

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT BLACK CREEK WATER RESOURCE DEVELOPMENT PROJECT INTAKE AND PUMP STATION

**ST. JOHNS RIVER WATER
MANAGEMENT DISTRICT BOARD**

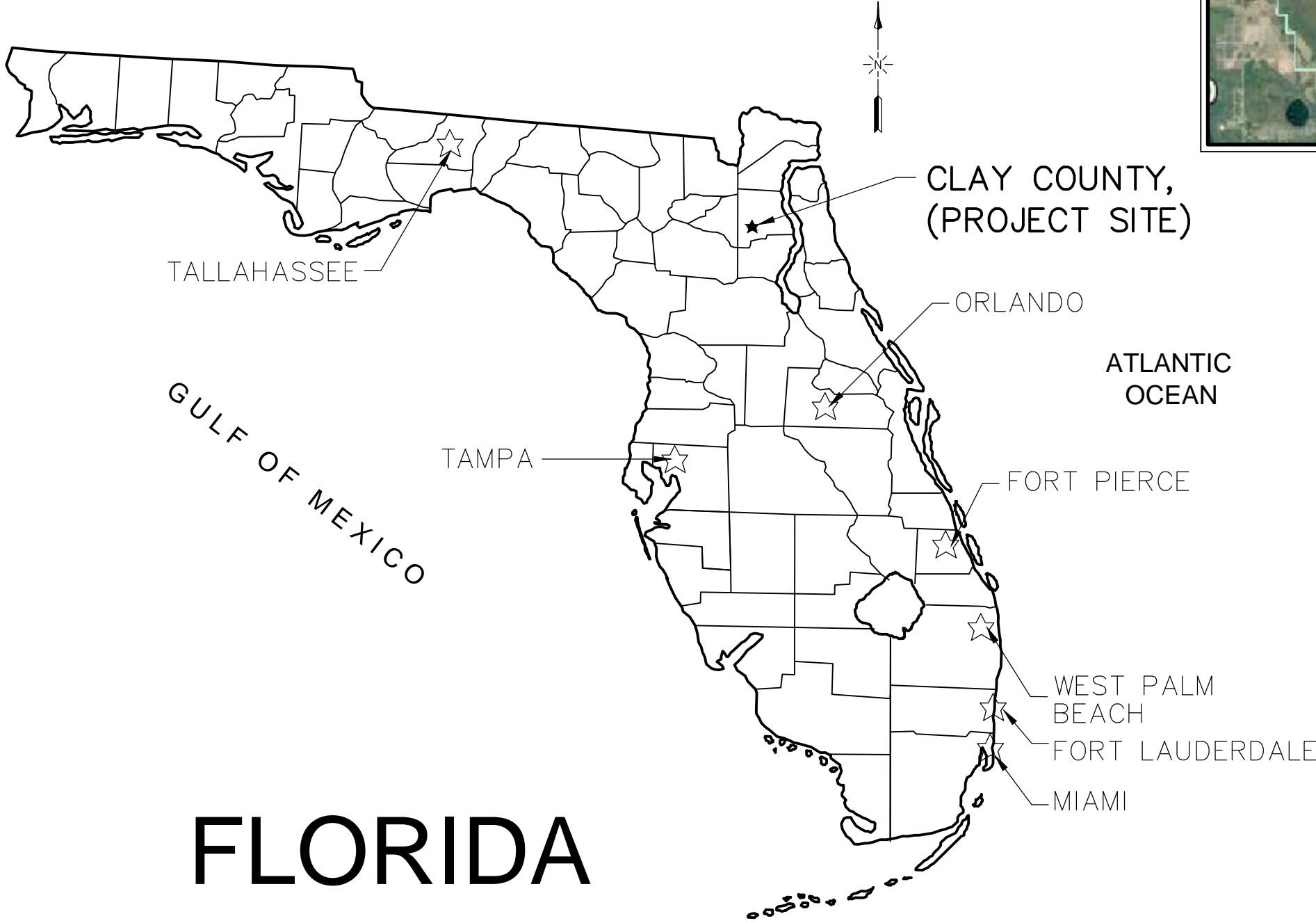
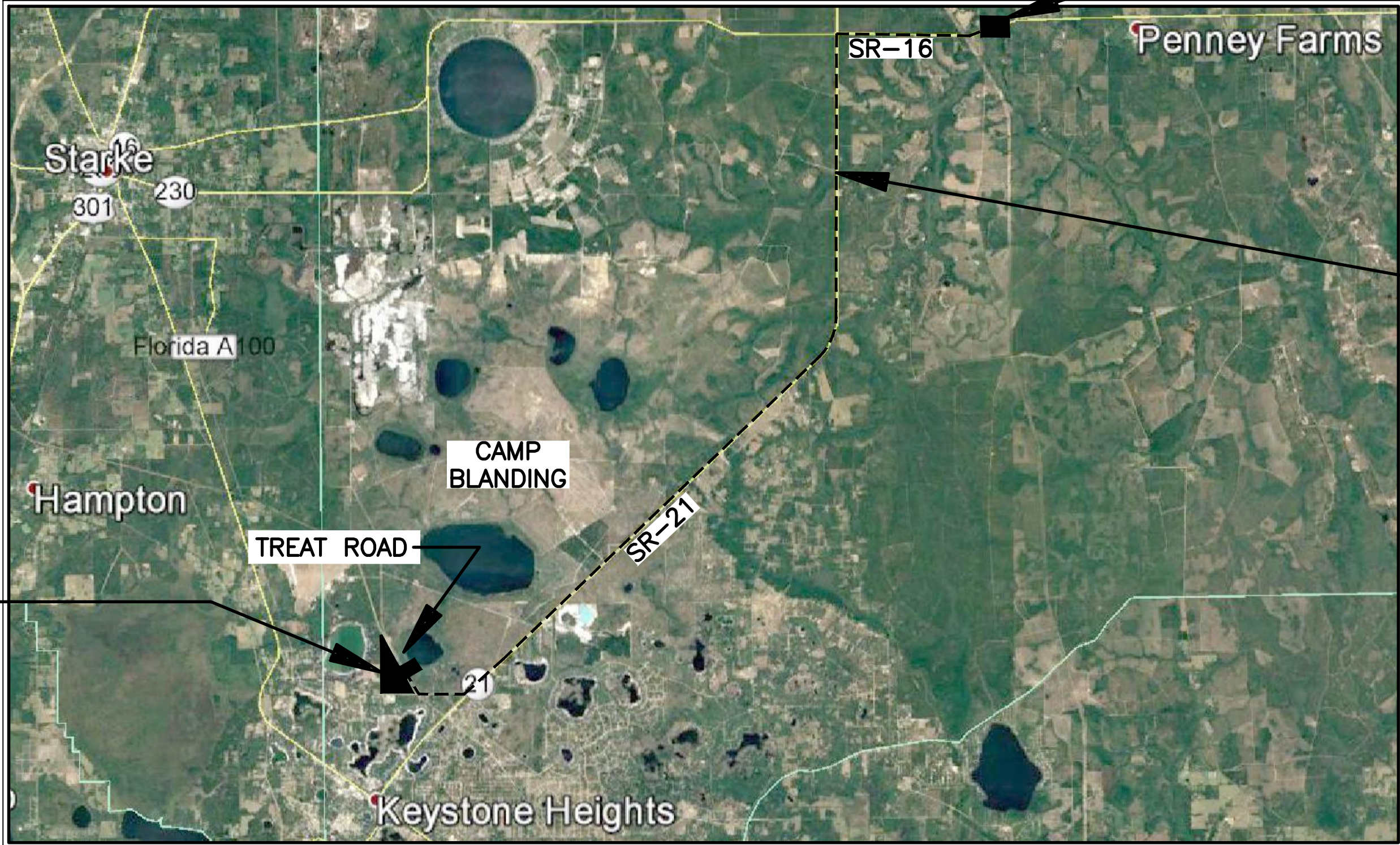
ROB BRADLEY, CHAIRMAN, AREA 2
 MARYAM H. GHYABI-WHITE, VICE CHAIRMAN, AT LARGE
 RON HOWSE, TREASURER, AT LARGE
 J. CHRIS PETERSON, SECRETARY, AREA 4
 RYAN ATWOOD, AREA 3
 DOUG BOURNIQUE, AREA 5
 DOUGLAS BURNETT, AT LARGE
 COLE OLIVER, AT LARGE
 JANET PRICE, AREA 1

CONTRACT NO. 30593

BLACK CREEK PUMP STATION
AND INTAKE STRUCTURE
PROJECT LOCATION

RAW WATER TRANSMISSION MAIN
(NOT IN THIS CONTRACT)

AQUIFER RECHARGE AREA
(NOT IN THIS CONTRACT)



LOCATION PLAN
MAY 2022



4651 Salisbury Road, Suite 420
 Jacksonville, FL 32256
 Tel: (904) 731-7109
 COA No. EB-0000020

ISSUED FOR BID 37744

VICINITY PLAN
N.T.S.

Water Environment Transportation Energy Facilities

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 pw:\cdmsmith-a202-pw.bentley.com\PW_PL_10247021208_PHASE 2 INTAKE PS04 Design Services NM_100%01 General\10 CA00D04_2022 INTAKE AND PUMP STATION\G000PSCV.dwg

INDEX OF SHEETS

INDEX OF SHEETS CON'T

ABBREVIATIONS

SHEET	TITLE
GENERAL	
	COVER SHEET
G-1	INDEX, LEGEND AND ABBREVIATIONS
G-2	GENERAL NOTES
CIVIL	
C-1	OVERALL SITE PLAN, LIMITS OF CLEARING, AND WETLAND IMPACTS
C-2	PUMP STATION YARD PIPING PLAN
C-3	PUMP STATION SITE GRADING AND DRAINAGE PLAN
C-4	PUMP STATION SUCTION PIPING PLAN
C-5	INTAKE AREA GRADING PLAN
C-6	INTAKE AREA PIPING PLAN
C-7	INTAKE AREA SECTIONS
C-8	PUMP STATION 24" SUCTION PIPING PROFILE
C-9	PUMP STATION FENCING, PRIVACY WALL AND LANDSCAPING PLAN
CD-1	
CD-1	MISCELLANEOUS CIVIL DETAILS
CD-2	SEDIMENTATION AND EROSION CONTROL DETAILS
CD-3	CIVIL DETAILS
ARCHITECTURAL	
A-1	ABBREVIATIONS, GENERAL NOTES AND SYMBOLS
A-2	PUMP STATION BUILDING BUILDING CODE KEY DETERMINATIONS AND LIFE SAFETY PLAN
A-3	PUMP STATION BUILDING FLOOR PLAN AND ROOF PLAN
A-4	PUMP STATION BUILDING EXTERIOR ELEVATIONS
A-5	PUMP STATION BUILDING BUILDING SECTIONS AND WALL SECTIONS
A-6	ELECTRICAL BUILDING BUILDING CODE KEY DETERMINATIONS AND LIFE SAFETY PLAN
A-7	ELECTRICAL BUILDING FLOOR PLAN AND ROOF PLAN
A-8	ELECTRICAL BUILDING EXTERIOR ELEVATIONS
A-9	ELECTRICAL BUILDING BUILDING SECTIONS AND WALL SECTIONS
AD-1	
AD-1	FINISH SCHEDULE, DOOR SCHEDULE AND TYPES, LOUVER SCHEDULE AND TYPES
AD-2	ARCHITECTURAL DETAILS
STRUCTURAL	
S-1	GENERAL STRUCTURAL NOTES
S-2	PUMP STATION BUILDING PLANS AND DETAILS
S-3	PUMP STATION BUILDING SECTIONS AND DETAILS
S-4	ELECTRICAL BUILDING PLAN AND DETAILS
S-5	ELECTRICAL BUILDING SECTIONS AND DETAILS
S-6	INTAKE STRUCTURE PLANS AND SECTIONS
SD-1	
SD-1	STANDARD STRUCTURAL CONCRETE DETAILS I
SD-2	STANDARD STRUCTURAL CONCRETE DETAILS II
SD-3	STANDARD MASONRY DETAILS
SD-4	STANDARD STEEL JOIST DETAILS
SD-5	STANDARD METAL DETAILS
SD-6	STANDARD STRUCTURAL DETAILS
MECHANICAL	
M-1	PROCESS NOTES, LEGEND AND ABBREVIATIONS
M-2	INTAKE PLAN AND SECTIONS
M-3	INTAKE PUMP STATION PLAN
M-4	INTAKE PUMP STATION SECTIONS
MD-1	
MD-1	MISCELLANEOUS MECHANICAL DETAILS

SHEET	TITLE
HVAC	
H-1	HVAC SYMBOLS AND ABBREVIATIONS
H-2	ELECTRICAL BUILDING HVAC PLAN
H-3	PUMP BUILDING HVAC PLAN
H-4	HVAC AIRFLOW SCHEMATICS AND SEQUENCE OF OPERATIONS
HD-1	
HD-1	HVAC SCHEDULES
HD-2	HVAC DETAILS
PLUMBING	
P-1	PLUMBING SYMBOLS AND ABBREVIATIONS
P-2	PUMP BUILDING PLUMBING PLAN
ELECTRICAL	
E-1	ELECTRICAL LEGEND I
E-2	ELECTRICAL LEGEND II
E-3	ELECTRICAL SITE PLAN
E-4	480V SWITCHBOARD ONE LINE POWER DIAGRAM
E-5	480V SWITCHBOARD FRONT ELEVATION AND ELEMENTARY CONTROL DIAGRAMS
E-6	ELECTRICAL BUILDING POWER PLAN
E-7	ELECTRICAL BUILDING LIGHTING PLAN
E-8	INTAKE PUMP STATION AND INTAKE STRUCTURE POWER PLANS
E-9	INTAKE PUMP STATION LIGHTING PLAN
E-10	LIGHT FIXTURE SCHEDULE AND PANELBOARD SCHEDULE
ED-1	
ED-1	ELECTRICAL DETAILS I
ED-2	ELECTRICAL DETAILS II
INSTRUMENTATION	
I-1	INSTRUMENTATION LEGEND SHEET (SHEET 1 OF 2)
I-2	INSTRUMENTATION LEGEND SHEET (SHEET 2 OF 2)
I-3	P&ID CONTROL BLOCK DIAGRAM
I-4	P&ID - INTAKE STRUCTURE AND PUMP STATION
I-5	INSTRUMENT INSTALLATION DETAILS

ADJUSTABLE	ADJ	MECHANICAL	MECH
ALUMINUM	AL, ALUM	METAL	MET
ANGLE	<	MECHANICAL JOINT	MJ
BARE ROOT	BR	METAL REINFORCED PLASTIC PIPE	MRPP
BASELINE	BL	MINIMUM	MIN
BELOW	BEL	MOUNTED	MTD
BENCHMARK	BM	NOMINAL	NOM
BETWEEN	BTWN	NOT IN CONTRACT	NIC
BURIED TV LINE	BTV	NOT TO SCALE	NTS
BUTTERFLY VALVE	BFV	NUMBER	NO
CENTER LINE	CL	ON CENTER	OC
CENTER TO CENTER	CC	OPTION	OPT
CONCRETE	CONC	OPPOSITE	OPP
CORRUGATED METAL PIPE	CMP	OPENING	OPNG
CENTER (ED)	CTR	OR EQUAL	O/E
CURVE DATA (HORIZONTAL)	CH - CHORD R - RADIUS Δ - DELTA L - ARC LENGTH PRC - POINT OF REVERSE CURVE	OUTSIDE CLEARANCE	OC
DEMOLITION	DEMO	OVERHEAD ELECTRIC	OHE
DIAMETER	DIA, DIAM	PERFORATED	PERF
DIAGONAL	DIAG	PIECE	PC
DIMENSION	DIM	POINT	PT
DISCHARGE	DISCH	POLYETHYLENE	PE
DRAWING	DWG	POLYVINYLCHLORIDE	PVC
DUCTILE IRON PIPE	DIP	POTABLE WATER	PW
DUCTILE IRON PIPE STANDARDS	DIPS	POUND(S)	LB(S)
DUCTILE IRON	DI	PLATE	PL
EACH	EA	PRECAST	PRCST
ELECTRICAL CONTROL BOX	ECB	RADIUS	RAD, R
ELEVATION	EL, ELEV	RAW WATER	RW
EDGE OF PAVEMENT	EOP	REINFORCED CONCRETE PIPE	RCP
EXISTING	EXIST	REQUIRED	REQ'D
FIBERGLASS REINFORCED PIPE	FRP	RESTRAINED JOINT	RJ
FIBER OPTIC CABLE	FOC	RIGHT OF WAY	R/W
FINISH	FIN	ROOM	RM
FLANGE	FLG	SCHEDULE	SCH
FLOOR	FL	SECTION	SEC
FORCE MAIN	FM	SHEET	SH, SHT
FURNISHED BY OTHERS	FBO	SIDEWALK	SDWK
FEET/FOOT	FT	SLIP-ON JOINT	SJ
GALVANIZED STEEL PIPE	GSP	SQUARE	SQ
GATE VALVE	GV	STAINLESS STEEL	SS
UNDERGROUND GAS LINE	GAS	STANDARD	STD
HIGH	H	STEEL	STL
HIGH POINT	HP	STEEL PIPE	SP
HEIGHT	HT	SYMMETRICAL	SYMM
HIGH-DENSITY POLYETHYLENE	HDPE	THICK	THK
HORIZONTAL DIRECTIONAL DRILL	HDD	TIED JOINT	TJ
IRRIGATION LINE	IRR	TYPICAL	TYP
JACK AND BORE	J&B	TEMPORARY	TEMP
LONG	LG	TRAFFIC SIGNAL LINE	TSL
LOW POINT	LP	UNDERGROUND ELECTRIC	UE
MATERIAL	MTL	UNDERGROUND TELEPHONE	UT
MANUFACTURING	MFG	VERTICAL	VERT
MANUFACTURER	MFR	WATER	WTR
MAXIMUM	MAX	WATER LINE	WL
		WATER MAIN	WM
		WATER RESOURCES DEVELOPMENT	WRD
		WEATHERPROOF	WPF
		WEST	W
		WITH	W/

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY
 DRAWN BY: C. SCOTT
 SHEET CHK'D BY: C. MONTGOMERY
 CROSS CHK'D BY: L. WISEMAN
 APPROVED BY: S. WOODS
 DATE: MAY 2022



4651 Salisbury Road, Suite 420
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 Tel: (904) 731-7109
 FL COA No. EB-0000020

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

INDEX, LEGEND AND ABBREVIATIONS

DATE:
 CRAIG C. MONTGOMERY
 PE NO. 45953

PROJECT NO. 9247-221208
 FILE NAME: G001PSIX.DWG

SHEET NO.
G-1

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO CLAY COUNTY STANDARDS AND SPECIFICATIONS, 2017 UTILITY ACCOMMODATION MANUAL (UAM), AND THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION JANUARY 2018 OR LATEST EDITION.
2. ALL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING HIS WORK.
4. CONTRACTOR SHALL VERIFY ALL UTILITIES AND NOTIFY UTILITY OWNER, 72 HOURS PRIOR TO DIGGING IN ANY PORTION OF THE SITE.
5. THE CONTRACTOR SHALL REPLACE ANY MONUMENTS, FENCES, ETC. WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION. COST TO BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION SHALL BE ALLOWED.
6. TOPOGRAPHIC SURVEY WAS PERFORMED BY: WOOLPERT, INC. UNIVERSITY CORPORATE CENTER 11, 11486 CORPORATE BOULEVARD, SUITE 190, ORLANDO, FL. 32817, PHONE: 407-591-5010.
7. THE CONTRACTOR SHALL CONTACT THE ENGINEER'S OFFICE IMMEDIATELY UPON FINDING ANY CONFLICTS DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THE DRAWINGS.
8. MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO ENSURE THAT ADEQUATE EROSION AND SEDIMENT CONTROL ARE MAINTAINED AT ALL TIMES DURING THE PROJECT (SEE EROSION CONTROL NOTES).
9. PRIOR TO EXCAVATING IN THE VICINITY OF A GAS LINE, THE CONTRACTOR SHALL NOTIFY THE GAS UTILITY OWNER IN ACCORDANCE WITH THE REQUIREMENTS OF FLORIDA STATUTES, PROTECTION OF UNDERGROUND PIPELINES F.S. 553.851, CH 17-143.
10. ALL BRUSH, STRIPPINGS OR UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF-SITE AT THE CONTRACTOR'S EXPENSE.
11. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING PRIOR TO COMMENCING CONSTRUCTION UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. COSTS TO BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION TO BE ALLOWED.
12. THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS SHALL BE STRICTLY OBSERVED BY THE CONTRACTOR. ALL INGRESS, EGRESS AND TRAFFIC PATTERNS ON THE SITE SHALL BE WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON THE DRAWINGS.
13. NO REPRESENTATION IS MADE REGARDING BALANCED EARTHWORK, ANY EXCESS MATERIAL, OR MATERIAL NOT SUITABLE FOR USE AS BACKFILL, SHALL BE DISPOSED OF BY THE CONTRACTOR.
14. IN AREAS REQUIRING FILL MATERIAL, THE CONTRACTOR WILL STRIP OR OTHERWISE REMOVE ALL VEGETATION SUCH AS BRUSH, HEAVY SODS, HEAVY GROWTH OF GRASS, DECAYED VEGETABLE MATTER, RUBBISH AND ANY OTHER DELETERIOUS MATERIAL BEFORE EMBANKMENT IS STARTED. IMMEDIATELY PRIOR TO THE PLACING OF FILL MATERIALS, THE ENTIRE AREA UPON WHICH FILL IS TO BE PLACED, SHALL BE SCARIFIED.
15. CONTRACTOR SHALL SEED ALL DISTURBED AREAS PER THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 2018 EDITION).
16. IMMEDIATELY AFTER THE WORK IS COMPLETED, CONTRACTOR SHALL BEGIN SEEDING OPERATIONS OF ALL DISTURBED AREAS PER FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 2018, OR LATEST EDITION). THE CONTRACTOR SHALL RESTORE THE RIGHT OF WAY TO THE CONDITION EXISTING PRIOR TO THE WORK. THE CONTRACTOR SHALL MAINTAIN THAT PORTION OF THE RIGHT OF WAY AFFECTED BY THE WORK UNTIL VEGETATION IS ESTABLISHED.
17. WITHIN THE ENTIRE PROJECT AREA, THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF ACTIVE AND INACTIVE GOPHER TORTOISE BURROWS AND SHALL IMMEDIATELY THEREAFTER INSTALL A CONTINUOUS DOUBLE ROW OF SILT FENCES TO EXCLUDE GOPHER TORTOISES FROM WORK AREAS. ONSITE RELOCATION ACTIVITIES SHALL BE PERFORMED FOR ANY ACTIVE OR INACTIVE BURROWS LOCATED WITHIN THE PROJECT AREA IN ACCORDANCE WITH SECTION 02100 OF THE SPECIFICATIONS.

GENERAL NOTES

MAINTENANCE OF TRAFFIC

1. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF TRAFFIC (MOT) THROUGHOUT THE PROJECT.
2. MOT SHALL CONFORM TO FDOT INDEX 600 SERIES STANDARDS. INDEX 601 AND 602, ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE.
3. WORK PERFORMED OUTSIDE FDOT RIGHT-OF-WAY, CONTRACTOR SHALL COORDINATE WITH CLAY COUNTY ENGINEERING AND PUBLIC WORKS DEPARTMENT.
4. NO LANE CLOSURES ARE PERMITTED.
5. POSTED SPEED LIMIT ON STATE ROADS 16 AND 21 IS 60 MPH.

UTILITY OWNERS & CONTACTS

1. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY EXCAVATION INVOLVING ITS UTILITIES SO THAT A COMPANY REPRESENTATIVE CAN BE PRESENT. THE LOCATION OF THE UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. THE EXACT LOCATION SHALL BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION.

COMCAST CABLE COMMUNICATIONS, INC. LARRY K. WINBURN 904-380-7574 5934 RICHARD ST. JACKSONVILLE, FL 32216	CLAY ELECTRIC KEYSTONE DISTRICT BILL STRASSBERGER 352-473-8000 EXT.: 8294 P.O. BOX 308 KEYSTONE HEIGHTS, FL 32656
FLORIDA POWER & LIGHT JOEL BRAY 954-581-3088 2455 PORT WEST BLVD CRS/PDC BLDG A RIVIERA BEACH, FL 33407	CLAY COUNTY UTILITY AUTHORITY TOM MORRIS 904-272-5999 3176 OLD JENNINGS ROAD MIDDLEBURG, FL 32068
AT&T/ DISTRIBUTION DINO FARRUGGIO 561-997-0240 AT&T/ DISTRIBUTION 1120 S ROGERS CIR. BOCA RATON, FL 33487	FLORIDA GAS TRANSMISSION COMPANY, LLC JOSEPH E. SANCHEZ 407-808-4607 SOUTHEAST DIVISION - SR. TECHNICAL SPECIALIST/ ENERGY TRANSFER PARTNERS 2405 LUCIEN WAY, SUITE 200 MAITLAND, FL 32751

2. THE CONTRACTOR SHALL USE THE SERVICES OF SUNSHINE-ONE CALL UTILITY LOCATOR A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF WORK. (SUNSHINE-ONE CALL 1 (800) 423-4770 / 811)
3. CONTRACTOR IS ALERTED THAT PROJECT AREA PARALLELS AND CROSSES UNDER OVERHEAD TRANSMISSION AND DISTRIBUTION POWER LINES OWNED BY CLAY ELECTRIC (STATE ROAD 21) AND FLORIDA POWER AND LIGHT (STATE ROAD 16). POWER TRANSMISSION LINES ARE 230 KILOVOLT AND DISTRIBUTION LINES ARE 23 - 25 KILOVOLT. CONTRACTOR SHALL ADHERE TO ALL NATIONAL ELECTRIC SAFETY CODE REQUIREMENTS.

EROSION CONTROL

1. EROSION CONTROL AND SEDIMENTATION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO BEGINNING ANY DEMOLITION OR CONSTRUCTION. THEY SHALL BE INSTALLED TO THE LIMITS SHOWN IN THE DRAWING, AS REQUIRED IN THE SPECIFICATIONS AND IN ACCORDANCE WITH ALL REGULATORY AGENCY REQUIREMENTS.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE PLANS AND PER FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 2018 EDITION). IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION CONTROLS SHOWN ON THE PLANS AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED, TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS.

SURVEYOR'S NOTES

1. HORIZONTAL COORDINATES ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE 0901, NORTH AMERICAN DATUM OF 83/1990. HORIZONTAL CONTROL WAS BASED ON THE FLORIDA DEPARTMENT OF TRANSPORTATION PERMANENT REFERENCE NETWORK (FPRN)
2. VERTICAL DATUM BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NAVD88). VERTICAL CONTROL WAS BASED AND VERIFIED BY THE FOLLOWING NATIONAL GEODETIC SURVEY (NGS) CONTROL POINTS.

DESIGNATION: G621
STATION NAME: D18481
NORTHING: 2,053,457 (US FEET)
EASTING: 386,258 (US FEET)
LONGITUDE: W081°51'09"
LATITUDE: N29°58'46"
ELEVATION: 24.23 (US FEET)

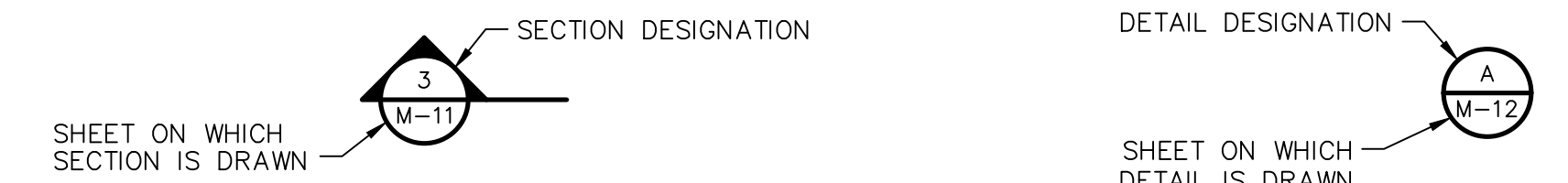
DESIGNATION: W441
STATION NAME: AC9702
NORTHING: 2,052,916 (US FEET)
EASTING: 377,635 (US FEET)
LONGITUDE: W081°52'47"
LATITUDE: N29°58'40"
ELEVATION: 94.06 (US FEET)

DESIGNATION: W441
STATION NAME: AC9702
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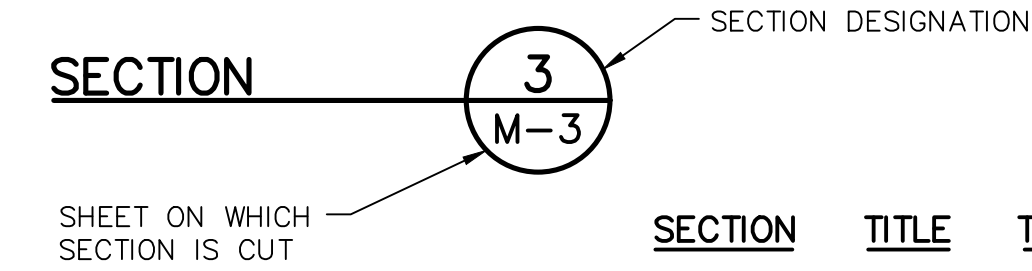
THE MARK IS A ROUND CONCRETE MONUMENT FLUSH WITH THE GROUND AND 1.6 FT BELOW THE LEVEL OF STATE ROAD 16, 259.8 EAST OF THE EAST END OF A CONCRETE HEADWALL, 57.6 FT SOUTH OF THE APPROXIMATE CENTERLINE OF STATE ROAD 16, 1.2 FT NORTH OF AN 18-INCH POWER POLE AND 1.2 FT NORTH OF A CARSONITE WITNESS POST.

3. THIS SURVEY EXCEEDS THE ACCURACY REQUIREMENTS FOR SUBURBAN PROPERTY.
4. ALL MEASUREMENTS SHOWN HEREON ARE REFERENCED TO THE US STANDARD SURVEY FOOT.
5. THIS SPECIFIC PURPOSE SURVEY WAS PREPARED IN ORDER TO ILLUSTRATE TOPOGRAPHIC DATA SHOWING ROAD STRIPING, EDGE OF PAVEMENTS, RIGHT OF WAY LIMITS BASED ON HISTORICAL MAPS AND DATA IN ADDITION TO DEPICTING WETLAND AREAS LOCATED BY THIS SURVEYOR AND DESIGNATED BY OTHERS.
6. UNDERGROUND UTILITIES WERE NOT LOCATED BY THIS SURVEYOR AND ARE NOT PART OF THIS SURVEY.
7. SURVEY DATE: ALL SURVEY FIELD DATA COLLECTION WAS COMPLETED BEFORE 01/16/2018.

SECTION AND DETAIL NUMBERING SYSTEM



SECTION CUT TARGET



DETAIL

SHEET ON WHICH
DETAIL IS CALLED

DETAIL CALL OUT TARGET



LEGEND

- PROPOSED TURNOUT RESTORATION
- EXIST ASPHALT ROADWAY
- AREA OF CLEARING AND GRUBBING
- WETLAND AREA
- EXISTING WATER MAIN
- EXISTING BURIED TELEPHONE
- OVERHEAD ELECTRIC
- EXISTING CABLE TELEVISION
- EXISTING FIBER OPTIC
- R/W - RIGHT OF WAY
- ARV (SEE PLAN FOR TYPE)
- VALVE BOX
- BLOWOFF
- WETLAND LIMITS
- EDGE OF PAVEMENT
- EDGE OF TRAVEL LANE
- CENTERLINE OF ROAD
- PL - PROPERTY LINE
- PROJECT BOUNDARY
- EXISTING POWER POLE
- EXISTING LIGHT POLE
- BORING
- FENCE
- GUARDRAIL
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING STORM DRAIN
- GOPHER TORTOISE LOCATION
- EXIST SIGN
- UP - UNKNOWN POST

SURVEYOR'S LEGEND

- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- EXISTING DRAINAGE MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING CURB INLET
- EXISTING CATCH BASIN
- ACCESS MANHOLE
- PLUG VALVE
- 90° BEND
- 48" H.D.P.E SUDIPLINE
- EXISTING VALVE
- AS BUILT ELEVATION
- EXISTING SEWER MH

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REV. NO.	DATE	DRWN	CHKD	REMARKS

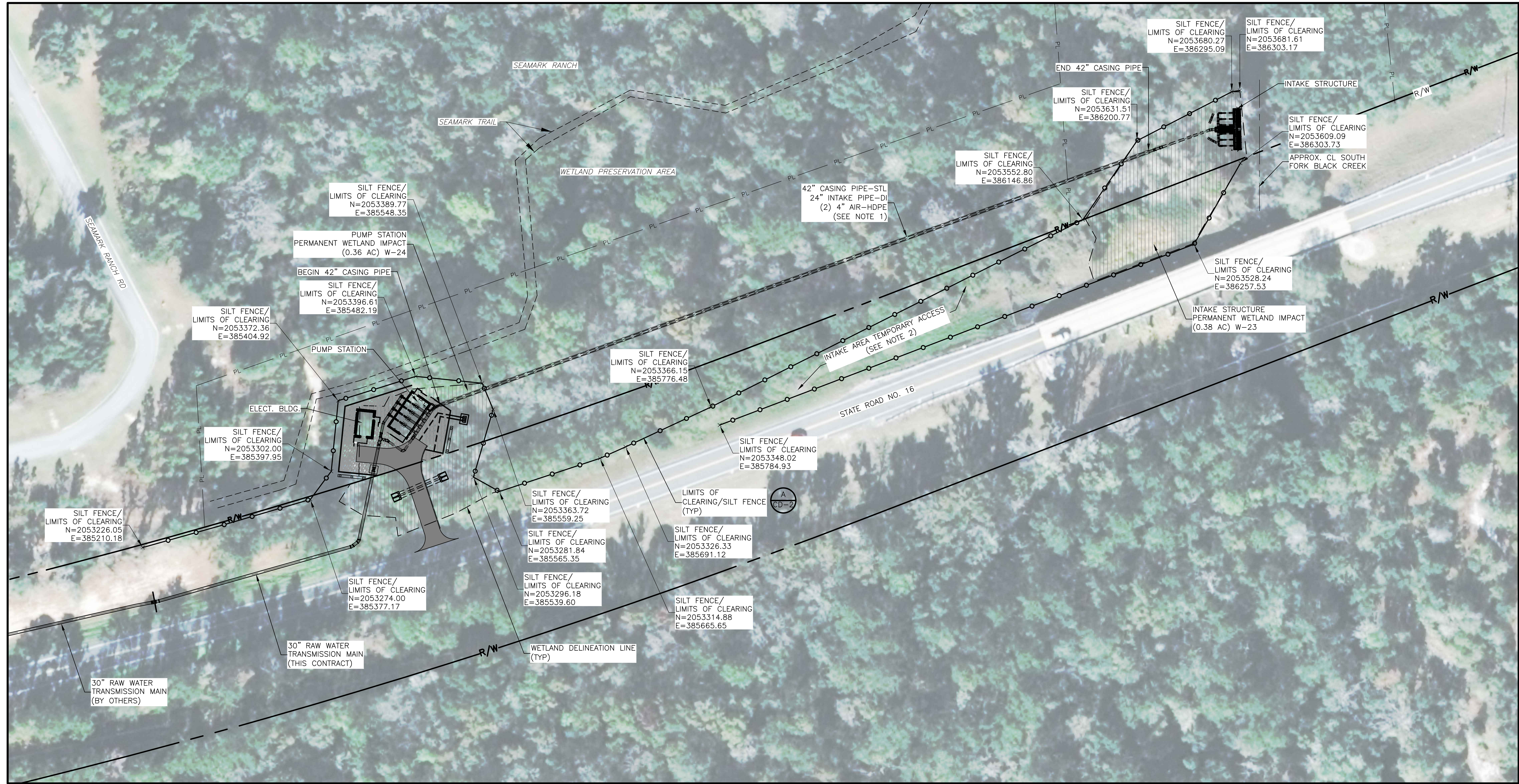
DESIGNED BY: <u>C. MONTGOMERY</u>	CDM Smith 4651 Salisbury Road, Suite 420 Jacksonville, FL 32256 Tel: (904) 731-7109 FL COA No. EB-0000020
DRAWN BY: <u>C. SCOTT</u>	
SHEET CHK'D BY: <u>C. MONTGOMERY</u>	
CROSS CHK'D BY: <u>J. WITTIG</u>	
APPROVED BY: <u>S. WOODS</u> DATE: <u>MAY 2022</u>	

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

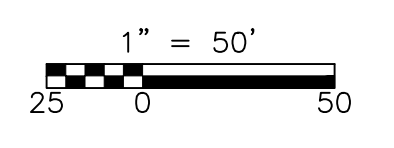
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 FILE NAME: G002PSGN.DWG
 SHEET NO.
G-2

DATE: CRAIG C. MONTGOMERY PE NO. 45953
PROJECT NO. 9247-221208 FILE NAME: G002PSGN.DWG
SHEET NO. G-2

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PUMP STATION AND INTAKE AREA
PLAN



- NOTES:
- CASING PIPE TO BE INSTALLED VIA MICROTUNNEL METHODOLOGY. SEE SPECIFICATIONS.
 - UNLESS OTHERWISE SHOWN OR SPECIFIED, UPON COMPLETION OF CONSTRUCTION ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO PRECONSTRUCTION GRADES AND SEEDED/SODDED IN ACCORDANCE WITH THE SPECIFICATIONS.

DATE:
CRAIG C MONTGOMERY
PE NO. 45953

PROJECT NO. 9247-221208
FILE NAME: C001NFSP.DWG

SHEET NO.
C-1

REV. NO.	DATE	DRWN	CHKD	REMARKS

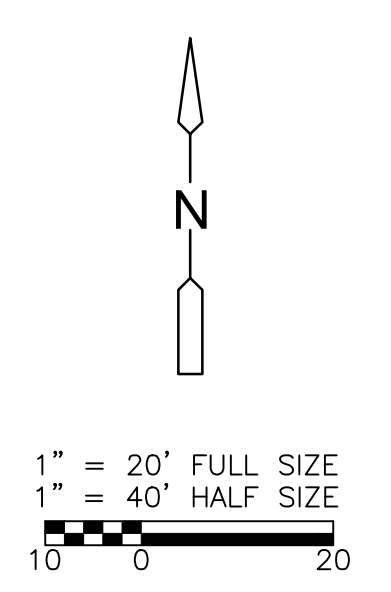
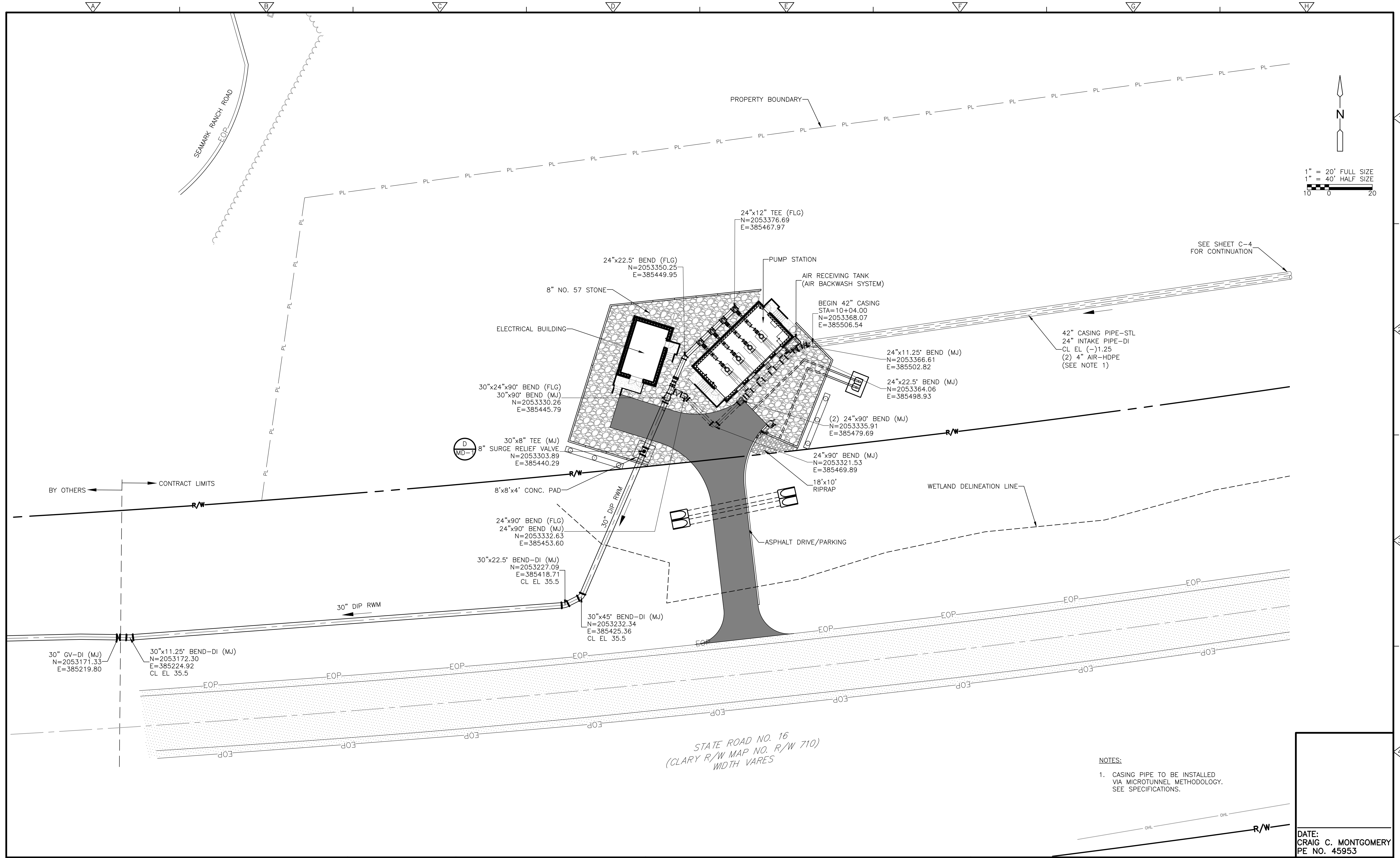
DESIGNED BY: C. MONTGOMERY
DRAWN BY: C. SCOTT
SHEET CHK'D BY: C. MONTGOMERY
CROSS CHK'D BY: J. WITIG
APPROVED BY: S. WOODS
DATE: MAY 2022



ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE
DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

OVERALL SITE PLAN, LIMITS OF CLEARING,
AND WETLAND IMPACTS

XREFS: [MVP0000, CDMS_2234, CWP001ST, ANZ000PS - Floor Plan - 2D, MVP0001, ANZ000EB - Floor Plan - 2D, CEP000SS, CEP000ST, MWP000IS, SWZ000IS] Images: []
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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY
 DRAWN BY: C. SCOTT
 SHEET CHK'D BY: C. MONTGOMERY
 CROSS CHK'D BY: J. WITTIG
 APPROVED BY: S. WOODS
 DATE: MAY 2022

CDM Smith
 4651 Salisbury Road, Suite 420
 Jacksonville, FL 32256
 Tel: (904) 731-7109
 FL COA No. EB-0000020

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

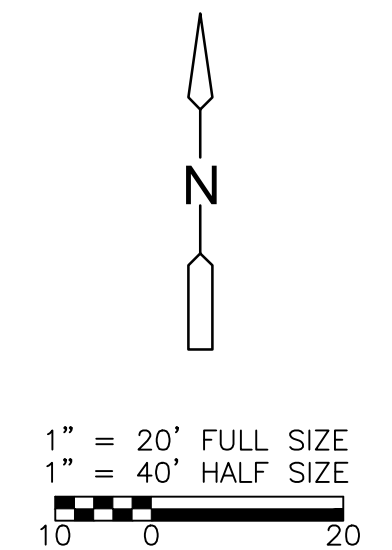
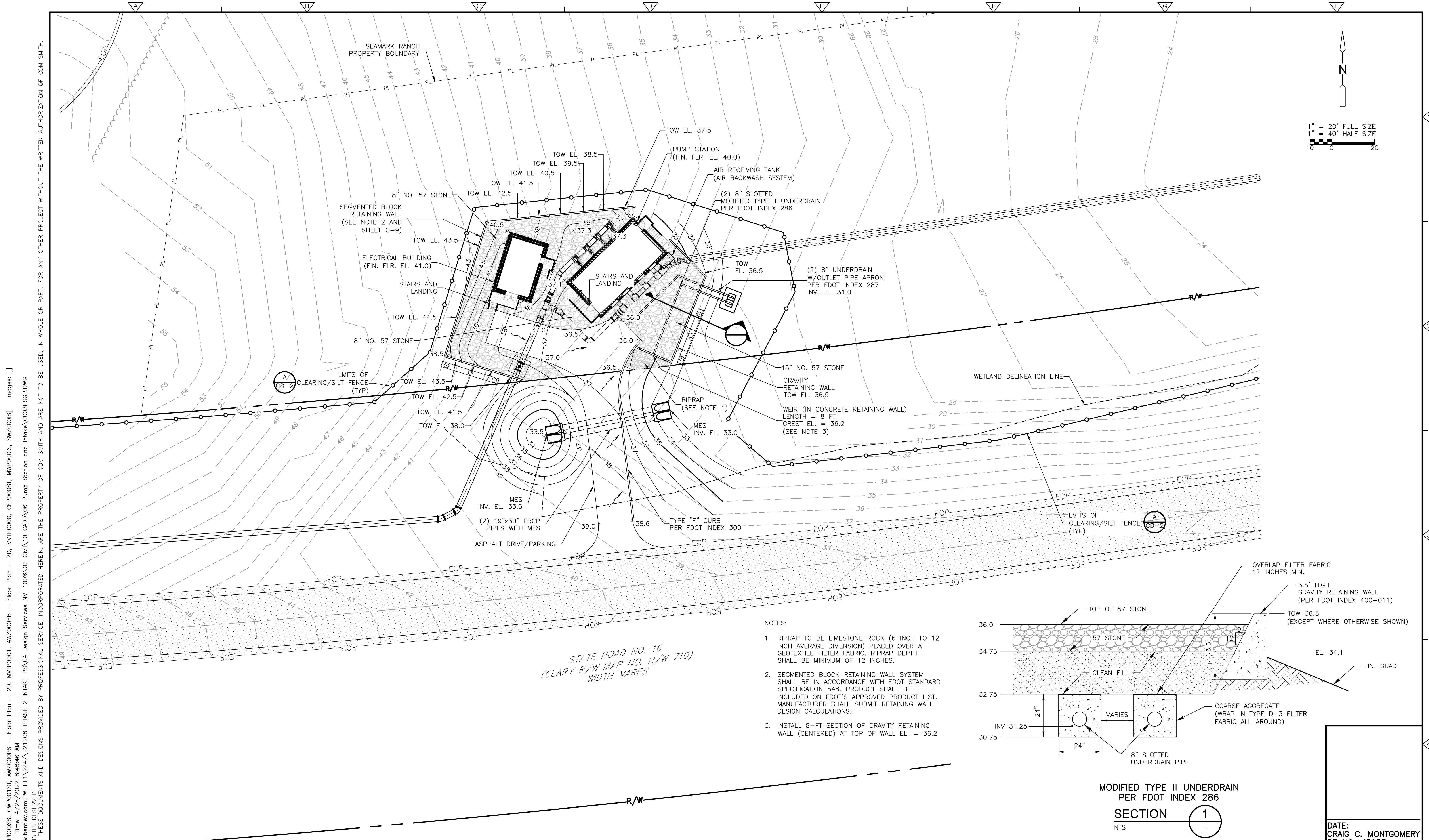
PUMP STATION
 SITE AND YARD PIPING PLAN

DATE:
 CRAIG C. MONTGOMERY
 PE NO. 45953

PROJECT NO. 9247-221208
 FILE NAME: C002PSSP.DWG

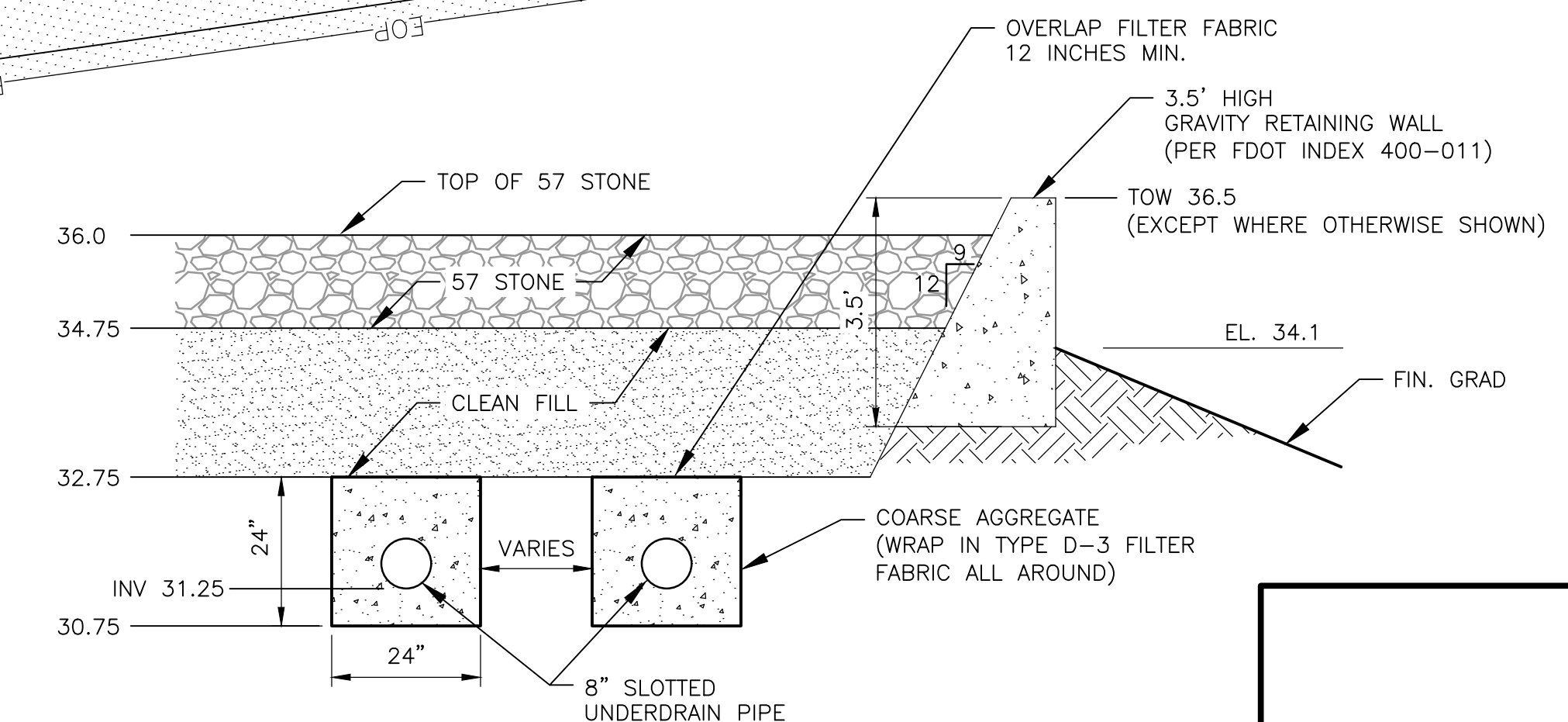
SHEET NO.
C-2

ISSUED FOR BID



NOTES:

1. RIPRAP TO BE LIMESTONE ROCK (6 INCH TO 12 INCH AVERAGE DIMENSION) PLACED OVER A GEOTEXTILE FILTER FABRIC. RIPRAP DEPTH SHALL BE MINIMUM OF 12 INCHES.
2. SEGMENTED BLOCK RETAINING WALL SYSTEM SHALL BE IN ACCORDANCE WITH FDOT STANDARD SPECIFICATION 548. PRODUCT SHALL BE INCLUDED ON FDOT'S APPROVED PRODUCT LIST. MANUFACTURER SHALL SUBMIT RETAINING WALL DESIGN CALCULATIONS.
3. INSTALL 8-FT SECTION OF GRAVITY RETAINING WALL (CENTERED) AT TOP OF WALL EL. = 36.2



MODIFIED TYPE II UNDERDRAIN
PER FDOT INDEX 286

SECTION 1
NTS

STATE ROAD NO. 16
(CLARY R/W MAP NO. R/W 710)
WIDTH VARIES

XREFS: [CDMS_2234_CEP0005S_CWP001ST_ANZ000EB - Floor Plan - 2D_MWTP0000_CEP0005T_MWP0005S_SWZ0005] Images: []
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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY
 DRAWN BY: C. SCOTT
 SHEET CHK'D BY: C. MONTGOMERY
 CROSS CHK'D BY: J. WITTIG
 APPROVED BY: S. WOODS
 DATE: MAY 2022



4651 Salisbury Road, Suite 420
 Jacksonville, FL 32256
 Tel: (904) 731-7109
 FL COA No. EB-0000020

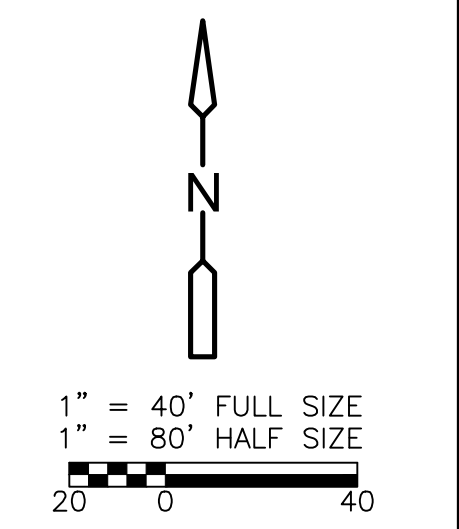
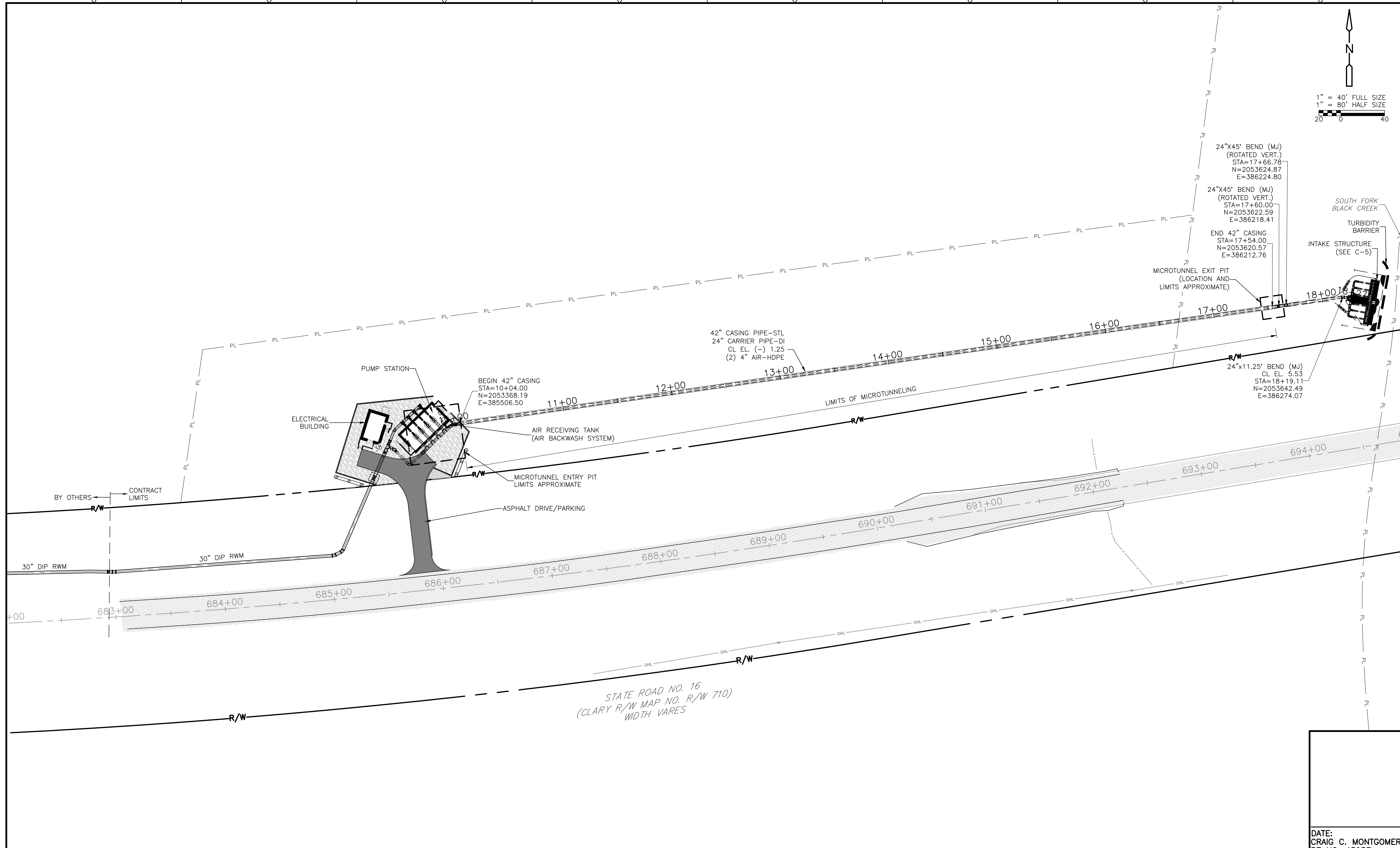
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

PUMP STATION
 SITE GRADING AND DRAINAGE PLAN

DATE: CRAIG C. MONTGOMERY PE NO. 45953
PROJECT NO. 9247-221208 FILE NAME: C003PSGP.DWG
SHEET NO. C-3

Images: []

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY
 DRAWN BY: C. SCOTT
 SHEET CHK'D BY: C. MONTGOMERY
 CROSS CHK'D BY: J. WITTIG
 APPROVED BY: S. WOODS
 DATE: MAY 2022



4651 Salisbury Road, Suite 420
 Jacksonville, FL 32256
 Tel: (904) 731-7109
 FL COA No. EB-0000020

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

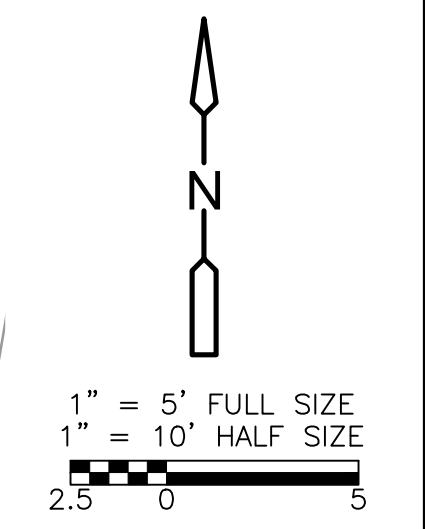
PUMP STATION SUCTION
 PIPING PLAN

DATE: CRAIG C. MONTGOMERY
 PE NO. 45953
 PROJECT NO. 9247-221208
 FILE NAME: C004PSWI.DWG
 SHEET NO. C-4

ISSUED FOR BID

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NOTES:
 1. RIPRAP SHALL BE LIMESTONE AGGREGATE (AVERAGE DIMENSION 6" TO 12") PLACED OVER GEOTEXTILE FILTER FABRIC TO A MINIMUM DEPTH OF 12 INCHES.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY
 DRAWN BY: C. SCOTT
 SHEET CHK'D BY: C. MONTGOMERY
 CROSS CHK'D BY: J. WITIG
 APPROVED BY: S. WOODS
 DATE: MAY 2022



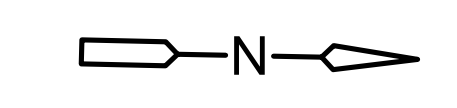
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

INTAKE AREA
 GRADING PLAN

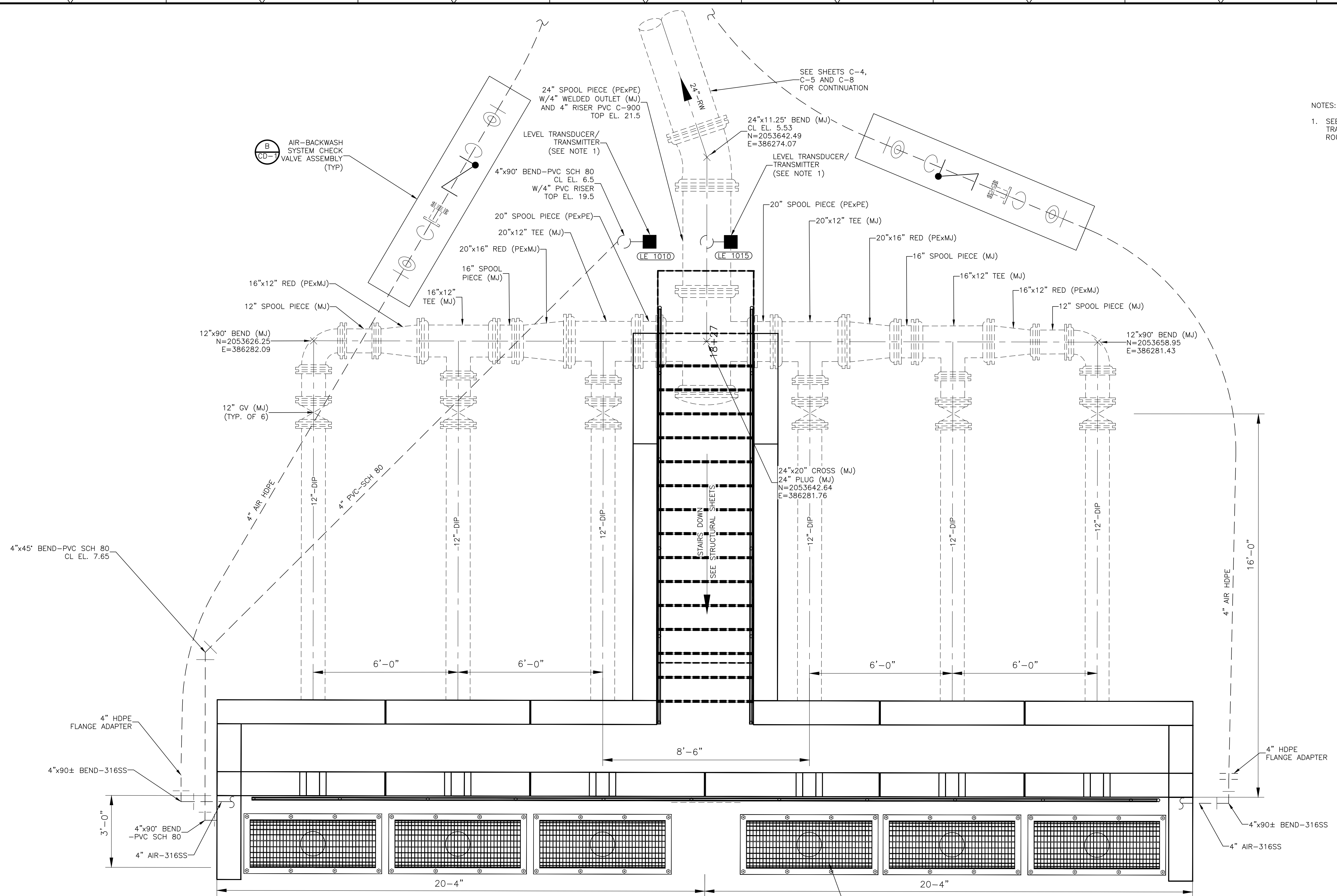
DATE: CRAIG C. MONTGOMERY
 PE NO. 45953
 PROJECT NO. 9247-221208
 FILE NAME: C005ISGP.DWG
 SHEET NO. C-5

ISSUED FOR BID

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NOTES:
 1. SEE ELECTRICAL SHEETS FOR LEVEL TRANSDUCER CONDUIT AND CABLE ROUTING TO PUMP STATION.



PLAN
 1" = 2'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY	 4651 Salisbury Road, Suite 420 Jacksonville, FL 32256 Tel: (904) 731-7109 FL COA No. EB-0000020
DRAWN BY: C. SCOTT	
SHEET CHK'D BY: C. MONTGOMERY	
CROSS CHK'D BY: J. WITIG	
APPROVED BY: S. WOODS	
DATE: MAY 2022	

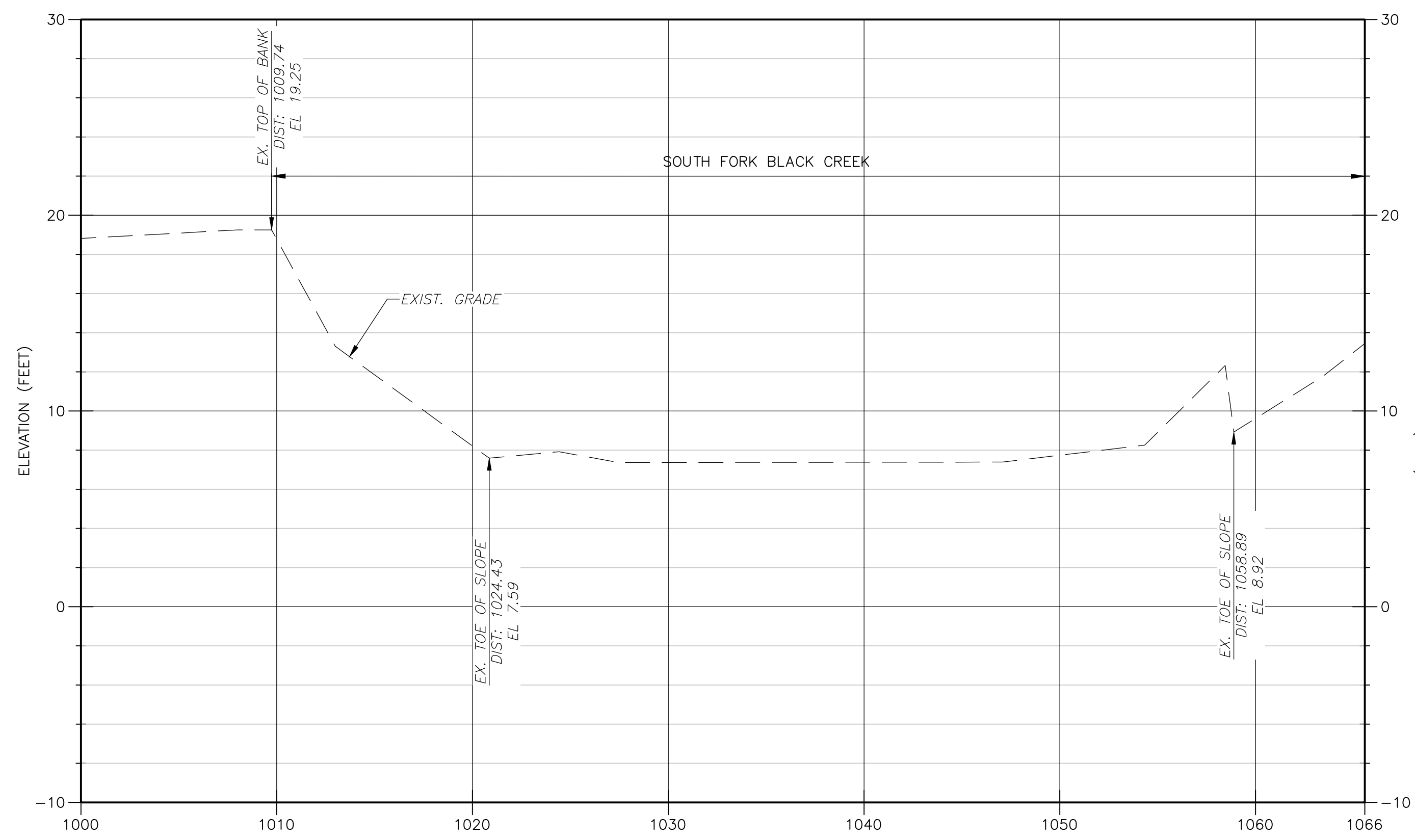
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

INTAKE SITE PIPING PLAN

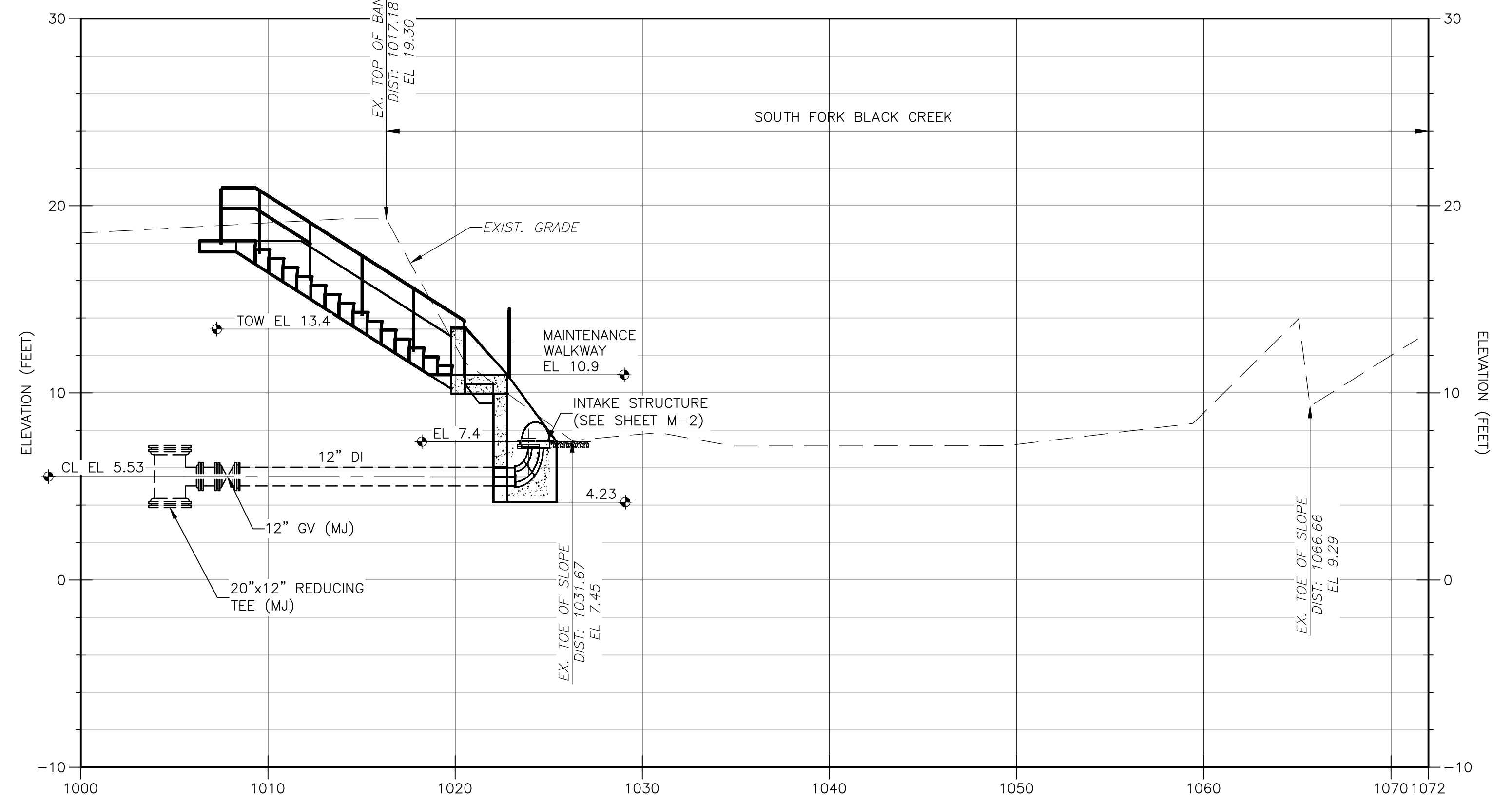
DATE: CRAIG C. MONTGOMERY PE NO. 45953
PROJECT NO. 9247-221208 FILE NAME: C006ISPL.DWG
SHEET NO. C-6

ISSUED FOR BID

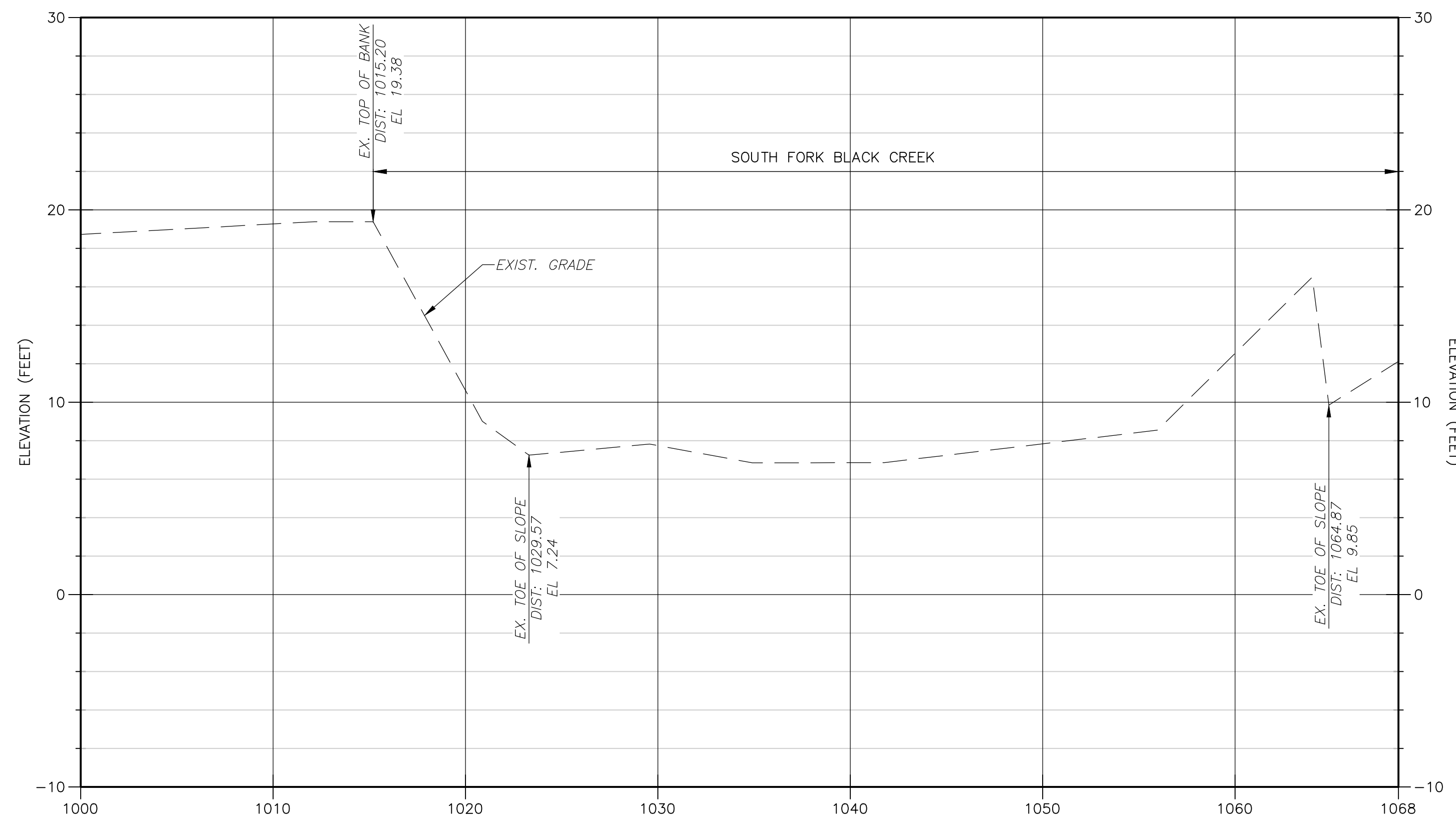
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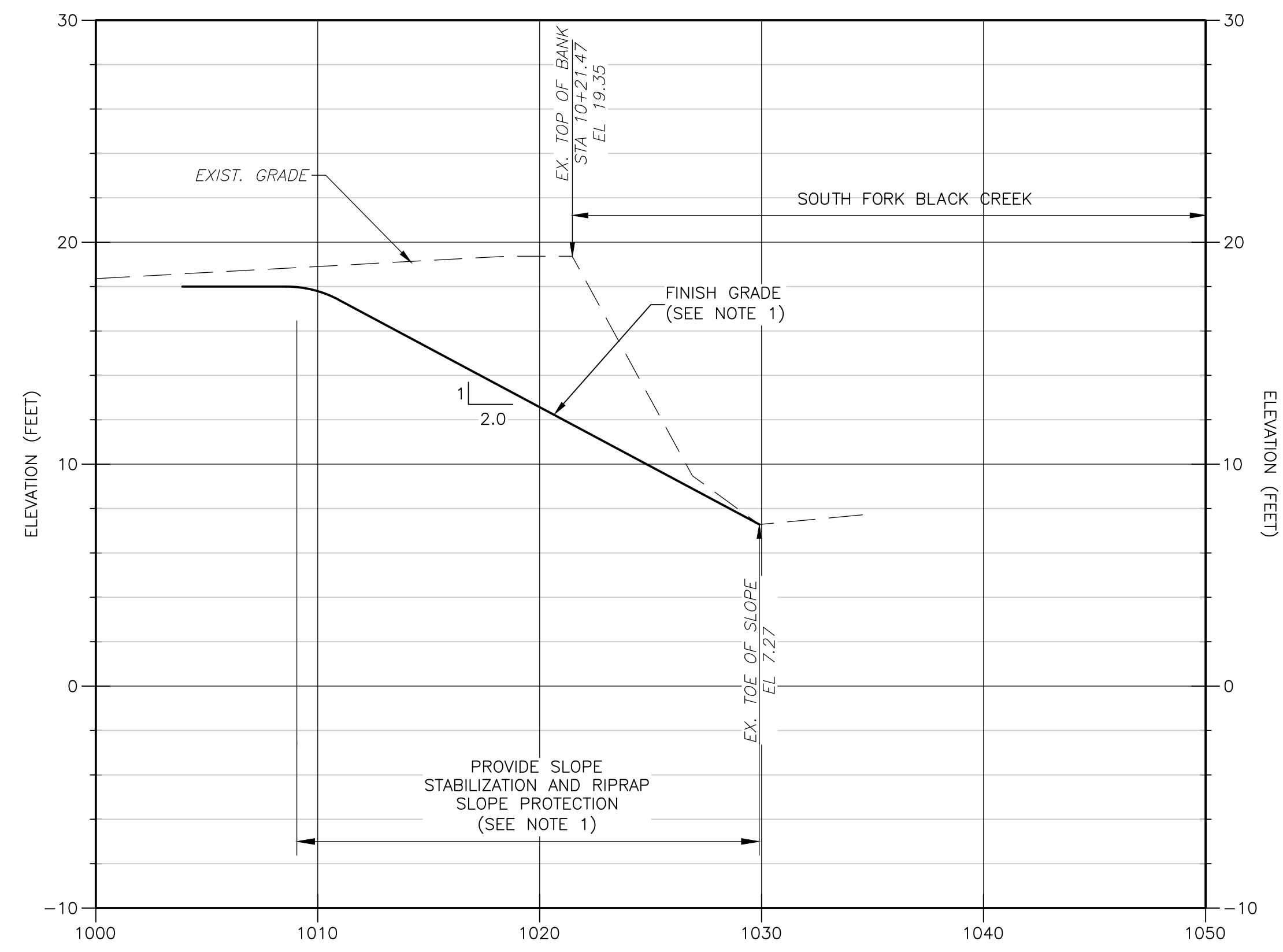
SECTION 1
1" = 5'-0"



SECTION 2
1" = 5'-0"



SECTION 3
1" = 5'-0"



SECTION 4
1" = 5'-0"

- NOTES:**
1. PROVIDE STABILIZATION OF COMPACTED BACKFILLED 2:1 SLOPES FROM TOE OF SLOPE TO EL. 18.0 CONSISTING OF THE FOLLOWING:
 - a. 18 INCH THICK RIPRAP GRADE D50>9 INCHES
 - b. 6 INCH THICK #57 BEDDING STONE
 - c. GEPTEXTILE MIRAFI 700 FW RO APPROVED EQUAL
 - d. CONSTRUCT A 2 FOOT THICK BY 4 FOOT WIDE KEY AT TOE OF SLOPE.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. WILLIAMS
DRAWN BY: C. SCOTT
SHEET CHK'D BY: J. WITTIG
CROSS CHK'D BY: B. WILLIAMS
APPROVED BY: S. WOODS
DATE: MAY 2022

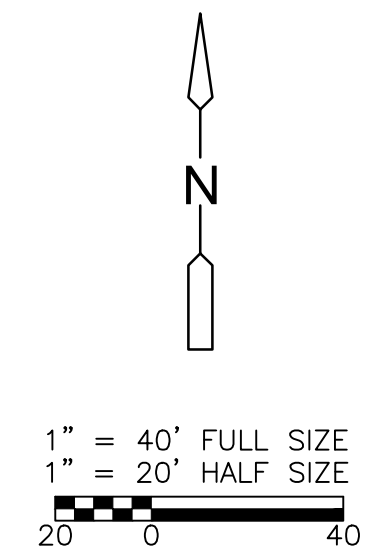
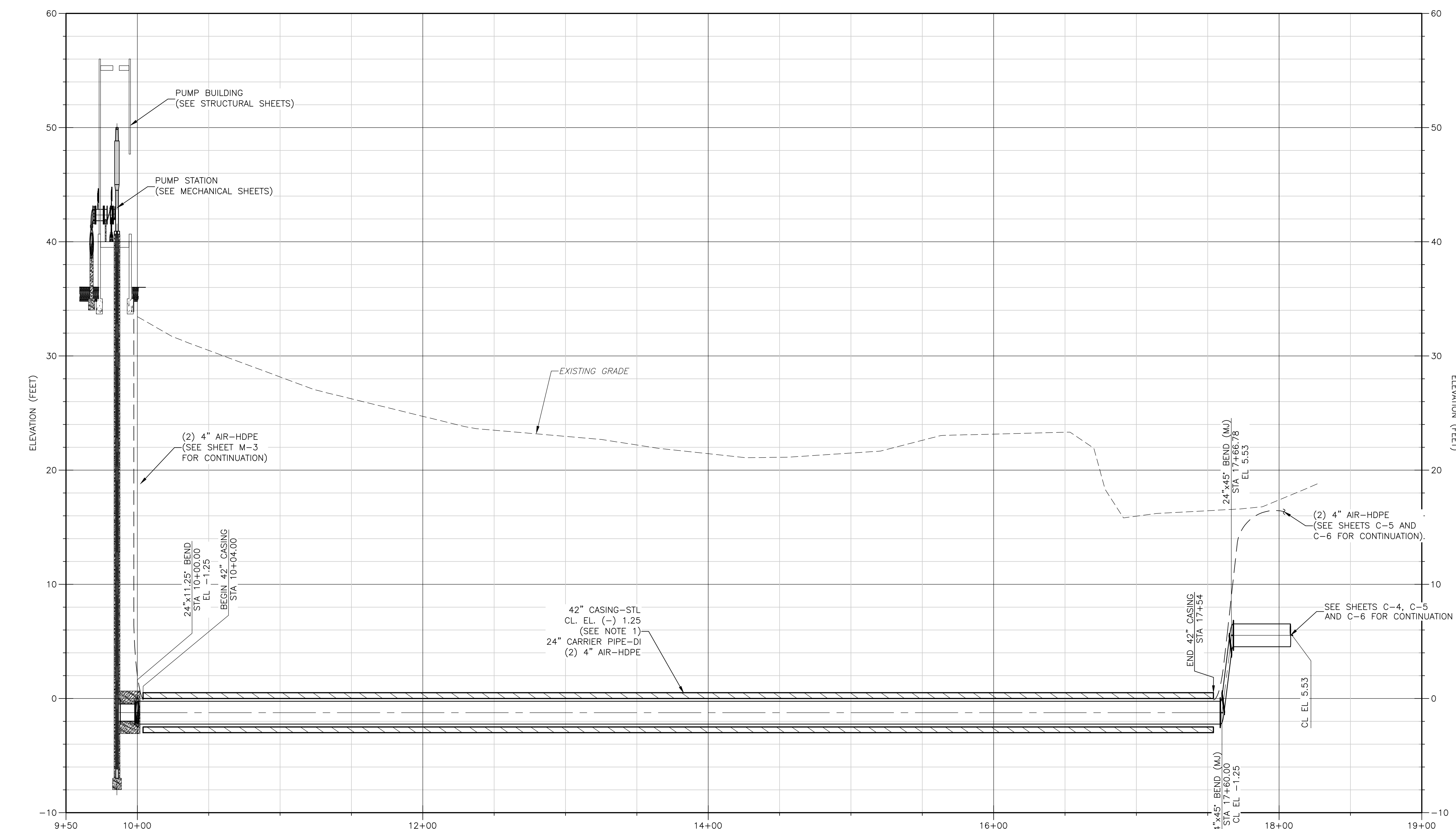


ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

INTAKE STRUCTURE SECTIONS

DATE: CRAIG G. MONTGOMERY PE NO. 45953
PROJECT NO. 9247-221208 FILE NAME: C007ISST.DWG
SHEET NO. C-7

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NOTE:
1. REFERS TO 24" CARRIER PIPE CENTERLINE ELEVATION

PROFILE
 HORZ. 1" = 40'
 VERT. 1" = 5'

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY	 4651 Salisbury Road, Suite 420 Jacksonville, FL 32256 Tel: (904) 731-7109 FL COA No. EB-0000020
DRAWN BY: D. AUST	
SHEET CHK'D BY: C. MONTGOMERY	
CROSS CHK'D BY: C. SCOTT	
APPROVED BY: S. WOODS	
DATE: MAY 2022	

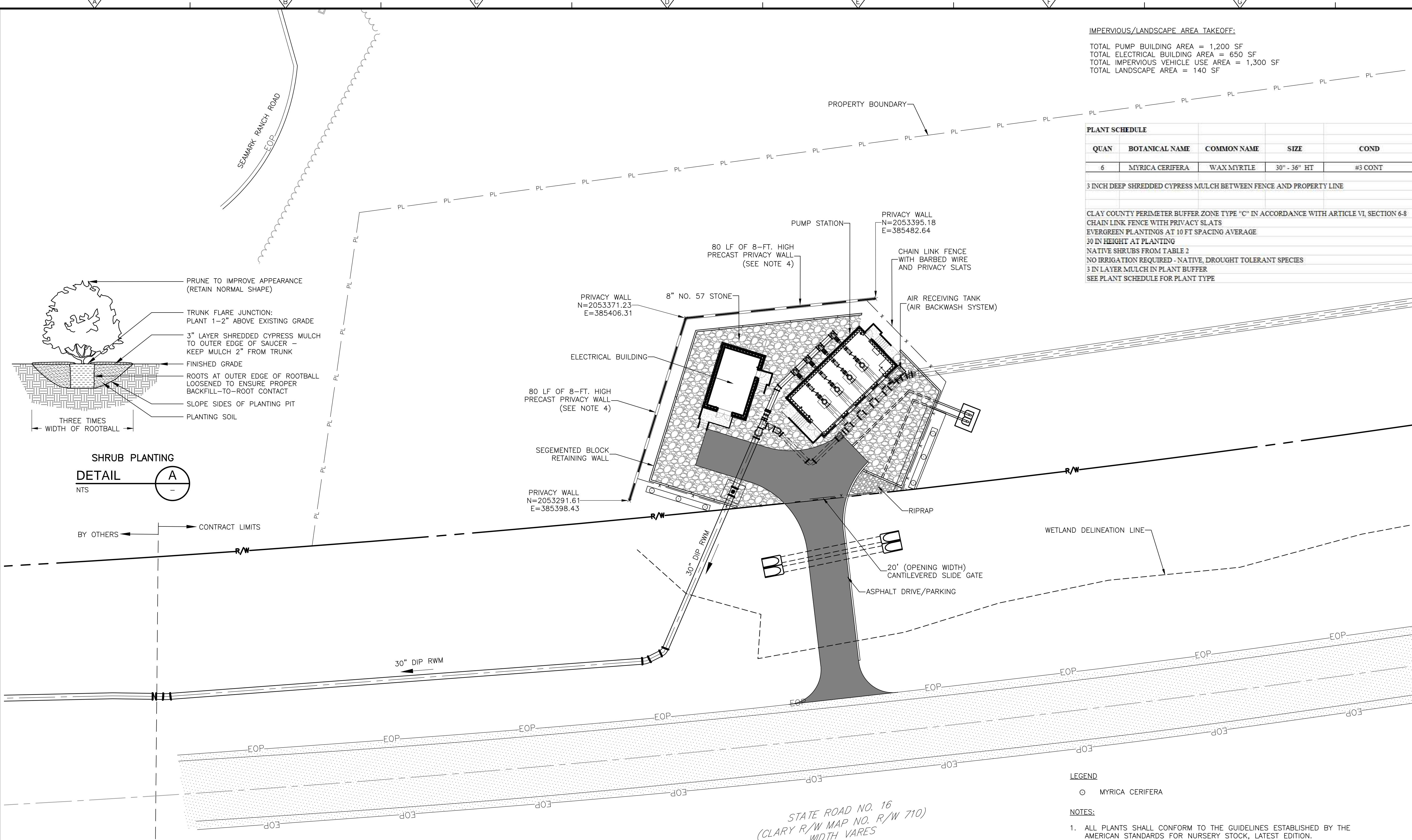
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

PUMP STATION 24" SUCTION PIPING PROFILE

DATE: CRAIG G. MONTGOMERY PE NO. 45953
PROJECT NO. 9247-221208 FILE NAME: C008PPSP.DWG
SHEET NO. C-8

ISSUED FOR BID

XREFS: [M:\P0000, CDMS_2234, CWP001ST, ANZ000PS - Floor Plan - 2D, MYP0001, ANZ000EB - Floor Plan - 2D, CFP000SS, CFP000ST, MWP000S, SWZ000S, ANZ000RP - Floor Plan, ANZ000PS - Floor Plan, MWP000PS, MWS000PS, MD03MMDT, ELECSITE, CWP000SP] Images: [A:\081d420]
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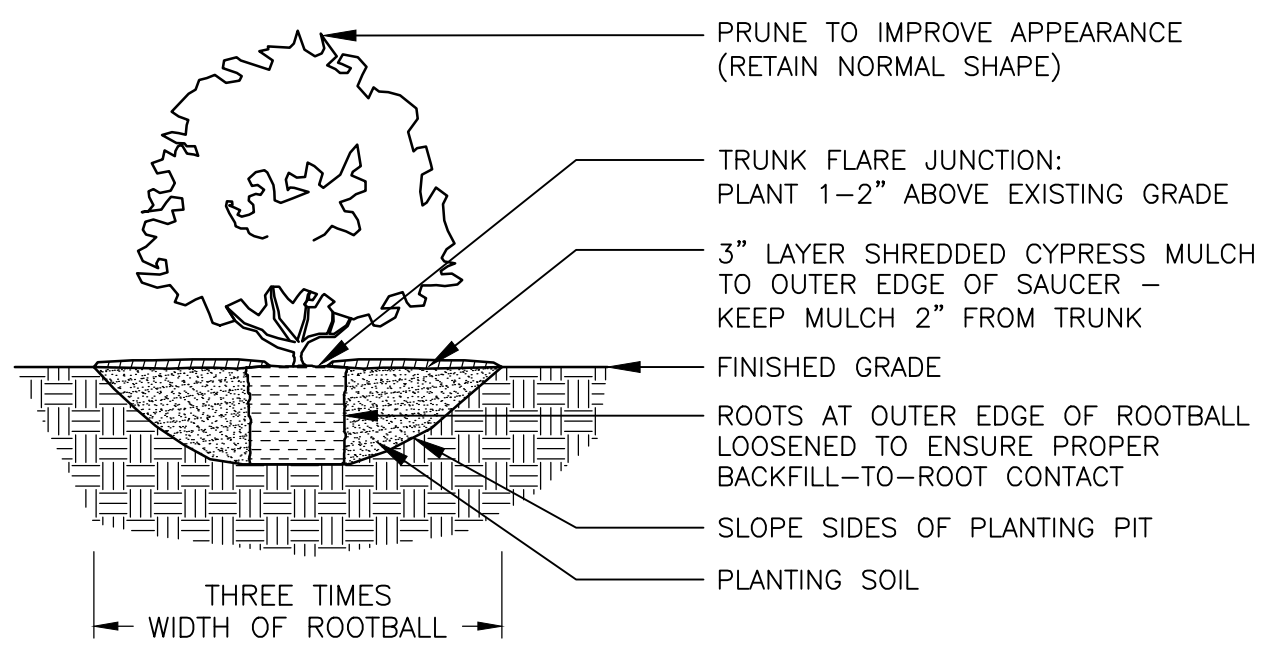
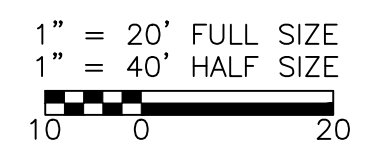
IMPERVIOUS/LANDSCAPE AREA TAKEOFF:
 TOTAL PUMP BUILDING AREA = 1,200 SF
 TOTAL ELECTRICAL BUILDING AREA = 650 SF
 TOTAL IMPERVIOUS VEHICLE USE AREA = 1,300 SF
 TOTAL LANDSCAPE AREA = 140 SF

PLANT SCHEDULE

QUAN	BOTANICAL NAME	COMMON NAME	SIZE	COND
6	MYRICA CERIFERA	WAX MYRTLE	30" - 36" HT	#3 CONT

3 INCH DEEP SHREDDED CYPRESS MULCH BETWEEN FENCE AND PROPERTY LINE

CLAY COUNTY PERIMETER BUFFER ZONE TYPE "C" IN ACCORDANCE WITH ARTICLE VI, SECTION 6-8
 CHAIN LINK FENCE WITH PRIVACY SLATS
 EVERGREEN PLANTINGS AT 10 FT SPACING AVERAGE
 30 IN HEIGHT AT PLANTING
 NATIVE SHRUBS FROM TABLE 2
 NO IRRIGATION REQUIRED - NATIVE, DROUGHT TOLERANT SPECIES
 3 IN LAYER MULCH IN PLANT BUFFER
 SEE PLANT SCHEDULE FOR PLANT TYPE



**SHRUB PLANTING
 DETAIL A**
 NTS

LEGEND
 ○ MYRICA CERIFERA

- NOTES:**
- ALL PLANTS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE AMERICAN STANDARDS FOR NURSERY STOCK, LATEST EDITION.
 - ALL PLANTING BEDS SHALL HAVE 3 IN DEPTH SHREDDED CYPRESS MULCH.
 - ALL DISTURBED AREAS NOT COVERED WITH PAVEMENT, PADS, STRUCTURES, OR CRUSHED STONE SHALL RECEIVE 4 IN LAYER LOAM AND GRASS SEED UNLESS NOTED OTHERWISE.
 - PRECAST PRIVACY WALL SHALL BE PERMACAST PERMAWALL 1.0, OR EQUAL. DESIGN CALCULATIONS FOR WIND LOADING AND FOUNDATION DESIGN SHALL BE THE RESPONSIBILITY OF THE WALL MANUFACTURER AND SHALL BE SUBMITTED FOR REVIEW.

STATE ROAD NO. 16
 (CLARY R/W MAP NO. R/W 710)
 WIDTH VARES

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY
 DRAWN BY: C. SCOTT
 SHEET CHK'D BY: C. MONTGOMERY
 CROSS CHK'D BY: J. WITTIG
 APPROVED BY: S. WOODS
 DATE: MAY 2022

4651 Salisbury Road, Suite 420
 Jacksonville, FL 32256
 Tel: (904) 731-7109
 FL COA No. EB-0000020

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

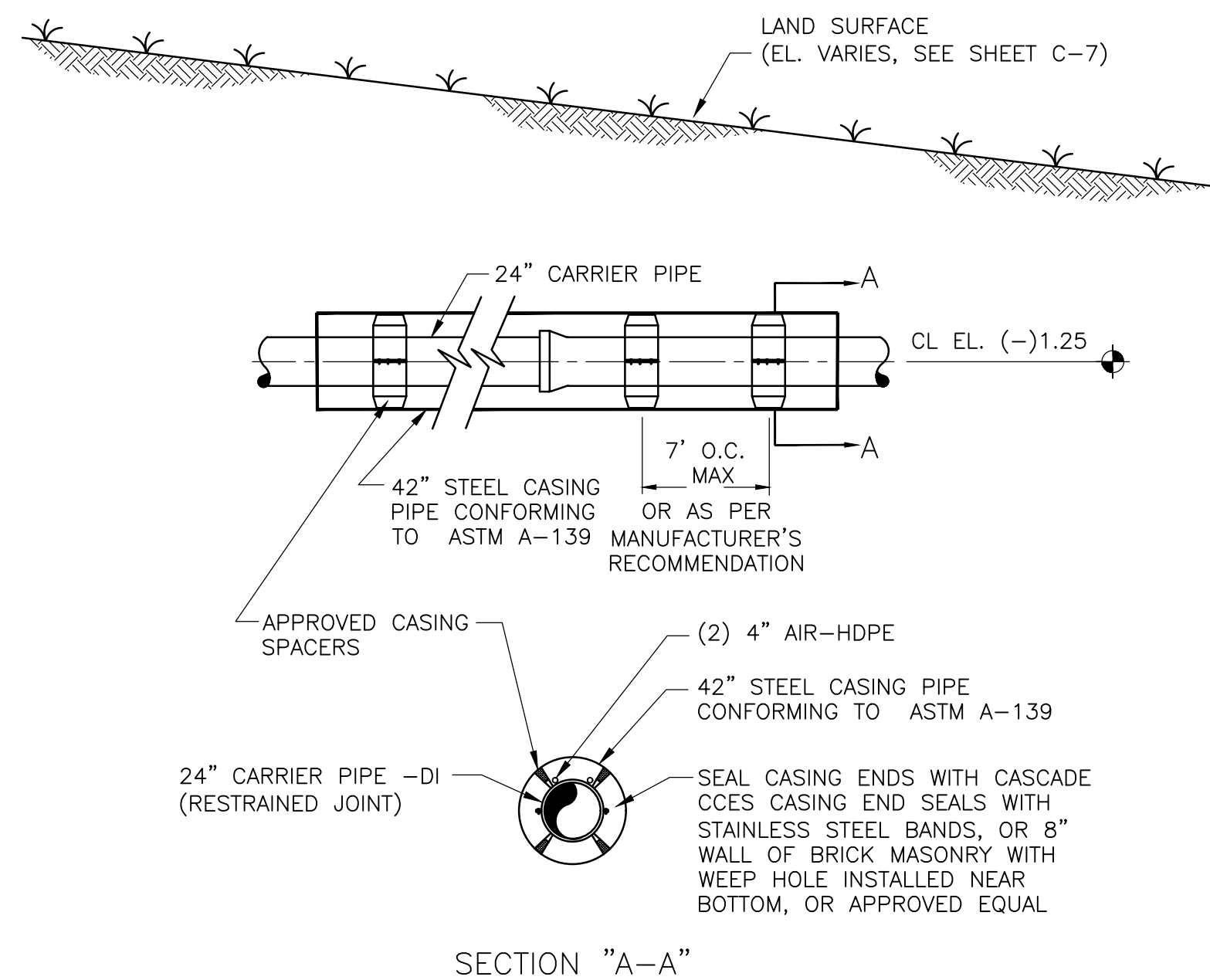
PUMP STATION FENCING,
 PRIVACY WALL AND LANDSCAPING PLAN

DATE:
 CRAIG C. MONTGOMERY
 PE NO. 45953

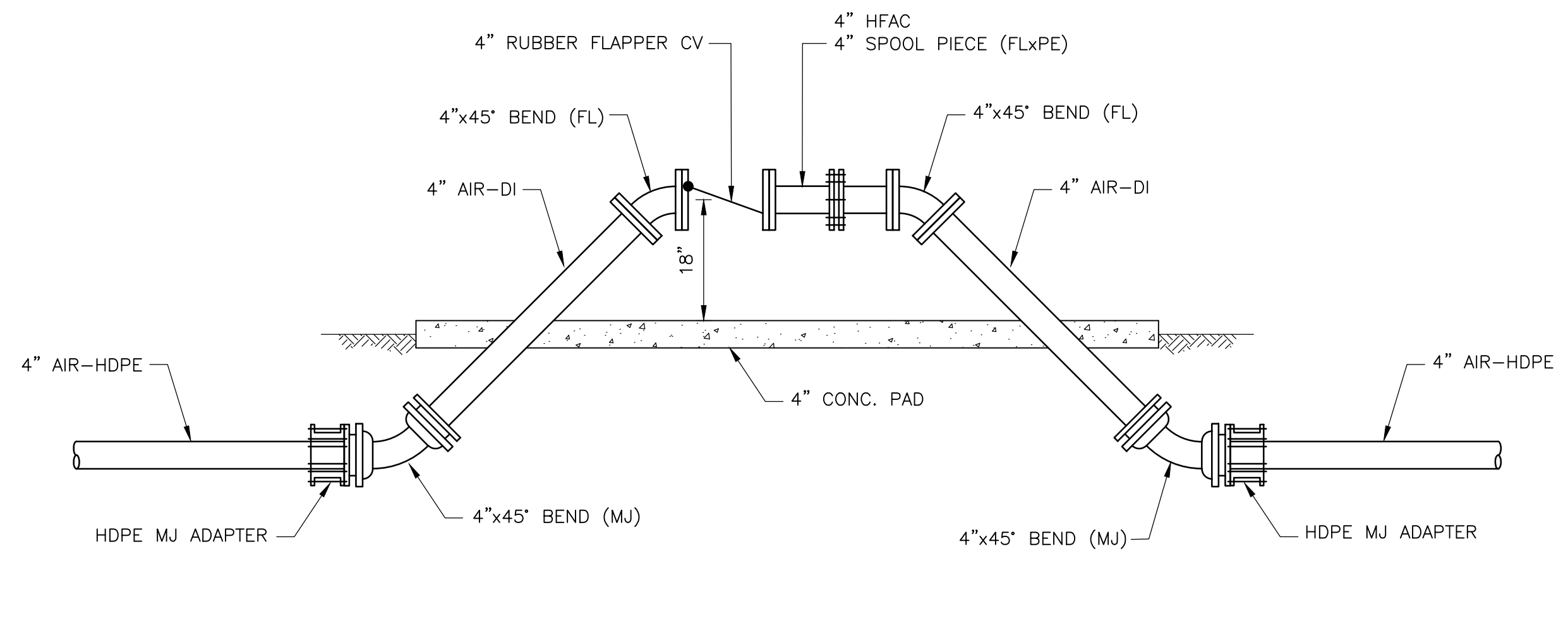
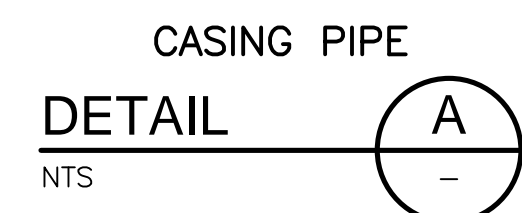
PROJECT NO. 9247-221208
 FILE NAME: C009LSPL.DWG

SHEET NO.
 C-9

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- NOTE:**
- CASING PIPE MATERIAL SHALL BE AS CALLED OUT ON THE PLANS. STEEL CASING ONLY SHALL BE USED FOR MICROTUNNEL INSTALLATIONS AND SHALL CONFORM TO ASTM A-139.
 - MINIMUM WALL THICKNESS FOR CASING PIPE SHALL BE 0.5 IN. CASING PIPE SHALL BE PAINTED INSIDE AND OUTSIDE WITH TWO COATS BITUMASTIC ENAMEL COATING IN ACCORDANCE WITH AWWA C203.



REV. NO.	DATE	DRWN	CHKD	REMARKS

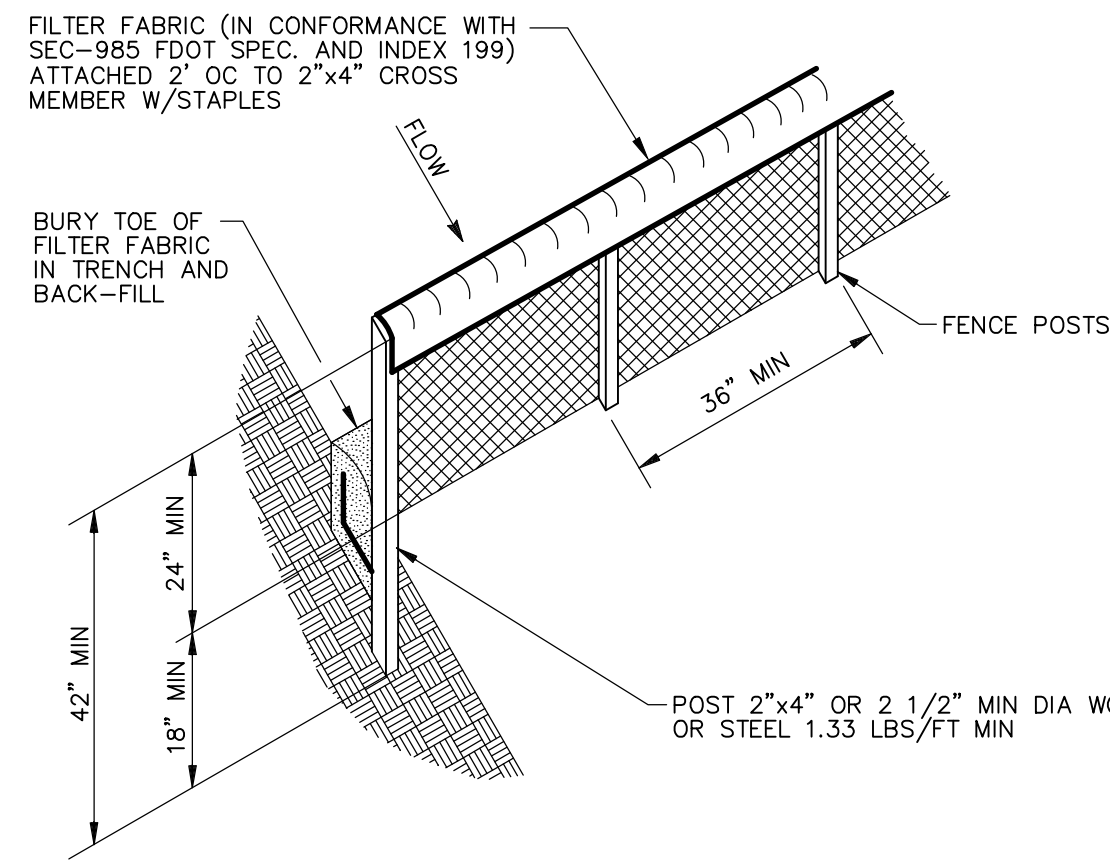
DESIGNED BY: C. MONTGOMERY
 DRAWN BY: C. SCOTT
 SHEET CHK'D BY: C. MONTGOMERY
 CROSS CHK'D BY: J. WILLITG
 APPROVED BY: S. WOODS
 DATE: MAY 2022



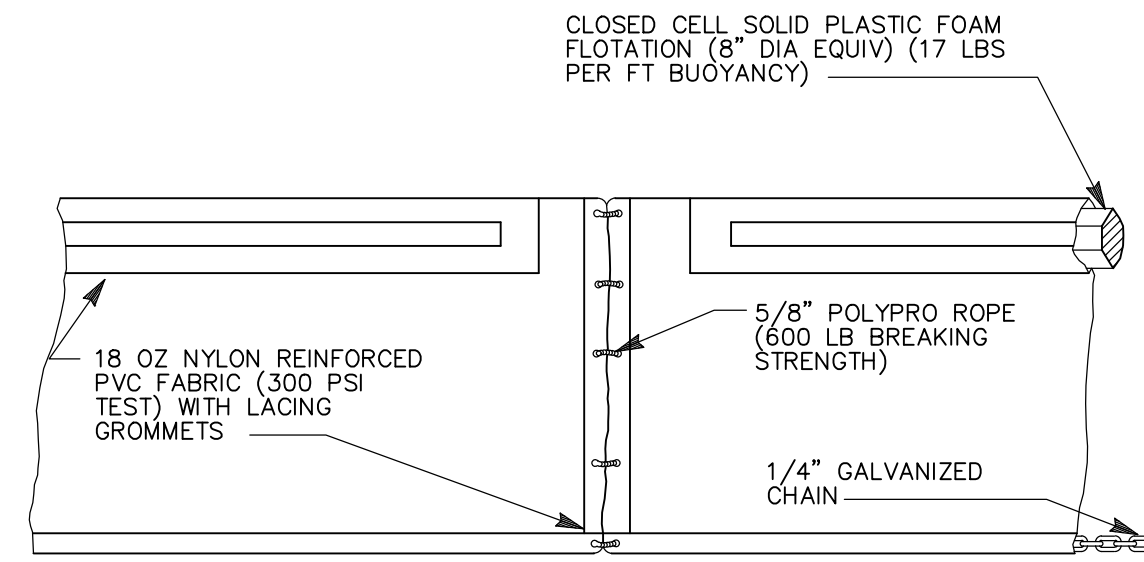
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

MISCELLANEOUS CIVIL DETAILS
 CD-1

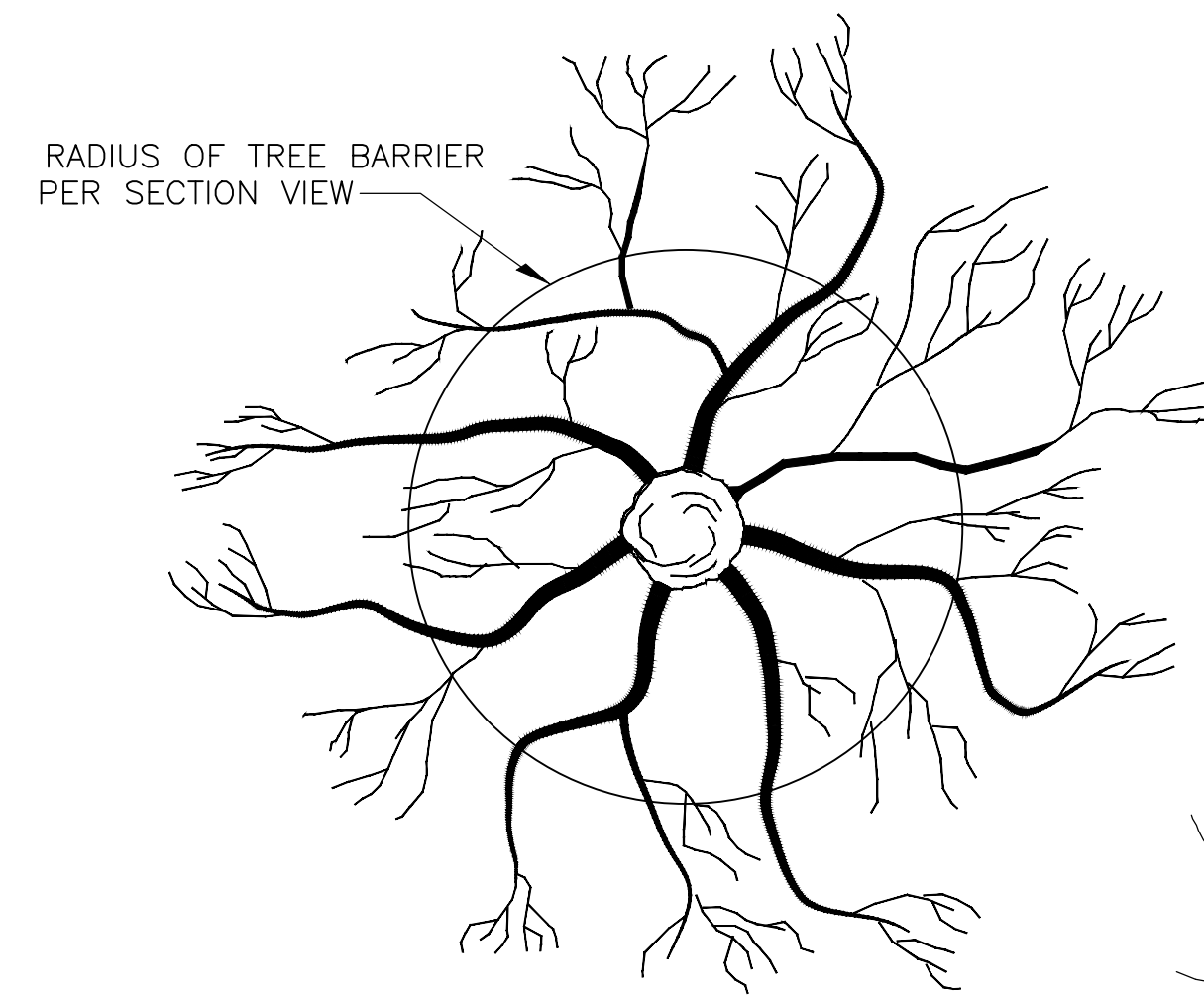
DATE: CRAIG C MONTGOMERY
 PE NO. PE45953
 PROJECT NO. 9247-221208
 FILE NAME: CD01DTLS.DWG
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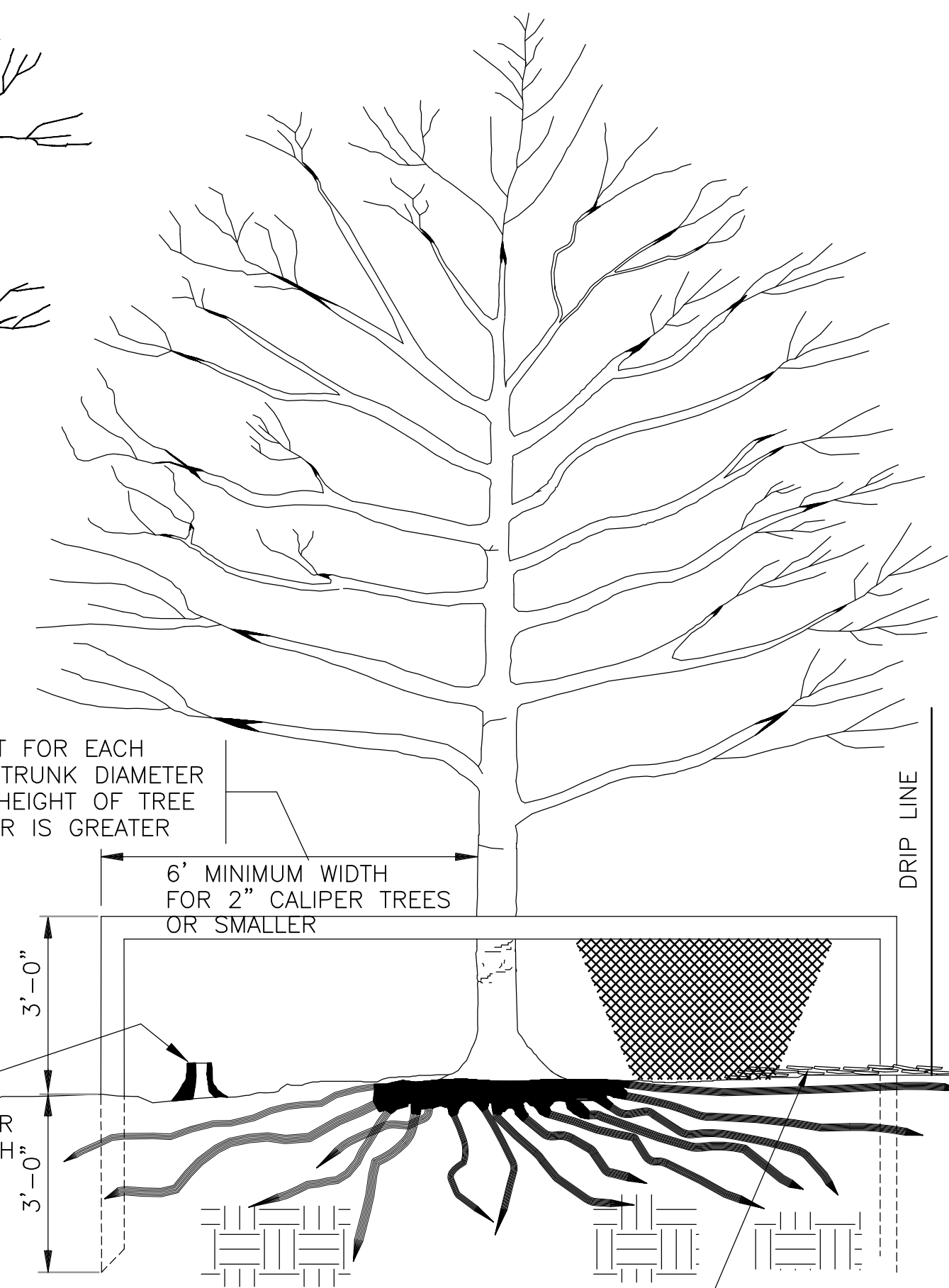
STAKED SILT FENCE
DETAIL A
 NTS



FLOATING TURBIDITY BARRIER
DETAIL B
 NTS



PLAN VIEW OF ROOT ZONE



ONE FOOT FOR EACH INCH OF TRUNK DIAMETER OR 1/2 HEIGHT OF TREE WHICHEVER IS GREATER

FOR PRUNING SEE NATIONAL ARBORIST ASSOCIATION SPECS.

DEAD TREES AND SCRUB OF UNDER GROWTH SHALL BE CUT FLUSH WITH ADJACENT GRADE. NO GRUBBING ALLOWED UNDER DRIP LINE.

2x4" STANDARDS + 1x4" RAILS OR ORANGE SAFETY FENCING MAY BE USED.

6" BARK MULCH, PLACE BARK MULCH AT AREAS NOT PROTECTED BY BARRIER.

TREE PROTECTION BARRICADE SPECIFICATIONS:

- CONTRACTOR TO COMPLY WITH ALL LOCAL TREE ORDINANCES IN ADDITION TO THE SPECIFICATIONS NOTED BELOW.
- FOUR CORNER UPRIGHT STAKES OF NO LESS THAN 2" X 2" LUMBER CONNECTED BY HORIZONTAL MEMBERS OF NO LESS THAN 1" X 4" LUMBER; OR UPRIGHT STAKES SPACED AT 4-5' INTERVALS OF NO LESS THAN 2" X 2" LUMBER CONNECTED BY TWINE FLAGGED WITH PLASTIC SURVEYING TAPE AT REGULAR INTERVALS.
- REQUIRED BARRICADES AND FLAGGING SHALL BE ERECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO COMMENCEMENT OF LAND ALTERATION ACTIVITIES. BARRICADES SHALL REMAIN IN PLACE UNTIL ALTERATION AND CONSTRUCTION ACTIVITIES ARE COMPLETED.
- DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLENE OF A TREE TO REMAIN ON THE SITE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- LAND ALTERATION ACTIVITIES SHALL NOT UNNECESSARILY REMOVE EXISTING VEGETATION AND ALTER EXISTING TOPOGRAPHY.

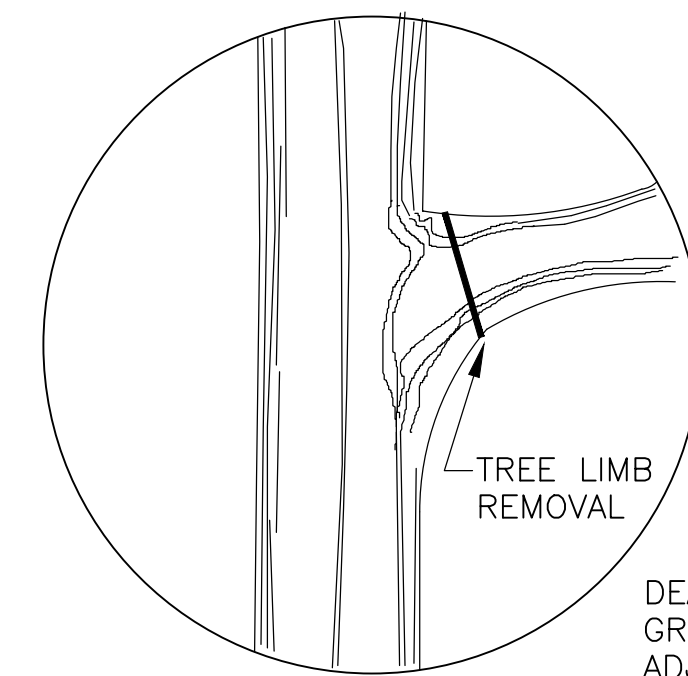
TREE PROTECTION BARRICADE

DETAIL D
 NTS

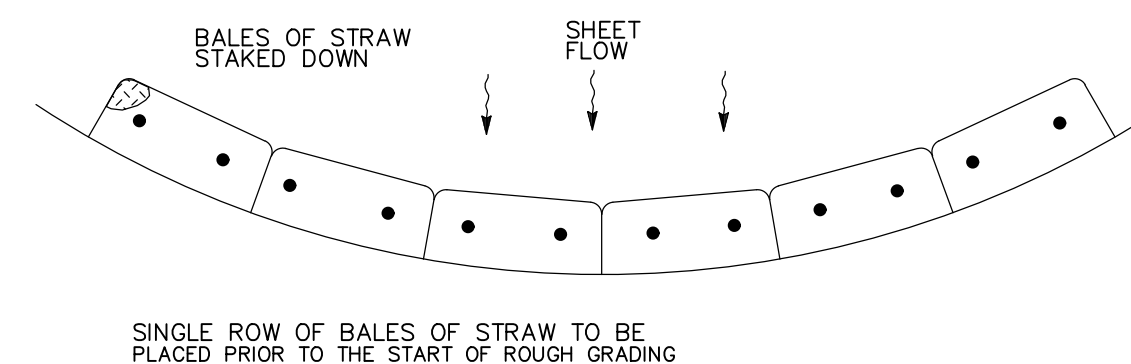
EROSION CONTROL NOTES

IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE PLANS. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE PLANS AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED, TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE PLANS AND AS REQUIRED BY THE REGULATORY AGENCIES.

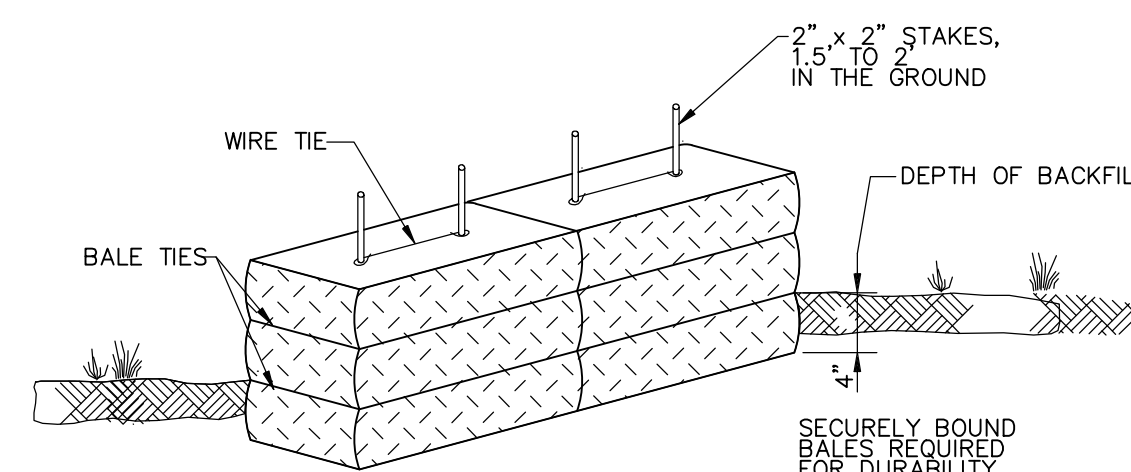
- SEDIMENT BASINS AND TRAPS, PERIMETER DITCHES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP BEFORE ANY LAND-DISTURBING TAKES PLACE.
- ALL SEDIMENT CONTROL MEASURES ARE TO BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON BALANCE OF SITE. PERIMETER SEDIMENT BARRIERS SHALL BE CONSTRUCTED TO PREVENT SEDIMENT OR TRASH FROM FLOWING OR FLOATING ON TO ADJACENT PROPERTIES.
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCK PILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTIONS AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- AFTER ANY SIGNIFICANT RAINFALL SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED FOR INTEGRITY. ANY DAMAGED DEVICES SHALL BE REPAIRED IMMEDIATELY.
- CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
- WHENEVER WATER SEEPS FROM A SLOPE FACE ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
- SEDIMENT WILL BE PREVENTED FROM ENTERING ANY STORM DRAIN SYSTEM, DITCH, OR CHANNEL. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- BEFORE TEMPORARY OR NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
- WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENRICHMENT. CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
- STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY.
- EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 1 ACRE. IF THE TOTAL AREA TO BE CLEARED IS EQUAL TO, OR EXCEEDS ONE (1) ACRE, THEN THE CONTRACTOR WILL BE RESPONSIBLE FOR PREPARING A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH EPA'S NPDES REGULATIONS. THE CONTRACTOR WILL BE RESPONSIBLE FOR SUBMITTING A NOTICE ON INTENT (NOI) TO EPA FORTY-EIGHT (48) HOURS PRIOR TO COMMENCING CONSTRUCTION.
- TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 30 DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.
- TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 12 ABOVE LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.
- TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER. TEMPORARY GRASSING SHALL BE THE SAME MIX & AMOUNT REQUIRED FOR PERMANENT GRASSING IN THE CONTRACT SPECIFICATIONS.
- TEMPORARY REGRASSING : IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.
- MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.
- PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.
- PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED AND MULCHED OR SODDED.
- ALL SLOPES STEEPER THAN 3:1 SHALL BE SODDED.



TREE LIMB REMOVAL



PLAN
 NTS



TEMPORARY STRAW BALE SEDIMENT BARRIER

DETAIL C
 NTS

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	C. MONTGOMERY
DRAWN BY:	C. SCOTT
SHEET CHK'D BY:	C. MONTGOMERY
CROSS CHK'D BY:	J. WITIG
APPROVED BY:	S. WOODS
DATE:	MAY 2022

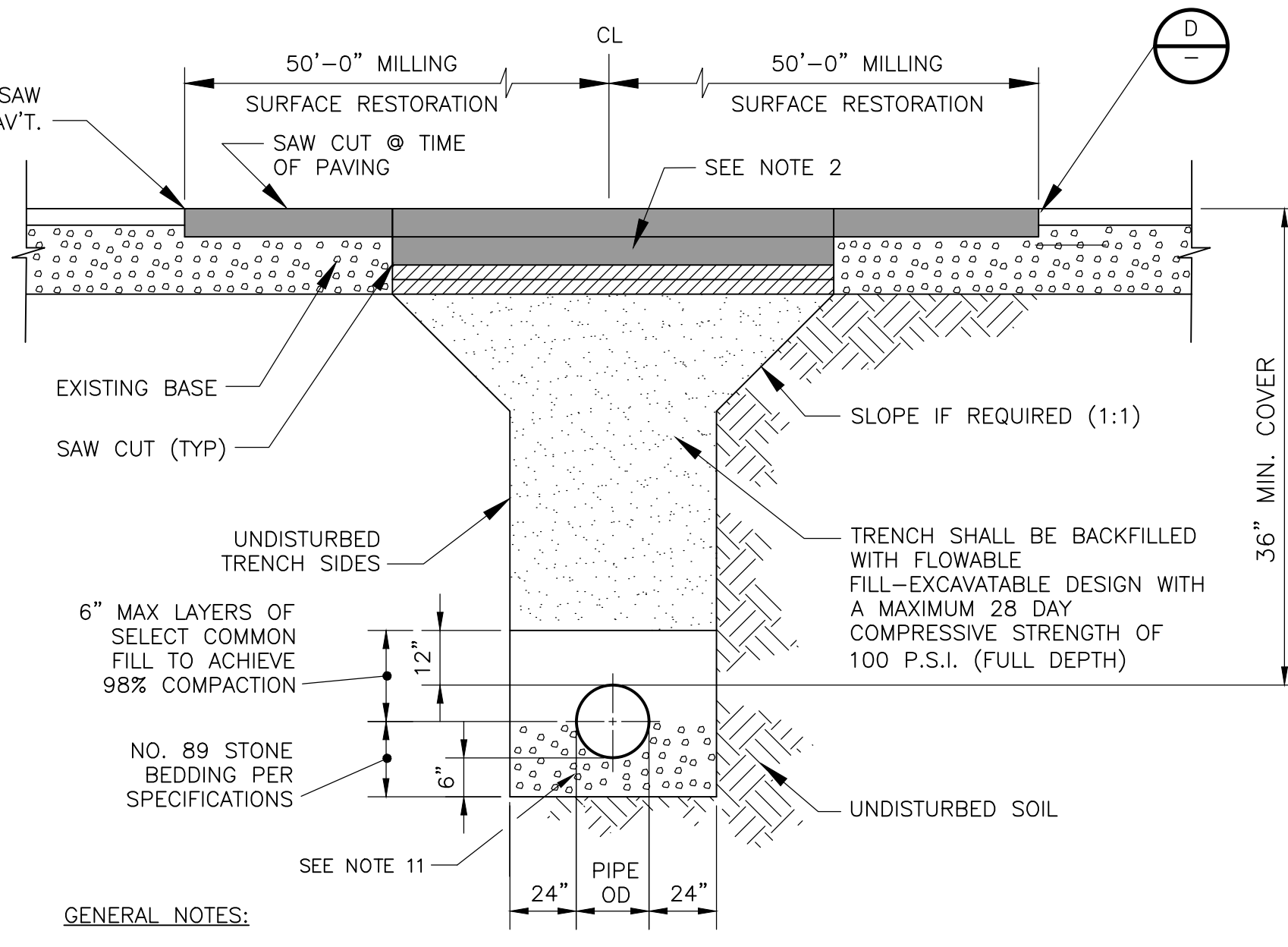
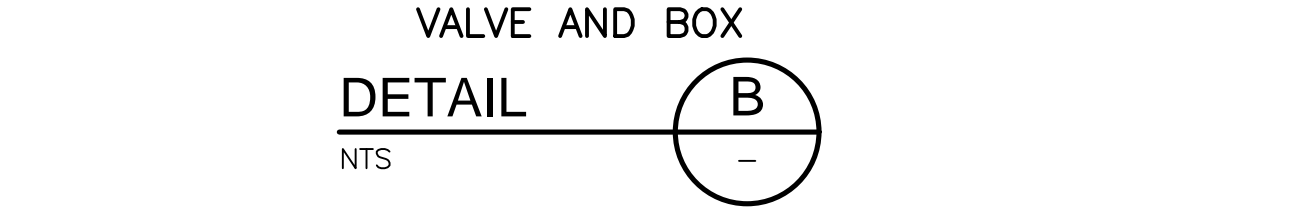
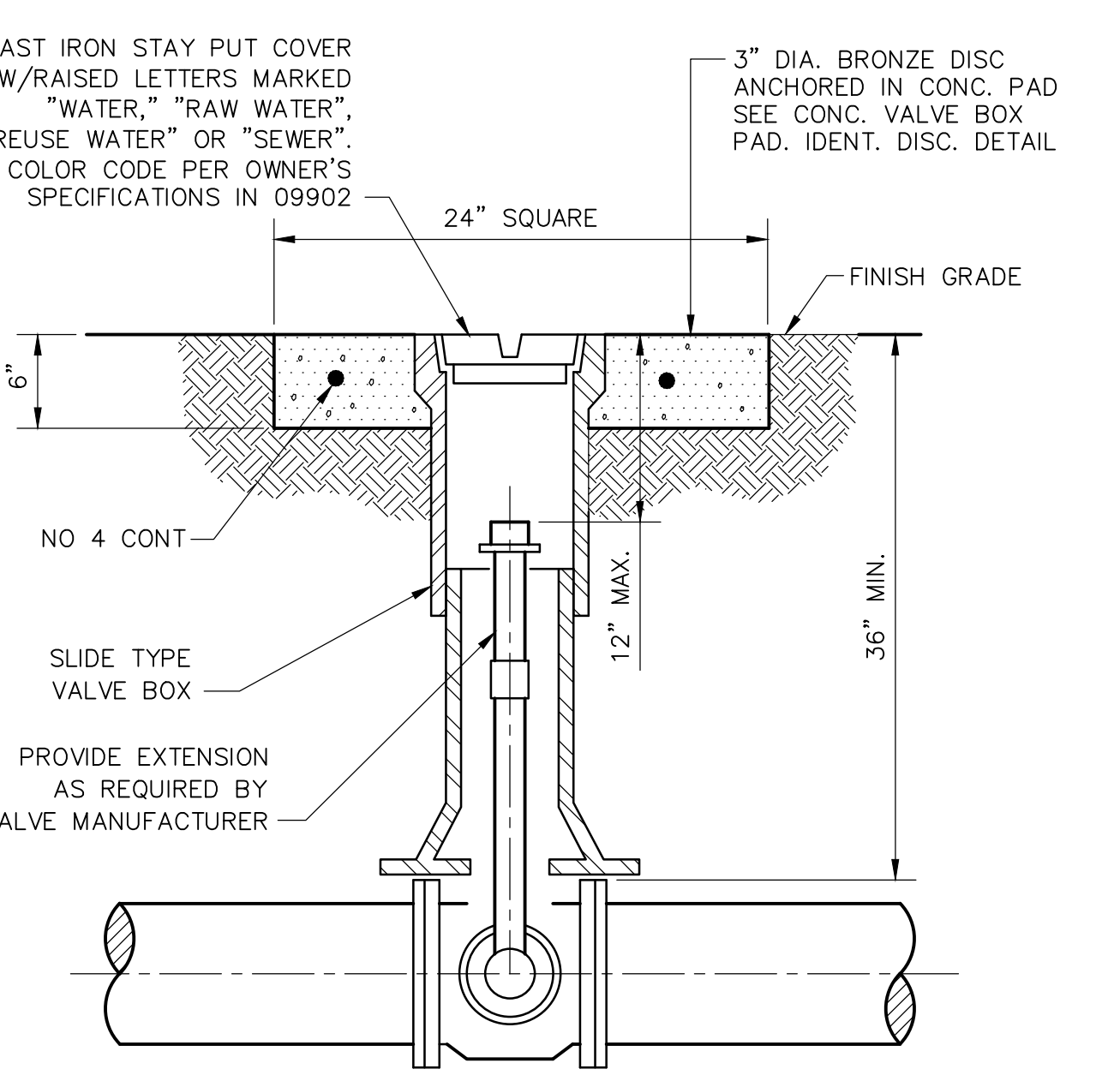
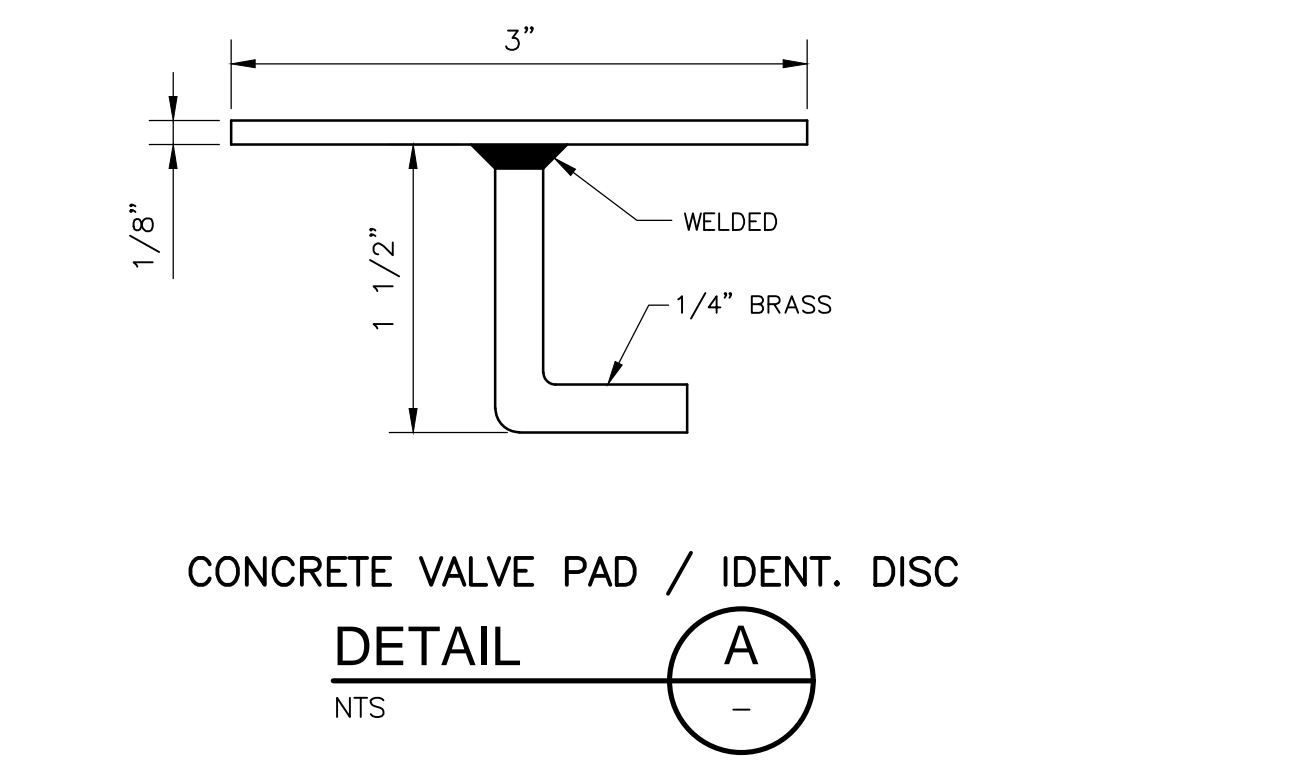
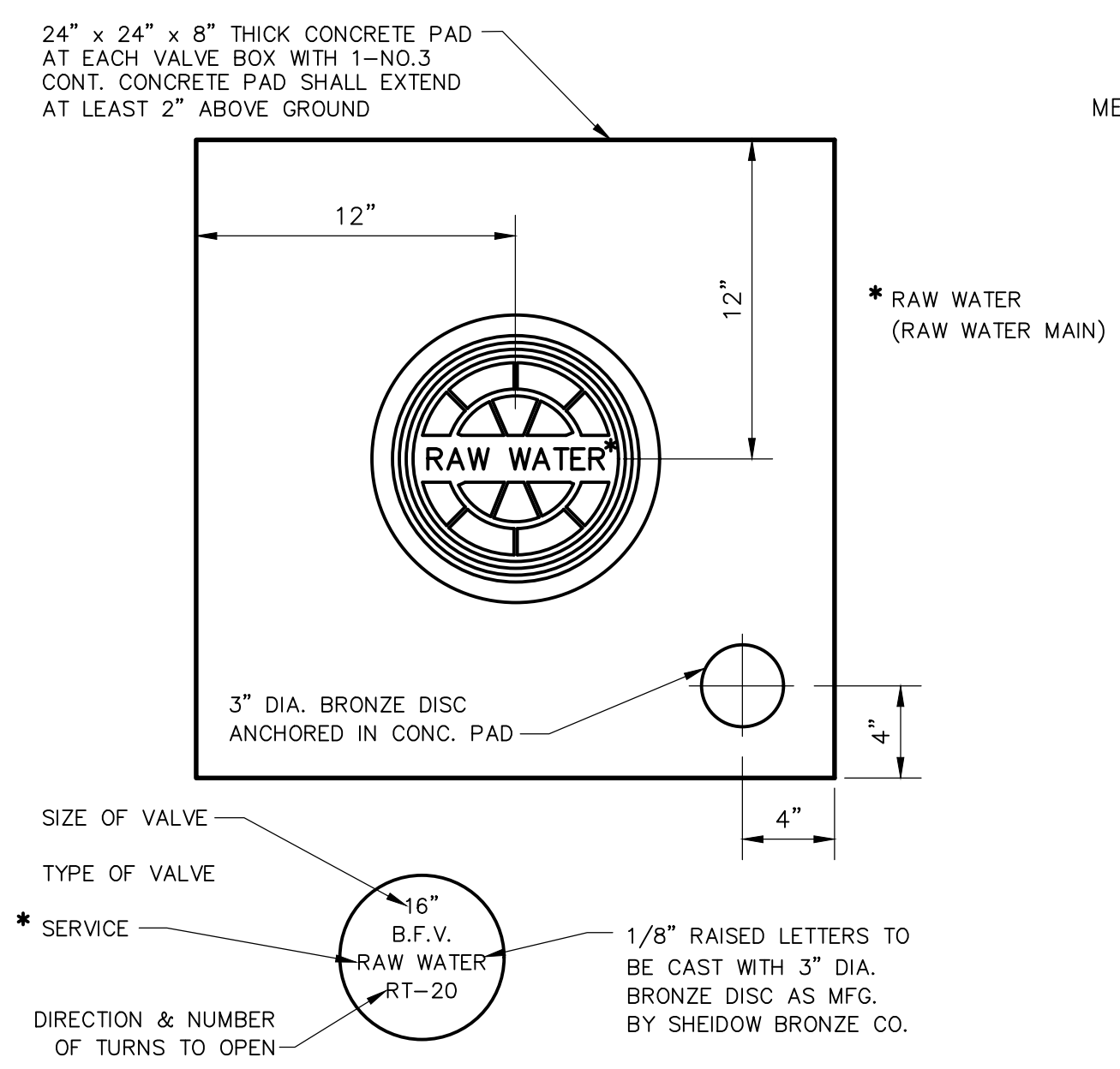


ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

SEDIMENTATION AND EROSION CONTROL
 DETAILS

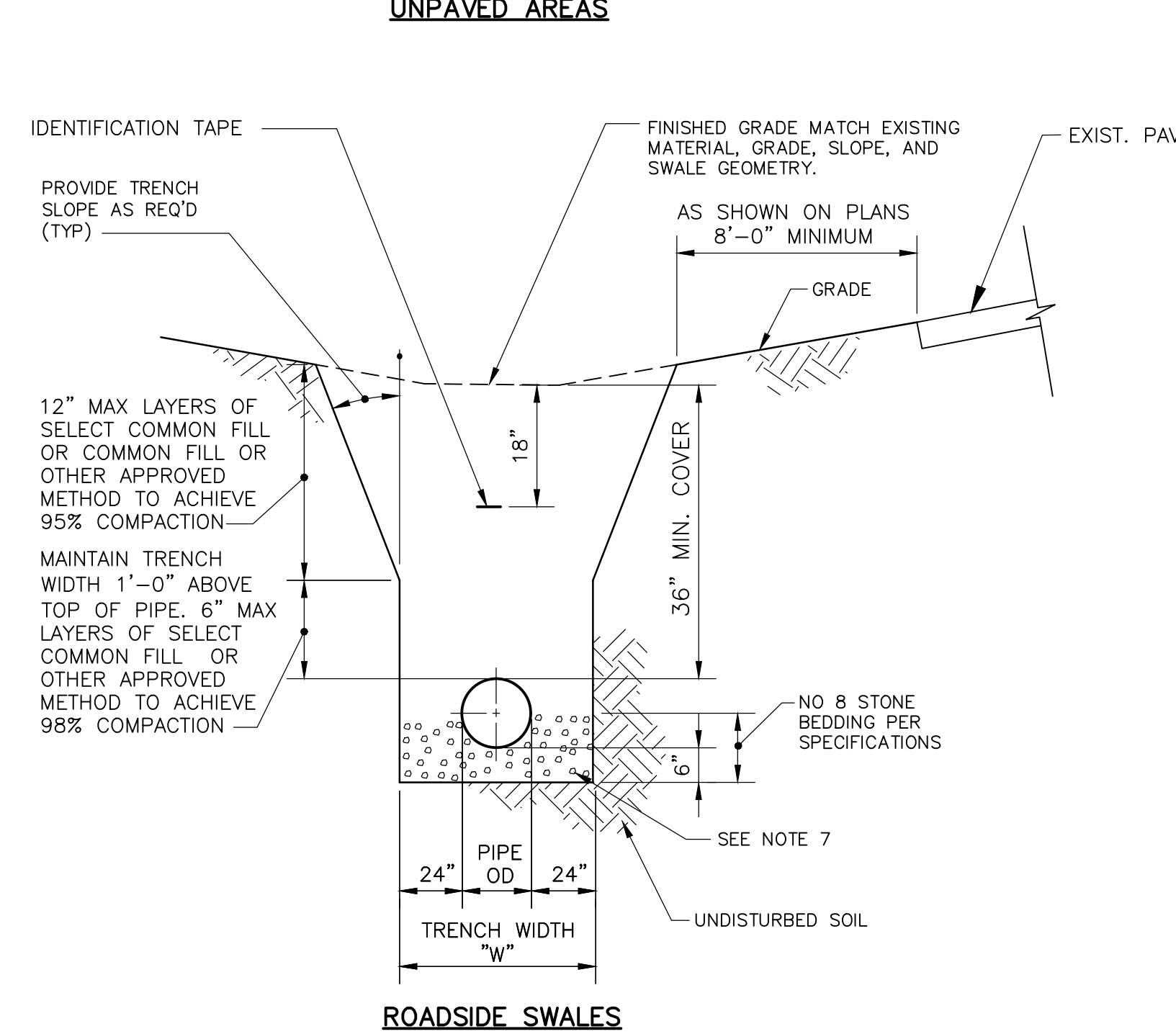
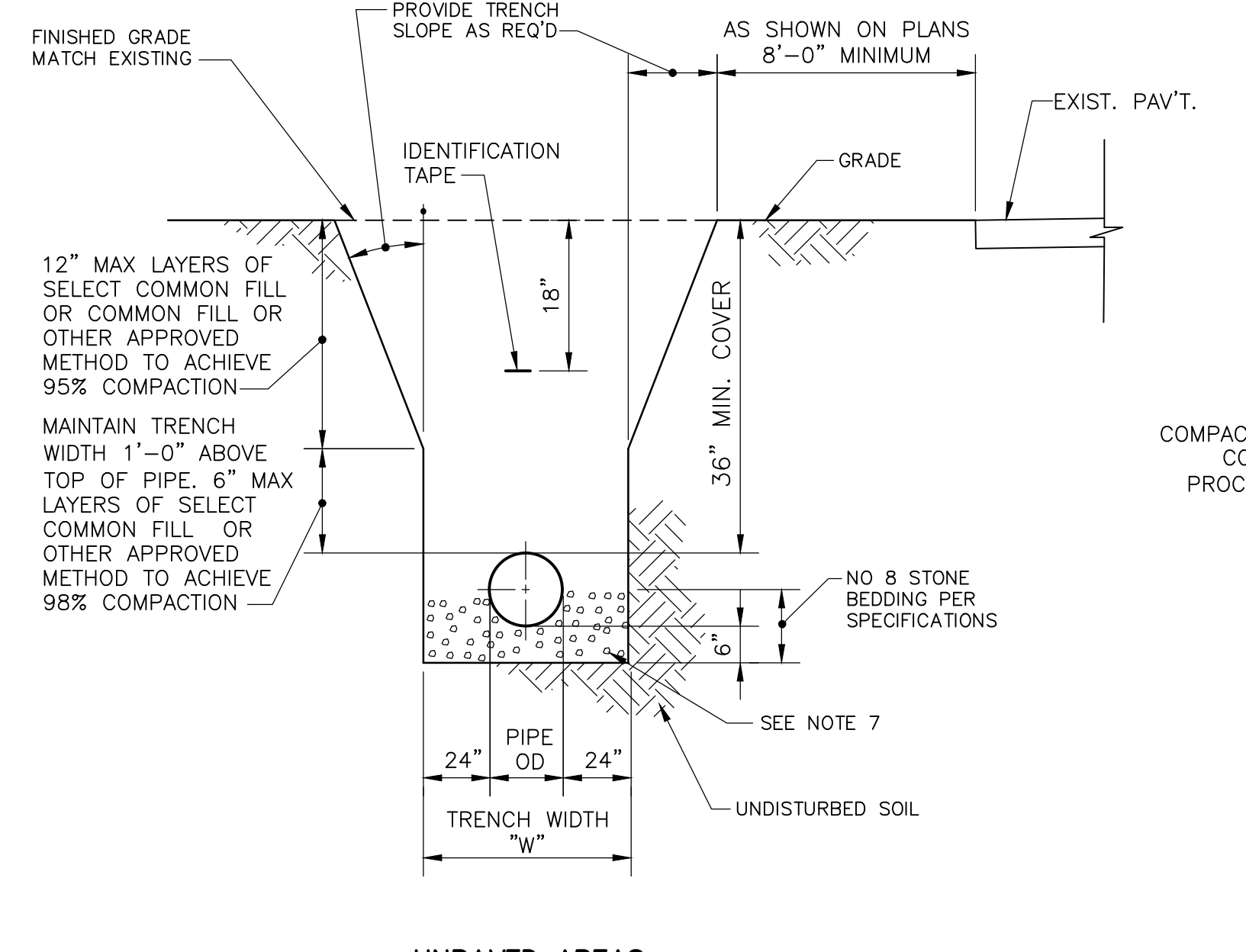
DATE:	CRAIG C. MONTGOMERY
PE NO.	45953
PROJECT NO.	9247-221208
FILE NAME:	CD02ECDT.DWG
SHEET NO.	CD-2

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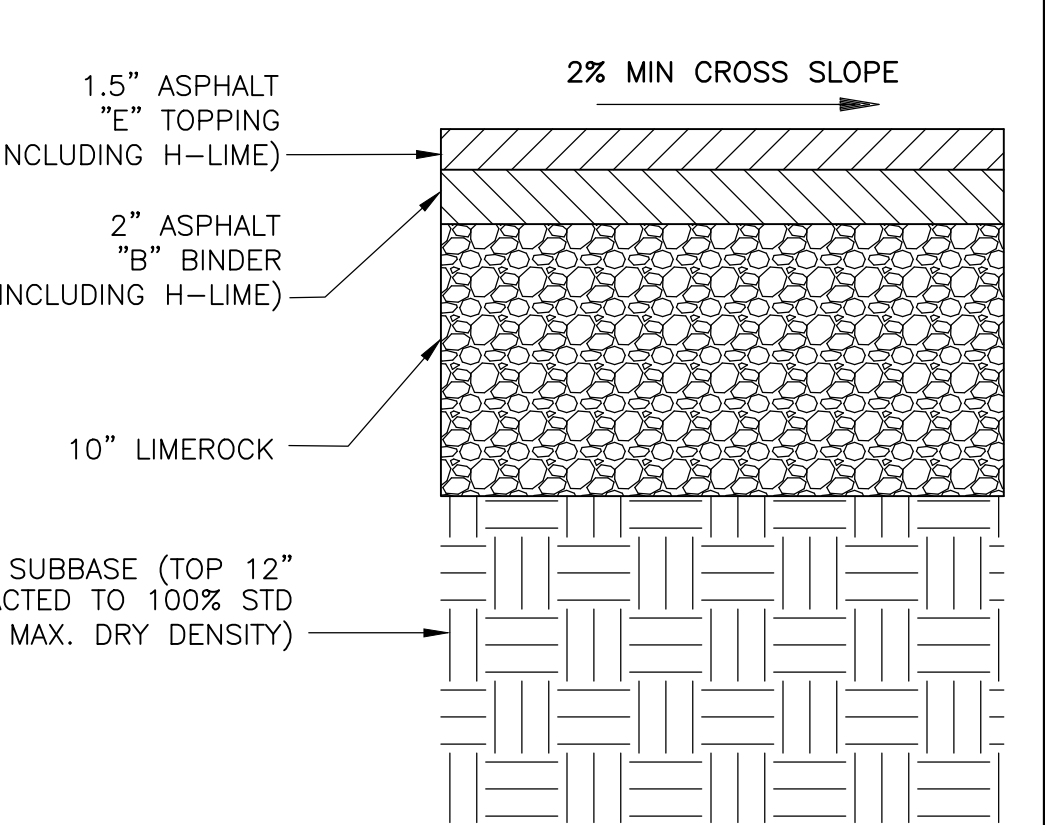


- GENERAL NOTES:**
- ALL MATERIALS, WORK AND TESTING SHALL MEET FDOT STANDARD SPECIFICATIONS.
 - ROADWAY RESTORATION WILL UTILIZE FULL DEPTH ASPHALT (TWO 3" LIFTS OF SP12.5 AND TWO 2" LIFTS OF SP9.5), MILL AND RESURFACE THE ROADWAY 50 FEET EITHER SIDE OF THE CENTER LINE OF THE ASPHALT PATCH 28 DAYS AFTER INSTALLATION.
 - TRENCH SHALL BE BACKFILLED TO BOTTOM OF ASPHALT WITH EXCAVATABLE FLOWABLE FILL WITH A MAXIMUM 28 DAY COMPRESSIVE STRENGTH OF 100 P.S.I. CONFORMING TO FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), SECTION 121.
 - PAVEMENT REPLACEMENT SHALL BE DETERMINED BY THE LOCATION & DEPTH OF THE TRENCH. CONTRACTOR SHALL ENDEAVOR TO KEEP OPEN TRENCH WIDTH TO A MINIMUM IN ORDER TO MINIMIZE IMPACTS AND RESTORATION LIMITS WITHIN FDOT RIGHT-OF-WAY.
 - CONTRACTOR SHALL RESTORE PAVEMENT TO MATCH GRADES WHICH EXISTED PRIOR TO CONSTRUCTION. ANY ADDITIONAL SURVEY NECESSARY TO ENSURE THAT THIS REQUIREMENT IS MET SHALL BE PERFORMED BY THE CONTRACTOR AT HIS EXPENSE.
 - WHERE SOIL CONDITIONS CAN NOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE ALTERNATE METHOD OF CONSTRUCTION TO COMPLY WITH THE FLORIDA TRENCH SAFETY ACT.
 - SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD. SEE SPECIFICATIONS.
 - COMPACTION PERCENTAGES SHOWN REFER TO A.A.S.H.T.O. T-180.
 - FOR PVC AND HDPE PIPE - INSTALL MARKER BALLS AS SPECIFIED. SEE SPECIFICATIONS.
 - THE BACK FILL MATERIAL SHALL BE SELECT COMMON FILL PER SPECIFICATIONS.
 - NO. 89 STONE BEDDING 6 INCHES BELOW INVERT TO SPRINGLINE PER SPECIFICATIONS. INSTALL IMPERMEABLE GROUNDWATER BARRIER AT 100-FOOT INTERVALS PER SPECIFICATIONS.
 - MAINTAIN MAXIMUM WATER LEVEL 2' BELOW THE BOTTOM OF THE TRENCH.

TYPICAL SECTION FOR FLEXIBLE RESTORATION WITHIN FDOT RIGHT-OF-WAY



- NOTES:**
- WHERE SOIL CONDITIONS CAN NOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE ALTERNATE METHOD OF CONSTRUCTION TO COMPLY WITH THE FLORIDA TRENCH SAFETY ACT, SEE SPECIFICATION SECTION 02311.
 - SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD. SEE SPECIFICATIONS.
 - COMPACTION PERCENTAGES SHOWN REFER TO A.A.S.H.T.O. T-180.
 - FOR PVC AND HDPE PIPE - INSTALL MARKER BALLS AS SPECIFIED.
 - WHEREVER POSSIBLE, USE IN - SITU MATERIAL FOR BACK FILL PER SPECIFICATIONS.
 - ALL PIPE SHALL BE BURIED WITH IDENTIFICATION TAPE ABOVE THE TOP OF THE PIPE.
 - NO. 89 STONE BEDDING 6 INCHES BELOW INVERT TO SPRINGLINE. INSTALL IMPERMEABLE GROUNDWATER BARRIER AT 100-FOOT INTERVALS PER SPECIFICATIONS.
 - DEWATERING SHALL BE PER SPECIFICATION SECTION 02140.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY	<p>4651 Salisbury Road, Suite 420 Jacksonville, FL 32256 Tel: (904) 731-7109 FL COA No. EB-0000020</p>
DRAWN BY: C. SCOTT	
SHEET CHK'D BY: C. MONTGOMERY	
CROSS CHK'D BY: J. WITIG	
APPROVED BY: S. WOODS	
DATE: MAY 2022	

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

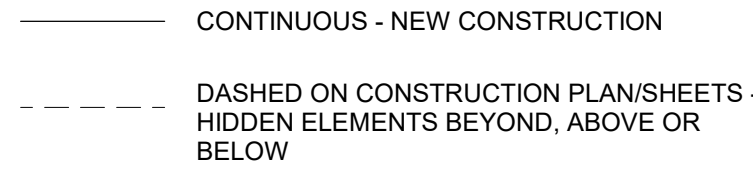
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DATE: CRAIG C MONTGOMERY
 PE NO. 45953

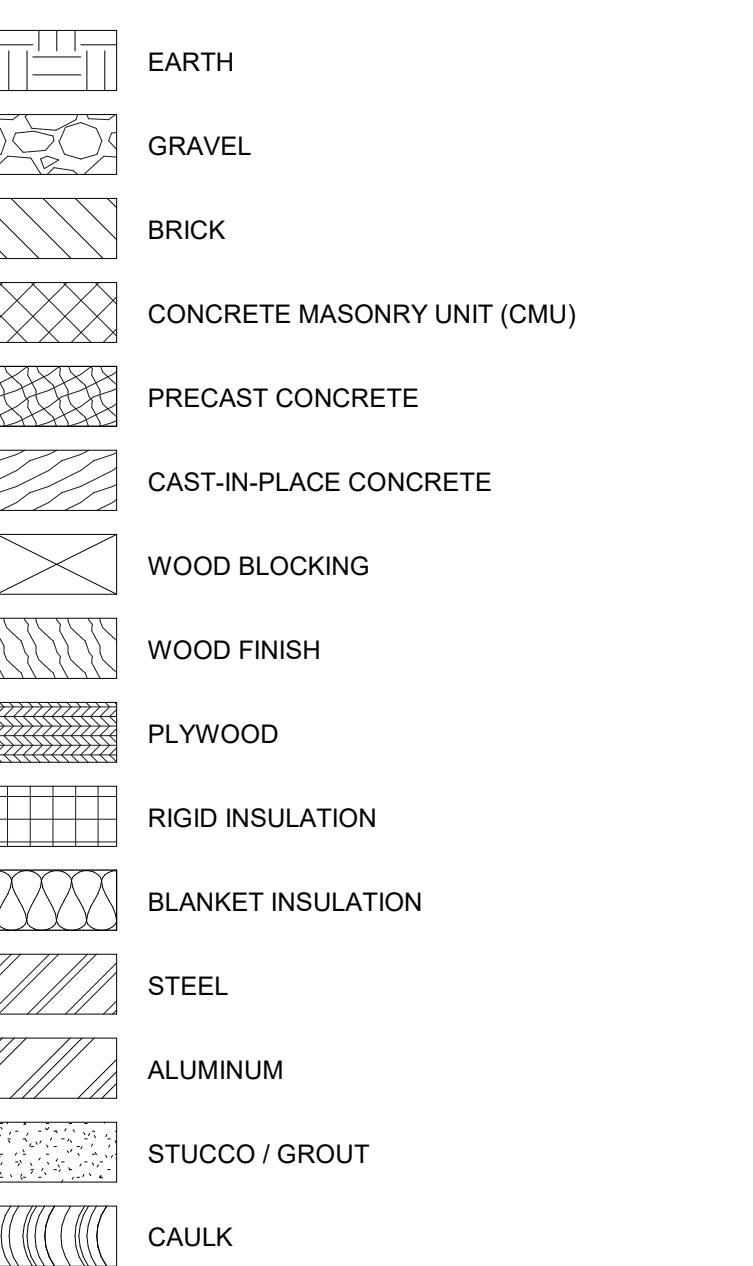
ABBREVIATIONS

&	AND	GB	GLASS BLOCK	REF	ROOF EXHAUST FAN
<	ANGLE	GRT	GRATING	REINF	REINFORCE (D, ING)
@	AT	GYP	GYPUM	REQ'D	REQUIRED
AB	ANCHOR BOLT	GWB	GYPUM WALL BOARD	REV	REVISED
ABV	ABOVE	HARD	HARDENER	RF	ROOF FAN
ACMU	ACOUSTICAL CONCRETE MASONRY UNIT	HD	HEAVY DUTY	RFG	ROOFING
AFF	ABOVE FINISHED FLOOR	HDWD	HARDWOOD	RGH	ROUGH
AFG	ABOVE FINISHED GRADE	HW	HARDWARE	RJ	REVEAL/RUSTICATION JOINT
AL, ALUM	ALUMINUM	HGR	HANGER	RL	RAIN LEADER
AMP	ACOUSTICAL METAL PANELS	HGT	HEIGHT	RLG	RAILING
ANOD	ANODIZE(D)	HM	HOLLOW METAL	RM	ROOM
ASSY	ASSEMBLY	HOR	HORIZONTAL	RO	ROUGH OPENING
BBT	BIOBASED TILE	HP	HIGH POINT	RT	RUBBER TILE
BD	BOARD	HR	HANDRAIL	RWL	RAIN WATER LEADER
BEV	BEVEL(ED)	IN	INCH	S	STEEL S-SHAPED DESIGNATION
BLDG	BUILDING	INST	INSTRUMENTATION	SAT	SUSPENDED ACOUSTICAL TILE
BLK	BLOCK	INSUL	INSULATION	SB	SEAMLESS BASE
BLKG	BLOCKING	JC	JANITOR'S CLOSET	SCHD	SCHEDULE
BRG	BEARING	JT	JOINT	SCRN	SCREEN(ED, ING)
BRK	BRICK	JT FLR	JOINT FILLER	SECT	SECTION
BRS	BRASS	L	LINE OF STRUCTURAL ANGLE DESIGNATION	SF	SEAMLESS FLOORING
BRZ	BRONZE	LAB	LABORATORY	SFCMU	SPLIT FACE CONCRETE MASONRY UNIT
BTM	BOTTOM	LAD	LADDER	SFT	STRUCTURAL GLAZED FACING TILE
C TO C	CENTER TO CENTER	LAM	LAMINATED	SHT	SHEET
CAB	CABINET	LAV	LAVATORY	SIM	SIMILAR
CEM	CEMENT	LG	LAMINATED GLASS	SK	SINK
CF	COMPRESSIBLE FILLER	LINO	LINOLEUM	SL	SLOPE
CGFB	CEMENTITIOUS GLASS FIBER BOARD	LKR	LOCKER	SLNT	SEALANT
CH	CONCRETE HARDENER	LNTL	LINTEL	SPEC	SPECIFICATION, SPECIFIED
CHAM	CHAMFER	LP	LOW POINT	SST	STAINLESS STEEL
CHAN	CHANNEL	LT	LIGHT(S)	STD	STANDARD
CIP	CAST IN PLACE	MAS	MASONRY	STL	STEEL
CJ	CONTROL JOINT	MATL	MATERIAL	STOR	STORAGE
CL OR	CENTERLINE	MAX	MAXIMUM	STRU	STRUCTURE(S, URAL)
CLG	CEILING	MEMB	MEMBRANE	STWY	STAIRWAY
CLKG	CAULKING	MFR	MANUFACTURER	SUPT	SUPERPENDENT
CMU	CONCRETE MASONRY UNIT	MIN	MINIMUM	SUSP	SUSPENDED
COL	COLUMN	MISC	MISCELLANEOUS	T	TREAD(S)
COMP	COMPRESSIBLE	MO	MASONRY OPENING	TBM	TRAFFIC BEARING MEMBRANE
CONC	CONCRETE	MR	MOISTURE RESISTANT	T&G	TONGUE AND GROOVE
CONT	CONTINUOUS	MRAT	MOISTURE RESISTANT ACOUSTICAL TILE	TEMP	TEMPERATURE
CRPT	CARPET, CARPET TILE	MTD	MOUNTED	TEMP	TEMPERED
CRS	COURSE(S)	MTG	MOUNTING	TEMP	TEMPORARY
CT	CERAMIC TILE	MTL	METAL	TER	TERRAZZO
DET	DETAIL	NIC	NOT IN CONTRACT	TERB	TERRAZZO BASE
DF	DRINKING FOUNTAIN	NOM	MONINAL	THK	THICKNESS
DIA	DIAMETER	NTS	NOT TO SCALE	THR	THRESHOLD
DIAG	DIAGONAL	OC	ON CENTER	TKBD	TACKBOARD
DIM	DIMENSION	OH	OVERHANG	TOB	TOP OF BRICK
DISP	DISPENSER	OPNG	OPENING	TOC	TOP OF CONCRETE
DN	DOWN	OPP HD	OPPOSITE HAND	TOIL	TOILET
DR	DAMP-PROOFING	ORD	OVERFLOW ROOF DRAIN	TON	TOP OF MASONRY
ELEC	ELECTRICAL	OSB	ORIENTED STRAND BOARD	TOPG	TOPPING
ELEV	ELEVATION	OV	OVER	TOS	TOP OF STEEL
EQ	EQUAL(LY)	OVHD	OVERHEAD	TS	STRUCTURAL TUBING (STEEL UNLESS NOTED)
EQPT	EQUIPMENT	PERIM	PERIMETER	TSL	TOP OF SLAB
EWC	ELECTRICAL WATER COOLER	PL	PLATE	TWF	THROUGH WALL FLASHING
EXP	EXPOSED	PL	PROPERTY LINE	TYP	TYPICAL
EXPJ	EXPANSION JOINT	PLAS	PLASTER	UC	UNDERCUT
EXIST, (E)	EXISTING	PLK	PLANK	UON	UNLESS OTHERWISE NOTED
FD	FLOOR DRAIN	PLYWD	PLYWOOD	UR	URINAL
FE	FIRE EXTINGUISHER	PM	PRESSED METAL	VB	VAPOR BARRIER
FF	FACTORY FINISH	PR	PAIR	VCT	VINYL COMPOSITE TILE
FGL	FIBERGLASS	PRD	PROMENADE ROOF DRAIN	VERT	VERTICAL
FIN	FINISH(ED)	PRCST	PRECAST	VEST	VESTIBULE
FLG	FLASHING	PREFAB	PRE-FABRICATED	VTR	VENT THRU ROOF
FL	FLOORING	PT	PRESSURE TREATED	W	WITH
FLR	FILLER	PRMLD	PREMOLDED	W/	WITH
FR	FRAME	PSF	POUNDS PER SQUARE FOOT	W/A	WHERE APPLICABLE
FRP	FIBERGLASS REINFORCED PLASTIC	PTD	PAINTED	W/O	WITHOUT
FO	FRAME OPENING	QT	QUARRY TILE	WC	WATER CLOSET
FV	FIELD VERIFY	QTB	QUARRY TILE BASE	WD	WOOD
FXD	FIXED	R	RISER(S)	WFD	WINDOW
GA	GAGE, GAUGE	R+S	RUBBER ROD & SEALANT	WFG	WIDE FLANGE
GALV	GALVANIZED	RB	RUBBER BASE	WPG	WATERPROOFING
GL	GLASS	RD	ROOF DRAIN	WT	WATERPROOFING
		RECT	RECEPTACLE	WWF	STEEL TEE-SHAPE DESIGNATION
					WELDED WIRE FABRIC

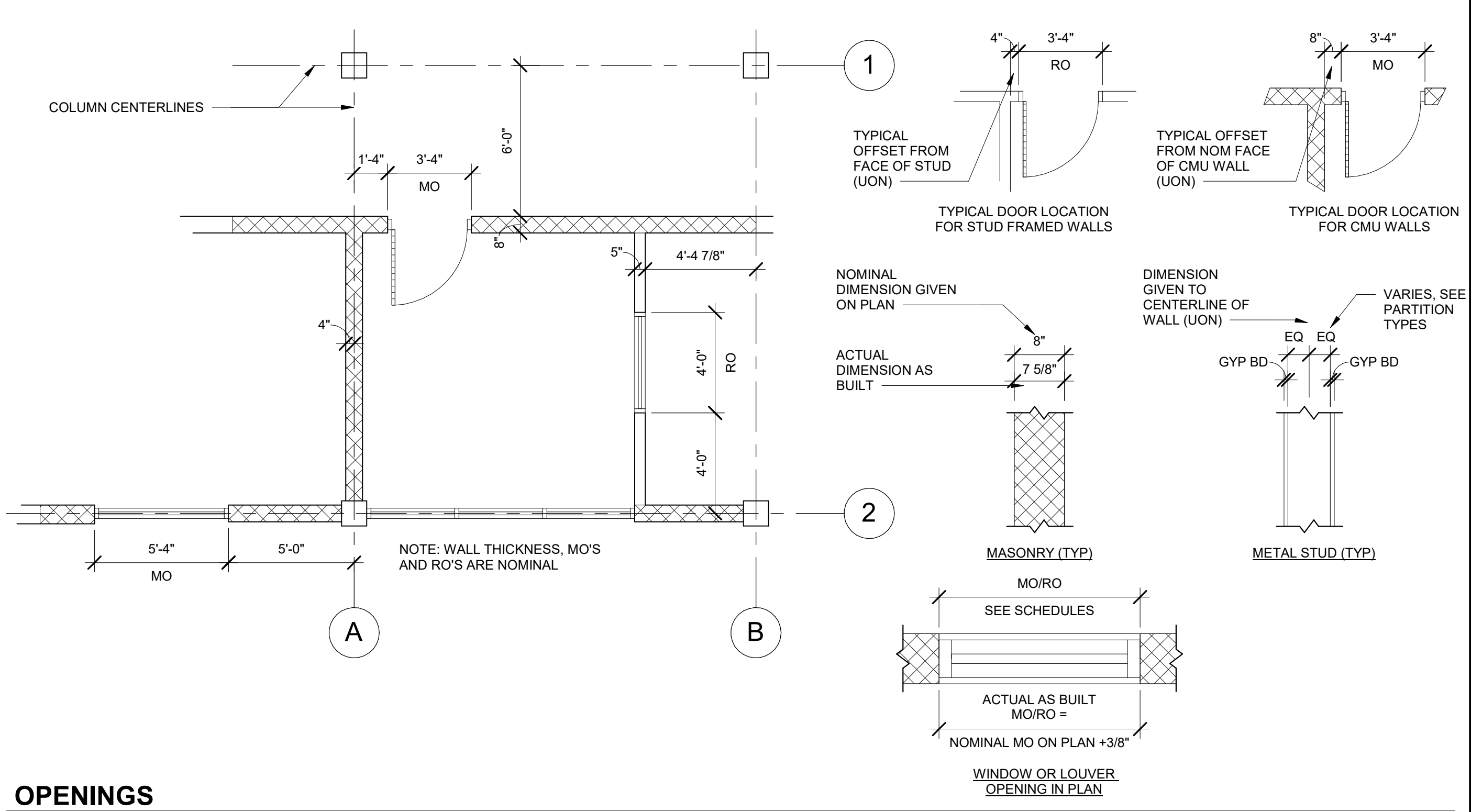
LINE TYPES (UNLESS OTHERWISE NOTED)



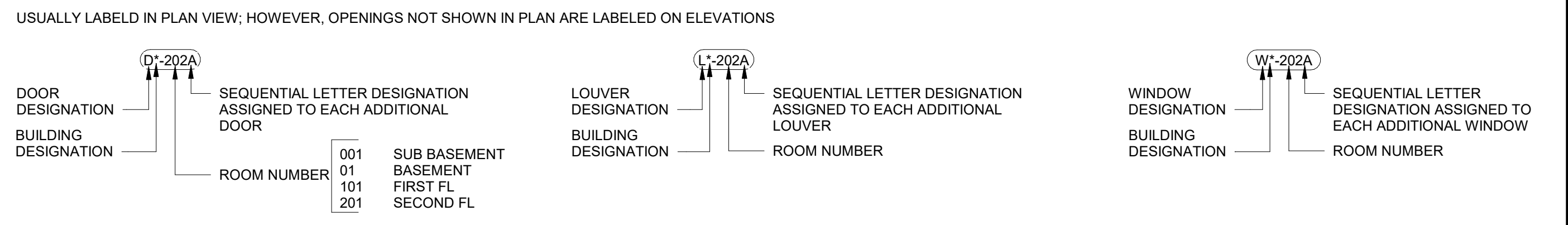
MATERIAL SYMBOLS



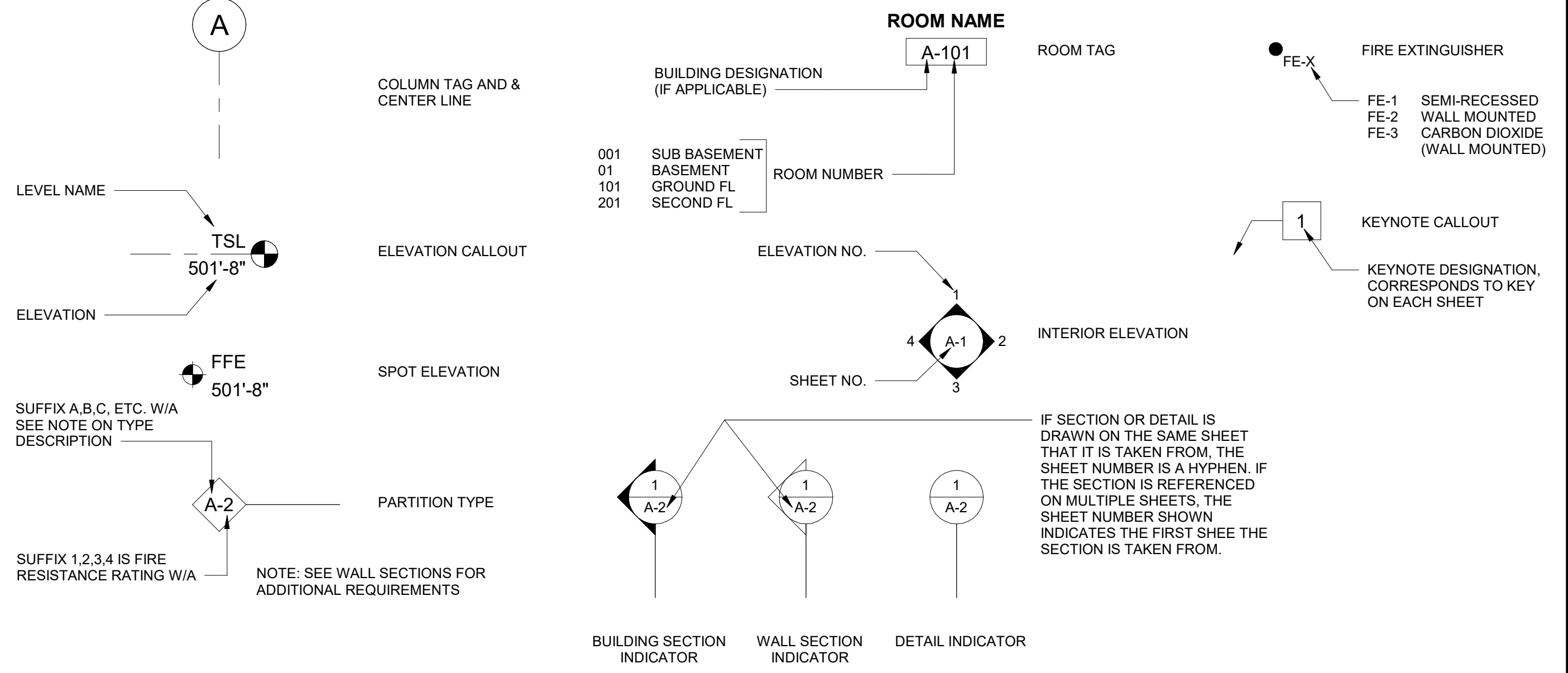
DIMENSIONING SYSTEM



OPENINGS



SYMBOLS



GENERAL NOTES

- NOT ALL EQUIPMENT IS SHOWN FOR CLARITY. REFER TO THE APPROPRIATE DISCIPLINE SHEETS FOR SPECIFIC EQUIPMENT LAYOUT AND OTHER REQUIREMENTS
- SEE CIVIL SHEETS FOR SIDEWALK, ROAD PAVING AND FINISH GRADE ELEVATIONS.
- SEE STRUCTURAL SHEETS FOR SIZE AND LOCATION OF CONCRETE PADS, TRENCHES, VAULTS, SUMPS, ETC
- SEE STRUCTURAL SHEETS FOR CONCRETE AND MASONRY REINFORCEMENT
- ALL ITEMS TO BE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.
- DO NOT SCALE FROM THE DRAWINGS
- NOTIFY ENGINEER IF CONSTRUCTION DOCUMENTS DIFFER FROM ACTUAL FIELD CONDITIONS PRIOR TO FABRICATION OR NEW CONSTRUCTION
- THIS DRAWING CONTAINS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT ALL ITEMS SHOWN HERE APPEAR ON THE CONTRACT DRAWINGS.

ARCHITECTURAL SHEET INDEX

- A-1 ARCHITECTURAL ABBREVIATIONS, GENERAL NOTES AND SYMBOLS
- A-2 PUMP STATION BUILDING BUILDING CODE KEY DETERMINATIONS AND LIFE SAFETY PLAN
- A-3 PUMP STATION BUILDING FLOOR PLAN AND ROOF PLAN
- A-4 PUMP STATION EXTERIOR ELEVATIONS
- A-5 PUMP STATION BUILDING BUILDING SECTIONS AND WALL SECTIONS
- A-6 ELECTRICAL BUILDING BUILDING CODE KEY DETERMINATIONS AND LIFE SAFETY PLAN
- A-7 ELECTRICAL BUILDING FLOOR PLAN AND ROOF PLAN
- A-8 ELECTRICAL BUILDING EXTERIOR ELEVATIONS
- A-9 ELECTRICAL BUILDING BUILDING SECTIONS AND WALL SECTIONS
- AD-1 FINISH SCHEDULE, DOOR SCHEDULE AND TYPES, LOUVER SCHEDULES AND TYPES
- AD-2 ARCHITECTURAL DETAILS

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DRAWN BY:	A. VENKATESAN
SHEET CHKD BY:	E. MORALES
CROSS CHKD BY:	M. ALFORD
APPROVED BY:	M. ALFORD
DATE:	MAY 2022

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 FLA COA No. EB-0000020

ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

ABBREVIATIONS, GENERAL NOTES
 AND SYMBOLS

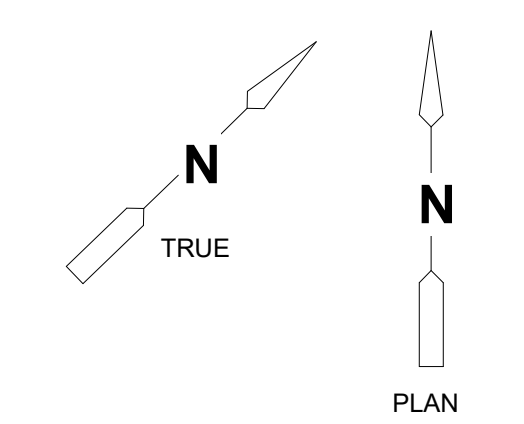
PROJECT NO.	9247-221208
FILE NAME:	AWZ000PS
SHEET NO.	A-1

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BUILDING CODE KEY DETERMINATIONS

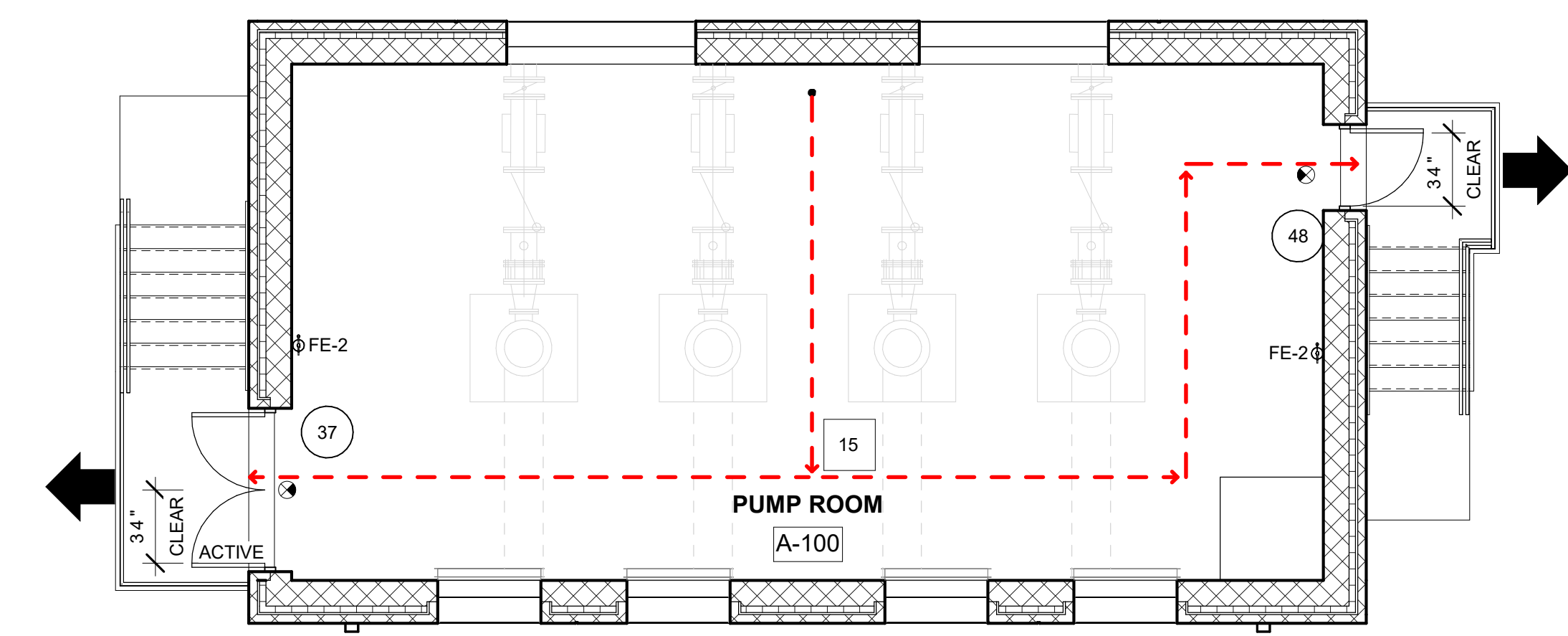
APPLICABLE CODES	FLORIDA BUILDING CODE, SEVENTH EDITION (2020) FLORIDA FIRE PREVENTION CODE, SEVENTH EDITION (2020) FLORIDA ACCESSIBILITY CODE, SEVENTH EDITION (2020)			
PUMP STATION BUILDING				
BUILDING CLASSIFICATION OCCUPANCY - SECTION 306.3	GROUP F-2, LOW-HAZARD FACTORY INDUSTRIAL			
CONSTRUCTION - SECTION 602.2	TYPE II B			
BUILDING HEIGHTS AND AREAS TABLE 506.2 TABLE 504.3a TABLE 504.4	MAX AREA	23,000 SF PER FLOOR	ACTUAL	1011 SF
	MAX HEIGHT	55 FEET	ACTUAL	22 FEET
	MAX STORES	3	ACTUAL	1
FIRE SEPARATION DISTANCE EXTERIOR WALL FIRE RESISTANCE RATING TABLE 602	TYPE II B > 30 FEET FROM BLDGS & PROPERTY LINE - 0 HR ACTUAL = >30 FOOT SEPARATION 0 HR			
BUILDING ELEMENT FIRE RESISTANCE RATING TABLE 601	TYPE IIB - 0 HR			
STAIRS SECTION 1011	MIN WIDTH	36" CLEAR	ACTUAL	40" CLEAR
	MIN RISER HEIGHT	7"	ACTUAL	7"
	MIN TREAD DEPTH	11"	ACTUAL	11"
RAMPS	N/A			
SPRINKLERS SECTION 903	REQUIRED:	NO	PROVIDED:	NO
FIRE ALARM SECTION 907.2.4	REQUIRED:	NO	PROVIDED:	NO
ACCESSIBILITY REQUIREMENTS SECTION 203.5 (FAC)	PUMP STATION BUILDING FREQUENTED ONLY BY SERVICE PERSONNEL FOR MAINTENANCE AND MONITORING SHALL NOT BE REQUIRED TO COMPLY			
GROUP F-2 LOW-HAZARD FACTORY INDUSTRIAL				
OCCUPANT LOAD SECTION 1004	1,011 SF/100 SF PER OCCUPANT = 11 OCCUPANTS			
EGRESS WIDTH SECTION 1005.3.2	REQUIRED	11 OCCUPANTS X .2 IN = 2.20 IN	ACTUAL	68 IN PROVIDED
EXITS PER SPACE TABLE 1006.2.1	REQUIRED	1	ACTUAL	2
MAX TRAVEL DISTANCE TABLE 1017.2	MAXIMUM	300 FEET	ACTUAL	MAX 48 FEET

GENERAL NOTES
SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES AND ABBREVIATIONS



LIFE SAFETY LEGEND

- EXIT DISCHARGE
- AREA OR SPACE EXIT
- EXIT SIGN
- FIRE EXTINGUISHER
- EGRESS PATH
- TRAVEL DISTANCE (FEET)
- COMMON PATH OF TRAVEL (FEET)

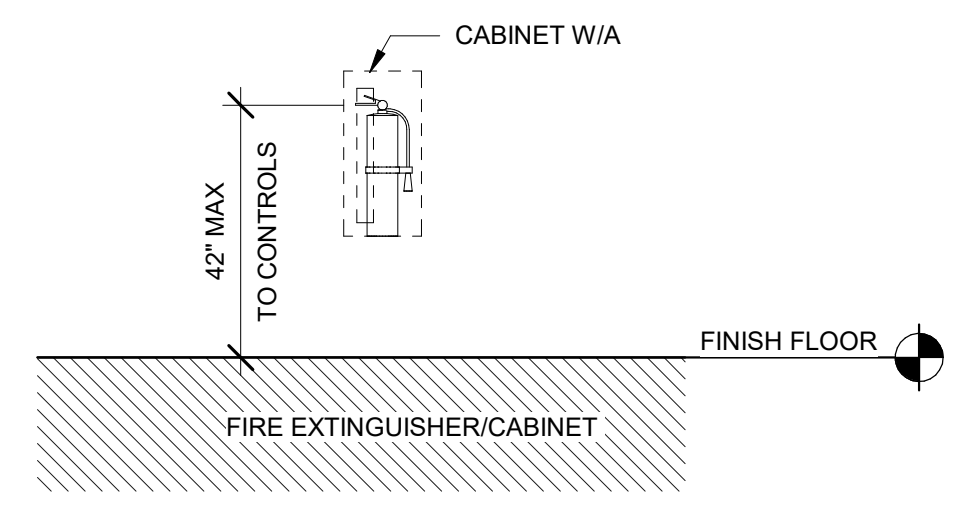


PUMP STATION BUILDING - LIFE SAFETY PLAN
3/16" = 1'-0"

FIRE EXTINGUISHER SCHEDULE

TAG	QTY	MODEL	MANUFACTURER	DESCRIPTION
FE-2	2	COSMIC 10E UL RATED 4A-80BC	JL INDUSTRIES (ACTIVAR INC)	10 LB DRY CHEMICAL, BRACKET MOUNTED

MOUNTING HEIGHT



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REV. NO.	DATE	DRWN	CHKD	REMARKS

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 DRAWN BY: A. VENKATESAN
 SHEET CHKD BY: E. MORALES
 CROSS CHKD BY: M. ALFORD
 APPROVED BY: M. ALFORD
 DATE: MAY 2022

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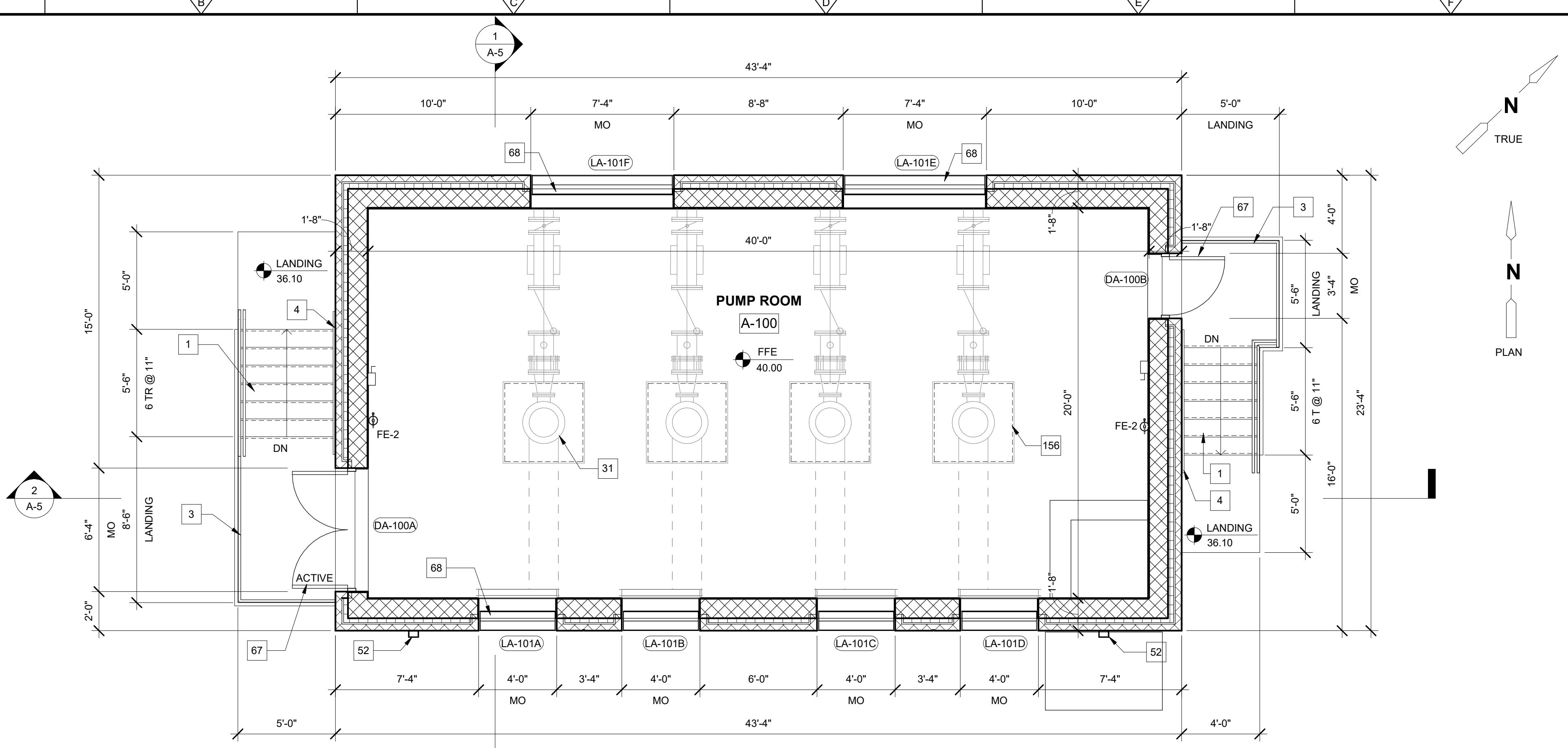
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

PUMP STATION BUILDING
 BUILDING CODE KEY DETERMINATIONS AND
 LIFE SAFETY PLAN

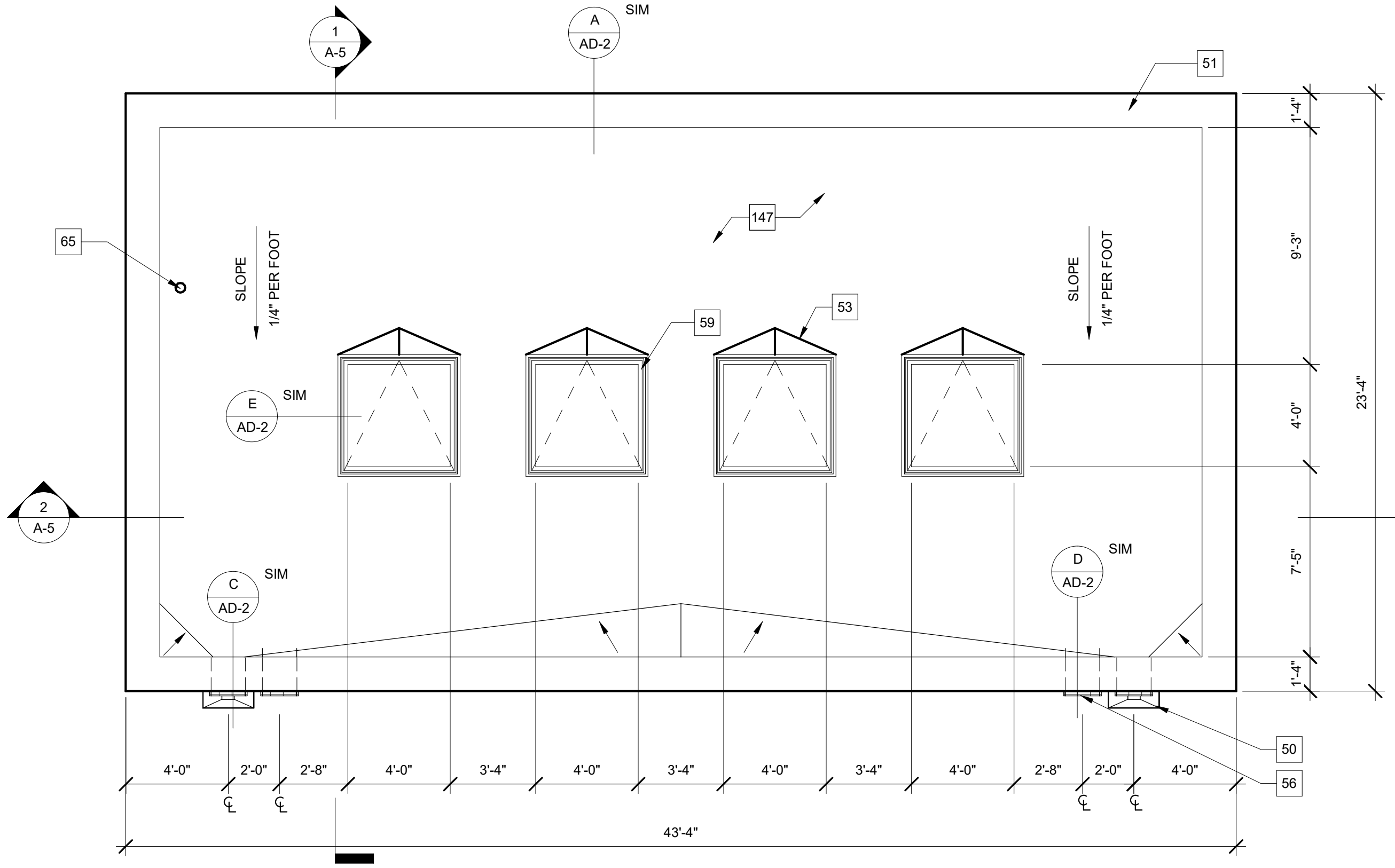
PROJECT NO.	9247-221208
FILE NAME:	AW2000PS
SHEET NO.	A-2

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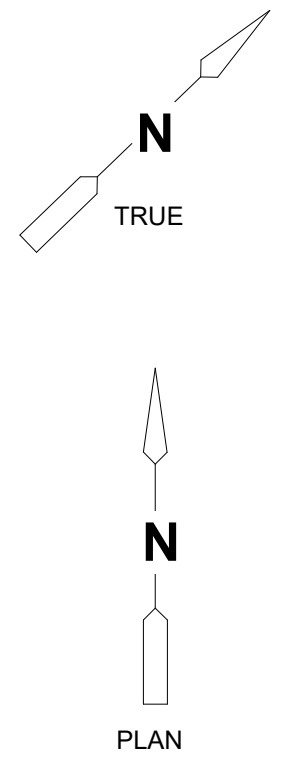
FLOOR PLAN
1/4" = 1'-0"



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

GENERAL NOTES
SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES AND ABBREVIATIONS
SEE SHEET A-2 FOR BUILDING CODE KEY DETERMINATIONS AND LIFE SAFETY PLAN

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	ALUMINUM STAIR WITH ALUMINUM GAUDDRAIL AND HANDRAIL, SEE "S" DWGS
3	ALUMINUM GUARDRAIL, TYP. SEE "S" DWGS
4	ALUMINUM HANDRAIL, SEE "S" DWGS
31	PROCESS MECH EQUIP, SEE "M" DWGS
50	ALUMINUM CONDUCTOR HEAD, DOWNSPOUT AND SCUPPER, TYP
51	ALUMINUM COPING, TYP
52	ALUMINUM DOWNSPOUT, TYP
53	CRICKET, TYP
56	OVERFLOW SCUPPER, BOTTOM OF OVERFLOW SCUPPER TO BE 2-IN ABOVE BOTTOM OF PRIMARY SCUPPER, TYP
59	48" X 48" PUMP REMOVAL ACCESS HATCH. VERIFY FINAL ACCESS HATCH LOCATION IS CENTERED OVER INSTALLED PUMP LOCATION
65	VENT THROUGH ROOF, TYP
67	ALUMINUM DOOR AND FRAME, SEE SCHD
68	ALUMINUM LOUVER, SEE SCHD
147	BUILT-UP MODIFIED BITUMEN ROOFING SYSTEM OVER TAPERED INSULATION
156	DASHED LINE IS ROOF HATCH OPENING ABOVE



REV. NO.	DATE	DRWN	CHKD	REMARKS

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APPROVED BY: M. ALFORD	
DATE: MAY 2022	

ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE
DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

PUMP STATION BUILDING
FLOOR PLAN AND ROOF PLAN

PROJECT NO. 9247-221208
FILE NAME:
SHEET NO. A-3

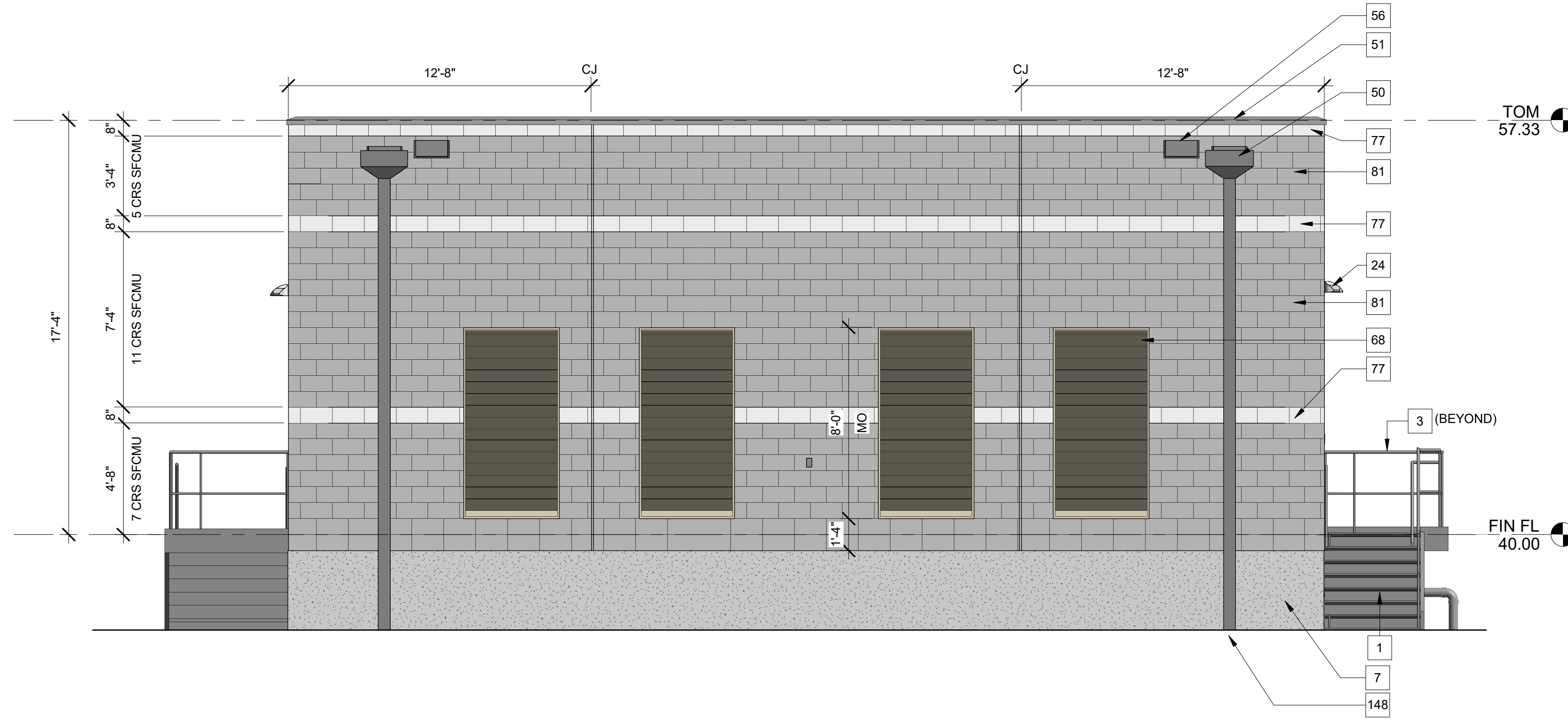
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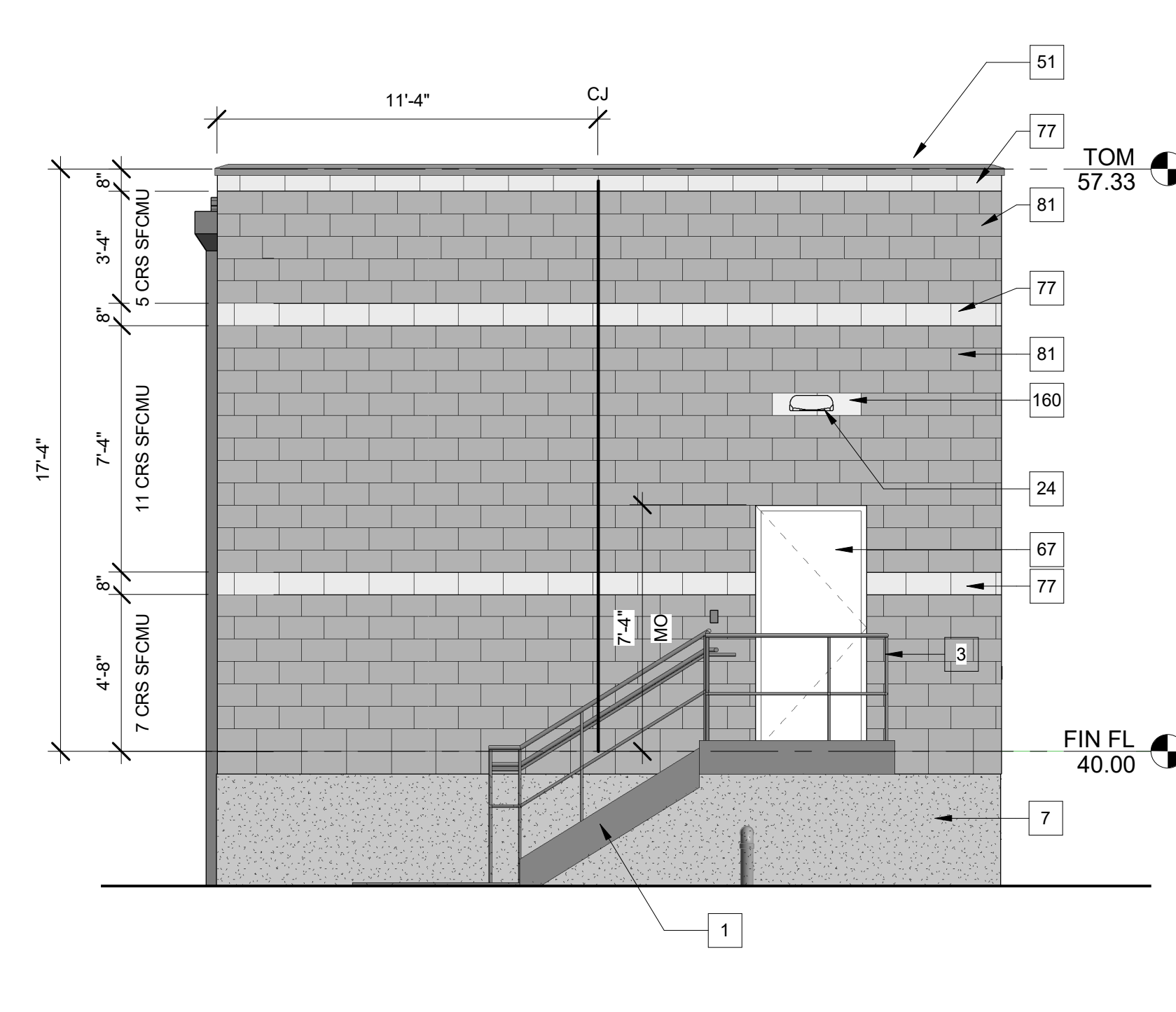
GENERAL NOTES

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES AND ABBREVIATIONS

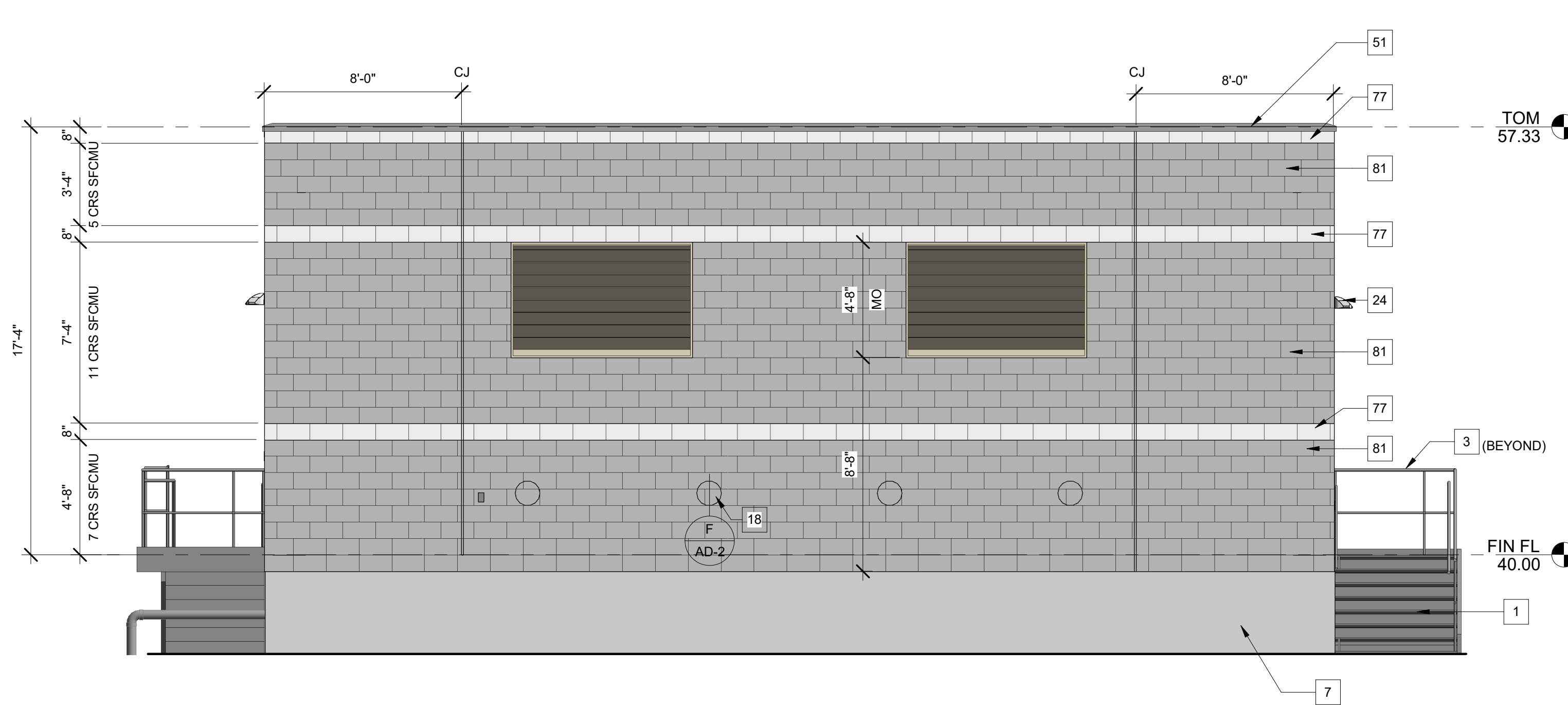
KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	ALUMINUM STAIR WITH ALUMINUM GAURDRAIL AND HANDRAIL, SEE "S" DWGS
3	ALUMINUM GUARDRAIL, TYP. SEE "S" DWGS
7	CONCRETE STEM WALL, SEE "S" DWGS
18	PIPE OPENING, SEE "M" DWGS
24	LIGHT FIXTURE, SEE "E" DWGS
50	ALUMINUM CONDUCTOR HEAD, DOWNSPOUT AND SCUPPER, TYP
51	ALUMINUM COPING, TYP
56	OVERFLOW SCUPPER, BOTTOM OF OVERFLOW SCUPPER TO BE 2-IN ABOVE BOTTOM OF PRIMARY SCUPPER, TYP
67	ALUMINUM DOOR AND FRAME, SEE SCHD
68	ALUMINUM LOUVER, SEE SCHD
77	GROUND FACE CMU, TYP
81	SPLIT FACE CMU, TYP
148	DOWNSPOUT TIED TO STORM DRAIN BELOW GRADE, TYP
160	PLACE GROUND FACE CMU @ LIGHT FIXTURE LOCATION FOR FLUSH MOUNTING



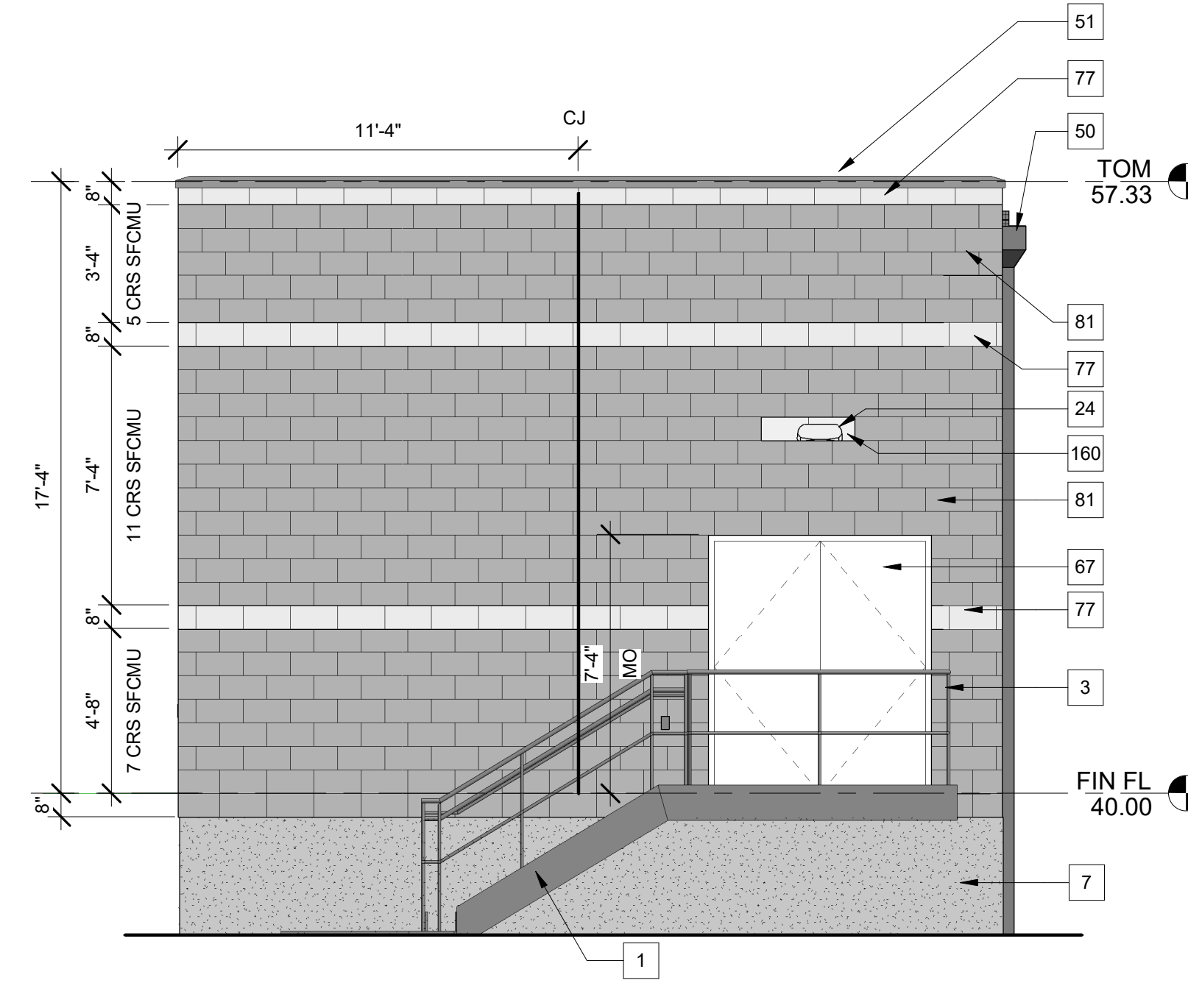
SOUTH ELEVATION
1/4" = 1'-0"



EAST ELEVATION
1/4" = 1'-0"



NORTH ELEVATION
1/4" = 1'-0"



WEST ELEVATION
1/4" = 1'-0"

MICHAEL T. ALFORD, AIA
NO. AR92055
FL CORP ARCHITECTURAL LIC NO. AA-0002781
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REV. NO.	DATE	DRWN	CHKD	REMARKS

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APPROVED BY: M. ALFORD
DATE: MAY 2022



ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE
DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

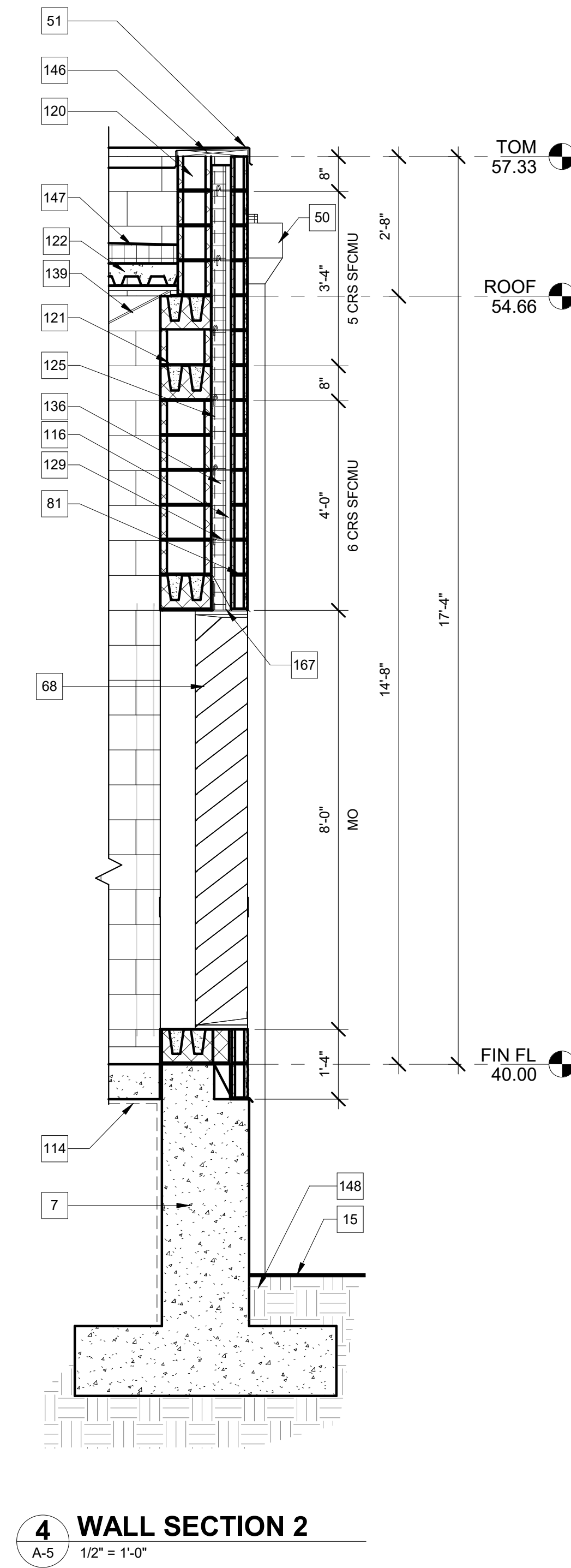
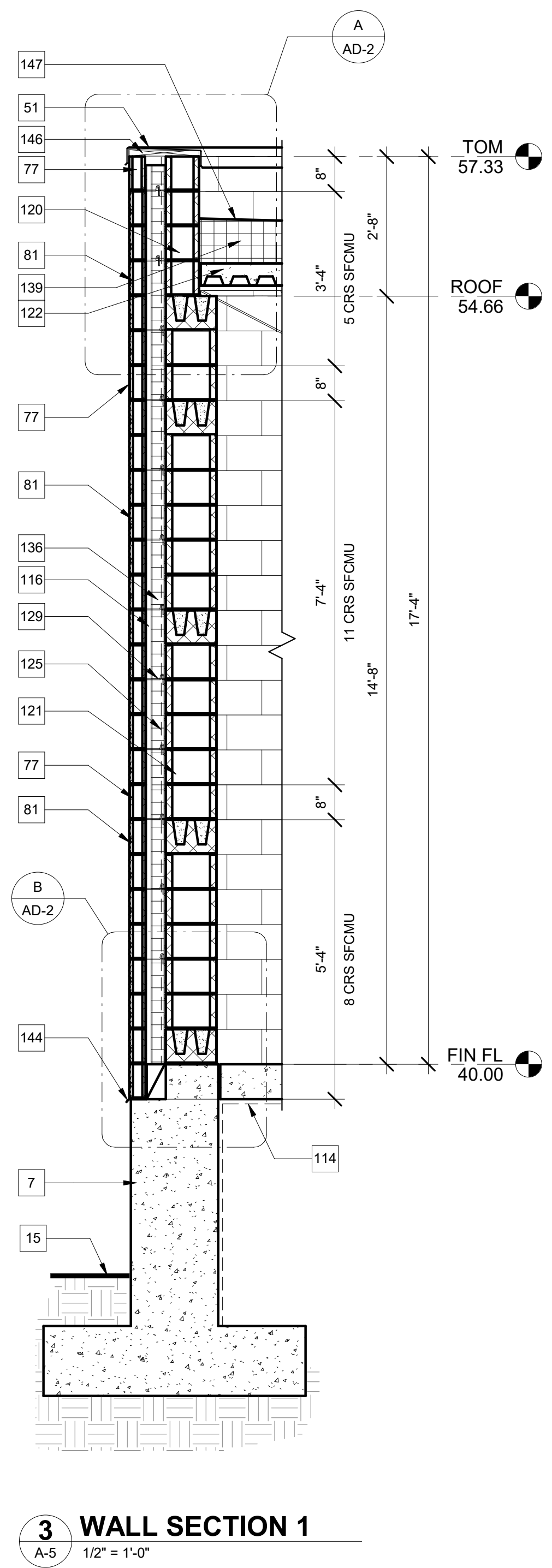
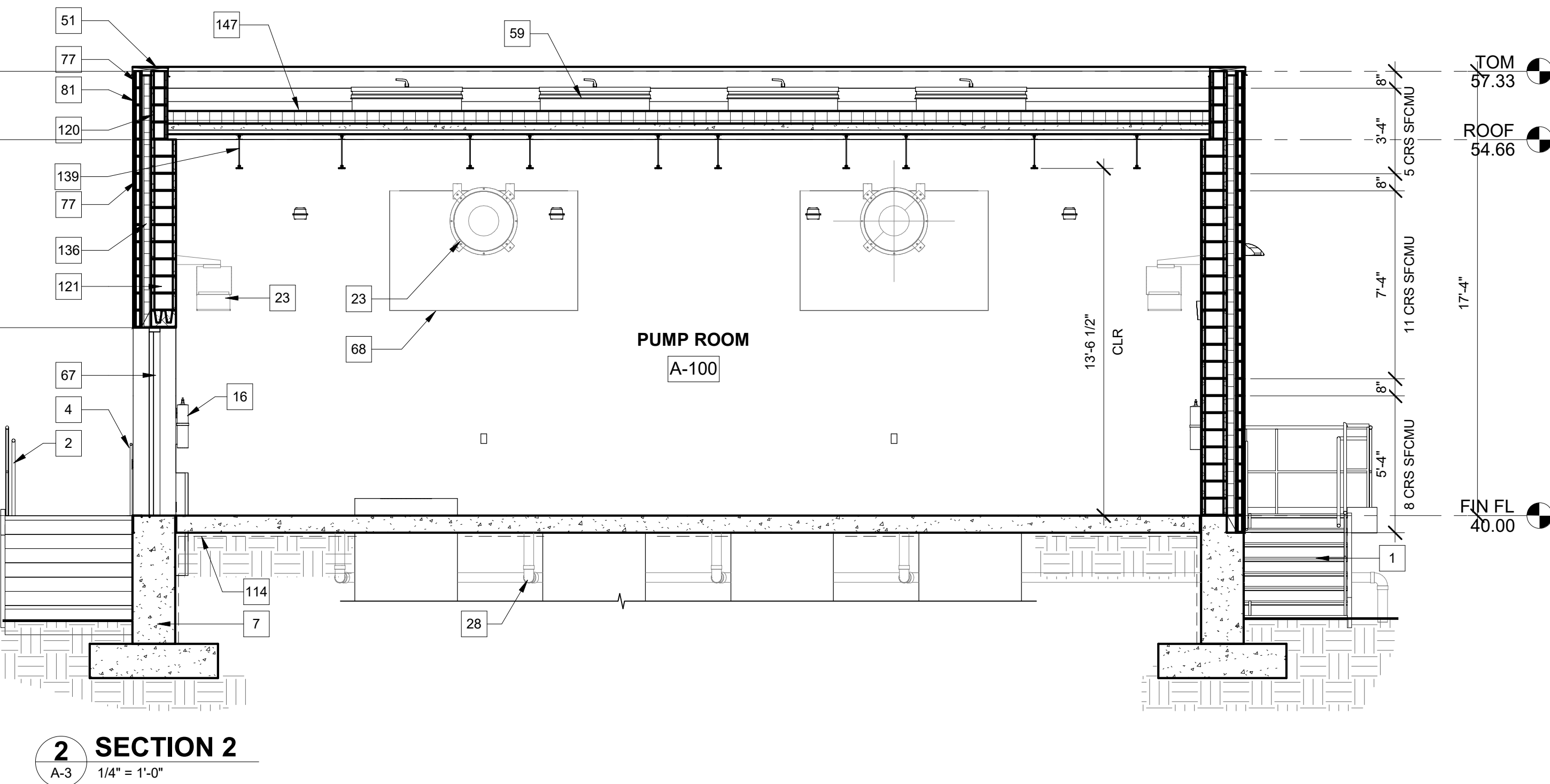
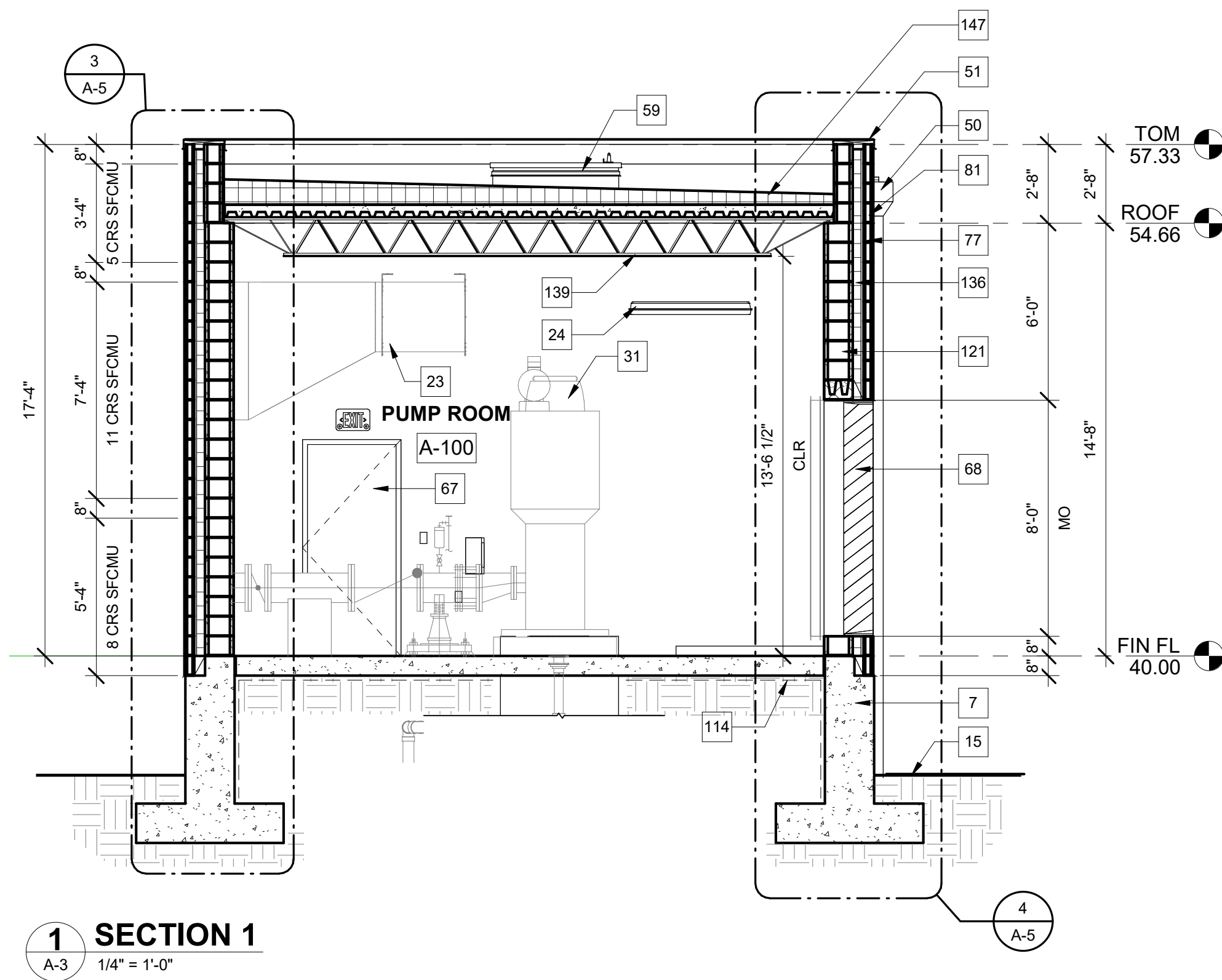
PUMP STATION BUILDING
EXTERIOR ELEVATIONS

PROJECT NO. 9247-221208
FILE NAME: AW2000PS

SHEET NO.
A-4

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GENERAL NOTES

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES AND ABBREVIATIONS

STRUCTURAL ITEMS SUCH AS GROUTED AND FILLED CELLS ARE REINFORCEMENT SHOWN ON THIS SHEET ARE FOR GRAPHICAL ILLUSTRATION ONLY. REFER TO STRUCTURAL DRAWINGS FOR SPECIFIC LOCATION AND DETAIL REQUIREMENTS.

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	ALUMINUM STAIR WITH ALUMINUM GAUDDRAIL AND HANDRAIL, SEE "S" DWGS
2	ALUMINUM GUARDRAIL WITH ALUMINUM HANDRAIL, TYP. SEE "S" DWGS
4	ALUMINUM HANDRAIL, SEE "S" DWGS
7	CONCRETE STEM WALL, SEE "S" DWGS
15	FINISH GRADE, SEE "C" DWGS
16	FIRE EXTINGUISHER, TYP
23	HVAC EQUIP, SEE "H" DWGS
24	LIGHT FIXTURE, SEE "E" DWGS
28	PLUMBING PIPES, SEE "P" DWGS
31	PROCESS MECH EQUIP, SEE "M" DWGS
50	ALUMINUM CONDUCTOR HEAD, DOWNSPOUT AND SCUPPER, TYP
51	ALUMINUM COPING, TYP
59	48" X 48" PUMP REMOVAL ACCESS HATCH. VERIFY FINAL ACCESS HATCH LOCATION IS CENTERED OVER INSTALLED PUMP LOCATION
67	ALUMINUM DOOR AND FRAME, SEE SCHD
68	ALUMINUM LOUVER, SEE SCHD
77	GROUND FACE CMU, TYP
81	SPLIT FACE CMU, TYP
114	VAPOR RETARDER, TYP
116	1" AIR SPACE
120	8" CMU, TYP
121	12" CMU, TYP
122	COMPOSITE ROOF DECK, SEE "S" DWGS
125	DAMPPOOFING FULL HEIGHT, TYP
129	HORT JOINT REINFORCING @ 16" O.C. EVERY OTHER COURSE VERT
136	3" THICK RIGID INSULATION
139	STEEL JOIST, SEE "S" DWGS
144	THROUGH WALL FLASHING WITH STAINLESS STEEL DRIP EDGE. PROVIDE WEEP HOLES 16" O.C. (MIN 2)
146	WOOD BLOCKING
147	BUILT-UP MODIFIED BITUMEN ROOFING SYSTEM OVER TAPERED INSULATION
148	DOWNSPOUT TIED TO STORM DRAIN BELOW GRADE, TYP
167	STEEL ANGLE, SEE "S" DWGS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: E. MORALES
 DRAWN BY: A. VENKATESAN
 SHEET CHKD BY: E. MORALES
 CROSS CHKD BY: M. ALFORD
 APPROVED BY: M. ALFORD
 DATE: MAY 2022

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 FLA COA No. EB-0000020

ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

PUMP STATION BUILDING
 BUILDING SECTIONS AND WALL SECTIONS

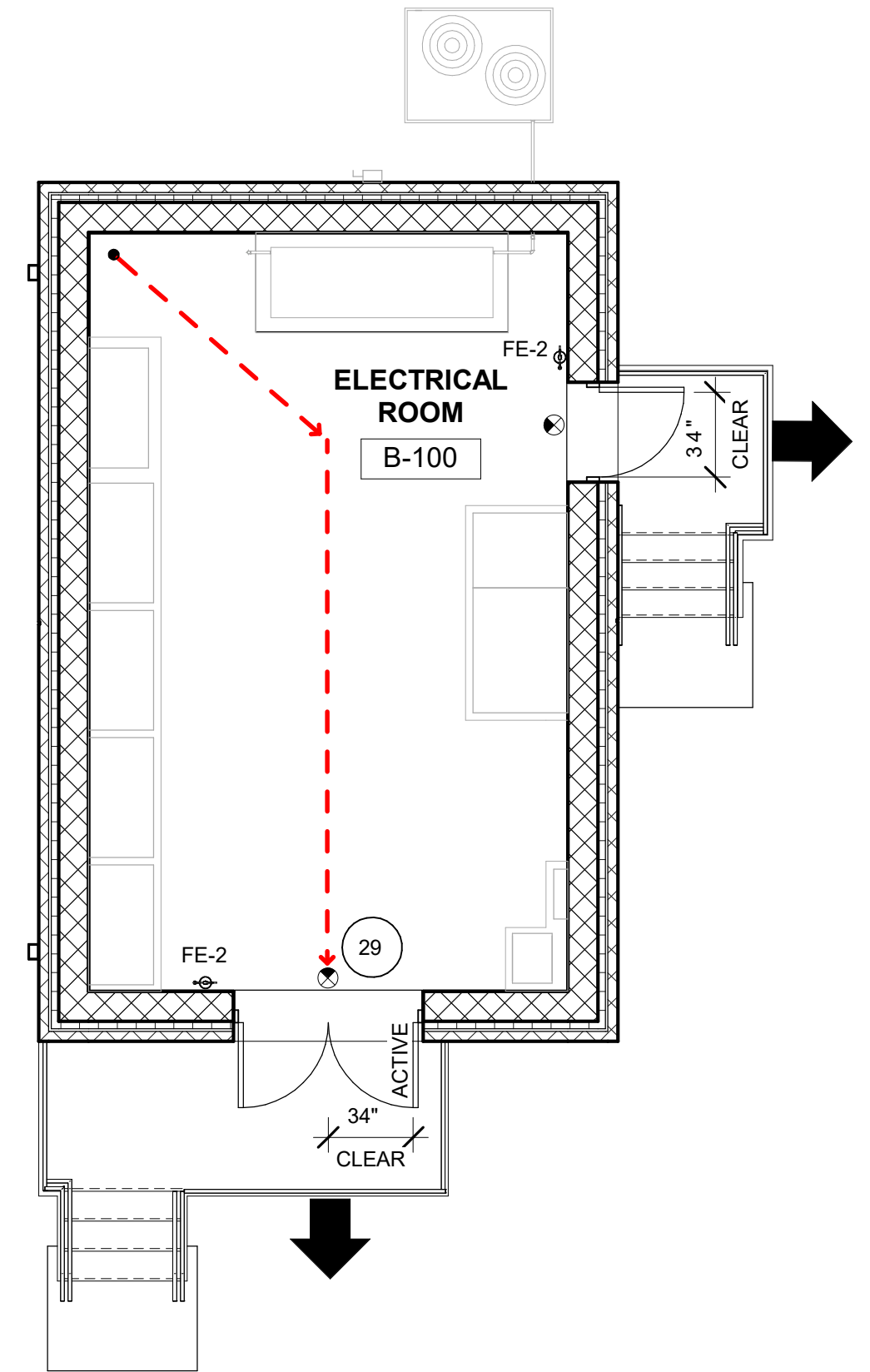
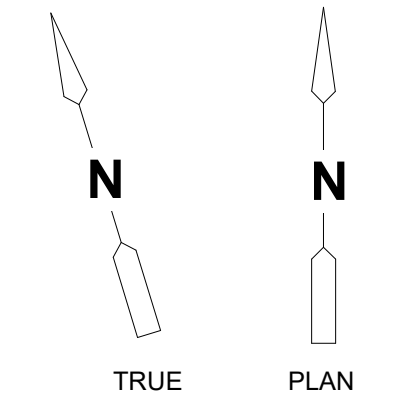
PROJECT NO.	9247-221208
FILE NAME:	AWZ000PS
SHEET NO.	A-5

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BUILDING CODE KEY DETERMINATIONS

APPLICABLE CODES	FLORIDA BUILDING CODE, SEVENTH EDITION (2020) FLORIDA FIRE PREVENTION CODE, SEVENTH EDITION (2020) FLORIDA ACCESSIBILITY CODE, SEVENTH EDITION (2020)			
ELECTRICAL BUILDING				
BUILDING CLASSIFICATION OCCUPANCY - SECTION 306.3	GROUP-F-2, LOW HAZARD FACTORY INDUSTRIAL			
CONSTRUCTION - SECTION 602.2	TYPE II B			
BUILDING HEIGHTS AND AREAS TABLE 506.2	MAX AREA	23,000 SF PER FLOOR	ACTUAL	555 SF
TABLE 504.3a	MAX HEIGHT	55 FEET	ACTUAL	16 FEET
TABLE 504.4	MAX STORES	3	ACTUAL	1
FIRE SEPARATION DISTANCE EXTERIOR WALL FIRE RESISTANCE RATING TABLE 602	TYPE II B > 30 FEET FROM BLDGS & PROPERTY LINE - 0 HR ACTUAL = >30 FOOT SEPARATION - 0 HR			
BUILDING ELEMENT FIRE RESISTANCE RATING TABLE 601	TYPE II B - 0 HR			
STAIRS SECTION 1011	MIN WIDTH	36" CLEAR	ACTUAL	40" CLEAR
	MIN RISER HEIGHT	7"	ACTUAL	7"
	MIN TREAD DEPTH	11"	ACTUAL	11"
RAMPS	N/A			
SPRINKLERS SECTION 903	REQUIRED:	NO	PROVIDED:	NO
FIRE ALARM SECTION 907.2.4	REQUIRED:	NO	PROVIDED:	NO
ACCESSIBILITY REQUIREMENTS SECTION 203.5 (FAC)	ELECTRICAL BUILDING FREQUENTED ONLY BY SERVICE PERSONNEL FOR MAINTENANCE AND MONITORING SHALL NOT BE REQUIRED TO COMPLY			
GROUP F-2 LOW HAZARD INDUSTRIAL				
OCCUPANT LOAD SECTION 1004	555 SF/100 SF PER OCCUPANT - 6 OCCUPANTS			
EGRESS WIDTH SECTION 1005.3.2	REQUIRED	6 OCCUPANTS X .2 IN = 1.2 IN	ACTUAL	68 IN PROVIDED
EXITS PER SPACE TABLE 1006.2.1	REQUIRED	1	ACTUAL	2
MAX TRAVEL DISTANCE TABLE 1017.2	MAXIMUM	300 FEET	ACTUAL	MAX 29 FEET

GENERAL NOTES
SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES AND ABBREVIATIONS

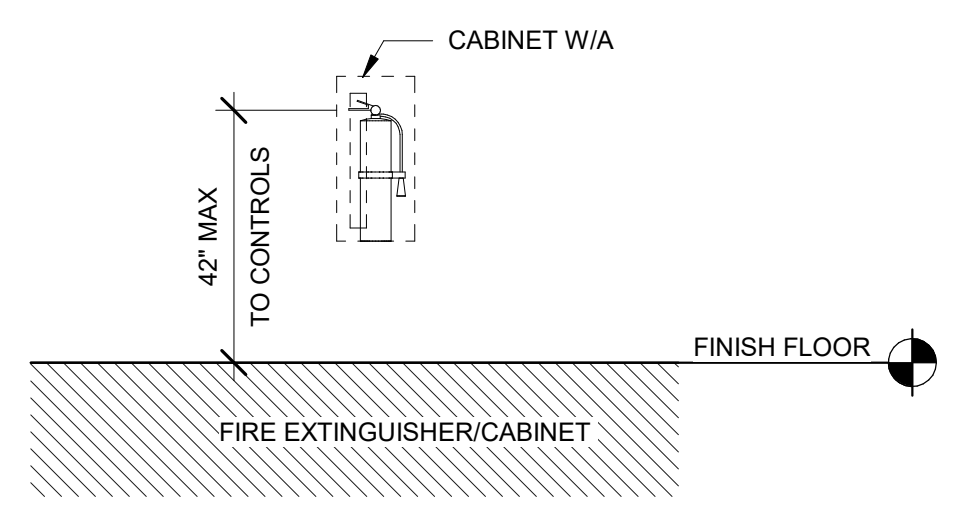


LIFE SAFETY LEGEND

- EXIT DISCHARGE
- AREA OR SPACE EXIT
- EXIT SIGN
- FIRE EXTINGUISHER
- EGRESS PATH
- TRAVEL DISTANCE (FEET)
- COMMON PATH OF TRAVEL (FEET)

CDMS FIRE EXTINGUISHER SCHEDULE				
TAG	QTY	MODEL	MANUFACTURER	DESCRIPTION
FE-2	2	COSMIC 10E UL RATED 4A-80BC	JL INDUSTRIES (ACTIVAR INC)	10 LB DRY CHEMICAL, BRACKET MOUNTED

MOUNTING HEIGHT



ELECTRICAL BUILDING - LIFE SAFETY PLAN
3/16" = 1'-0"

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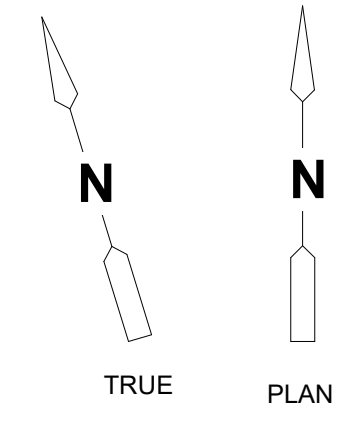
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

ELECTRICAL BUILDING
 BUILDING CODE KEY DETERMINATIONS AND
 LIFE SAFETY PLAN

PROJECT NO.	9247-221208
FILE NAME:	AWZ000EB
SHEET NO.	A-6

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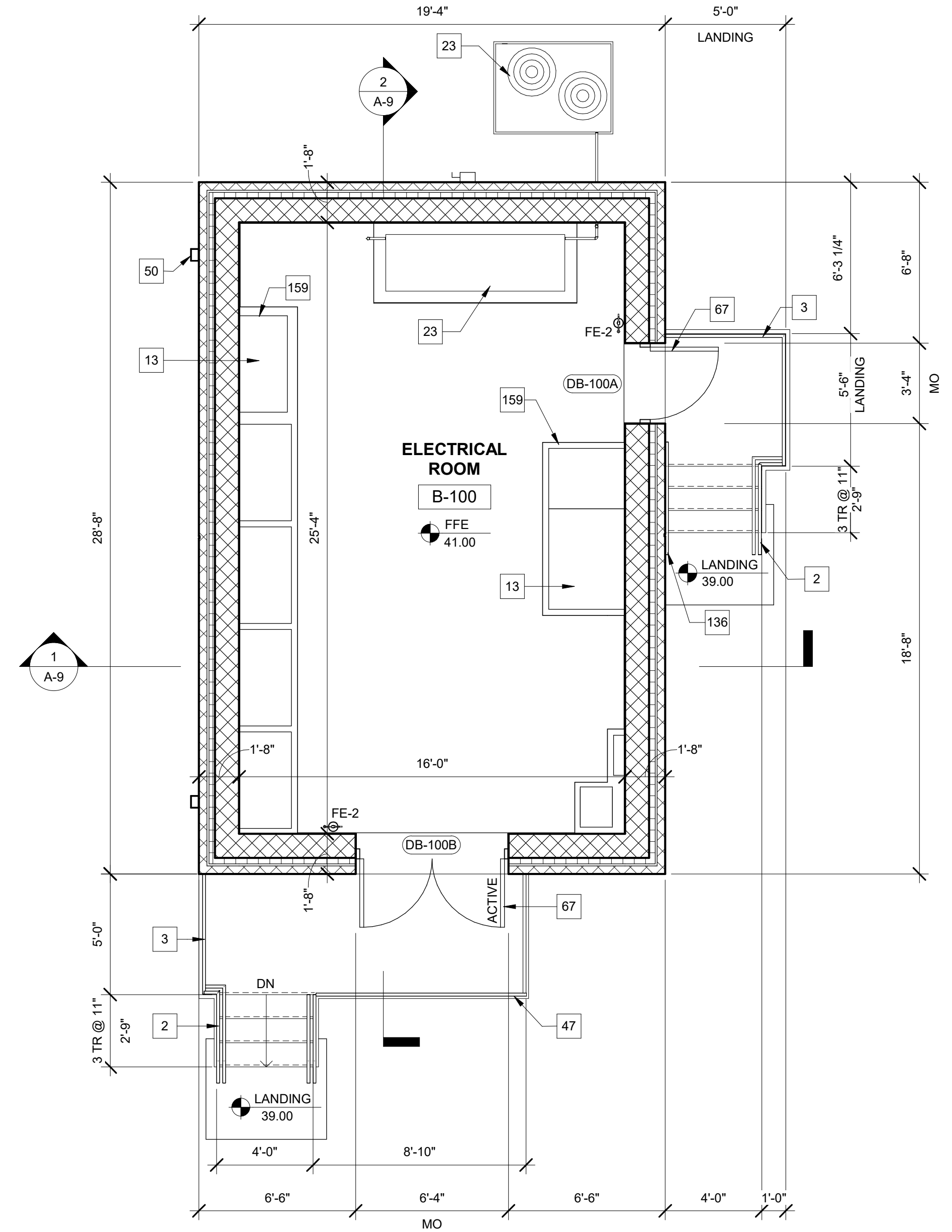


GENERAL NOTES

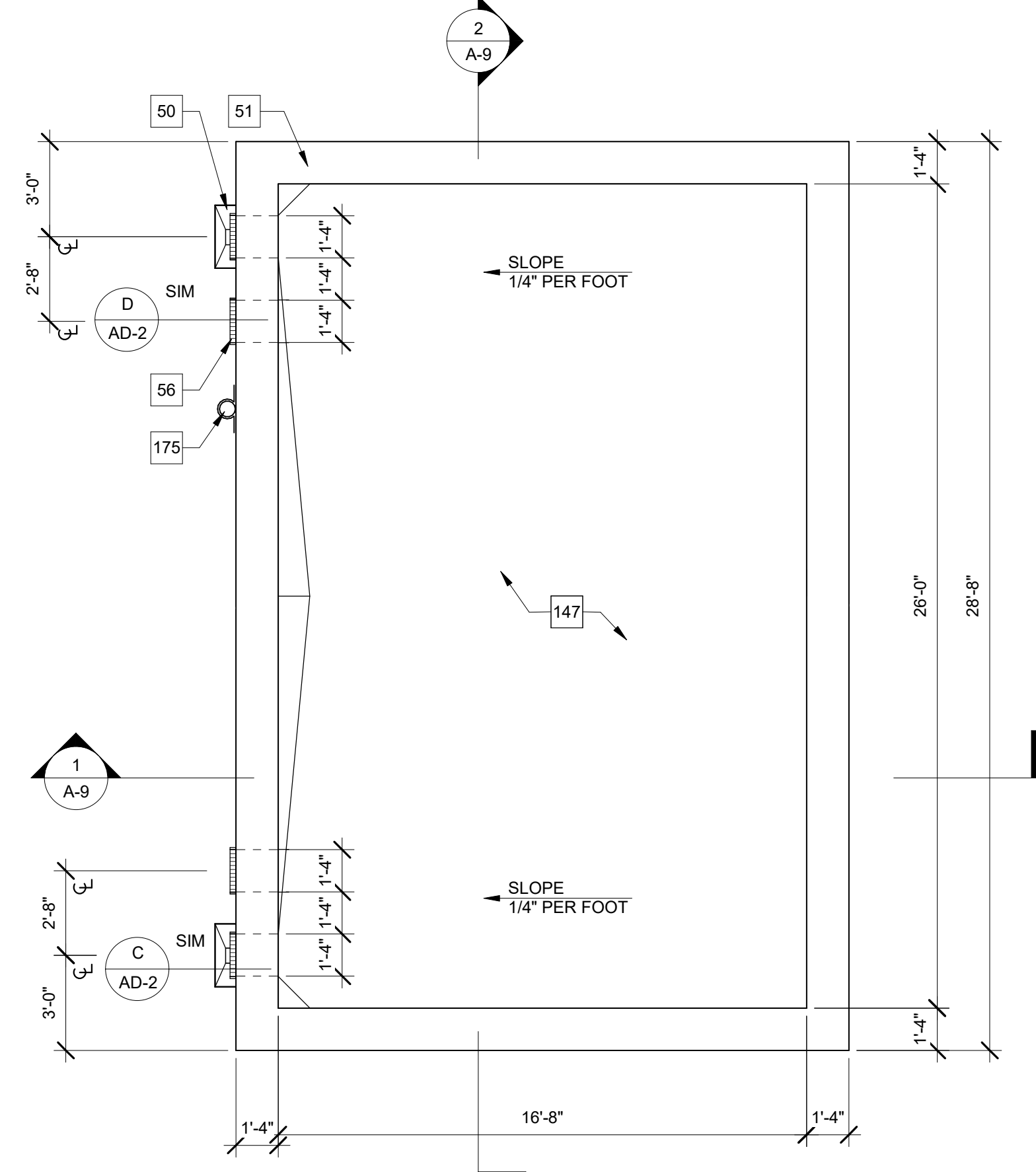
SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES AND ABBREVIATIONS

SEE SHEET A-6 FOR BUILDING CODE KEY DETERMINATIONS AND LIFE SAFETY PLAN

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
2	ALUMINUM GUARDRAIL WITH ALUMINUM HANDRAIL, TYP. SEE "S" DWGS
3	ALUMINUM GUARDRAIL, TYP. SEE "S" DWGS
13	ELEC EQUIP, SEE "E" DWGS
23	HVAC EQUIP, SEE "H" DWGS
47	REMOVABLE ALUMINUM GUARDRAIL, SEE "S" DWGS
50	ALUMINUM CONDUCTOR HEAD, DOWNSPOUT AND SCUPPER, TYP
51	ALUMINUM COPING, TYP
56	OVERFLOW SCUPPER, BOTTOM OF OVERFLOW SCUPPER TO BE 2-IN ABOVE BOTTOM OF PRIMARY SCUPPER, TYP
67	ALUMINUM DOOR AND FRAME, SEE SCHD
136	3" THICK RIGID INSULATION
147	BUILT-UP MODIFIED BITUMEN ROOFING SYSTEM OVER TAPERED INSULATION
159	HOUSEKEEPING PAD
175	CELLULAR ANTENNA, SEE "I" DWGS



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



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

REV. NO.	DATE	DRWN	CHKD	REMARKS

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 DRAWN BY: A. VENKATESAN
 SHEET CHKD BY: E. MORALES
 CROSS CHKD BY: M. ALFORD
 APPROVED BY: M. ALFORD
 DATE: MAY 2022



ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

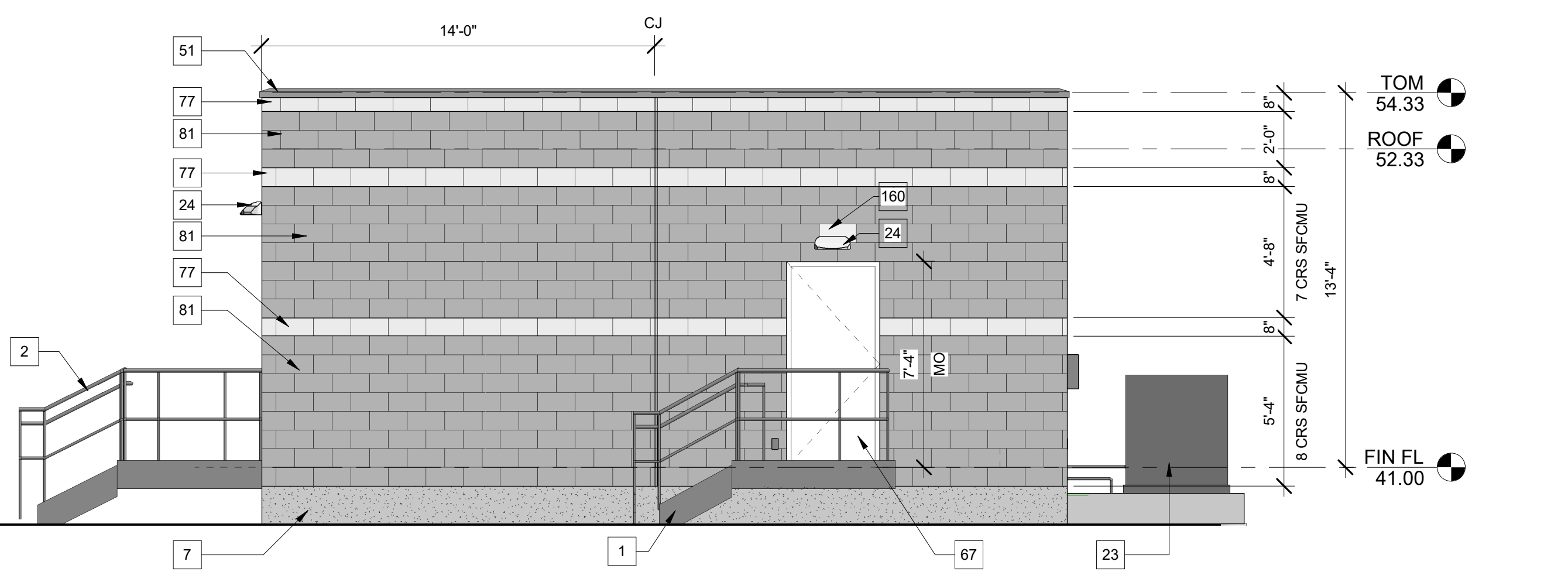
**ELECTRICAL BUILDING
 FLOOR PLAN AND ROOF PLAN**

PROJECT NO. 9247-221208
 FILE NAME: AW2000EB
 SHEET NO. **A-7**

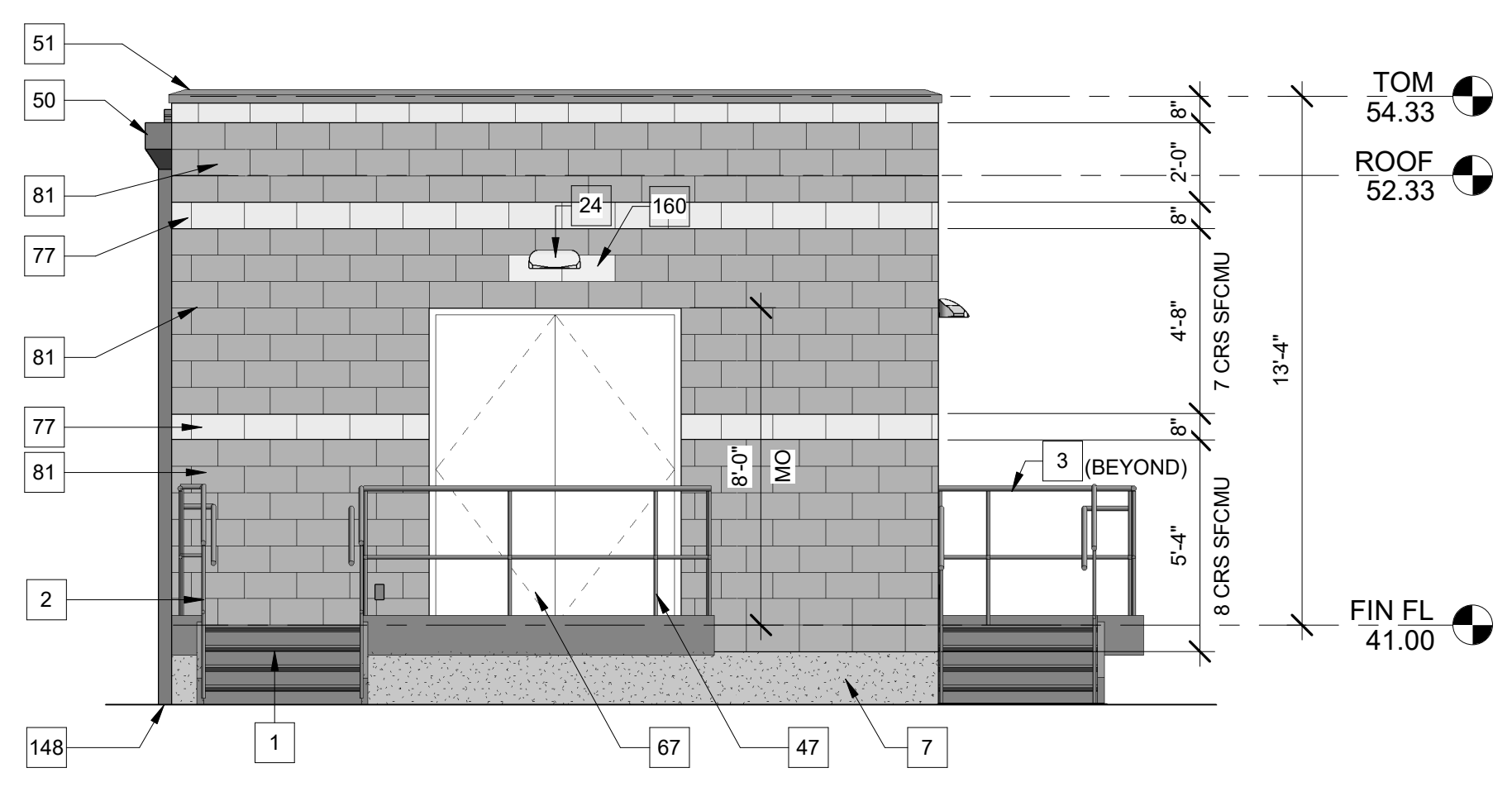
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GENERAL NOTES
SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES AND ABBREVIATIONS

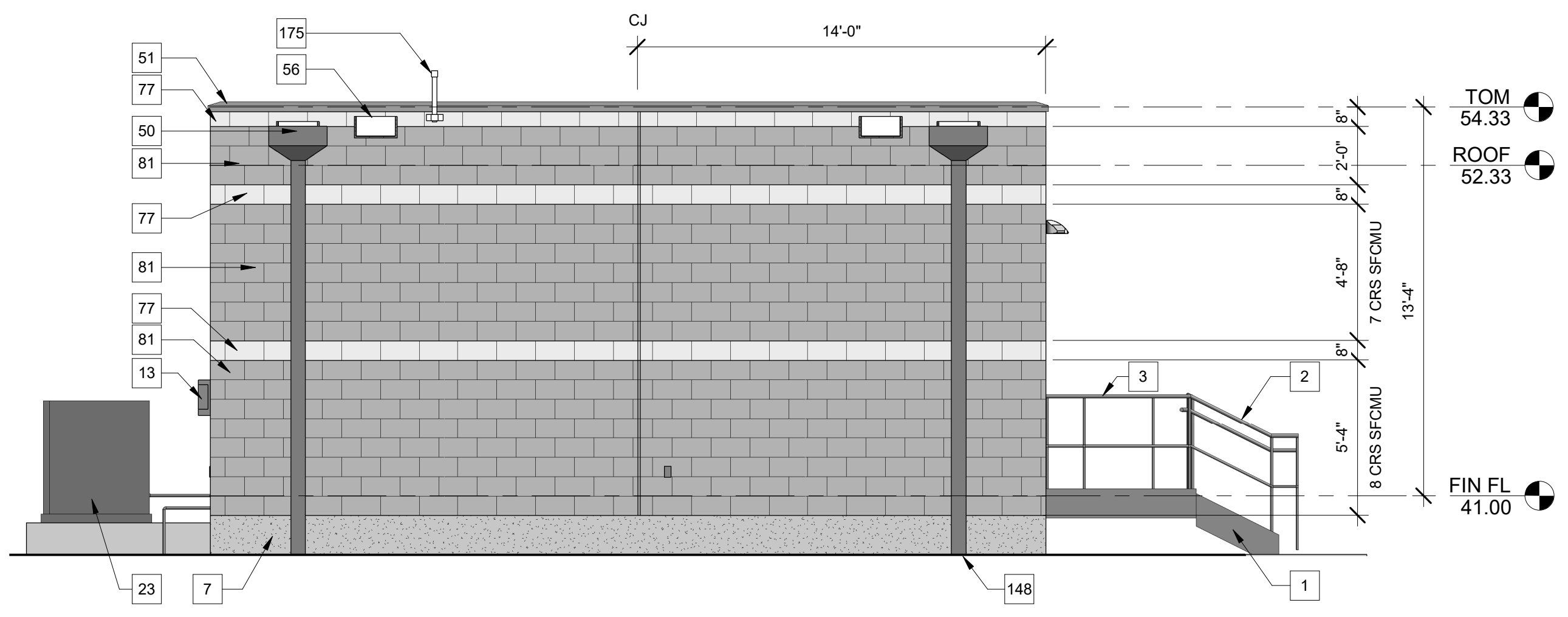
KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	ALUMINUM STAIR WITH ALUMINUM GAURDRAIL AND HANDRAIL, SEE "S" DWGS
2	ALUMINUM GUARDRAIL WITH ALUMINUM HANDRAIL, TYP. SEE "S" DWGS
3	ALUMINUM GUARDRAIL, TYP. SEE "S" DWGS
7	CONCRETE STEM WALL, SEE "S" DWGS
13	ELEC EQUIP, SEE "E" DWGS
23	HVAC EQUIP, SEE "H" DWGS
24	LIGHT FIXTURE, SEE "E" DWGS
47	REMOVABLE ALUMINUM GUARDRAIL, SEE "S" DWGS
50	ALUMINUM CONDUCTOR HEAD, DOWNSPOUT AND SCUPPER, TYP
51	ALUMINUM COPING, TYP
56	OVERFLOW SCUPPER, BOTTOM OF OVERFLOW SCUPPER TO BE 2-IN ABOVE BOTTOM OF PRIMARY SCUPPER, TYP
67	ALUMINUM DOOR AND FRAME, SEE SCHD
77	GROUND FACE CMU, TYP
81	SPLIT FACE CMU, TYP
148	DOWNSPOUT TIED TO STORM DRAIN BELOW GRADE, TYP
160	PLACE GROUND FACE CMU @ LIGHT FIXTURE LOCATION FOR FLUSH MOUNTING
175	CELLULAR ANTENNA, SEE "I" DWGS



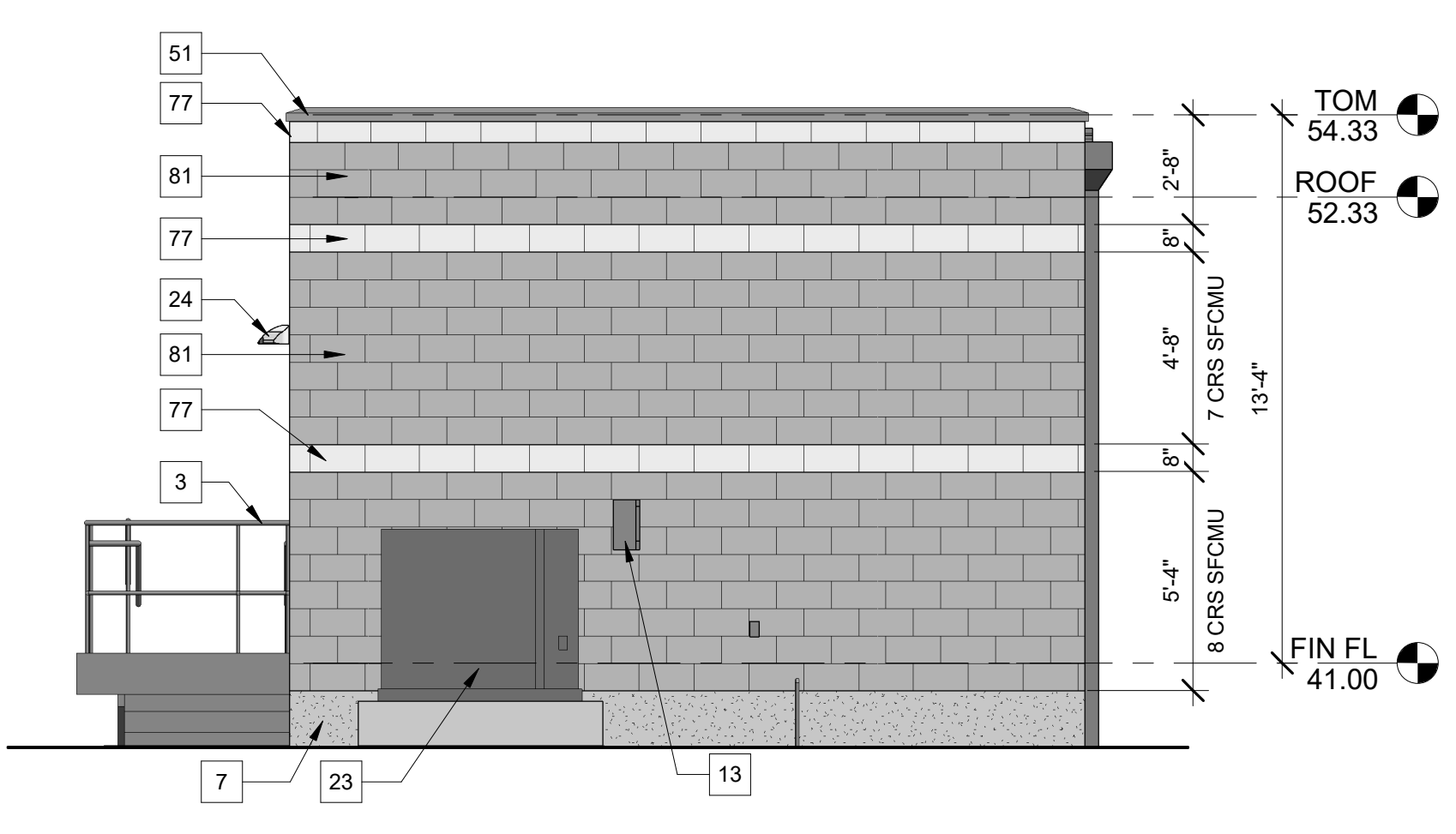
EAST ELEVATION
1/4" = 1'-0"



SOUTH ELEVATION
1/4" = 1'-0"



WEST ELEVATION
1/4" = 1'-0"



NORTH ELEVATION
1/4" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: E. MORALES
 DRAWN BY: A. VENKATESAN
 SHEET CHKD BY: E. MORALES
 CROSS CHKD BY: M. ALFORD
 APPROVED BY: M. ALFORD
 DATE: MAY 2022

CDM Smith
 4651 Salisbury Road, Suite 400
 Jacksonville, FL 32256
 Tel: (904) 731-7109
 FLA COA No. EB-0000020

ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

**ELECTRICAL BUILDING
 EXTERIOR ELEVATIONS**

PROJECT NO.	9247-221208
FILE NAME:	AW2000EB
SHEET NO.	A-8

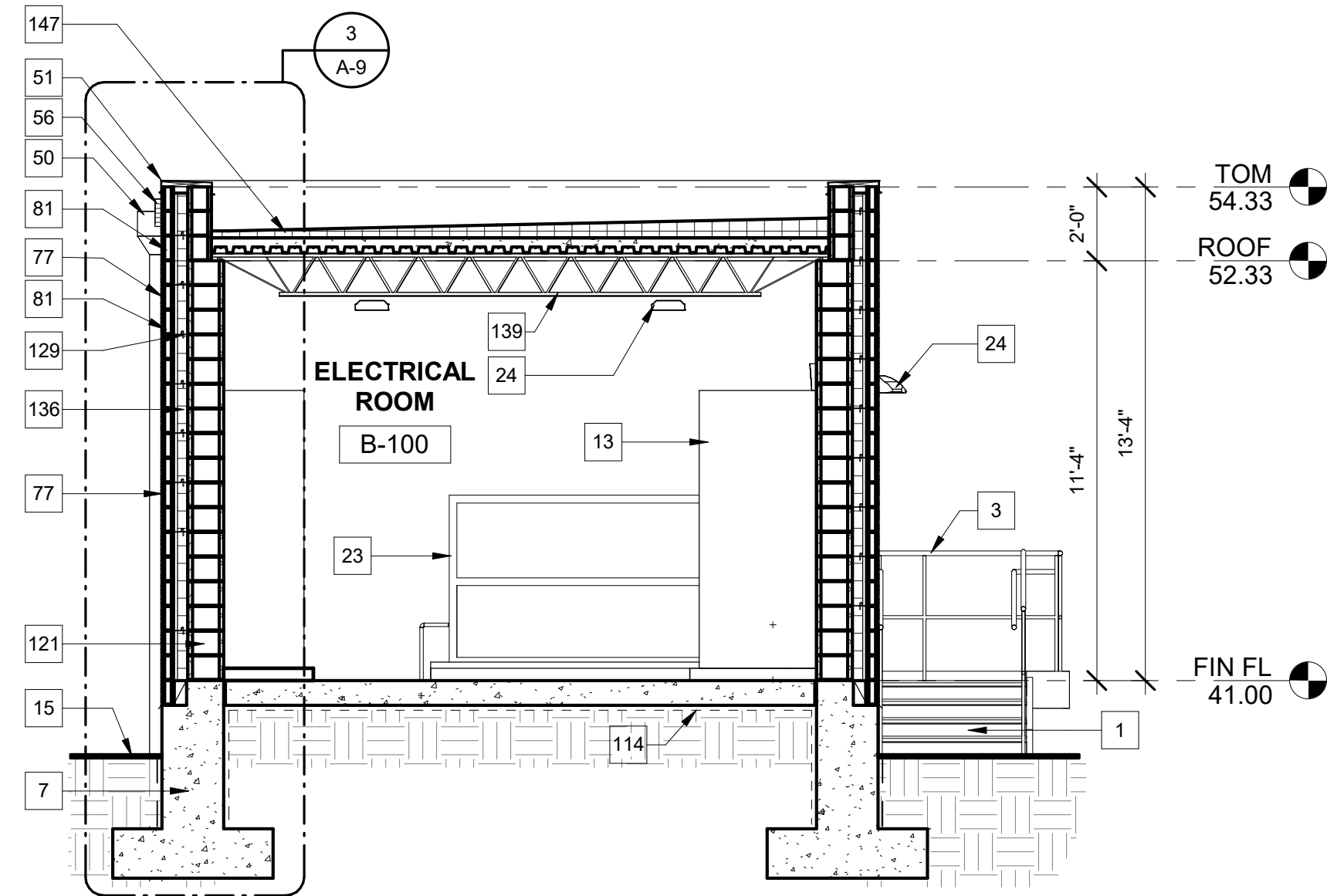
ISSUED FOR BID

GENERAL NOTES

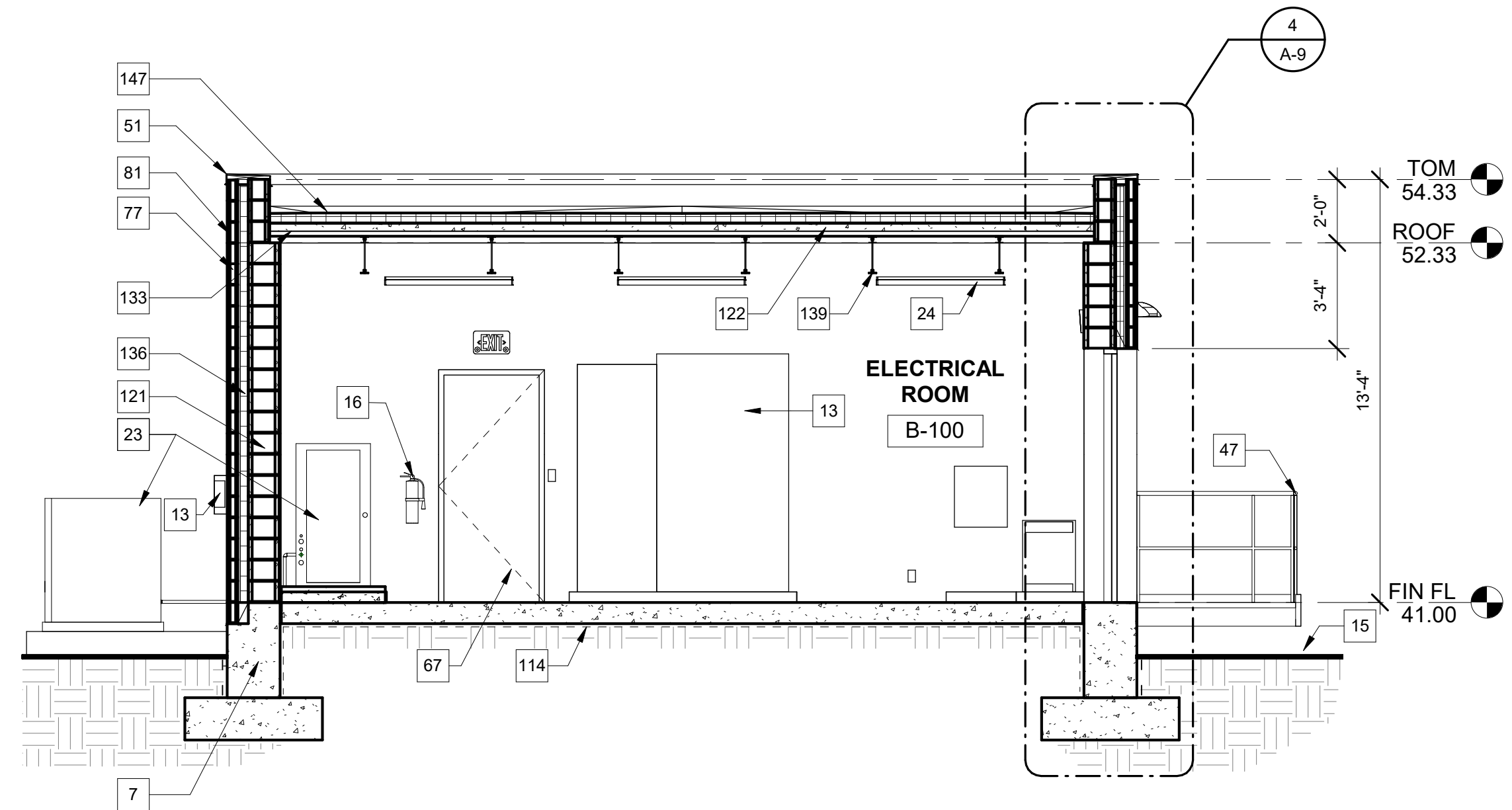
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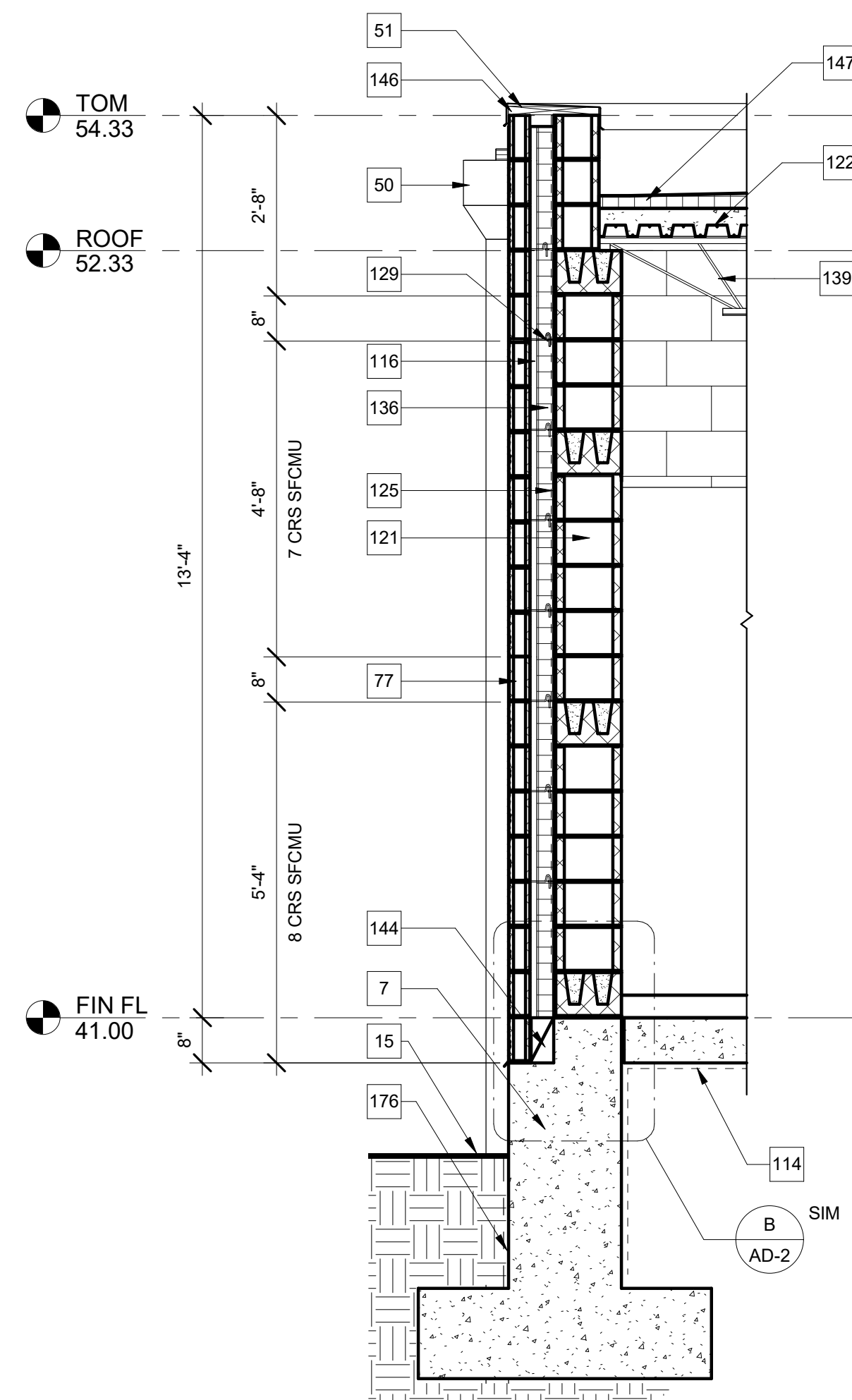
KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
1	ALUMINUM STAIR WITH ALUMINUM GAURDRAIL AND HANDRAIL, SEE "S" DWGS
3	ALUMINUM GUARDRAIL, TYP. SEE "S" DWGS
7	CONCRETE STEM WALL, SEE "S" DWGS
13	ELEC EQUIP, SEE "E" DWGS
15	FINISH GRADE, SEE "C" DWGS
16	FIRE EXTINGUISHER, TYP
23	HVAC EQUIP, SEE "H" DWGS
24	LIGHT FIXTURE, SEE "E" DWGS
47	REMOVABLE ALUMINUM GUARDRAIL, SEE "S" DWGS
50	ALUMINUM CONDUCTOR HEAD, DOWNSPOUT AND SCUPPER, TYP
51	ALUMINUM COPING, TYP
56	OVERFLOW SCUPPER, BOTTOM OF OVERFLOW SCUPPER TO BE 2-IN ABOVE BOTTOM OF PRIMARY SCUPPER, TYP
67	ALUMINUM DOOR AND FRAME, SEE SCHD
77	GROUND FACE CMU, TYP
81	SPLIT FACE CMU, TYP
114	VAPOR RETARDER, TYP
116	1" AIR SPACE
121	12" CMU, TYP
122	COMPOSITE ROOF DECK, SEE "S" DWGS
125	DAMPPOOFING FULL HEIGHT, TYP
129	HORT JOINT REINFORCING @ 16" O.C. EVERY OTHER COURSE VERT
133	METAL ROOF DECK, SEE "S" DWGS
136	3" THICK RIGID INSULATION
139	STEEL JOIST, SEE "S" DWGS
144	THROUGH WALL FLASHING WITH STAINLESS STEEL DRIP EDGE. PROVIDE WEEP HOLES 16" O.C. (MIN 2)
146	WOOD BLOCKING
147	BUILT-UP MODIFIED BITUMEN ROOFING SYSTEM OVER TAPERED INSULATION
167	STEEL ANGLE, SEE "S" DWGS
176	DAMPPOOFING, TYP.



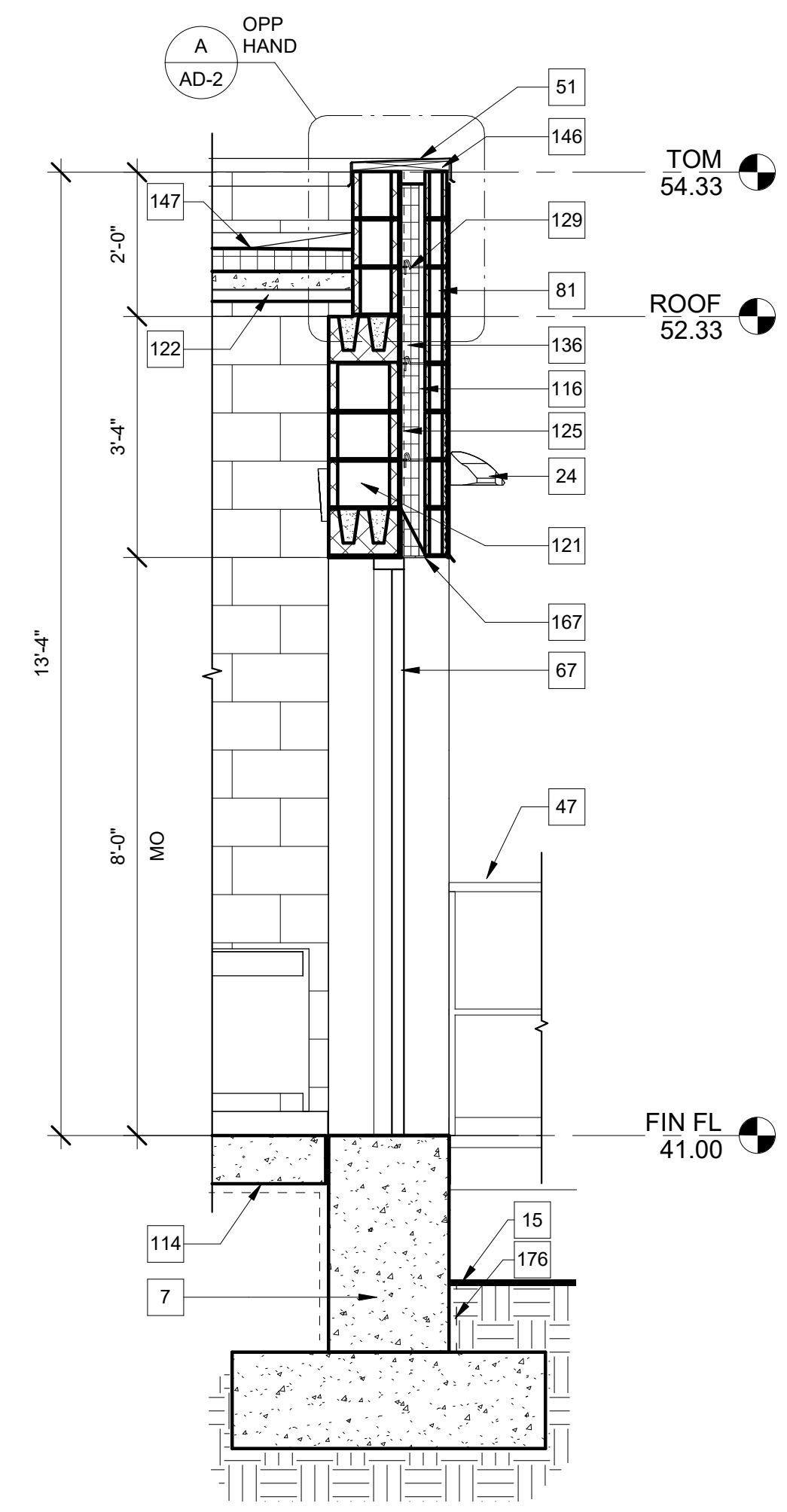
1 BUILDING SECTION
A-7 1/4" = 1'-0"



2 BUILDING SECTION
A-7 1/4" = 1'-0"



3 WALL SECTION 1
A-9 1/2" = 1'-0"



4 WALL SECTION 2
A-9 1/2" = 1'-0"

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REV. NO.	DATE	DRWN	CHKD	REMARKS

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 CROSS CHKD BY: M. ALFORD
 APPROVED BY: M. ALFORD
 DATE: MAY 2022

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ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

ELECTRICAL BUILDING
 BUILDING SECTIONS AND WALL SECTIONS

PROJECT NO.	9247-221208
FILE NAME:	AWZ000EB
SHEET NO.	A-9

ISSUED FOR BID

PUMP STATION BUILDING FINISH SCHEDULE

ROOM NAME	ROOM NUMBER	FLOOR		WALL								CEILING			NOTES			
		MATERIAL	FINISH	NORTH		EAST		SOUTH		WEST		BASE		MATERIAL		FINISH	HEIGHT	
PUMP ROOM	A-100	CONC	SEAL	CMU	PTD	CMU	PTD	CMU	PTD	CMU	PTD	CMU	PTD	CMU	--	--	--	

ELECTRICAL BUILDING FINISH SCHEDULE

ROOM NAME	ROOM NUMBER	FLOOR		WALL								CEILING			NOTES			
		MATERIAL	FINISH	NORTH		EAST		SOUTH		WEST		BASE		MATERIAL		FINISH	HEIGHT	
ELECTRICAL ROOM	B-100	CONC	SEAL	CMU	PTD	CMU	PTD	CMU	PTD	CMU	PTD	CMU	PTD	CMU	--	--	--	

PUMP STATION BUILDING DOOR SCHEDULE

DOOR NUMBER	ROOM NAME	EXT DOOR	SIZE		DOOR				GLASS TYPE	FRAME			DETAILS			FIRE RATING (MIN)	HARDWARE SET	NOTES
			WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	TYPE		MATERIAL	FINISH	HEAD	JAMB	THRESH OLD				
DA-100A	PUMP ROOM	*	PR	3'-0"	7'-2"	F	ALUM	SPEC	--	F2	ALUM	SPEC	A/AD-1	B/AD-1	C/AD-1	0	HW 2	
DA-100B	PUMP ROOM	*	PR	3'-0"	7'-2"	F	ALUM	SPEC	--	F1	ALUM	SPEC	A/AD-1	B/AD-1	C/AD-1	0	HW 1	

ELECTRICAL BUILDING DOOR SCHEDULE

DOOR NUMBER	ROOM NAME	EXT DOOR	SIZE		DOOR				GLASS TYPE	FRAME			DETAILS			FIRE RATING (MIN)	HARDWARE SET	NOTES
			WIDTH	HEIGHT	TYPE	MATERIAL	FINISH	TYPE		MATERIAL	FINISH	HEAD	JAMB	THRESH OLD				
DB-100A	ELECTRICAL ROOM	*	PR	3'-0"	7'-2"	F	ALUM	SPEC	--	F1	ALUM	SPEC	A/AD-1	B/AD-1	C/AD-1	0	HW 1	
DB-100B	ELECTRICAL ROOM	*	PR	3'-0"	7'-10"	F	ALUM	SPEC	--	F2	ALUM	SPEC	A/AD-1	B/AD-1	C/AD-1	0	HW 2	

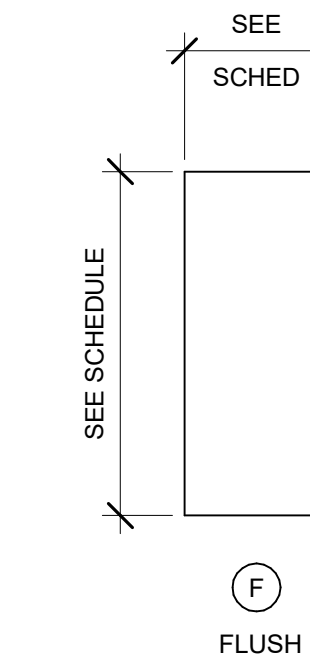
PUMP STATION BUILDING LOUVER SCHEDULE

LOUVER NUMBER	ROOM NAME	TYPE	PERFORMANCE	R.O. SIZE			DETAIL			NOTES		
				WIDTH	HEIGHT	DEPTH	MATERIAL	FINISH	HEAD		JAMB	SILL
LA-101A	PUMP ROOM	L1	HORIZONTAL BLADE	4'-0"	8'-0"	1'-0"	ALUM	SPEC	D/AD-1	E/AD-1	F/AD-1	SOUND DAMPENING LOUVER
LA-101B	PUMP ROOM	L1	HORIZONTAL BLADE	4'-0"	8'-0"	1'-0"	ALUM	SPEC	D/AD-1	E/AD-1	F/AD-1	SOUND DAMPENING LOUVER
LA-101C	PUMP ROOM	L1	HORIZONTAL BLADE	4'-0"	8'-0"	1'-0"	ALUM	SPEC	D/AD-1	E/AD-1	F/AD-1	SOUND DAMPENING LOUVER
LA-101D	PUMP ROOM	L1	HORIZONTAL BLADE	4'-0"	8'-0"	1'-0"	ALUM	SPEC	D/AD-1	E/AD-1	F/AD-1	SOUND DAMPENING LOUVER
LA-101E	PUMP ROOM	L1	HORIZONTAL BLADE	7'-4"	4'-8"	1'-0"	ALUM	SPEC	D/AD-1	E/AD-1	F/AD-1	SOUND DAMPENING LOUVER
LA-101F	PUMP ROOM	L1	HORIZONTAL BLADE	7'-4"	4'-8"	1'-0"	ALUM	SPEC	D/AD-1	E/AD-1	F/AD-1	SOUND DAMPENING LOUVER

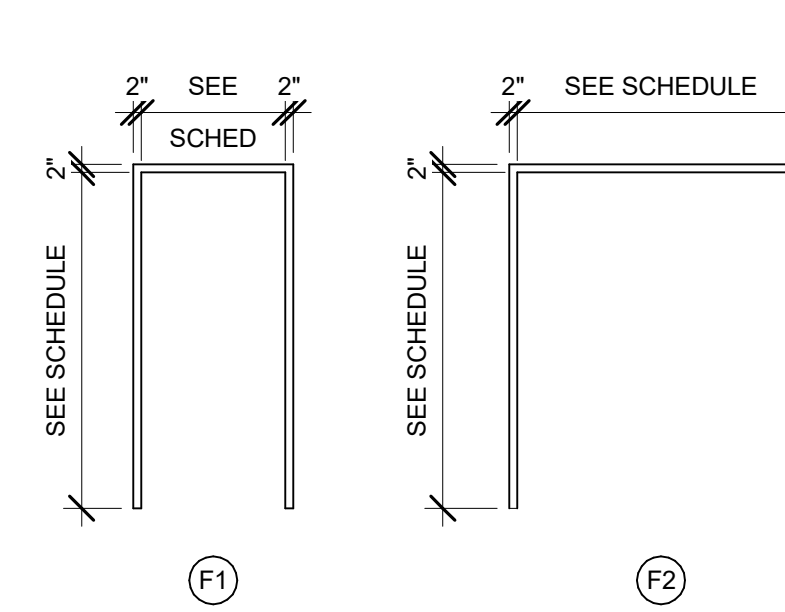
GENERAL NOTES

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 SEE STRUCTURAL DRAWINGS FOR COMPONENT AND CLADDING WIND PRESSURE REQUIREMENTS FOR DOORS AND LOUVERS
 SEE EXTERIOR ELEVATIONS, BUILDING SECTIONS AND WALL SECTIONS FOR LOCATION OR SPLIT FACE CMU AND GROUND FACE CMU

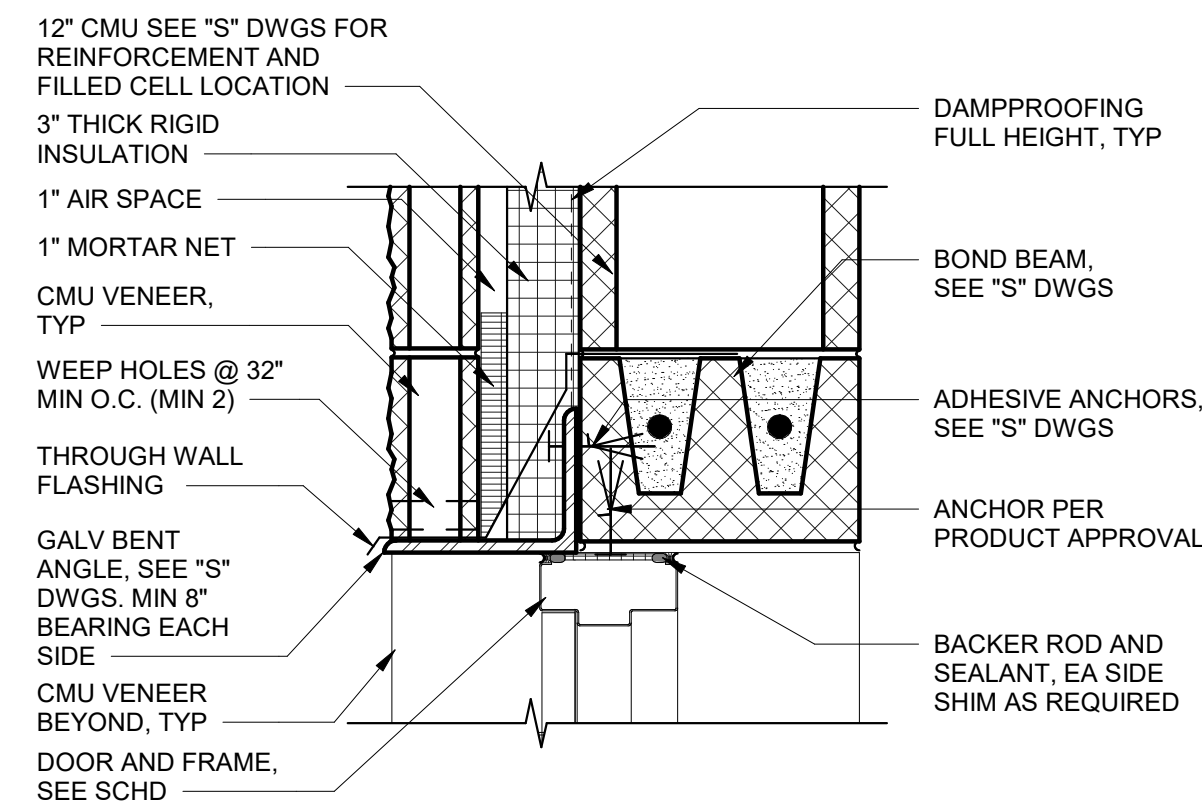
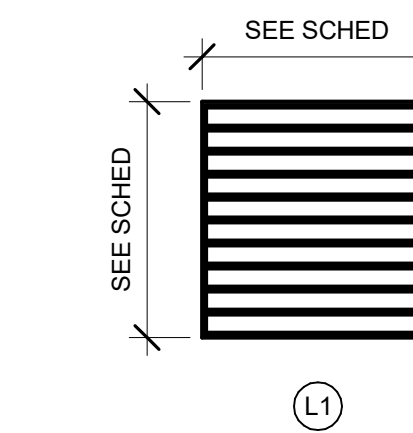
DOOR TYPE



FRAME TYPES

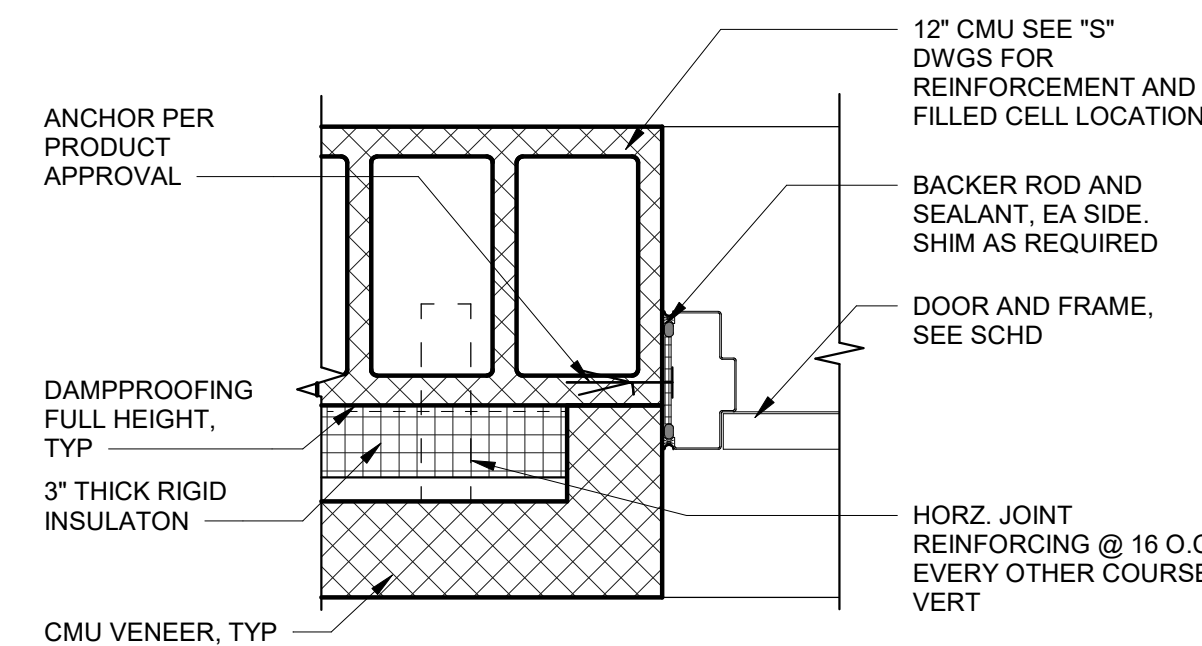


LOUVER TYPES



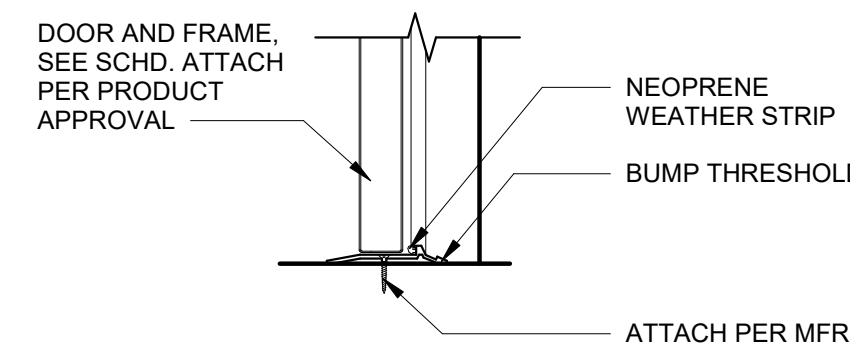
DOOR HEAD

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



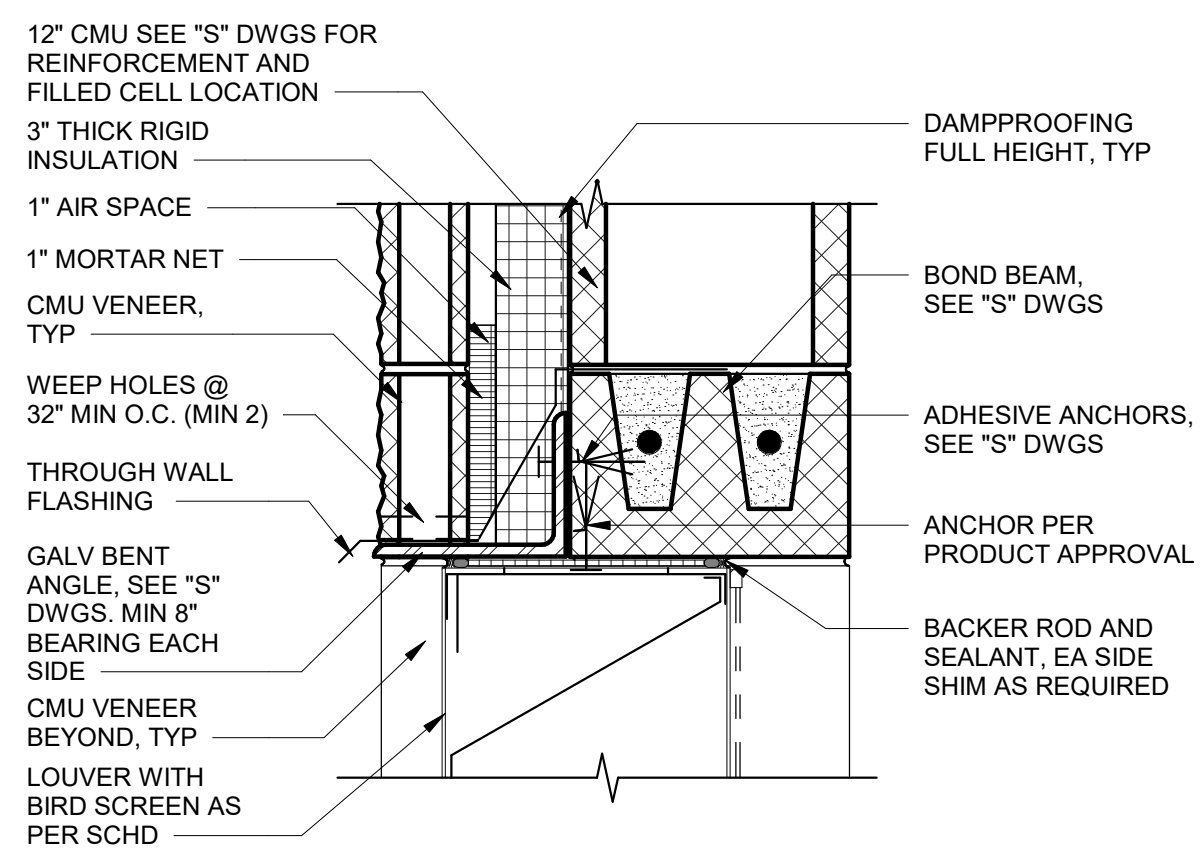
DOOR JAMB

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



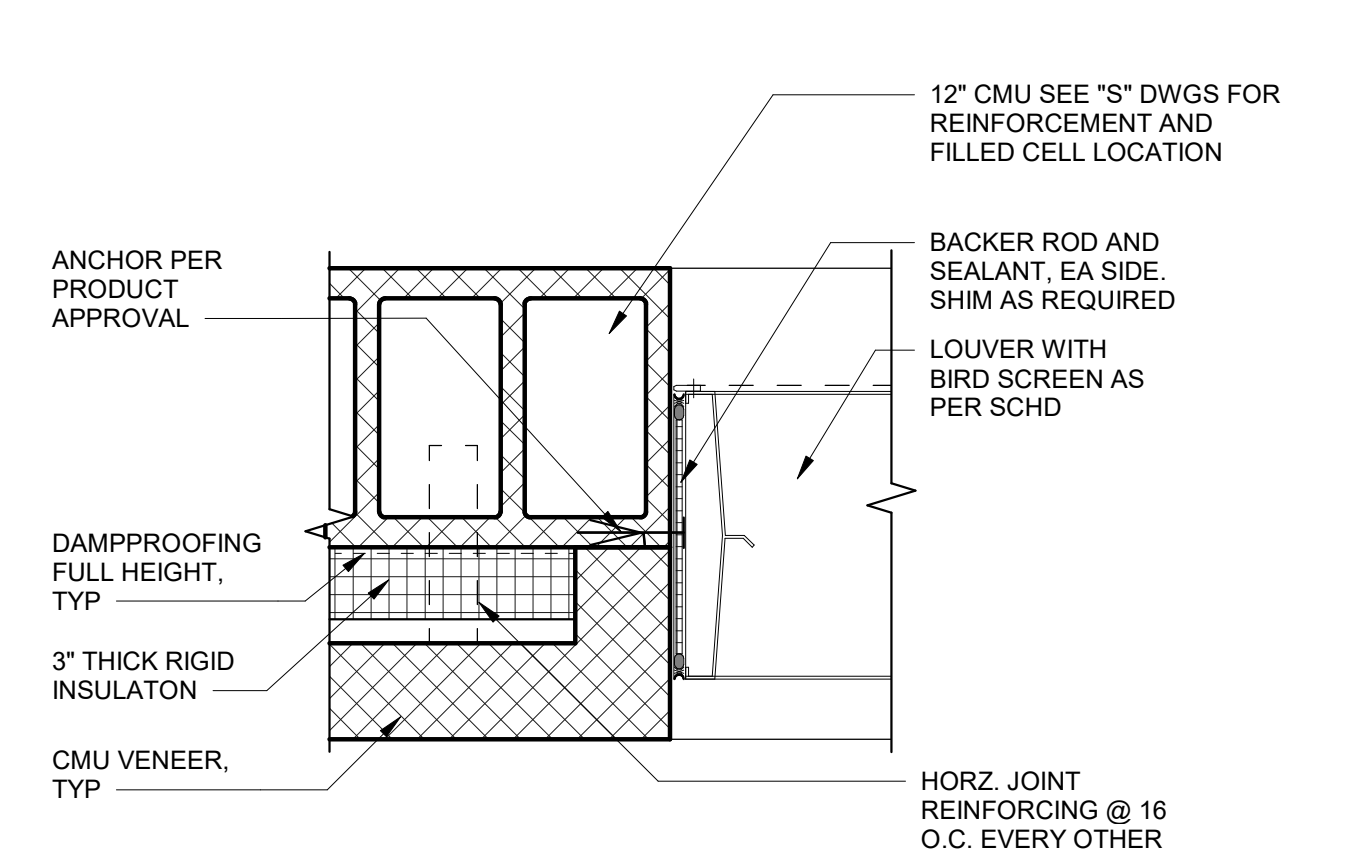
DOOR THRESHOLD

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



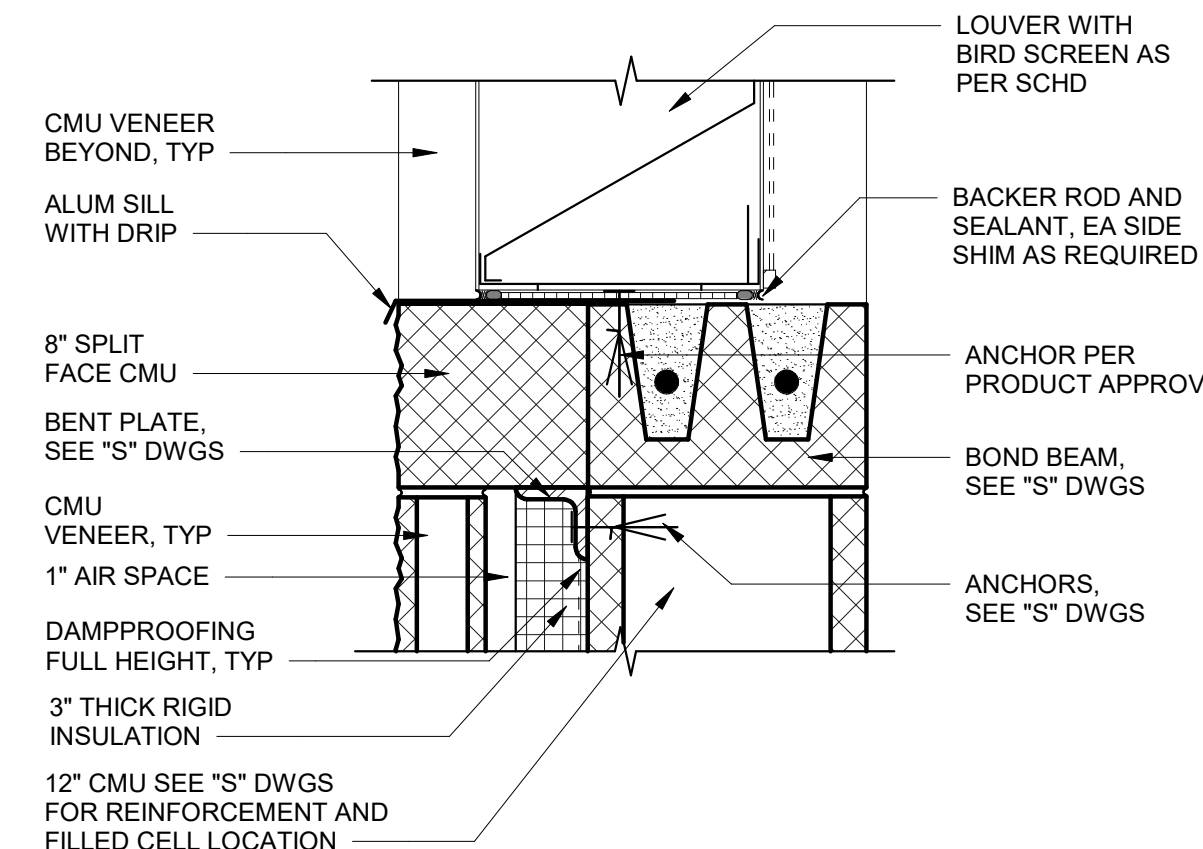
LOUVER HEAD

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



LOUVER JAMB

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



LOUVER SILL

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

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REV. NO.	DATE	DRWN	CHKD	REMARKS

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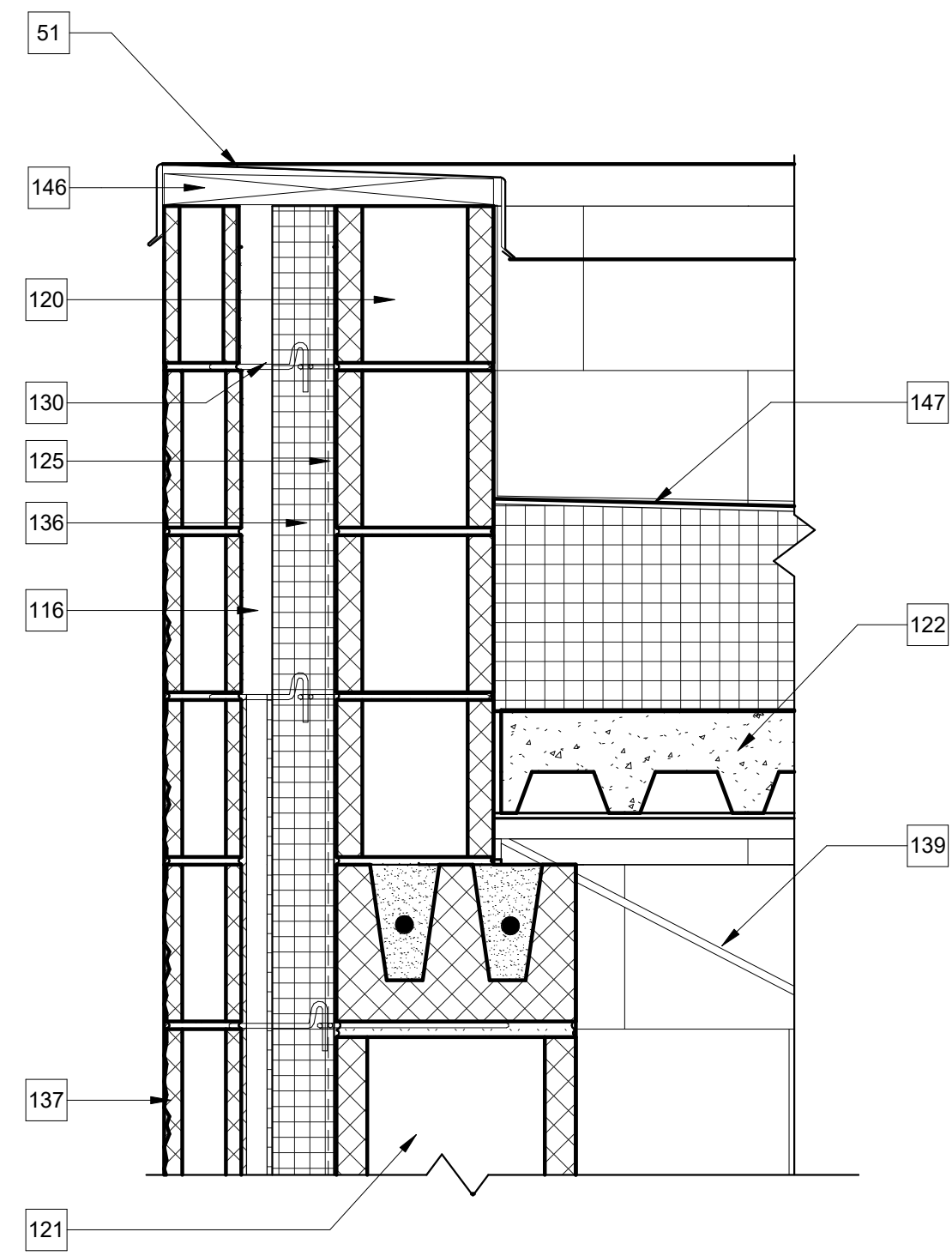
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

FINISH SCHEDULE, DOOR SCHEDULE
 AND TYPES, LOUVER SCHEDULE AND TYPES

PROJECT NO.	9247-221208
FILE NAME:	
SHEET NO.	AD-1

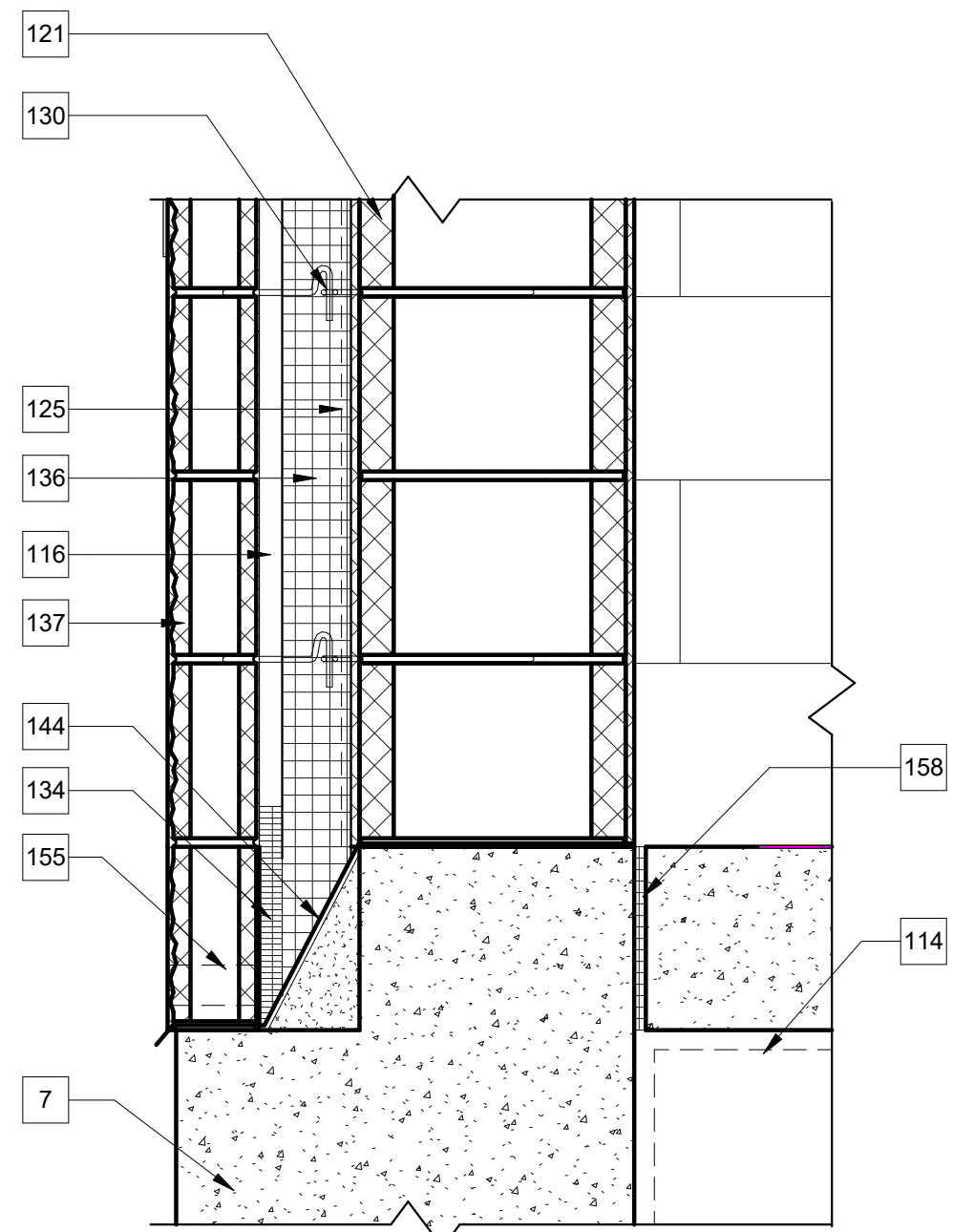
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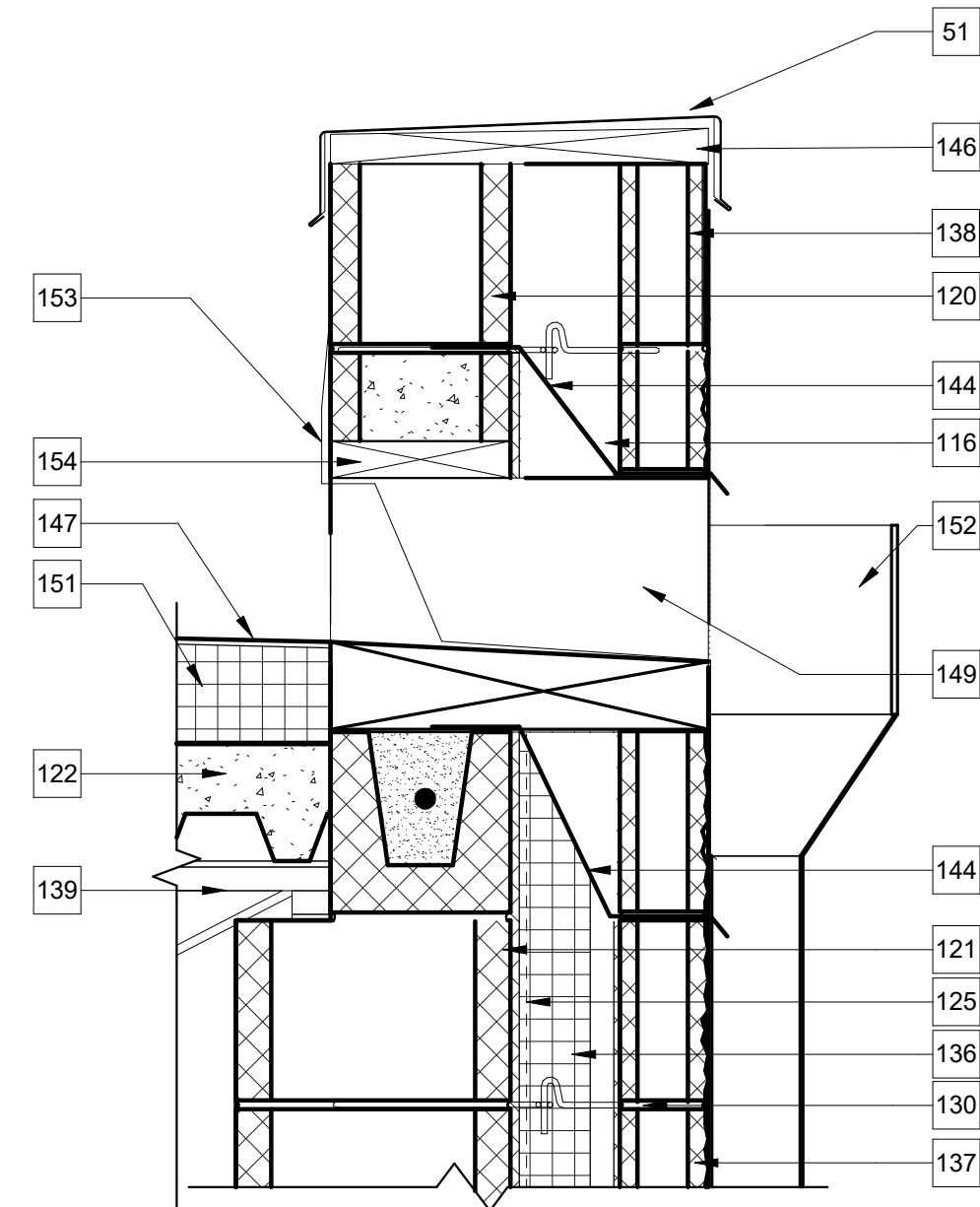
PARAPET

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



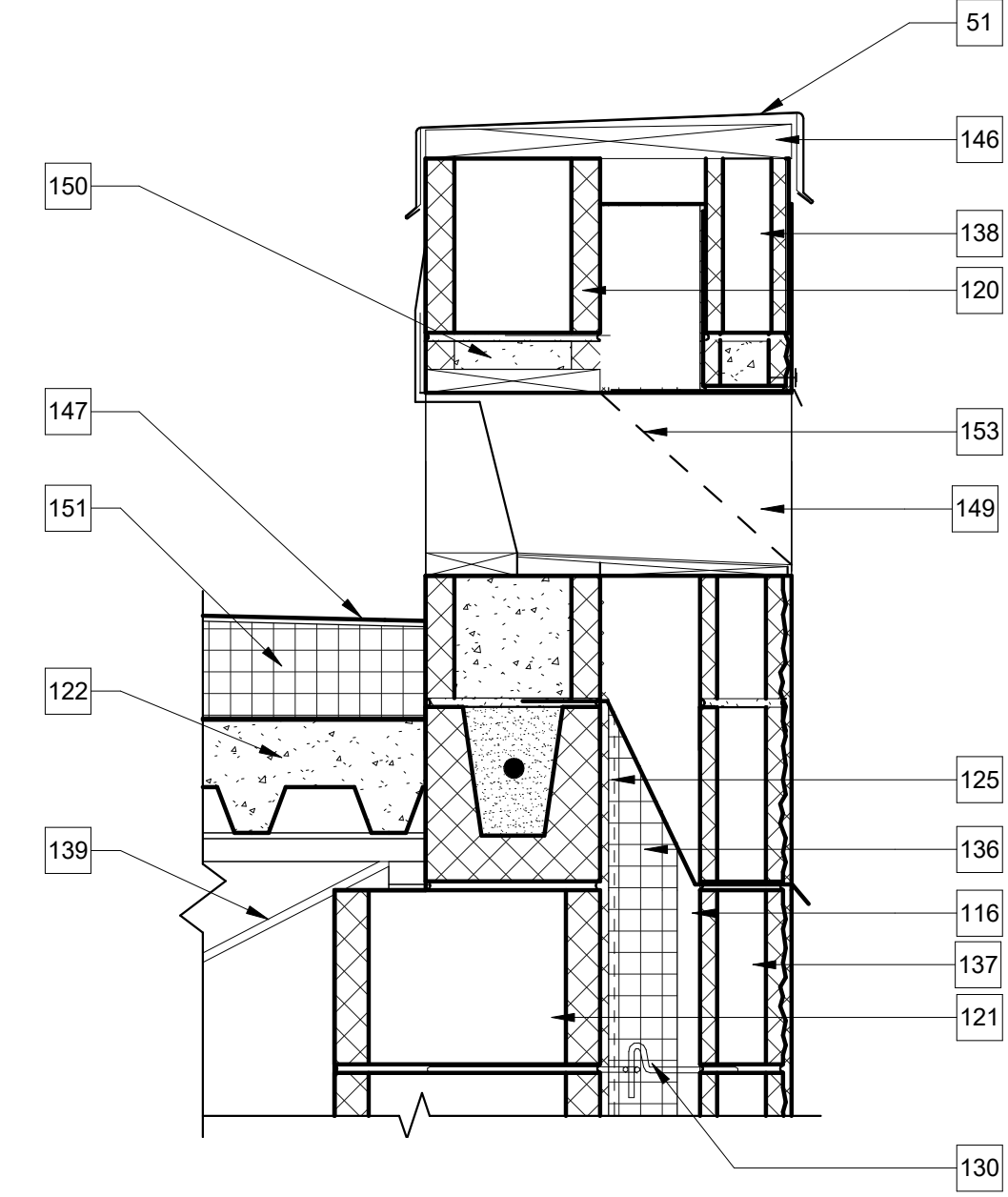
WALL BASE

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



SCUPPER

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



OVERFLOW SCUPPER

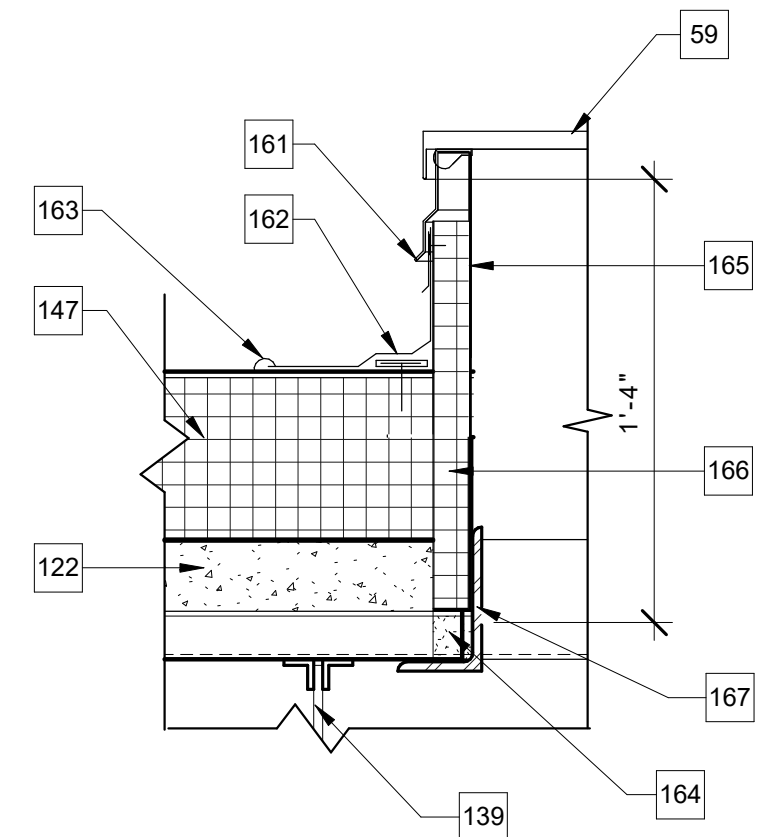
D DETAIL
1 1/2" = 1'-0"

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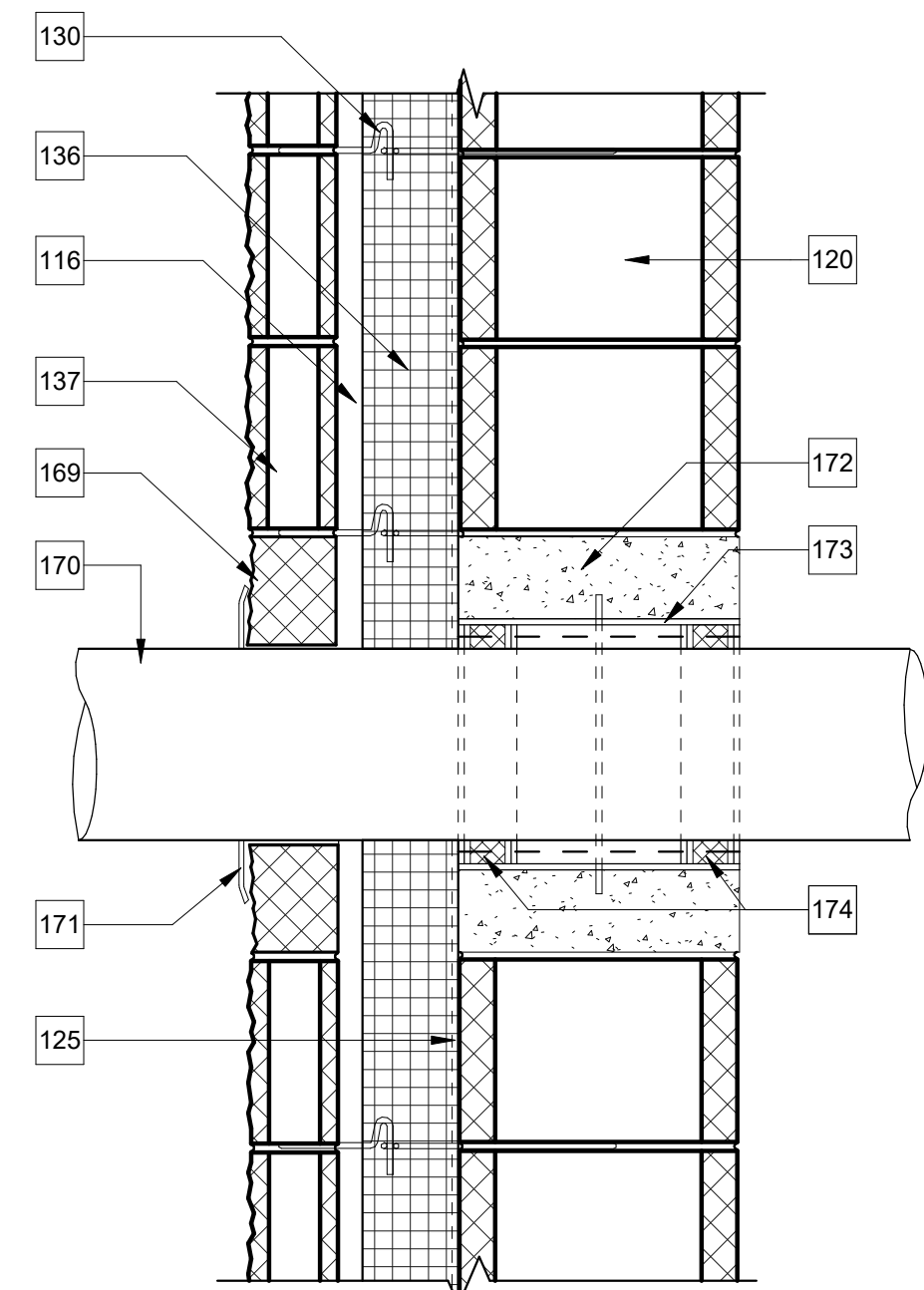
KEYNOTE LEGEND

KEY VALUE	KEYNOTE TEXT
7	CONCRETE STEM WALL, SEE "S" DWGS
51	ALUMINUM COPING, TYP
59	48" X 48" PUMP REMOVAL ACCESS HATCH. VERIFY FINAL ACCESS HATCH LOCATION IS CENTERED OVER INSTALLED PUMP LOCATION
114	VAPOR RETARDER, TYP
116	1" AIR SPACE
120	8" CMU, TYP
121	12" CMU, TYP
122	COMPOSITE ROOF DECK, SEE "S" DWGS
125	DAMP-PROOFING FULL HEIGHT, TYP
130	HORT JOINT REINFORCING WITH ADJ VENEER TIES AT EVERY OTHER COURSE, TYP
134	1" MORTAR NET
136	3" THICK RIGID INSULATION
137	4" SPLIT FACE CMU VENEER, TYP
138	4" GROUND FACE CMU VENEER, TYP
139	STEEL JOIST, SEE "S" DWGS
144	THROUGH WALL FLASHING WITH STAINLESS STEEL DRIP EDGE. PROVIDE WEEP HOLES 16" O.C. (MIN 2)
146	WOOD BLOCKING
147	BUILT-UP MODIFIED BITUMEN ROOFING SYSTEM OVER TAPERED INSULATION
149	FINISHED OPENING OF SCUPPER SHALL BE 8" X 16"
150	GROUT FILLED CELL AT PERIMETER OF SCUPPER, TYP
151	ROOF INSULATION TO BE MIN. 2" AT EDGE OF SCUPPER
152	CONDUCTOR HEAD AND DOWNSPOUT
153	CONTINUOUS MEMBRANE SLEEVE AT PERM. OF OPENING
154	MEMBRANE FLASHING TO LAP METAL SCUPPER AND EXTEND INTO SCUPPER OPENING, TYP
155	WEEP HOLES @ 32" O.C.
158	EXPANSION JOINT, SEE "S" DWGS
161	CURB W/ INTEGRAL CAP FLASHING
162	MEMBRANE FLASHING
163	LAP SEALANT
164	FLUTE PLUG
165	METAL ENCLOSURE
166	2" MIN. RIGID INSULATION ALL AROUND OUTSIDE OF CURB
167	STEEL ANGLE, SEE "S" DWGS
169	CUT BLOCK AROUND PIPE PENETRATION
170	DUCTILE IRON PIPE SIZE VARIES, SEE "M" DWGS
171	SS ESCUTHEON PLATE SET IN CAULK
172	GROUT FILL, SEE "S" DWGS
173	WALL SLEEVE, SEE "M" DWGS
174	MECHANICAL SEAL, SEE "M" DWGS



EQUIPMENT ACCESS HATCH

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



PIPE PENETRATION

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

REV. NO.	DATE	DRWN	CHKD	REMARKS

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ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

ARCHITECTURAL DETAILS

PROJECT NO. 9247-221208
 FILE NAME: AWZ000PS

SHEET NO.

AD-2

ISSUED FOR BID

GENERAL NOTES

DELEGATED SUBMITTALS

DESIGN CRITERIA:

CODES:

- FLORIDA BUILDING CODE, SEVENTH EDITION (2020)
- ENVIRONMENTAL STRUCTURES: ACI 350 "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES"
- OTHER STRUCTURES: ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
- TMS 402-2016 "BUILDING CODE REQUIREMENTS FOR REINFORCED MASONRY STRUCTURES"
- AISC 360 SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS

CONCRETE:

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 OR ACI 350 REQUIREMENTS.

ALL CONCRETE SHALL BE AIR-ENTRAINED WITH 4500 PSI COMPRESSIVE STRENGTH AT 28 DAYS UNLESS OTHERWISE NOTED.

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494.

ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS CEMENT FINISHING IS COMPLETED OR FORMS ARE REMOVED.

ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE A MINIMUM CHAMFER OF 3/4" UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATION OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWING.

STRUCTURAL STEEL:

DESIGN, FABRICATION, ERECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS AND DESIGN DRAWINGS.

ALL STRUCTURAL STEEL:

W SHAPES -	ASTM A992
M, S AND HP SHAPES -	ASTM A36
CHANNELS AND ANGLES -	ASTM A36
HSS (SQUARE, RECTANGULAR AND ROUND) -	ASTM A500
PLATES -	ASTM A36
HIGH-STRENGTH BOLTS -	ASTM F3125
TENSION CONTROL BOLTS -	ASTM F1852
NUTS -	ASTM A563
HARDENED STEEL WASHER -	ASTM F436
ANCHOR RODS -	ASTM F1554
THREADED RODS -	ASTM A36

ALL PIPE: ASTM A53, GRADE B.

1. THE FOLLOWING PORTIONS OF THE PROJECT ARE DELEGATED SUBMITTAL ITEMS AND HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD:
 - a. EQUIPMENT, TANK AND PIPE SUPPORT ANCHORAGE
 - b. RAILING SYSTEMS
 - c. PUMP STATION EXHAUST FAN SUPPORTS
 - d. ROOF HATCHES
 - e. STEEL JOISTS
2. DELEGATED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW DURING THE CONSTRUCTION PHASE OF THE PROJECT.
3. DELEGATED SUBMITTAL ITEMS SHALL BE STAMPED AND SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
4. DELEGATED SUBMITTAL ITEMS SHALL NOT BE ERECTED OR INSTALLED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE STRUCTURE.

DESIGN LOADS:

LIVE LOADS:

- STAIRWAYS	100 PSF
- WALKWAYS	100 PSF
- PROCESS SLABS ON GRADE	200 PSF
- STORAGE AREAS AND ELECTRICAL ROOM	300 PSF

SUPERIMPOSED DEADLOADS:

- ROOFS	AS NOTED
- FLOORS	AS NOTED

WINDLOADS: ASCE 7-16

- ULTIMATE DESIGN WIND SPEED, V_{ULT} (3 SECOND GUST) 134 MPH
 - NOMINAL DESIGN WIND SPEED, V_{ASD} 104 MPH
 - RISK CATEGORY III
 - WIND EXPOSURE CATEGORY C
 - ENCLOSURE CLASSIFICATION SEE DESIGN DRAWINGS
 - INTERNAL PRESSURE COEFFICIENT SEE DESIGN DRAWINGS

REINFORCING STEEL:

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS.

ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

- CONCRETE CAST AGAINST EARTH	3"
- FORMED SURFACES IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER	2"
- FORMED SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH SOIL:	
- SLABS, WALLS AND JOISTS	1"
- BEAMS AND COLUMNS	1-1/2"

LAP SPLICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPLICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL.

THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

THE FABRICATOR SHALL DESIGN AND DETAIL ALL PARTS OF CONNECTIONS NOT FULLY DETAILED ON THE DESIGN DRAWINGS. THE NUMBER OF BOLTS AND OTHER SIMILAR ELEMENTS SHOWN ON THE DRAWING ARE PICTORIAL ONLY.

SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS STRUCTURAL WELDING CODE REQUIREMENTS. ELECTRODES SHALL BE E-70XX.

STRUCTURAL ALUMINUM:

DESIGN, FABRICATION, ERECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST "ALUMINUM DESIGN MANUAL" (ADM), SPECIFICATIONS AND DESIGN DRAWINGS.

ALL STRUCTURAL ALUMINUM:

ALUMINUM EXTRUDED PIPE -	ASTM B429, ALLOY 6063-T6 OR ALLOY 6061-T6
ALUMINUM EXTRUDED SHAPE -	ASTM B221, ALLOY 6061-T6
ALUMINUM SHEET AND PLATE -	ASTM B209, ALLOY 6061-T6
ALUMINUM ALLOY ROLLED THREAD PLATE -	ASTM B209, ALLOY 6061-T6
ALUMINUM CASTING -	ASTM B26/B36M, ALLOY 443.0-F

SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST ANS D1.2/D1.2M "STRUCTURAL WELDING CODE - ALUMINUM".

WHERE ALUMINUM CONTACTS A DISSIMILAR METAL, APPLY TO THE DISSIMILAR METAL A HEAVY BRUSH COAT OF ZINC-CHROMATE PRIMER FOLLOWED BY TWO COATS OF ALUMINUM METAL PAINT.

WHERE ALUMINUM CONTACTS MASONRY OR CONCRETE, APPLY A HEAVY COAT OF BITUMASTIC OR EPOXY PAINT.

FLOOD DESIGN DATA:

- 1% ANNUAL CHANCE FLOOD BASE FLOOD ELEVATION ZONE AE NAVD 88 EL 39.00'
- DESIGN FLOOD ELEVATION, DFE EL 40.00'
- PUMP STATION BUILDING EL 41.00'
- ELECTRICAL BUILDING EL 41.00'

CONCRETE 28-DAY STRENGTH:

- COLUMNS, BEAMS, SLABS, WALLS AND FOOTINGS	4500 PSI
- MASONRY FILLED CELL GROUT	2500 PSI
- PRECAST ELEMENTS	5000 PSI

CONCRETE MASONRY:

DESIGN CRITERIA:

- DESIGN COMPRESSIVE STRENGTH OF MASONRY AT 28 DAYS $f_m = 2000$ PSI
- ALLOWABLE STEEL STRESS $f_s = 32,000$ PSI

CONTINUOUS INSPECTION IS REQUIRED FOR ALL MASONRY WORK.

THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

GEOTECHNICAL REPORT:

GEOTECHNICAL DESIGN REPORT, "BLACK CREEK WATER RESOURCE DEVELOPMENT PROJECT INTAKE, PUMP STATION AND AQUIFER RECHARGE SYSTEM" PREPARED BY CDM SMITH, DATED NOVEMBER 2018.

REINFORCING STEEL:

- ALL BARS ASTM A615, GRADE 60
- WELDED WIRE FABRIC ASTM A185

FOUNDATIONS:

- ALLOWABLE BEARING PRESSURE FOR SHALLOW FOUNDATIONS OVER SUBSURFACE PREPARED AS PER SPECIFICATIONS:

PUMP STATION BUILDING	1500 PSF
ELECTRICAL BUILDING	1500 PSF
INTAKE STRUCTURE	1500 PSF
PUMP CANS	6400 PSF

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS AND:

- TMS 402-2016 "BUILDING CODE REQUIREMENTS FOR REINFORCED MASONRY STRUCTURES."

CONSTRUCTION:

- ALL FILLED CELLS AND COLUMNS SHALL BE POURED AT LEAST (2) HOURS PRIOR TO POURING LINTEL BLOCK OR TIE BEAMS.
- MAXIMUM CONSTRUCTION HEIGHT OF MASONRY WALLS WITHOUT FILLED CELL OR COLUMN POURS IS TO BE 8'-0". THE CONCRETE FOR FILLED CELLS SHALL BE RODDED OR PUDDED DURING PLACEMENT TO ENSURE COMPLETE FILLING TO THE BLOCK CORE.
- SEE STANDARD DETAILS AND ARCHITECTURAL DRAWINGS FOR LINTEL REQUIREMENTS OVER OPENINGS.
- PROVIDE CLEAN OUT AND INSPECTION BLOCK OUTS IN CELLS CONTAINING REINFORCEMENT.

SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

WHERE ALUMINUM CONTACTS A DISSIMILAR METAL, APPLY TO THE DISSIMILAR METAL A HEAVY BRUSH COAT OF ZINC-CHROMATE PRIMER FOLLOWED BY TWO COATS OF ALUMINUM METAL PAINT.

WHERE ALUMINUM CONTACTS MASONRY OR CONCRETE, APPLY A HEAVY COAT OF BITUMASTIC OR EPOXY PAINT.

GENERAL CONDITIONS:

ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, HVAC, PLUMBING, MECHANICAL, CIVIL, ELECTRICAL AND SHOP DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FACILITY. SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.

FLOTATION CONSIDERATION:

STRUCTURES WERE DESIGNED TO BE NON-BUOYANT AFTER THE STRUCTURE IS PLACED INTO SERVICE. THEREFORE, THE STRUCTURE MAY BE BUOYANT DURING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL PROTECT ALL STRUCTURES (NEW AND EXISTING) FROM FLOTATION DURING CONSTRUCTION, REGARDLESS OF GROUNDWATER LEVELS, UNTIL STRUCTURES ARE PLACED IN OPERATION.

ABBREVIATIONS

AL	ALUMINUM	MCJ	MASONRY CONTROL JOINT
BLD	BUILDING	MIN	MINIMUM
BOT	BOTTOM	MISC	MISCELLANEOUS
CC	CENTER TO CENTER	NF	NEAR FACE
CJ	CONTROL JOINT	NTS	NOT TO SCALE
CMU	CONCRETE MASONRY UNITS	OC	ON CENTER
CONC	CONCRETE	PCJ	PARTIAL CONTRACTION JOINT
CONST JT	CONSTRUCTION JOINT	PL	PLATE
CONT	CONTINUOUS	PLF	POUNDS PER LINEAR FOOT
DIA	DIAMETER	PROJ	PROJECTION
DWG	DRAWING	PSF	POUNDS PER SQUARE FOOT
EF	EACH FACE	PSI	POUNDS PER SQUARE INCH
EJ	EXPANSION JOINT	REINF	REINFORCEMENT
EL	ELEVATION	SIM	SIMILAR
EW	EACH WAY	SPECS	SPECIFICATIONS
FF	FAR FACE	SS	STAINLESS STEEL
FTG	FOOTING	STD	STANDARD
GALV	GALVANIZED	T&B	TOP AND BOTTOM
HORIZ	HORIZONTAL	T/STRUCTURE	TOP OF STRUCTURE
HP	HIGH POINT	TYP	TYPICAL
ID	INSIDE DIAMETER	UNO	UNLESS NOTED OTHERWISE
LP	LOW POINT	VERT	VERTICAL
MATL	MATERIAL	VIF	VERIFY IN FIELD
MAX	MAXIMUM	WSTP	WATERSTOP
		WWF	WELDED WIRE FABRIC

ABBREVIATION NOTES:

1. ABBREVIATIONS AND DESIGNATIONS FOR STEEL MEMBERS MAY BE FOUND IN THE CURRENT MANUAL OF STEEL CONSTRUCTION BY AISC.
2. ABBREVIATIONS OF TECHNICAL SOCIETIES AND TRADE ASSOCIATIONS MAY BE FOUND IN THE SPECIFICATIONS.
3. WELDING SYMBOLS AND ABBREVIATIONS MAY BE FOUND IN AWS 2.4.

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: P. KALARIA
 DRAWN BY: P. SCHIAVO
 SHEET CHKD BY: W. MAPLES
 CROSS CHKD BY: C. MONTGOMERY
 APPROVED BY: K. FRANCOFORTE
 DATE: MAY 2022



4651 Salisbury Road, Suite 400
 Jacksonville, FL 32256
 Tel: (904) 791-7109
 FLA COA No. EB-0000020

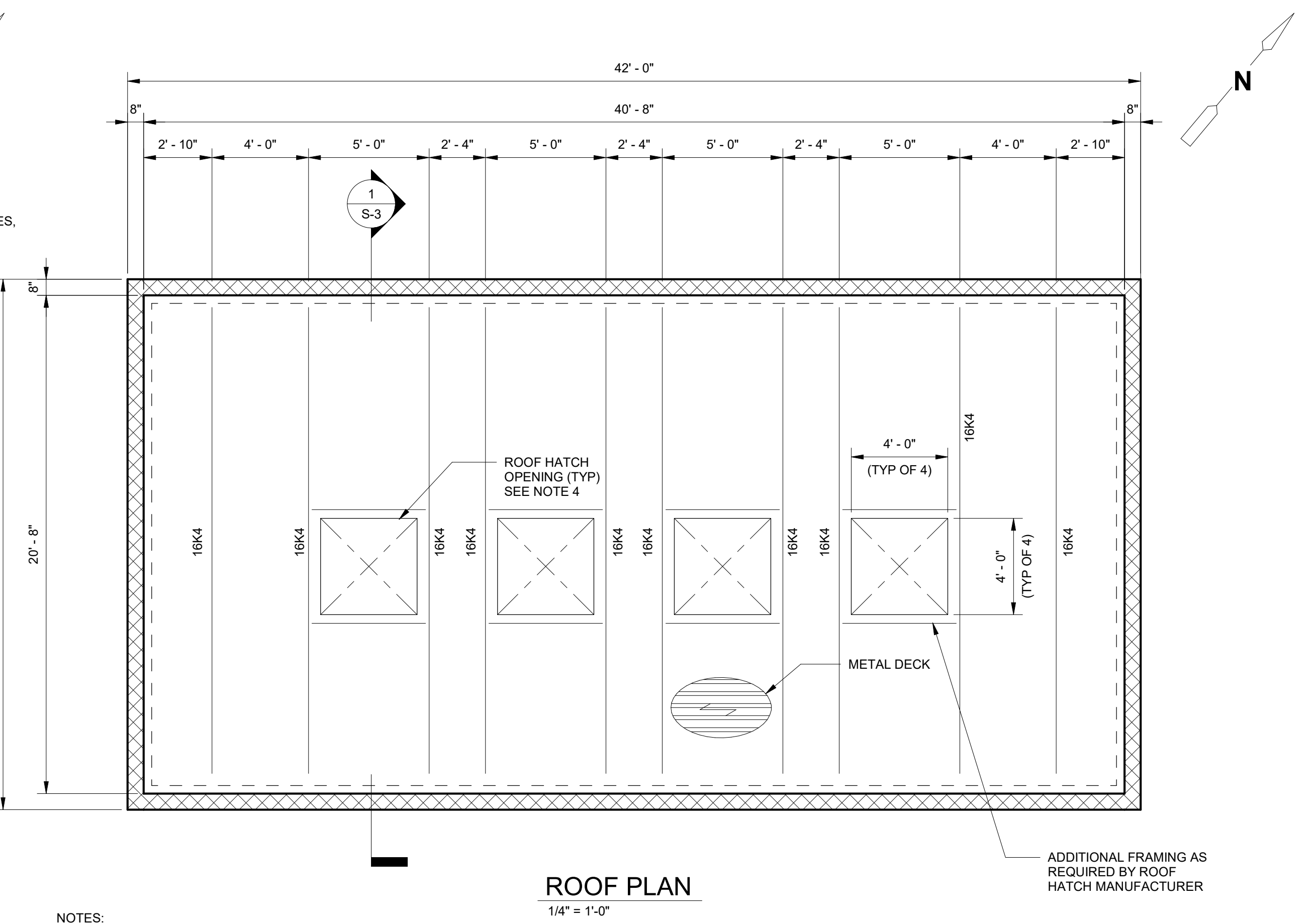
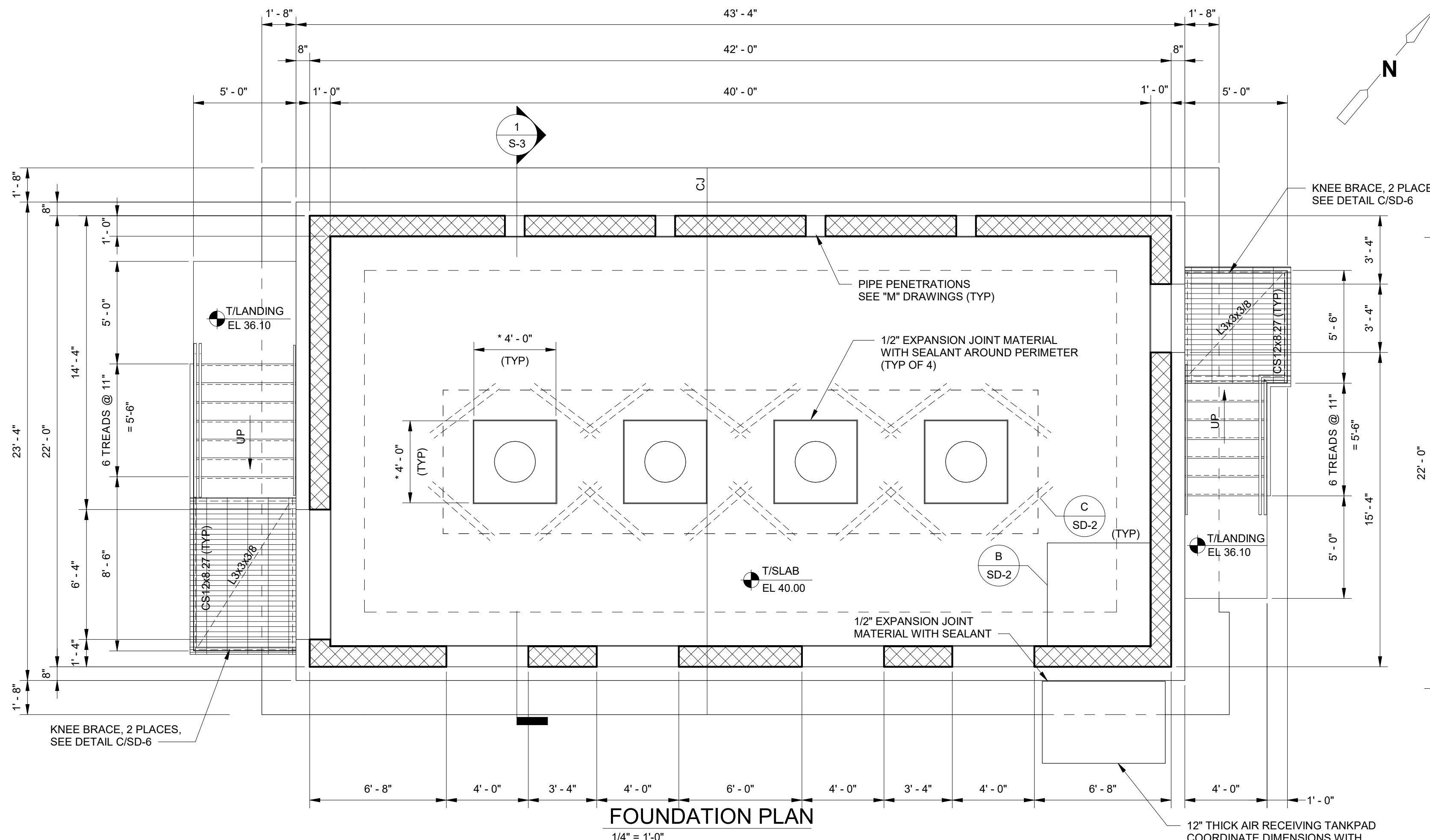
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

GENERAL STRUCTURAL NOTES

SHEET NO.
S-1

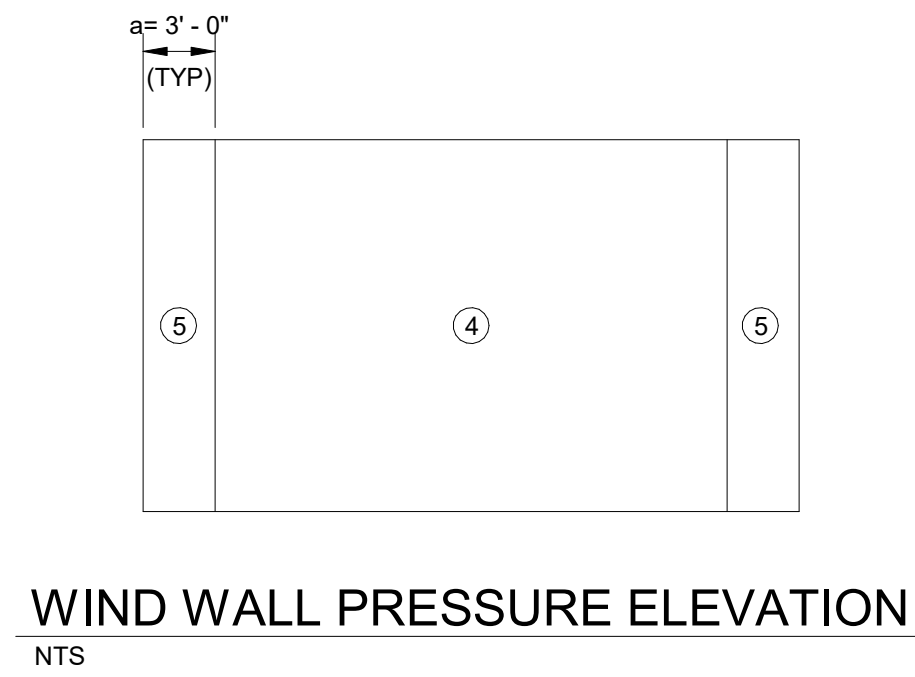
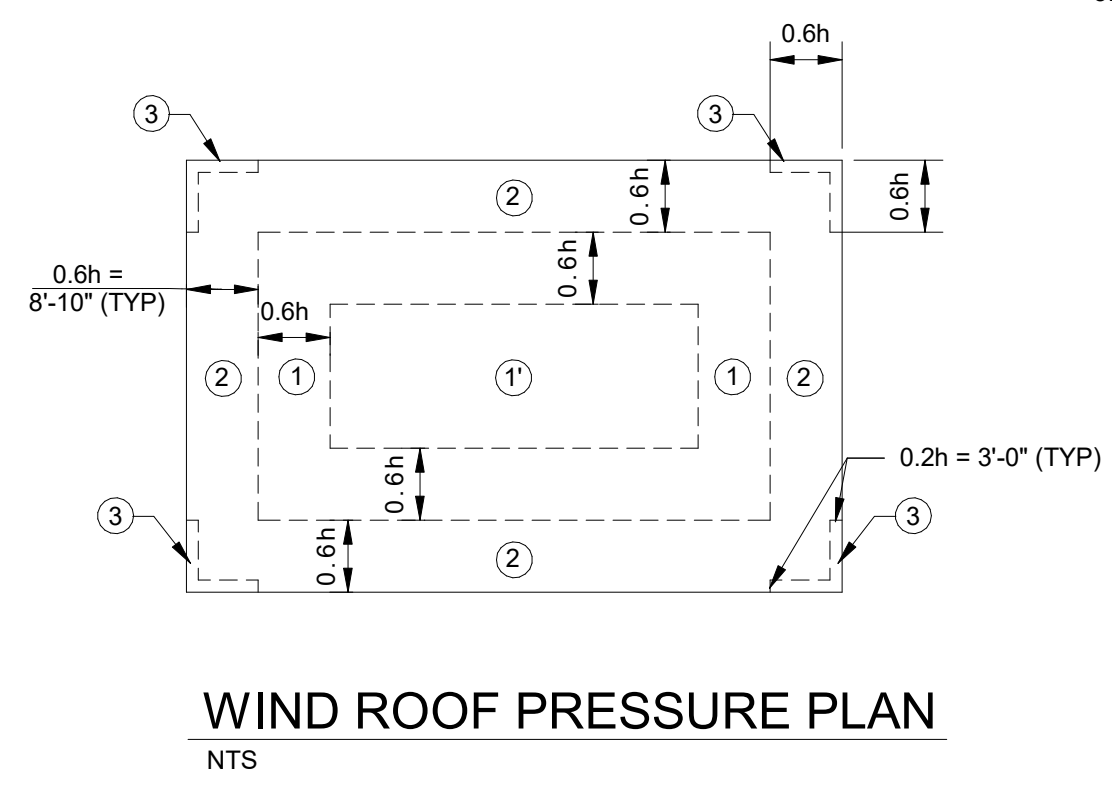
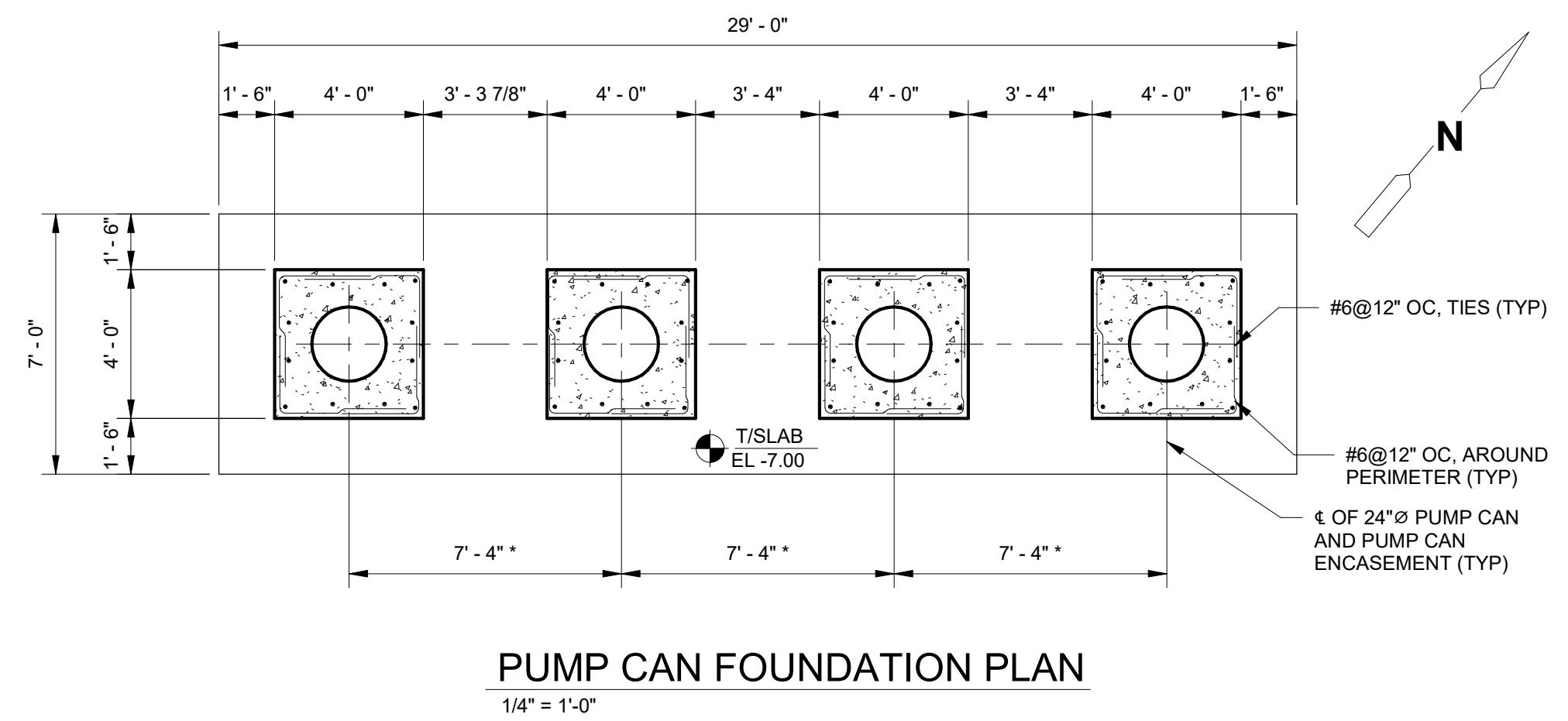
DATE:	KEVIN M. FRANCOFORTE
PE NO.	73949
PROJECT NO.	9247-221208
FILE NAME:	S000STNT.RVT

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- NOTES:**
- VENEER AND RAILING NOT SHOWN FOR CLARITY.
 - * REFER TO "M" DRAWINGS FOR LOCATIONS OF PUMPS.
 - REFER TO SD-6 FOR STANDARD STAIR DETAILS.
 - TO FACILITATE PUMP REMOVAL, COORDINATE OPENING SIZE AND LOCATION WITH APPROVED EQUIPMENT SHOP DRAWING AND FINAL LOCATION.
 - COORDINATE ROOF SCUPPER AND OVERFLOW WITH ARCHITECTURAL DRAWINGS.

- JOIST AND DECK NOTES:**
- ROOF JOIST SUPERIMPOSED LOADS:
 - LIVE LOAD = 20 PSF
 - DEAD LOAD = 10 PSF
 - SELF-WEIGHT = 42.8 PSF
 - (DECK + INSULATION)
 - EQUIPMENT = PER EQUIPMENT MANUFACTURER
 - RAIN PONDING = 22 PSF
 - NET WIND UPLIFT = -22.8 PSF
 - FRAME ALL OPENINGS PER DETAIL C ON SD-4.
 - BRIDGING SHOWN IS MINIMUM REQUIRED. ADDITIONAL BRIDGING MAY BE REQUIRED BY JOIST MANUFACTURER.
 - ROOF DECK DIAPHRAGM:
 - A. DECK: 1.5 VL20 BY VULCRAFT OR APPROVED EQUAL.
 - B. SUPPORT FASTENERS: HILTI X-HSN 24** 36/4 PATTERN OR APPROVED EQUAL.
 - C. SIDELAP FASTENERS: 1 HILTI S-SLC01M HWH SIDELAP CONNECTORS PER SPAN OR APPROVED EQUAL.
- ** COORDINATE FASTENER MODEL WITH JOIST CHORD THICKNESS.



DESIGN LOAD DATA - PUMP STATION BUILDING

WIND DESIGN DATA:
 ENCLOSURE CLASSIFICATION: PARTIALLY OPEN
 INTERNAL PRESSURE COEFFICIENT: +/- 0.18
 AVERAGE ALLOWABLE BEARING PRESSURE: 1500 PSF
 REFER TO SHEET S-1 FOR DESIGN LOAD DATA THAT IS THE SAME FOR ALL STRUCTURES.

WIND PRESSURE (PSF) FOR COMPONENT AND CLADDING (VuIt)

EFFECTIVE WIND AREA (SQ. FT.)	PRESSURE (+) / SUCTION (-)												PARAPET (PSF)
	ROOF (PSF)				WALL (PSF)				PARAPET (PSF)				
	ZONE 1'	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 4	ZONE 5	ZONE 4	ZONE 5	ZONE 4	ZONE 5	
< 10.00	15.9	-35.8	15.9	-62.3	15.9	-82.2	15.9	-112.0	35.8	-38.8	35.8	-47.7	107.0
10 TO 20	15.9	-35.8	15.9	-62.3	15.9	-82.2	15.9	-112.0	35.8	-38.8	35.8	-47.7	107.0
20 TO 50	14.9	-35.8	14.9	-58.2	14.9	-76.9	14.9	-101.0	34.2	-37.2	34.2	-44.6	107.0
50 TO 100	13.6	-35.8	13.6	-52.8	13.6	-69.9	13.6	-87.5	32.1	-35.1	32.1	-40.4	107.0
>= 100	12.6	-35.8	12.6	-48.7	12.6	-64.7	12.6	-76.9	30.5	-33.5	30.5	-37.2	107.0

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: P. KALARIA
 DRAWN BY: P. SCHIAVO
 SHEET CHKD BY: W. MAPLES
 CROSS CHKD BY: C. MONTGOMERY
 APPROVED BY: K. FRANCOFORTE
 DATE: MAY 2022

CDM Smith
 4651 Salisbury Road, Suite 400
 Jacksonville, FL 32256
 Tel: (904) 731-7109
 FLA COA No. EB-0000020

ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

PUMP STATION BUILDING
 PLANS AND DETAILS

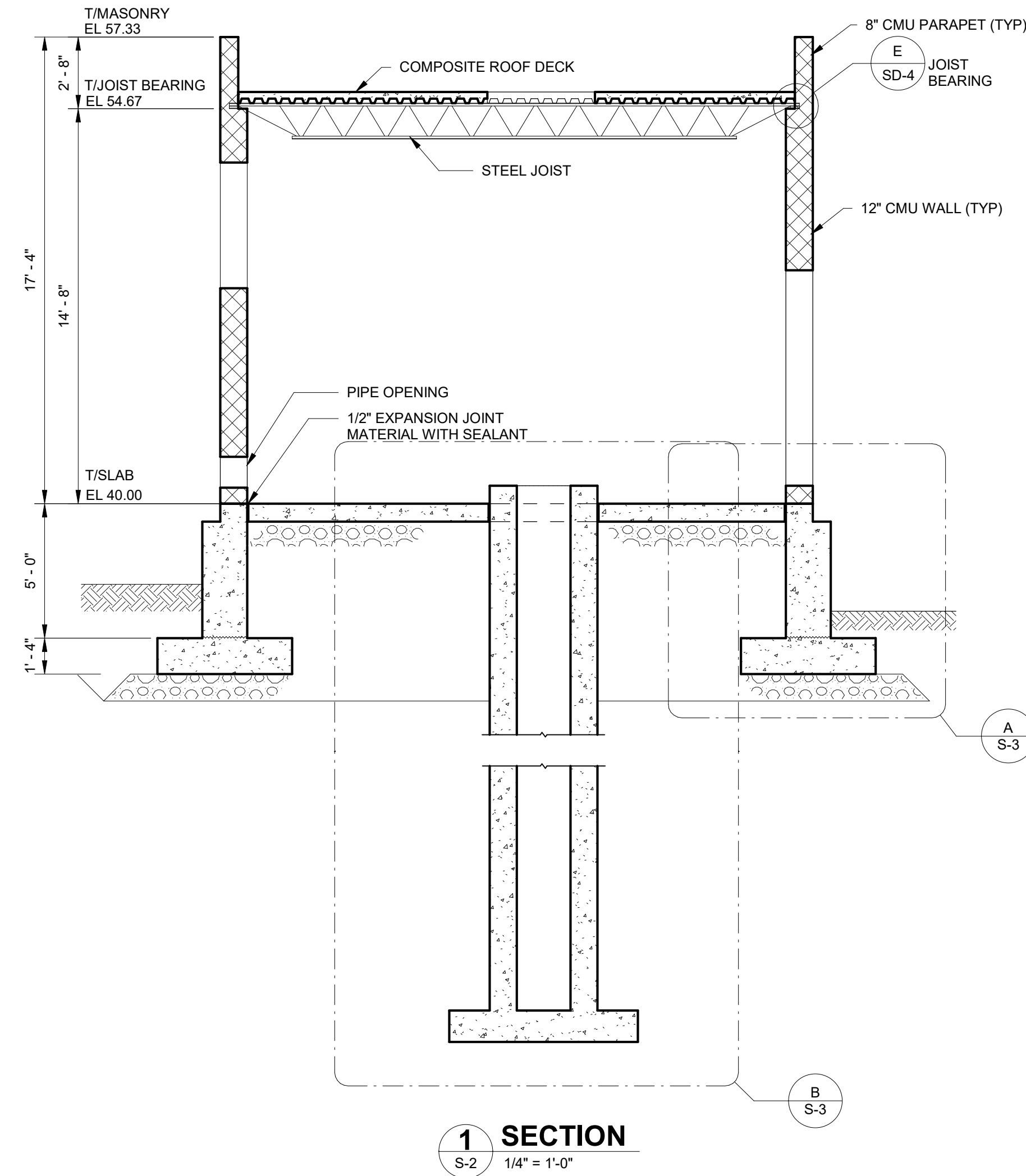
SHEET NO. S-2

DATE: KEVIN M. FRANCOFORTE
 PE NO. 73949

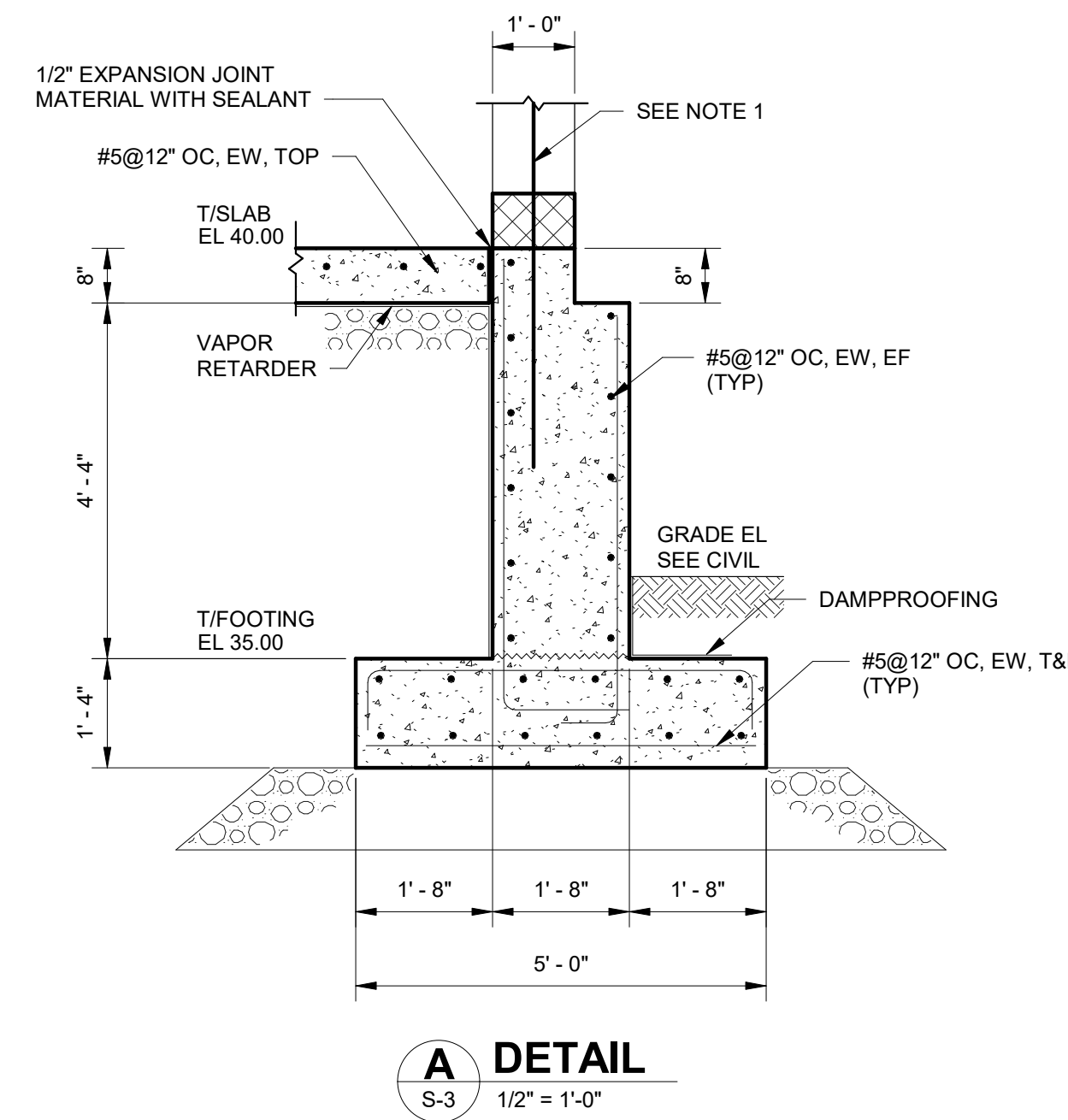
PROJECT NO. 9247-221208
 FILE NAME: SW2000PS.RVT

SHEET NO. S-2

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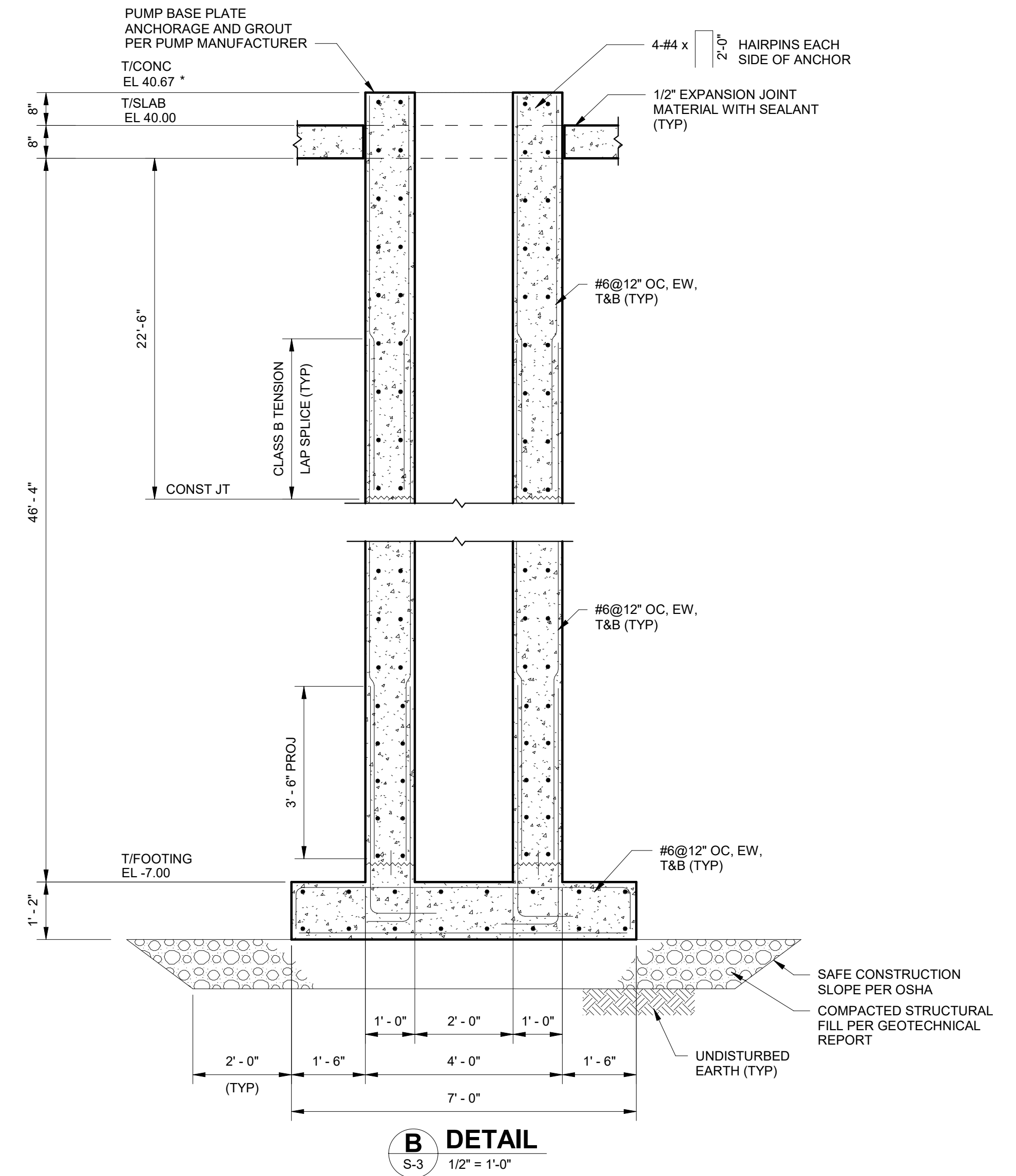
1 SECTION
S-2 1/4" = 1'-0"



A DETAIL
S-3 1/2" = 1'-0"

NOTES:

1. FOR CMU REINFORCING AND DETAILS, REFER TO SD-3.
2. FOR ROOF JOIST NOTES, REFER TO S-2.
3. FOR ROOF DETAILS, REFER TO SD-4.
4. SEE ARCHITECTURAL DRAWINGS FOR BUILDING ELEVATIONS.
5. CONSTRUCTION JOINTS ARE NOT SHOWN FOR PUMP CAN CONCRETE ENCASUREMENT. CONTRACTOR SHALL SUBMIT CONCRETE PLACEMENT SEQUENCE AND INDICATE JOINT LOCATIONS. PROVIDE 6" PVC WATERSTOP AT BELOW GRADE JOINTS.
6. *COORDINATE FINAL ELEVATIONS WITH MANUFACTURER OF FINAL EQUIPMENT, APPROVED BY THE ENGINEER.



B DETAIL
S-3 1/2" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: E. RIVERA
 DRAWN BY: P. SCHIAVO
 SHEET CHKD BY: W. MAPLES
 CROSS CHKD BY: C. MONTGOMERY
 APPROVED BY: K. FRANCOFORTE
 DATE: MAY 2022



ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

PUMP STATION BUILDING
 SECTIONS AND DETAILS

DATE:
 KEVIN M. FRANCOFORTE
 PE NO. 73949

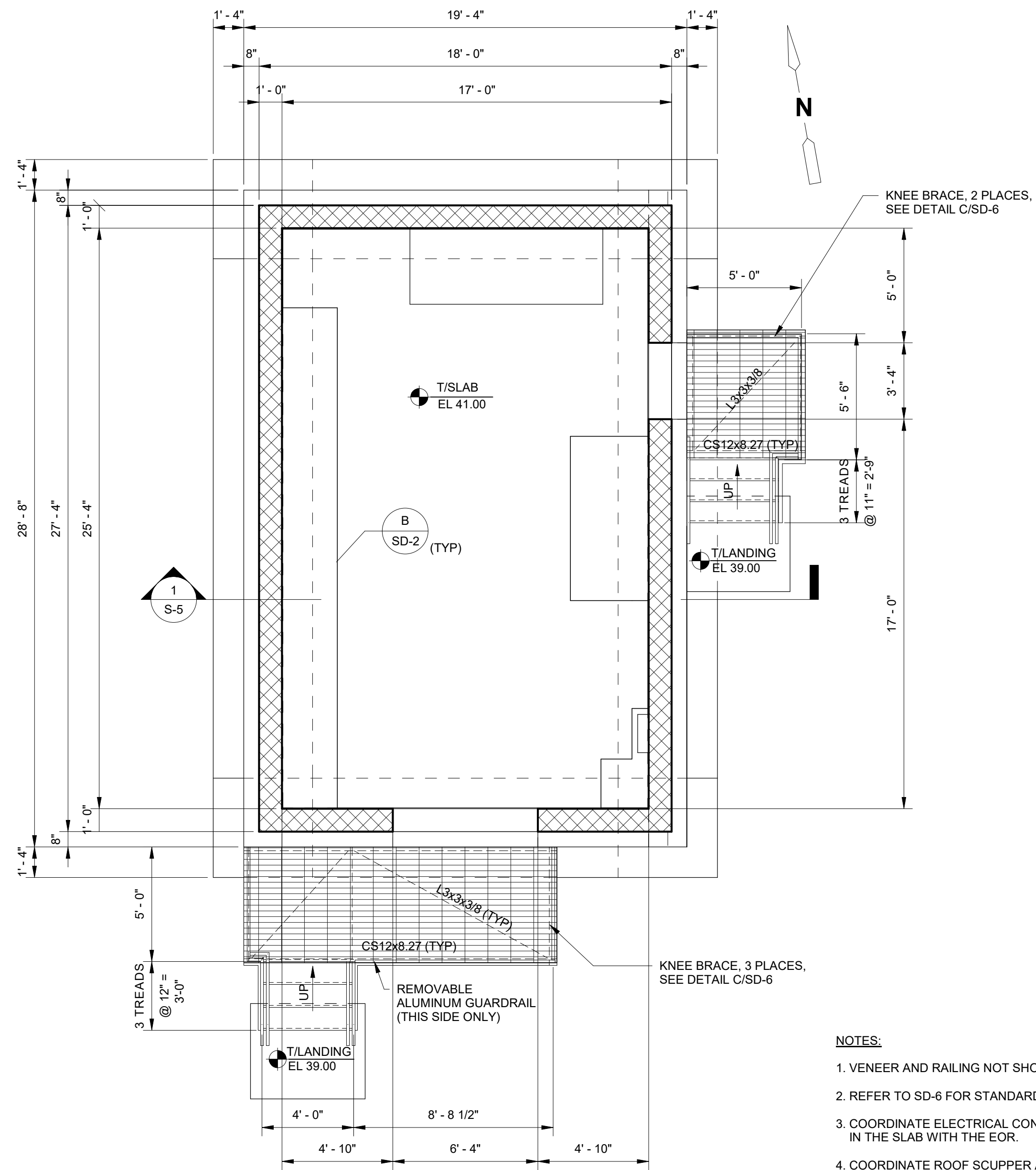
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 FILE NAME: SWZ000PS.RVT

SHEET NO.

S-3

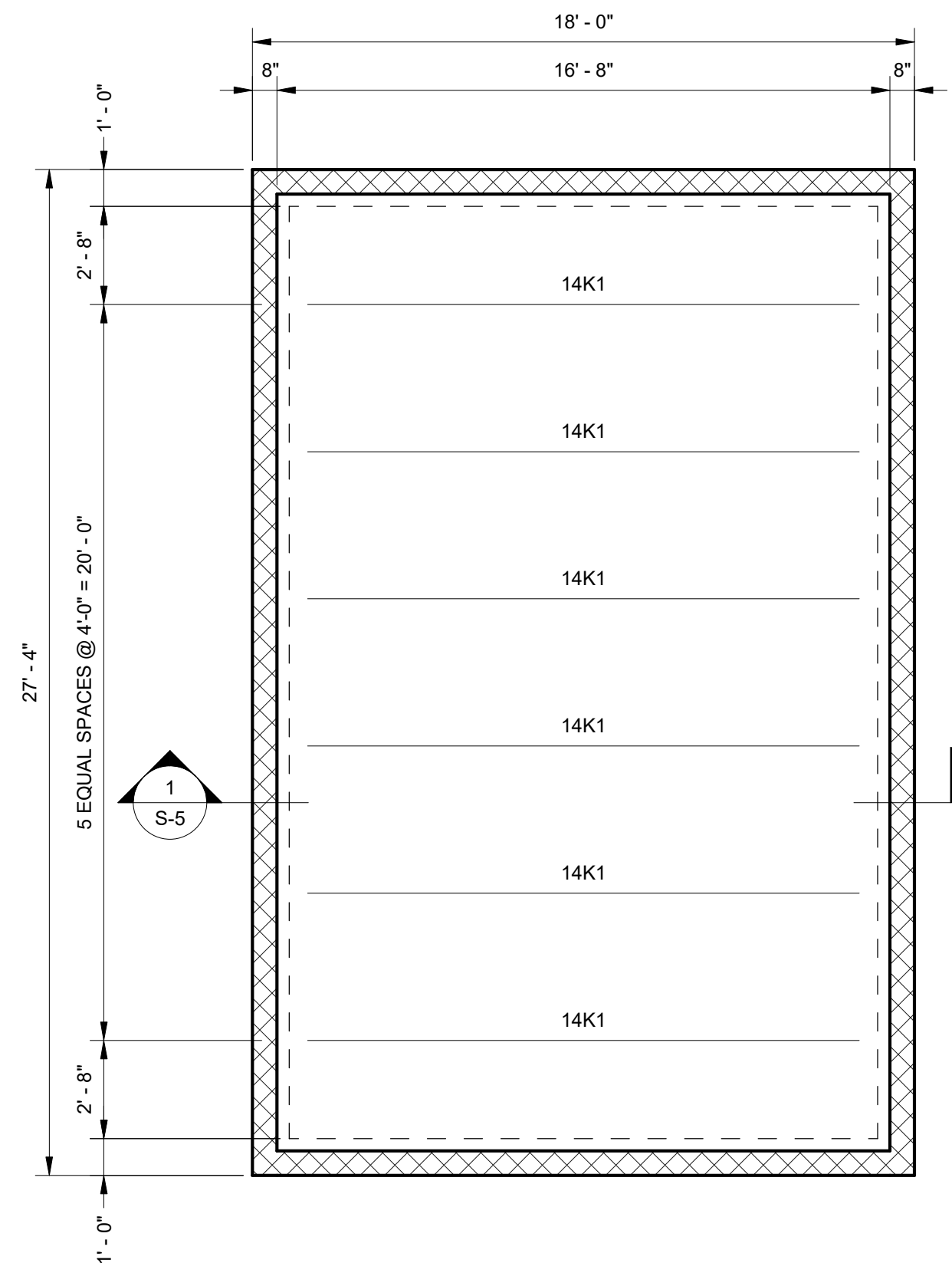
ISSUED FOR BID

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

- NOTES:**
- VENEER AND RAILING NOT SHOWN FOR CLARITY.
 - REFER TO SD-6 FOR STANDARD STAIR DETAILS.
 - COORDINATE ELECTRICAL CONDUIT OPENINGS IN THE SLAB WITH THE EOR.
 - COORDINATE ROOF SCUPPER AND OVERFLOW WITH ARCHITECTURAL DRAWINGS.



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

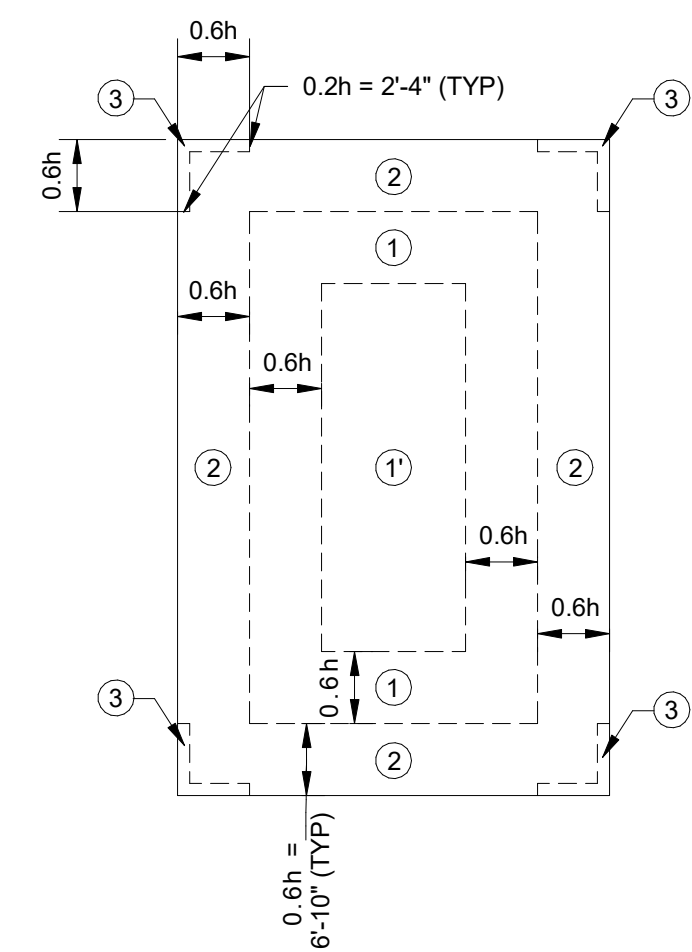
DESIGN LOAD DATA - ELECTRICAL BUILDING	
WIND DESIGN DATA:	
ENCLOSURE CLASSIFICATION:	PARTIALLY ENCLOSED
INTERNAL PRESSURE COEFFICIENT:	+/- 0.55
AVERAGE ALLOWABLE BEARING PRESSURE:	1500 PSF
REFER TO SHEET S-1 FOR DESIGN LOAD DATA THAT IS THE SAME FOR ALL STRUCTURES.	

- JOIST AND DECK NOTES:**
- ROOF JOIST SUPERIMPOSED LOADS:

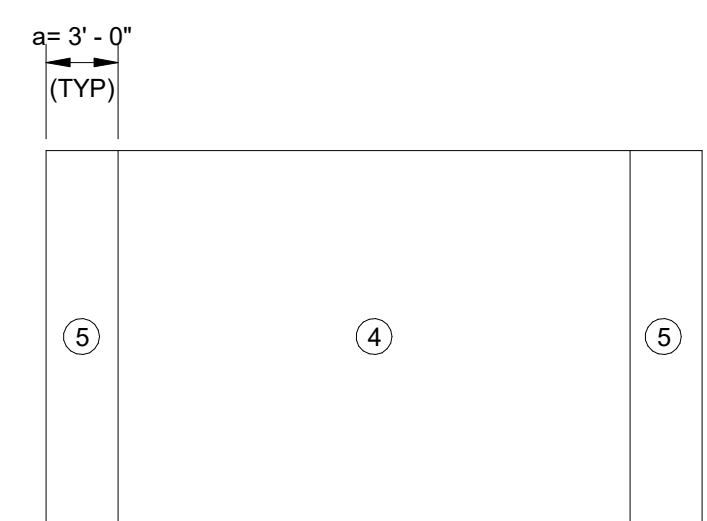
LIVE LOAD	=	20 PSF
DEAD LOAD	=	10 PSF
SELF-WEIGHT (DECK + INSULATION)	=	43 PSF
EQUIPMENT	=	PER EQUIPMENT MANUFACTURER
RAIN PONDING	=	20 PSF
NET WIND UPLIFT	=	-26 PSF
 - FRAME ALL OPENINGS PER DETAIL C ON SD-4.
 - BRIDGING SHOWN IS MINIMUM REQUIRED. ADDITIONAL BRIDGING MAY BE REQUIRED BY JOIST MANUFACTURER.
 - ROOF DECK DIAPHRAGM:

A. DECK:	1.5 VL20 BY VULCRAFT OR APPROVED EQUAL.
B. SUPPORT FASTENERS:	HILTI X-HSN 24" 36/7 PATTERN OR APPROVED EQUAL.
C. SIDELAP FASTENERS:	1 HILTI S-SL01M HWH SIDELAP CONNECTORS PER SPAN OR APPROVED EQUAL.
- ** COORDINATE FASTENER MODEL WITH JOIST CHORD THICKNESS.

EFFECTIVE WIND AREA (SQ. FT.)	WIND PRESSURE (PSF) FOR COMPONENT AND CLADDING (VuIt)												
	PRESSURE (+) / SUCTION (-)												
	ZONE 1*		ZONE 1		ZONE 2		ZONE 3		ZONE 4		ZONE 5		PARAPET (PSF)
< 10.00	28.2	-48.1	28.2	-74.6	28.2	-94.5	28.2	-124.0	48.1	-51.0	48.1	-60.0	
10 TO 20	28.2	-48.1	28.2	-74.6	28.2	-94.5	28.2	-124.0	48.1	-51.0	48.1	-60.0	106.0
20 TO 50	27.2	-48.1	27.2	-70.5	27.2	-89.2	27.2	-114.0	46.5	-49.5	46.5	-56.8	106.0
50 TO 100	25.9	-48.1	25.9	-65.0	25.9	-82.2	25.9	-99.8	44.4	-47.4	44.4	-52.6	106.0
>= 100	24.9	-48.1	24.9	-60.9	24.9	-76.9	24.9	-99.8	42.8	-45.8	42.8	-49.5	106.0



WIND ROOF PRESSURE PLAN
NTS



WIND WALL PRESSURE ELEVATION
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. FRANCOFORTE
 DRAWN BY: P. SCHIAVO
 SHEET CHKD BY: W. MAPLES
 CROSS CHKD BY: C. MONTGOMERY
 APPROVED BY: K. FRANCOFORTE
 DATE: MAY 2022

CDM Smith
 4651 Salisbury Road, Suite 400
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 Tel: (904) 731-7109
 FLA COA No. EB-0000020

ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

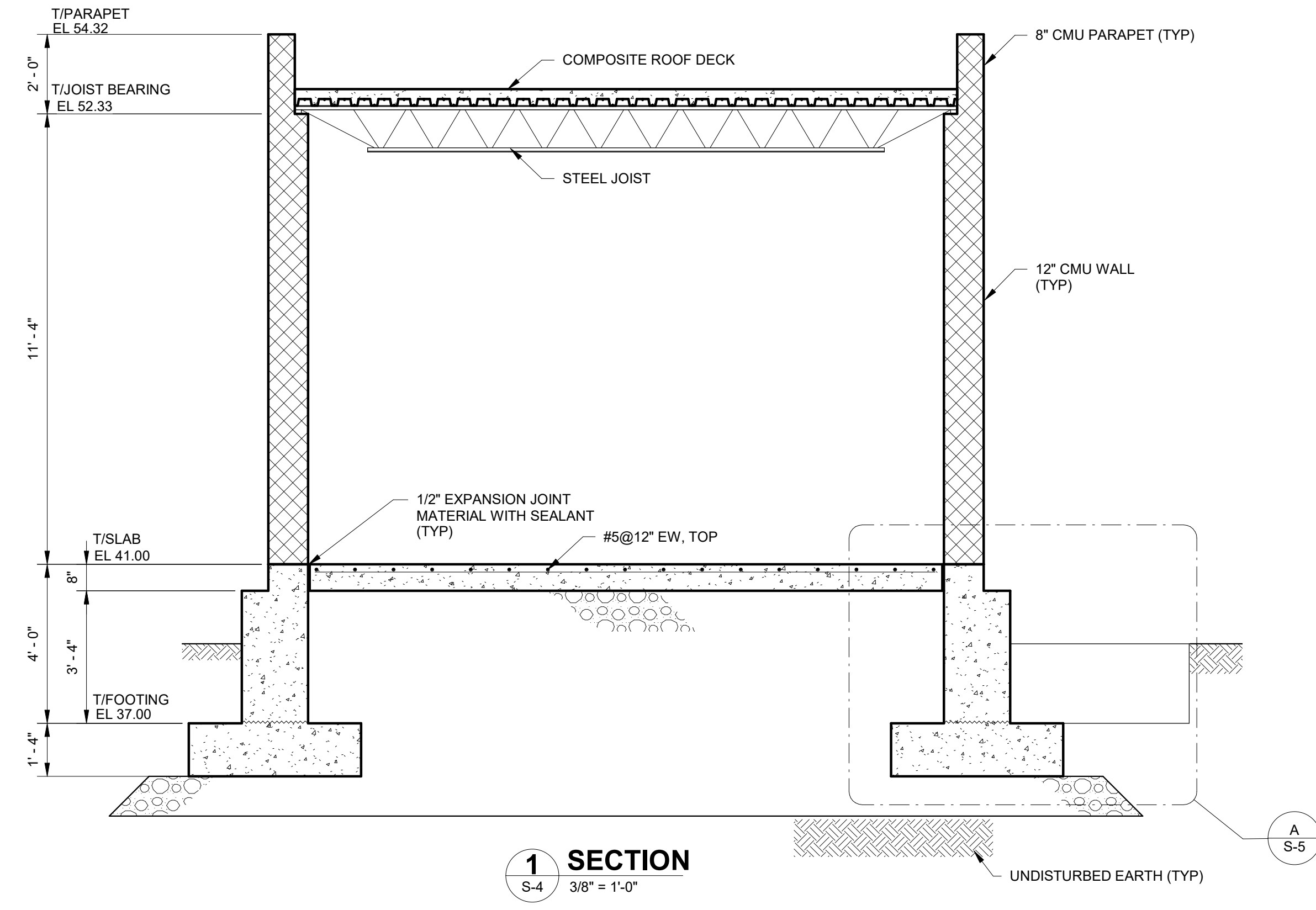
ELECTRICAL BUILDING
 PLANS AND DETAILS

SHEET NO.
S-4

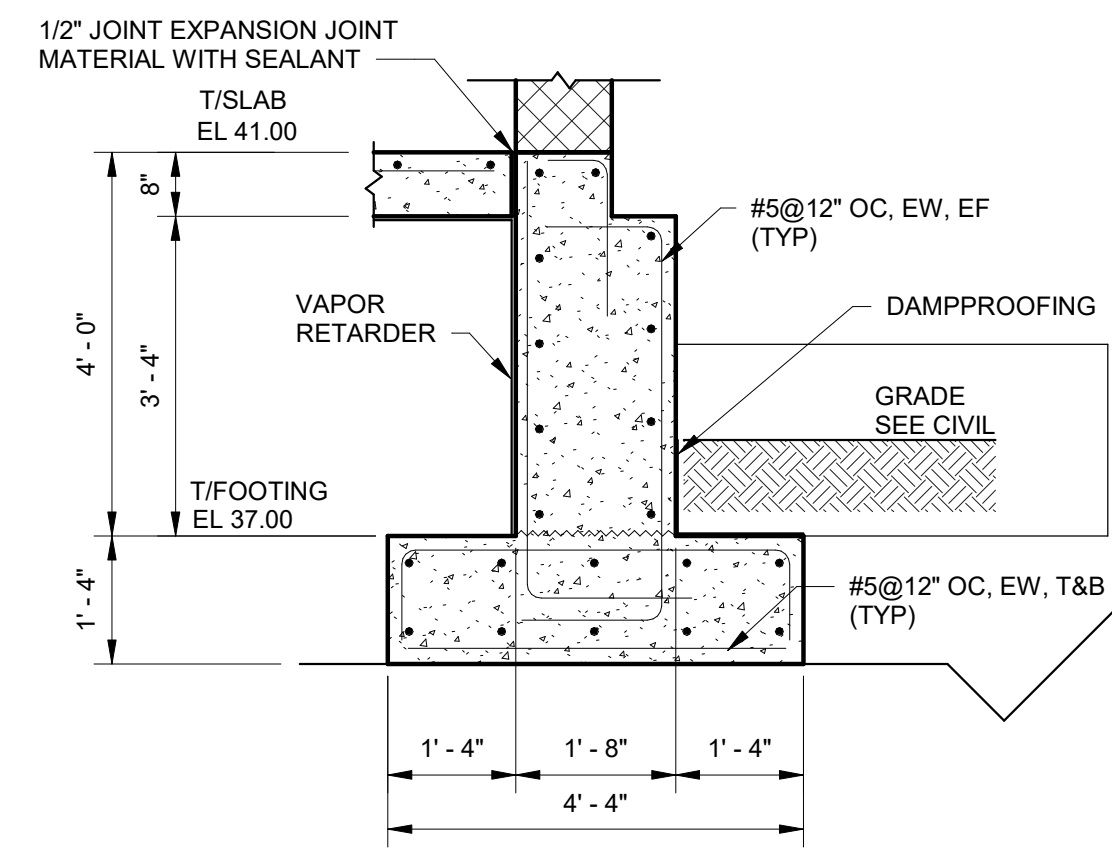
DATE:
 KEVIN M. FRANCOFORTE
 PE NO. 73949

PROJECT NO. 9247-221208
 FILE NAME: SW2000EB.RVT

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1 SECTION
S-4 3/8" = 1'-0"



A DETAIL
S-5 1/2" = 1'-0"

- NOTES:**
1. FOR CMU REINFORCING AND DETAILS, REFER TO SD-3.
 2. FOR ROOF JOIST NOTES, REFER TO S-4.
 3. FOR ROOF DETAILS, REFER TO SD-4.
 4. SEE ARCHITECTURAL DRAWINGS FOR BUILDING ELEVATIONS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. FRANCOFORTE
 DRAWN BY: P. SCHIAVO
 SHEET CHKD BY: W. MAPLES
 CROSS CHKD BY: C. MONTGOMERY
 APPROVED BY: K. FRANCOFORTE
 DATE: MAY 2022

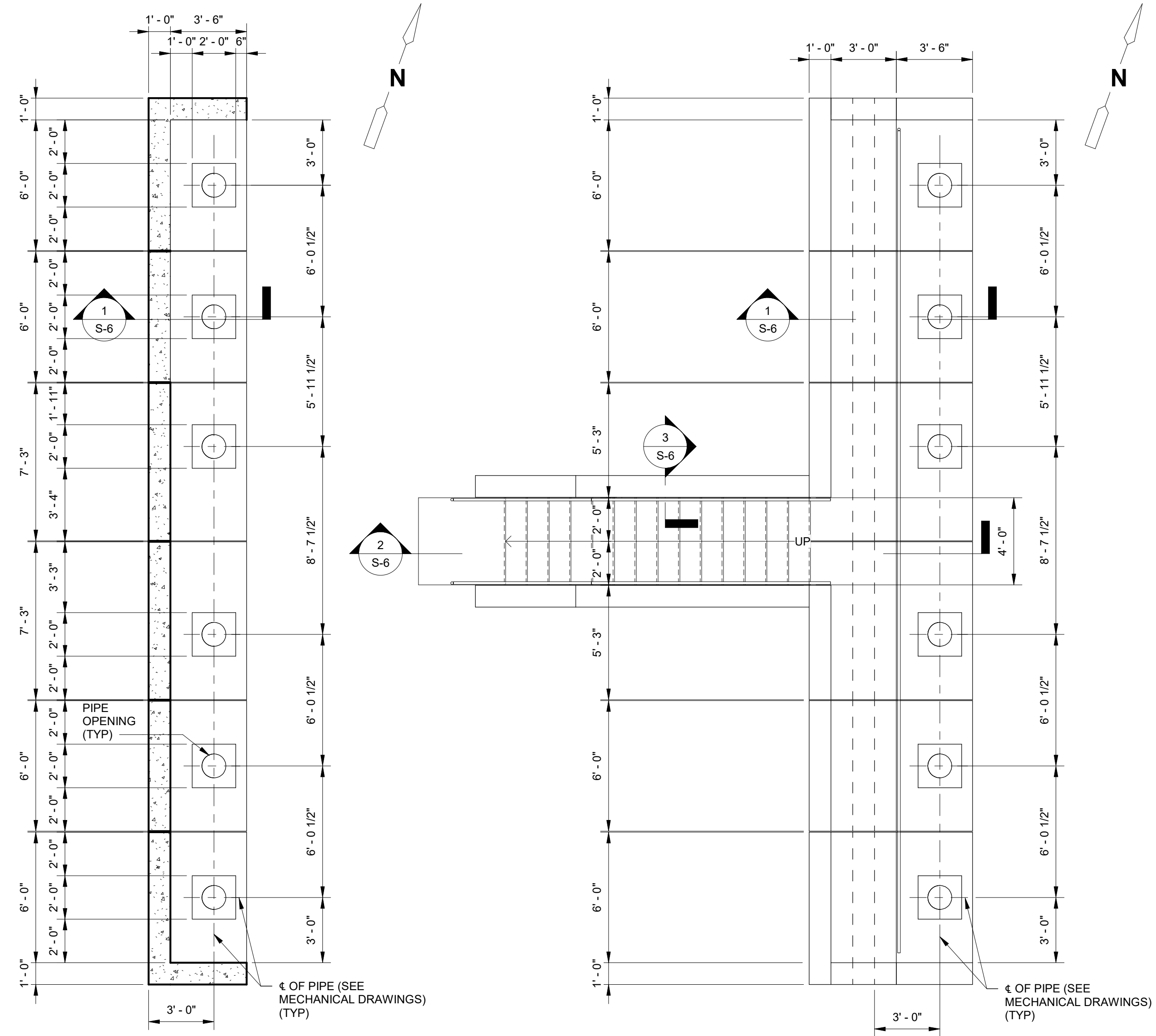


ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

ELECTRICAL BUILDING
 SECTIONS AND DETAILS

DATE: KEVIN M. FRANCOFORTE PE NO. 73949
PROJECT NO. 9247-221208 FILE NAME: SW2000EB.RVT
SHEET NO. S-5

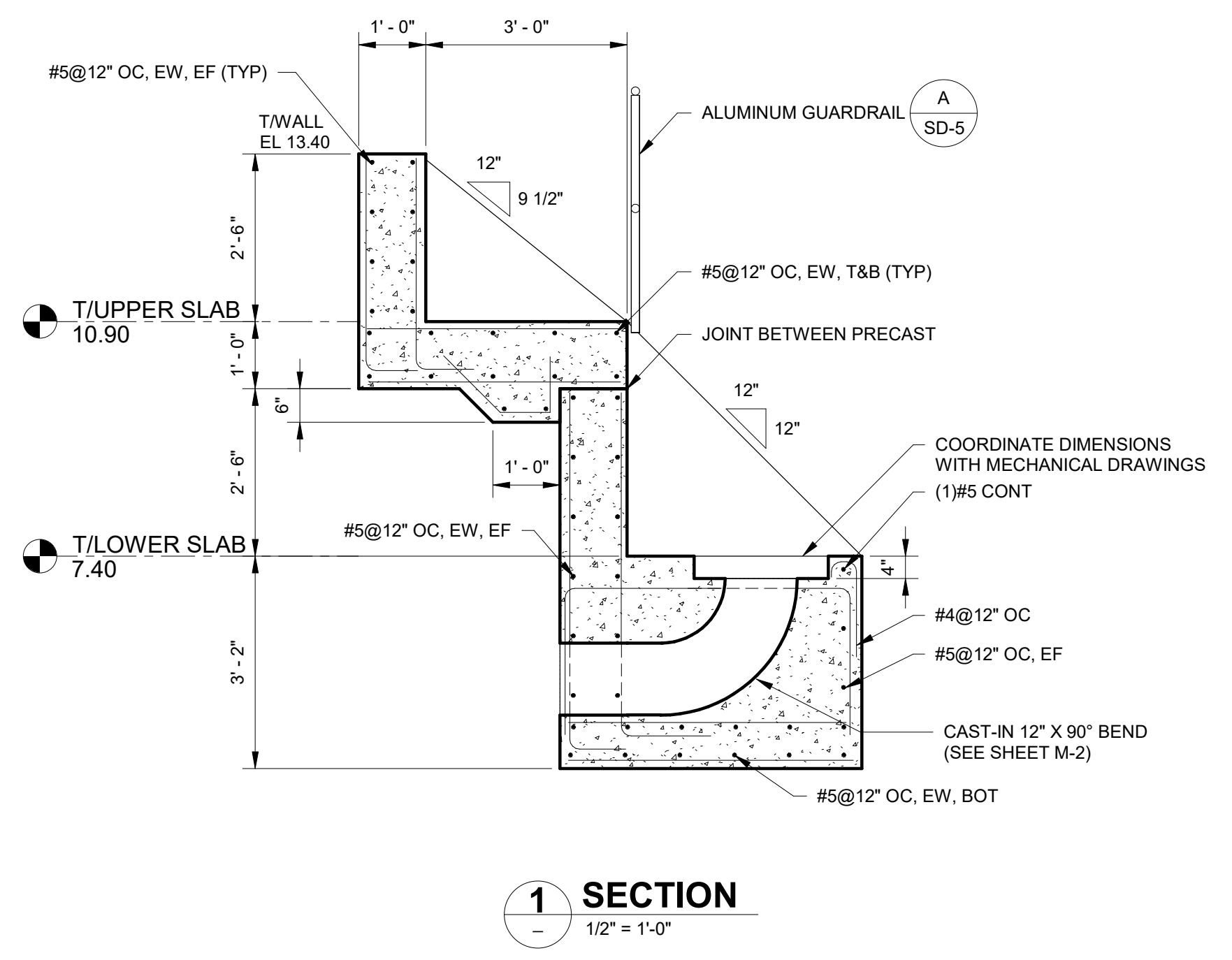
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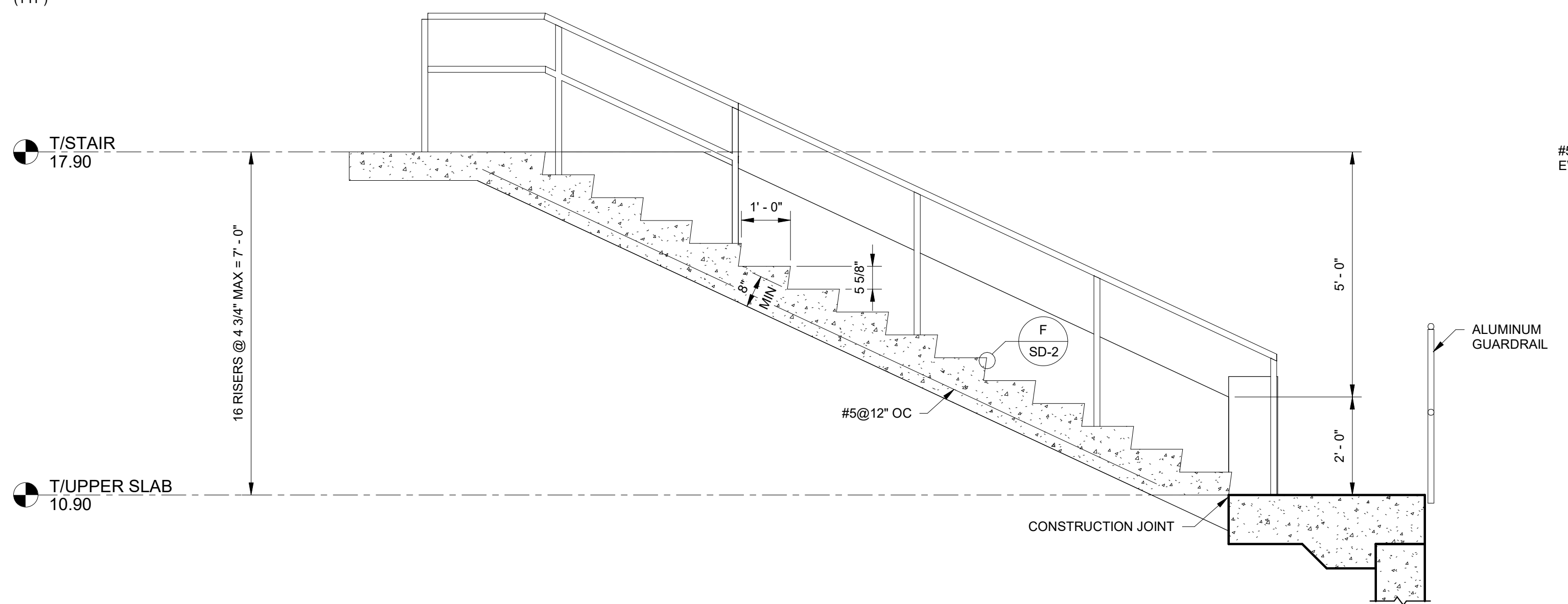
LOWER PLAN
1/4" = 1'-0"

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

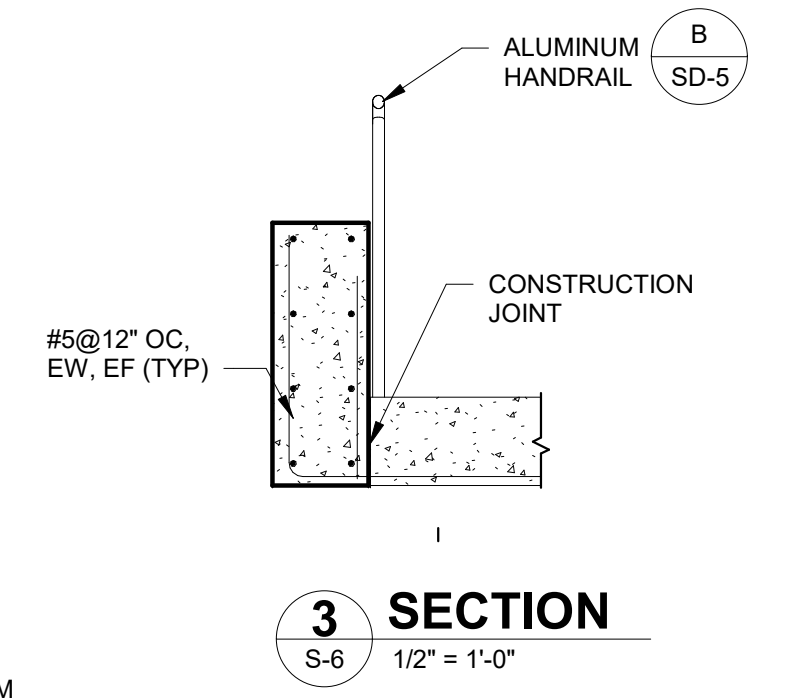
- NOTE:**
1. REFER TO SD-5 FOR GUARDRAIL AND HANDRAIL DETAILS.
 2. * - COORDINATE PIPE LOCATIONS WITH MECHANICAL DRAWINGS.



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



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



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

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: P. KALARIA
 DRAWN BY: P. SCHIAVO
 SHEET CHKD BY: W. MAPLES
 CROSS CHKD BY: C. MONTGOMERY
 APPROVED BY: K. FRANCOFORTE
 DATE: MAY 2022

CDM Smith
 4651 Salisbury Road, Suite 400
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 Tel: (904) 731-7109
 FLA COA No. EB-0000020

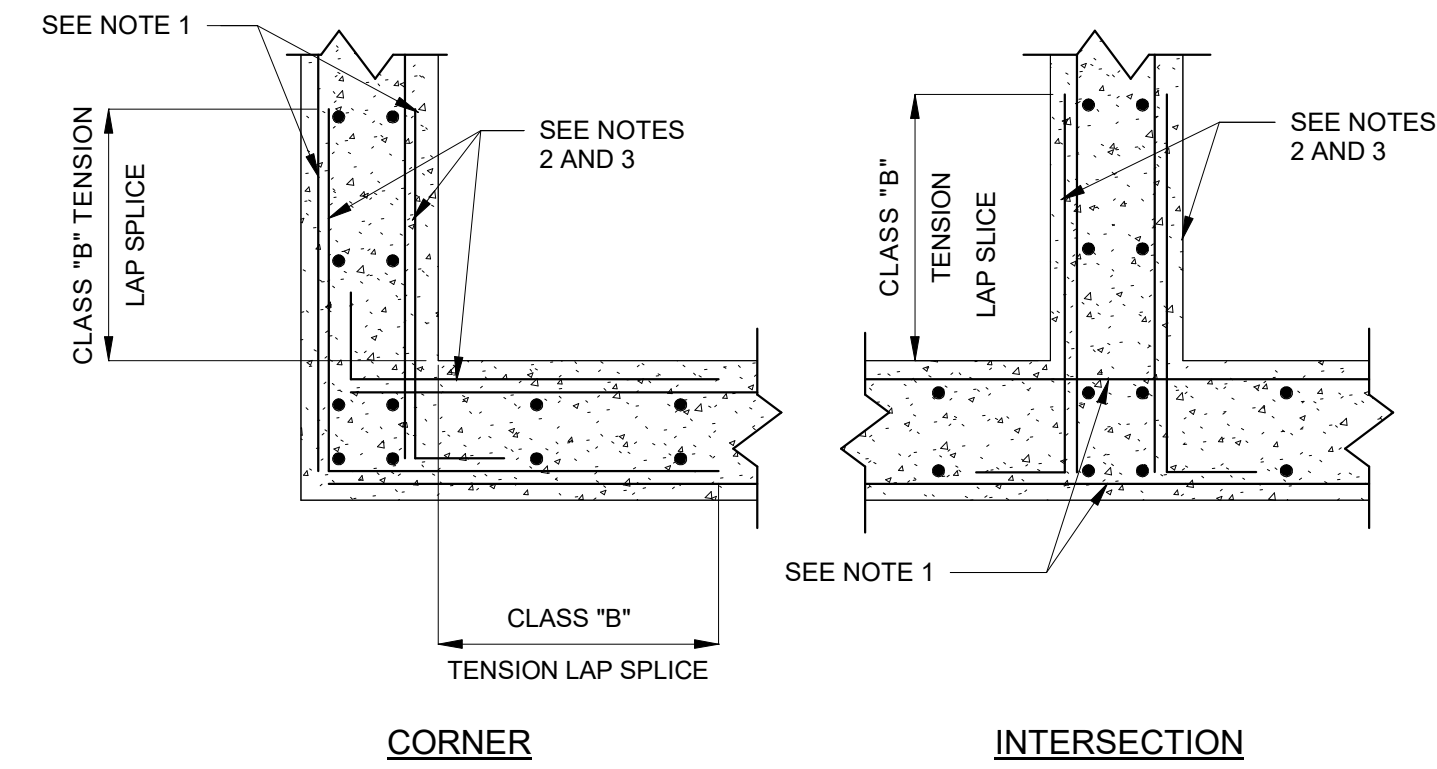
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

**INTAKE STRUCTURE
 PLANS AND SECTIONS**

PROJECT NO.	9247-221208
FILE NAME:	SWZ000IS
SHEET NO.	S-6

ISSUED FOR BID

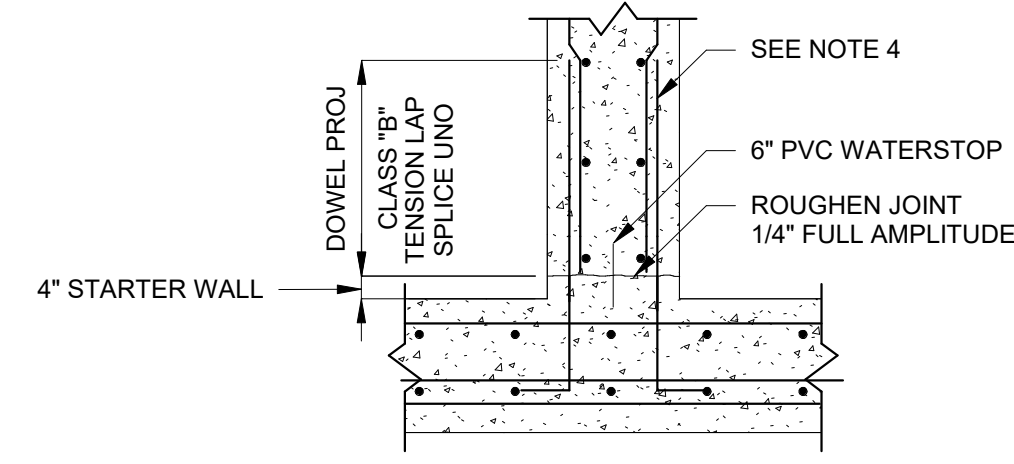
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CORNER **INTERSECTION**

WALL CORNER AND INTERSECTION REINFORCEMENT

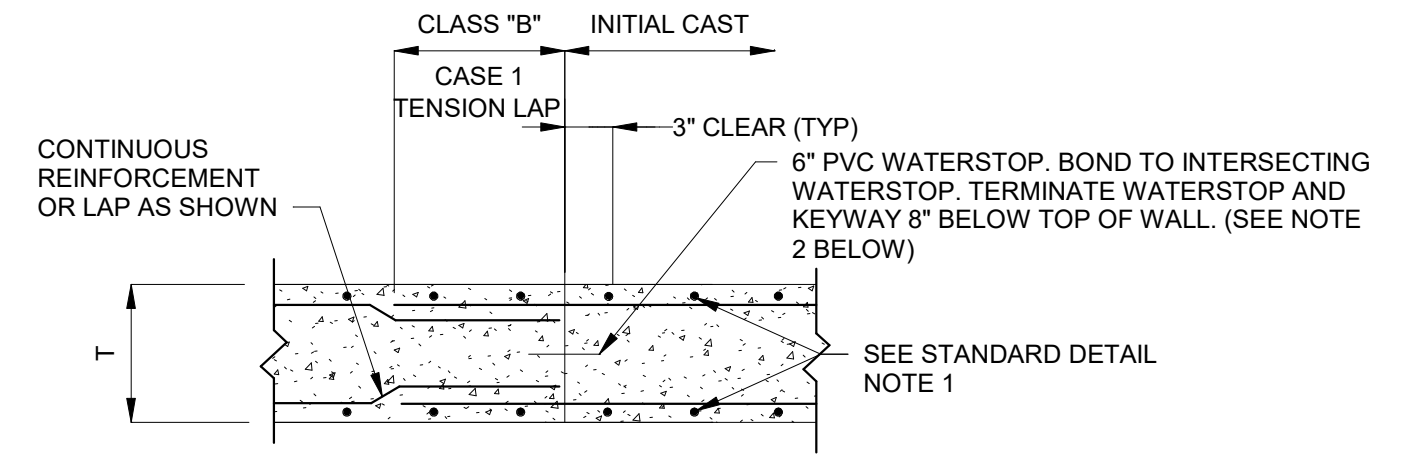
A **DETAIL**
- NTS



- NOTES:**
1. STARTER WALL MAY BE ELIMINATED AT JOINTS WITHOUT WATERSTOP AT CONTRACTOR'S OPTION.
 2. PROVIDE ADDITIONAL REINFORCEMENT, EACH FACE, IN BOTTOM PORTION OF WALL, WHERE NOTED ON THE DRAWINGS. REINFORCING SHALL BE THE SAME SIZE AS AND LOCATED HALFWAY BETWEEN TYPICAL HORIZONTAL REINFORCEMENT.

WALL BASE CONSTRUCTION JOINT

B **DETAIL**
- NTS

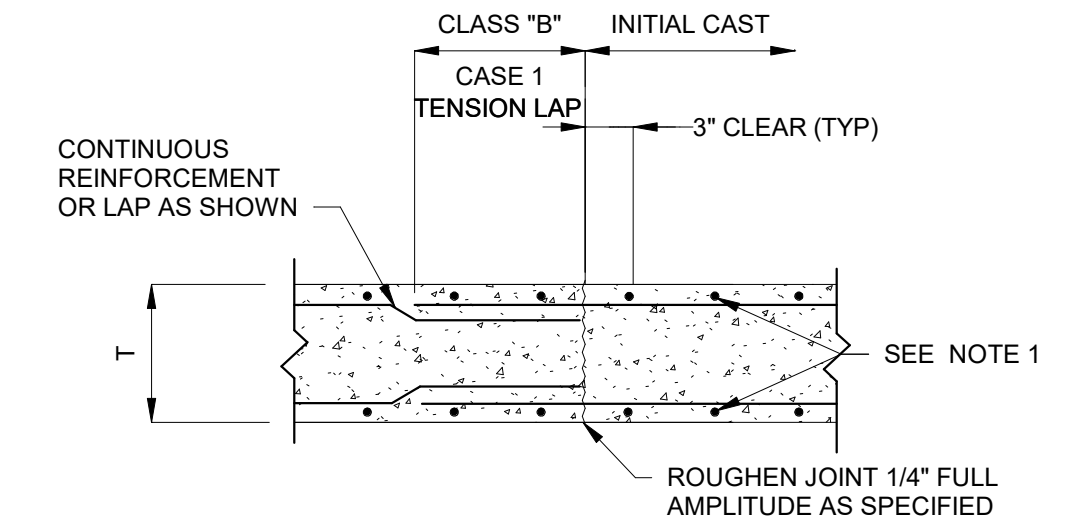


- NOTES:**
1. SECOND POUR SHALL BE 24 HOURS AFTER INITIAL POUR.
 2. FOR GRADE SLAB FOUNDATIONS, DO NOT PROVIDE WATERSTOP.

WITH WATERSTOP

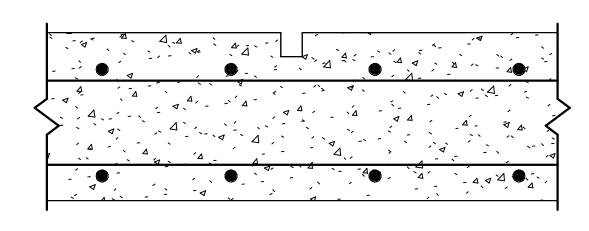
CONSTRUCTION JOINT

C **DETAIL**
- NTS



- NOTE:** SECOND POUR SHALL BE 24 HOURS AFTER INITIAL POUR.

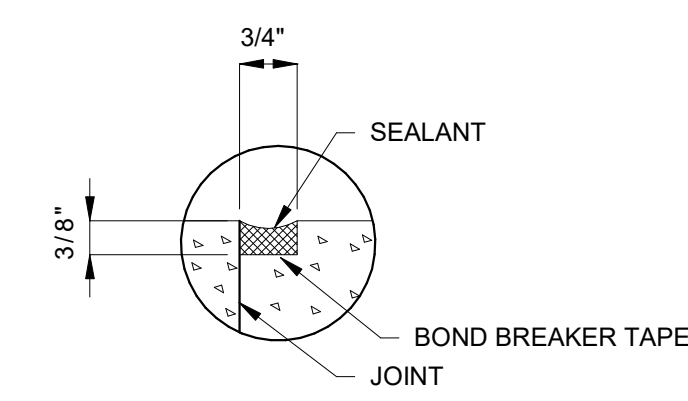
WITHOUT WATERSTOP



- NOTES:**
1. SAWCUT WIDTH 1/8" MINIMUM - 1/4" MAXIMUM.
 2. SAWCUT DEPTH 1" MINIMUM - 1-1/2" MAXIMUM.
 3. FILL JOINT TO FULL DEPTH WITH SELF-LEVELING SEALANT.

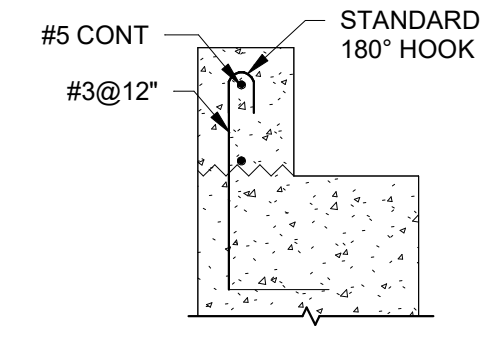
CONTROL JOINT

D **DETAIL**
- NTS



PARTIAL CONTRACTION JOINT SEALANT

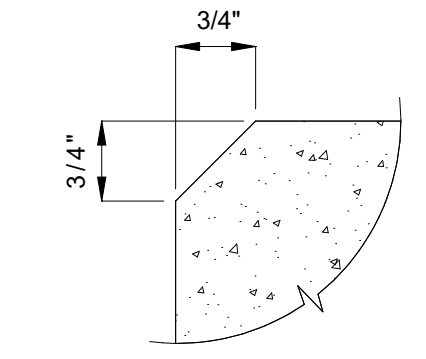
E **DETAIL**
- NTS



NOTE: SEE PLANS FOR CURB DIMENSIONS

CURB

F **DETAIL**
- NTS



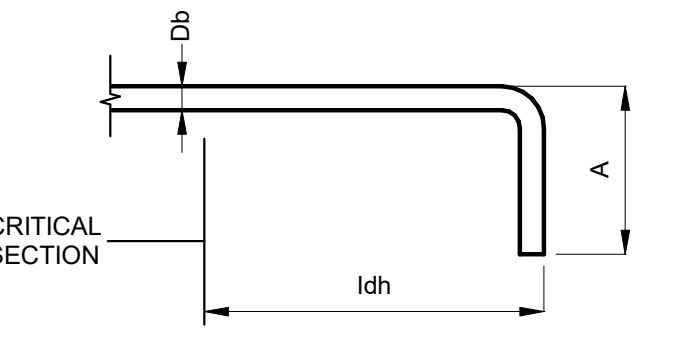
CHAMFER

G **DETAIL**
- NTS

BAR SIZE	ALL (INCHES)					
	90° HOOK		SPLICE		STRAIGHT DEVELOPMENT	
	ldh	A	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
3	7	6	14	12	12	12
4	9	8	19	14	14	12
5	12	10	23	18	18	14
6	14	12	28	21	21	17
7	16	14	40	31	31	24
8	18	16	46	35	35	29
9	21	19	57	44	49	34
10	23	22	70	54	54	41
11	26	24	84	65	65	50

BAR SIZE	ALL (INCHES)					
	90° HOOK		SPLICE		STRAIGHT DEVELOPMENT	
	ldh	A	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
3	7	6	14	12	12	12
4	9	8	19	14	14	12
5	12	10	23	18	18	14
6	14	12	28	21	21	17
7	16	14	40	31	35	27
8	18	16	46	35	44	34
9	21	19	57	44	54	42
10	23	22	70	54	69	51
11	26	24	84	65	79	61

NOTES:



1. TOP BARS ARE HORIZ BARS PLACED SUCH THAT MORE THAN 12" OF CONCRETE IS CAST BELOW THE BAR. HORIZONTAL WALL BARS ARE TOP BARS.
2. 90° HOOKS SHALL BE LOCATED WITHIN THE CONFINED CORE OF A COLUMN OR BOUNDARY ELEMENT.
3. TABLE IS VALID FOR DESIGN BASED ON ACI 318-14 AND 350-06
4. TABLE IS BASED ON $f_c = 4500$ psi. LAP SPLICE AND DEVELOPMENT LENGTHS SHALL BE ADJUSTED FOR OTHER CONCRETE COMPRESSIVE STRENGTHS AS FOLLOWS:

f_c	MULTIPLIER
3000 PSI	1.23
3500 PSI	1.14
4000 PSI	1.06
5. FOR COVER AND SPACING GEOMETRY NOT SHOWN ALL HOOKS, SPLICES AND DEVELOPMENT LENGTHS SHALL BE APPROVED IN WRITING BY THE ENGINEER OF RECORD.
6. LAPPED SPLICES SHALL NOT BE MADE AT POINTS OF MAXIMUM STRESS UNLESS NOTED OTHERWISE. INDICATED ON THE DRAWING OR DETERMINED BY ENGINEER.
7. UNLESS NOTED OTHERWISE ON DRAWINGS, THE BARS AT A LAP SPLICE SHALL BE IN CONTACT WITH EACH OTHER.
8. FOR STRAIGHT DEVELOPMENT LENGTH, DIVIDE SPLICE LENGTH BY 1.3, ROUNDING OFF TO THE NEXT WHOLE NUMBER, BUT NOT LESS THAN 12".

- NOTES:**
1. BASIC SLAB/WALL/BEAM REINFORCEMENT AS SHOWN ON DESIGN DRAWINGS.
 2. SIZE AND SPACING OF BAR TO MATCH WALL/BEAM REINFORCEMENT AS SHOWN ON DESIGN DRAWINGS.
 3. FOR ADDITIONAL BARS AT CORNERS AND INTERSECTIONS, SEE DESIGN DRAWINGS.
 4. FOR DOWEL SIZE AND SPACING, SEE DESIGN DRAWINGS.
 5. FOR WALLS, TERMINATE WATERSTOP AND KEYWAY 8" BELOW TOP OF WALL.

STANDARD HOOKS, LAP SPLICE AND DEVELOPMENT LENGTHS (FOR UNCOATED BARS)

H **DETAIL**
- NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: P. KALARIA
DRAWN BY: P. SCHIAVO
SHEET CHKD BY: W. MAPLES
CROSS CHKD BY: C. MONTGOMERY
APPROVED BY: K. FRANCOFORTE
DATE: MAY 2022

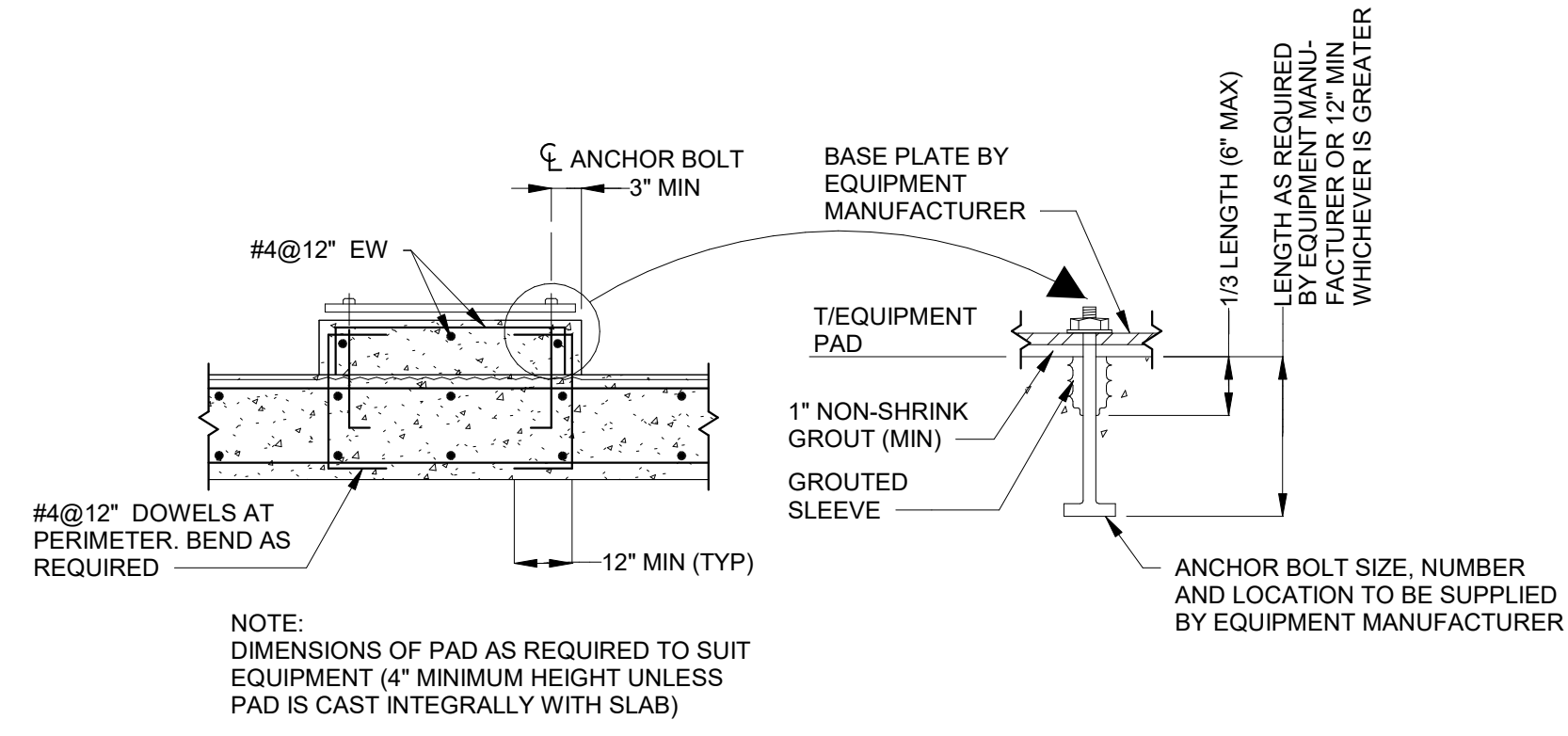
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FLA COA No. EB-0000020

**ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE
DEVELOPMENT PROJECT
INTAKE AND PUMP STATION**

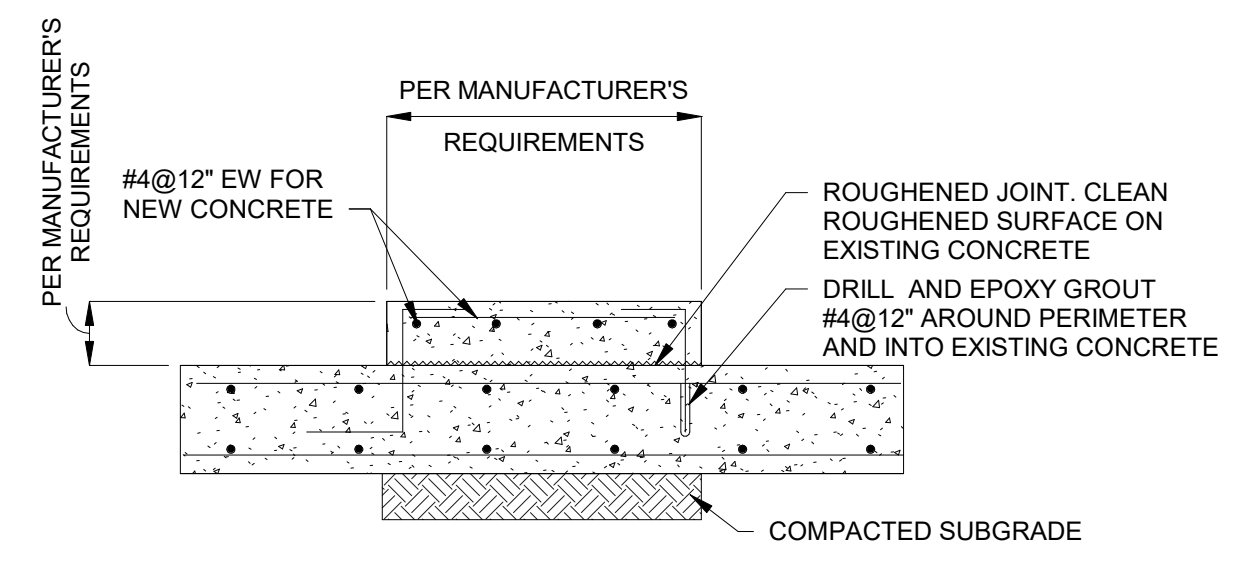
STANDARD STRUCTURAL CONCRETE DETAILS I

PROJECT NO.	9247-221208
FILE NAME:	S000STD.RVT
SHEET NO.	SD-1

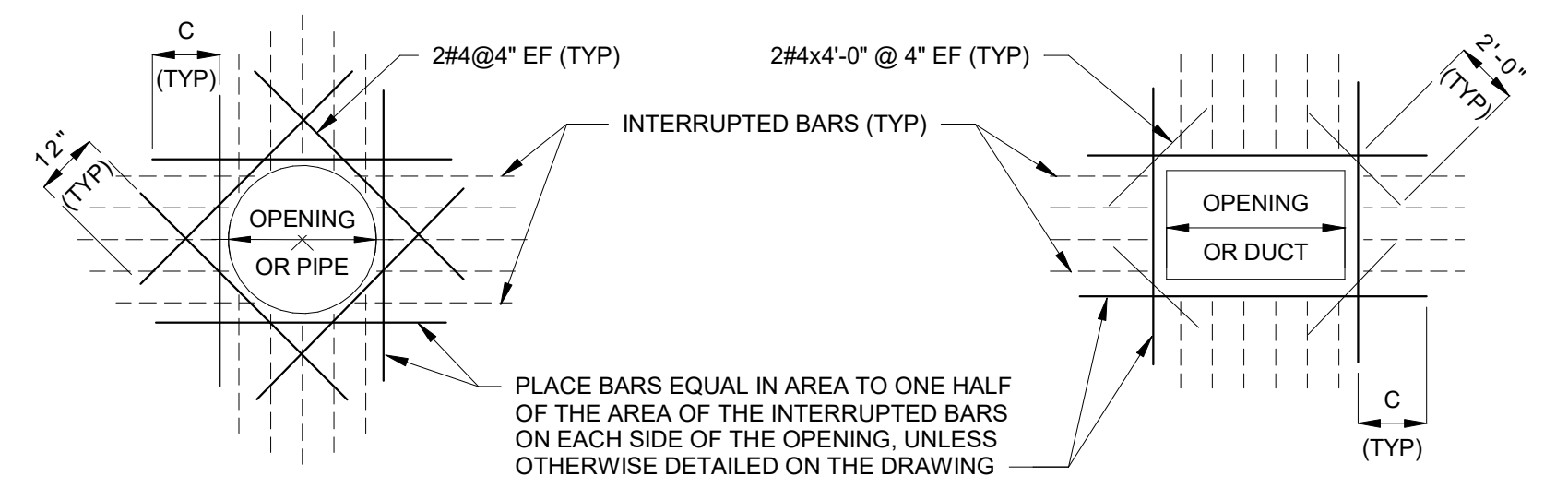
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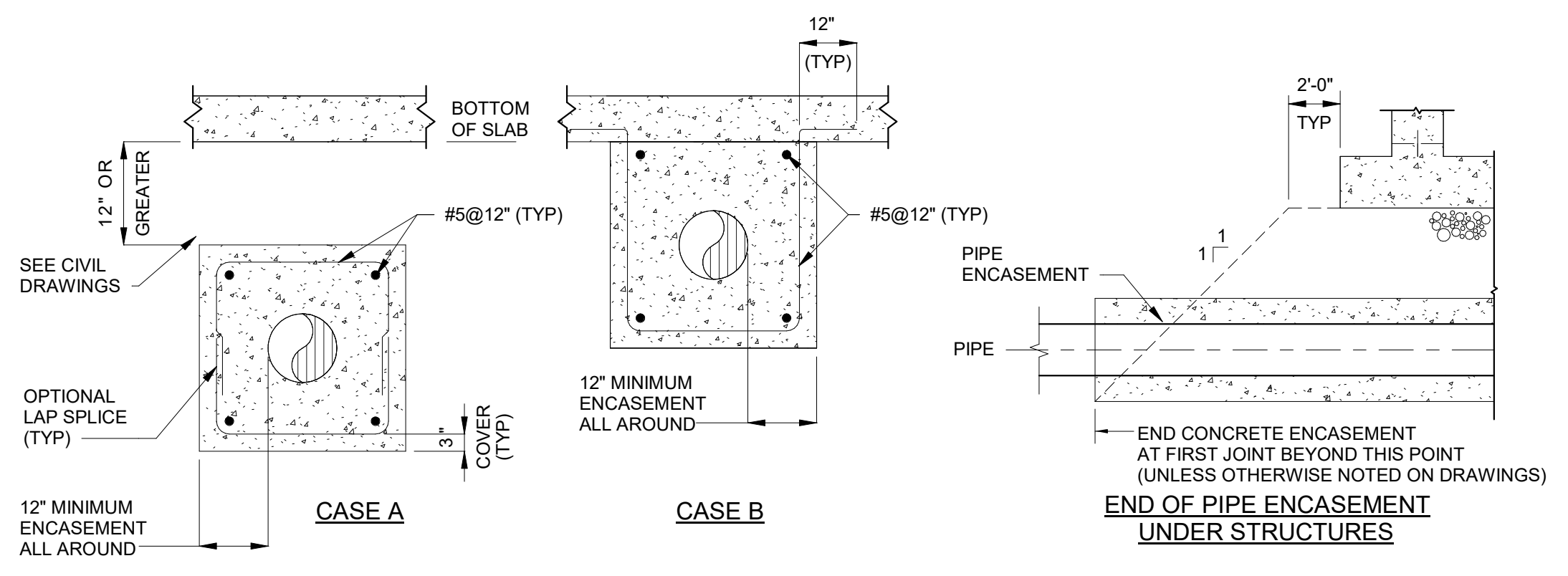


B DETAIL
NTS



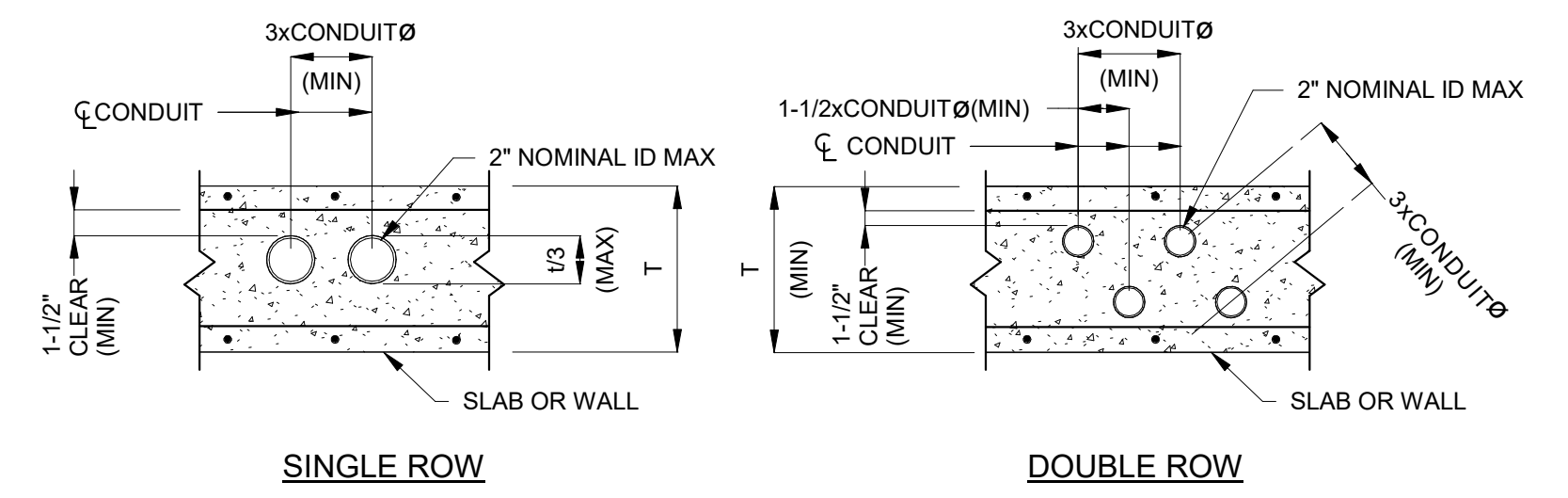
- NOTES:**
- DETAIL IS TYPICAL FOR ALL OPENINGS 12" AND GREATER IN CONCRETE WALLS AND SLABS UNLESS OTHERWISE NOTED. SPREAD REINFORCING AT SMALLER OPENINGS.
 - BARS ARE NOT REQUIRED AT AN OPENING EDGE PARALLEL TO AND WITHIN 6 INCHES OF A WALL OR BEAM.
 - C = CLASS "B" CASE 1 TENSION LAP.
 - REINFORCING STEEL IS TO BE CARRIED ACROSS ALL CONSTRUCTION JOINTS.
 - WHERE OPENING IS WITHIN 4'-0" OF BASE SLAB, PROVIDE MATCHING DOWELS FOR ADDITIONAL BARS.

C DETAIL
NTS



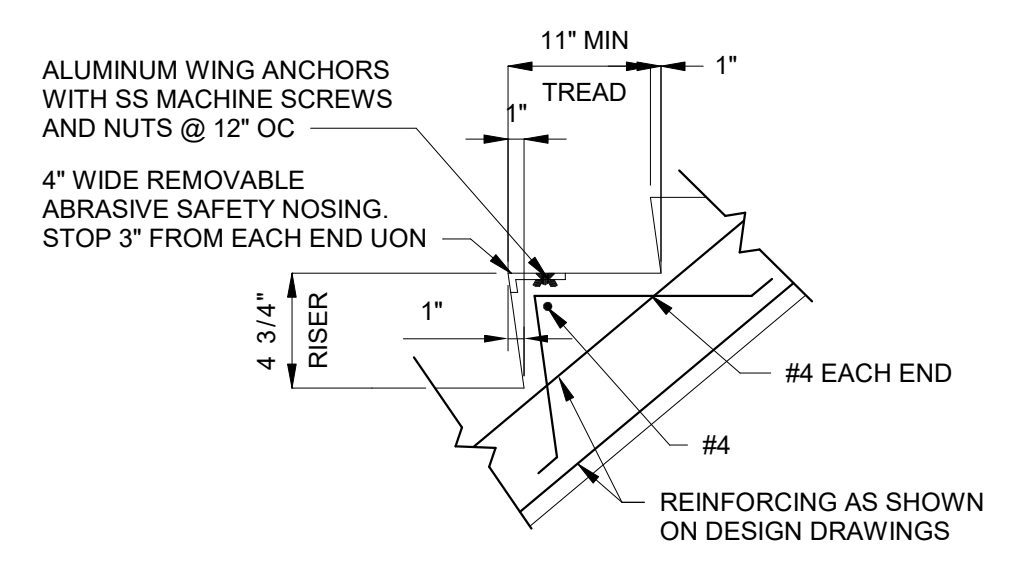
D DETAIL
NTS

- PIPE ENCASEMENT NOTES:**
- MINIMUM ENCASEMENT:
PIPES LESS THAN 12" Ø - 6"
PIPES 12" Ø AND GREATER - 12"
 - ALL PIPE SHALL BE PRESSURE TESTED BEFORE CONCRETE PLACEMENT.
 - ALL BELOW GRADE PIPES SHALL BE SUPPORTED ON CONCRETE BLOCKS PRIOR TO CASTING OF CONCRETE BEDDING. SIZE AND SPACING OF CONCRETE BLOCK SUPPORTS SHALL BE PER PIPE MANUFACTURER.
 - FOR ALL PIPES 12" Ø AND LARGER, ENCASEMENT SHALL BE CAST IN TWO POURS. INITIAL CAST SHALL BE CURED FOR 12 HOURS BEFORE CASTING THE SECOND POUR.
 - THE DEPTH OF THE INITIAL POUR SHALL BE SELECTED TO PREVENT FLOTATION OF THE PIPE. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT FLOTATION OF THE PIPE DURING CONCRETING.
 - ENCASE ALL PIPES BELOW SLABS AND FOOTINGS. EXTEND ENCASEMENT AS SHOWN IN DETAIL. MINIMUM 5'-0" BEYOND EDGE OF SLAB OR FOOTING.
 - MAINTAIN MINIMUM COVER FOR LAPS FOR PIPES SMALLER THAN 6" Ø.
 - FOR CASE "A", PROVIDE A PARTIAL CONTRACTION JOINT AT EACH PIPE JOINT. MAXIMUM SPACING BETWEEN PARTIAL CONTRACTION JOINTS 24'-0".
 - FOR CASE "B", PROVIDE A JOINT IN THE PIPE AT EACH JOINT IN STRUCTURE. PROVIDE CONSTRUCTION JOINTS IN ENCASEMENT AT LOCATIONS OF CONSTRUCTION JOINTS IN STRUCTURE. PROVIDE PARTIAL CONTRACTION JOINTS IN ENCASEMENT AT LOCATIONS OF CONTROL JOINTS AND EXPANSION JOINTS IN STRUCTURE.



E DETAIL
NTS

- CONDUIT NOTES:**
- NO CONDUIT SHALL BE EMBEDDED IN STRUCTURAL BEAMS, COLUMNS, WALLS OR SLABS UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWING.
 - CONDUIT SHALL BE PLACED 6" BELOW SLAB.
 - WHERE CONDUIT MUST PASS THROUGH A SLAB OR WALL, MINIMUM SIZE AND SPACING REQUIREMENT PER THIS DETAIL.
 - ALUMINUM SHALL NOT BE EMBEDDED IN CONCRETE UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION.



F DETAIL
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

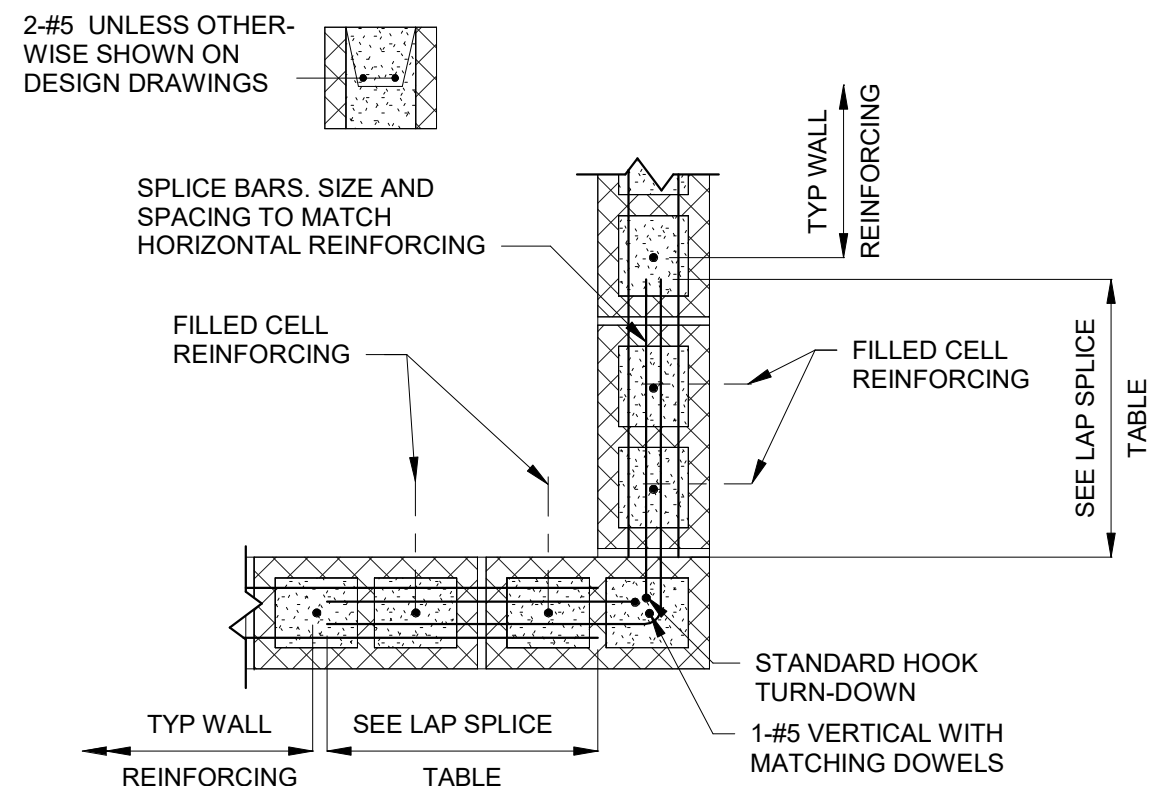
DESIGNED BY: P. KALARIA
 DRAWN BY: P. SCHIAVO
 SHEET CHKD BY: W. MAPLES
 CROSS CHKD BY: C. MONTGOMERY
 APPROVED BY: K. FRANCOFORTE
 DATE: MAY 2022

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ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

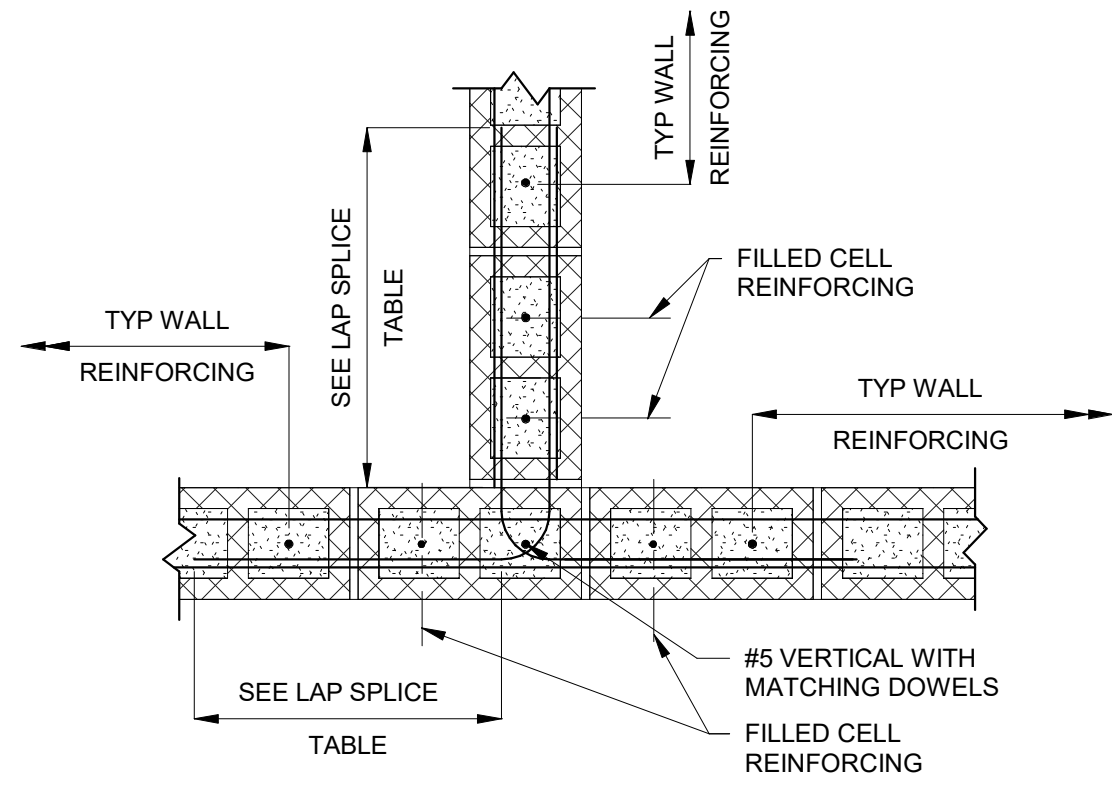
STANDARD STRUCTURAL CONCRETE DETAILS II

PROJECT NO.	9247-221208
FILE NAME:	S000STD.RVT
SHEET NO.	SD-2



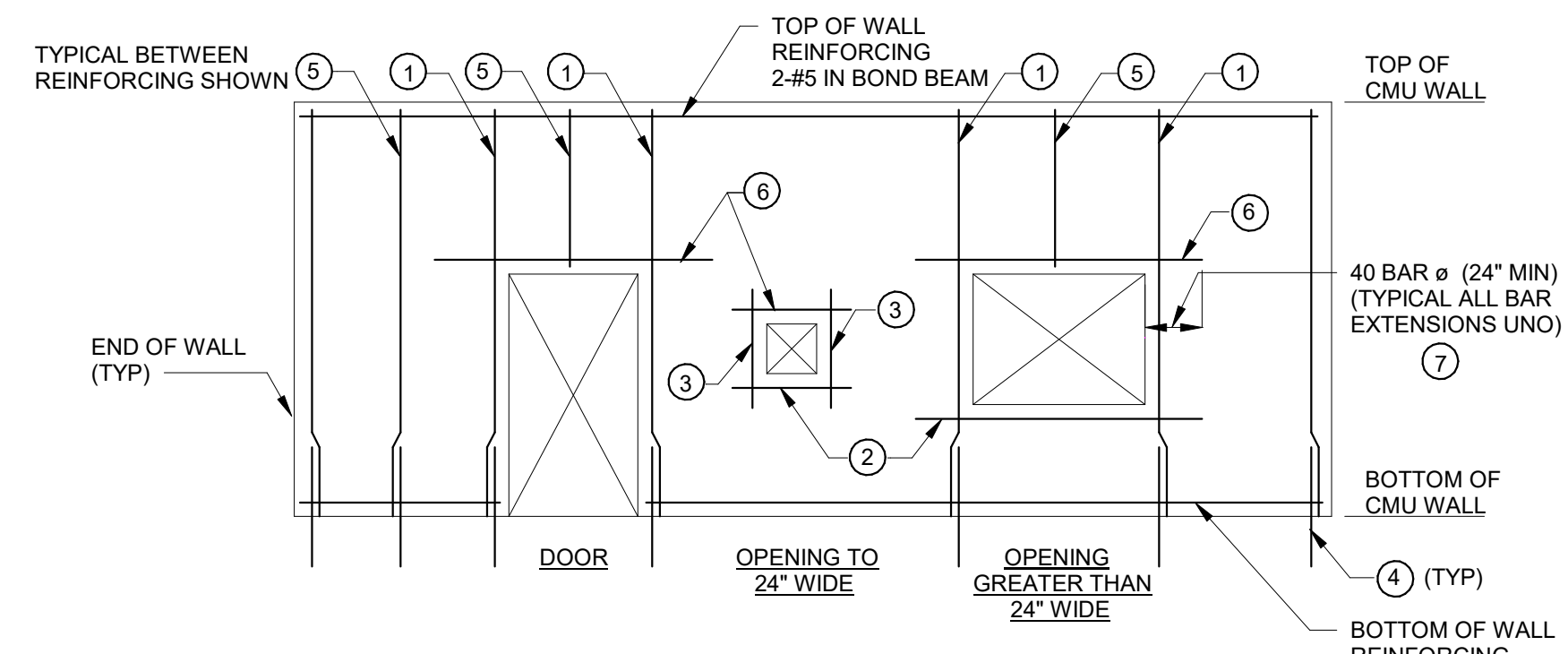
8" CMU WALL CORNER AND END WALL

A DETAIL
- NTS



12" CMU WALL INTERSECTION

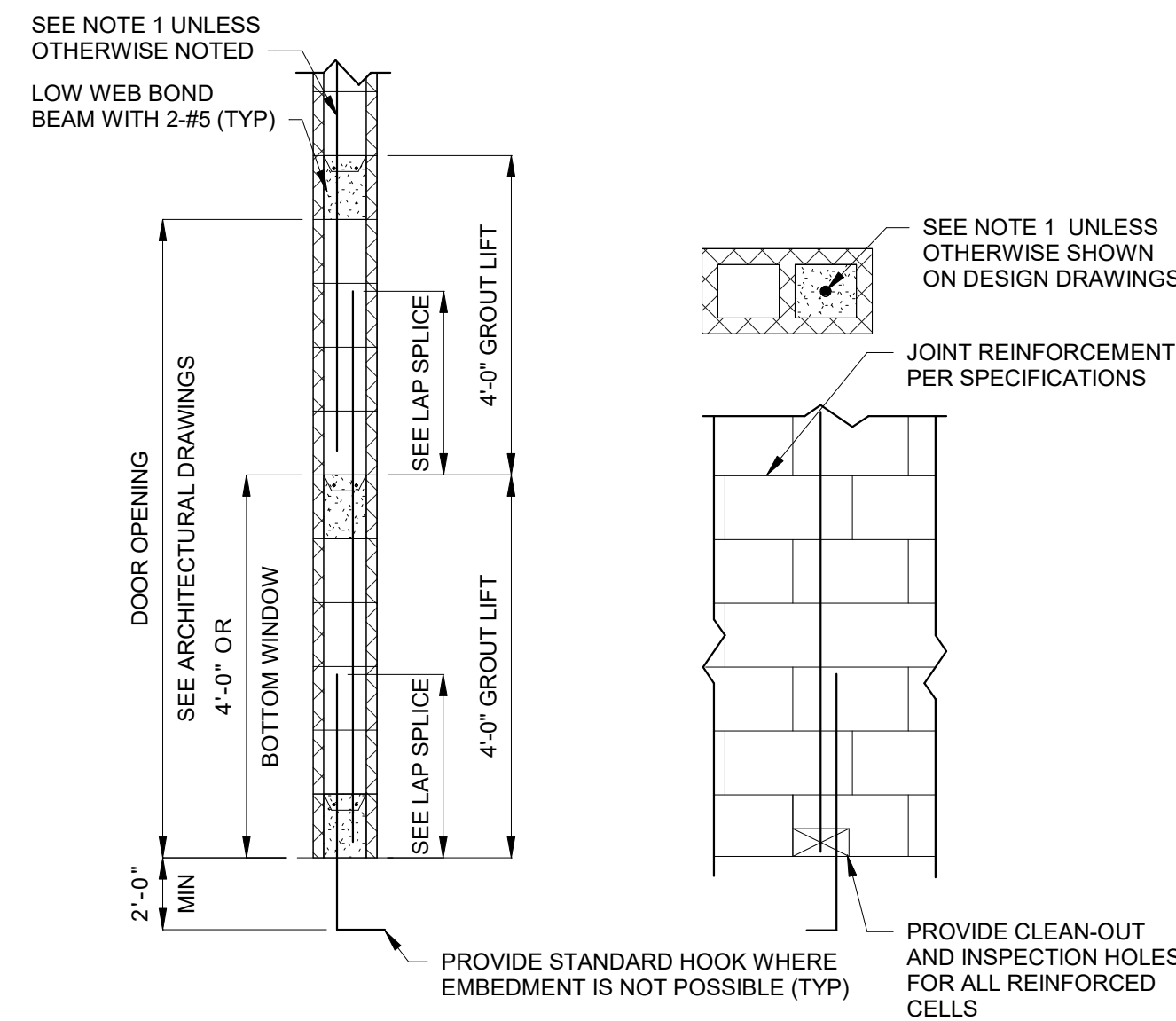
B DETAIL
- NTS



TYPICAL CMU WALL ELEVATION

C DETAIL
- NTS

- LEGEND**
- ① SEE TYPICAL CMU WALL OPENING/JAMB DETAILS ON THIS SHEET
 - ② SILL BARS, 2-#5 IN BOND BEAM
 - ③ 1-#5 EACH SIDE
 - ④ SEE TYPICAL CMU WALL CORNER, END INTERSECTION REINFORCING DETAIL ON THIS SHEET
 - ⑤ BETWEEN BARS SHOWN, PROVIDE TYPICAL WALL REINFORCING PER FILLED CELL REINFORCING DETAIL ON THIS SHEET
 - ⑥ SEE TYPICAL CMU LINTEL REINFORCING SCHEDULE ON THIS SHEET
 - ⑦ IF FULL LENGTH IS NOT AVAILABLE, EXTEND AS FAR AS POSSIBLE, HOOK 90 DEGREE, THEN EXTEND BEYOND BEND REMAINDER OF LENGTH REQUIRED (BUT NOT LESS THAN 12")



FILLED CELL

D DETAIL
- NTS

- NOTES:**
- 1. FILLED CELL REINFORCEMENT: 1-#5 @ 4'-0" OC MAX UNLESS OTHERWISE SHOWN ON DESIGN DRAWINGS
 - 2. BOND BEAM REINFORCEMENT: 2-#5 @ 4'-0" OC MAX UNLESS OTHERWISE NOTED ON DESIGN DRAWINGS

CMU WALL OPENING/JAMB DETAILS

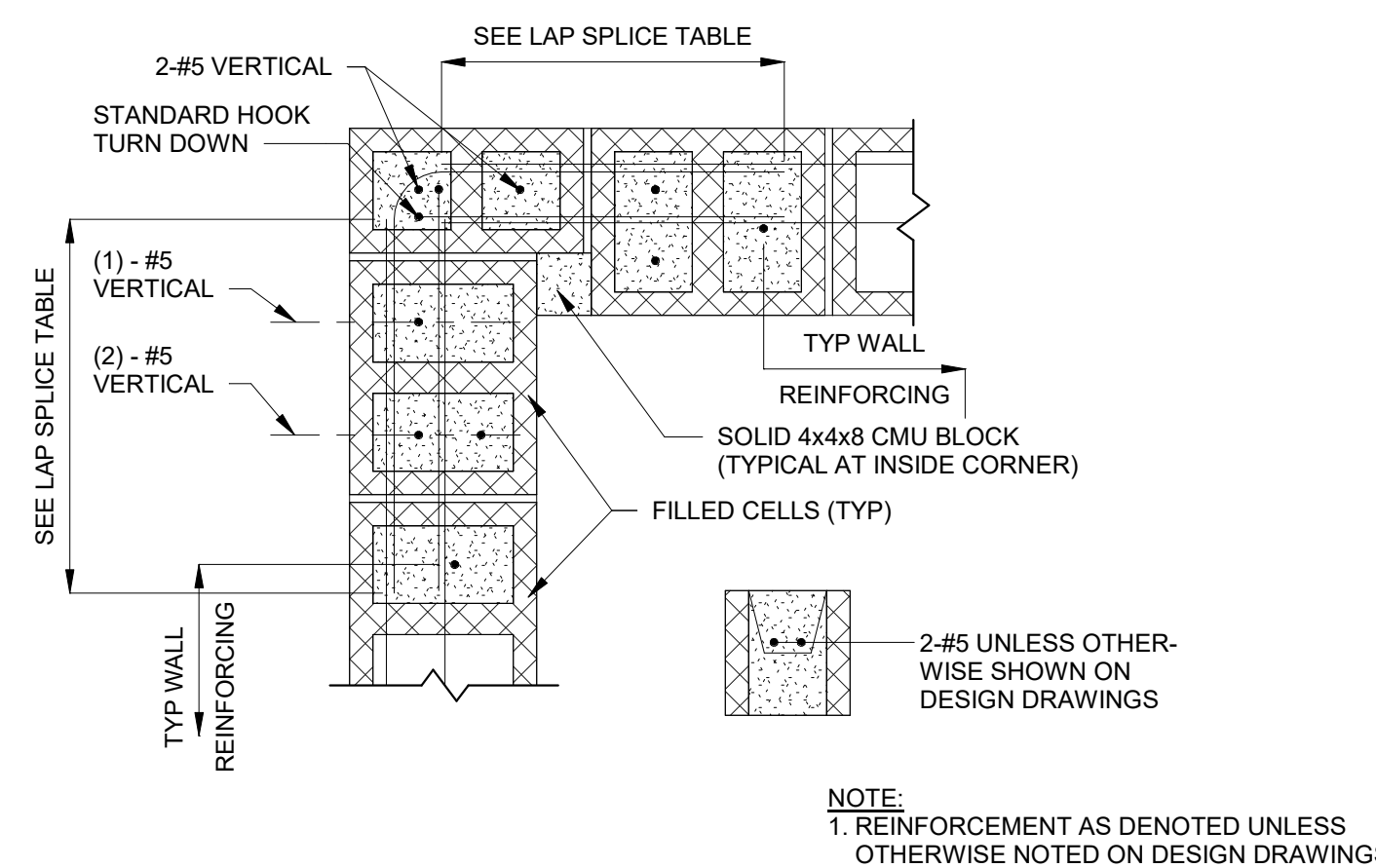
H DETAIL
- NTS

BAR SIZE	CMU LAP SPlice LENGTH (INCHES)	
	12" BLOCK CENTER	EF
4	10	22
5	13	35
6	22	64
7	30	87
8	46	131

MASONRY LAP SPlice SCHEDULE TMS 402

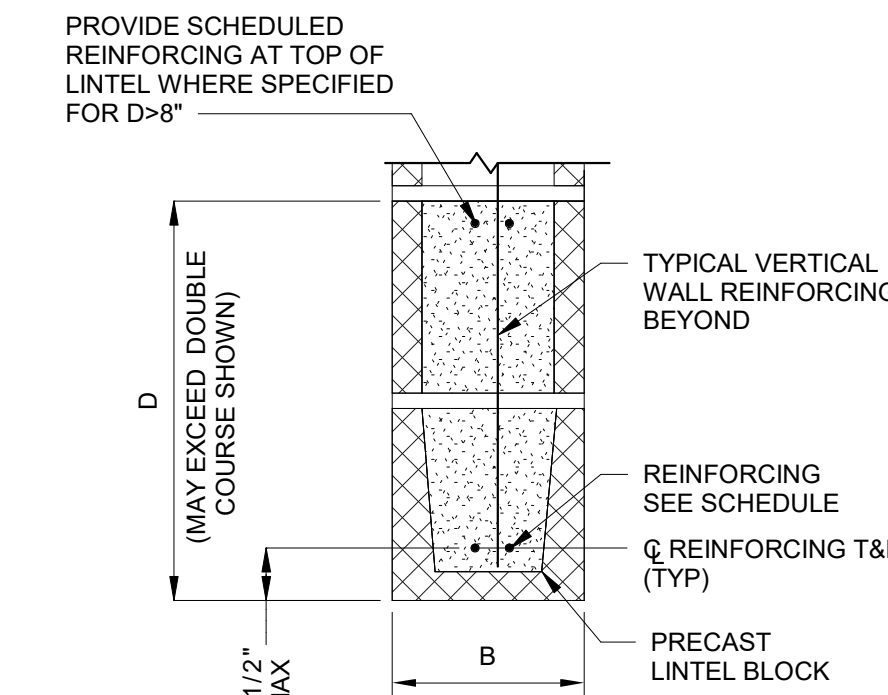
E DETAIL
- NTS

- NOTES:**
- 1. SEE DRAWINGS OR CONTACT ENGINEER FOR LAP SPlice LENGTHS NOT SHOWN.



12" CORNER CMU/BOND BEAM/FILLED CELL

F DETAIL
- NTS

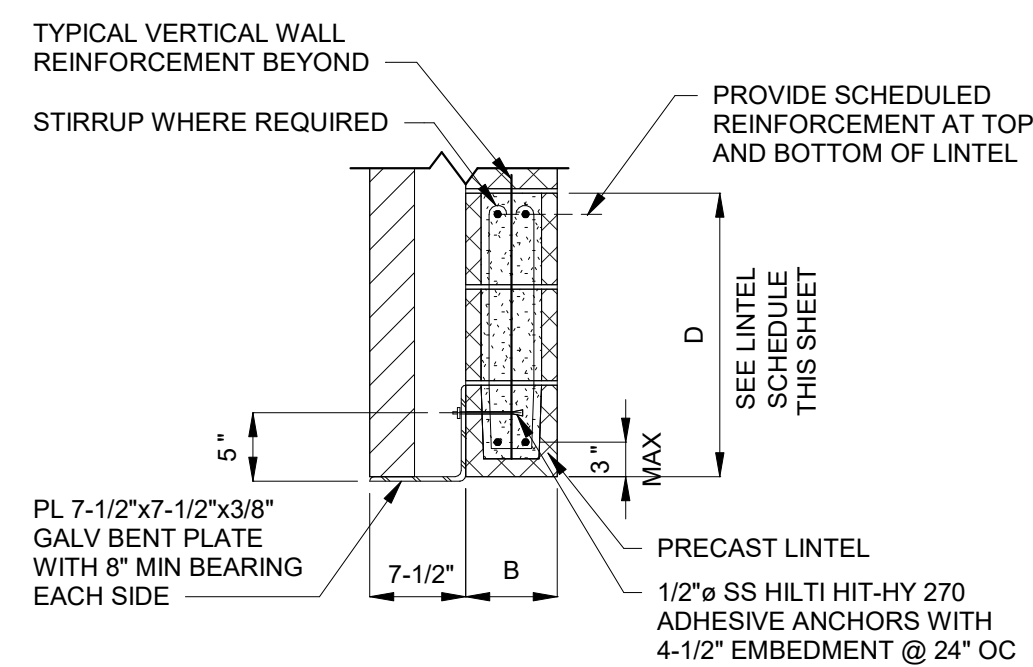
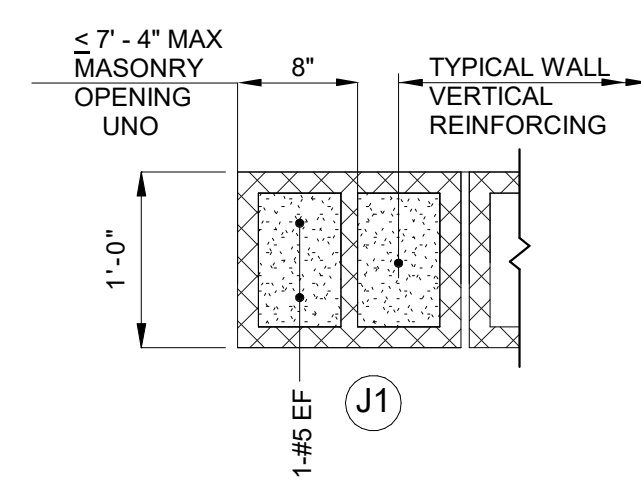


CMU LINTEL REINFORCING SCHEDULE

G DETAIL
- NTS

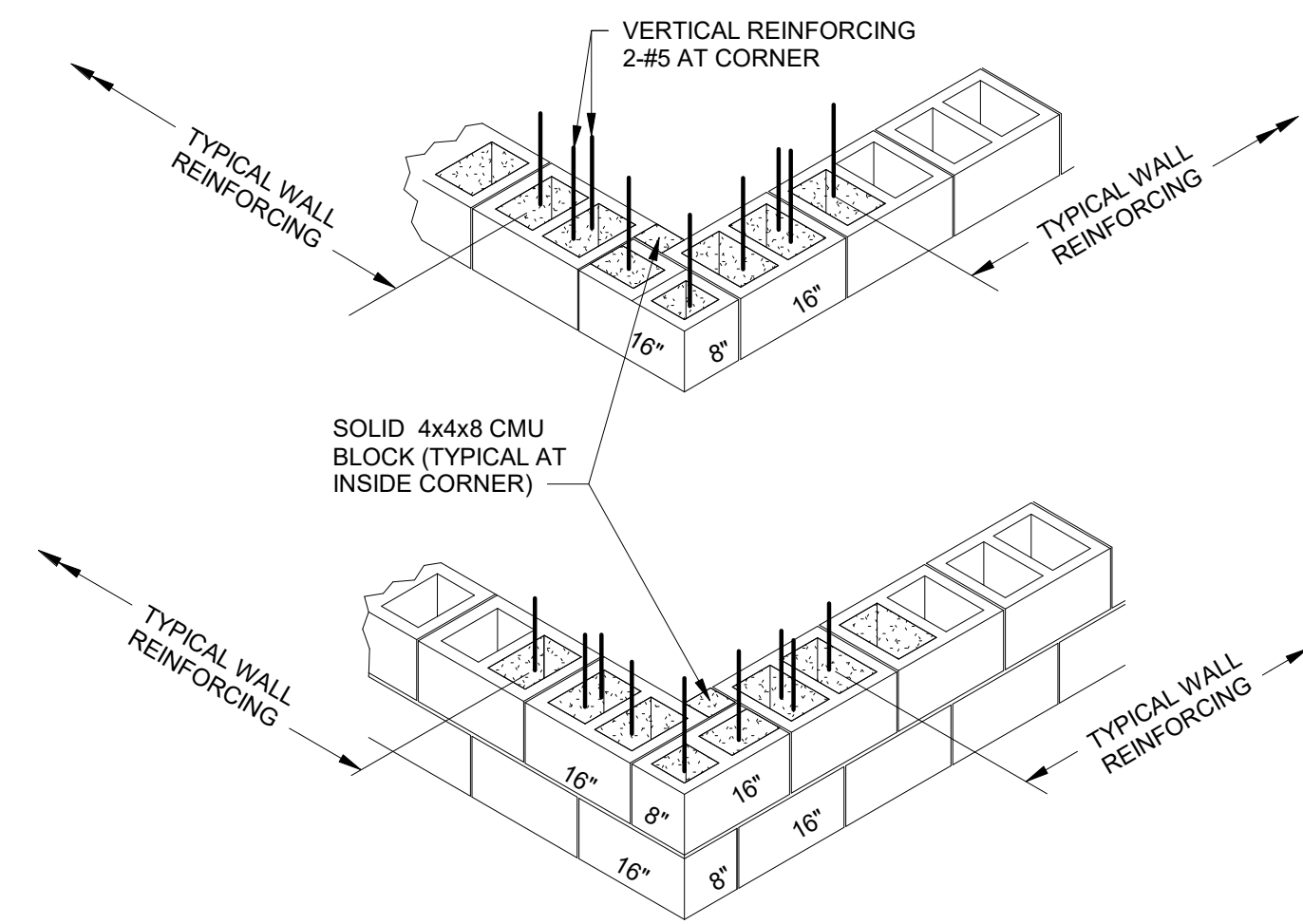
LINTEL TYPE	CLEAR SPAN	LINTEL SCHEDULE		
		TYPE ¹	B	D
L1	0' TO ≤ 4' - 0"	12U8	12"	8"
L2	> 4' - 0" ≤ 7' - 4"	12F16-2B	12"	16"

- CMU LINTEL NOTES:**
- 1. LINTELS SHALL BE PRE-CAST/PRE-STRESSED CONCRETE BY CAST CRETE, OR APPROVED EQUAL.
 - 2. * REINFORCING SHALL EXTEND PAST OPENING PER DETAIL C, THIS SHEET.
 - 3. PROVIDE 8" MINIMUM BEARING AT EACH SIDE OF CLEAR SPAN UNLESS OTHERWISE SHOWN ON DESIGN DRAWINGS. PROVIDE 40 BAR ø (24" MINIMUM) BAR EXTENSION PAST EACH SIDE OF OPENING.
 - 4. PROVIDE REINFORCING AS INDICATED AT ALL OPENINGS.
 - 5. REINFORCING TYPICAL UNLESS OTHERWISE NOTED.
 - 6. LOCATIONS ARE FOR EXTERIOR LINTELS UNLESS OTHERWISE NOTED.



BRICK SHELF PLATE FOR CMU

J DETAIL
- NTS



12" CMU BLOCK CORNER DETAIL

K DETAIL
- NTS

DATE: KEVIN M. FRANCOFORTE PE NO. 73949

PROJECT NO. 9247-221208
FILE NAME: S000STD.RVT

SHEET NO.

SD-3

ISSUED FOR BID

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REV. NO.	DATE	DRWN	CHKD	REMARKS

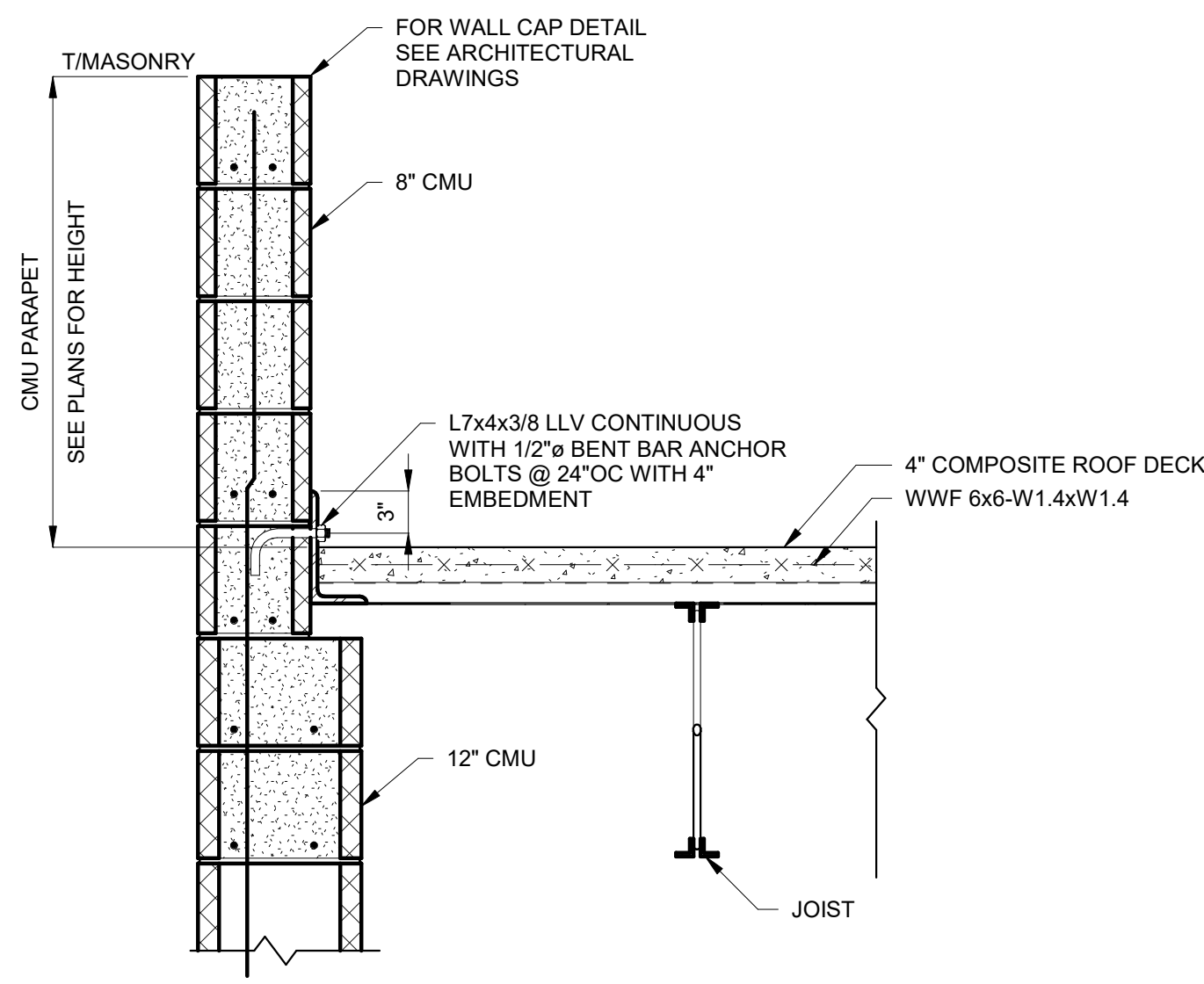
DESIGNED BY: P. KALARIA
 DRAWN BY: P. SCHIAVO
 SHEET CHKD BY: W. MAPLES
 CROSS CHKD BY: C. MONTGOMERY
 APPROVED BY: K. FRANCOFORTE
 DATE: MAY 2022

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 FLA COA No. EB-0000020

ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

STANDARD MASONRY DETAILS

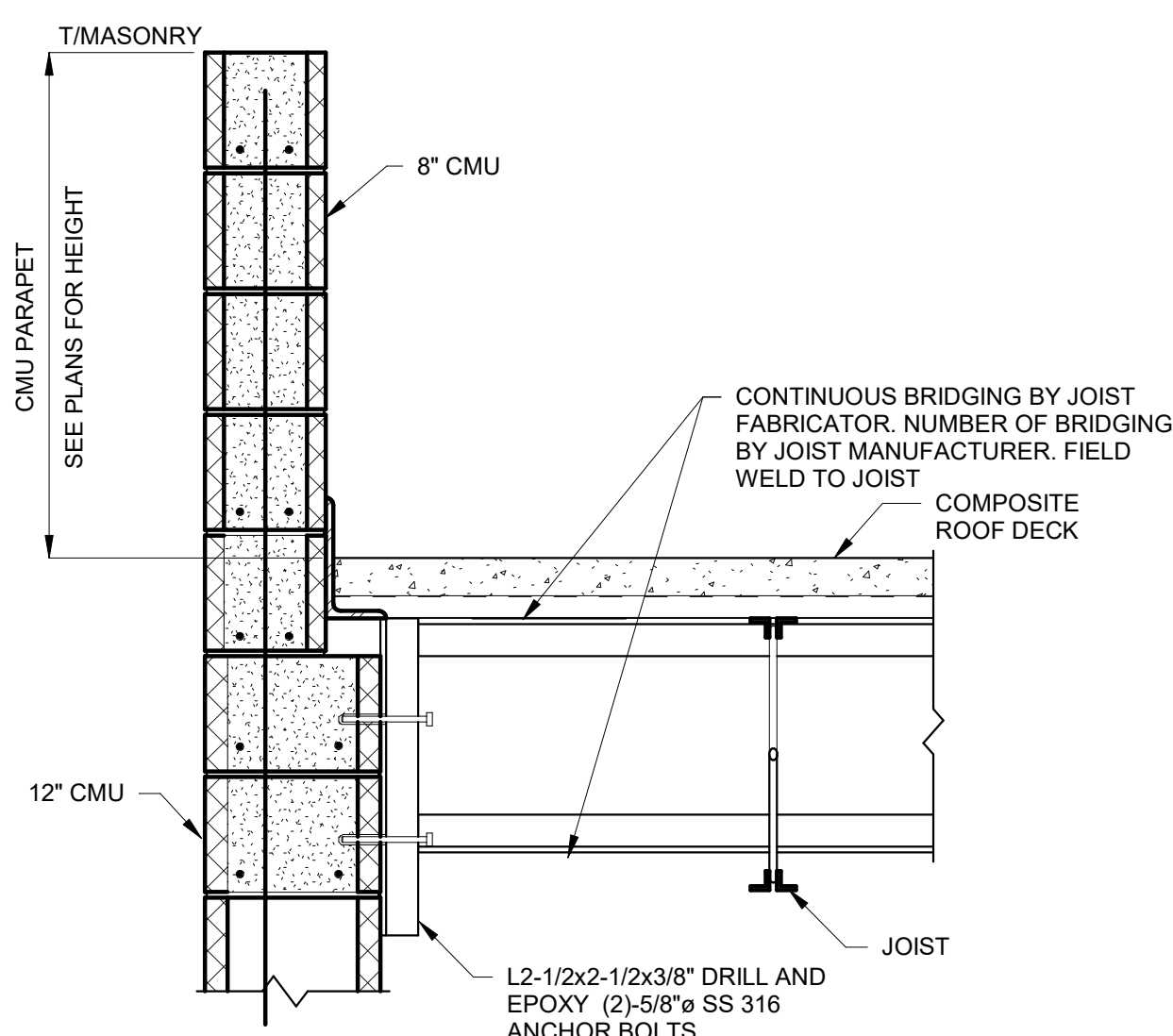
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NOTE:
1. PROVIDE GROUTED BOND BEAMS AS SHOWN HORIZONTAL ABOVE AND BELOW ANCHORS TO PROVIDE A MINIMUM OF 12" FROM CENTERLINE OF BOLT. BEAM SHALL BE CONTINUOUS OVER LENGTH OF WALL.

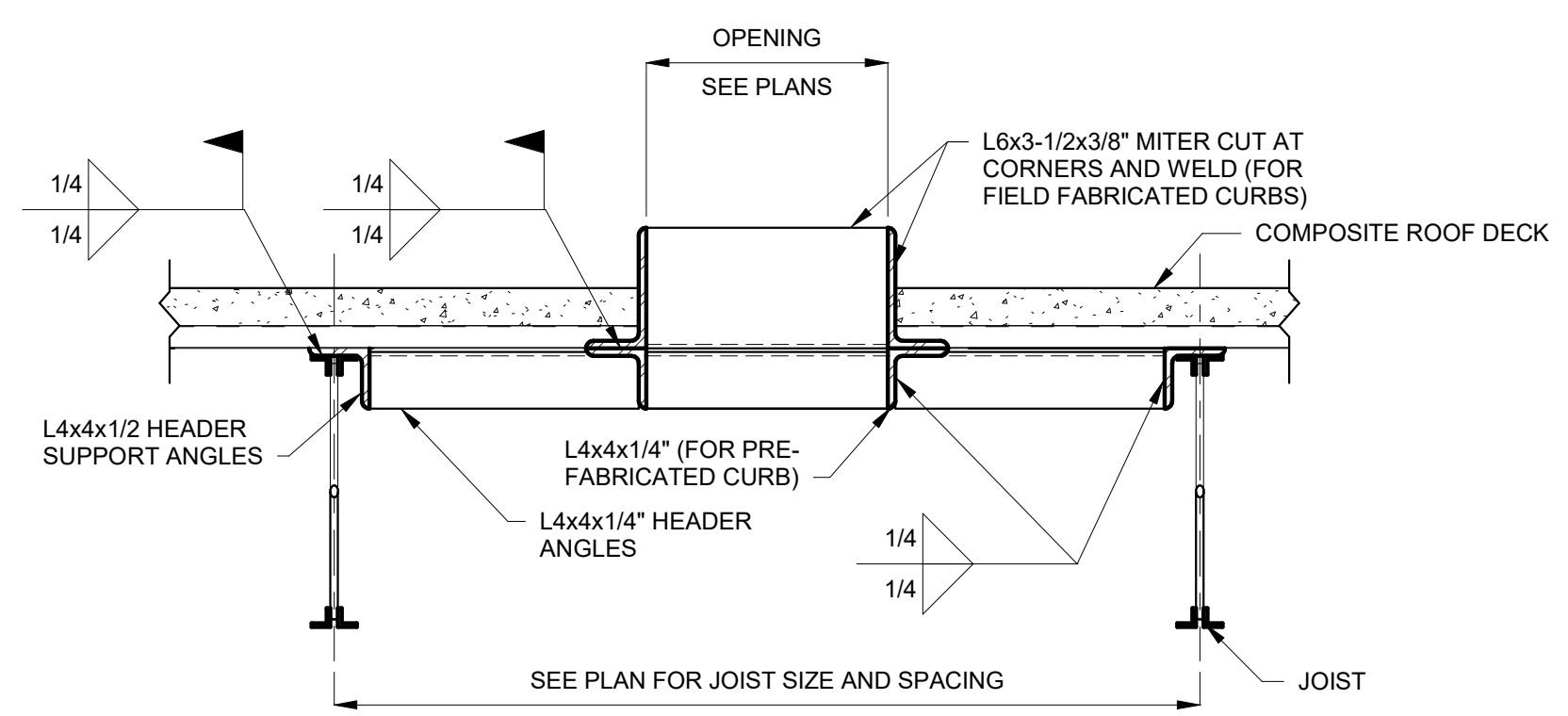
COMPOSITE DECK TO MASONRY CONNECTION

A DETAIL
- NTS



HORIZONTAL BRIDGING

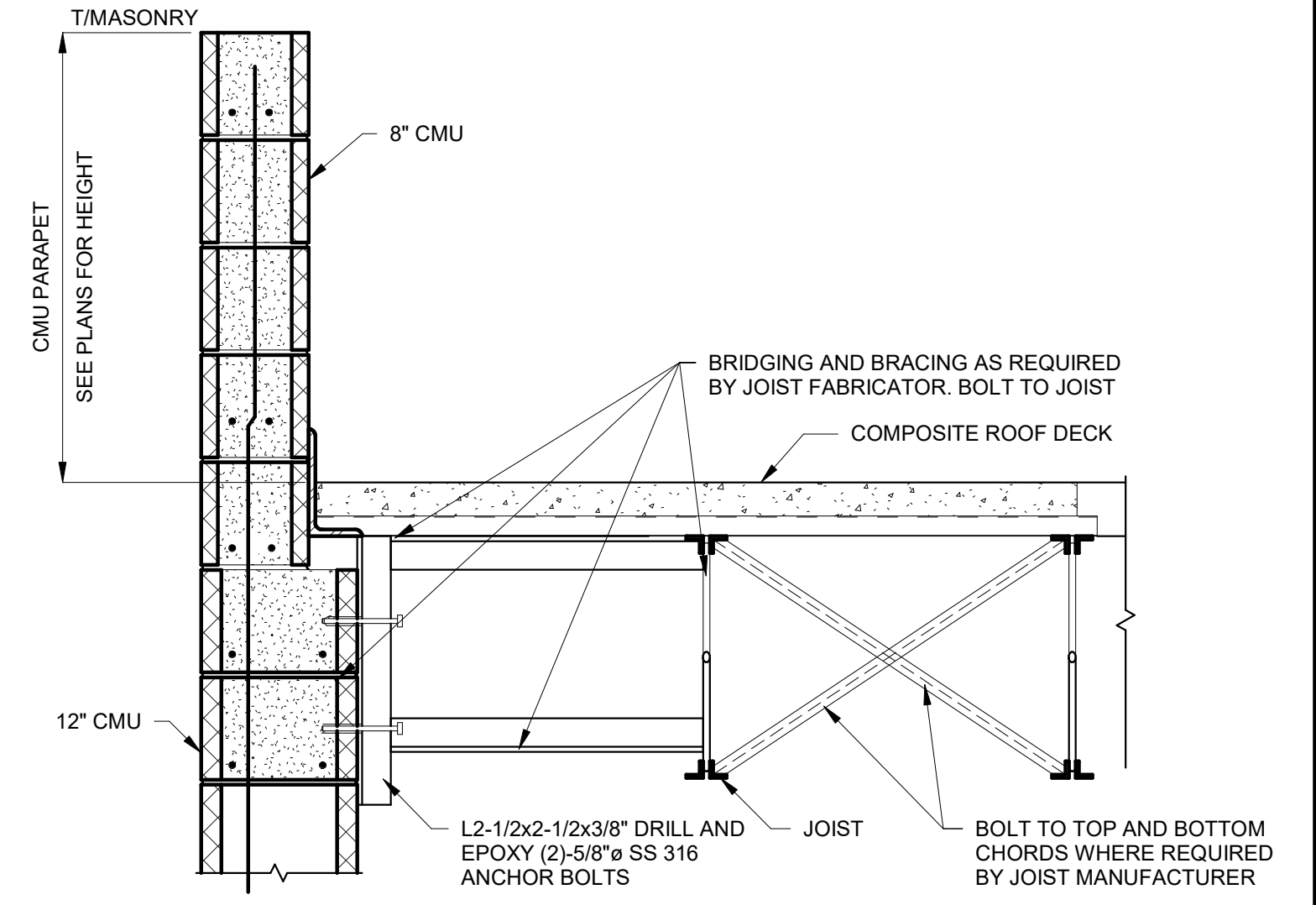
B DETAIL
- NTS



NOTES:
1. FOR BLOCKING AND FLASHING REQUIREMENTS, SEE ARCHITECTURAL DRAWINGS.
2. FOR FIELD FABRICATED CURBS, TRIM LONG LEG OF L6x3-1/2 AS REQUIRED BY EQUIPMENT MANUFACTURER.

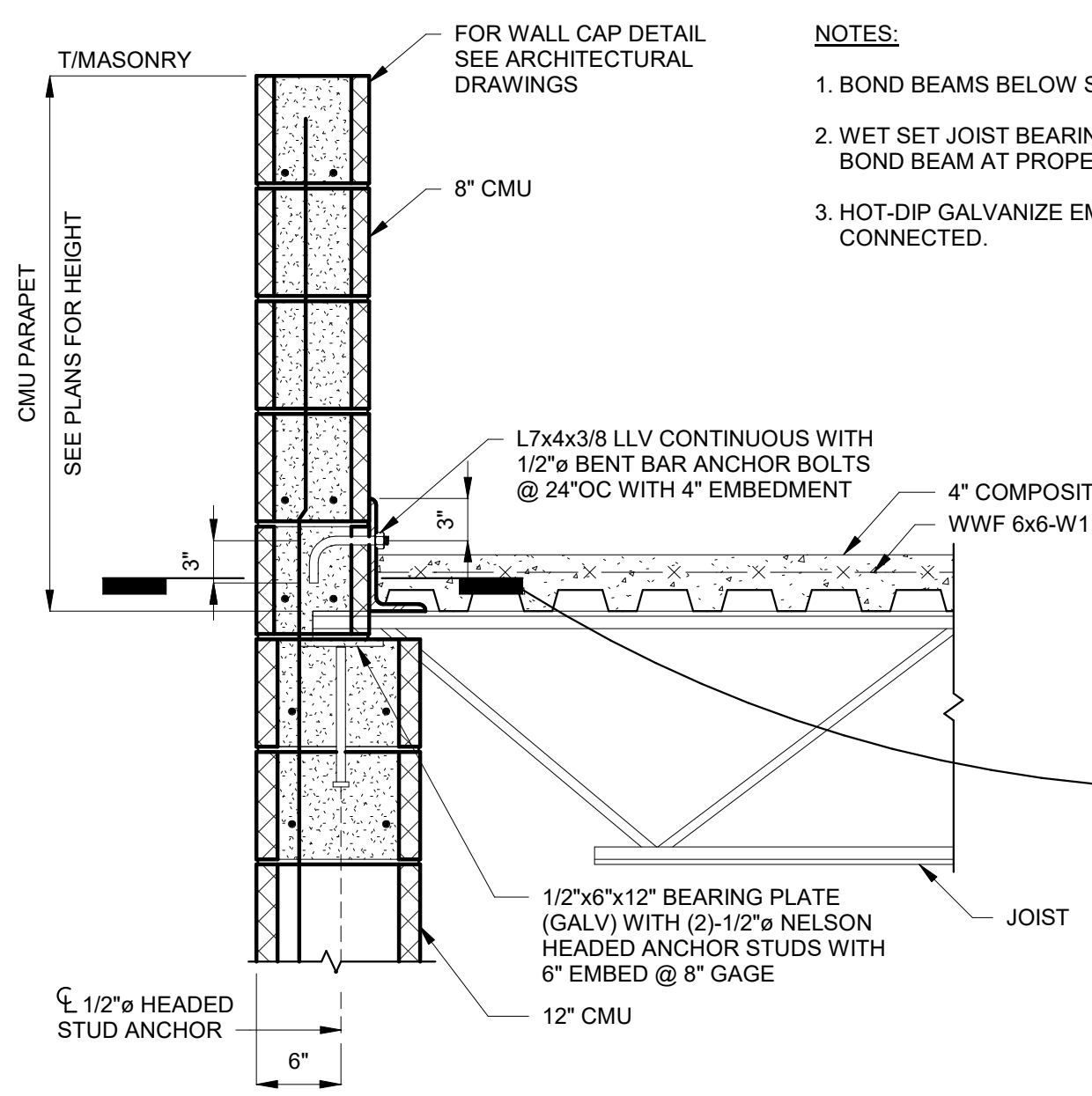
ROOF OPENING FRAMING

C DETAIL
- NTS



BOLTED DIAGONAL BRACING

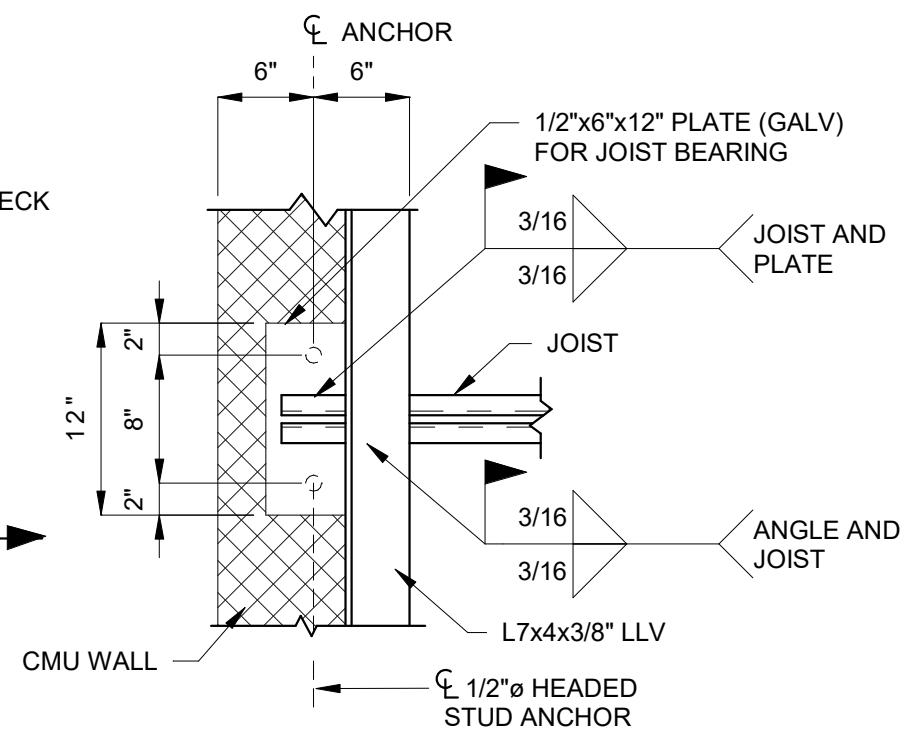
D DETAIL
- NTS



NOTES:
1. BOND BEAMS BELOW STEEL JOIST SHALL BE CONTINUOUS.
2. WET SET JOIST BEARING PLATE WITH ANCHOR IN 2-COURSE BOND BEAM AT PROPER JOIST ALIGNMENT AND ELEVATION.
3. HOT-DIP GALVANIZE EMBED PLATE AFTER ANCHOR IS CONNECTED.

JOIST/DECK TO CMU

E DETAIL
- NTS



NOTE: COMPOSITE DECK NOT SHOWN FOR CLARITY.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: P. KALARIA	<p>4651 Salisbury Road, Suite 400 Jacksonville, FL 32256 Tel: (904) 731-7109 FLA COA No. EB-0000020</p>
DRAWN BY: P. SCHIAVO	
SHEET CHKD BY: W. MAPLES	
CROSS CHKD BY: C. MONTGOMERY	
APPROVED BY: K. FRANCOFORTE	
DATE: MAY 2022	

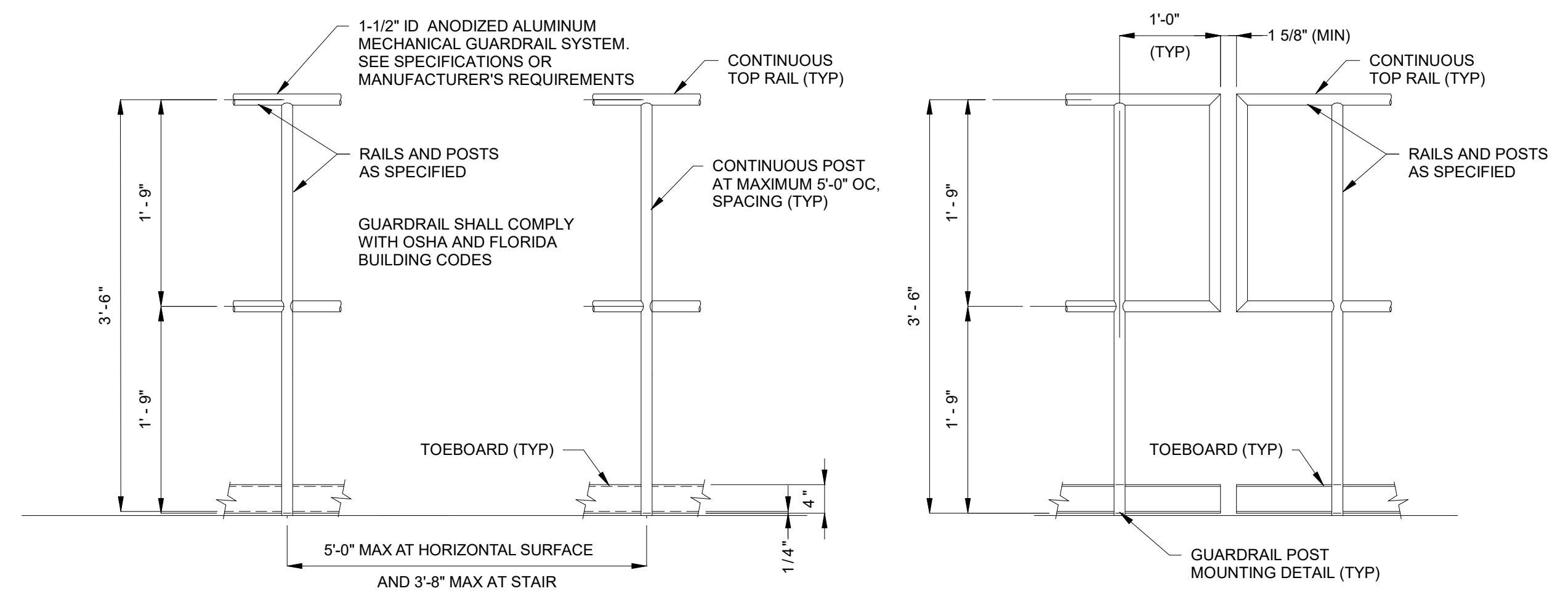
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE
DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

STANDARD STEEL JOIST DETAILS

DATE: KEVIN M. FRANCOFORTE PE NO. 73949
PROJECT NO. 9247-221208 FILE NAME: S000STD.RVT
SHEET NO. SD-4

ISSUED FOR BID

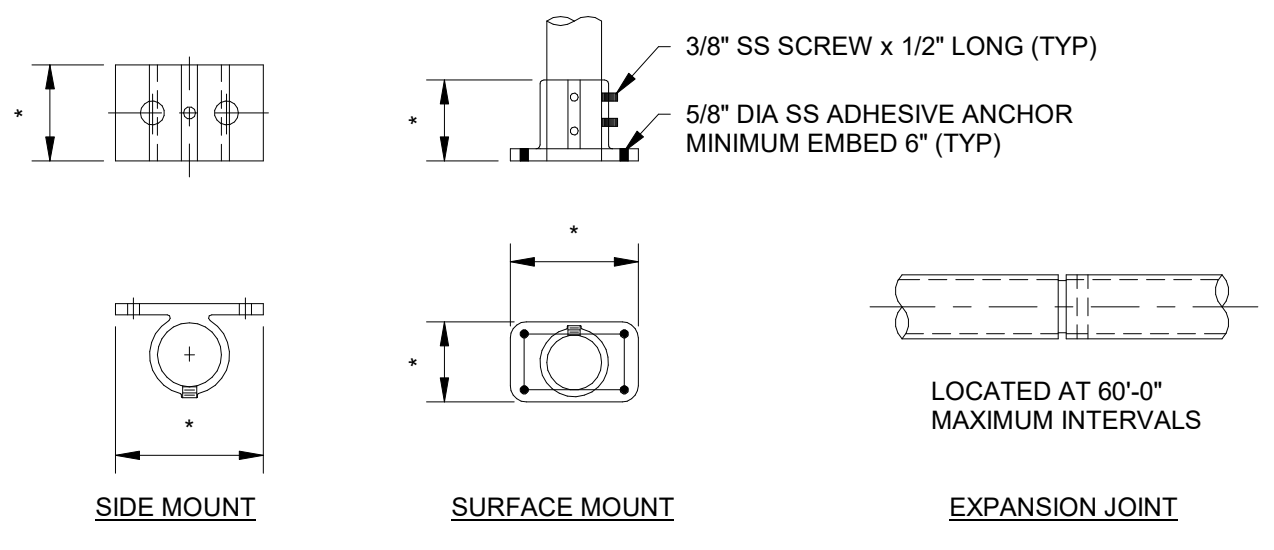
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AT HORIZONTAL SURFACE

END POST

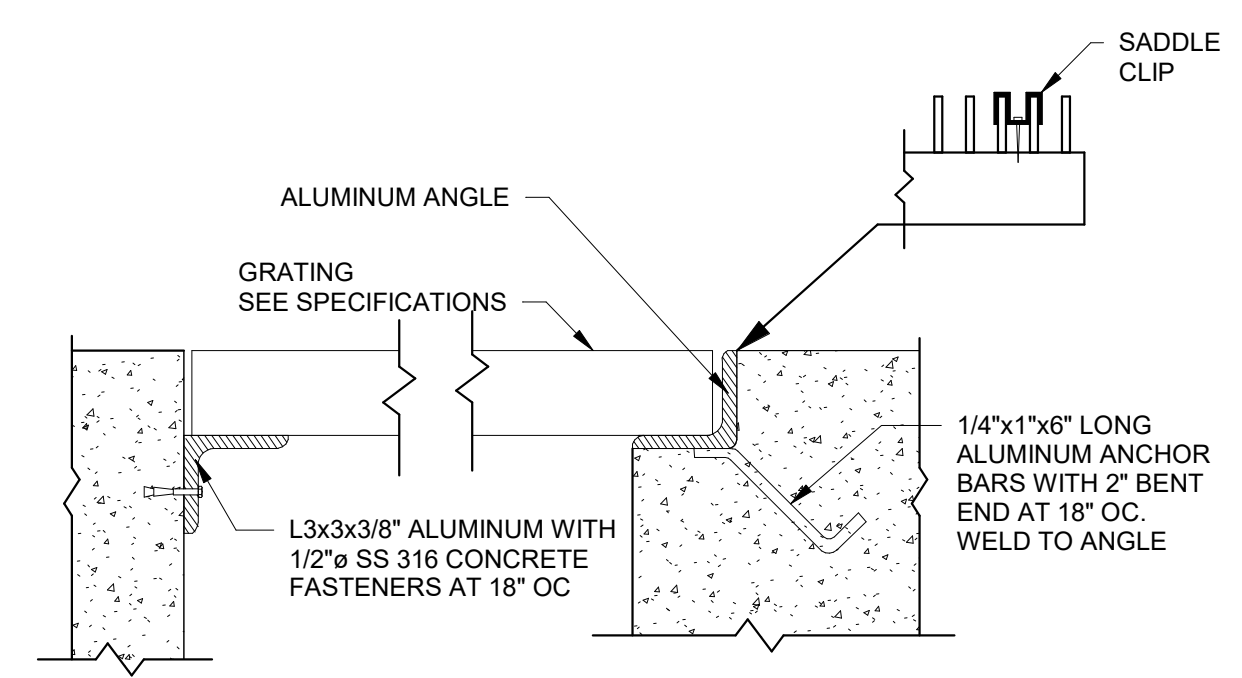
NOTE: TOEBOARD SHALL BE PROVIDED UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS OR IN SPECIFICATIONS. TOEBOARD NOT REQUIRED WHEN CONCRETE CURBS 4" OR HIGHER ARE PROVIDED.



GUARDRAIL CONNECTIONS

GUARDRAIL

A DETAIL
NTS



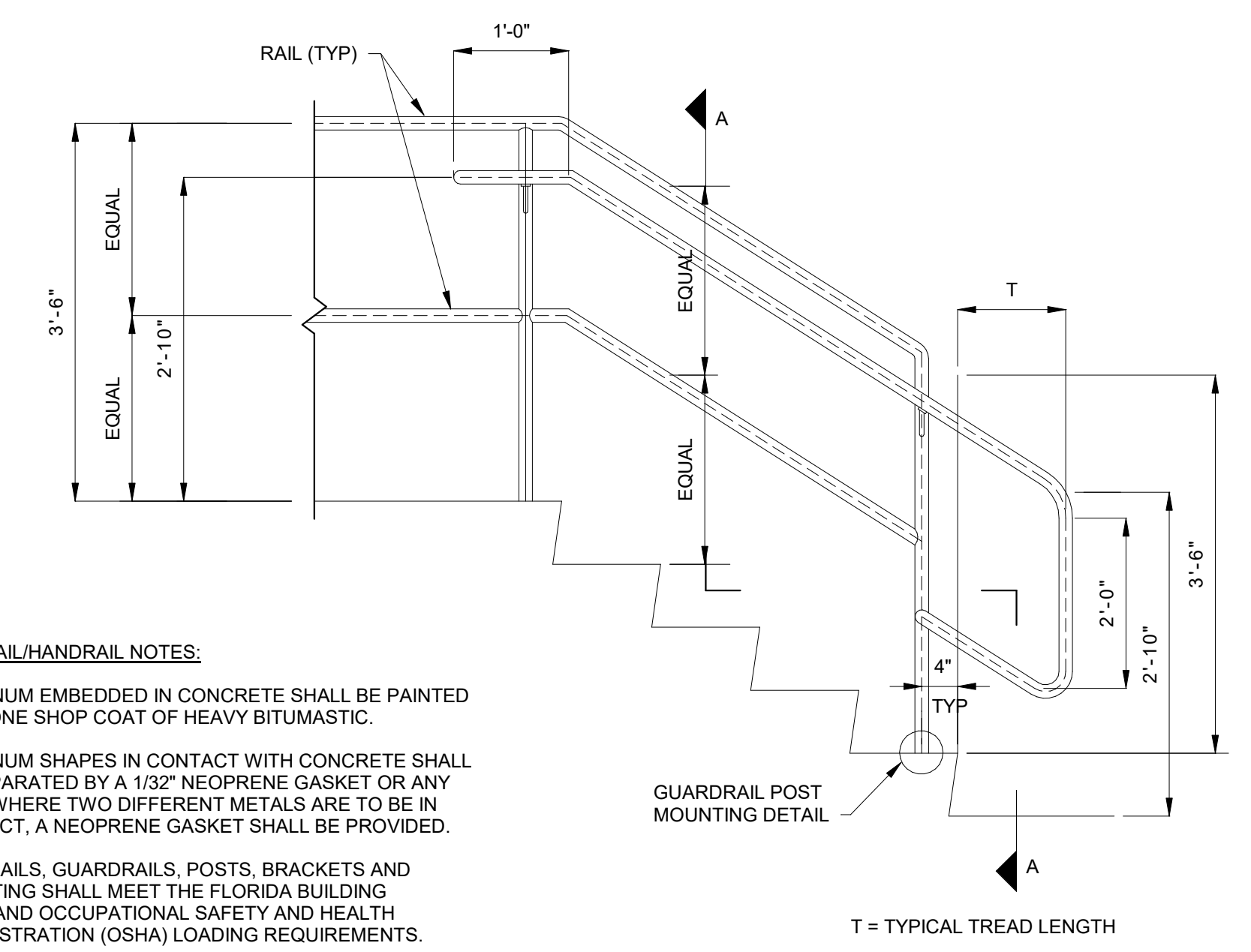
METAL GRATING AND COVER PLATE NOTES:

- GRATING, COVER PLATES, ANGLE FRAMES AND SUPPORTS SHALL BE ALL ALUMINUM CONSTRUCTION UNLESS OTHERWISE NOTED. COVER PLATES SHALL BE DIAMOND PLATE ALUMINUM ALLOY 6061-T6. GRATING SHALL BE ALUMINUM ALLOY 6063-T6.
- FASTENERS, ANCHORS, BOLTS, NUTS AND WASHERS FOR GRATING, COVER PLATES AND SUPPORTS SHALL BE TYPE 316 STAINLESS STEEL.
- FIELD VERIFY GRATING SUPPORT LOCATIONS BEFORE FABRICATING GRATING. PLACE SUPPORTS WITH EXTREME CARE TO PROVIDE TOLERANCES SHOWN OR SPECIFIED.
- GRATING PANEL LAYOUT SHALL PROVIDE FOR THE REMOVAL OF GRATING AROUND PIPE AND OTHER GRATING PENETRATIONS.
- BAND ALL GRATING ALONG EDGES AND AROUND OPENINGS WITH CONTINUOUS BAR SAME DEPTH AND THICKNESS AS BEARING BARS.
- ALL ANGLE FRAMES FOR GRATING AND COVER PLATES ARE TO BE MITERED AND WELDED AT CORNERS.
- ALL GRATING IS TO BE SECURELY FASTENED TO SUPPORTS, UNLESS OTHERWISE NOTED.
- ALL COVER PLATES SHALL BE SECURELY FASTENED TO SUPPORTS WITH 3/8" STAINLESS STEEL FLAT-HEAD MACHINE SCREWS AT 2'-0" ON CENTER, UNLESS OTHERWISE NOTED.

MAXIMUM SPAN	DEPTH	BEARING BAR	
		THICKNESS	SPACING
3'-0"	1-1/4"	3/16"	1-3/16"
4'-0"	1-1/2"	3/16"	1-3/16"
5'-0"	2"	3/16"	1-3/16"
6'-0"	2-1/4"	3/16"	1-3/16"

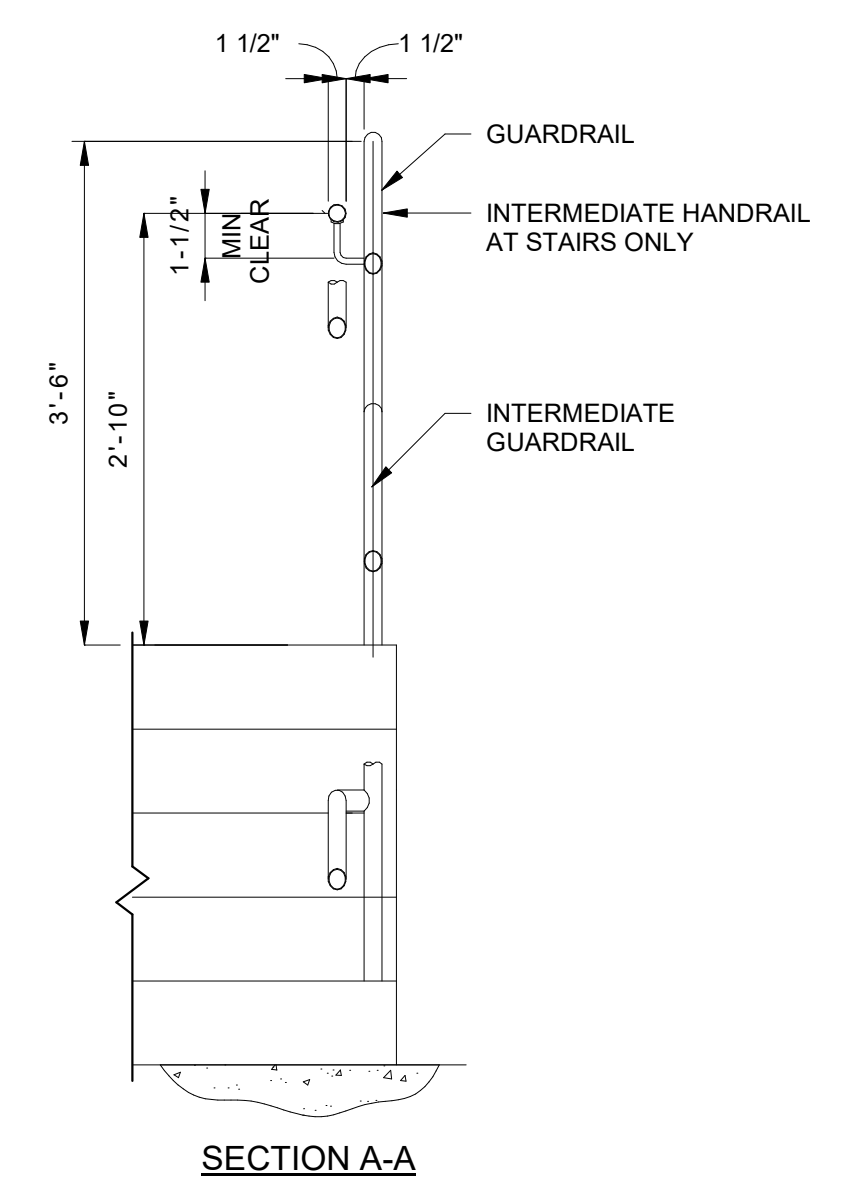
ALUMINUM GRATING AND GRATING SUPPORT

C DETAIL
NTS



TYPICAL GUARDRAIL/HANDRAIL AT STAIRS

B DETAIL
NTS



SECTION A-A

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: P. KALARIA
 DRAWN BY: P. SCHIAVO
 SHEET CHKD BY: W. MAPLES
 CROSS CHKD BY: C. MONTGOMERY
 APPROVED BY: K. FRANCOFORTE
 DATE: MAY 2022

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 4651 Salisbury Road, Suite 400
 Jacksonville, FL 32256
 Tel: (904) 731-7109
 FLA COA No. EB-0000020

ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

STANDARD METAL DETAILS

PROJECT NO. 9247-221208
 FILE NAME: S000STDT.RVT

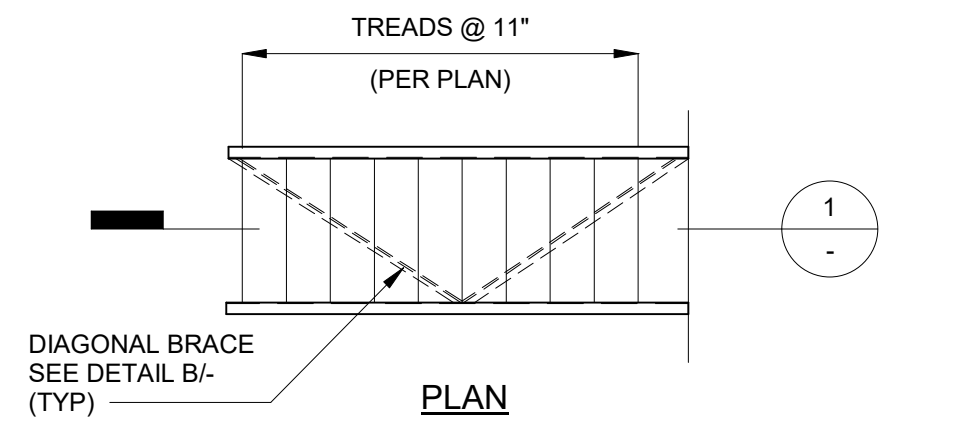
SHEET NO.
SD-5

DATE:
 KEVIN M. FRANCOFORTE
 PE NO. 73949

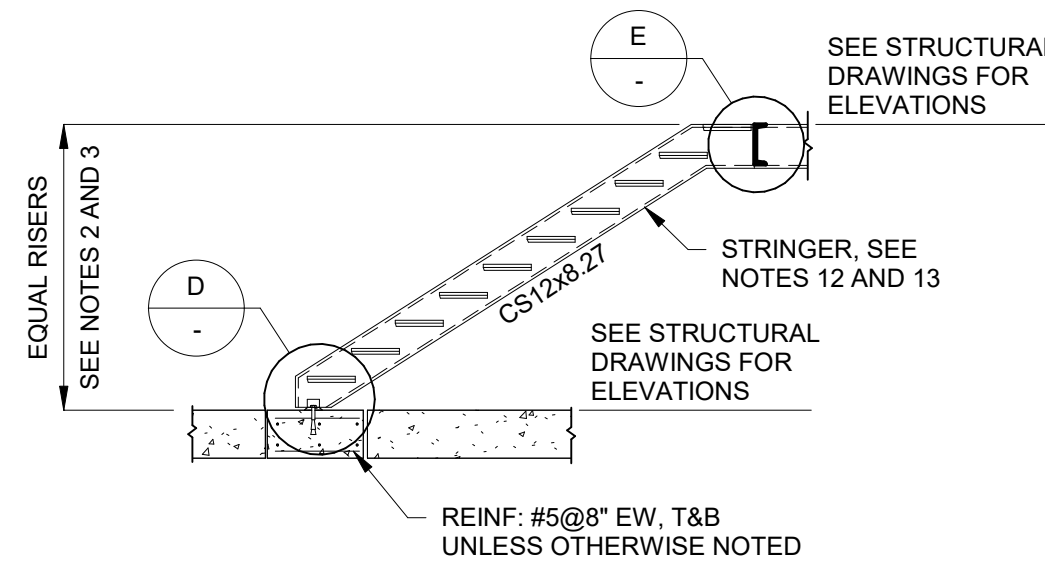
ISSUED FOR BID

STAIR AND PLATFORM NOTES:

1. ALL CONSTRUCTION IS ALUMINUM PER SPECIFICATIONS, UNLESS NOTED OTHERWISE.
2. RISERS: 7" MAXIMUM, UNLESS NOTED OTHERWISE.
TREADS: 11" MAXIMUM, PLUS 1" NOSING UNLESS NOTED OTHERWISE.
3. TYPICAL STAIR WIDTH IS 3'-0" UNLESS NOTED OTHERWISE.
4. MAXIMUM HEIGHT FOR INDIVIDUAL FLIGHT OF STAIRS = 12'-0".
5. STAIR STRINGER DIAGONAL BRACING MAY BE OMITTED WHERE STRINGER LENGTH IS LESS THAN 10'-0".
6. TYPICAL PAD WIDTH IS STAIR WIDTH, PLUS 6" EACH SIDE.
7. ALUMINUM EMBEDDED IN CONCRETE MUST BE PAINTED WITH ONE SHOP COAT OF HEAVY BITUMASTIC.
8. ALUMINUM SHAPES IN CONTACT WITH CONCRETE MUST BE SEPARATED BY A 1/32" NEOPRENE GASKET OR ANY CASE WHERE TWO DIFFERENT METALS ARE TO BE IN CONTACT, A NEOPRENE GASKET MUST BE PROVIDED.
9. HANDRAILS, GUARDRAILS, POSTS, BRACKETS AND MOUNTINGS SHALL MEET THE FLORIDA BUILDING CODE (FBC) AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) LOADING REQUIREMENTS.
10. TOP OF ALL GUARDRAILS SHOULD BE 42" HIGH ABOVE THE FINISH FLOOR OR WALKWAY. THE CLEAR DISTANCE BETWEEN THE TOP AND INTERMEDIATE RAILS MEASURED AT RIGHT ANGLES TO THE RAILS SHALL NOT EXCEED 21".
11. ALL WALKWAYS SHALL USE GRATING UNLESS NOTED OTHERWISE.
12. FOR ALUMINUM STAIRS, USE C12x8.64 STRINGERS AND " SQUARE x 14" ALUMINUM POST, UNLESS NOTED OTHERWISE.
13. IF STAIR HEIGHT IS LESS THAN 6'-0", STAIR STRINGER SIZE MAY BE REDUCED TO C10x8.64 FOR ALUMINUM STAIR.
14. ASTM F593 SS BOLTS SHALL BE USED WHERE CONNECTING ALUMINUM MEMBERS.



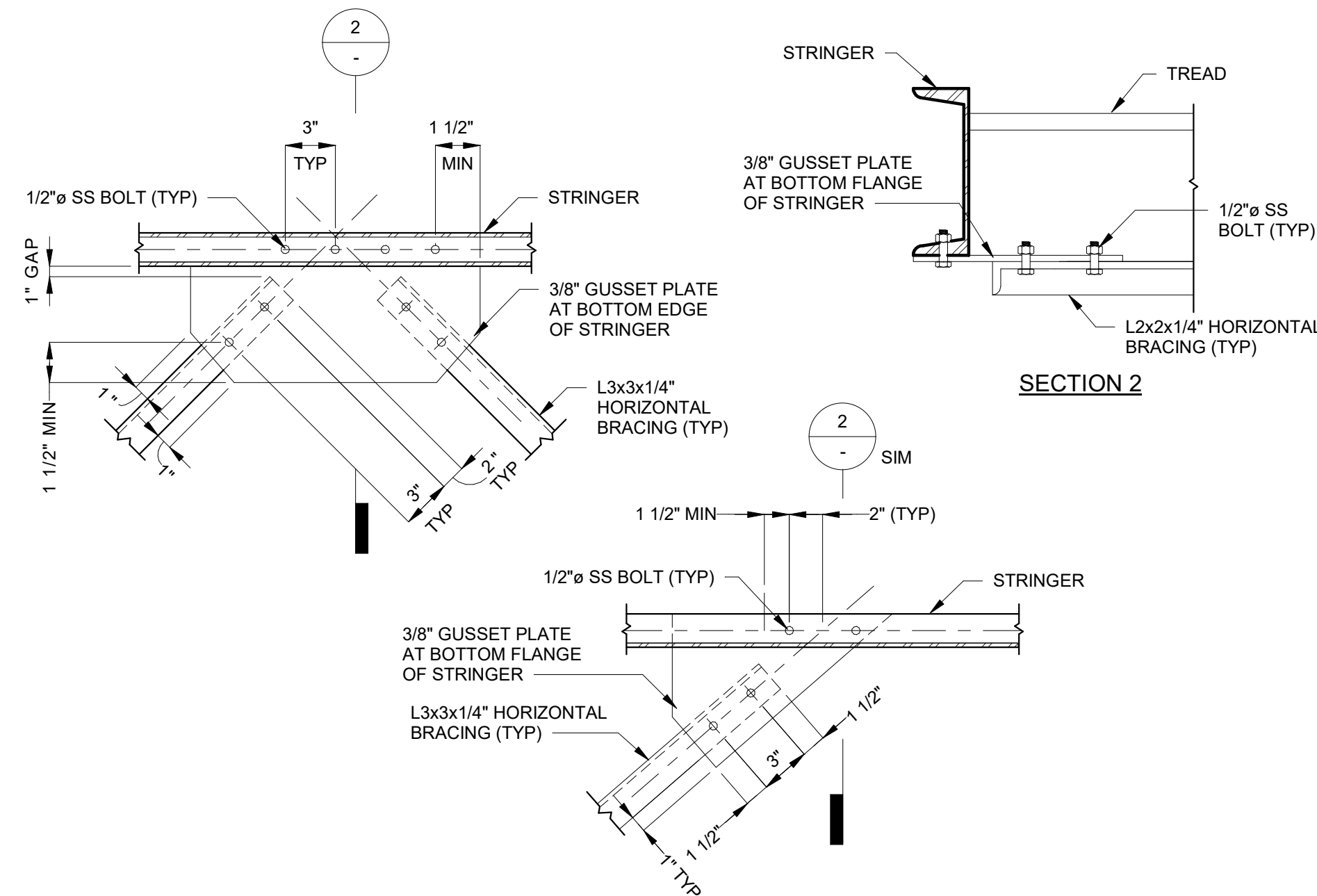
PLAN



SECTION 1

TYPE "T-1" STAIR

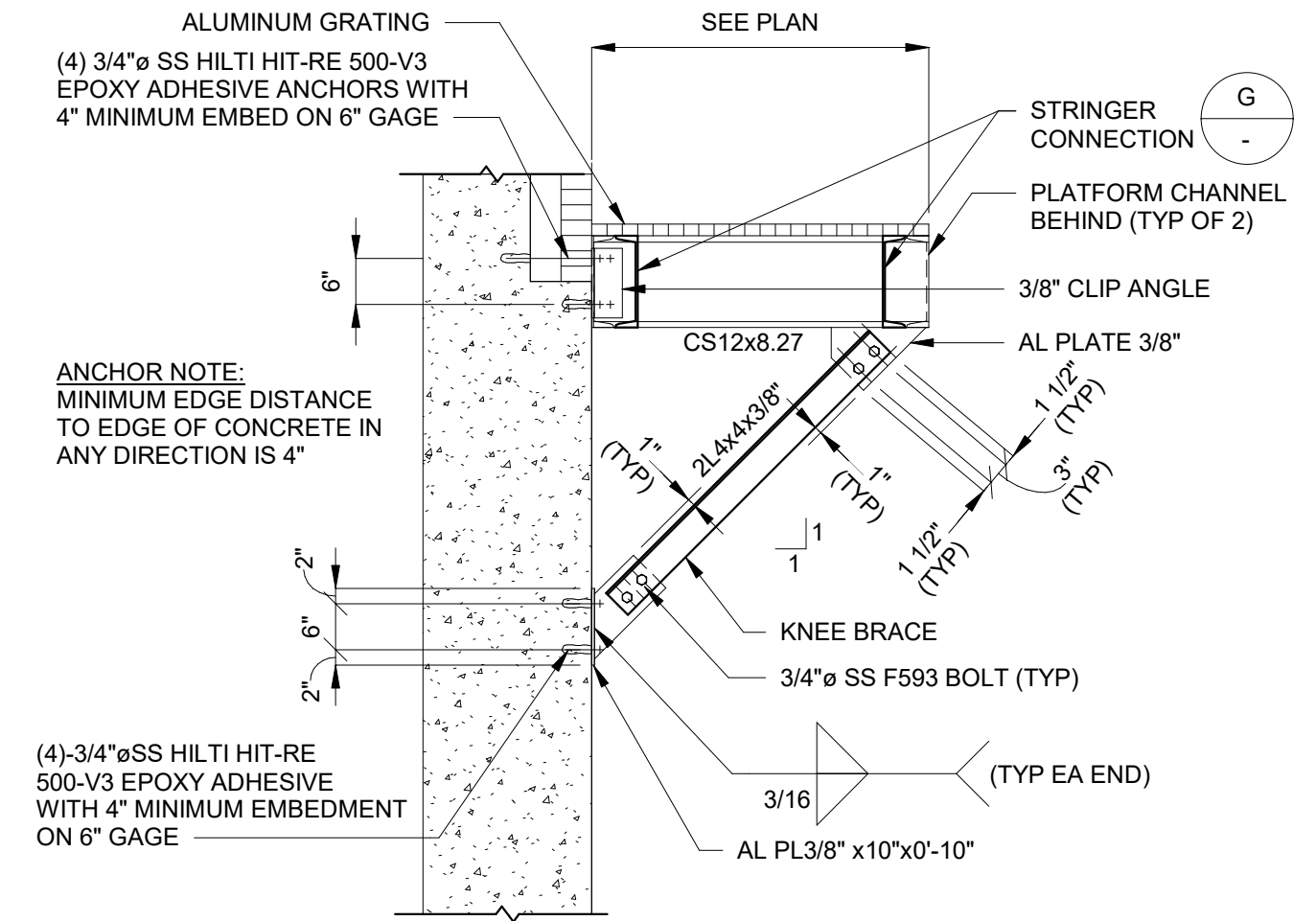
A DETAIL
NTS



SECTION 2

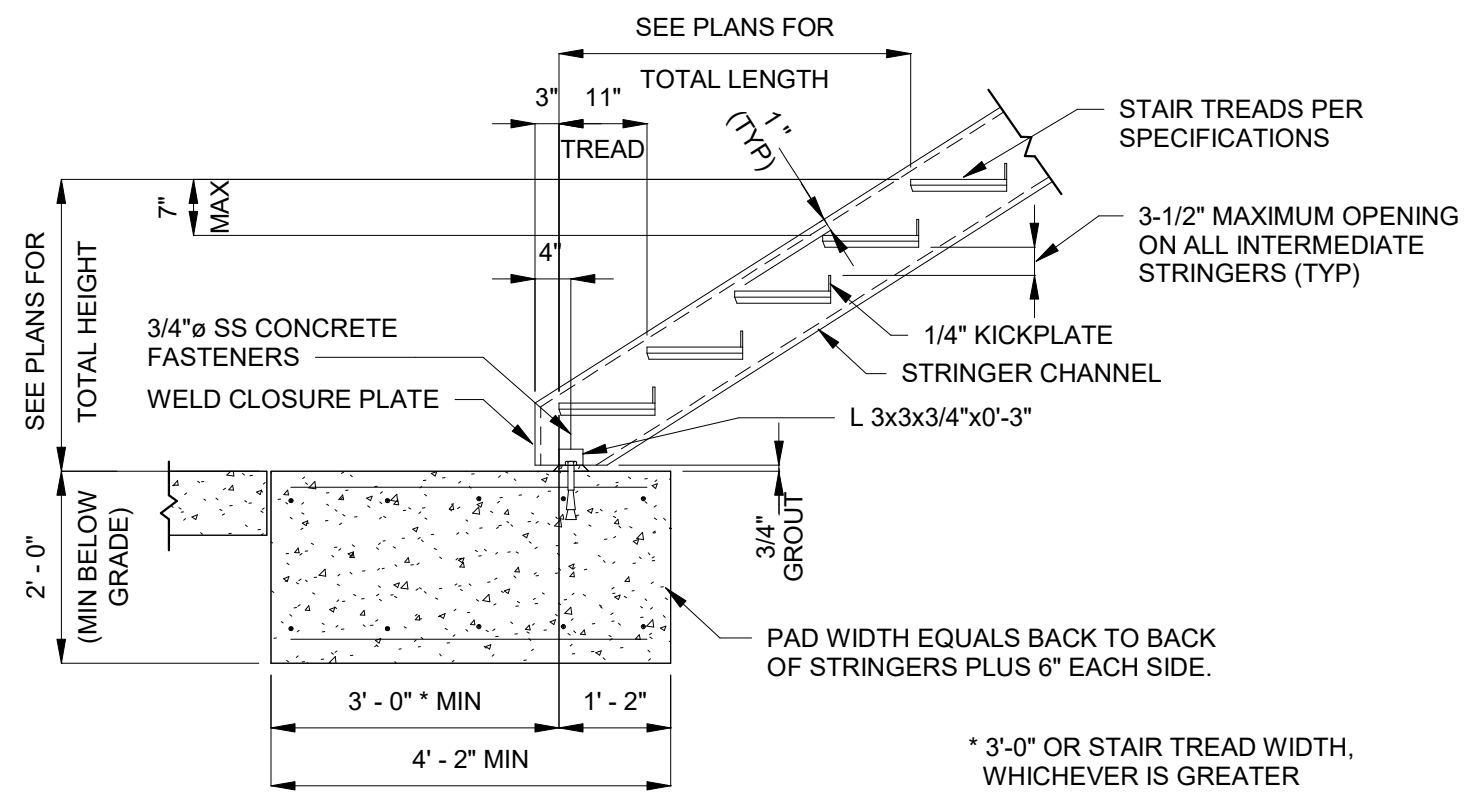
STAIR STRINGER HORIZONTAL BRACING

B DETAIL
NTS



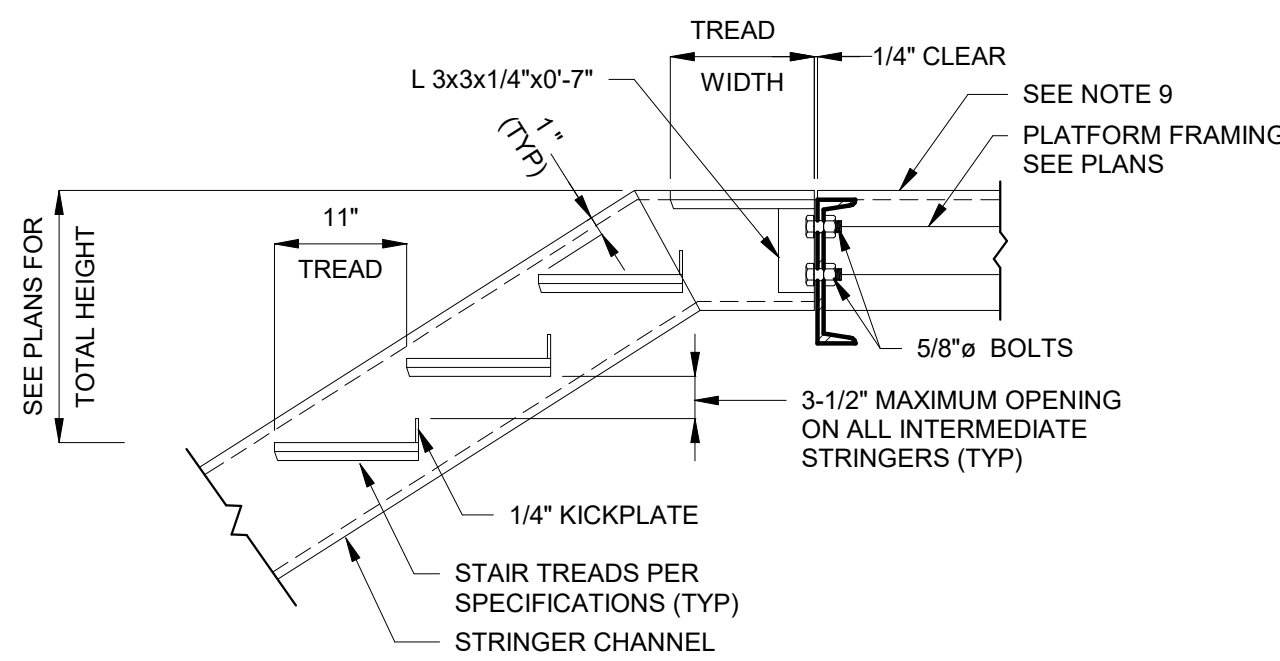
BRACKET AT LANDING PLATFORM

C DETAIL
NTS



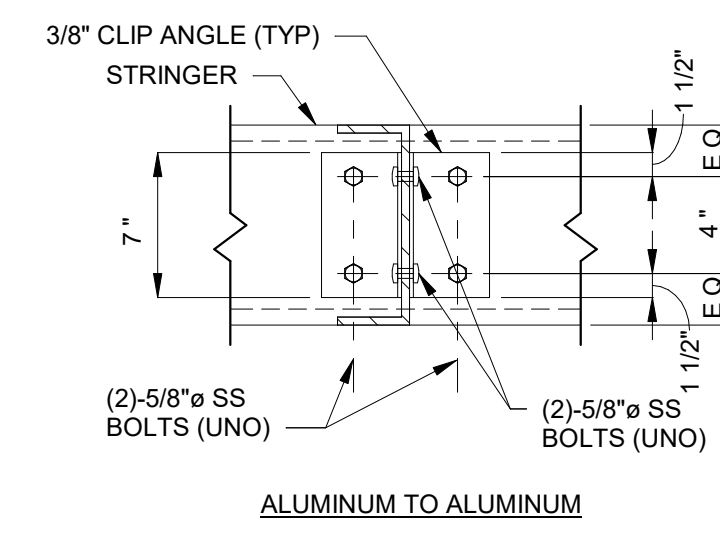
STAIR STRINGER TO CONCRETE BASE

D DETAIL
NTS



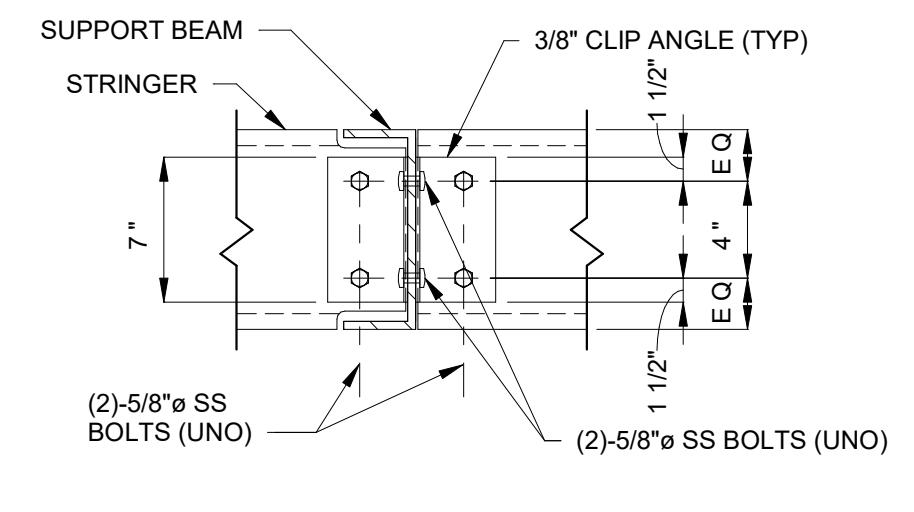
STAIR STRINGER TO ALUMINUM PLATFORM TOP

E DETAIL
NTS



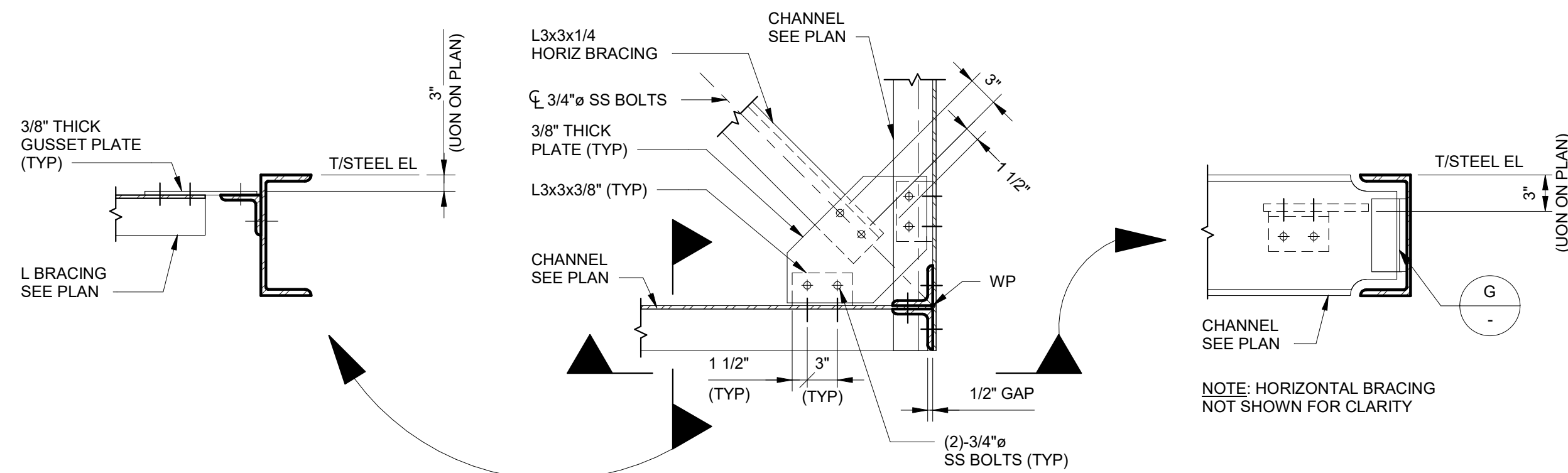
TYPICAL BEAM TO BEAM CONNECTION

F DETAIL
NTS



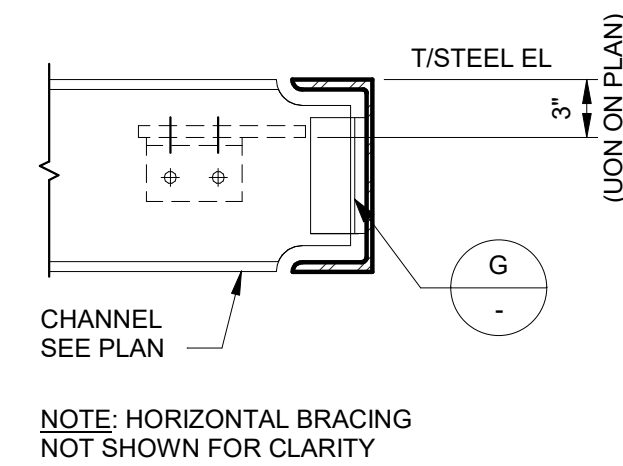
TYPICAL GIRDER TO BEAM CONNECTION

G DETAIL
NTS



HORIZONTAL BRACING AT LANDING

H DETAIL
NTS



NOTE: HORIZONTAL BRACING NOT SHOWN FOR CLARITY

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	P. KALARIA
DRAWN BY:	P. SCHIAVO
SHEET CHKD BY:	W. MAPLES
CROSS CHKD BY:	C. MONTGOMERY
APPROVED BY:	K. FRANCOFORTE
DATE:	MAY 2022



ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE
DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

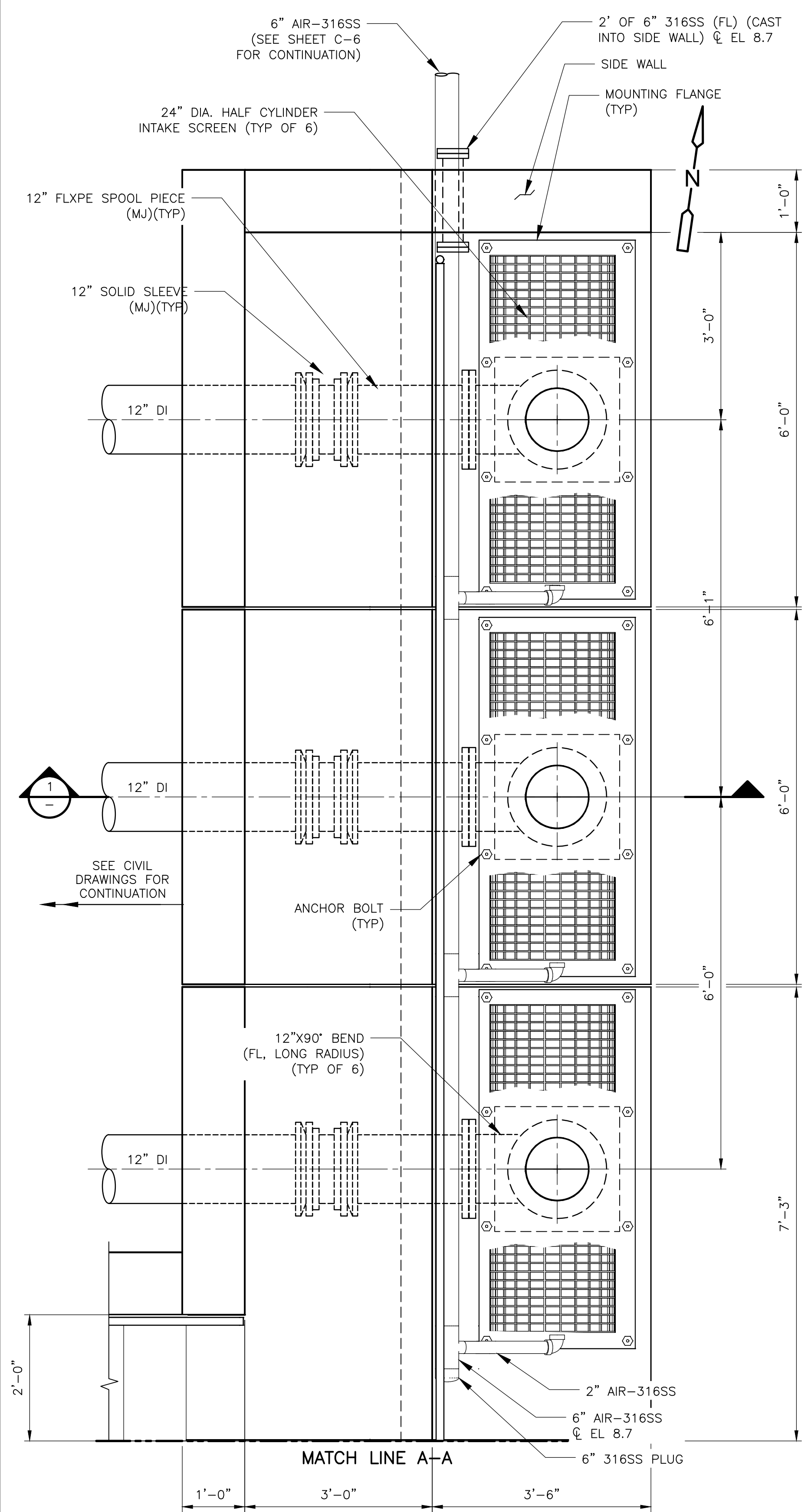
STANDARD STRUCTURAL DETAILS

SHEET NO.
SD-6

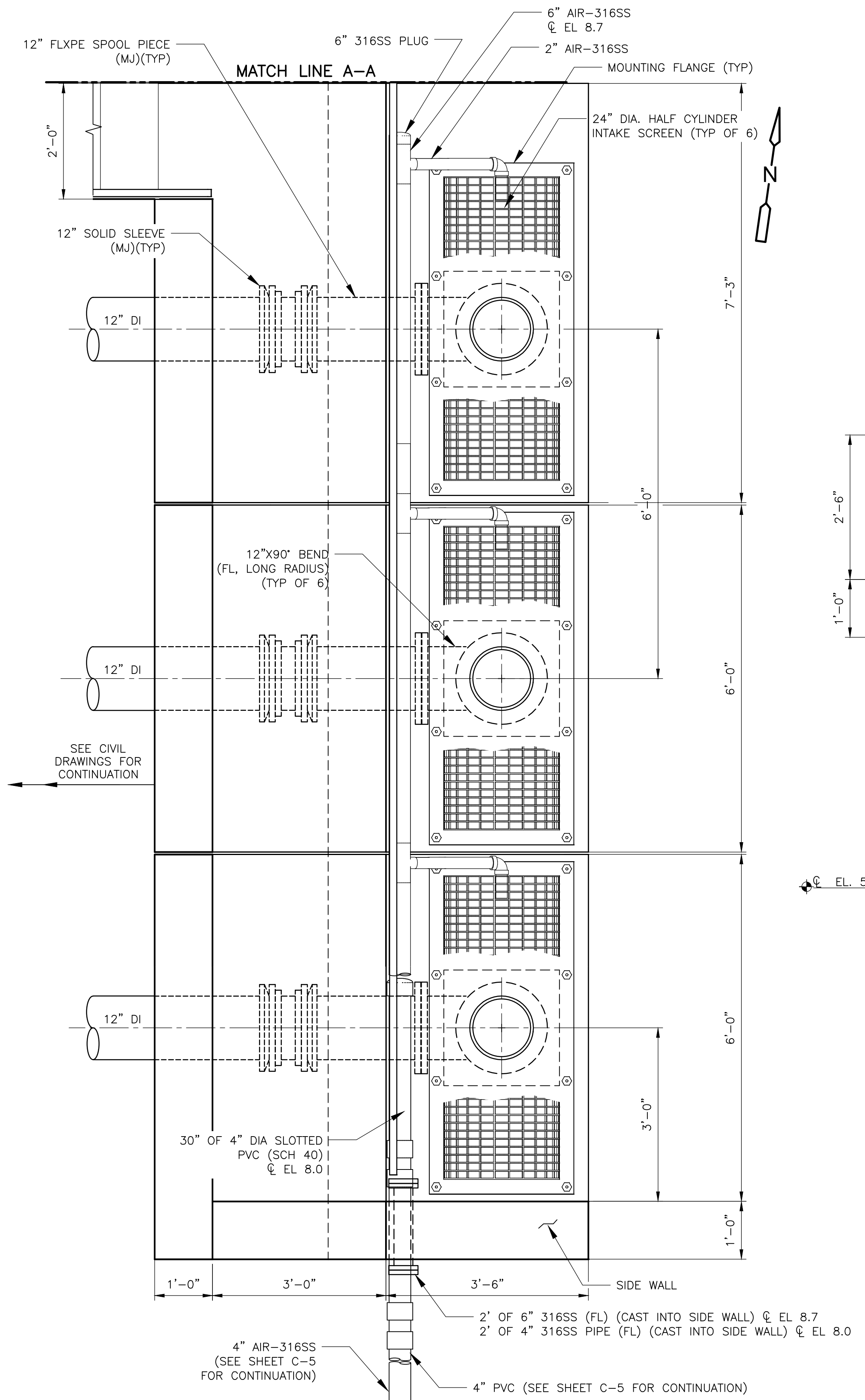
DATE:	KEVIN M. FRANCOFORTE
PE NO.:	73949
PROJECT NO.:	9247-221208
FILE NAME:	S000STD.RVT

ISSUED FOR BID

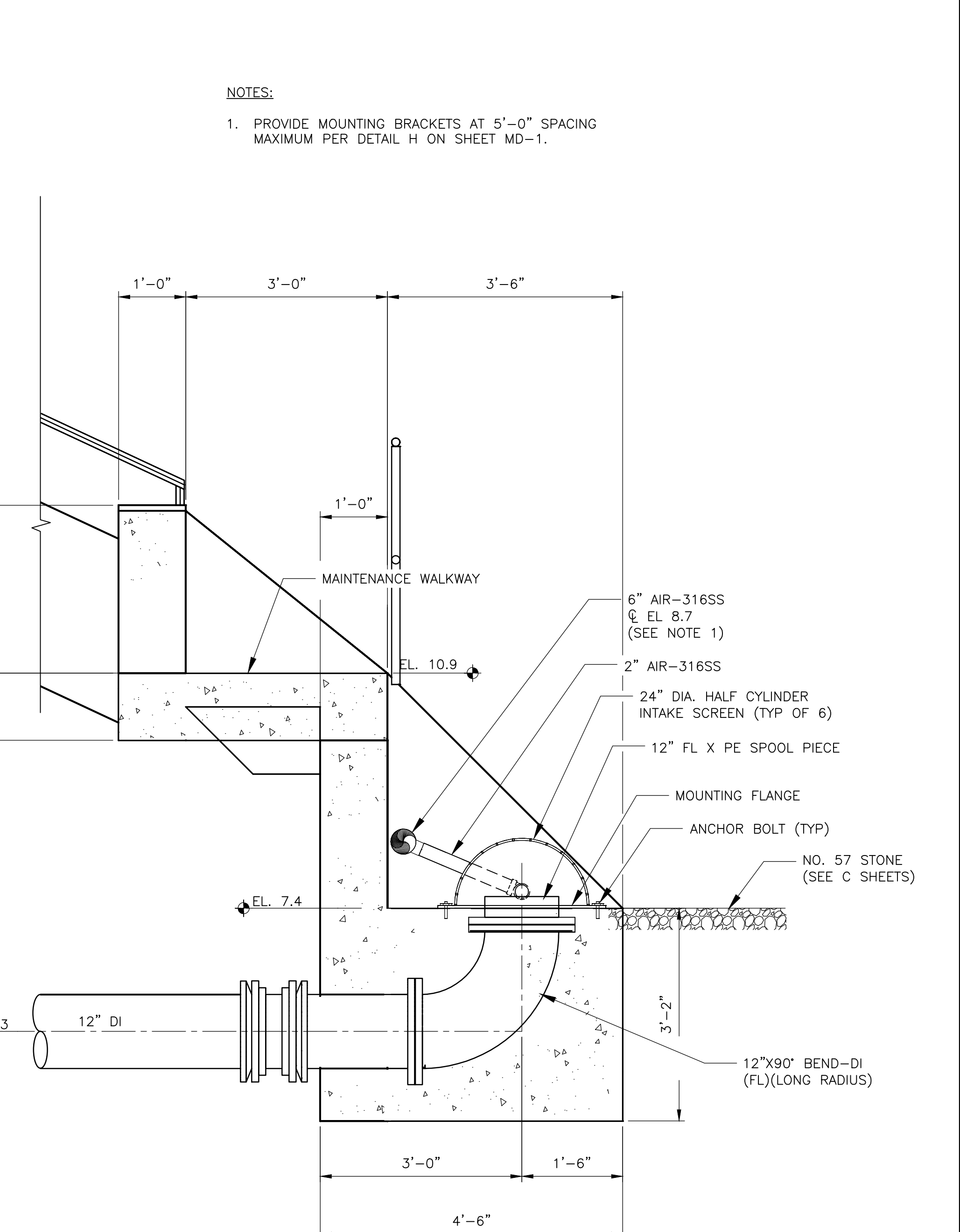
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INTAKE STRUCTURE – NORTH SIDE
 PLAN
 3/4" = 1'-0"



INTAKE STRUCTURE – SOUTH SIDE
 PLAN
 3/4" = 1'-0"



INTAKE STRUCTURE – NORTH SIDE
 SECTION 1
 3/4" = 1'-0"

NOTES:
 1. PROVIDE MOUNTING BRACKETS AT 5'-0" SPACING MAXIMUM PER DETAIL H ON SHEET MD-1.

REV. NO.	DATE	DRWN	CHKD	REMARKS

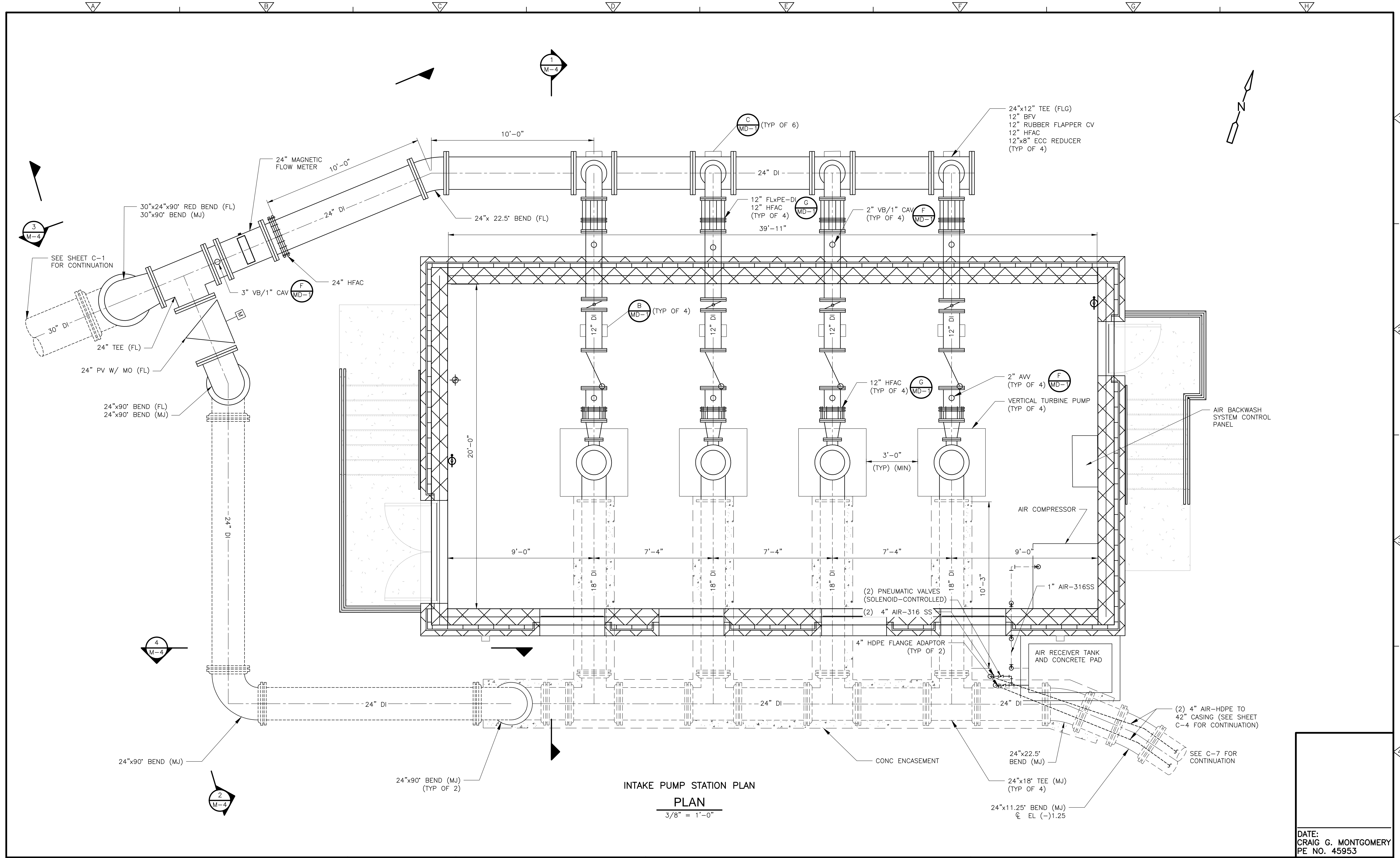
DESIGNED BY:	C. MONTGOMERY
DRAWN BY:	L. BARTLEWSKI
SHEET CHK'D BY:	C. MONTGOMERY
CROSS CHK'D BY:	C. MONTGOMERY
APPROVED BY:	C. MONTGOMERY
DATE:	MAY 2022

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 FL COA No. EB-0000020

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

DATE:
 CRAIG G. MONTGOMERY
 PE NO. 45953
 PROJECT NO. 9247-221208
 FILE NAME: M002INPL.DWG
 SHEET NO.
M-2

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INTAKE PUMP STATION PLAN
PLAN
 3/8" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY
 DRAWN BY: L. BARTLEWSKI
 SHEET CHK'D BY: C. MONTGOMERY
 CROSS CHK'D BY: C. MONTGOMERY
 APPROVED BY: C. MONTGOMERY
 DATE: MAY 2022

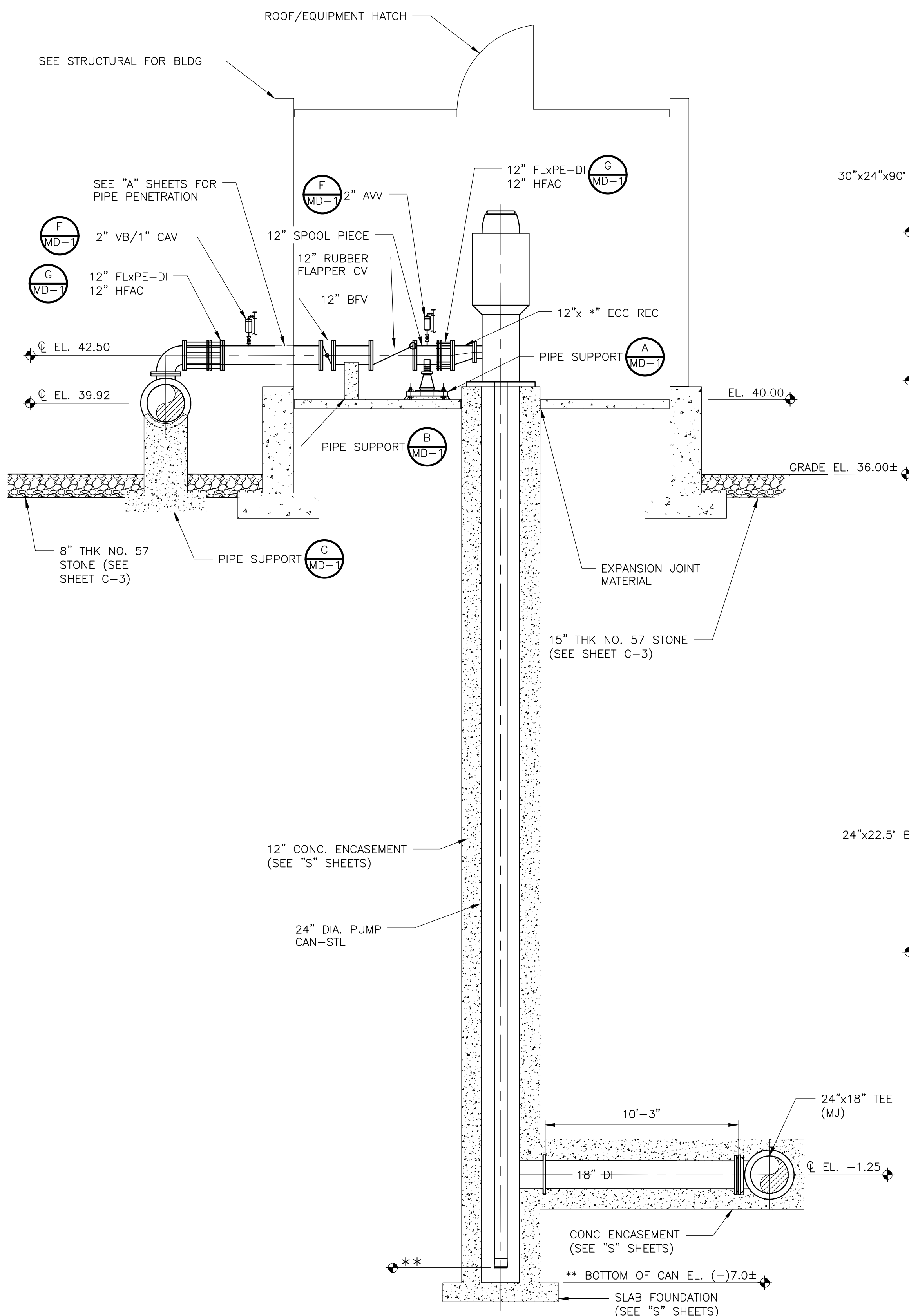


ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

INTAKE PUMP STATION PLAN
M-3

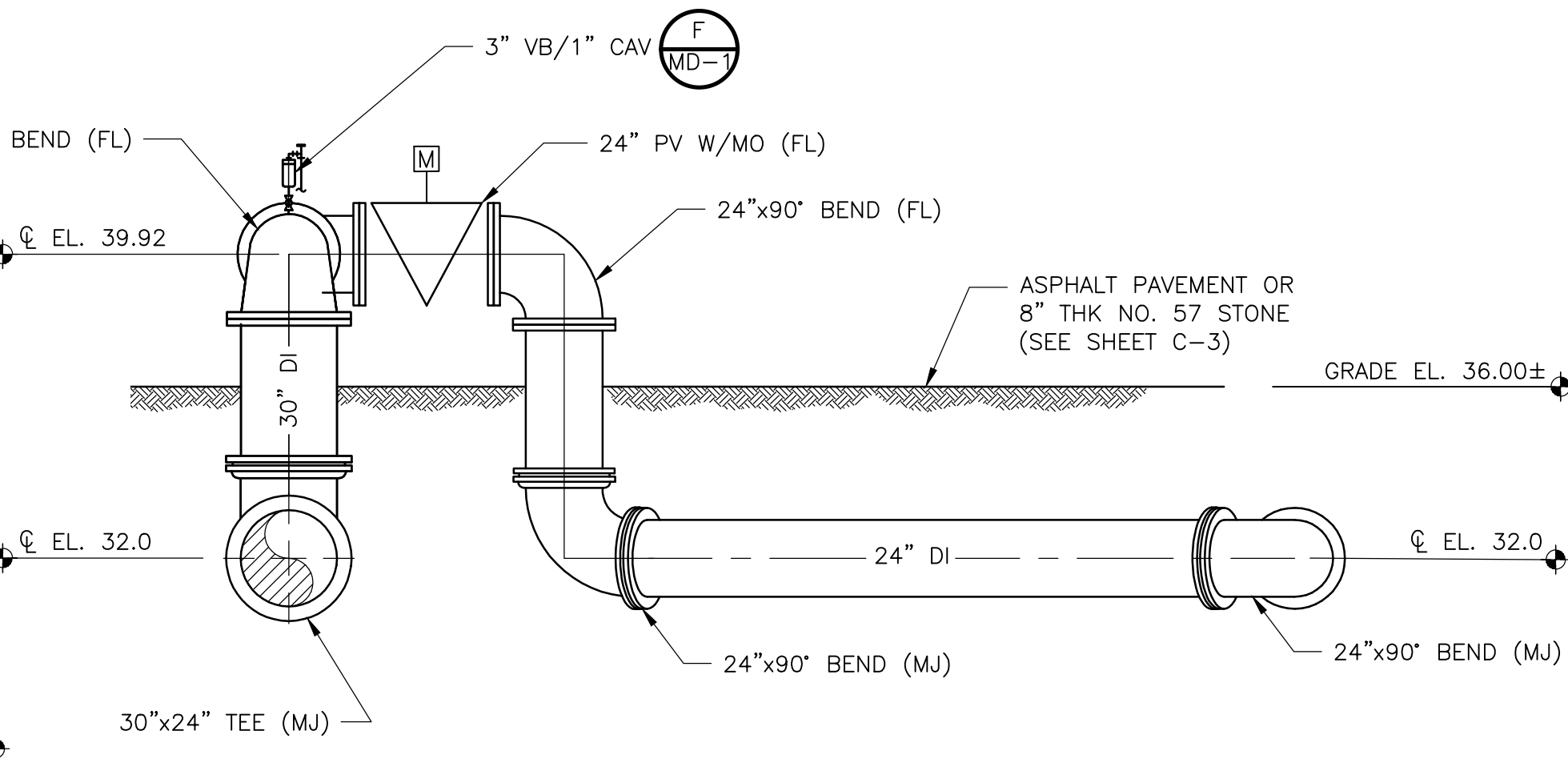
DATE:	CRAIG G. MONTGOMERY
PE NO.:	45953
PROJECT NO.:	9247-221208
FILE NAME:	M003IPSP.DWG
SHEET NO.:	M-3

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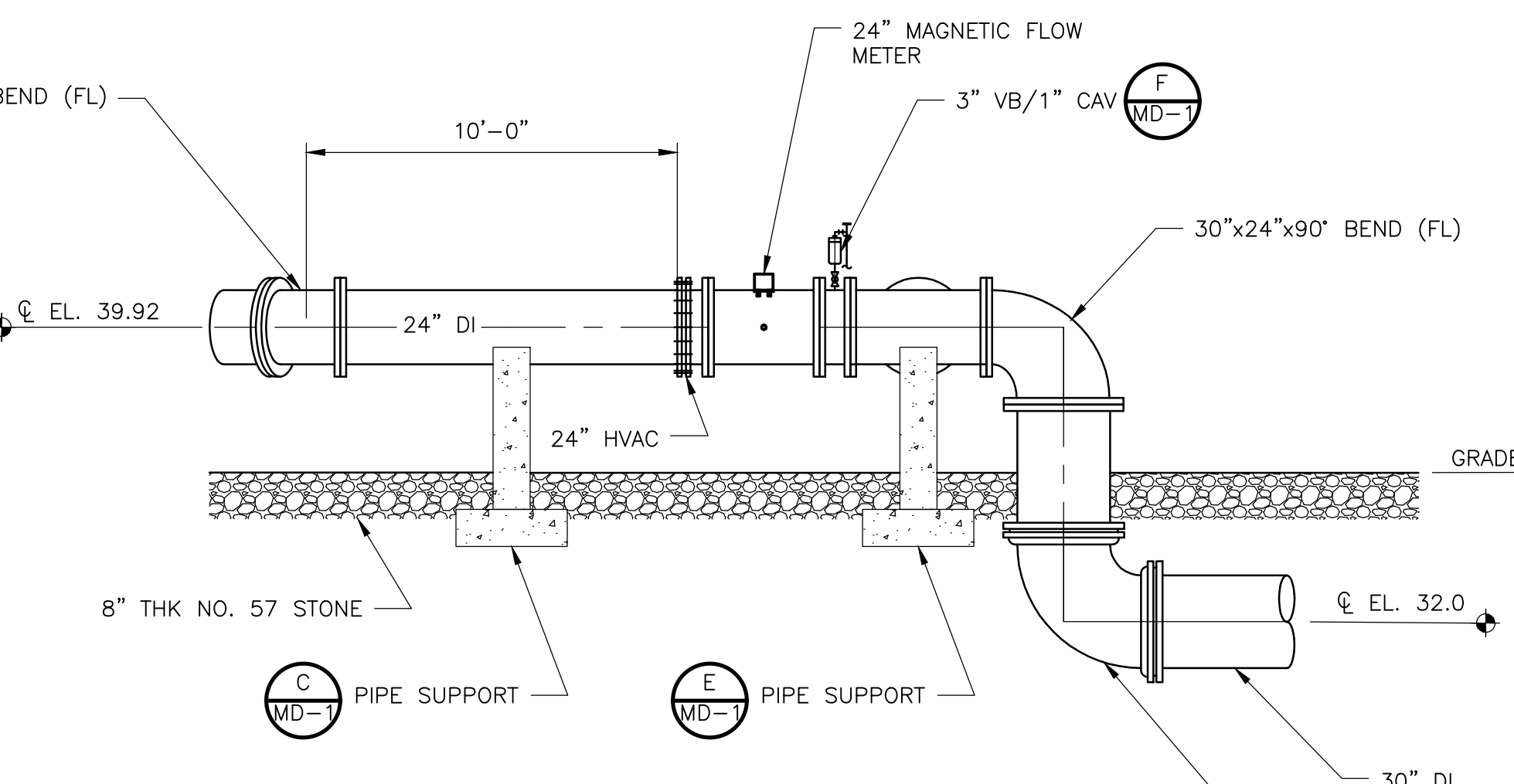


SECTION 1
1/4" = 1'-0" M-3

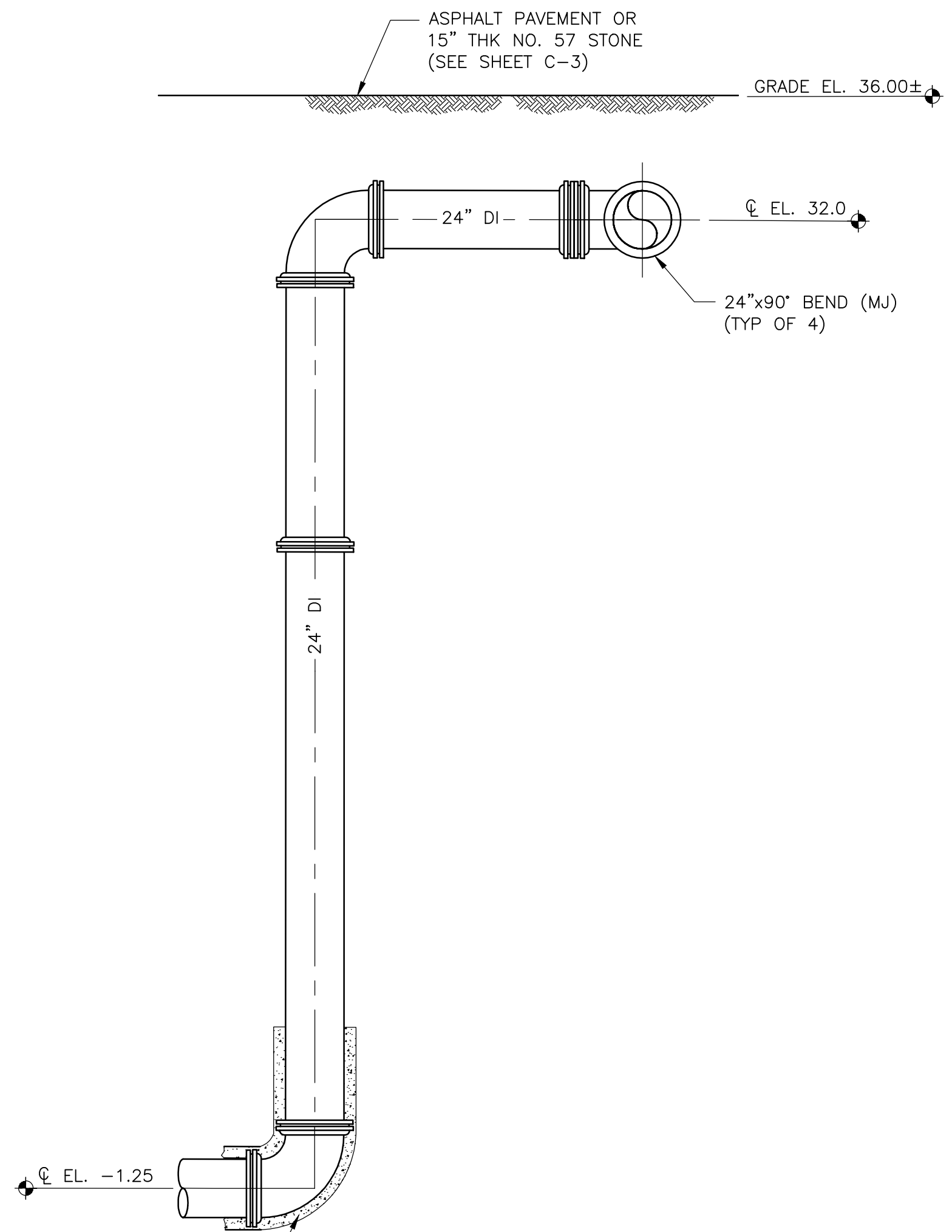
* SIZE TO BE CONFIRMED BY PUMP MANUFACTURER.
 ** ELEVATIONS TO BE CONFIRMED BY PUMP MANUFACTURER. SEE SPECIFICATION SECTION 11214.



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



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



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

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY
 DRAWN BY: L. BARTLEWSKI
 SHEET CHK'D BY: C. MONTGOMERY
 CROSS CHK'D BY: C. MONTGOMERY
 APPROVED BY: C. MONTGOMERY
 DATE: MAY 2022



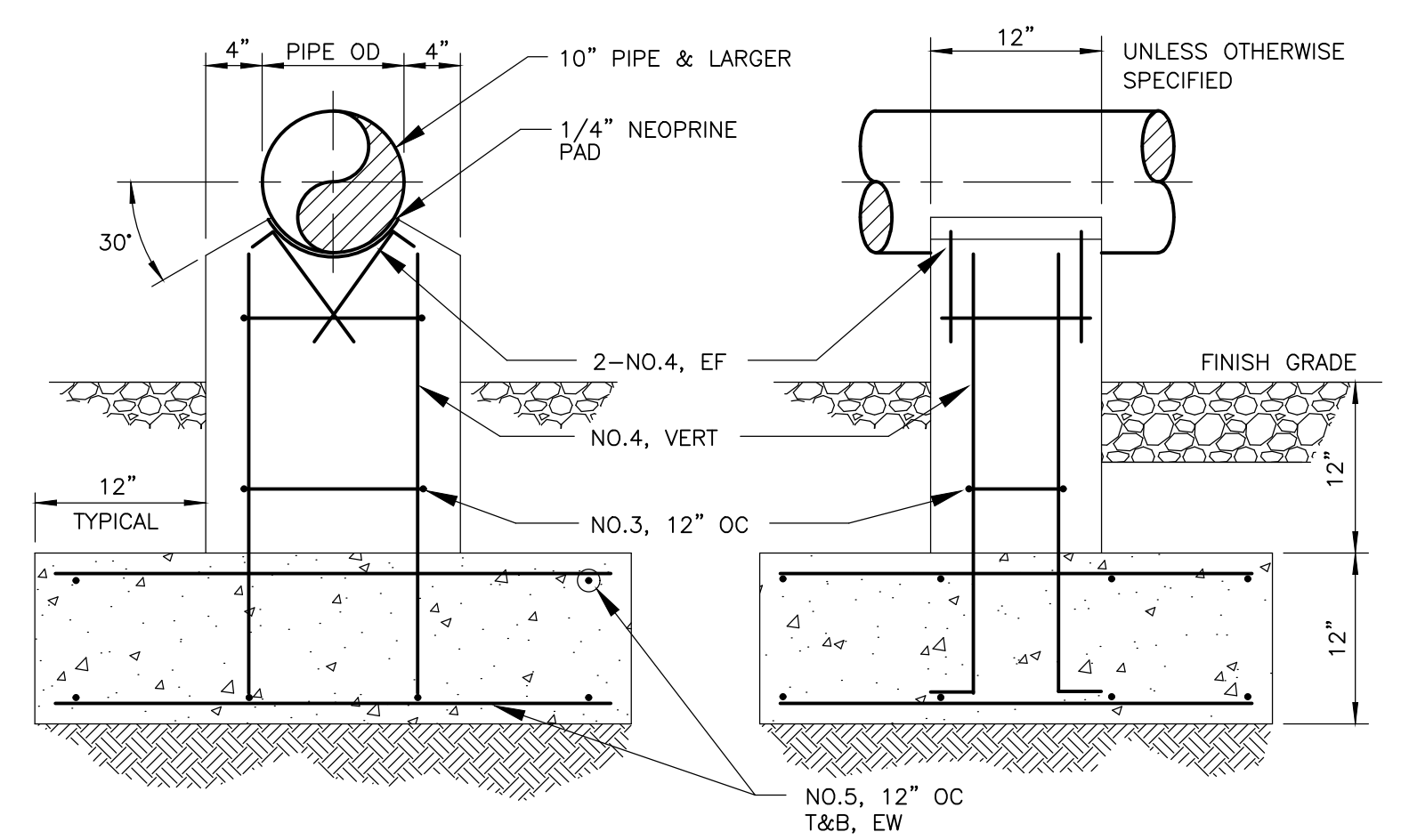
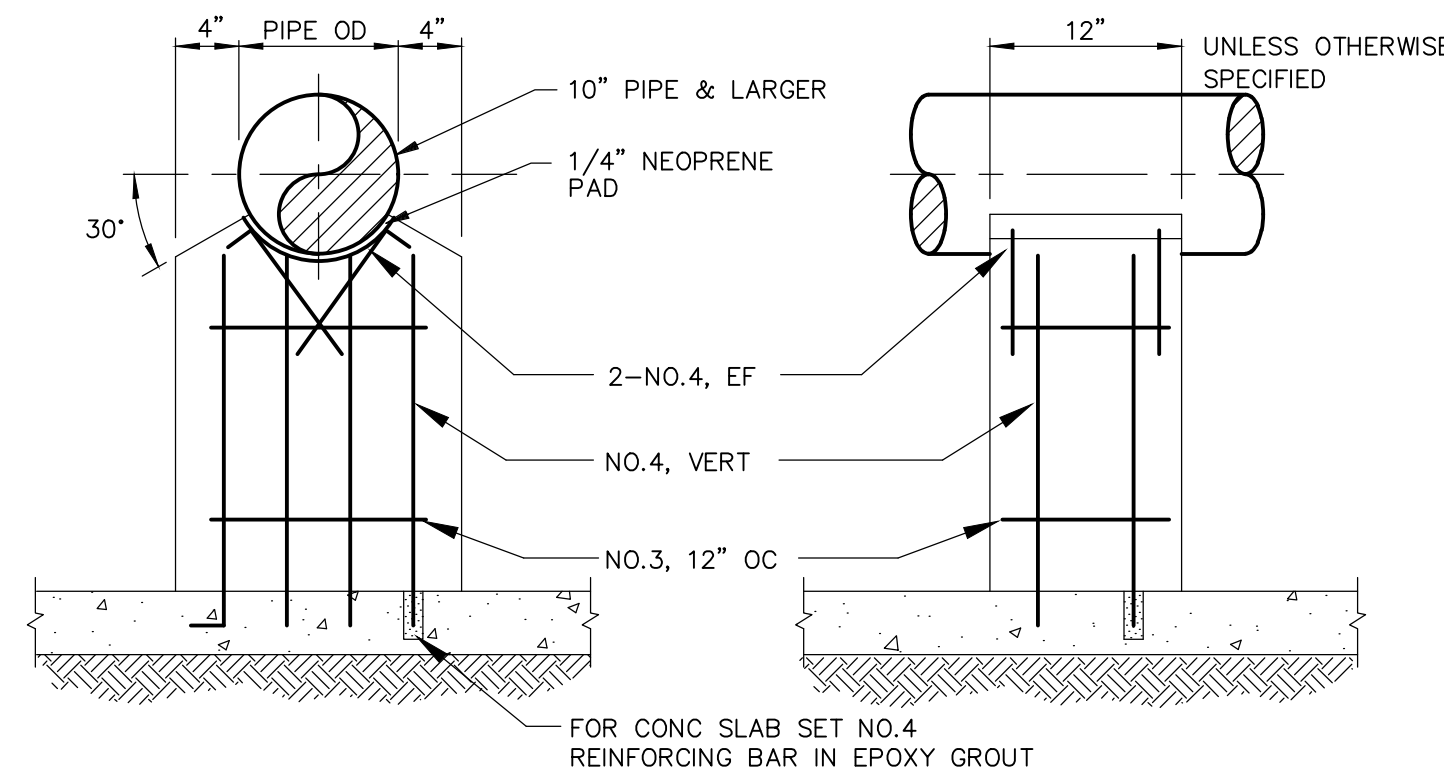
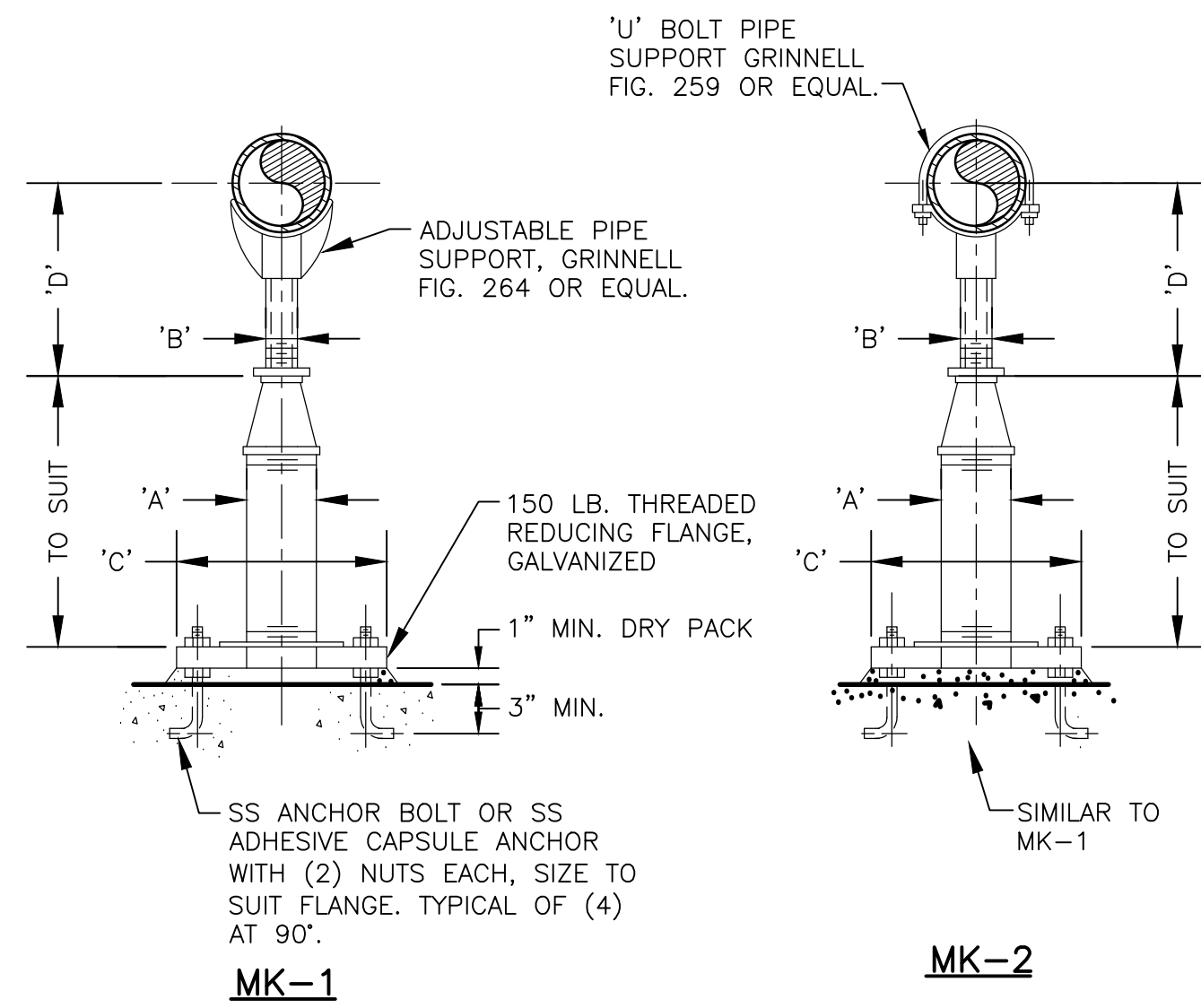
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

INTAKE PUMP STATION SECTIONS
 SHEET NO. M-4

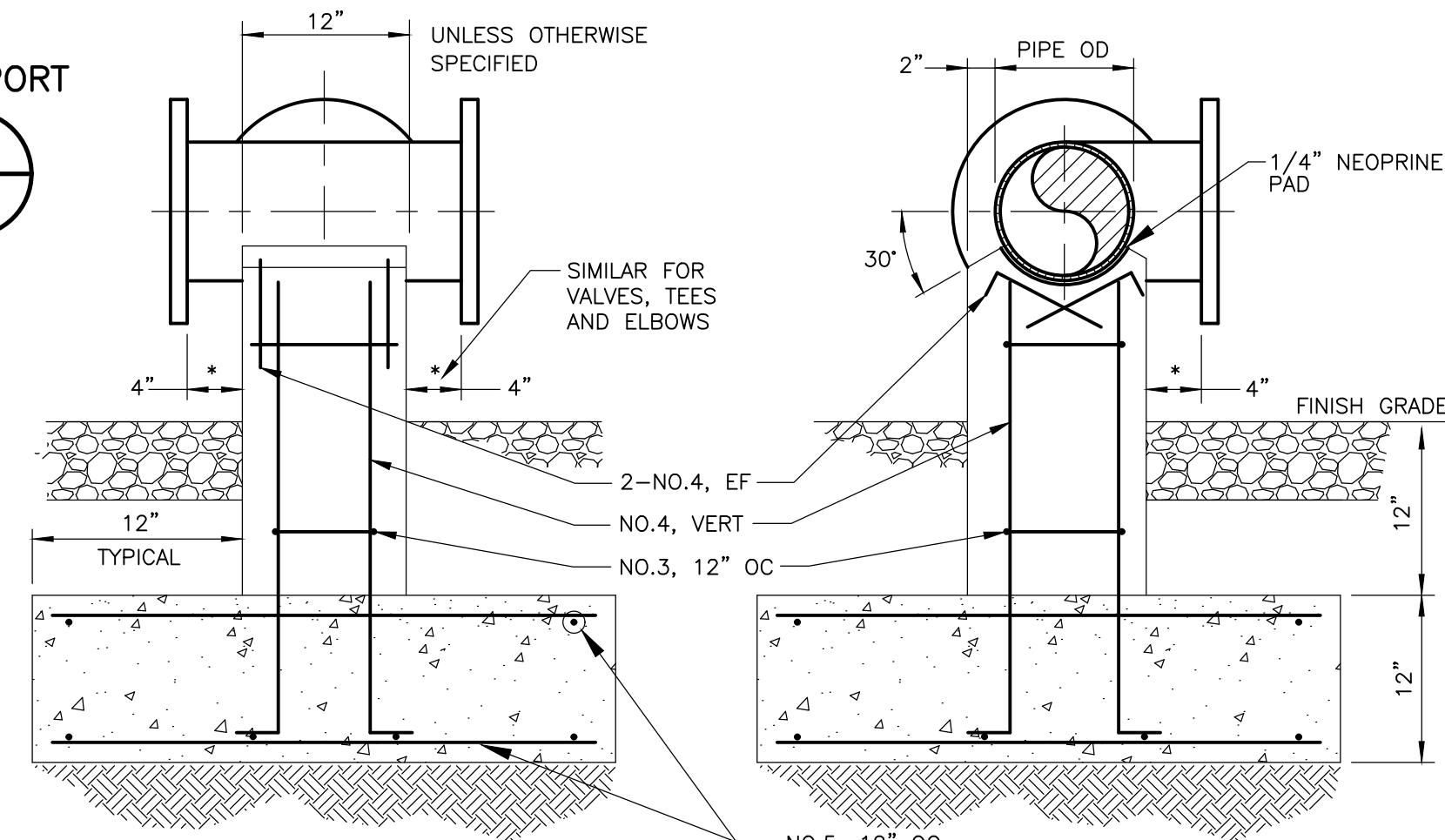
DATE: CRAIG G. MONTGOMERY
 PE NO. 45953
 PROJECT NO. 9247-221208
 FILE NAME: M004PSSC.DWG

ADJUSTABLE PIPE SUPPORT APPROX DIMENSIONS IN INCHES					
PIPE SIZE	A	B	C	D MIN.	D MAX.
2 1/2	2 1/2	1 1/2	9	8	11 1/2
3	2 1/2	1 1/2	9	8 1/4	11 3/4
3 1/2	2 1/2	1 1/2	9	8 1/2	12
4	3	2 1/2	9	10 1/4	14
6	3	2 1/2	9	11 5/8	15 1/4
8	3	2 1/2	9	13 5/8	16 1/2
10	3	2 1/2	9	14 5/8	18 1/4
12	3	2 1/2	9	15 5/8	19 3/4
14	4	3	11	18 5/8	20 3/4
16	4	3	11	19 7/8	22 1/4
18	6	3 1/2	13 1/2	21 1/4	24
20	6	3 1/2	13 1/2	23 1/4	25 1/2
24	6	4	13 1/2	26 1/2	28 1/4
30	6	4	13 1/2	29 5/8	31 1/2
32	6	4	13 1/2	30 5/8	32 3/4
36	6	4	13 1/2	32 5/8	34 3/4

NOTE:
UNDER VALVES, METERS, OR OTHER SPECIAL APPURTENANCES A FABRICATED SUPPORT PIECE MAY BE UTILIZED AS ACCEPTABLE TO ENGINEER.

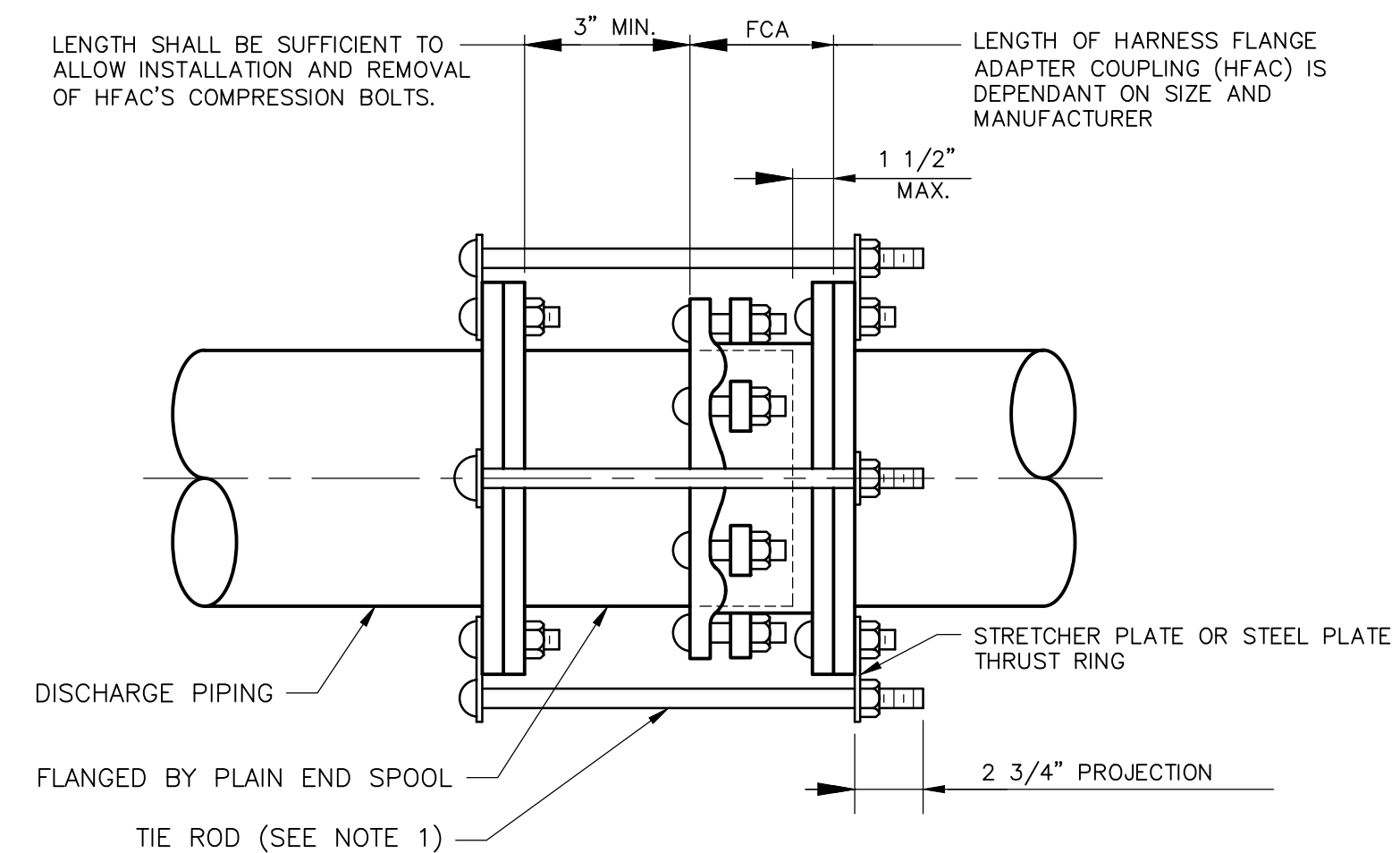


ADJUSTABLE PIPE SUPPORT
DETAIL A
NTS



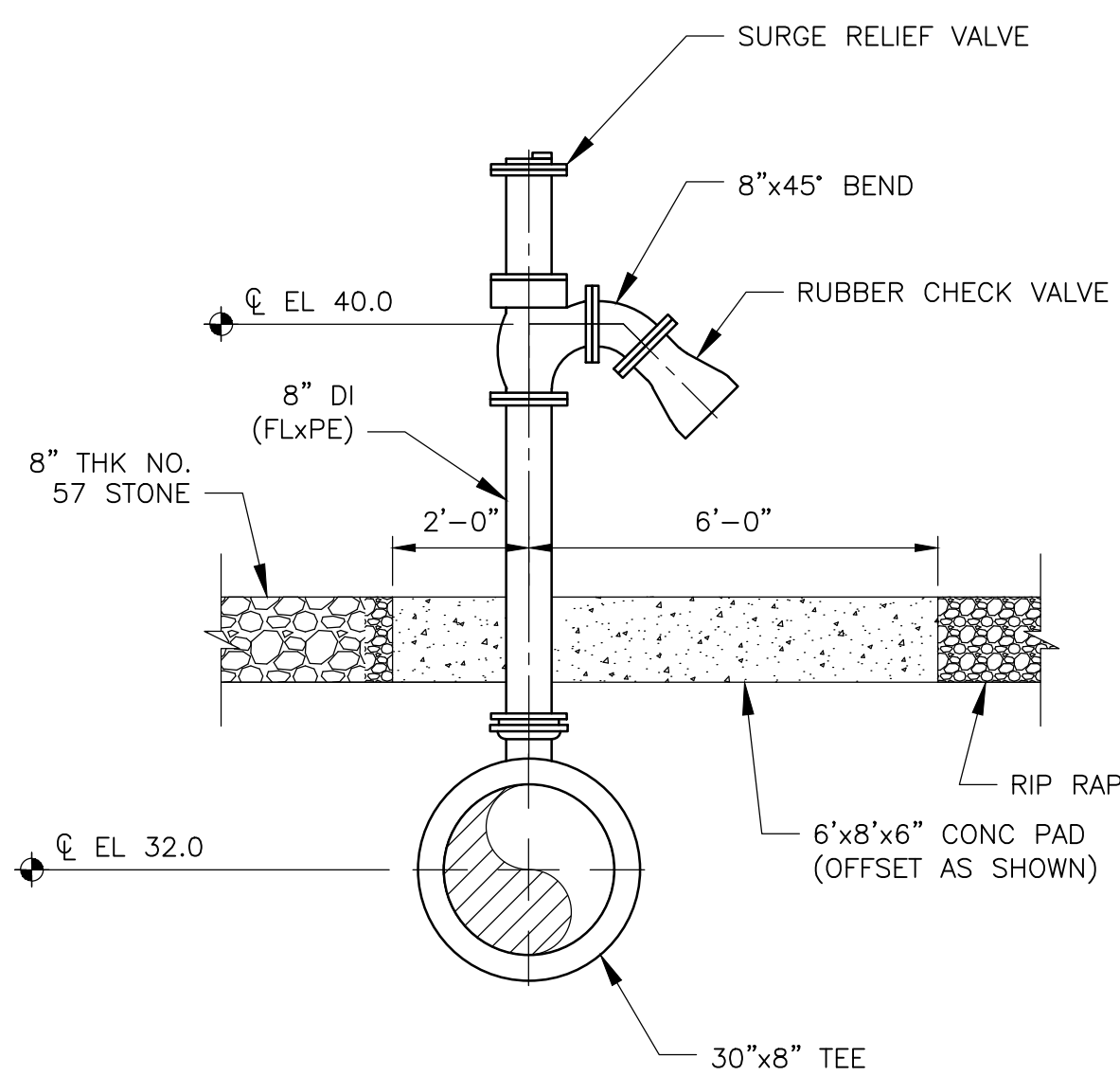
LENGTH SHALL BE SUFFICIENT TO ALLOW INSTALLATION AND REMOVAL OF HFAC'S COMPRESSION BOLTS.

LENGTH OF HARNESS FLANGE ADAPTER COUPLING (HFAC) IS DEPENDANT ON SIZE AND MANUFACTURER

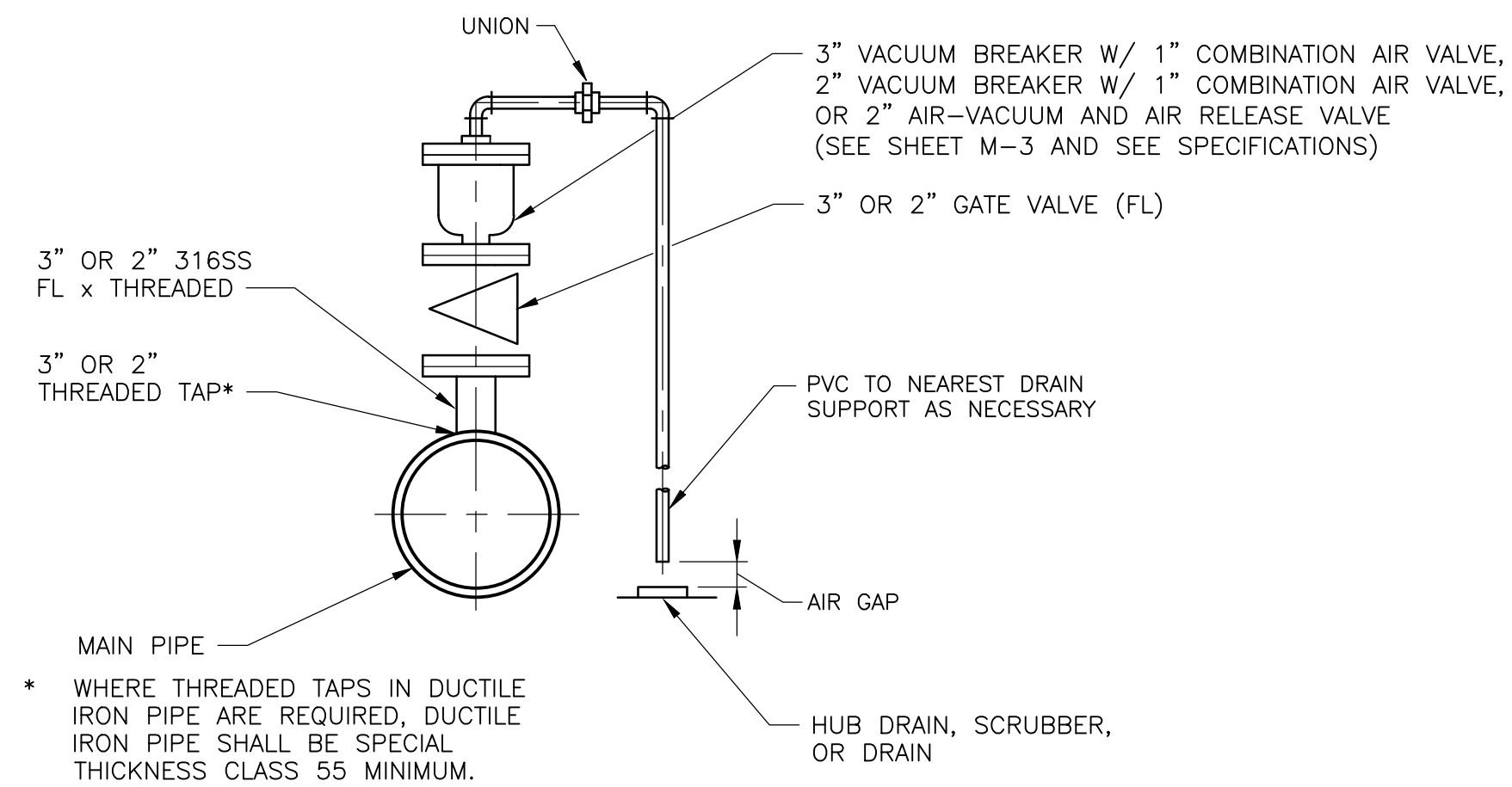


NOTES:

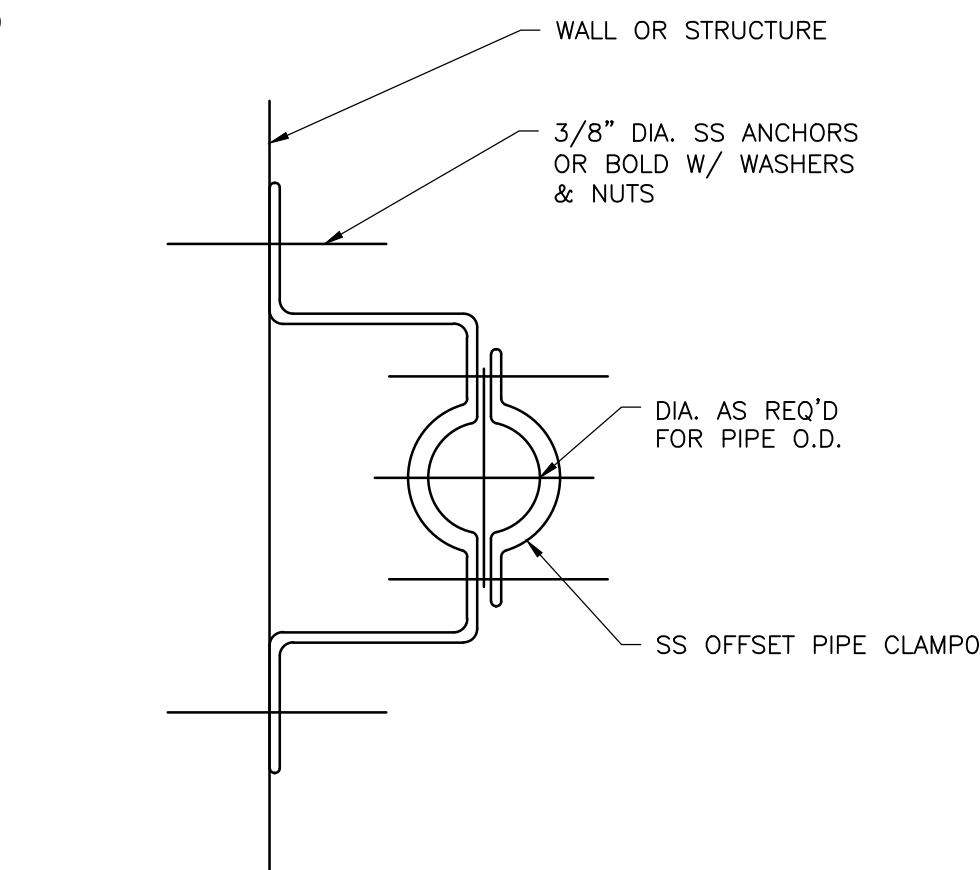
- PROVIDE NUMBER OF TIE RODS PER SCHEDULE. EVENLY SPACE INSTALLATION OF THE TIE RODS. LENGTH OF TIE RODS TO BE DETERMINED BY CONTRACTOR BASED ON SIZE AND FLANGED COUPLING ADAPTOR AND FINAL LENGTH OF SPOOL PIECE.
- PROVIDE STRETCHER PLATE OR STEEL PLATE THRUST RING FOR ATTACHMENT OF TIE RODS. FOR SIZE SEE TABLE.
- MATERIALS - TIE RODS: ASTM A-307 HOT DIP GALVANIZED. STRETCHER PLATE: ASTM A36 STEEL HOT DIP GALVANIZED. HARNESS FLANGE ADAPTER COUPLING OR GROOVED COUPLING: PER SPECIFICATIONS
- WRAP ALL COUPLING BURIED BELOW GRADE IN PROTECTIVE TAPE.



* INCREASE 4" CLEARANCE AS REQUIRED IF BOLT HAS TO BE INSERTED FROM THE SUPPORT SIDE OF THE CONNECTION.



* WHERE THREADED TAPS IN DUCTILE IRON PIPE ARE REQUIRED, DUCTILE IRON PIPE SHALL BE SPECIAL THICKNESS CLASS 55 MINIMUM.



XREF: [CDMS_2234] Images: []
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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: C. MONTGOMERY
DRAWN BY: L. BARTLEWSKI
SHEET CHK'D BY: C. MONTGOMERY
CROSS CHK'D BY: C. MONTGOMERY
APPROVED BY: C. MONTGOMERY
DATE: MAY 2022

CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE
DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

MISCELLANEOUS MECHANICAL DETAILS

DATE:
CRAIG G. MONTGOMERY
PE NO. 45953

PROJECT NO. 9247-221208
FILE NAME: MD01DTLS.DWG

SHEET NO.

MD-1

ISSUED FOR BID

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HVAC SYMBOLS	
	THERMOSTAT
	HIGH TEMPERATURE SWITCH
	LOW TEMPERATURE SWITCH
	SMOKE DETECTOR
	FLOW SENSOR
	HUMIDISTAT
	WALL TIMER
	BREAK GLASS SWITCH
	WALL SWITCH
	MOTOR OPERATED DAMPER
	EXTERIOR ALARM STATION
	INTERIOR ALARM STATION
	CONTROL DAMPER
	FIRE DAMPER
	SMOKE ACTUATED FIRE DAMPER
	FLEXIBLE CONNECTION
	ELBOW WITH TURNING VANES
	EXHAUST GRILLE
	EXHAUST REGISTER
	RETURN GRILLE

HVAC SYMBOLS	
	SUPPLY REGISTER
	SUPPLY DUCT
	RETURN/EXHAUST DUCT
	DOOR GRILLE
	TRANSFER GRILLE
	TRANSFER DUCT
	SPLITTER DAMPER
	SHOE-TAP
	DAMPER-EXTRACTOR DUCT CONNECTION
	CEILING DIFFUSER - TYPE VARIES
	ROOF MOUNTED EXHAUST FAN
	WALL MOUNTED EXHAUST FAN
	VARIABLE AIR VOLUME REGULATOR W/ OUTLETS
	ROUND FLEXIBLE INSULATED DUCT
	SHEET METAL DUCT
	ELECTRIC UNIT HEATER
	ELECTRIC DUCT HEATER
	ENERGY RECOVERY UNIT
	WT BOX WITH TRANSITION

HVAC ABBREVIATIONS	
A	AIR
AABC	ASSOCIATED AIR BALANCE COUNCIL
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AL	ALUMINUM
APU	AIR PURIFICATION UNIT
AR	ACID RESISTING
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ATC	AUTOMATIC TEMPERATURE CONTROL
BDD	BACKDRAFT DAMPER
BEL	BELOW
BLDG	BUILDING
BS	BIRD SCREEN
BTU	BRITISH THERMAL UNITS
C	CONDENSATE
CD	CONTROL DAMPER
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CONC	CONCRETE
CONN	CONNECTION
CW	CHILLED WATER
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
DB	DRY BULB
DG	DOOR GRILLE
DHU	DEHUMIDIFICATION UNIT
DIA	DIAMETER
DISC	DISCHARGE
DN	DOWN
DPR	DAMPER
DS	DISCONNECT SWITCH
EA	EACH
EDH	ELECTRIC DUCT HEATER
EER	ENERGY EFFICIENCY RATION
EF	EXHAUST FAN
EG	EXHAUST GRILLE
ER	EXHAUST REGISTER
EUH	ELECTRIC UNIT HEATER
EVAP	EVAPORATOR
FC	FLEXIBLE CONNECTION
FD	FIRE DAMPER
FIN	FINISH
FL	FLOOR
FLA	FULL LOAD AMPS
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET
FT²	SQUARE FEET
GA	GAUGE
GALV/GS	GALVANIZED
GFC	GAS FIRED CHILLER
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HG	HOT GAS
HP	HORSEPOWER

HVAC ABBREVIATIONS	
HR	HOUR
HW	HOT WATER
KW	KILOWATT
LD	LINEAR DIFFUSER
LIQ	LIQUID
LVR	LOUVER
MAU	MAKE-UP AIR UNIT
MCA	MAXIMUM CURRENT AMPS
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MTD	MOUNTED
MTG	MOUNTING
NOM	NOMINAL
NTS	NOT TO SCALE
O/A	OUTSIDE AIR
OPD	OPPOSED BLADE DAMPER
PAC	PACKAGED AIR CONDITIONING UNIT
PBD	PARALLEL BLADE DAMPER
PCD	PERFORATED CEILING DIFFUSER
PCF	POUNDS PER CUBIC FOOT
PPM	PARTS PER MILLION
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	REFRIGERANT
R/A	RETURN AIR
RG	RETURN GRILLE
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
S/A	SUPPLY AIR
SAD	SUPPLY AIR DIFFUSER
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SHT	SHEET
SM	SHEET METAL
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SP	STATIC PRESSURE
SR	SUPPLY REGISTER
SS	STAINLESS STEEL
ST	STEAM
STD	STANDARD
SUCT	SUCTION
SW	SWITCH
TDH	TOTAL DISCHARGE HEAD
TEMP	TEMPERATURE
TG	TRANSFER GRILLE
TSP	TOTAL STATIC PRESSURE
TV	TURNING VANES
TYP	TYPICAL
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
VAP	VAPOR
VVT	VARIABLE VOLUME TERMINAL
W	WITH
WB	WET BULB
WG	WATER GAUGE
WT	WEIGHT
WTR	WATER

- HVAC NOTES**
- HVAC EQUIPMENT DIMENSIONS, LOCATIONS, DUCTWORK AND PIPING SYSTEM LAYOUTS ARE BASED ON EQUIPMENT SELECTED BY THE ENGINEER. IF THE CONTRACTOR PROPOSES TO FURNISH EQUIPMENT THAT REQUIRES AN ARRANGEMENT OR SPACE DIFFERING FROM THAT INDICATED ON THE DRAWINGS, OR SPECIFIED, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER, FOR APPROVAL, DETAILED ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION, HVAC AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT HE PROPOSES TO FURNISH. THIS INFORMATION SHALL INCLUDE BUT SHALL NOT BE LIMITED TO PLANS, SECTIONS, DETAILS, AND SCHEMATICS OF ALL APPURTENANCES REQUIRED. SUCH CHANGES, IF APPROVED BY THE ENGINEER, SHALL BE AT NO EXTRA COST TO THE OWNER. THE CONTRACTOR SHALL ASSUME THE COST OF, AND THE RESPONSIBILITY FOR, SATISFACTORILY ACCOMPLISHING ALL THE NECESSARY CHANGES CORRESPONDING TO THE DIMENSIONS AND CHARACTERISTICS OF THE EQUIPMENT SUBMITTED AND APPROVED BY THE ENGINEER. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
 - SIZES OF EQUIPMENT PADS INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FOR THE EQUIPMENT FURNISHED. ALL FLOOR MOUNTED EQUIPMENT SHALL BE SET ON CONCRETE PADS CONFORMING TO DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.
 - DIELECTRIC COUPLINGS, FLANGES OR UNIONS SHALL BE INSTALLED AT ALL CONNECTIONS OF COPPER PIPE TO OTHER TYPES OF METALLIC PIPING.
 - HVAC PIPING AND DUCTWORK DRAWINGS DO NOT SHOW ALL DRAINS, VENTS, OFFSETS AND FITTINGS ETC. REQUIRED FOR THE COMPLETE SYSTEM. SMALL PIPING IS SHOWN APPROXIMATELY TO SCALE BUT NOT EVERY FITTING AND OFFSET IS SHOWN. SOME VALVES AND APPURTENANCES MAY BE OMITTED FOR THE SAKE OF CLARITY. THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL HVAC SYSTEMS SHOWN ON THE DRAWINGS AND DETAILS, AND/OR AS DEFINED IN THE SPECIFICATIONS TO PROVIDE THE COMPLETE SYSTEM.
 - UNLESS OTHERWISE SHOWN ON THE DRAWING, ALL WALL PENETRATIONS SHALL BE AS SHOWN ON THE WALL PENETRATION DETAILS. ABOVE GROUND EXTERIOR WALL AND ROOF PENETRATIONS SHALL BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS. IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY SUBSTITUTE ALTERNATE METHODS PROVIDING THEY MEET INTENDED DESIGN REQUIREMENTS.
 - NOT ALL AND ONLY CERTAIN TYPES OF SUPPORTS ARE SHOWN ON THE HVAC DRAWINGS. UNLESS OTHERWISE DETAILED ON THE DRAWINGS ALL PIPE AND DUCT SUPPORTS SHALL BE DESIGNED, FURNISHED AND INSTALLED BY THE CONTRACTOR AS SPECIFIED AND TO THE APPROVAL OF THE ENGINEER.
 - FOR ALL ROOF MOUNTED EQUIPMENT, MAINTAIN A MINIMUM OF 10'-0" CLEARANCE FROM ANY ROOF EDGE UNLESS GUARDRAILS HAVE BEEN PROVIDED.
 - UNLESS OTHERWISE NOTED, MOUNT ALL DUCTWORK AND PIPING TIGHT TO STRUCTURE. MAINTAIN A MINIMUM 7'-6" CLEAR HEIGHT BELOW DUCTWORK, INCLUDING SUPPORTS. COORDINATE INSTALLATION OF DUCTWORK WITH ALL OTHER NEW AND EXISTING EQUIPMENT, PIPING, CONDUIT, ETC.
 - SEE ELECTRICAL DRAWINGS FOR AREA ELECTRICAL/CODE RATING. ALL HVAC EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF THOSE AREA CLASSIFICATIONS.

PUMP STATION AND ELECTRICAL BUILDING ENERGY CODE NOTES:

THE ELECTRICAL BUILDING IS EXEMPT FROM THE REQUIREMENTS OF THE FLORIDA BUILDING CODE - ENERGY CONSERVATION, BY PARAGRAPH C101.4.2.4. PER EXEMPTION 4, THE ELECTRICAL BUILDING COOLING EQUIPMENT PROVIDES SPACE CONDITIONING FOR THE ELECTRICAL EQUIPMENT ONLY IN ORDER TO KEEP THE FACILITY OPERATIONAL. HEATING SYSTEMS ARE PROVIDED FOR FREEZE PROTECTION ONLY.

THE PUMP BUILDING IS EXEMPT FROM THE REQUIREMENTS OF THE FLORIDA BUILDING CODE - ENERGY CONSERVATION, BY PARAGRAPH C101.4.2.4. NO COOLING SYSTEMS ARE PROVIDED. VENTILATION SYSTEMS PROVIDED ARE INTERMITTENT/THERMOSTAT CONTROLLED FOR HEAT REMOVAL AS REQUIRED. HEATING SYSTEMS ARE PROVIDED FOR FREEZE PROTECTION ONLY.

**CALCULATION OF HEATING AND COOLING
NEW BUILDING SUMMARY SHEET**

PROJECT NAME/OWNER	BLACK CREEK WATER RESOURCE DEVELOPMENT PROJECT/ ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT	
PROJECT AREA	ELECTRICAL BUILDING	
SIZING METHOD	CARRIER HAP5.1 CALCULATION SOFTWARE	
EXTERIOR DESIGN CONDITIONS		
WINTER DRY BULB	29°F	
SUMMER DRY BULB	94°F	
SUMMER WET BULB	77°F	
INTERIOR DESIGN CONDITIONS		
WINTER DRY BULB	50°F	50°F
SUMMER DRY BULB	80°F	NO CONDITIONING PROVIDED
RELATIVE HUMIDITY	50 %	NO CONDITIONING PROVIDED
GRAINS WATER (DIFFERENCE)	2.8 GR/LB.DA	NO CONDITIONING PROVIDED
TOTAL SENSIBLE GAIN	141,300 BTU/HR	NO CONDITIONING PROVIDED
TOTAL LATENT GAIN	0 BTU/HR	NO CONDITIONING PROVIDED
BUILDING COOLING LOAD	141,300 BTU/HR	NO CONDITIONING PROVIDED
BUILDING HEATING LOAD	5,500 BTU/HR	10,900 BTU/HR
DESIGNER STATEMENT:		
THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THE BUILDING COMPLIES WITH THE MECHANICAL SYSTEM AND EQUIPMENT REQUIREMENTS OF THE 2020 FL MECHANICAL CODE AND 2020 FL ENERGY CODE.		

NOTE:

- SYMBOLS AND ABBREVIATIONS SHOWN ON THE SHEET ARE GENERIC AND MAY NOT HAVE BEEN USED ON THE PROJECT.

OUTDOOR AIR CALCULATIONS											
SPACE	AREA (SQ. FT.)	VOLUME (CU. FT.)	FMC REQ'D VENTILATION RATE	FMC REQ'D VENTILATION	PROVIDED VENTILATION	PROVIDED VENTILATION RATE	VENTILATION PROVIDED BY	OUTDOOR AIR PROVIDED BY	ADDITIONAL VENTILATION PROVIDED BY	ADDITIONAL OUTDOOR AIR PROVIDED BY	
ELECTRICAL BUILDING	N/A	N/A	SEE NOTE 2	SEE NOTE 2	N/A	N/A	N/A	N/A	N/A	N/A	
PUMP BUILDING	800	12,800	SEE NOTE 2	SEE NOTE 2	14,000 CFM	65.63 AC/HR	EF-1, EF-2	INTAKE LOUVERS	N/A	N/A	

- NOTES:**
- OUTDOOR AIR CALCULATIONS PROVIDED PER ASHRAE STANDARD 62.1 ARE PROVIDED FOR INFORMATIONAL AND CODE REVIEW PURPOSES ONLY. THE CALCULATIONS DO NOT CHANGE THE CONTRACT DOCUMENTS.
 - THIS AREA IS NORMALLY UNOCCUPIED AND IS NOT COVERED UNDER THE SCOPE OF ASHRAE STANDARD 62.1.
- ACHR - AIR CHANGES PER HOUR
ASHRAE - AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR-CONDITIONING ENGINEERS
CFM/SQ. FT. - CUBIC FEET PER MINUTE PER SQUARE FOOT
N/A - NOT APPLICABLE
WC - WATER CLOSET

REV. NO.	DATE	DRWN	CHKD	REMARKS

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DRAWN BY: C. JOHNSON
SHEET CHK'D BY: J. GARZIONE
CROSS CHK'D BY: C. MONTGOMERY
APPROVED BY: J. GARZIONE
DATE: MAY 2022



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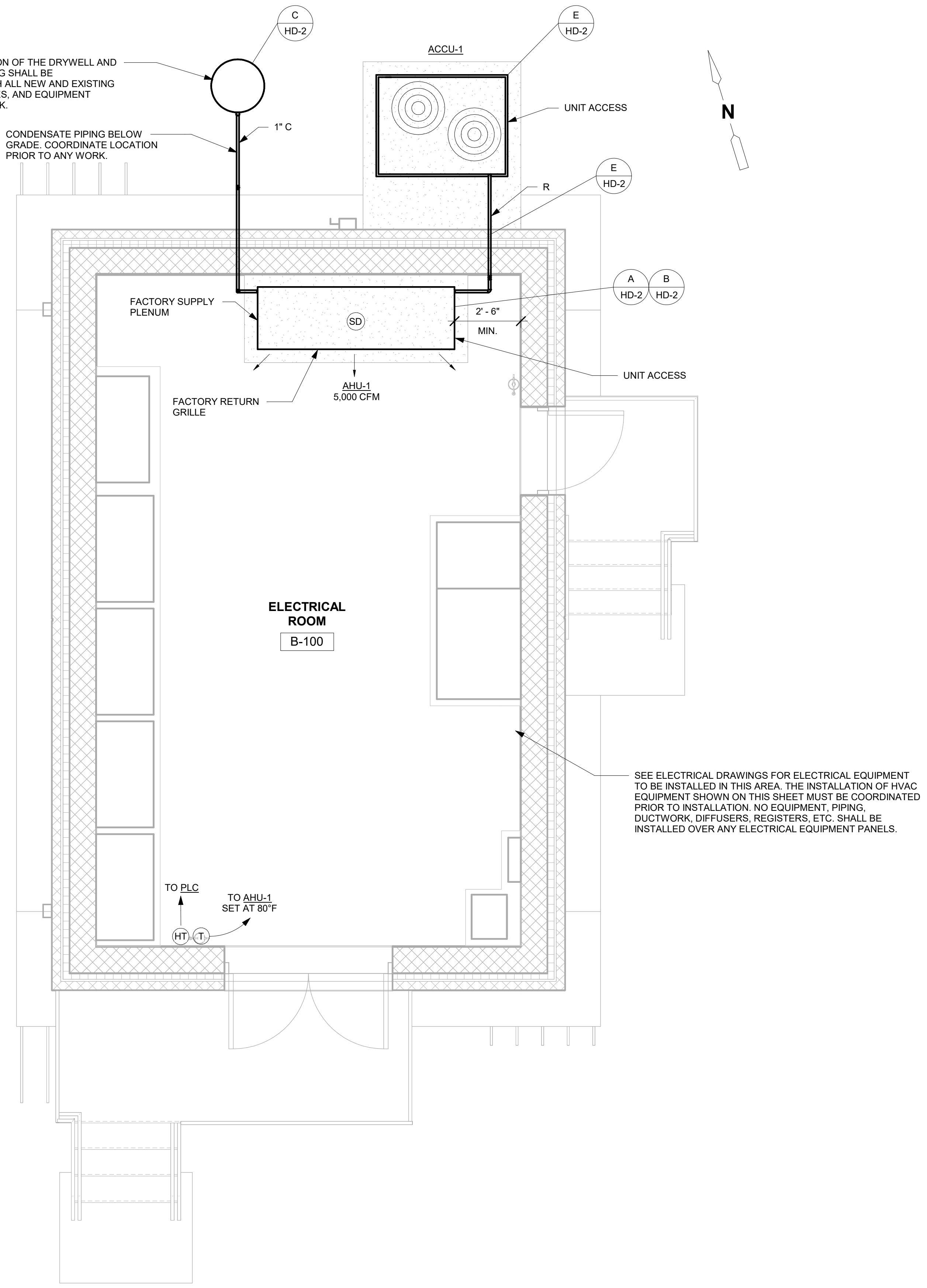
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

HVAC SYMBOLS AND ABBREVIATIONS

PROJECT NO. 9247-221208
FILE NAME: HW2000EB.RVT
SHEET NO. H-1

ISSUED FOR BID

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ELECTRICAL BUILDING HVAC PLAN
3/8" = 1'-0"

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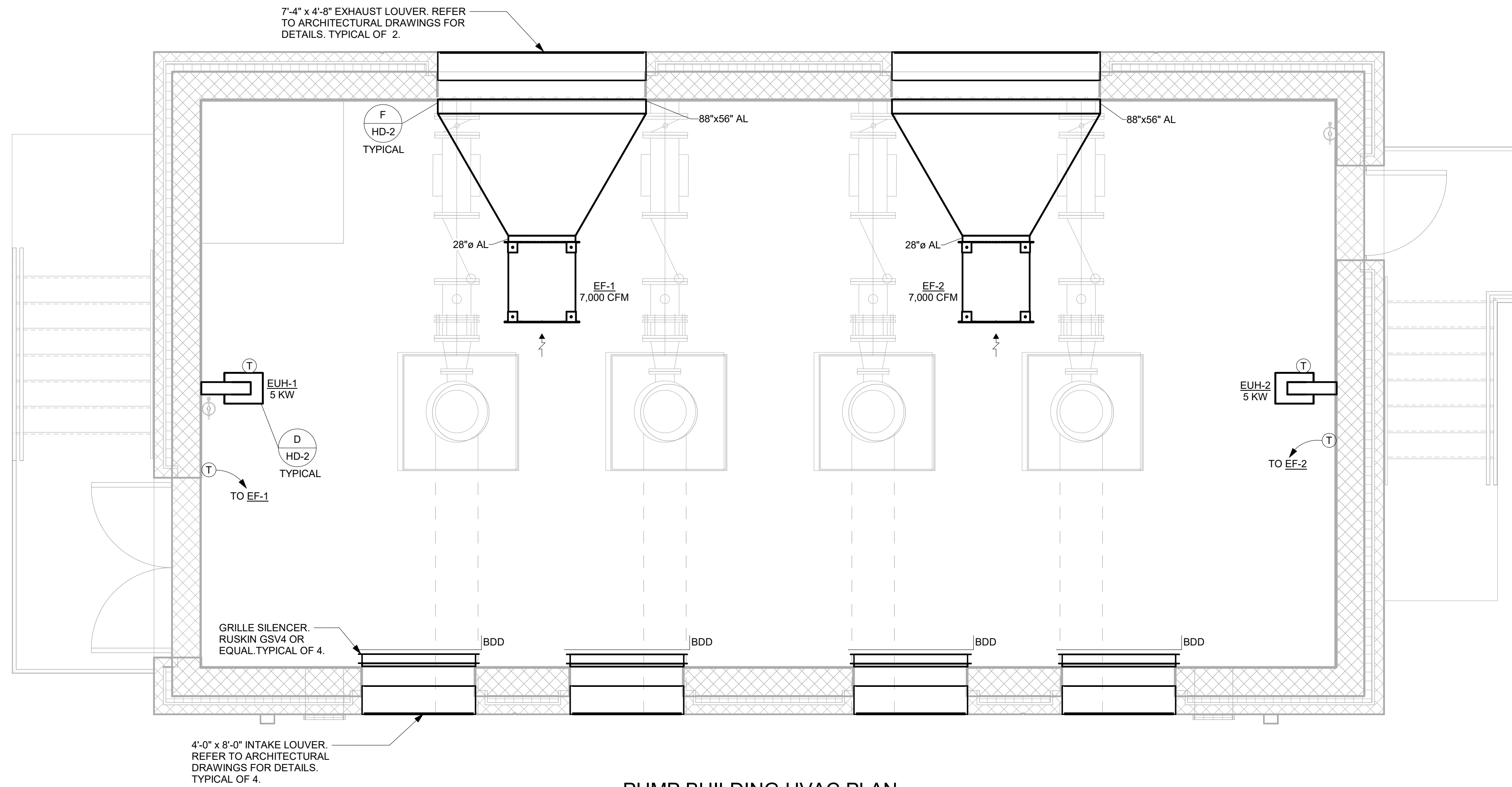
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

**ELECTRICAL BUILDING
 HVAC PLAN**

PROJECT NO.	9247-221208
FILE NAME:	HW2000EB.RVT
SHEET NO.	H-2

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PUMP BUILDING HVAC PLAN

3/8" = 1'-0"

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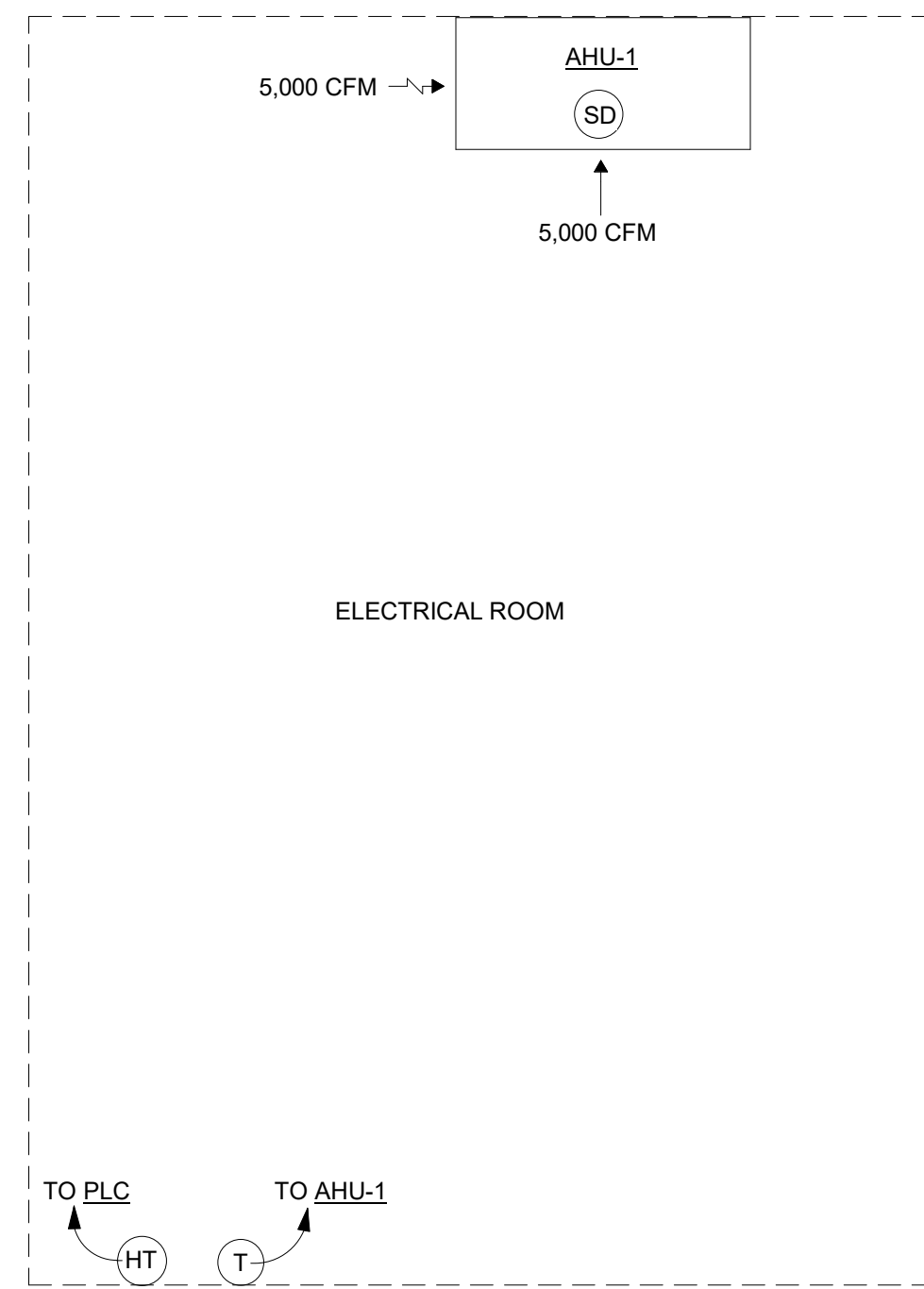
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ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

PUMP BUILDING
 HVAC PLAN

PROJECT NO.	9247-221208
FILE NAME:	HW2000PS.RVT
SHEET NO.	H-3

ISSUED FOR BID

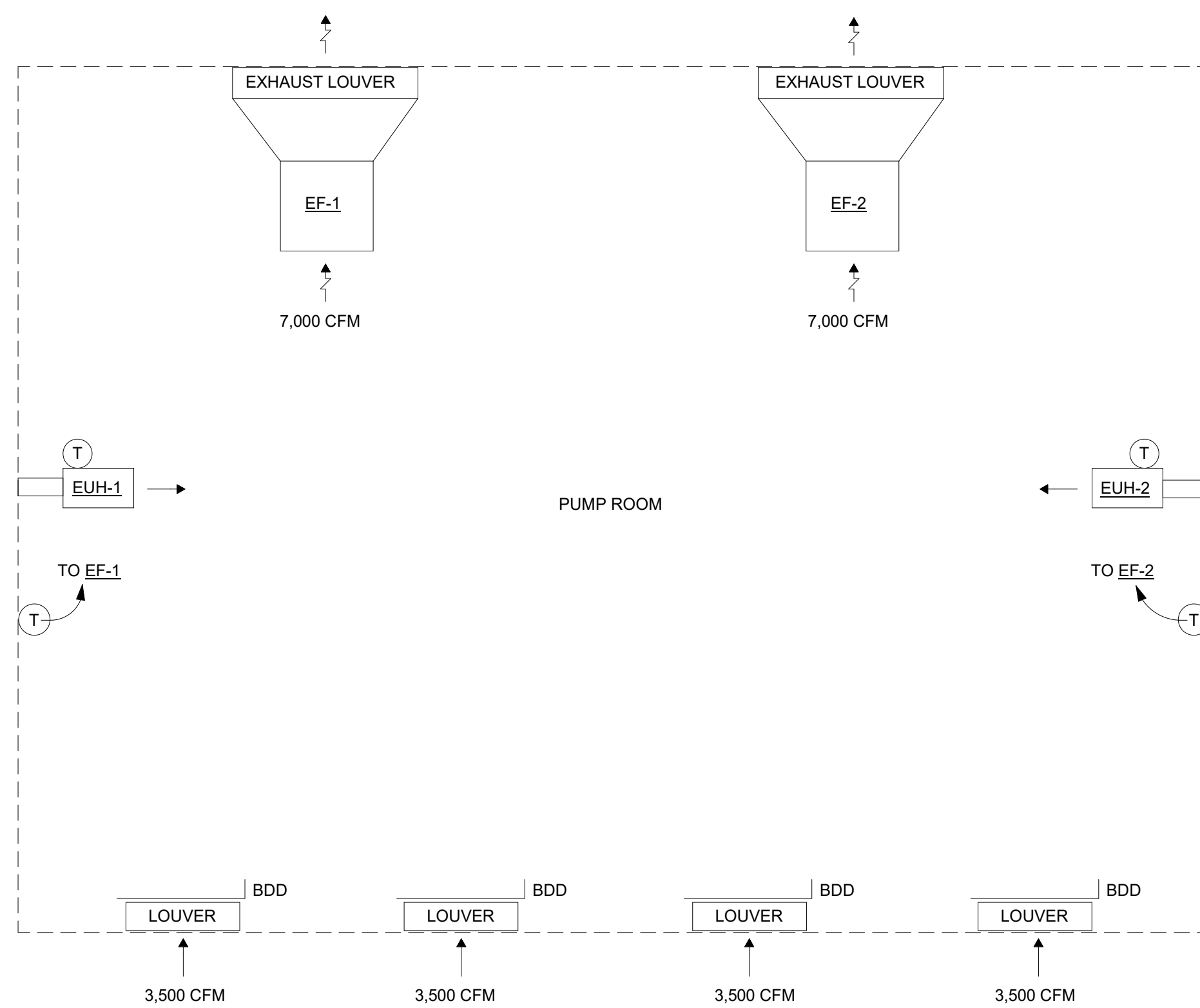


ELECTRICAL BUILDING DESIGN TEMPERATURE AND VENTILATION RATES			
MODE	SUMMER INDOOR TEMP	WINTER INDOOR TEMP	VENTILATION
NORMAL	80°F	50°F (MIN)	N/A

SEQUENCE OF OPERATION:

1. AIR COOLED UNIT WITH SPACE THERMOSTAT (AHU-1/ACCU-1):

- 1.1. WHEN SMOKE IS SENSED BY THE SUPPLY AIR SMOKE SENSOR, ALL OTHER CONTROL FUNCTIONS SHALL BE OVERRIDDEN AND THE FAN SHALL BE OFF, AND AN ALARM LIGHT IN THE SMOKE SENSOR SHALL BE ACTIVATED. SMOKE SENSORS SHALL BE MANUALLY RESET.
- 1.2. WHEN THE UNIT THERMOSTAT ON/OFF SWITCH IS PLACED IN THE OFF POSITION, THE TEMPERATURE CONTROLS SHALL BE INACTIVATED, THE SUPPLY FAN AND CONDENSING UNIT SHALL BE OFF.
- 1.3. WHEN THE UNIT THERMOSTAT IS PLACED IN THE ON POSITION AND THE SYSTEM FAN ON/AUTO SWITCH IS IN THE ON POSITION, THE TEMPERATURE CONTROLS SHALL BE ACTIVATED, AND THE FAN SHALL RUN CONTINUOUSLY.
 - 1) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE THE COOLING SET POINT (80°F), THE CONDENSING UNIT SHALL BE ON IN COOLING MODE.
 - 2) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW THE COOLING SET POINT (80°F), THE CONDENSING UNIT SHALL BE OFF.
 - 3) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW THE HEATING SET POINT (50°F) THE AUXILIARY ELECTRIC HEAT SHALL BE ACTIVATED.
 - 4) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE THE HEATING SET POINT (50°F), THE CONDENSING UNIT SHALL BE OFF.
- 1.4. WHEN THE UNIT THERMOSTAT IS PLACED IN THE ON POSITION AND THE SYSTEM FAN ON/AUTO SWITCH IS IN THE AUTO POSITION, THE TEMPERATURE CONTROLS SHALL BE ACTIVATED.
 - 1) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE THE COOLING SET POINT (80°F), THE CONDENSING UNIT SHALL BE ON IN COOLING MODE, AND THE SUPPLY FAN SHALL BE ON.
 - 2) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW THE COOLING SET POINT (80°F), THE CONDENSING UNIT SHALL BE OFF, AND THE SUPPLY FAN SHALL BE OFF.
 - 3) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW THE HEATING SET POINT (50°F), THE AUXILIARY ELECTRIC HEAT SHALL BE ACTIVATED.
 - 4) WHEN THE SPACE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE THE HEATING SET POINT (50°F), THE CONDENSING UNIT SHALL BE OFF, AND THE SUPPLY FAN SHALL BE OFF.
- 1.5. THE SPACE THERMOSTAT SHALL HAVE AN ADJUSTABLE SET POINT. THE COOLING SET POINT FOR AHU-1 SHALL BE 80°F. THE INITIAL HEATING SET POINT SHALL BE 50°F. THERMOSTATS SHALL HAVE AUTOMATIC CHANGEOVER FROM HEATING TO COOLING.
- 1.6. DUAL (OR TWO-SPEED) COMPRESSORS SHALL HAVE TWO STAGES OF COOLING.
- 1.7. PROVIDE A HIGH TEMPERATURE SWITCH. SET POINT SHALL BE 95°F. SWITCH SHALL SEND A HIGH SPACE TEMPERATURE ALARM SIGNAL TO THE INSTRUMENTATION SYSTEM. SEE ELECTRICAL AND INSTRUMENTATION DRAWINGS FOR ADDITIONAL DETAILS. COORDINATE INTERFACE WITH INSTRUMENTATION SYSTEM SUPPLIER.



PUMP BUILDING DESIGN TEMPERATURE AND VENTILATION RATES			
MODE	SUMMER INDOOR TEMP	WINTER INDOOR TEMP	VENTILATION
NORMAL	MAX 10°F ABOVE AMBIENT	50°F (MIN)	14,000 CFM

SEQUENCE OF OPERATION:

1. EXHAUST FANS WITH HAND-OFF-AUTO SWITCH, THERMOSTATS (EF-1, EF-2):

- 1.1. WHEN THE HAND-OFF-AUTO SWITCH IS IN THE HAND POSITION, THE FAN SHALL RUN.
- 1.2. WHEN THE HAND-OFF-AUTO SWITCH IS IN THE OFF POSITION, THE FAN SHALL BE OFF.
- 1.3. WHEN THE HAND-OFF-AUTO SWITCH IS IN THE AUTO POSITION AND THE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS ABOVE SET POINT (85°F), THE FAN SHALL RUN.
- 1.4. WHEN THE HAND-OFF-AUTO SWITCH IS IN THE AUTO POSITION AND THE TEMPERATURE SENSED BY THE SPACE THERMOSTAT IS BELOW SET POINT (85°F), THE FAN SHALL BE OFF.

2. UNIT HEATERS (EUH-1, EUH-2)

- 2.1. UNIT HEATERS SHALL BE CONTROLLED BY INTEGRAL CONTROLS SUPPLIED WITH THE UNIT HEATER.
- 2.2. ALL SEQUENCES ARE REVERSIBLE EXCEPT AS NOTED.
 - 1) WHEN THE SPACE TEMPERATURE AS SENSED BY THE INTEGRAL THERMOSTAT IS BELOW THE SPACE THERMOSTAT SET POINT (50°F), THE UNIT HEATER SHALL BE ACTIVATED.
 - 2) WHEN THE SPACE TEMPERATURE AS SENSED BY THE INTEGRAL THERMOSTAT IS ABOVE THE SPACE THERMOSTAT SET POINT (50°F), THE UNIT HEATER SHALL BE OFF.

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REV. NO.	DATE	DRWN	CHKD	REMARKS

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ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

HVAC AIRFLOW SCHEMATICS
 AND SEQUENCE OF OPERATIONS

PROJECT NO.	9247-221208
FILE NAME:	HW2000PS.RVT
SHEET NO.	H-4

EXHAUST FAN															
MARK	AREA SERVED	AIRFLOW (CFM)	S.P.	SET	WHEEL	DRIVE	HP	V	P	FAN RPM	MAX SONE VALUE	MANUFACTURER	MODEL NO.	CONTROL	NOTES
EF-1.2	PUMP ROOM	7,000	0.5"	AXIAL	PROP.	DIRECT	1.5	460	3ø	1170	MFR. STD.	GREENHECK	AX-72-190-0422-B15	THERMOSTAT	AP,DS,EC,IG,SC,SS,T,TE,VI

AP = CAST ALUMINUM PROPELLER
DS = STAINLESS STEEL NEMA 4X DISCONNECT SWITCH
EC = HI-PRO POLYESTER EPOXY COATED ENITRE FAN, INCLUDING ALL ACCESSORIES
IG = EC COATED INLET GUARD
SC = STEEL FAN CONSTRUCTION
SS = STAINLESS STEEL FASTENERS AND SHAFT
T = HEAVY DUTY LINE VOLTAGE THERMOSTAT
TE = TOTALLY ENCLOSED FAN COOLED MOTOR
VI = NEOPRENE VIBRATION ISOLATORS AND MOUNTING BRACKETS

AIR COOLED CONDENSING UNIT																
MARK	MATCH WITH	SYSTEM CAPACITY		PIPING		CONDENSER				COMPRESSOR				MANUFACTURER MODEL	REMARKS	
		MBH	SEER	SUCT.	LIQ.	OSA °F	CFM	ROWS	FLA	NO.	TYPE	RLA COMP	VOLT			PHASE
ACCU-1	AHU-1	144.2	12.0 (EER)	SEE NOTE B	SEE NOTE B	95	2 @ 6,000	SEE NOTE B	0.8	2	SCROLL	10.6	460V	3ø	CARRIER 38AUDA14	SEE NOTES A, B, AND C

NOTE A: PROVIDE UNIT WITH THE FOLLOWING OPTIONS: TYPE 3A OR 3B CABINET COATING PER THE SPECIFICATIONS (EXTERIOR AND INTERIOR, INCLUDING COMPRESSOR, CONDENSER FAN, PIPING, ETC), E-COATED COILS (EQUIVALENT TO TYPE 1A OR 1B COIL COATING PER THE SPECIFICATIONS), STAINLESS STEEL HARDWARE (EXTERIOR HARDWARE ONLY), NON-RUST BASE PAN, ANTI-SHORT CYCLE TIMER, CRANKCASE HEATER, HIGH PRESSURE CONTROL, LOW PRESSURE CONTROL, LIQUID LINE REFRIGERANT FILTER DRIER, LIQUID LINE SOLENOID VALVE, 0°F LOW AMBIENT CONTROL, PHASE LOSS/REVERSAL MONITOR, THERMOSTATIC EXPANSION VALVE, LOW VOLTAGE CIRCUIT PROTECTION, COMPRESSOR DISCHARGE LINE THERMOSTAT, HAIL GUARD, VIBRATION ISOLATORS, EVAPORATOR DEFROST CONTROL AND HOT GAS BYPASS.

NOTE B: FOR ALL UNITS, PROVIDE REFRIGERANT PIPING SIZES, COIL ROWS, AND FINS PER THE MANUFACTURER'S RECOMMENDATIONS.

NOTE C: BASIS OF DESIGN FOR AIR CONDITIONING SYSTEMS IS CARRIER OR APPROVED EQUAL.

AIR HANDLING UNIT																								
MARK	AREA SERVED	SHEET NO.	COOLING COIL						AIRFLOW (CFM)	OSA CFM	ESP	HP	VOLTAGE	PHASE	DRIVE	FILTERS		MANUFACTURER MODEL	REMARKS	AUX. ELECTRIC HEAT				
			ENTERING AIR		LEAVING AIR		TOTAL MBH	SENSIBLE MBH								ROW'S FINS	TYPE			SIZE NO.	KW	VOLT	PHASE	NO. OF STAGES
			DB	WB	LDB	LWB																		
AHU-1	ELECTRICAL BUILDING	H-2	80	62	-	-	144.2	140.2	SEE NOTE B	5,000	0	0.5"	2.9	460V	3ø	BELT	SEE NOTE A	SEE NOTE A	CARRIER 40RUAA14	SEE NOTES A, B, AND C	10	480V	3ø	1

NOTE A: PROVIDE UNIT WITH THE FOLLOWING OPTIONS: TYPE 4A OR 4B COIL COATING PER THE SPECIFICATIONS, STAINLESS STEEL HARDWARE (EXTERNAL HARDWARE ONLY), 2" THICK FARR 30/30 FILTERS, CORROSION RESISTANT CONDENSATE PAN, NON-RUST BASE PAN, CORROSION RESISTANT COIL CASING, TIME DELAY RELAY, FACTORY ELECTRIC HEATER, 2-STAGE COOLING/2-STAGE HEATING THERMOSTAT, AND 2-SPEED VFD.

NOTE B: FOR ALL UNITS, PROVIDE SAFE-T-SWITCH MODEL SS2, OR EQUAL, CONDENSATE OVERFLOW SHUT-OFF SWITCH ON THE AUXILIARY DRAIN CONNECTIONS OF EACH AIR HANDLING UNIT. INSTALL PER THE MANUFACTURER'S INSTRUCTIONS. PROVIDE ALL NECESSARY RELAYS, FITTINGS, WIRING, CONTACTS, ETC. FOR ALL UNITS, PROVIDE REFRIGERANT PIPING SIZES, COIL ROWS, AND FINS PER THE MANUFACTURER'S RECOMMENDATIONS.

NOTE C: BASIS OF DESIGN FOR AIR CONDITIONING SYSTEMS IS CARRIER OR APPROVED EQUAL.

ELECTRIC UNIT HEATER SCHEDULE												
MARK	NO. REQ'D	AREA SERVED	KW	MBH	STAGE	CONTROL VOLTAGE	VOLT	PHASE	TOTAL AMPS	MOUNTING	MANUFACTURER MODEL NO.	REMARKS
EUH-1.2	2	PUMP BUILDING	5	17.1	1	115V	480V	3ø	8	8'-0" AFF	INDEECO-TRIAD 234-U11N-0050U	SEE NOTE A

NOTE A: PROVIDE UNIT WITH BUILT-IN PILOT LIGHT, SELECTOR SWITCH, THERMOSTAT, NEMA 4X DISCONNECT SWITCH, CORROSION RESISTANT CONSTRUCTION WITH EPOXY COATED STAINLESS STEEL PARTS, AND MONEL FINNED TUBULAR ELEMENTS.

DUCTWORK MATERIAL SCHEDULE	
SYMBOL	DESCRIPTION
---	GALVANIZED INSULATED DUCTWORK PER SMACNA STANDARDS.
AL	ALUMINUM DUCTWORK PER SMACNA STANDARDS.

CONTROL COMPONENT SCHEDULE	
SYMBOL	DESCRIPTION
Ⓣ	HEAVY DUTY, NEMA 4X CORROSION RESISTANT LINE VOLTAGE THERMOSTAT (EXHAUST FAN) JOHNSON CONTROLS A19PRC-1C OR EQUAL WITH CLEAR LOCKING COVER. SET AT 85°F. REFER TO AIR HANDLING UNIT SCHEDULE AND THE SPECIFICATIONS FOR AIR CONDITIONING UNIT THERMOSTAT REQUIREMENTS.
ⓈⓉ	IONIZATION TYPE SMOKE DETECTOR SYSTEM SENSOR INNOVAIR MODEL DH100ACDCI OR EQUAL. REFER TO THE SPECIFICATIONS.
ⓂⓉ	HEAVY DUTY, CORROSION RESISTANT LINE VOLTAGE THERMOSTAT/HIGH TEMPERATURE SWITCH JOHNSON CONTROLS A19BAF-1C OR EQUAL WITH CLEAR LOCKING COVER. SET AT 95°F.

AIR DISTRIBUTION DEVICE SCHEDULE						
SYMBOL	DESCRIPTION	MODEL	FRAME TYPE	MATERIAL	FINISH	REMARKS
BDD	BACK DRAFT DAMPER	GREENHECK EM-30	CHANNEL	ALUMINUM	-	VERTICAL MOUNT HORIZONTAL FLOW

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DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

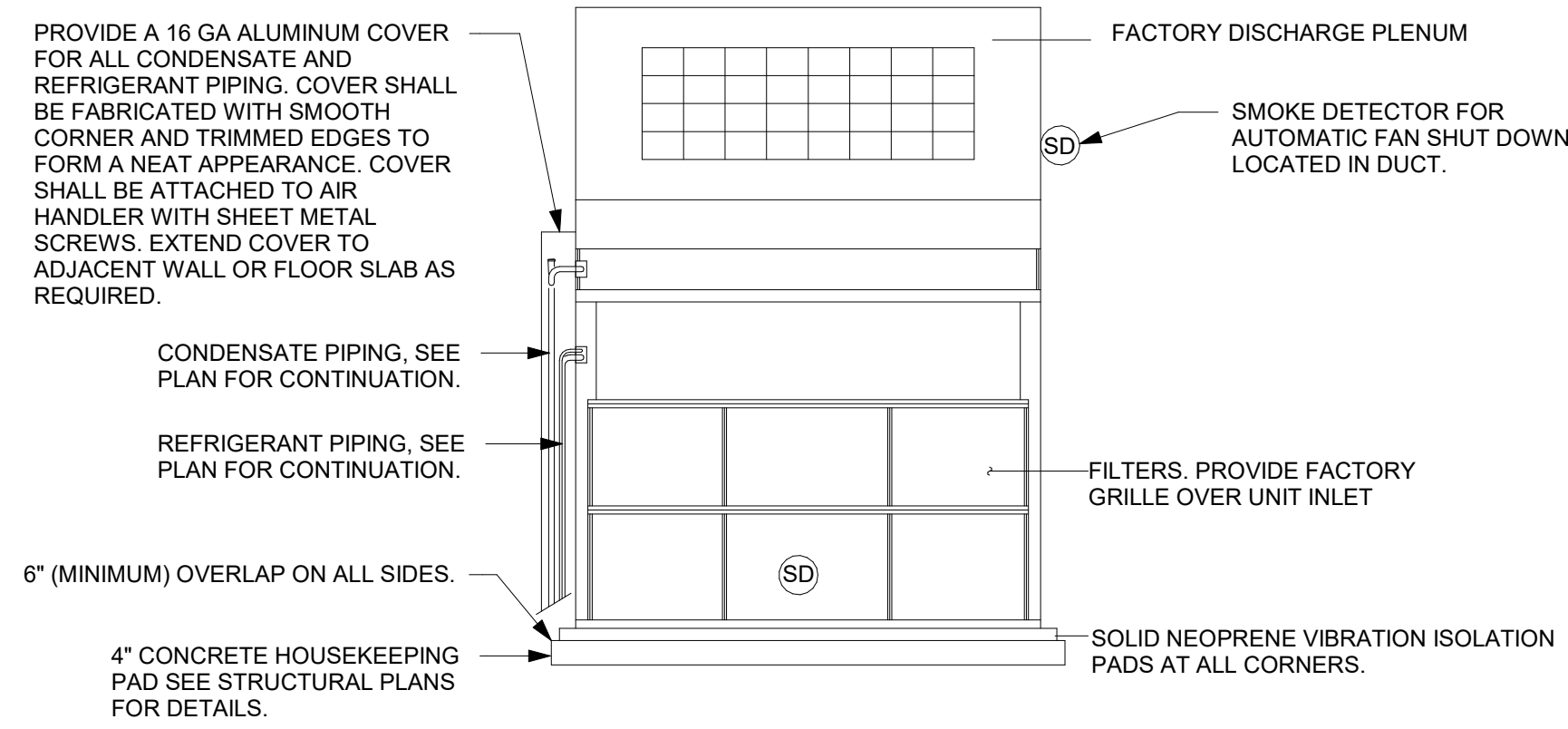
HVAC SCHEDULES

HD-1

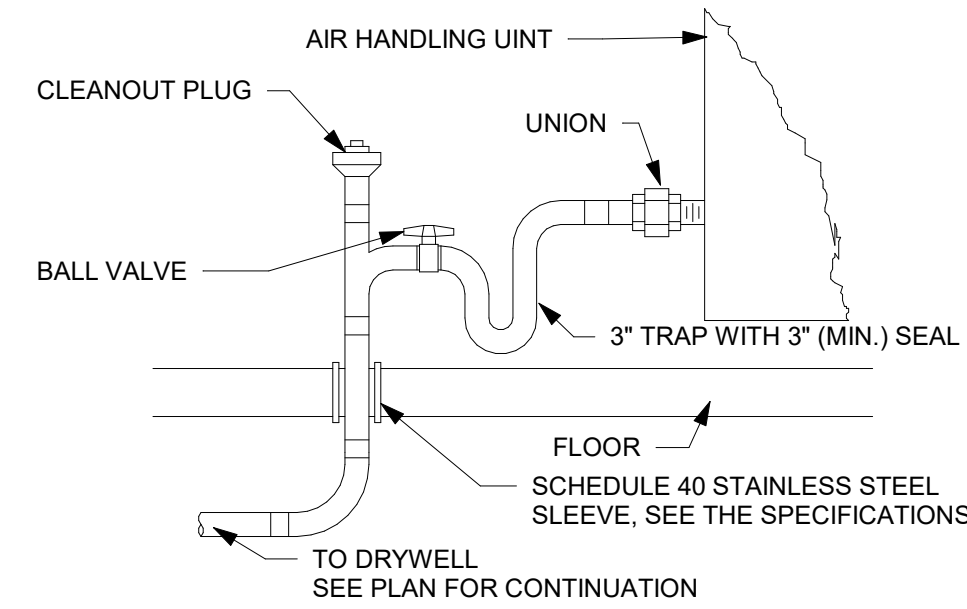
PROJECT NO.	9247-221208
FILE NAME:	HW2000EB.RVT
SHEET NO.	HD-1

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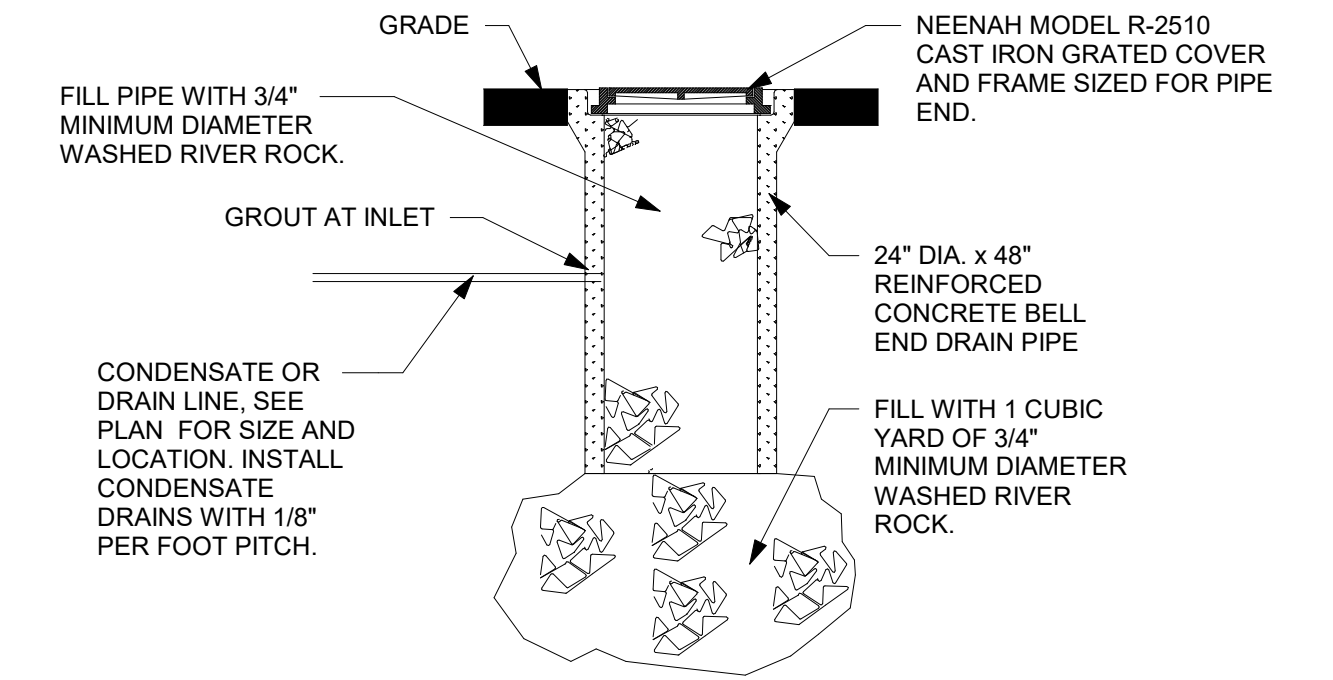
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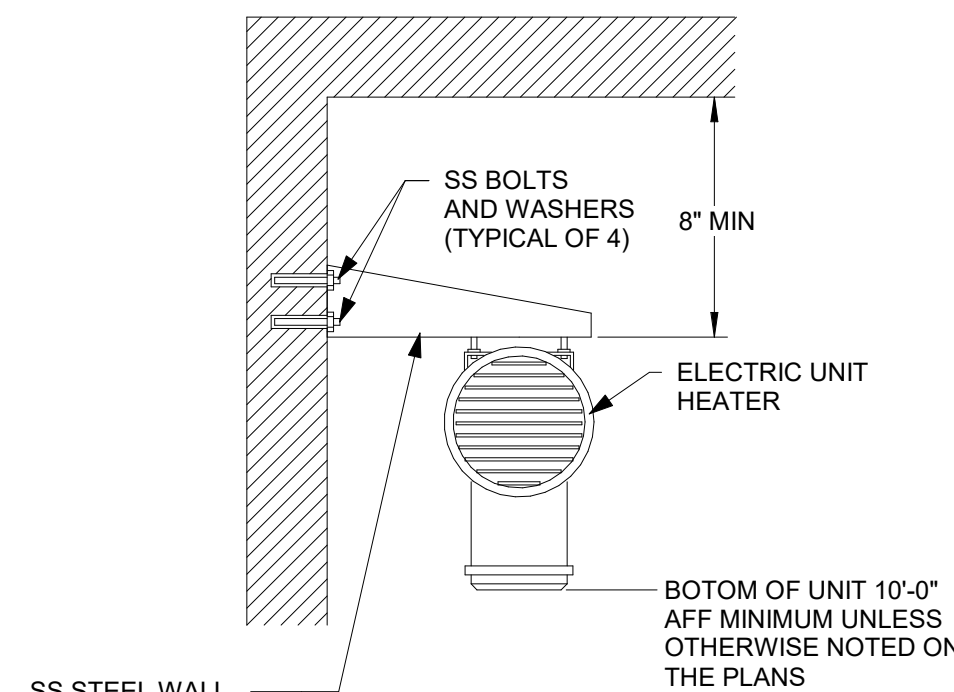
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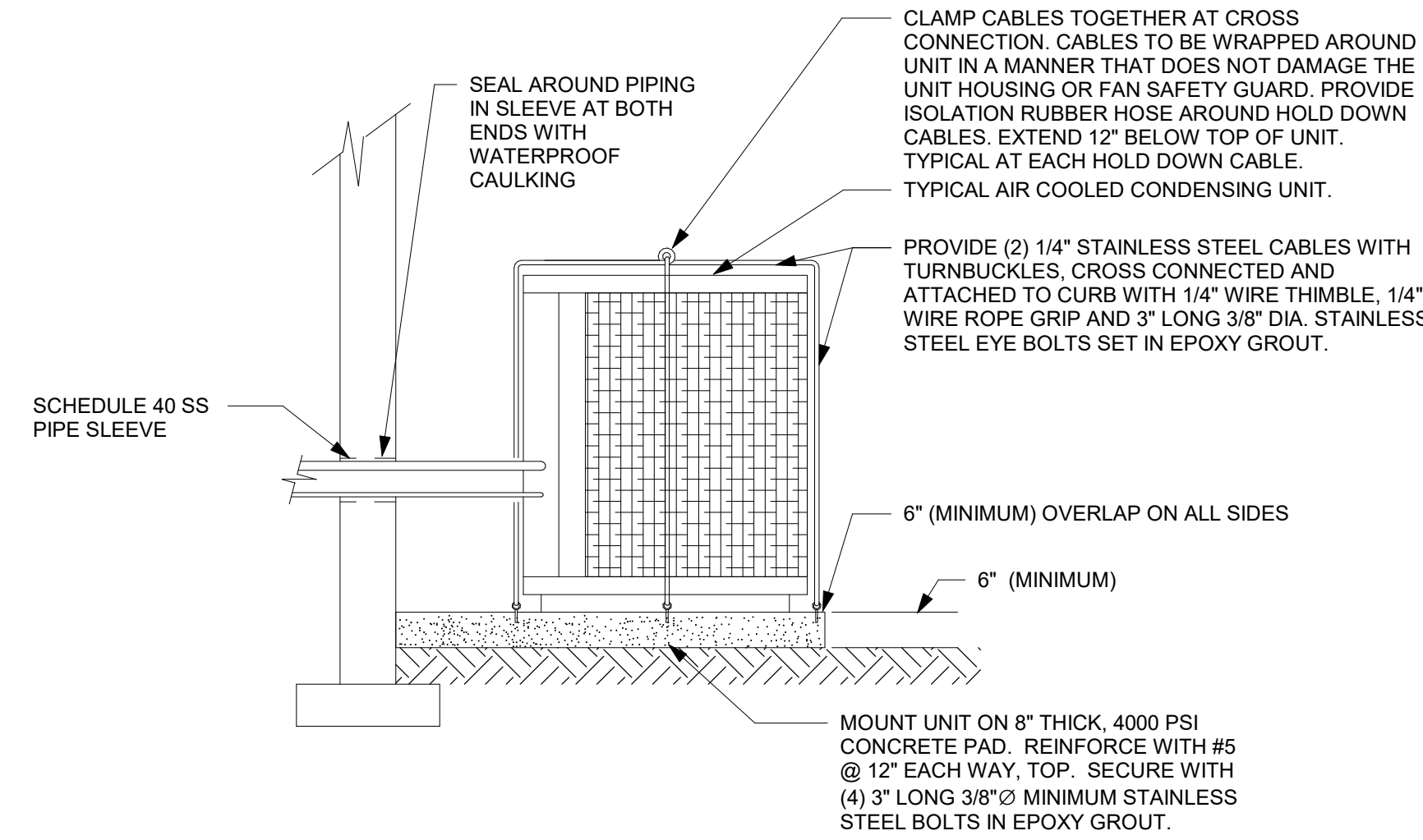
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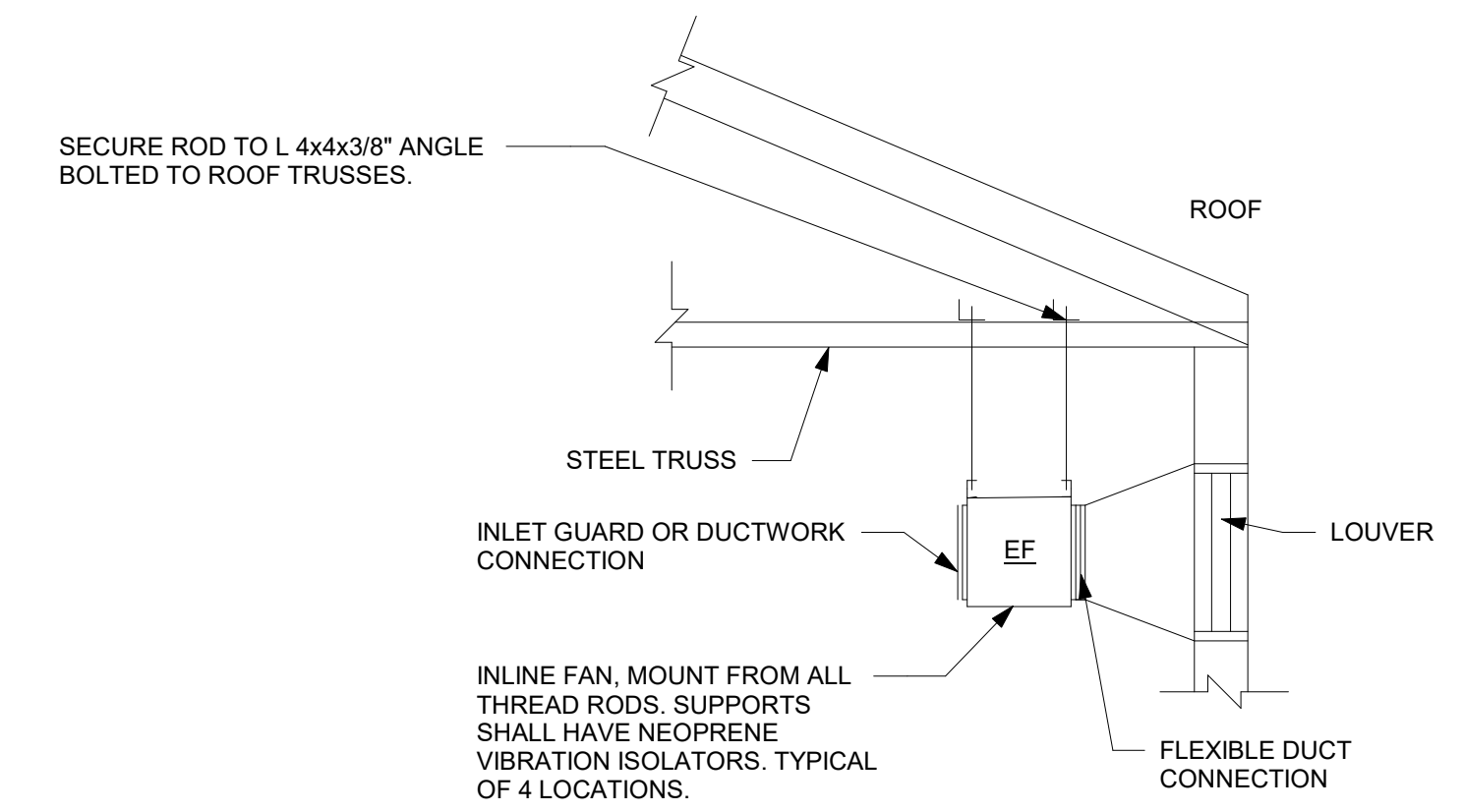
C DETAIL
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D DETAIL
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E DETAIL
NTS



F DETAIL
NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. GARZIONE
 DRAWN BY: C. JOHNSON
 SHEET CHK'D BY: J. GARZIONE
 CROSS CHK'D BY: C. MONTGOMERY
 APPROVED BY: J. GARZIONE
 DATE: MAY 2022

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 FLA COA No. EB-0000020

ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

HVAC DETAILS

PROJECT NO. 9247-221208
 FILE NAME: HW2000EB.RVT

SHEET NO.
HD-2

DATE:
 JOSHUA A. GARZIONE
 PE NO. 82162

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PLUMBING ABBREVIATIONS	
@	AT
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AV	ACID VENT
AW	ACID WASTE
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BWV	BACKWATER VALVE
BLDG	BUILDING
CL	CENTERLINE
CA	COMPRESSED AIR
CD	CAVITY DRAIN
CI	CAST IRON
CO	CLEANOUT
CONT	CONTINUOUS, CONTINUE
CS	CUP SINK
CU. FT.	CUBIC FEET
CV	CHECK VALVE
CW	COLD WATER
DI	DUCTILE IRON
DN	DOWN
DW	DISHWASHER
DWG	DRAWING
DWV	DRAIN WASTE VENT
E	EMERGENCY WATER
(E)	EXISTING, TO REMAIN
ECO	EXTERIOR CLEANOUT
ED	EQUIPMENT DRAIN
EL	ELEVATION
ES	EMERGENCY SHOWER
ES/EW	EMERGENCY SHOWER AND EYEWASH
EWC	ELECTRIC WATER COOLER
EWST	EMERGENCY WATER STORAGE TANK
EWU	EYEWASH UNIT
FAS	FLOW ALARM SWITCH
FCO	FLUSH FLOOR CLEANOUT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FHV&C	FIRE HOSE VALVE AND CABINET
FS	FLOW SWITCH
FV	FIRE VALVE
FBS	FACE/BODY SPRAY
G	GAS
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HD	HUB DRAIN
HEV	HOSE END VALVE
HP	HANDICAPPED
HW	HOT WATER
HWR	HOT WATER RETURN
INV	INVERT
IOS	INSTALLED BY OTHER SECTION
IPS	IRON PIPE SIZE
KS	KITCHEN SINK
KU	KITCHEN UNIT
LAB	LABORATORY
LAV	LAVATORY

PLUMBING ABBREVIATIONS	
LBV	LOCKABLE BALL VALVE
LCW	LAB COLD WATER
LHW	LAB HOT WATER
LS	LAB SINK
MAX	MAXIMUM
MB	MOP BASIN
MIN	MINIMUM
MXV	MIXING VALVE
NO	NUMBER
OED	OPEN END OR OPEN EQUIPMENT DRAIN
ORD	OVERFLOW ROOF DRAIN
ORL	OVERFLOW RAIN LEADER
PD	PUMP DISCHARGE
PG	PRESSURE GAUGE
PH	POST HYDRANT
PHW	PROTECTED HOT WATER
PP	POLYPROPYLENE
PRW	PRESSURE WASTE
PSI	POUNDS PER SQUARE INCH
P&T	PRESSURE & TEMPERATURE
PVC	POLYVINYL CHLORIDE
PW	PROTECTED WATER
RD	ROOF DRAIN
RL	RAINLEADER
RM	ROOM
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
S	SOIL
SH	SHOWER
SHT	SHEET
SP	SPRINKLER
SQ	SQUARE
SS	STAINLESS STEEL
SSK	SERVICE SINK
ST	SAND TRAP
TD	TRENCH DRAIN
THK	THICKNESS
TP	TRAP PRIMER
TW	TEPID WATER
TYP	TYPICAL
UR	URINAL
V	VENT
VAC	VACUUM
VB	VACUUM BREAKER
VE	VACUUM EXHAUST
VTR	VENT THROUGH ROOF
W	WASTE
W/	WITH
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR
WHS	WASH HOSE STATION
W&V	WASTE & VENT

PLUMBING SYMBOLS	
—	SOIL/SANITARY
—	VENT
---	COLD WATER (POTABLE)
---	HOT WATER (POTABLE)
—A—	COMPRESSED AIR
—AV—	ACID VENT
—AW—	ACID WASTE
—E—	EMERGENCY WATER
—ES—	EMERGENCY WATER (EMERGENCY SHOWER-LAB ONLY)
—FL—	FIRE LINE
—FS—	FIRE SERVICE WATER (POTABLE)
—G—	GAS
—LCW—	LABORATORY COLD WATER (NON-POTABLE)
—LHW—	LABORATORY HOT WATER (NON-POTABLE)
—PD—	PUMP DISCHARGE
—PHW—	PROTECTED HOT WATER (NON-POTABLE)
—PRW—	PRESSURE WASTE
—RL—	RAIN LEADER
—PW—	PROTECTED WATER (NON-POTABLE)
—SP—	SPRINKLER LINE
—V—	VACUUM
—VE—	VACUUM EXHAUST

	VALVE
	LOCKABLE BALL VALVE
	CHECK VALVE
	FLOW ALARM SWITCH
	ES/EW - EMERGENCY SHOWER/EYEWASH / FP-ES/EW - "FREEZE PROOF" ES/EW
	WATER HAMMER ARRESTOR
	CLEANOUTS
	FLUSH FLOOR CLEANOUT
	WATER PROOF SLEEVE
	FLOOR DRAIN OR ROOF DRAIN
	PROTECTED WATER CONNECTION IDENTIFICATION NUMBER
	OPEN END DRAIN
	EQUIPMENT PROVIDED UNDER PLUMBING SECTION
	EQUIPMENT PROVIDED BY OTHERS REQUIRING PLUMBING CONNECTIONS
	DN OR DROP "DN" DENOTES PIPES WHICH PENETRATE THR FLOOR BELOW. "DROP" DENOTES PIPES WHICH DO NOT.
	UP OR RISE "UP" DENOTES PIPES WHICH PENETRATE THR FLOOR ABOVE. "RISE" DENOTES PIPES WHICH DO NOT.
	POINT WHERE NEW CONSTRUCTION CONNECTS TO EXISTING CONSTRUCTION
	POINT BETWEEN EXISTING CONSTRUCTION TO REMAIN AND EXISTING CONSTRUCTION TO BE DEMOLISHED
	MIXING VALVE

THE TERMS "DN", "DROP", "UP", & "RISE" ARE USED TO INDICATE THE VERTICAL DIRECTION IN WHICH A PIPE LINE CONTINUES FROM THE IMAGINARY PLANE OF VIEW. THE TERMS HAVE NO RELEVANCE TO THE DIRECTION OF THE FLOW WITHIN THE PIPE LINE.

NOTE:
1. SYMBOLS AND ABBREVIATIONS SHOWN ON THE SHEET ARE GENERIC AND MAY NOT HAVE BEEN USED ON THE PROJECT.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. GARZIONE
DRAWN BY: C. JOHNSON
SHEET CHK'D BY: J. GARZIONE
CROSS CHK'D BY: C. MONTGOMERY
APPROVED BY: J. GARZIONE
DATE: MAY 2022

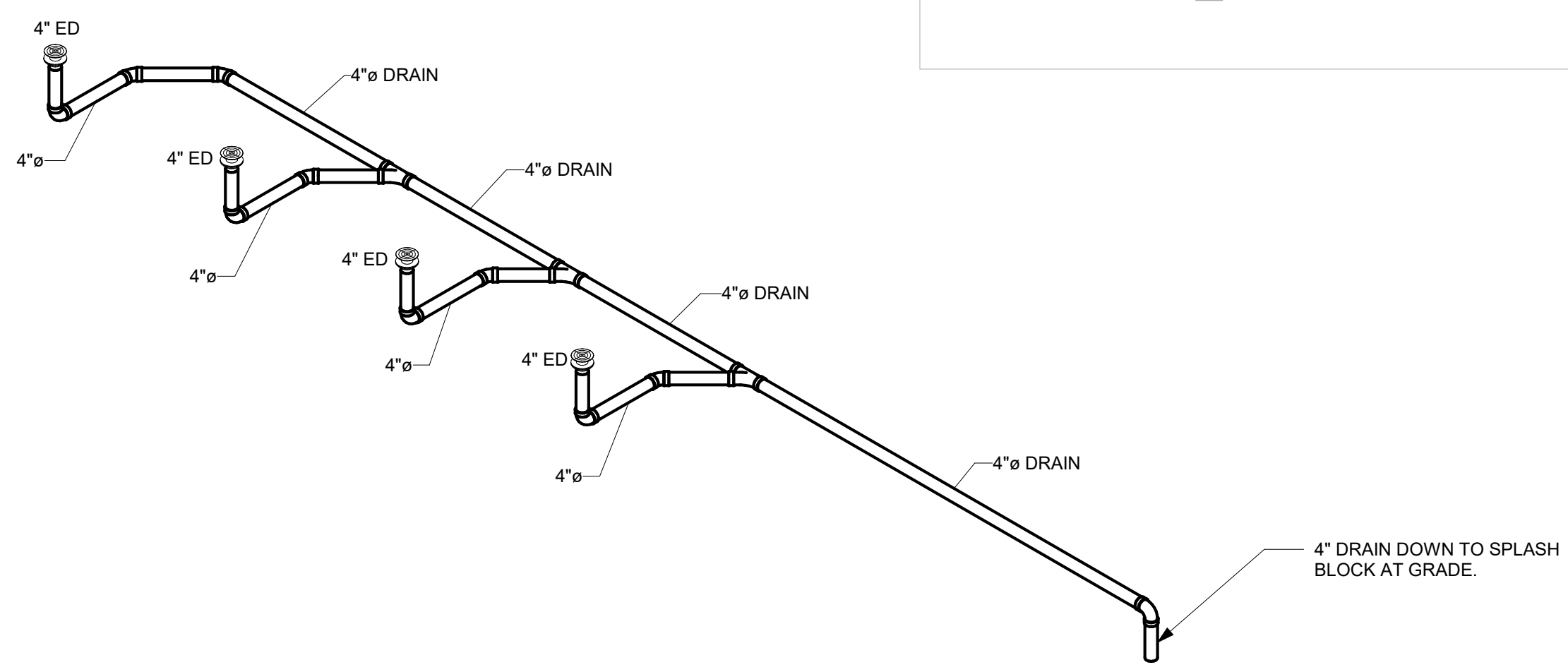
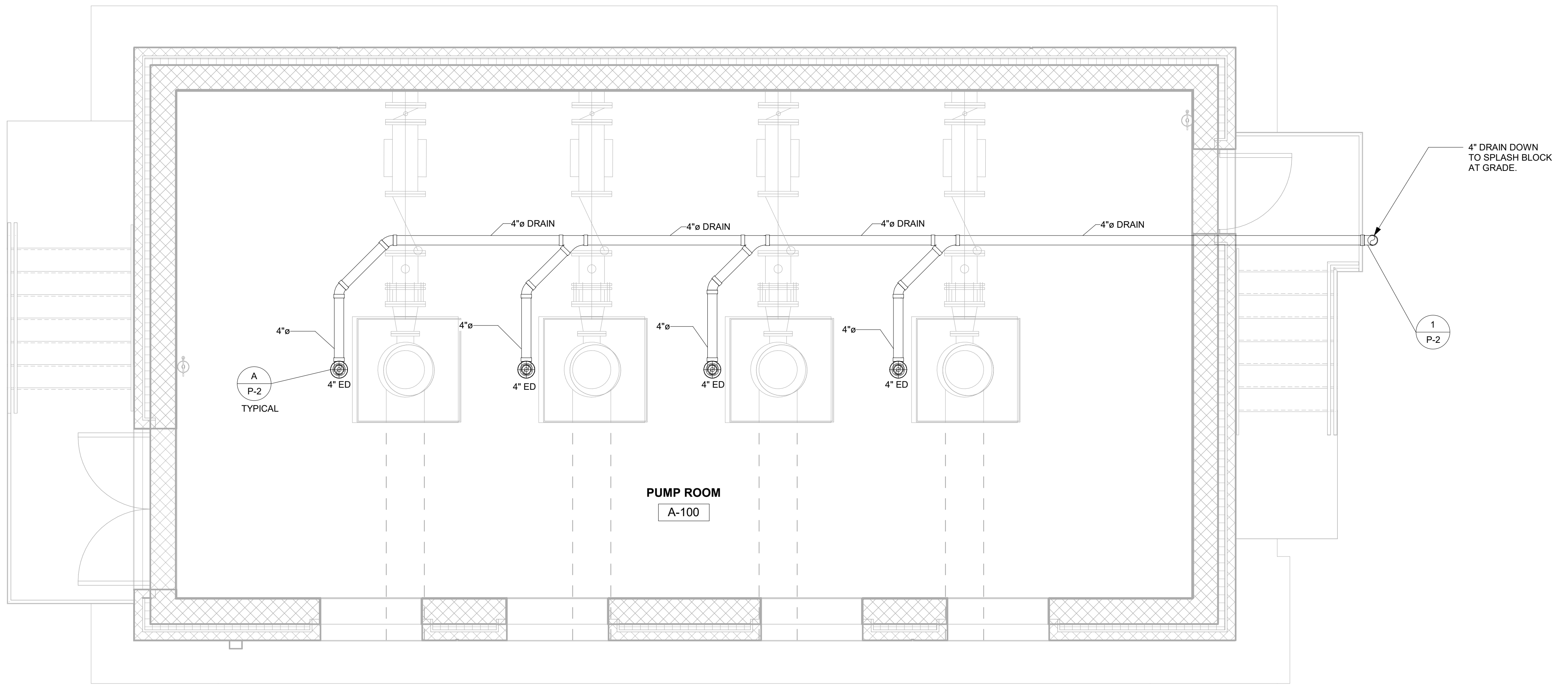
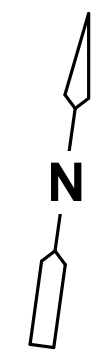


ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE
DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

PLUMBING SYMBOLS AND
ABBREVIATIONS

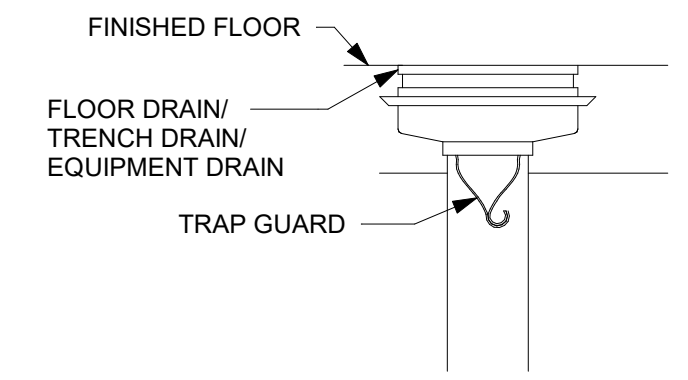
PROJECT NO. 9247-221208
FILE NAME: PW2000PS.RVT
SHEET NO. P-1

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PUMP BUILDING PLUMBING PLAN

3/8" = 1'-0"



EQUIPMENT DRAIN WITH TRAP GUARD

A DETAIL
- NTS

NOTE:
PROVIDE PROSET TRAP GUARD MODEL TG-33-Z OR EQUIVALENT INSERT FOR ALL FLOOR/EQUIPMENT DRAINS. REFER TO DETAIL AND SPECIFICATIONS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

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 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
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PUMP BUILDING
 PLUMBING PLAN

PROJECT NO.	9247-221208
FILE NAME:	PW2000PS.RVT
SHEET NO.	P-2

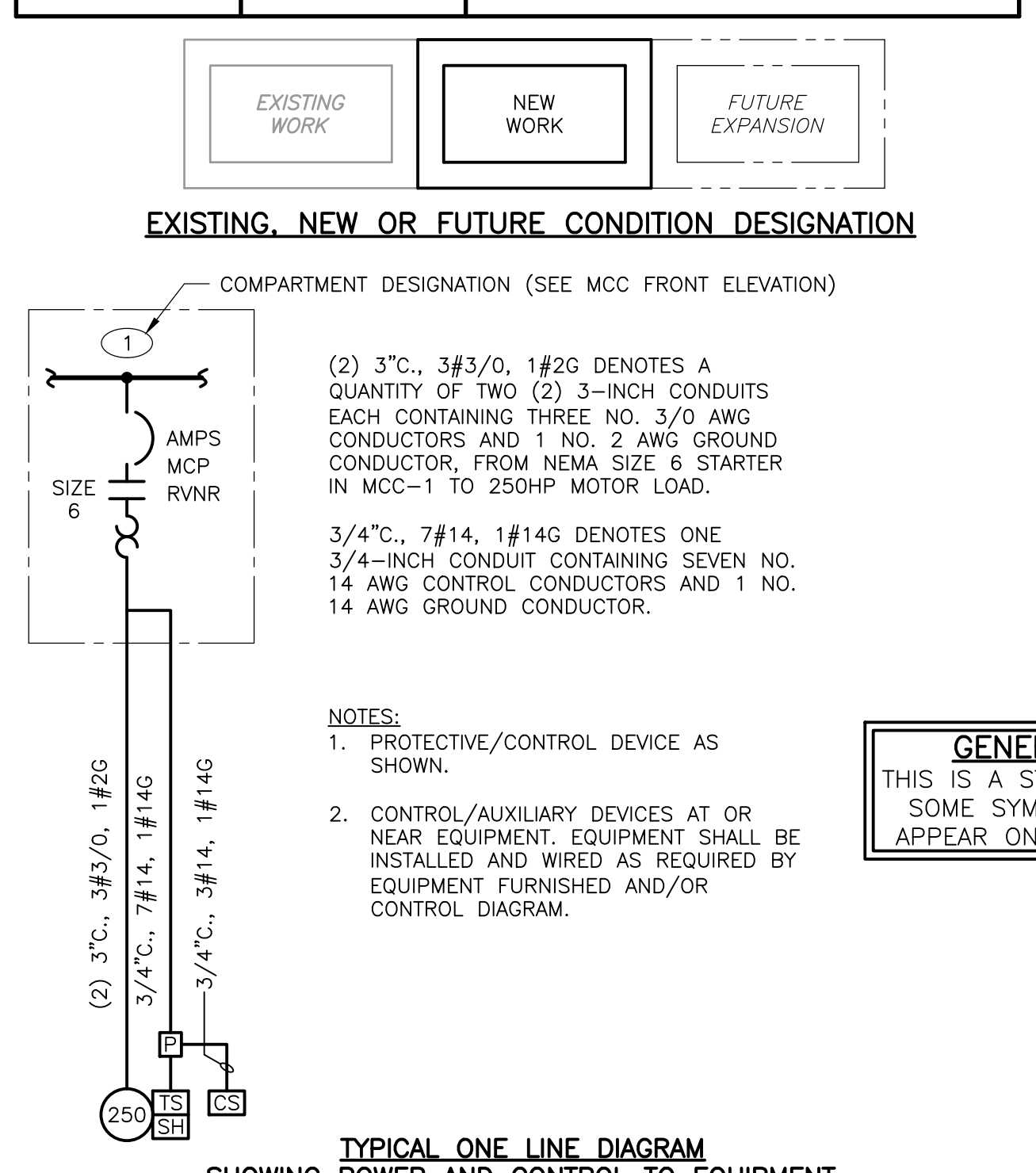
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ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	MEDIUM VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER CS=CONTROL SWITCH
	CB	LOW VOLTAGE AIR OR MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED.
	⊠	COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED: * FVR - FULL VOLTAGE REVERSING RVNR - REDUCED VOLTAGE NON-REVERSING RVAT - REDUCED VOLTAGE AUTOTRANSFORMER RVSS - REDUCED VOLTAGE SOLID STATE 2S1W - TWO SPEED, ONE WINDING 2S2W - TWO SPEED, TWO WINDING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	□	NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING NOTED IF OTHER THAN 30A (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	F	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING AND FUSE SIZE AS NOTED * AMPERE RATING NOTED IF OTHER THAN 30A FUSE RATING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	P 2	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD HEATER, 1 POLE UNLESS OTHERWISE NOTED "P" INDICATES WITH PILOT LIGHT "2" INDICATES TWO POLE (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	—	DRAWOUT TYPE EQUIPMENT OR DEVICE
	—	MEDIUM VOLTAGE CABLE TERMINATION
	—	MEDIUM VOLTAGE AIR INTERRUPTER SWITCH
	—	MEDIUM VOLTAGE FUSED AIR INTERRUPTER SWITCH * FUSE RATING
	—	MEDIUM VOLTAGE FUSED MOTOR CONTROLLER
	T	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED. UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS, ALL DRY TYPE TRANSFORMERS SERVICING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 4. ISOLATION TRANSFORMERS SHALL HAVE A K-20 RATING
	—	CURRENT TRANSFORMER * QUANTITY A = PRIMARY AMPERES
	—	POTENTIAL TRANSFORMER * QUANTITY V = PRIMARY VOLTAGE
	G	GENERATOR, RATINGS AND CONNECTIONS AS NOTED
	—	AUTOMATIC OR MANUAL TRANSFER SWITCH NO.1 (ATS-1), (MTS-1) "N" INDICATES NORMAL OR PREFERRED SOURCE "S" INDICATES STANDBY OR ALTERNATE SOURCE 100A INDICATES CONTINUOUS CURRENT RATING
	*	VARIABLE SPEED DRIVE CONTROLLER * D.C. = D.C. DRIVE CONTROLLER SCR = SILICON CONTROLLED RECTIFIER VFD = VARIABLE FREQUENCY DRIVE
	E	UNIT HEATER - ELECTRIC HEATING COIL AND FAN # - RATING
	U	UNIT HEATER - GAS FIRED, STEAM OR WATER HEATING COIL AND FAN
	M	MOTOR, NUMERAL INDICATES HORSEPOWER
	—	VOLTMETER WITH SWITCH, 3 PHASE
	—	AMMETER WITH SWITCH, 3 PHASE

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	METER * WM - WATTMETER WHM - WATTHOUR METER WHDM - WATTHOUR DEMAND METER WHDR - WATTHOUR DEMAND RECORDER PF - POWER FACTOR METER DMU - DIGITAL METERING UNIT
	—	TRANSDUCER AX - CURRENT TRANSDUCER WX - WATT TRANSDUCER WHX - WATTHOUR TRANSDUCER
	—	RELAY, NO. AS INDICATED 25 - SYNCHRONISM CHECK RELAY 27 - UNDERVOLTAGE RELAY 32 - DIRECTIONAL POWER RELAY 38 - BEARING PROTECTIVE DEVICE 40 - LOSS OF EXCITATION RELAY 42 - RUNNING CONTACTOR/PILOT RELAY 46 - REVERSE PHASE/PHASE BALANCE/CURRENT RELAY 47 - PHASE SEQUENCE VOLTAGE RELAY 49 - MACHINE OR TRANSFORMER THERMAL RELAY 50/51 - INSTANTANEOUS/TIME OVERCURRENT RELAY 50G - INSTANTANEOUS GROUND 51 - TIME OVERCURRENT RELAY 51G - TIME OVERCURRENT RELAY, GROUNDING RESISTOR TYPE 51N - TIME OVERCURRENT RELAY, RESIDUAL TYPE 51V - TIME OVERCURRENT RELAY WITH VOLTAGE RESTRAINT 51X - AUXILIARY RELAY (TRIPS CB AND ALARMS) 59 - OVERVOLTAGE RELAY 60 - NEGATIVE SEQUENCE VOLTAGE RELAY 62 - TIME DELAY RELAY 63 - OVERPRESSURE RELAY 64 - GENERATOR FIELD GROUND RELAY 67 - AC DIRECTIONAL OVERCURRENT RELAY 74 - ALARM LATCHING RELAY 83 - AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY 86 - LOCKING-OUT RELAY 87 - DIFFERENTIAL PROTECTIVE RELAY B - SUFFIX INDICATES "BUS" G - SUFFIX INDICATES "GENERATOR" GF - GROUND FAULT T - SUFFIX INDICATES "TRANSFORMER" X - SUFFIX INDICATES "AUXILIARY"
	—	SPECIAL CAPACITOR * SC - SURGE CAPACITOR PF - POWER FACTOR CORRECTION CAPACITOR
	—	TUNED POWER FACTOR CORRECTION CAPACITOR
	—	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED
	—	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN
	ES	EMERGENCY STOP PUSHBUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)
	PBL	START-STOP PUSHBUTTON CONTROL STATION (MOMENTARY CONTACT) WITH LOCKOUT DEVICE ON STOP
	PBM	START-STOP PUSHBUTTON CONTROL STATION, MAINTAINED CONTACT WITH LOCKOUT DEVICE ON STOP
	S/S	OFF/ON SELECTOR SWITCH
	LR	LOCAL/REMOTE SELECTOR SWITCH
	—	3 POSITION SELECTOR SWITCH, MAINTAINED CONTACT O-OPEN X-CLOSED
	*	NAMEPLATE (A/B/C) HOA - HAND/OFF/AUTO HOR - HAND/OFF/REMOTE LOR - LOCAL/OFF/REMOTE RSL - RAISE/STOP/LOWER TOA - TEST/OFF/AUTO
	GD/VF #	GAS DETECTOR / VENTILATION FAILURE ALARM # INDICATES TYPE OF UNIT 1=MASTER, 2=REMOTE
	—	MOTOR STARTER COIL, NUMBER AS INDICATED TO DENOTE INTERLOCKING ONLY
	—	CONTROL RELAY COIL, NUMBER AS INDICATED

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	PILOT LIGHT, COLOR AS NOTED * R - RED G - GREEN B - BLUE W - WHITE A - AMBER
	—	PILOT LIGHT, PUSH-TO-TEST TYPE, COLOR AS NOTED ABOVE.
	—	TIME DELAY RELAY RANGE AS NOTED SETPOINT AS NOTED # NUMBER AS INDICATED * TDE - TIME DELAY AFTER ENERGIZATION ON DELAY TDD - TIME DELAY AFTER DE-ENERGIZATION OFF DELAY
	—	NOTC - NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED
	—	NCTO - NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED
	—	NOTO - NORMALLY OPEN, TIMED OPENING WHEN DE-ENERGIZED
	—	NCTC - NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED
	—	FIELD INSTRUMENT, TAG NO. AS INDICATED * INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS OR P & ID ## INDICATES LOOP NO.
	LS OR ■	LIQUID LEVEL (FLOAT) SWITCH NORMALLY OPEN, CLOSSES ON RISING LEVEL NORMALLY CLOSED, OPENS ON RISING LEVEL
	PS OR ■	PRESSURE OR VACUUM SWITCH NORMALLY OPEN, CLOSSES ON RISING PRESSURE NORMALLY CLOSED, OPENS ON RISING PRESSURE NORMALLY CLOSED, OPENS ON DROPPING PRESSURE
	TS OR T OR ■	TEMPERATURE SWITCH OR THERMOSTAT NORMALLY OPEN, CLOSSES ON RISING TEMPERATURE NORMALLY OPEN, CLOSSES ON DROPPING TEMPERATURE NORMALLY CLOSED, OPENS ON RISING TEMPERATURE NORMALLY CLOSED, OPENS ON DROPPING TEMPERATURE
	FS OR ■	FLOW SWITCH (AIR, WATER, ETC.) NORMALLY OPEN, CLOSSES ON INCREASED FLOW NORMALLY CLOSED, OPENS ON INCREASED FLOW
	ZS OR ■	POSITION (LIMIT) SWITCH NORMALLY OPEN NORMALLY OPEN - HELD CLOSED NORMALLY CLOSED NORMALLY CLOSED - HELD OPEN
	WS OR ■	TORQUE SWITCH NORMALLY OPEN, CLOSSES ON HIGH TORQUE NORMALLY CLOSED, OPENS ON HIGH TORQUE
	—	UTILIZED IN CONJUNCTION WITH OTHER CONTROL SCHEMATIC SYMBOLS TO DEPICT THE PHYSICAL LOCATION OF THE DEVICE # REPRESENTS LOCATION SEE LOCATION LEGEND ON DRAWING
	—	CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
	—	CONDUCTORS ELECTRICALLY CONNECTED
	S	SOLENOID VALVE

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	LIGHTNING ARRESTER
	—	GROUND OR GROUND ROD
	—	FUSE, AMPERE RATING AS NOTED
	HTR	STRIP HEATER OR HEATING ELEMENT
	—	INDUCTOR
	TG	TACHOMETER GENERATOR
	—	CONTACT, NORMALLY OPEN (NO)
	—	CONTACT, NORMALLY CLOSED (NC)
	—	OVERLOAD RELAY HEATER
	TB	TERMINAL OR TEST BLOCK
	RTD	RESISTANCE TEMPERATURE DETECTOR
	VE OR VE	VIBRATION DETECTOR
	DM	DAMPER MOTOR
	ETM	ELAPSED TIME METER
	M	MOTOR OPERATED VALVE OR GATE
	—	INDICATES LIMITS OF ELECTRICAL EQUIPMENT OR WIRING ENCLOSURE



NOTES:

- IN GENERAL CONDUIT ROUTING FOR EQUIPMENT AND DEVICES IS NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING ALL CONDUITS WHICH SHALL INCLUDE CONDUITS SHOWN ON ONE-LINE AND RISER DIAGRAMS AND HOME-RUNS SHOWN ON PLAN DRAWINGS. REFER TO SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS.
- THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUITS 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.
- SWITCHGEAR AND MOTOR CONTROL CENTER COMPARTMENT DESIGNATIONS AS INDICATED BELOW:
 BLANK: NOT INTENDED FOR USE. PLATE ONLY
 SPACE: EQUIPPED WITH REQUIRED BUS AND HARDWARE FOR THE FUTURE ADDITION OF BREAKERS AND/OR STARTERS WITHIN THE SIZE AND RANGE SHOWN
 SPARE: CONTAINS A COMPLETELY INSTALLED BREAKER AND/OR STARTER OF SIZE AND TYPE INDICATED FOR FUTURE USE.
- INTERPRETATION OF ELECTRICAL DRAWINGS: CIRCUIT IDENTIFICATION, ROUTING, AND SIZES OF CONDUITS AND WIRES ARE SHOWN ON THE FOLLOWING DRAWINGS:
 A. ONE LINE POWER DIAGRAMS: POWER, CONTROL AND SIGNAL WIRING REQUIREMENTS FOR ELECTRICAL DISTRIBUTION EQUIPMENT AND UTILIZATION EQUIPMENT POWERED FROM SWITCHGEAR, SWITCHBOARDS, MOTOR CONTROL CENTERS AND MAJOR POWER DISTRIBUTION PANELBOARDS ARE TYPICALLY SHOWN ON THE ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE: CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE AND QUANTITY FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT, AND SIZE OF THE GROUNDING ELECTRODE CONDUCTORS.
 B. INSTRUMENTATION AND CONTROL RISER DIAGRAMS: POWER, CONTROL, SIGNAL AND DATA HIGHWAY WIRING REQUIREMENTS FOR INSTRUMENTS AND CONTROL DEVICES CONTROLLED/MONITORED FROM INSTRUMENTATION AND CONTROL PANELS SUCH AS RTUS, PLCs, TERMINAL CABINETS, AND REMOTE I/O PANELS ARE TYPICALLY SHOWN ON THE INSTRUMENTATION AND CONTROL ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE: CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE, QUANTITY AND TYPE FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT.
 C. FLOOR PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS LOCATED WITHIN STRUCTURES, FLOOR PLANS SHOW THE LOCATION OF ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS, UTILIZATION EQUIPMENT, INSTRUMENTS, ANCILLARY EQUIPMENT AND DEVICES AND THE ANTICIPATED PENETRATION LOCATIONS WHERE CONDUITS EXIT/ENTER THE STRUCTURE. HOMERUNS MAY ALSO BE SHOWN FROM MISCELLANEOUS EQUIPMENT NOT SHOWN ON A ONE LINE OR RISER DIAGRAM.
 D. SITE PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS EXTERIOR TO STRUCTURES AND TO IDENTIFY THE SPECIFIC REQUIREMENTS OF THE UNDERGROUND CONDUITS OR DUCT BANKS, SITE PLANS SHOW THE GENERAL ROUTING OF UNDERGROUND CONDUITS AND DUCT BANKS WITH SECTIONS INDICATING THE CONDUIT SIZE, ARRANGEMENT AND CIRCUIT ROUTING.
 E. NOTE THAT CONDUIT SIZE WITHIN THE STRUCTURE IS INDICATED ON ONE-LINE DIAGRAM AND UNDERGROUND SIZE IS INDICATED ON DUCT BANK SECTIONS.

DATE: SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 9247-221208
 FILE NAME: E001NFLG.DWG
 SHEET NO. **E-1**

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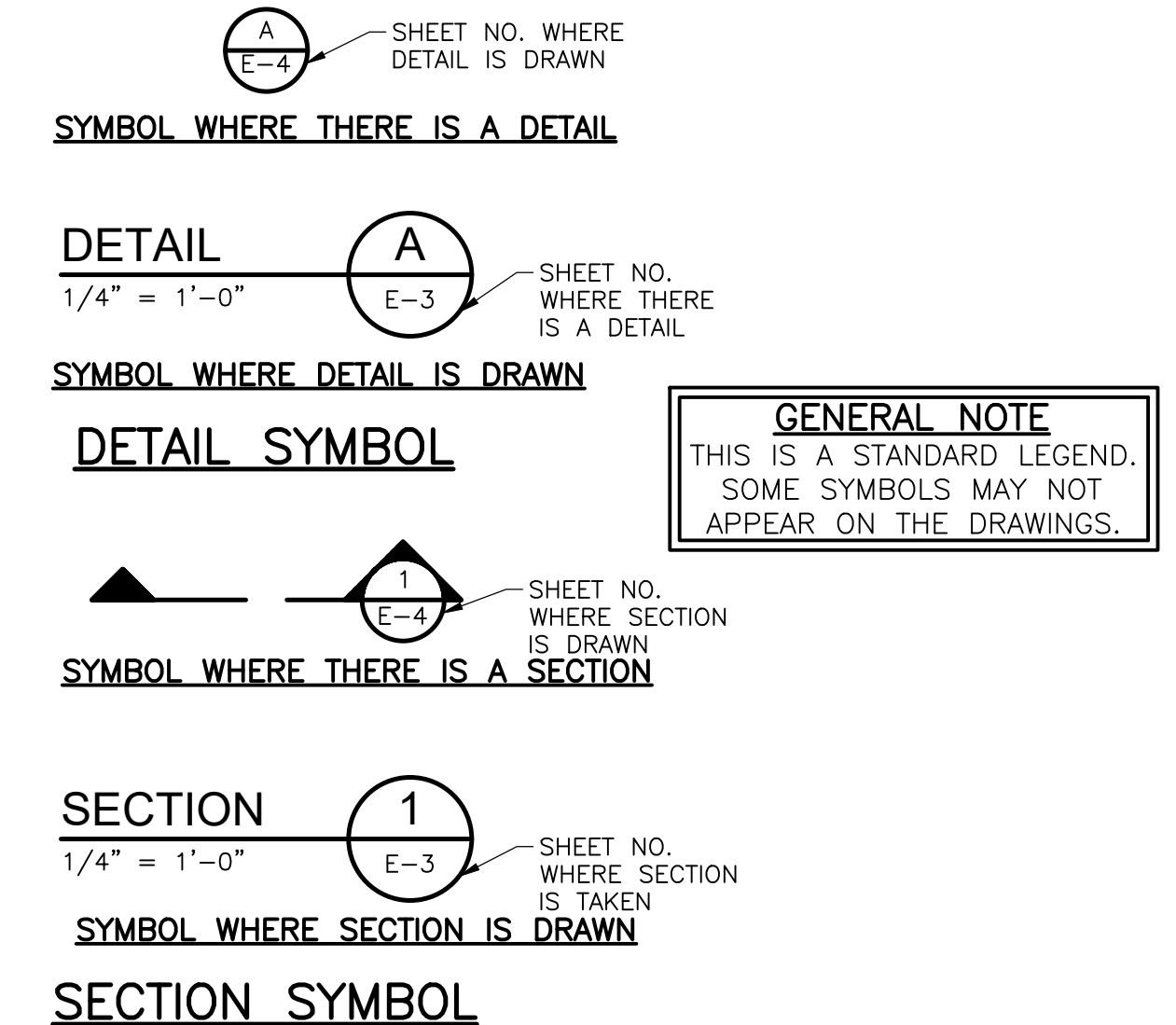
SYMBOL	DESCRIPTION
	LIGHTING FIXTURE "A" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "B" - CONTROLLED BY SWITCH "B" "3" - CIRCUIT NUMBER
	LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	WALL MOUNTED TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	CROSS HATCH INDICATES LIGHTING FIXTURE THAT IS UNSWITCHED AND SHALL REMAIN ON AT ALL TIMES. NOTATIONS SAME AS ABOVE.
	SHADED AREA INDICATES LIGHTING FIXTURE THAT IS EQUIPPED WITH EMERGENCY BACKUP POWER SOURCE. NOTATIONS SAME AS ABOVE.
	POLE MOUNTED AREA TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	POLE MOUNTED ROADWAY TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	EMERGENCY LIGHTING BATTERY UNIT WITH TWO LAMP HEADS "EM" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "3" - SUPERVISORY CIRCUIT * - FIXTURE TAG #
	REMOTE EMERGENCY ADJUSTABLE WALL LIGHTING FIXTURE WITH TWO LAMP HEADS "R-2" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) * - HOME RUN TO BATTERY UNIT INDICATED. CONDUIT SHALL BE 3/4" AND CONTAIN (2) NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND (1) NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE INDICATED.
	COMBINATION BATTERY UNIT AND EXIT SIGN. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN.
	CEILING MOUNTED EXIT SIGN, NOTATIONS SAME AS ABOVE. WHEN USED, ARROW INDICATES DIRECTION OF EGRESS. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN. (DOUBLE FACE DOUBLE CHEVRONS SHOWN)
	WALL MOUNTED EXIT SIGN, NOTATIONS SAME AS ABOVE. WHEN USED, ARROW INDICATES DIRECTION OF EGRESS. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN.
	REMOTE EMERGENCY CEILING LIGHTING FIXTURE. "RH-3" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "3" - SUPERVISORY CIRCUIT * - HOME RUN TO BATTERY UNIT INDICATED. CONDUIT SHALL BE 3/4" AND CONTAIN 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE INDICATED.
	HOME RUN TO DESIGNATED EQUIPMENT. BRANCH CIRCUIT CONDUIT WITH 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE NOTED. NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.
	CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING.
	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.
	CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.
	"X" INDICATES EXPLOSION PROOF CONDUIT SEAL FITTING.
	CONCRETE ENCASED DUCTBANK. WIDTH VARIES. SEE DUCTBANK SECTION/DETAILS FOR REQUIREMENTS AND WIDTH
	CONDUIT STUBBED OUT AND CAPPED
	NOTES A QUANTITY OF TWO (2) 3-INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR.
	NOTES A QUANTITY OF TWO INSTRUMENT CABLES. EACH CABLE TO CONSIST OF TWO NO. 16 AWG CONDUCTORS TWISTED TOGETHER AND COVERED WITH A METALLIC SHIELD AND AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
	SAME AS ABOVE EXCEPT CABLE TO CONSIST OF THREE NO. 16 AWG CONDUCTORS TWISTED, SHIELDED AND COVERED WITH AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
	THREE 4-INCH CONDUITS
	FLEXIBLE METAL CONDUIT "WHIP" (3/4" C., 2#12, 1#12G UNLESS OTHERWISE NOTED) FOR LIQUID TIGHT MOTOR CONNECTIONS
	"X" INDICATES CONDUIT SEAL FITTING IN OTHER THAN CODE REQUIRED LOCATIONS.
	INDICATES MOTOR STARTER AND/OR MOTOR CONTROL EQUIPMENT WITHIN THE ENCLOSURE.

SYMBOL	DESCRIPTION
	SINGLE POLE SWITCH "a" INDICATES FIXTURES CONTROLLED.
	DOUBLE POLE SWITCH "a" INDICATES FIXTURES CONTROLLED.
	THREE WAY SWITCH "c" INDICATES FIXTURES CONTROLLED.
	FOUR WAY SWITCH "a" INDICATES FIXTURES CONTROLLED.
	DIMMER SWITCH "a" INDICATES FIXTURES CONTROLLED
	SINGLE POLE SWITCH "OS" INDICATES A PASSIVE INFRARED OCCUPANCY SENSOR
	DOUBLE POLE SWITCH "OS" INDICATES PROGRAMMABLE OCCUPANCY SENSOR CAPABLE OF INBOARD/OUTBOARD SWITCHING
	SINGLE POLE SWITCH "DT" INDICATES DUAL TECHNOLOGY PROGRAMMABLE OCCUPANCY SENSOR CAPABLE OF SENSING MOTION AND SOUND
	LIGHTING CONTACTOR WITH NUMBER OF POLES AS INDICATED
	TIME SWITCH
	PUSH BUTTON STATION
	INDICATES ALL LIGHTING FIXTURES WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE TYPE "A" UNLESS OTHERWISE NOTED. SEE LIGHTING FIXTURE SCHEDULE FOR TYPES
	LIGHTING PANELBOARD (LP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	POWER PANELBOARD (PP-#) OR DISTRIBUTION PANELBOARD (DP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	LIGHTING CONTACTOR PANELBOARD (LCP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W * GFCI - GROUND FAULT CIRCUIT INTERRUPTER TYPE WP - WEATHERPROOF XP - EXPLOSION PROOF T - TRANSIENT VOLTAGE SURGE SUPPRESSOR IC - ISOLATED GROUND 4 - CIRCUIT NUMBER
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W MOUNTED ABOVE COUNTER-TOP OR 42" AFF * NOTATIONS SAME AS ABOVE
	SPECIAL PURPOSE RECEPTACLE * - VOLT RATING "3" - NUMBER OF POLES "60" - AMPERE RATING "4W" - 4 WIRES IN ADDITION TO GROUND
	MULTI-OUTLET ASSEMBLY, SYMBOL DENOTES RECEPTACLE TYPE
	FLUSH FLOOR OUTLET BOX WITH TYPE OUTLET INDICATED
	UNDER FLOOR DUCT SYSTEM WITH TYPE OUTLETS INDICATED
	THREE CELL UNDER FLOOR DUCT SYSTEM JUNCTION BOX
	JUNCTION BOX
	PULL BOX
	TERMINAL CABINET
	OCCUPANCY SENSOR
	PHOTOCELL
	EMERGENCY EYEWASH/SHOWER ALARM STATION WITH FLOW SWITCH(ES)
	INDICATED EQUIPMENT AND MATERIALS TO BE DEMOLISHED
	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 12 CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION (OR GASKETED AND SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE OF NEMA 4X CONSTRUCTION (OR CORROSION RESISTANT CONSTRUCTION SUITABLE FOR USE IN A WET LOCATION WHERE NEMA STANDARDS DO NOT APPLY) UNLESS OTHERWISE NOTED.
	INDICATES THAT ALL ELECTRICAL EQUIPMENT AND MATERIALS INSTALLED WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL CONFORM TO N.E.C. REQUIREMENTS FOR THE HAZARDOUS AREA CLASSIFICATION SHOWN.

SYMBOL	DESCRIPTION
	GROUND SYSTEM GRID OR LOOP, 36" BELOW FINISHED GRADE UNLESS OTHERWISE NOTED.
	EXOOTHERMIC WELD CONNECTION
	3/4" x 10'-0" GROUND ROD. UNLESS SPECIFIED OTHERWISE.
	GROUND ROD TEST WELL STATION (SEE DETAIL SHEET FOR REQUIREMENTS)
COMMUNICATION SYSTEMS	
	TELEPHONE OUTLET FOR DESK TYPE HANDSET K = KEY SYSTEM
	TELEPHONE OUTLET FOR WALL TYPE HANDSET (MOUNT UP 4'-6") K = KEY SYSTEM
	PAGE/PARTY TELEPHONE OUTLET FOR DESK TYPE HANDSET
	PAGE/PARTY TELEPHONE OUTLET FOR WALL TYPE HANDSET, MOUNT UP 4'-6"
	PAGING SPEAKER, WALL MOUNTED H = HORN TYPE W = WIDE ANGLE TYPE
	PAGING SPEAKER, WALL MOUNTED, BI-DIRECTIONAL, HORN TYPE W = WIDE ANGLE TYPE
	PAGING SPEAKER, FLUSH MOUNTED CEILING TYPE
	PAGING SPEAKER, SURFACE MOUNTED CEILING TYPE
	REMOTE WALL MOUNTED VOLUME CONTROL FOR CEILING SPEAKER, MOUNT UP 5'-0"
	PAGING SPEAKER AMPLIFIER ASSEMBLY
	TELEPHONE CABINET OR BACKBOARD AS NOTED
	"C" - DATA INPUT/OUTPUT CABLE OUTLET "P" - PROCESS COMPUTER SYSTEM (CAT6 RJ-45 JACK)
	GAS DETECTOR/VENTILATION FAILURE ALARM, # INDICATES TYPE OF UNIT. 1 = MASTER, 2 = REMOTE
	GAS DETECTION/VENTILATION FAILURE WEATHERPROOF DUAL-LITE BEACON MOUNT TOP OF DEVICE UP 6'-8" A.F.F.
	GAS DETECTION/VENTILATION FAILURE HORN/STROBE MOUNT TOP OF DEVICE UP 6'-8" A.F.F.
	GAS DETECTION/VENTILATION FAILURE HORN, MOUNT TOP OF DEVICE UP 6'-8" A.F.F.
	GAS DETECTION/VENTILATION FAILURE STROBE, MOUNT TOP OF DEVICE UP 6'-8" A.F.F.
SECURITY SYSTEMS	
	SECURITY ALARM CONTROL PANEL
	SECURITY ALARM DOOR SWITCH
	SECURITY ALARM KEY PAD
	SECURITY SYSTEM CARD ACCESS READER
	SECURITY ALARM WINDOW SWITCH
	SECURITY ALARM MOTION DETECTOR
	CLOSED CIRCUIT TV CAMERA
	PAN, TILT, ZOOM CAMERA LENS CONTROLS
	GLASS BREAK DETECTOR
FIRE ALARM SYSTEMS	
	FIRE ALARM HEAT DETECTOR 135 FIXED TEMPERATURE UNLESS OTHERWISE NOTED. "200" - 200 FIXED TEMPERATURE "R" - FIXED TEMPERATURE RATE-OF-RISE TYPE
	FIRE ALARM SMOKE DETECTOR PHOTOELECTRIC TYPE UNLESS OTHERWISE NOTED. "I" - IONIZATION TYPE.
	FIRE ALARM DUCT SMOKE DETECTOR
	FIRE ALARM CONTROL PANEL
	FIRE ALARM VENTILATION PANEL WITH GRAPHIC PANEL
	REMOTE FIRE ALARM ANNUNCIATOR PANEL

SYMBOL	DESCRIPTION
	FIRE ALARM MASTER BOX
	FIRE ALARM HORN, MOUNT UP 7'-6"
	FIRE ALARM STROBE, MOUNT UP 6'-8" 15 = CANDELA RATING
	FIRE ALARM HORN AND STROBE LIGHT COMBINATION, MOUNT UP 6'-8" 15 = CANDELA RATING
	FIRE ALARM MANUAL PULL STATION, MOUNT UP 4'-0"
	SPRINKLER VALVE SUPERVISORY SWITCH
	SPRINKLER FLOW ALARM SWITCH
	FIRE ALARM BELL
	WEATHERPROOF HI-INTENSITY FIRE ALARM STROBE LIGHT WITH HORN
	PASSIVE INFRARED DETECTOR
	SMOKE BEAM DETECTOR (RECEIVER)
	SMOKE BEAM DETECTOR (TRANSMITTER)
	FIRE ALARM SMOKE DETECTOR REMOTE INDICATOR AND TEST SWITCH

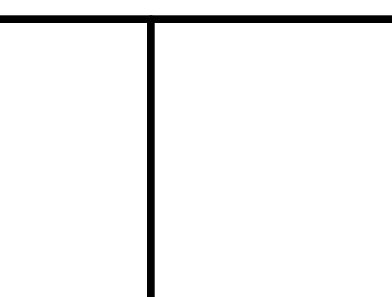
ABBREVIATIONS	
A	AMPS
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
AIC	AMPERE INTERRUPTING CAPACITY
AMP	AMPERE
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CGD	COMBUSTIBLE GAS DETECTOR
CKT	CIRCUIT
CLB	CURRENT LIMITING BREAKER
CLF	CURRENT LIMITING FUSE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH/CONTROL STATION
CT	CURRENT TRANSFORMER
CU	COPPER
CWS	CONDUIT WALL SEAL
DC	DIRECT CURRENT
DIA	DIAMETER
DMU	DIGITAL METERING UNIT
DN	DOWN
EC	EMPTY CONDUIT
ELEC	ELECTRICAL
ELEV	ELEVATION



GENERAL NOTE
THIS IS A STANDARD LEGEND.
SOME SYMBOLS MAY NOT
APPEAR ON THE DRAWINGS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
DRAWN BY: R. RUCK
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: E. GACHARICH
APPROVED BY: S. PERRY
DATE: MAY 2022



ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE
DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

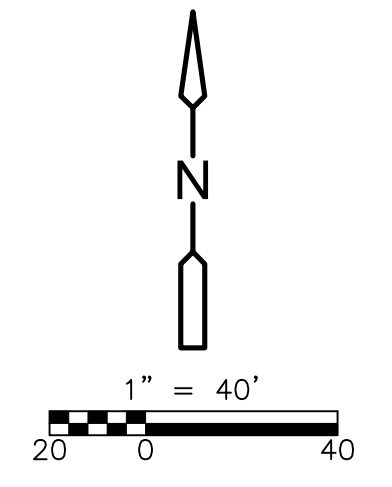
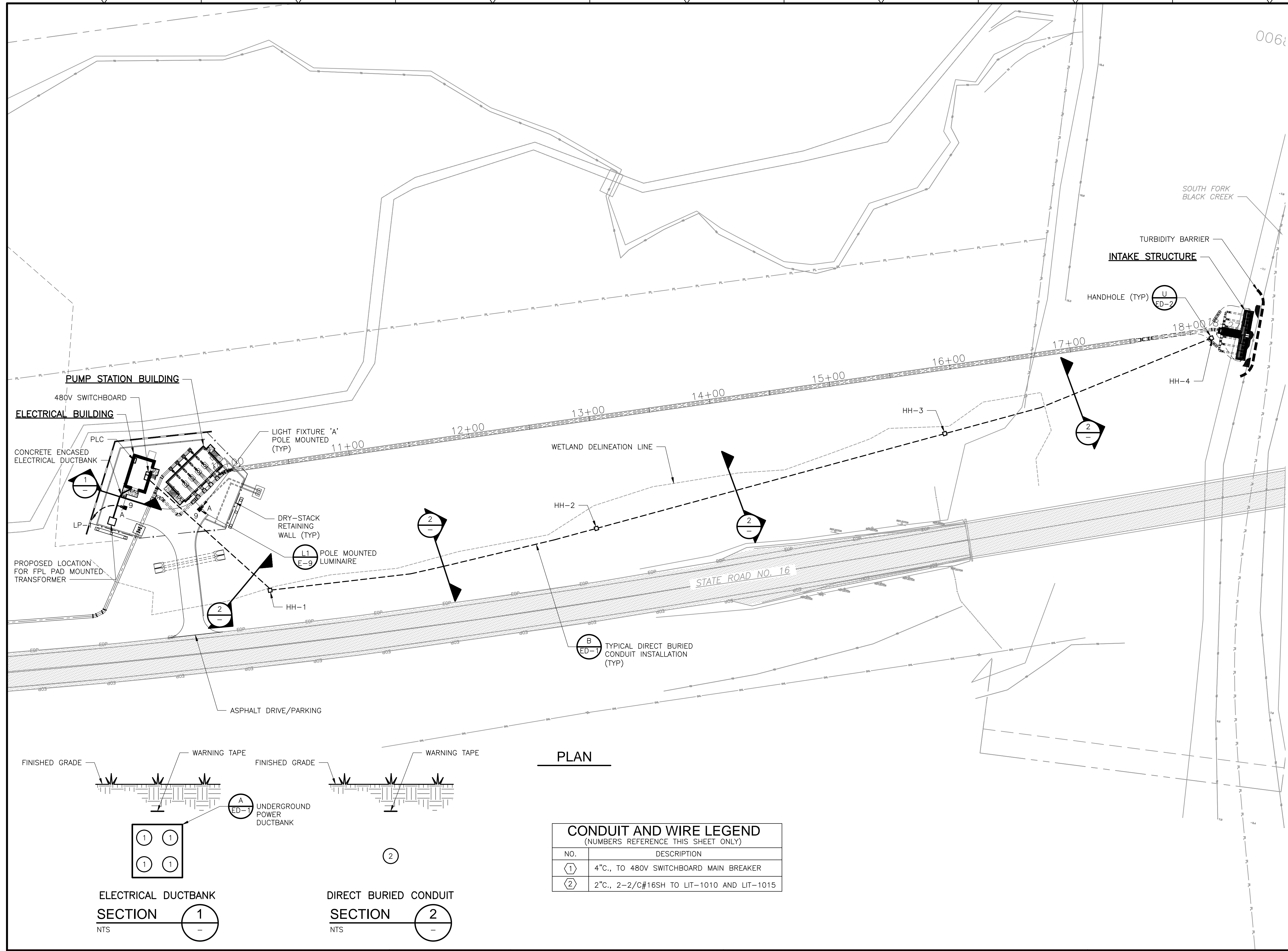
ELECTRICAL LEGEND II

DATE: SPENCER J. PERRY JR
PE NO. 62587

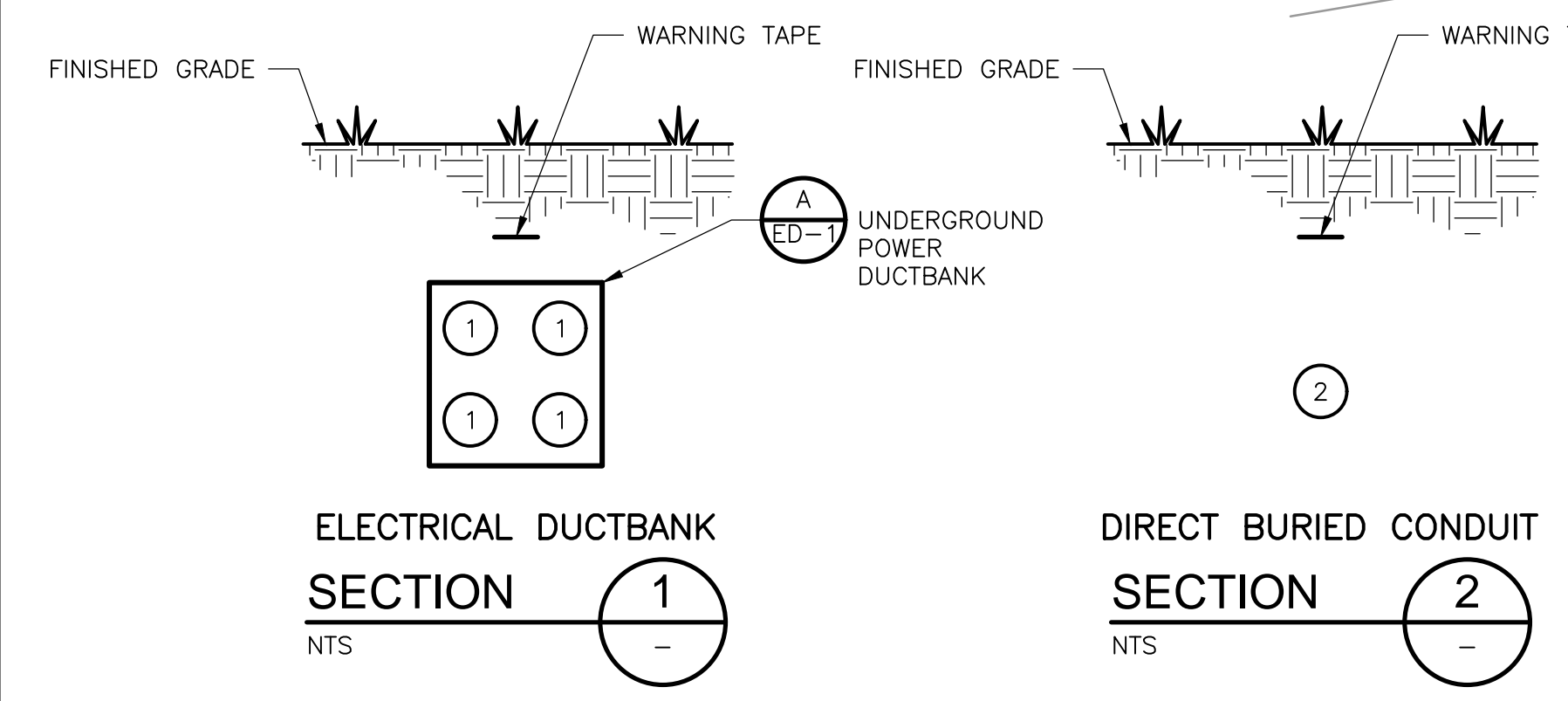
PROJECT NO. 9247-221208
FILE NAME: E002NFLG.DWG
SHEET NO. E-2

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XREFS: [ESI_BpBpfr_2008-01-08 COMPOSITE, CDM-2234, CEP000SS, CWP001ST, ANZ000PS - Floor Plan - 2D, WTP0001, ANZ000EB - Floor Plan - 2D, WTP0000, CEP000ST, MW000S, SWZ000S, EWP000ST] Images: []
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- GENERAL NOTES:**
- A. DO NOT SCALE THE ELECTRICAL DRAWINGS REFER TO THE CIVIL, MECHANICAL, STRUCTURAL DRAWINGS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT.
 - B. ALL WORK SHALL COMPLY WITH NEC AND LOCAL CODES.
 - C. CONDUCTORS SHALL NOT BE SPliced EXCEPT AS NOTED IN SPECS.
 - D. ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250.122 OF THE NEC (UNLESS OTHERWISE NOTED).
 - E. CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND UTILITIES, PIPING, ETC. REROUTE NEW CONDUITS, DUCTBANK, MANHOLES, PULL BOXES, ETC., AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
 - F. DO NOT INSTALL ANY CONDUITS, DUCTBANKS, PULLBOXES, MANHOLES, ETC. IN THE AREAS DESIGNATED FOR FUTURE STRUCTURES.
 - G. CONDUITS EMBEDDED IN CONCRETE SLABS SHALL MEET THE INSTALLATION AND SPACING REQUIREMENTS SPECIFIED IN DIVISION 3 AND AS SHOWN ON THE STRUCTURAL DRAWINGS.
 - H. REFER TO THE STRUCTURAL DRAWING DETAILS FOR EQUIPMENT PAD REQUIREMENTS.
 - I. REFER TO STRUCTURAL DRAWING S-1 FOR THE PROJECT WIND LOADS CRITERIA.
 - J. REFER TO SPECIFICATION SECTION 16502 FOR LIGHTNING PROTECTION SYSTEM REQUIREMENTS.



CONDUIT AND WIRE LEGEND
(NUMBERS REFERENCE THIS SHEET ONLY)

NO.	DESCRIPTION
①	4" C., TO 480V SWITCHBOARD MAIN BREAKER
②	2" C., 2-2/C#16SH TO LIT-1010 AND LIT-1015

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
 DRAWN BY: R. RUCK
 SHEET CHK'D BY: S. PERRY
 CROSS CHK'D BY: E. GACHARICH
 APPROVED BY: S. PERRY
 DATE: MAY 2022

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE
DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

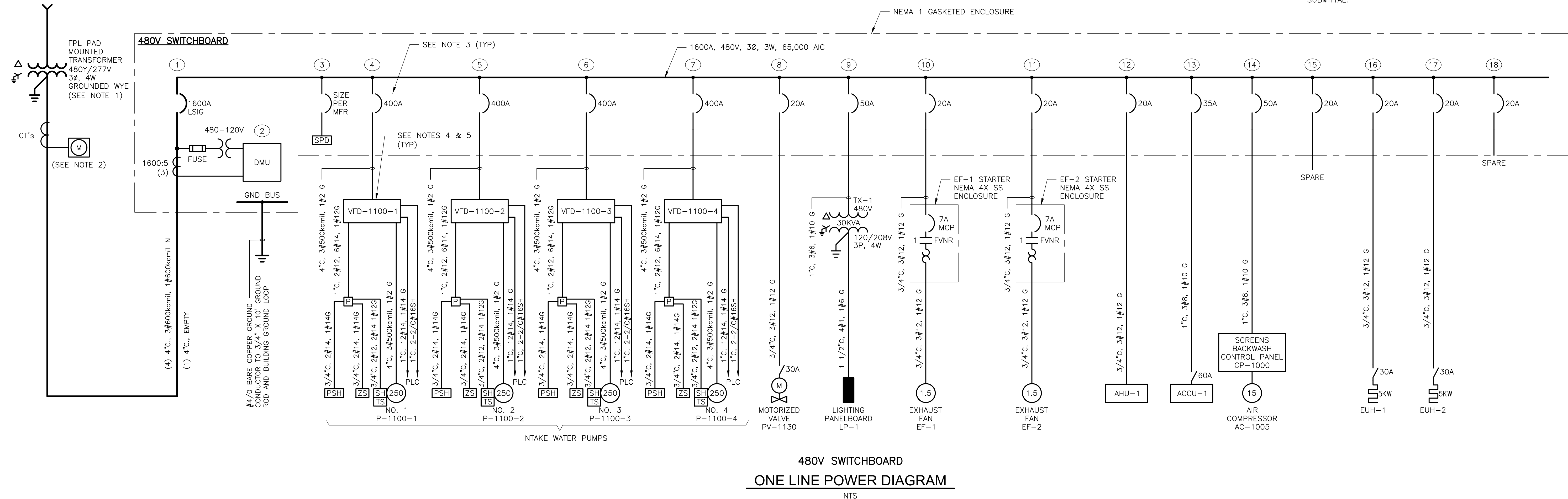
ELECTRICAL SITE PLAN

DATE: SPENCER J. PERRY JR
 PE NO. 62587

PROJECT NO. 9247-221208
 FILE NAME: E003STPL.DWG
 SHEET NO.
E-3

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- NOTES:**
1. THE ESTIMATED MAXIMUM AVAILABLE FAULT CURRENT AT THE SECONDARY TERMINALS OF THE TRANSFORMER IS 38,600 AMPS. BASED ON 1500 KVA, 5.75% Z TRANSFORMER.
 2. PROVIDE METER SOCKET AND PEDESTAL PER FPL REQUIREMENTS FOR ELECTRIC SERVICE.
 3. ALL CIRCUIT BREAKERS RATED 400 AMP AND LARGER SHALL BE 100% RATED.
 4. THE VFD SHALL UTILIZE ACTIVE FRONT END (AFE) DESIGN AND EQUIPPED WITH DV/DT OUTPUT FILTER.
 5. THE VFD SHALL BE SIZED FOR NOT LESS THAN THE MOTOR FULL LOAD AMPERES. COORDINATE WITH THE PUMP/MOTOR SHOP DRAWING SUBMITTAL.



480V SWITCHBOARD
ONE LINE POWER DIAGRAM
 NTS

480V SWITCHBOARD CONNECTED LOAD SCHEDULE	
DESCRIPTION	LOAD (AMPERES)
INTAKE PUMP NO. 1	302.0
INTAKE PUMP NO. 2	302.0
INTAKE PUMP NO. 3	302.0
INTAKE PUMP NO. 4	302.0
MOTORIZED VALVE PV-1130	2.1
LIGHTING PANELBOARD LP-1	36.1
EXHAUST FAN EF-1	3.0
EXHAUST FAN EF-2	3.0
AHU-1	15.4
ACCU-1	22.0
AIR COMPRESSOR	21.0
EUH-1	6.0
EUH-2	6.0
TOTAL CONNECTED LOAD (AMPERES @ 480V, 3-PHASE) =	1322.6

NOTE:
THREE-PHASE AC MOTOR FULL LOAD CURRENTS PER NEC TABLE 430.250.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
 DRAWN BY: R. RUCK
 SHEET CHK'D BY: S. PERRY
 CROSS CHK'D BY: E. GACHARICH
 APPROVED BY: S. PERRY
 DATE: MAY 2022



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 Jacksonville, FL 32256
 Tel: (904) 731-7109
 FL COA No. EB-0000020

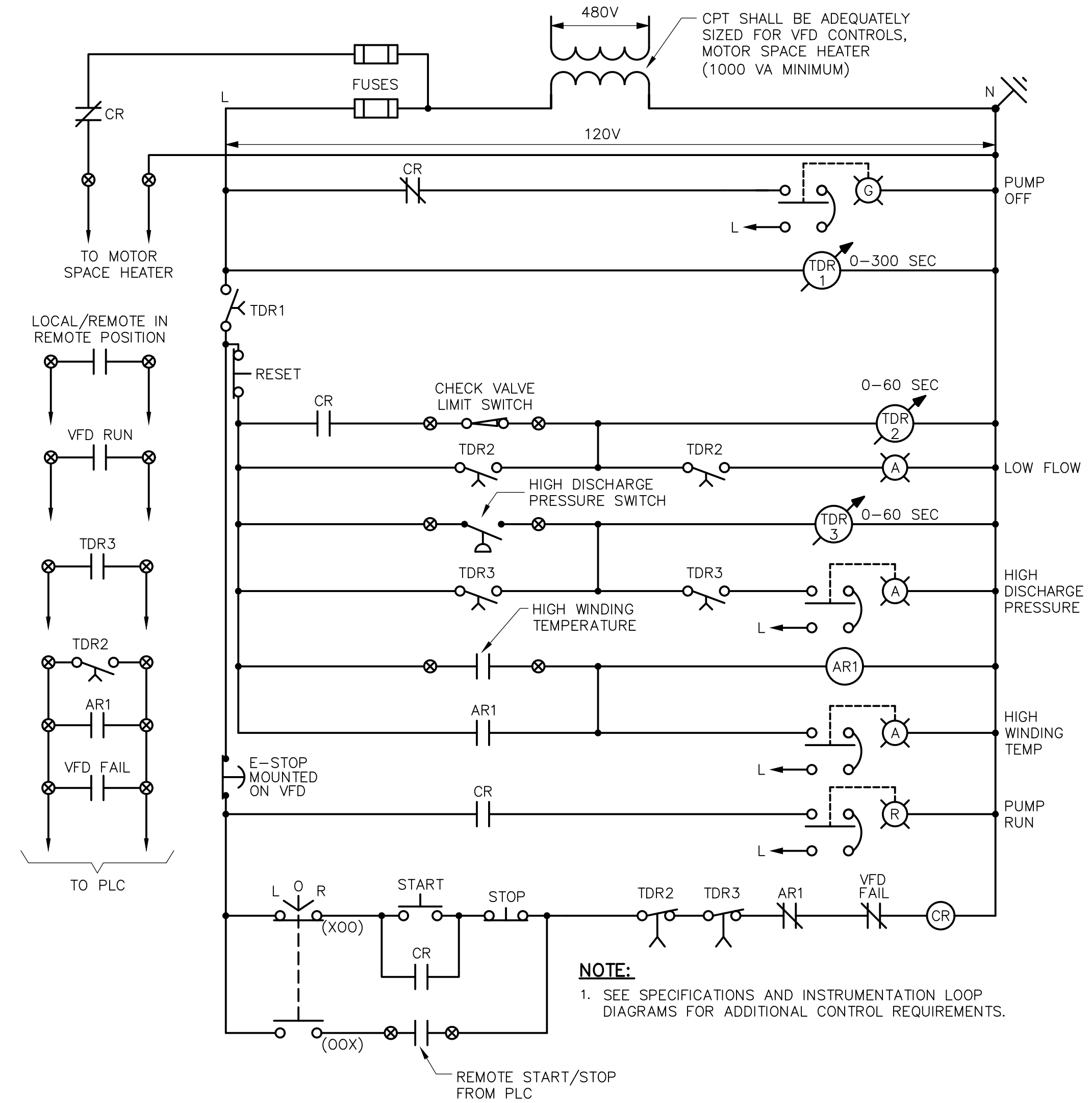
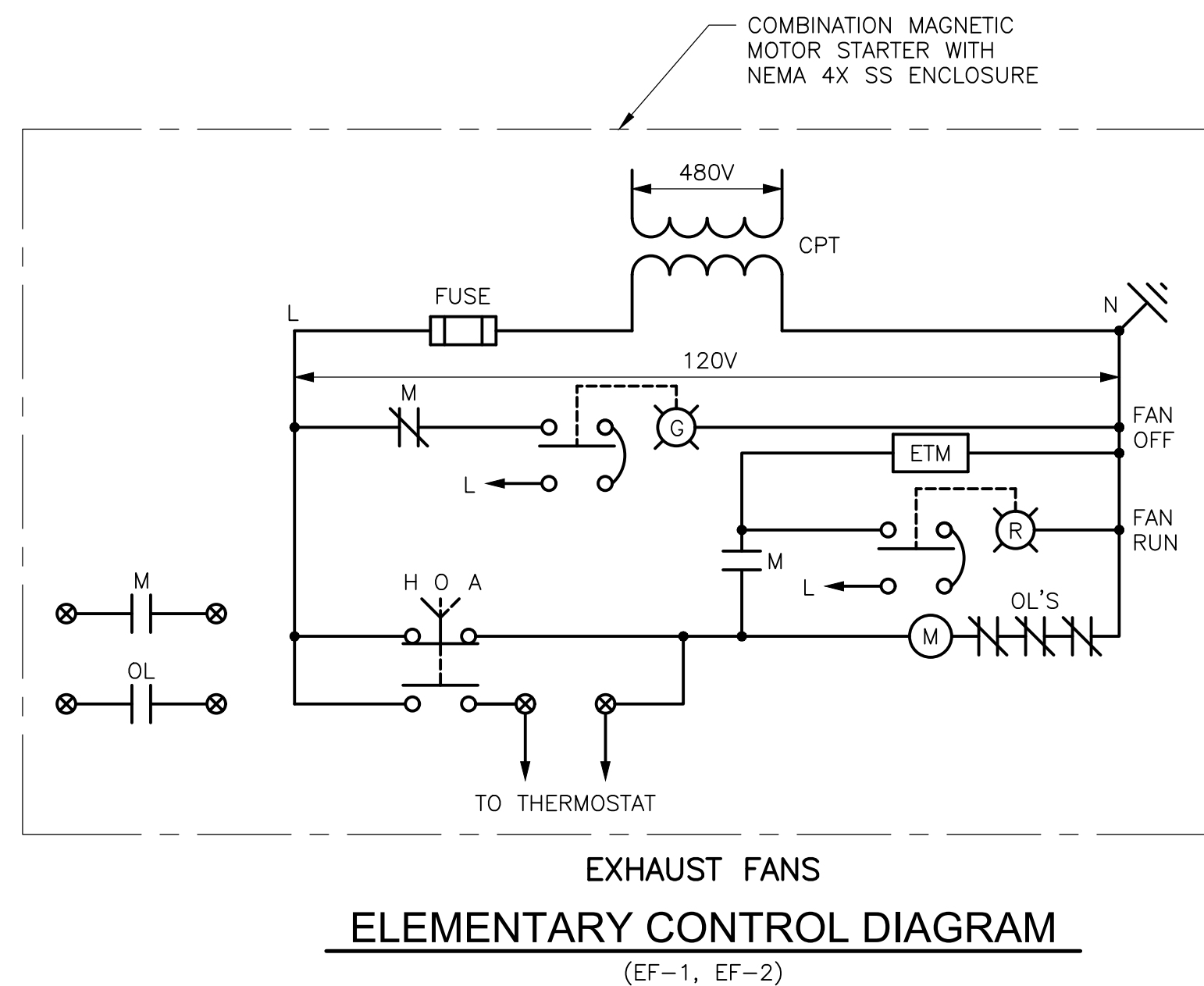
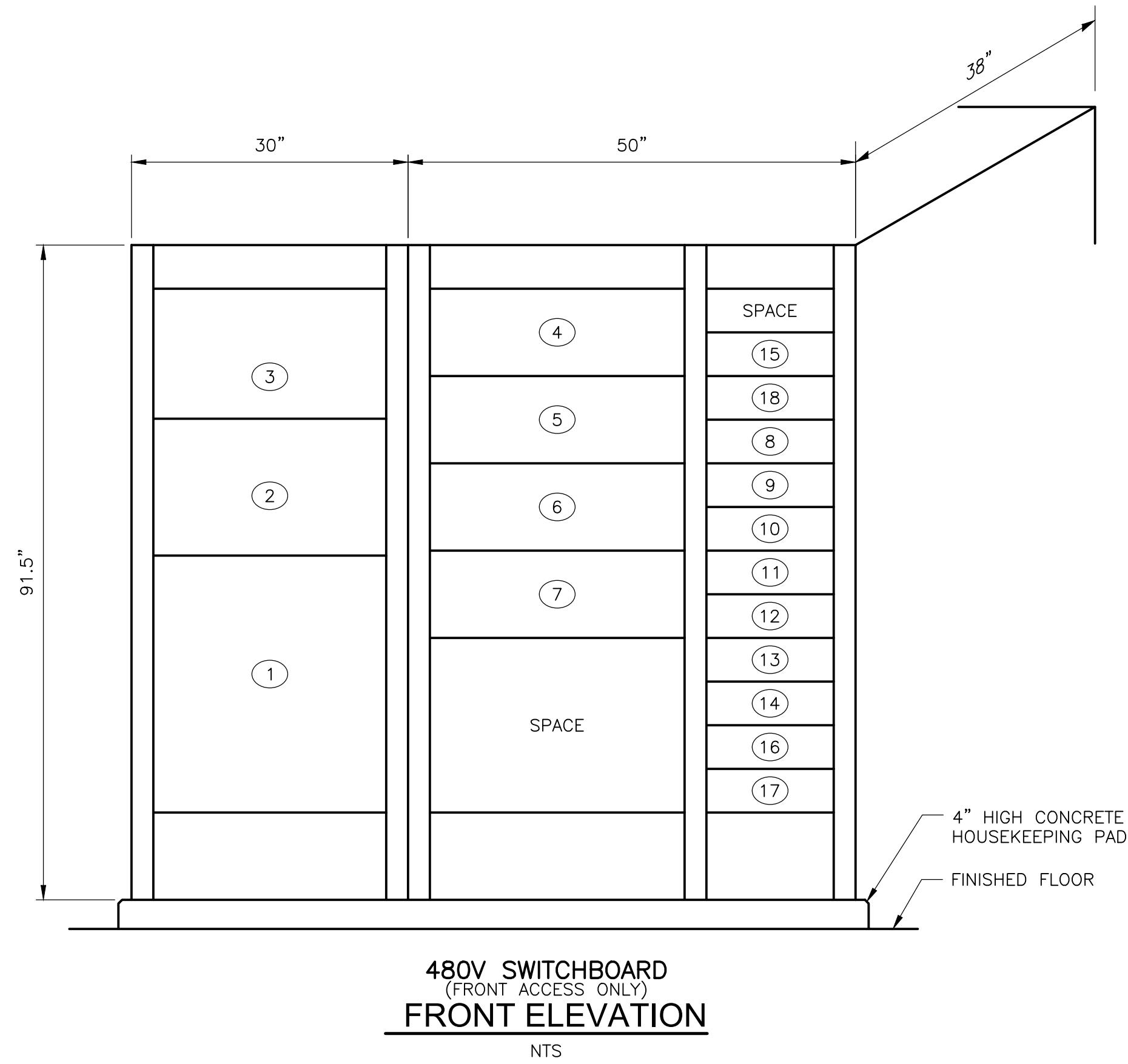
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

480V SWITCHBOARD
ONE LINE POWER DIAGRAM

DATE:
 SPENCER J. PERRY JR
 PE NO. 62587

PROJECT NO. 9247-221208
 FILE NAME: E004NFOL.DWG
 SHEET NO.
E-4

XREFS: [CDMS_2234] Images: []
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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
 DRAWN BY: R. RUCK
 SHEET CHK'D BY: S. PERRY
 CROSS CHK'D BY: E. GACHARICH
 APPROVED BY: S. PERRY
 DATE: MAY 2022

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 FL COA No. EB-0000020

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

480V SWITCHBOARD
 FRONT ELEVATION AND
 ELEMENTARY CONTROL DIAGRAMS

DATE:
 SPENCER J. PERRY JR
 PE NO. 62587

PROJECT NO. 9247-221208
 FILE NAME: E005NFOL.DWG

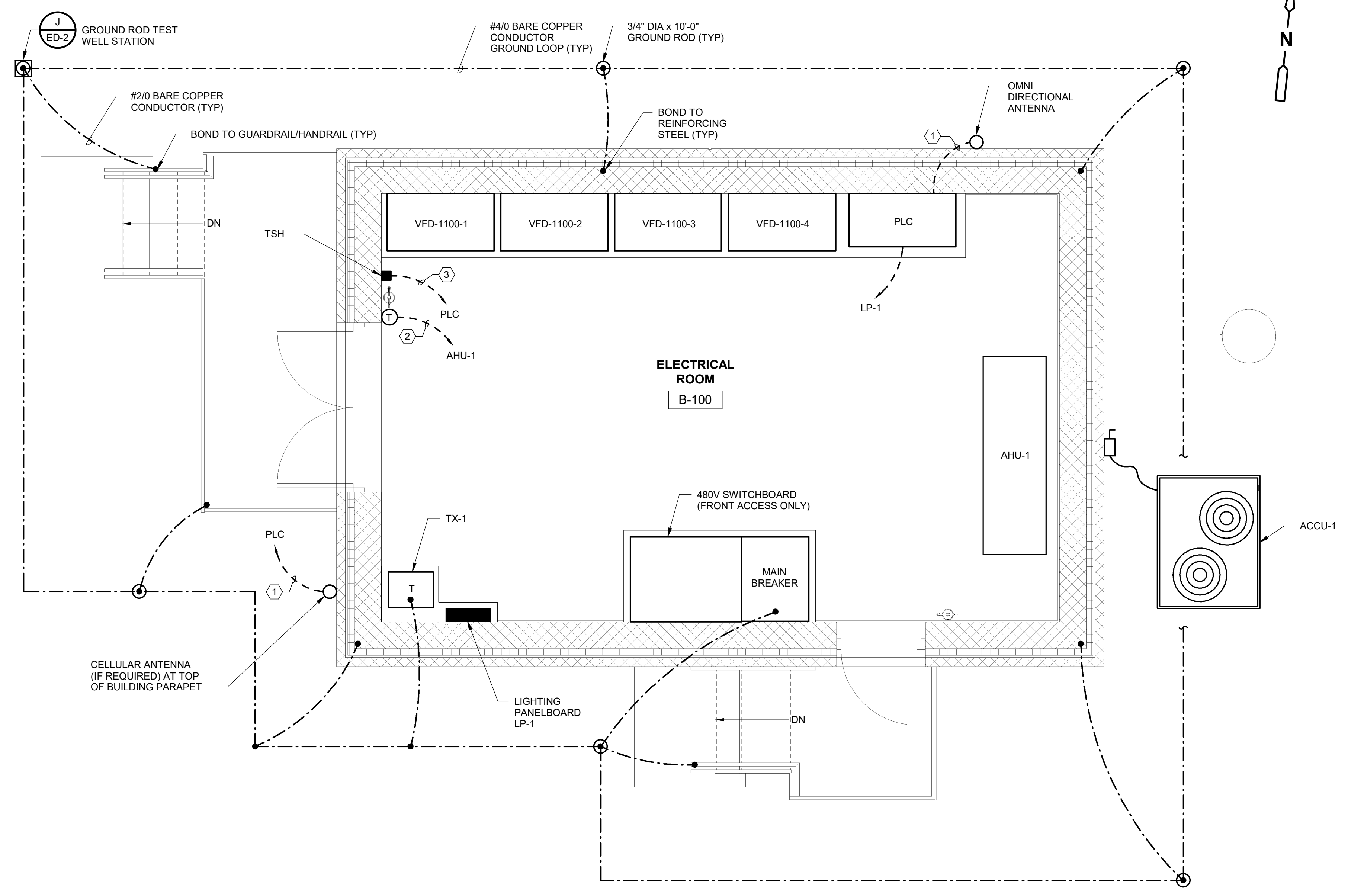
SHEET NO.

E-5

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CONDUIT AND WIRE LEGEND (NUMBERS REFERENCE THIS SHEET ONLY)	
NO.	DESCRIPTION
①	1" C., W/ ANTENNA CABLE, 1#12G
②	3/4" C., 2#14, 1#12G
③	3/4" C., 2#14, 1#14G



POWER PLAN
3/8" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
 DRAWN BY: R. RUCK
 SHEET CHKD BY: J. SANCHEZ
 CROSS CHKD BY: E. GACHARICH
 APPROVED BY: S. PERRY
 DATE: MAY 2022

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 8381 Dix Ellis Trail, Suite 400
 Jacksonville, FL 32256
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 FLA COA No. EB-0000020

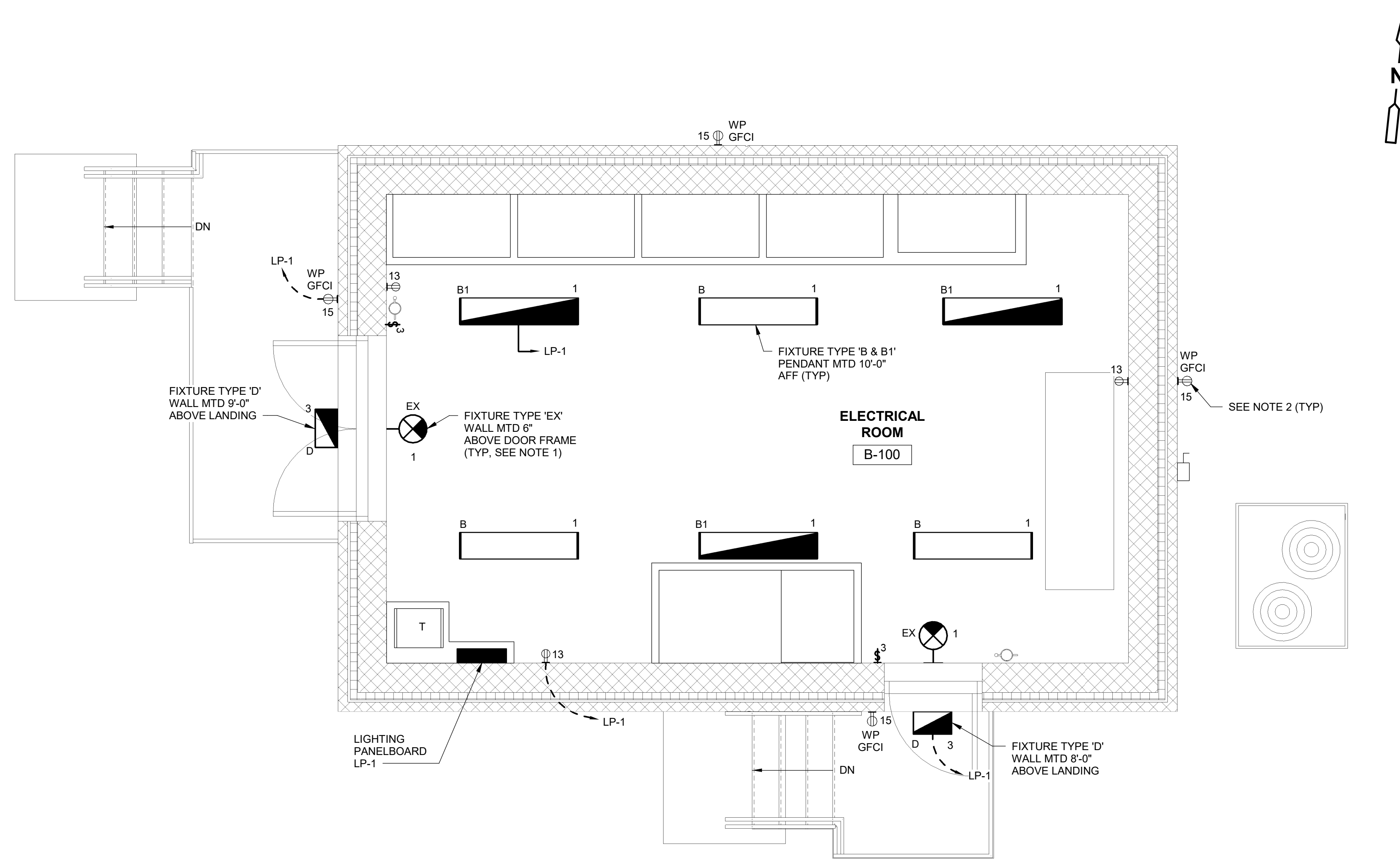
ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

ELECTRICAL BUILDING
 POWER PLAN

DATE: SPENCER J. PERRY JR
 PE NO. 62587
 PROJECT NO. 9247-221208
 FILE NAME: EW2000EB.RVT
 SHEET NO.
E-6

NOTES:

- EXIT SIGNS SHALL BE WIRED TO THE NORMAL LIGHTING CIRCUIT OF THE ROOM IT SERVES AND TO THE LINE-SIDE OF THE LIGHT SWITCH.
- ALL RECEPTACLES LOCATED OUTDOORS OR IN AN AREA DESIGNATED AS "WET" SHALL BE PROVIDED WITH A WEATHERPROOF WHILE-IN-USE COVER.



LIGHTING PLAN
3/8" = 1'-0"

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REV. NO.	DATE	DRWN	CHKD	REMARKS

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 DRAWN BY: R. RUCK
 SHEET CHKD BY: J. SANCHEZ
 CROSS CHKD BY: E. GACHARICH
 APPROVED BY: S. PERRY
 DATE: MAY 2022

CDM Smith
 8381 Dix Ellis Trail, Suite 400
 Jacksonville, FL 32256
 Tel: (904) 731-7109
 FLA COA No. EB-0000020

ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

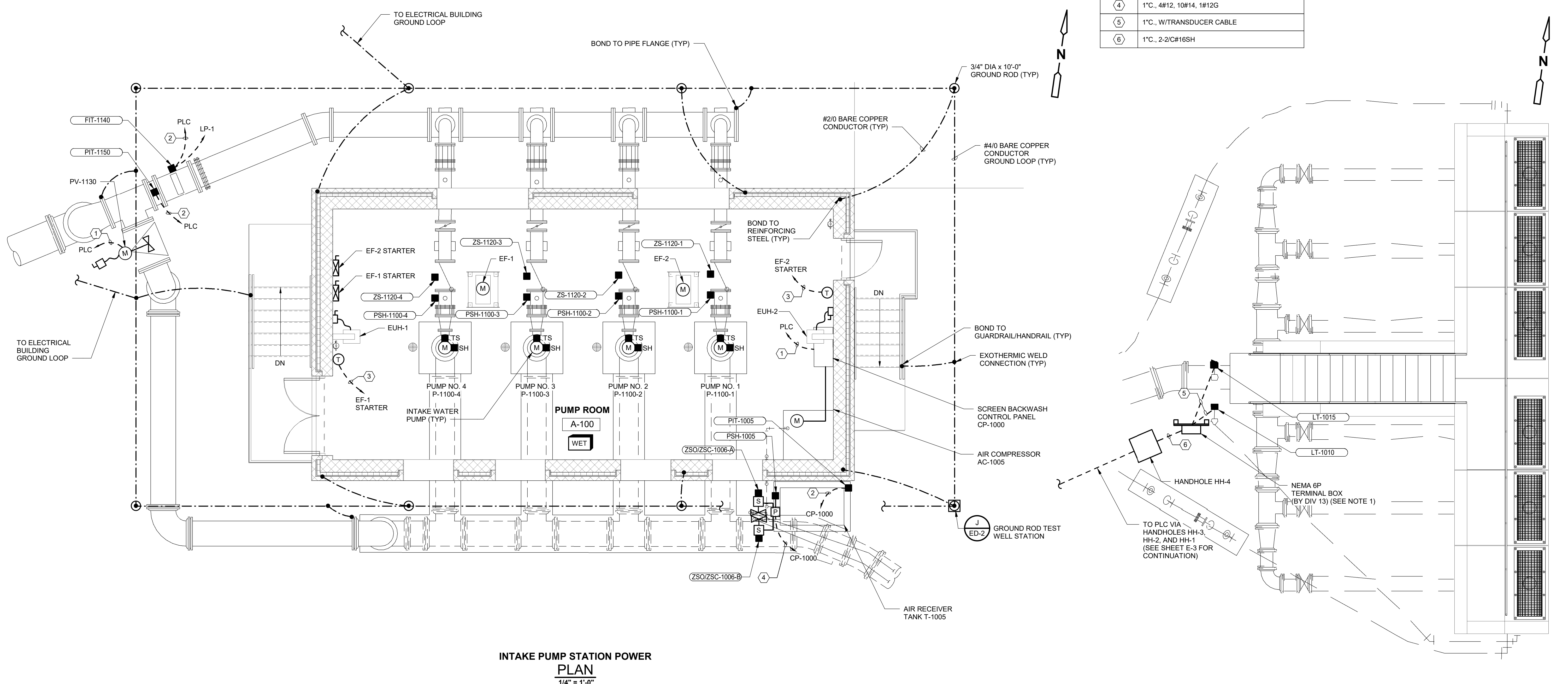
ELECTRICAL BUILDING
 LIGHTING PLAN

DATE: SPENCER J. PERRY JR PE NO. 62587
PROJECT NO. 9247-221208 FILE NAME: EW2000EB.RVT
SHEET NO. E-7

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CONDUIT AND WIRE LEGEND (NUMBERS REFERENCE THIS SHEET ONLY)	
NO.	DESCRIPTION
①	1" C., 14#14, 1#14G
②	3/4" C., 1-2/C#16SH
③	3/4" C., 2#14, 1#12G
④	1" C., 4#12, 10#14, 1#12G
⑤	1" C., W/TRANSDUCER CABLE
⑥	1" C., 2-2/C#16SH

NOTE:
1. THE CENTERLINE OF THE TERMINAL BOX SHALL BE 6-FT ABOVE FINISHED GRADE.



INTAKE PUMP STATION POWER PLAN
1/4" = 1'-0"

INTAKE STRUCTURE POWER PLAN
1/4" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
 DRAWN BY: R. RUCK
 SHEET CHKD BY: S. PERRY
 CROSS CHKD BY: E. GACHARICH
 APPROVED BY: S. PERRY
 DATE: MAY 2022



ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

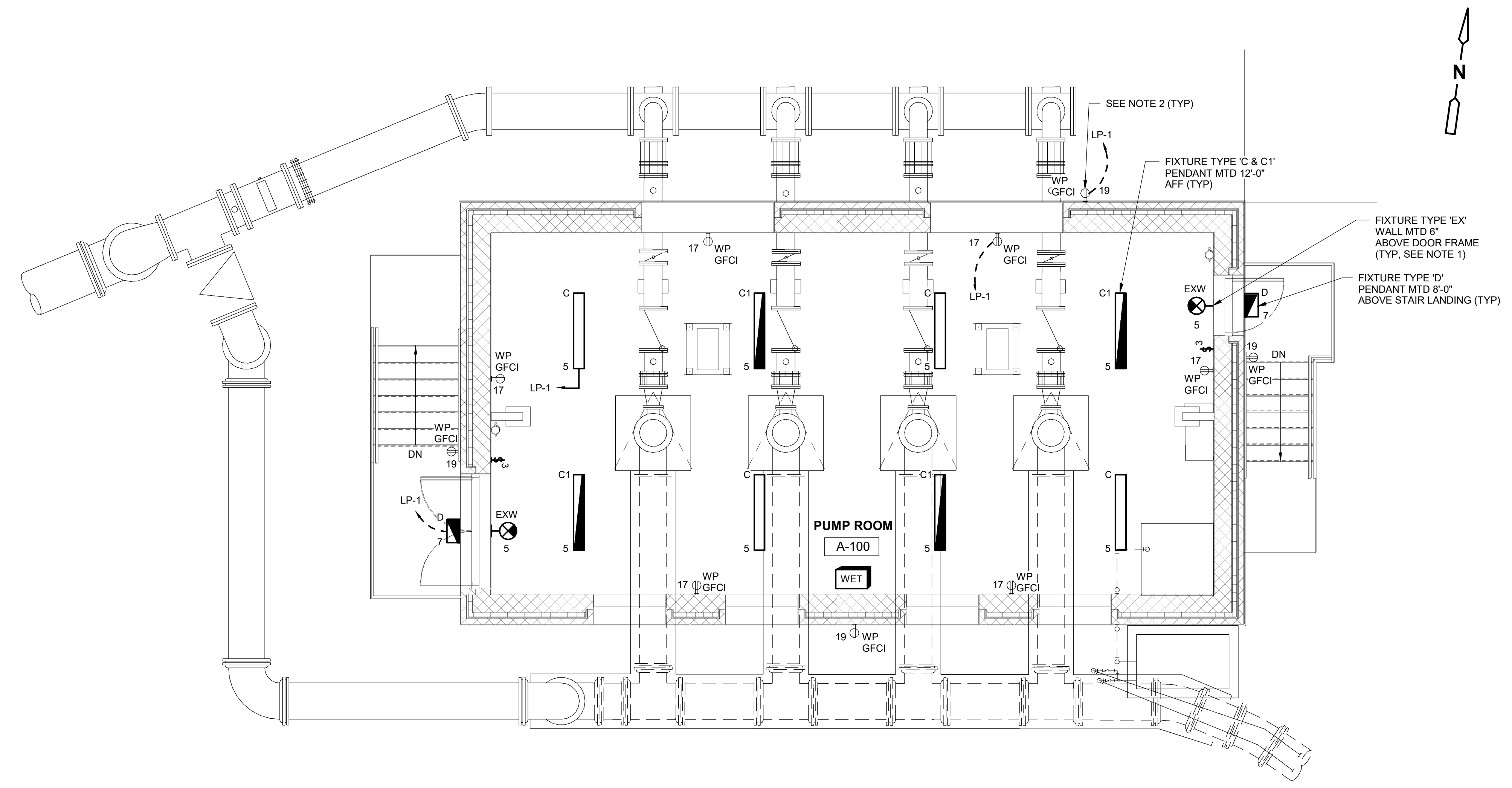
INTAKE PUMP STATION AND INTAKE STRUCTURE POWER PLANS

DATE: SPENCER J. PERRY JR
 PE NO. 62587
 PROJECT NO. 9247-221208
 FILE NAME: EWZ000PS.RVT
 SHEET NO. E-8

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NOTES:

1. EXIT SIGNS SHALL BE WIRED TO THE NORMAL LIGHTING CIRCUIT OF THE ROOM IT SERVES AND TO THE LINE-SIDE OF THE LIGHT SWITCH.
2. ALL RECEPTACLES LOCATED OUTDOORS OR IN AN AREA DESIGNATED AS "WET" SHALL BE PROVIDED WITH A WEATHERPROOF WHILE-IN-USE COVER.



INTAKE PUMP STATION LIGHTING
PLAN
 1/4" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
 DRAWN BY: R. RUCK
 SHEET CHKD BY: J. SANCHEZ
 CROSS CHKD BY: S. PERRY
 APPROVED BY: S. PERRY
 DATE: MAY 2022



ST. JOHN'S RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

INTAKE PUMP STATION
 LIGHTING PLAN

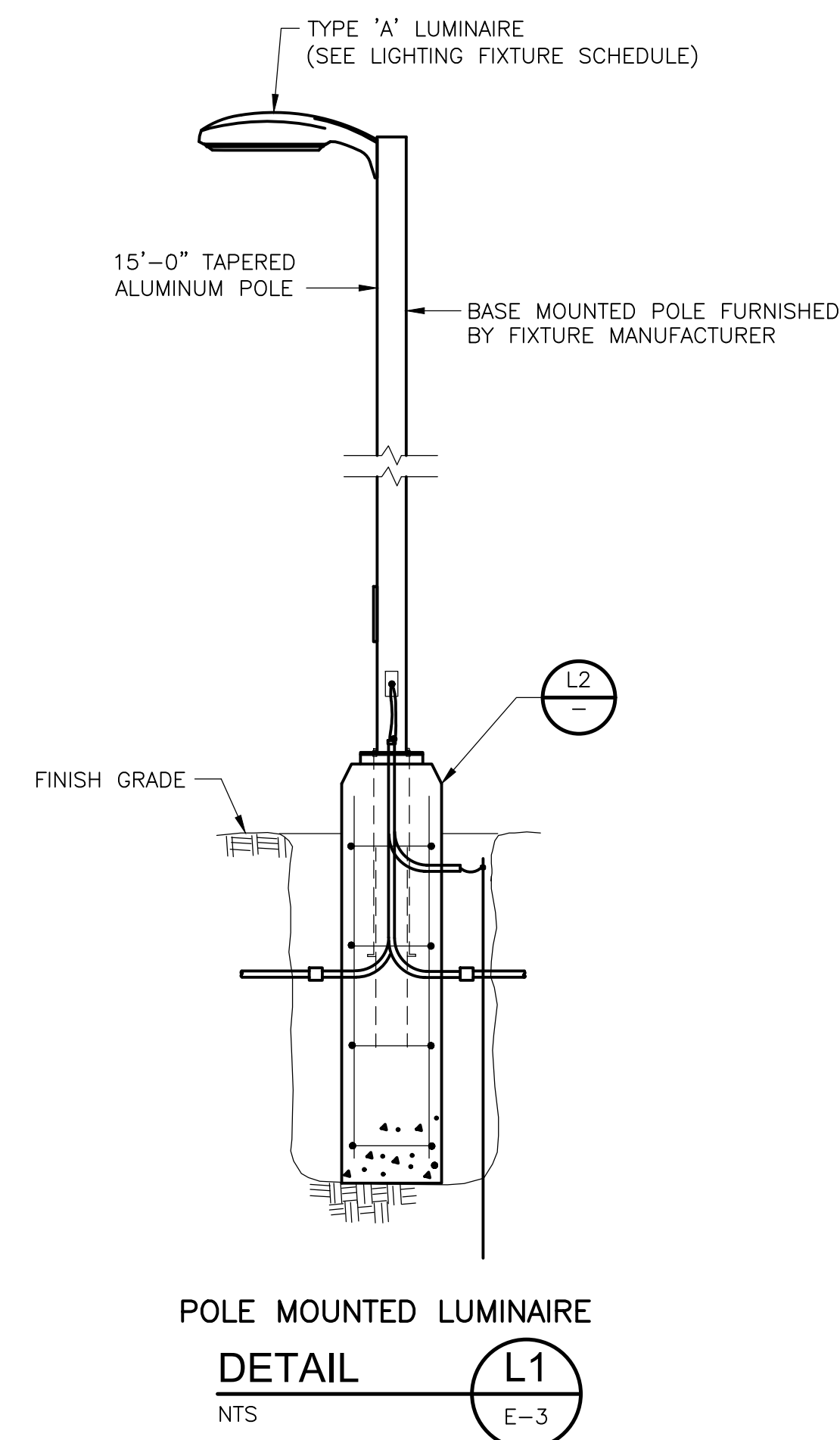
DATE: SPENCER J. PERRY JR
 PE NO. 62587
 PROJECT NO. 9247-221208
 FILE NAME: EW2000PS.RVT
 SHEET NO.
E-9

LIGHTING FIXTURE SCHEDULE

TYPE	WATT	DESCRIPTION	MFR (OR APPROVED EQUAL)
A	69	POLE MOUNTED LED LIGHT FIXTURE; 64 LED's (9,111 LUMENS, 148 LUMENS PER WATT); DIE CAST ALUMINUM HOUSING; STANDARD 9" ARM ATTACHED TO MAIN LUMINAIRE HOUSING; IP66 RATING; 3G VIBRATION RATING; UNIVERSAL VOLTAGE, 350ma LED DRIVER; COMPONENT TO COMPONENT WIRING WITHIN THE LUMINAIRE; CONSUMES 0.0 WATTS IN THE OFF STATE; DIE CAST ALUMINUM THERMAL RADIATION FINS; ADVANCED LED OPTICAL SYSTEM WITH IES TYPE 3 LIGHT DISTRIBUTION; UNITIZED LENS OPTIC CONSTRUCTION; LUMINAIRE MOUNTED MOTION RESPONSE INTEGRAL MOTION SENSOR WITH A PROGRAMMABLE LED DRIVER AND AN INTEGRAL PROGRAMMABLE MOTION SENSOR, MOTION SENSOR IS SET TO A CONSTANT 50%, WHEN MOTION IS DETECTED THE LUMINAIRE GOES TO 100% LIGHT OUTPUT, LUMINAIRE REMAINS AT 100% OUTPUT UNTIL NO MOTION IS DETECTED FOR THE MOTION SENSOR DURATION PERIOD AFTER WHICH THE LUMINAIRE RETURNS TO 50% OUTPUT (DURATION PERIOD IS FACTORY SET AT 5 MINS.); TOOL-LESS ENTRY AND DRIVER REMOVAL HARDWARE; IN-LINE/IN-POLE FUSING; IES FULL CUTOFF OPTICS, NATURAL ALUMINUM POLYESTER POWDER COAT FINISH; L70 AT 154,000; UNIVERSAL VOLTAGE (120-277V); CRI OF 70 FOR 4000K; PHOTOCELL CONTROL; UL LISTED FOR WET LOCATIONS; DLC LISTED; 5 YEAR WARRANTY	PHILIPS GARDCO PUREFORM SERIES: PART NO. P21-MRI-A1-1-3-70LA-NW-UNV-NP-TL-LF-PC SEE NOTE 1 SEE DETAIL 'L1' ON THIS SHEET
B	53	1x4' LOW-PROFILE WRAP-AROUND LED LUMINAIRE; 5,500 NOMINAL LUMENS; 82 CRI, 4,000K; 20-GAUGE DIE-FORMED C.R.S. HOUSING; FROSTED PRISMATIC ACRYLIC DIFFUSER; REFLECTIVE WHITE POLYESTER POWDER COAT FINISH; HIGH QUALITY MID-POWER LED'S AND LED BOARDS ARE REPLACEABLE; SURFACE OR SUSPENDED MOUNTED; UNIVERSAL VOLTAGE (120-277V); CSA-US CERTIFIED SUITABLE FOR DRY OR DAMP LOCATIONS; 5 YEAR WARRANTY	HE WILLIAMS: NARROW LOW-PROFILE WRAP 17 SERIES LED 17-4-L55/840-AF-DRV-UNV
B1	53	SAME AS TYPE 'B' ABOVE WITH INTEGRAL 10W EMERGENCY LED BATTERY	HE WILLIAMS: 17 SERIES LED 17-4-L55/840-AF-EM/10W-DRV-UNV
C	69	1x4 FULLY ENCLOSED, GASKETED INDUSTRIAL LED LUMINAIRE; 7300 LUMENS, 82CRI, 4000K CCT; FIBERGLASS HOUSING; STAINLESS STEEL LATCHES; WATERTIGHT HUBS; FROSTED, IMPACT-RESISTANT ACRYLIC SHIELDING; HIGH QUALITY MID-POWER LED BOARD; L70 >50,000 HOURS. 40°C MAXIMUM AMBIENT OPERATING TEMPERATURE; SURFACE OR SUSPENDED MOUNTING; UNIVERSAL VOLTAGE 120-277V; ETL CONFORMS TO UL STD 1598 AND UL STD 8750; LISTED AS SUITABLE FOR WET LOCATIONS; IP65, IP66, AND IP67 CERTIFIED; RATED FOR NEMA 4X; 5 YEAR WARRANTY	HE WILLIAMS: FULLY ENCLOSED & GASKETED 96 SERIES LED 96-4-L62-840-DCL-WET/2-SS LATCH-DRV-UNV
C1	69	SAME AS TYPE 'C' ABOVE WITH EM/10W 10-WATT EMERGENCY DRIVER	HE WILLIAMS: FULLY ENCLOSED & GASKETED 96 SERIES LED 96-4-L62/840-DCL-EM/10W-WET/2-SS LATCH-DRV-UNV
D	36	LED EMERGENCY SCONCE; WALL MOUNTED CUTOFF FIXTURE; SINGLE PIECE DIE-CAST ALUMINUM HOUSING AND DOOR FRAME; MEMORY RETENTIVE GASKET SEALS; STAINLESS STEEL HARDWARE; CLEAR GLASS LENS; WIDE THROW LIGHT DISTRIBUTION; DARK BRONZE FINISH; 364mA LED DRIVERS; LED THERMAL MANAGEMENT; SELF-CONTAINED LED EMERGENCY DRIVER; 120V; UL LISTED WET LOCATION; PHOTOCELL	GARDCO: 121-EM LED EMERGENCY SCONCE SERIES
EX	3.8	EXIT SIGN W/DIE CAST ALUMINUM HOUSING, WHITE BODY, BRUSHED ALUMINUM FACE, RED LED LAMPS, RED POLYCARBONATE LENS W/PRISMATIC DIFFUSER, SEALED NICKEL CADMIUM BATTERY, FULLY AUTOMATIC SOLID STATE CHARGER, FLAT OR OPENING MOUNTED AS REQUIRED, 120V, 12V DC	PHILIPS CHLORIDE: 55 LINE SERIES
EXW	4.8	EXIT SIGN, CORROSION RESISTANT NEMA 4X TYPE SEALED AND GASKETED ENCLOSURE IN INDUSTRIAL GRAY POLYCARBONATE WITH CLEAR POLYCARBONATE COVER, INPUT VOLTAGE 120/277 VAC, SOLID STATE BATTERY CHARGER, RED LED LAMPS, WHITE SINGLE FACE WALL MOUNT, REMOVABLE CHEVRON ARROWS, SEALED NICKEL CADMIUM BATTERY WITH 90 MINUTE CAPACITY, TEST SWITCH, INDICATOR LIGHT, UL 924 WET LOCATION LISTED, FULL 5 YEAR WARRANTY	PHILIPS CHLORIDE: VNL SERIES

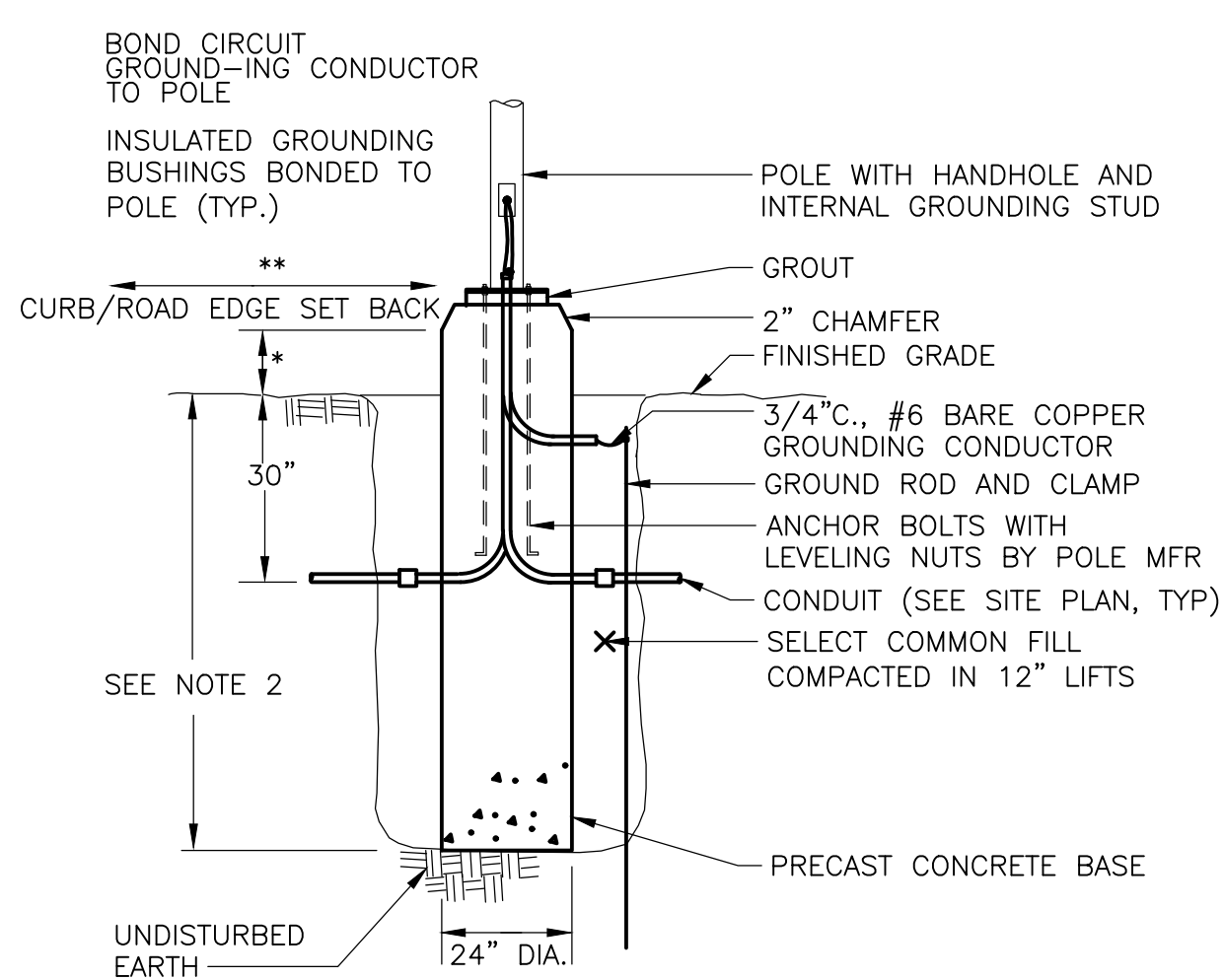
NOTE:

1. FIXTURE MANUFACTURER SHALL FURNISH A 15' ROUND TAPERED ALUMINUM POLE. POLE SHALL HAVE A CLEAR ANODIZED FINISH AND MEET WIND LOADS AND GUST FACTOR FOR RELATED PROJECT LOCATION. POLE SHALL BE MOUNTED TO A CONCRETE BASE PER DETAIL 'L2'. SUITABLE ANCHOR BOLTS, BASE COVER, GROUND LUG, AND VIBRATION PAD FURNISHED WITH POLE.



NOTES:

1. LIGHT POLE FOUNDATION SHALL BE A PRECAST CONCRETE FOUNDATION DESIGNED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER ENGAGED AT THE EXPENSE OF THE CONTRACTOR. DESIGN SPEED SHALL BE IN ACCORDANCE WITH ASCE 7-16 FOR THE PROJECT SPECIFIC SITE. CONTRACTOR SHALL CONFIRM SOIL CONDITIONS WITH A FLORIDA REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER. DESIGN SHALL BE SIGNED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF FLORIDA.
2. EMBEDMENT DEPTH AS REQUIRED PER DELEGATE ENGINEER. MIN. EMBEDMENT IN CLAYEY SOILS 6'-6", MIN EMBEDMENT IN SANDY SOILS 4'-6".
3. REFER TO SPECIFICATIONS FOR MATERIALS.



- * =2" AT WALKWAYS; 18" AT ROADWAYS & PARKING AREAS
- ** =48" AT WALKWAYS; 24" AT ROADWAYS

100 AMP MAIN BREAKER		PANELBOARD LP-1				LOCATION: ELECTRICAL BUILDING						
100 AMP BUS RATING		10 KA SHORT CIRCUIT RATING				ENCLOSURE RATING: NEMA 1						
208/120 VOLTS		ELECTRONIC GRADE: NO				MOUNTING: SURFACE						
CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	CIRCUIT NO.	DESCRIPTION	LOAD KVA			BREAKER AMPS/POLES	NOTES
		PHASE A	PHASE B	PHASE C				PHASE A	PHASE B	PHASE C		
1	LTG - ELECTRICAL BUILDING	0.49			20/1	2	PLC	0.5			20/1	7
3	LTG - ELECTRICAL BUILDING		0.08		20/1	4	FIT-1140		0.05		20/1	7
5	LTG - PUMP STATION BUILDING			0.65	20/1	6	SPARE				20/1	
7	LTG - PUMP STATION BUILDING	0.08			20/1	8	SPARE				20/1	
9	LTG - SITE		0.16		20/1	10	SPARE				20/1	
11	SPARE				20/1	12	SPARE				20/1	
13	RECPT - ELECTRICAL BUILDING	0.54			20/1	14	SPARE				20/1	
15	RECPT - ELECTRICAL BUILDING		0.72		20/1	16	SPARE				20/1	
17	RECPT - PUMP STATION BUILDING			1.08	20/1	18	SPARE				20/1	
19	RECPT - PUMP STATION BUILDING	0.72			20/1	20	SPARE				20/1	
21	SPARE				20/1	22	SPARE				20/1	
23	SPARE				20/1	24	SPARE				20/1	
25	SPARE				20/1	26	SPARE				20/1	
27	SPARE				20/1	28	SPARE				20/1	
29	SPARE				20/1	30	SPARE				20/1	
31	SPARE				20/1	32	SPARE				20/1	
33	SPARE				20/1	34	SPARE				20/1	
TOTAL PHASE KVA THIS SIDE		1.83	0.96	1.73	TOTAL PHASE KVA THIS SIDE		0.5	0.05	0			
					TOTAL KVA PER PHASE		2.33	1.01	1.73			
					TOTAL THREE PHASE KVA			5.07				

NOTES:		NOTES CONT.:	
1. PROVIDE LOCKING HARDWARE		2. 5 ma GROUND FAULT INTERRUPTER (GFI) CIRCUIT BREAKER	
3. 30 ma GFI CIRCUIT BREAKER FOR EQUIPMENT PROTECTION ONLY (HEAT TRACE)		4. PROVIDE LOCKING HARDWARE & PAINT BREAKER HANDLE RED (FACP)	
5. BRANCH CIRCUIT WIRING: 3/4" C, 3#12 & 1#12G		6. BRANCH CIRCUIT WIRING: 3/4" C, 3#10 & 1#12G	
7. BRANCH CIRCUIT WIRING: 3/4" C, 2#12 & 1#12G		8.	

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DESIGNED BY: J. SANCHEZ	<p>4651 Salisbury Road, Suite 420 Jacksonville, FL 32256 Tel: (904) 731-7109 FL COA NO. EB-000020</p>
DRAWN BY: R. RUCK	
SHEET CHK'D BY: S. PERRY	
CROSS CHK'D BY: E. GACHARICH	
APPROVED BY: S. PERRY	
DATE: MAY 2022	

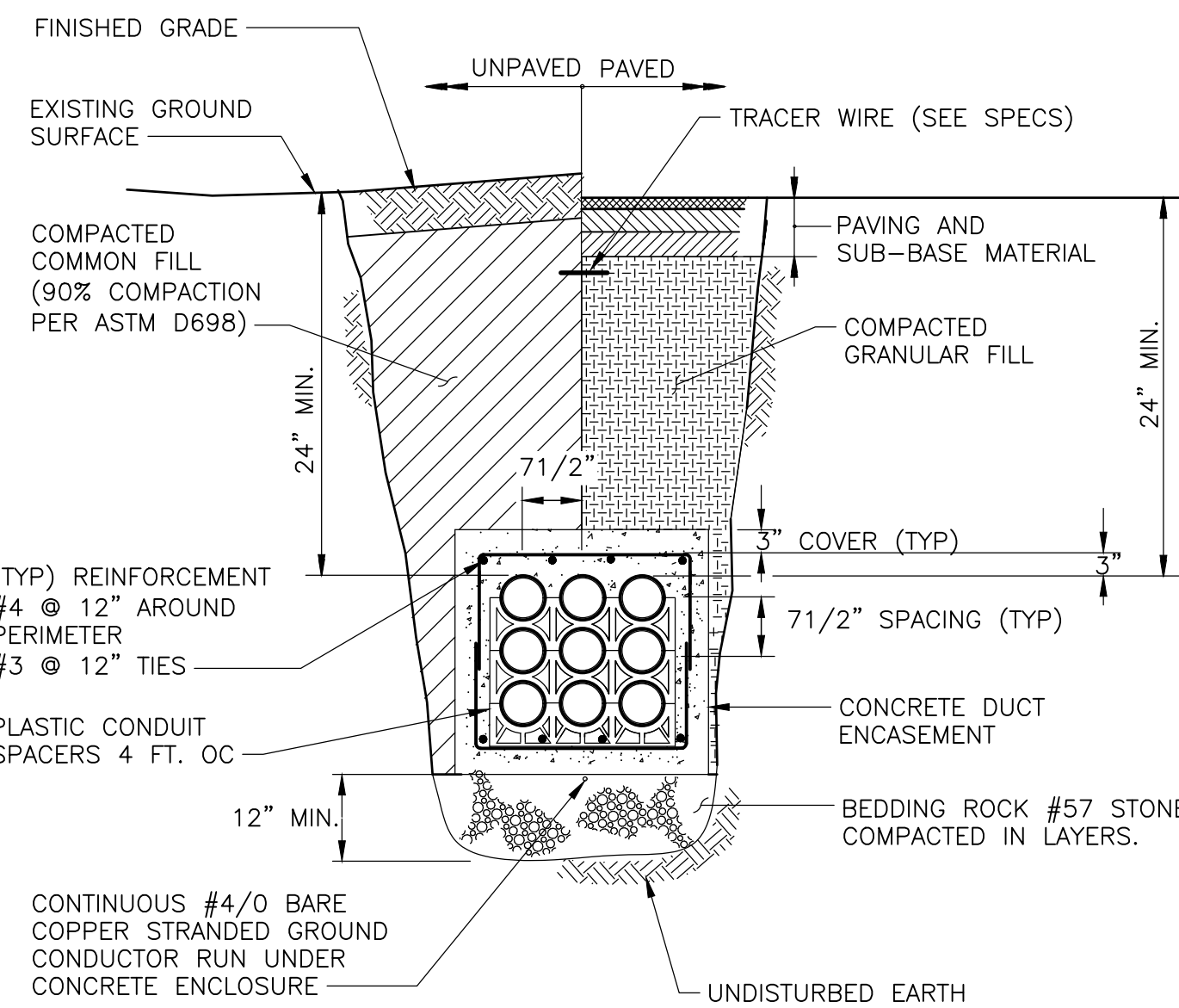
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

LIGHT FIXTURE SCHEDULE
 AND PANELBOARD SCHEDULE

DATE: SPENCER J. PERRY JR
 PE NO. 62587

PROJECT NO. 9247-221208
 FILE NAME: E010NFDI.DWG

SHEET NO.
E-10

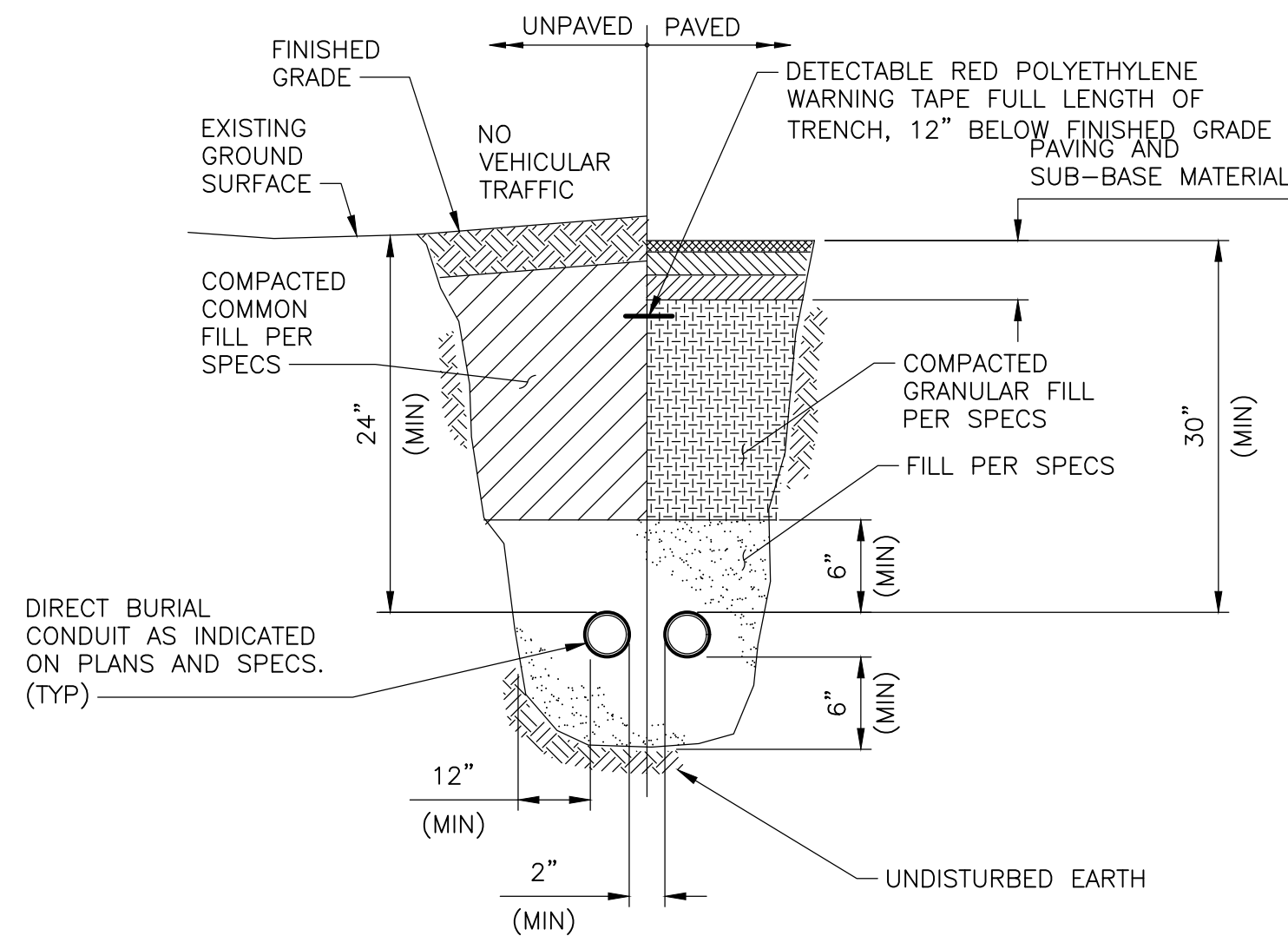


NOTE:

1. DUCT BANKS SHALL BE REINFORCED WHEN INSTALLED OVER NEW PIPELINES OR UNDER ROADWAYS, PARKING LOTS OR ANY AREA SUBJECT TO VEHICULAR TRAFFIC. INSTALL REINFORCING BARS AS SHOWN ON THE DRAWINGS, EXTENDING 10'-FT. BEYOND AREA NEEDING PROTECTION.

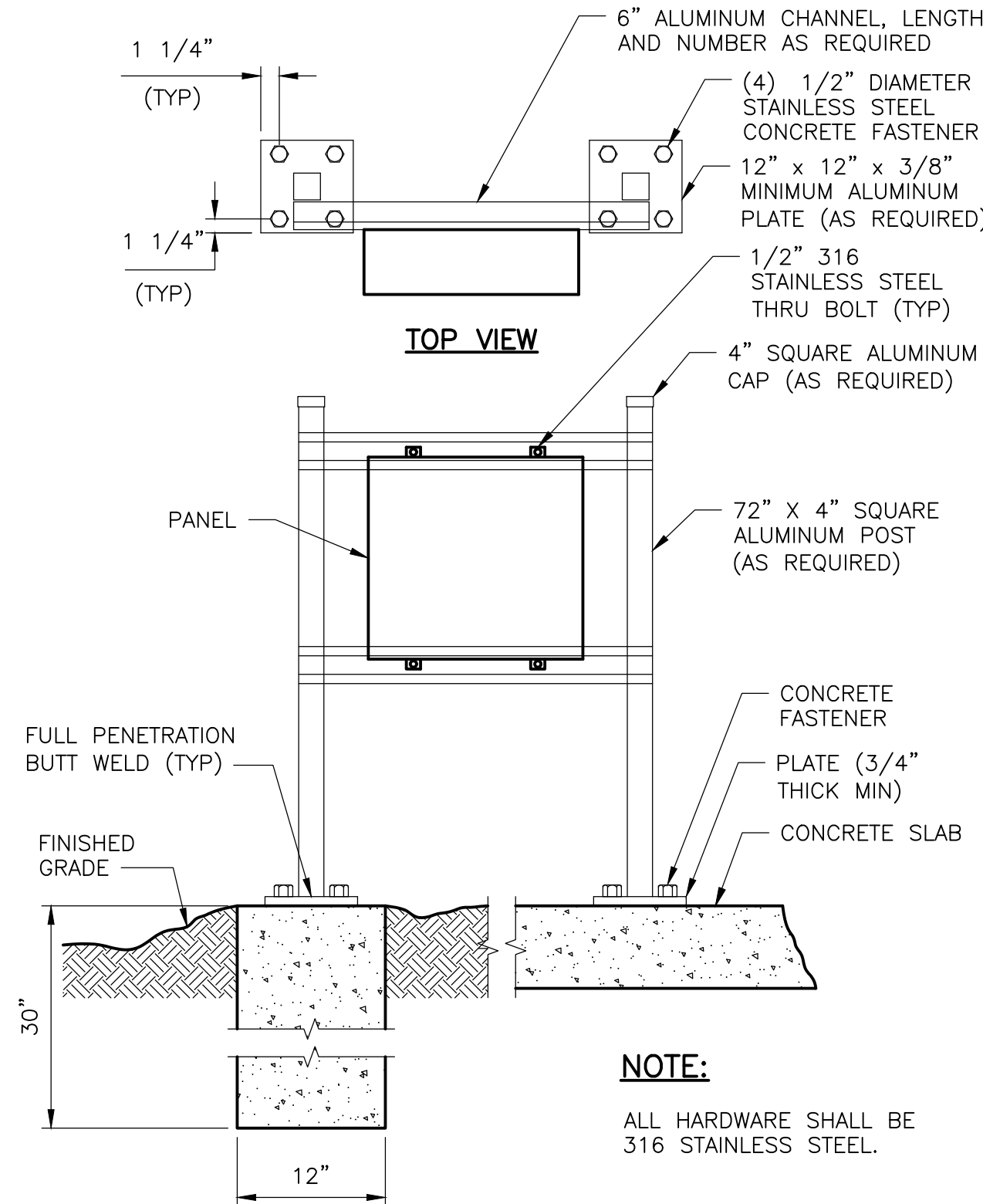
UNDERGROUND POWER DUCT BANK

DETAIL A
NTS



TYPICAL DIRECT BURIED CONDUIT INSTALLATION

DETAIL B
NTS

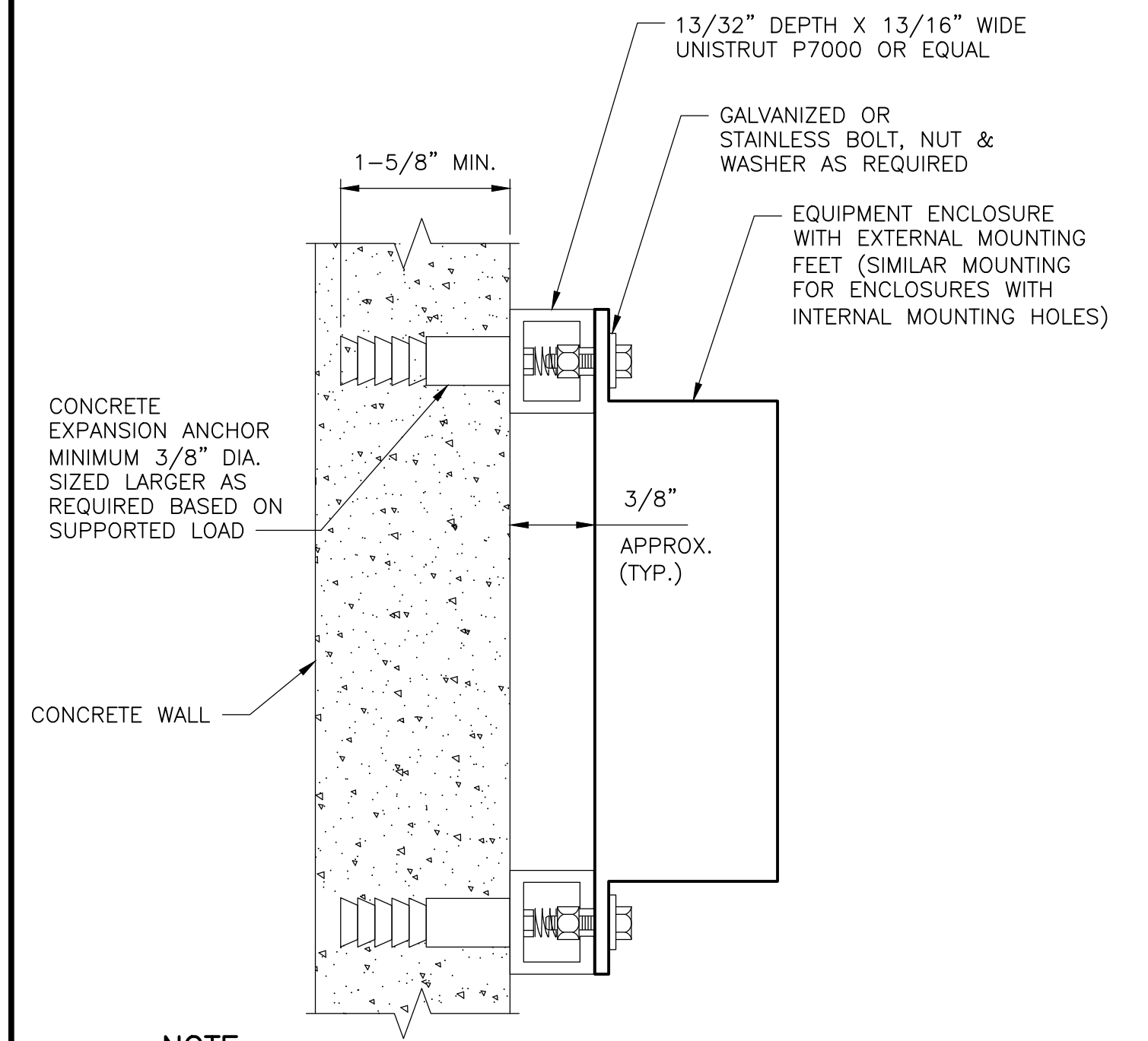


NOTE:

- ALL HARDWARE SHALL BE 316 STAINLESS STEEL.

PANEL MOUNTING

DETAIL C
NTS

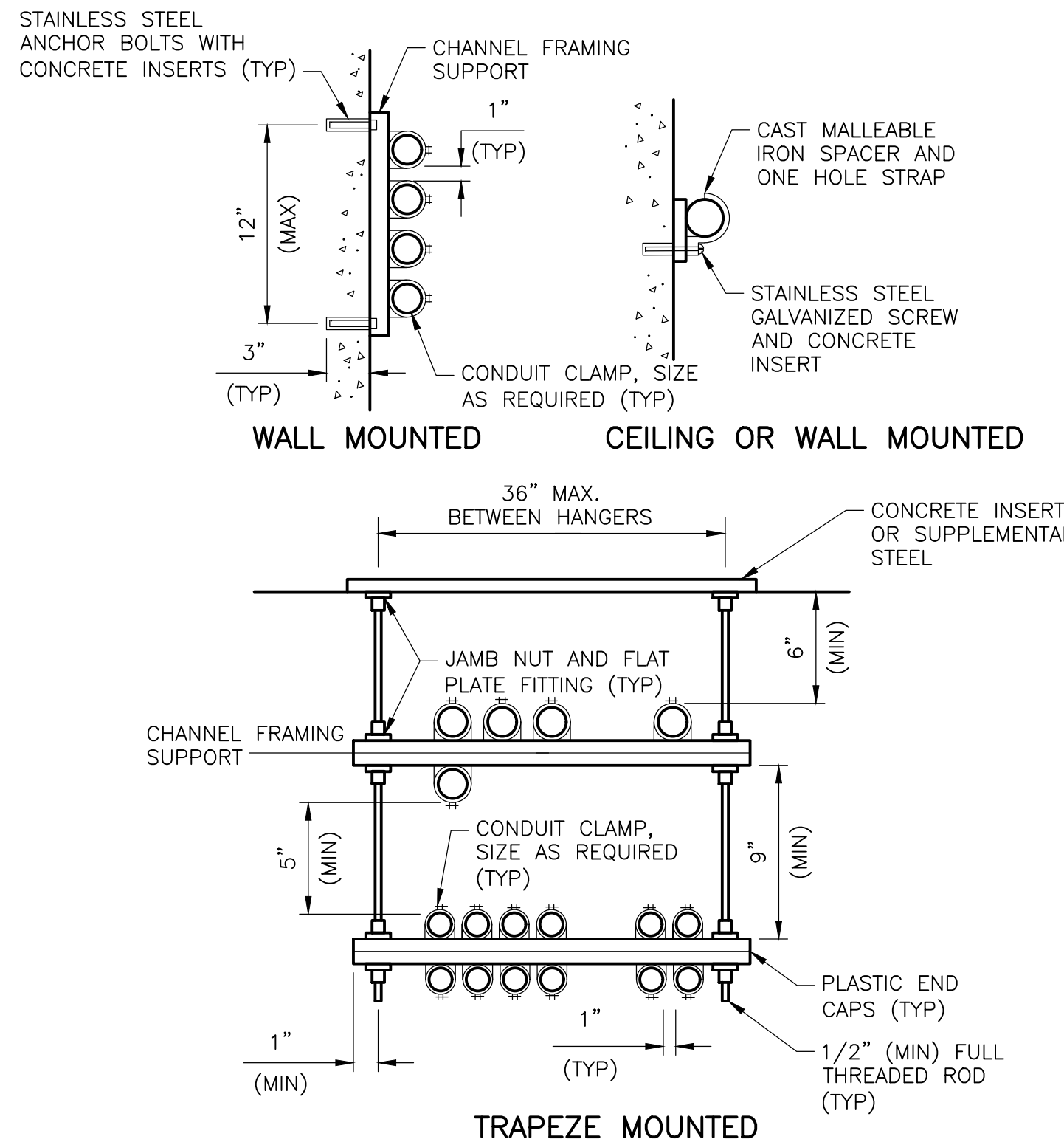


NOTE:

1. APPLICABLE FOR ALL NON CAST-IRON ENCLOSURES OR BOXES.

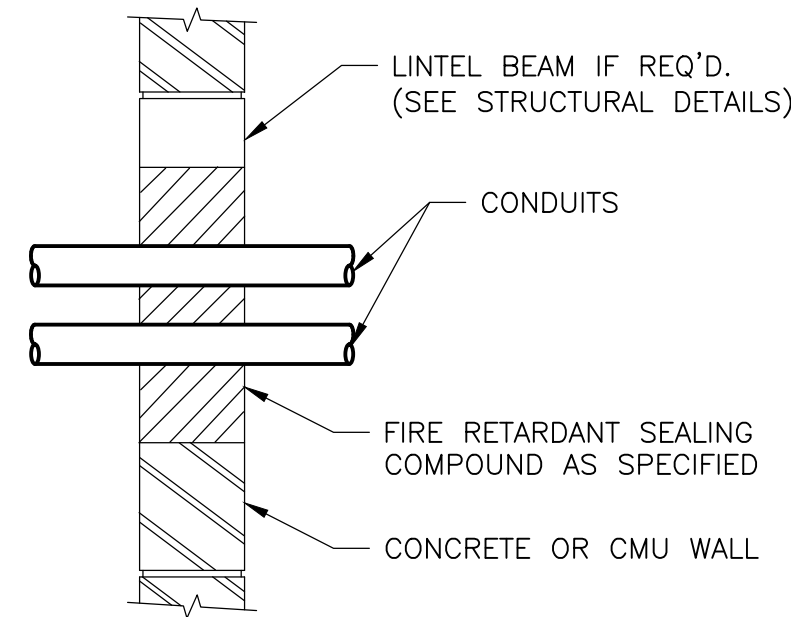
EQUIPMENT ENCLOSURE MOUNTED ON CONCRETE WALL

DETAIL D
NTS



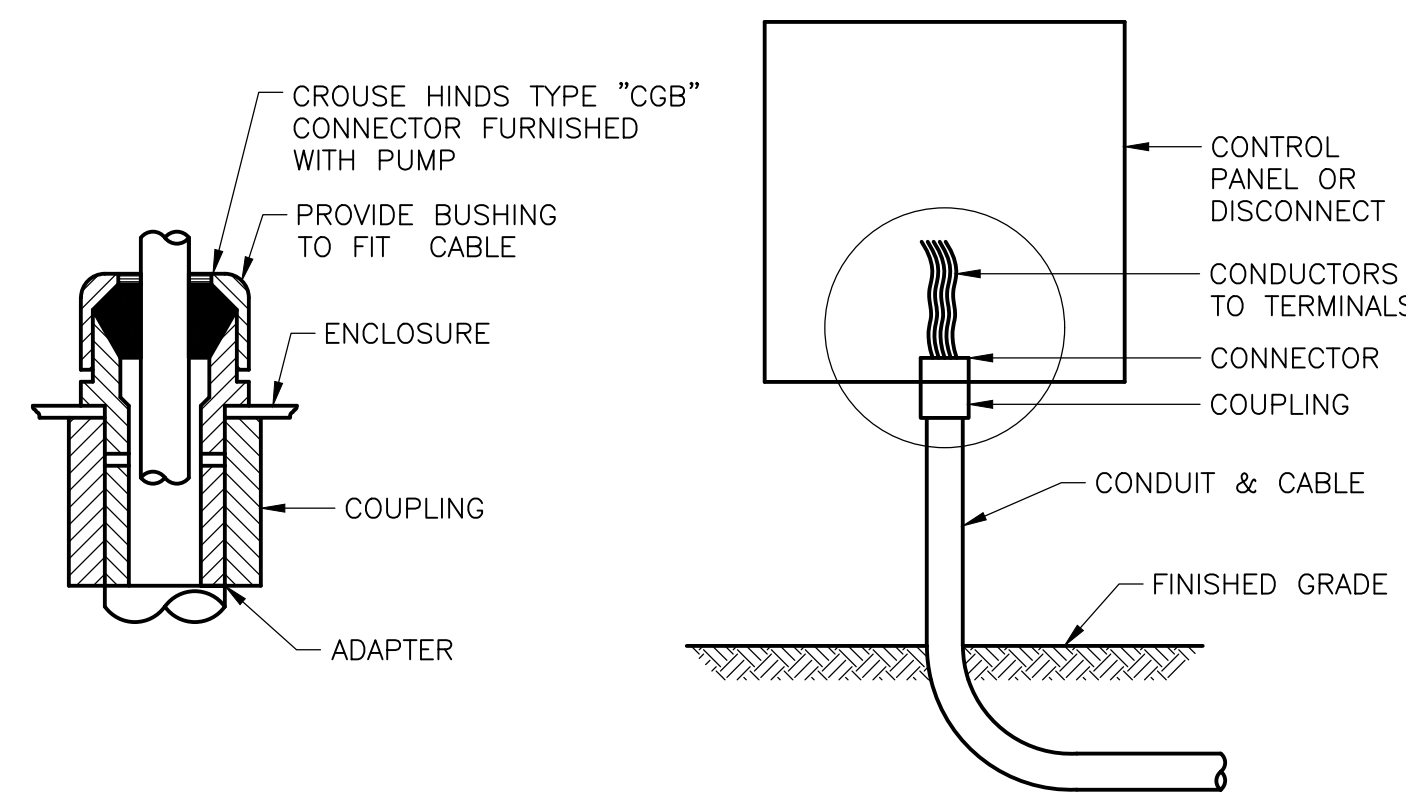
CONDUIT MOUNTING

DETAIL E
NTS



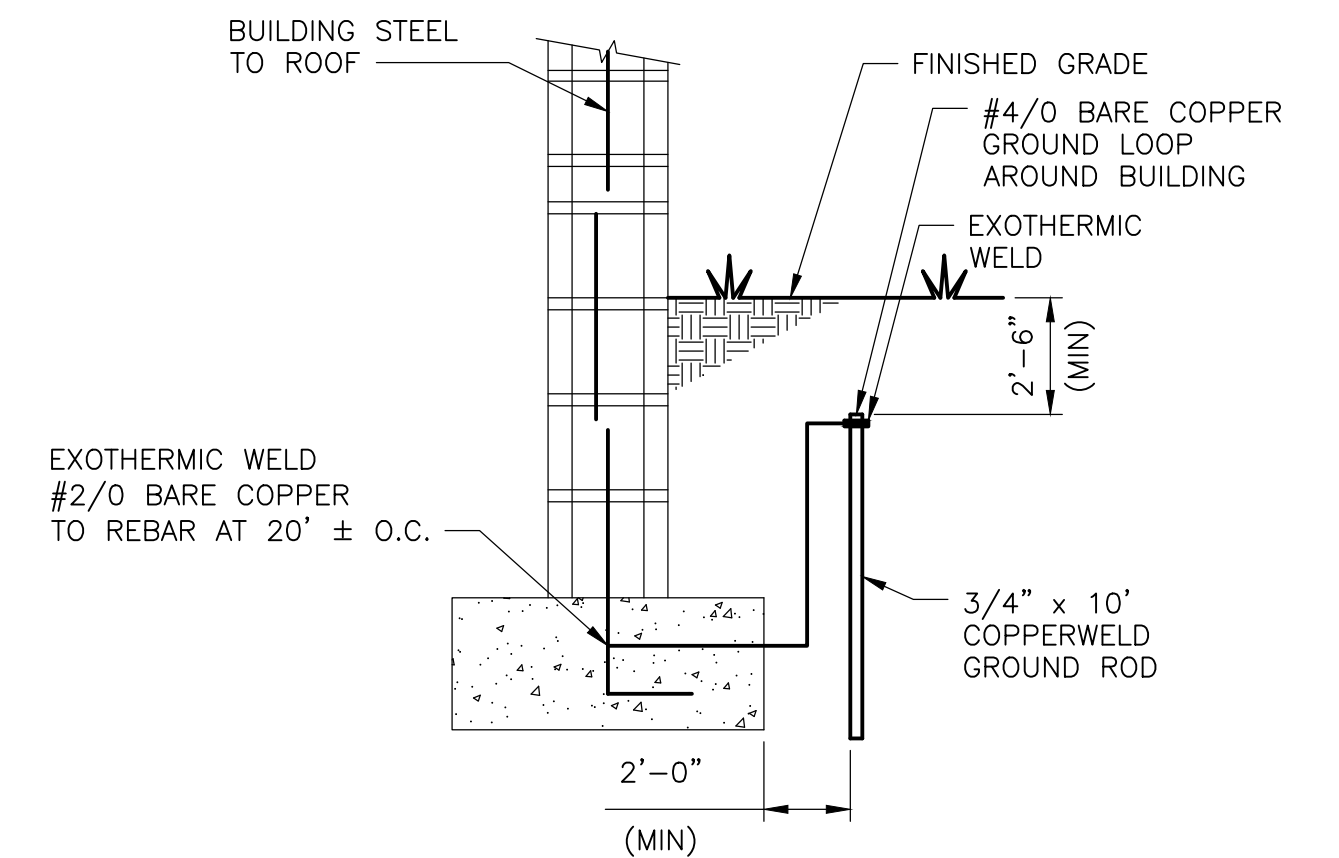
TYPICAL ABOVE GRADE WALL NO WATERTIGHT CONDUIT PENETRATION

DETAIL F
N.T.S.



WATER-TIGHT CONNECTION

DETAIL G
N.T.S.



BUILDING STRUCTURE BONDING

DETAIL H
NTS

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REV. NO.	DATE	DRWN	CHKD	REMARKS

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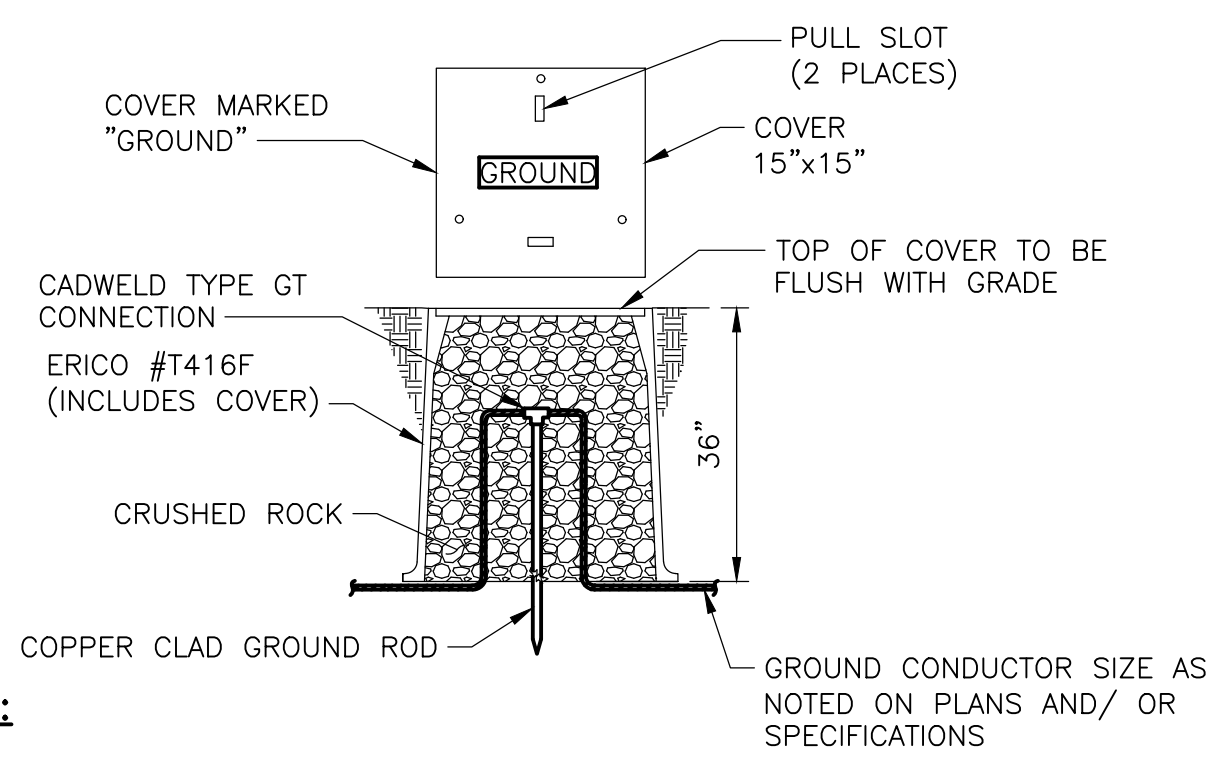


ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

ELECTRICAL DETAILS I
 SHEET NO. ED-1

DATE: SPENCER J. PERRY JR
 PE NO. 62587
 PROJECT NO. 9247-221208
 FILE NAME: ED01NFD1.DWG
 SHEET NO. ED-1

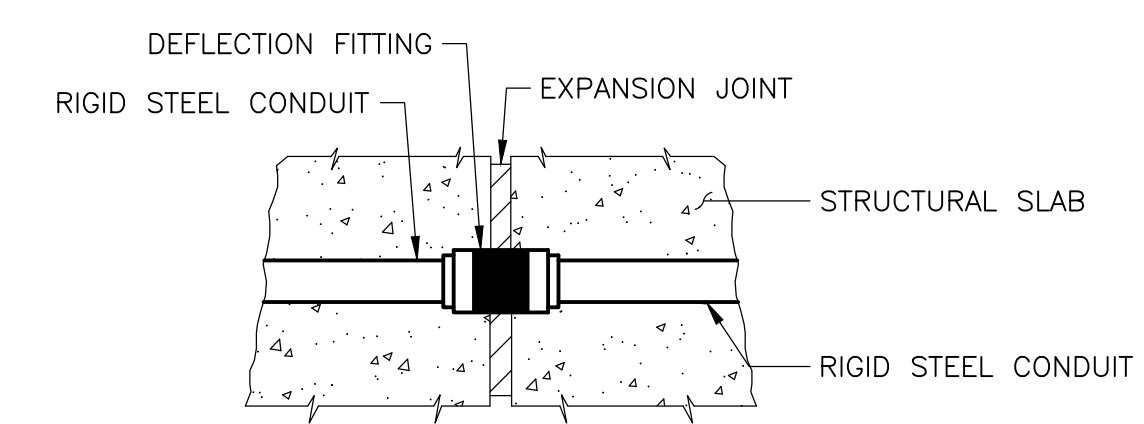
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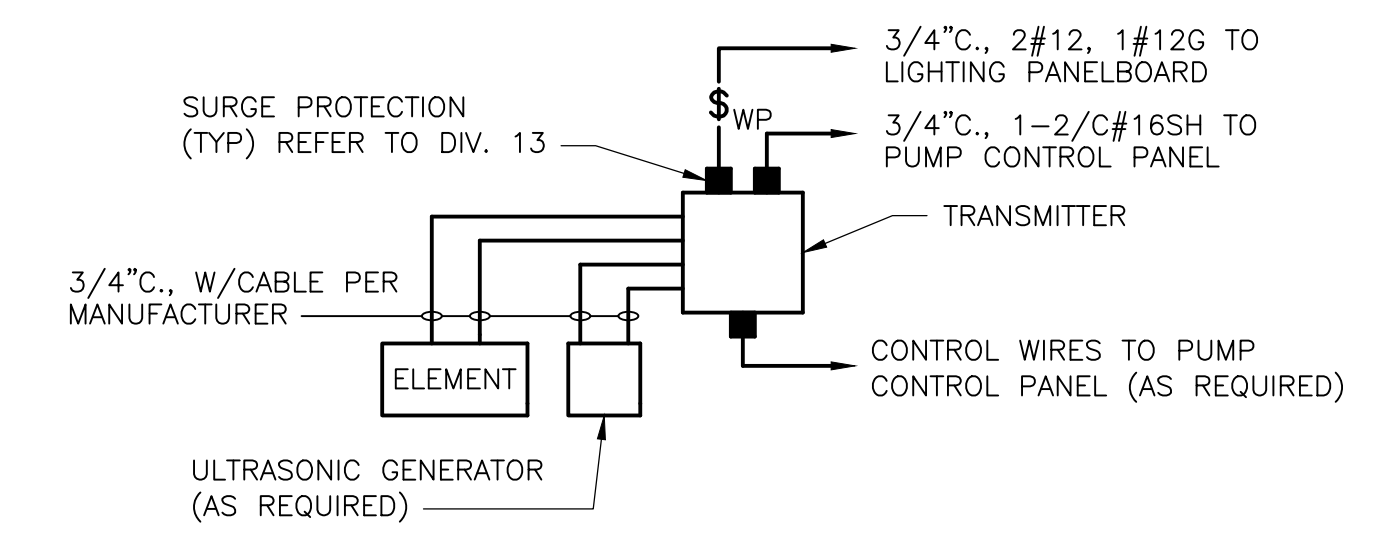
NOTE:

- TO IMPROVE SYSTEM RESISTANCE, ERICO GEM MAY BE USED AS A BACKFILL MATERIAL IN AN AUGERED HOLE.

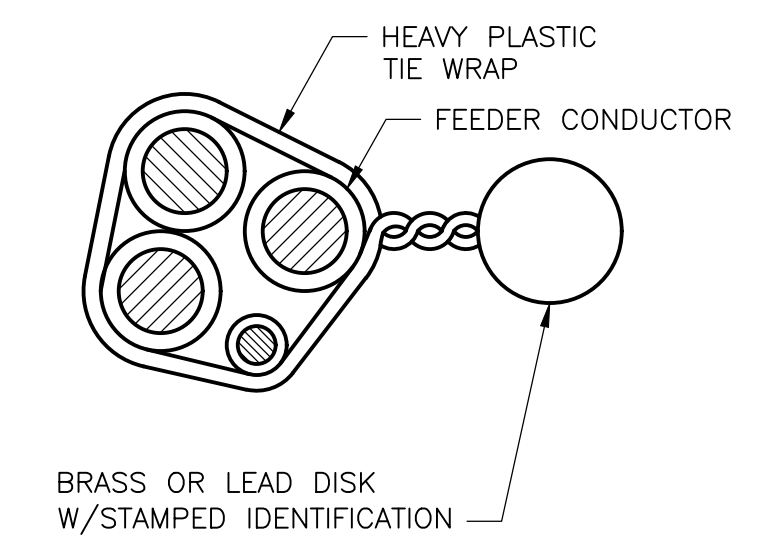
GROUND ROD TEST WELL STATION
DETAIL J
 NTS



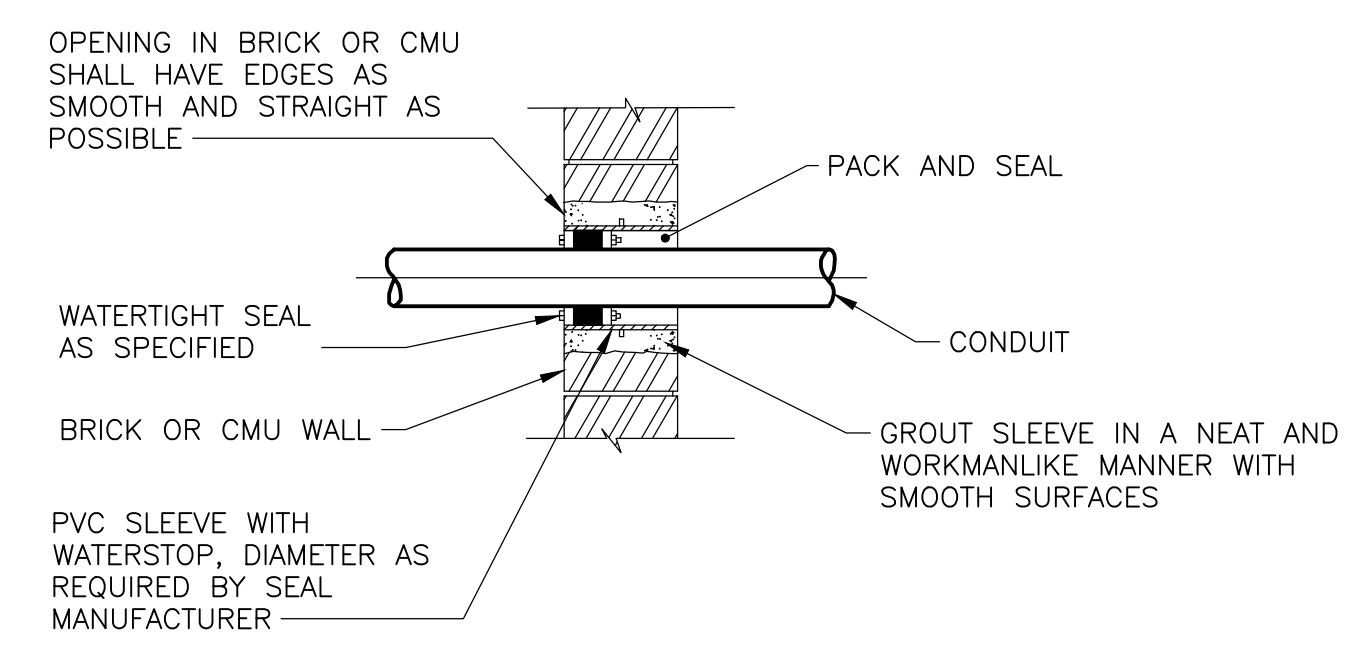
EMBEDDED EXPANSION FITTING
DETAIL K
 NTS



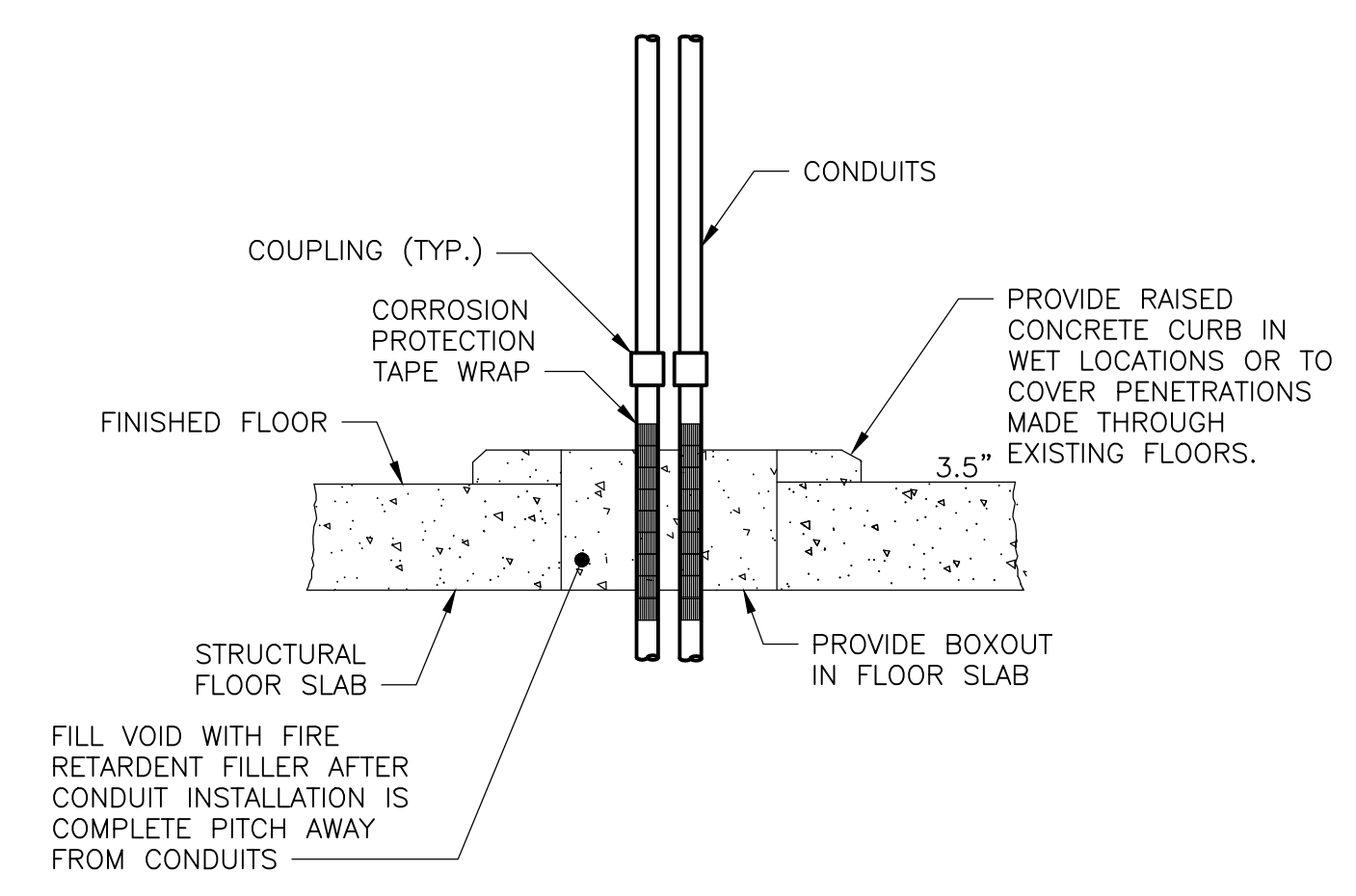
TYPICAL TRANSMITTER
DETAIL L
 NTS



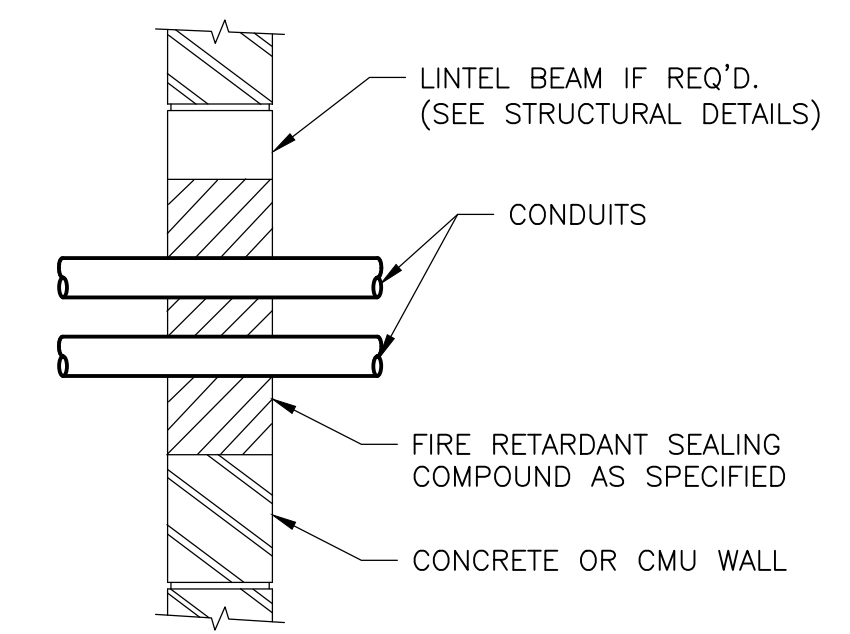
U.G. CABLE TAG
DETAIL M
 NTS



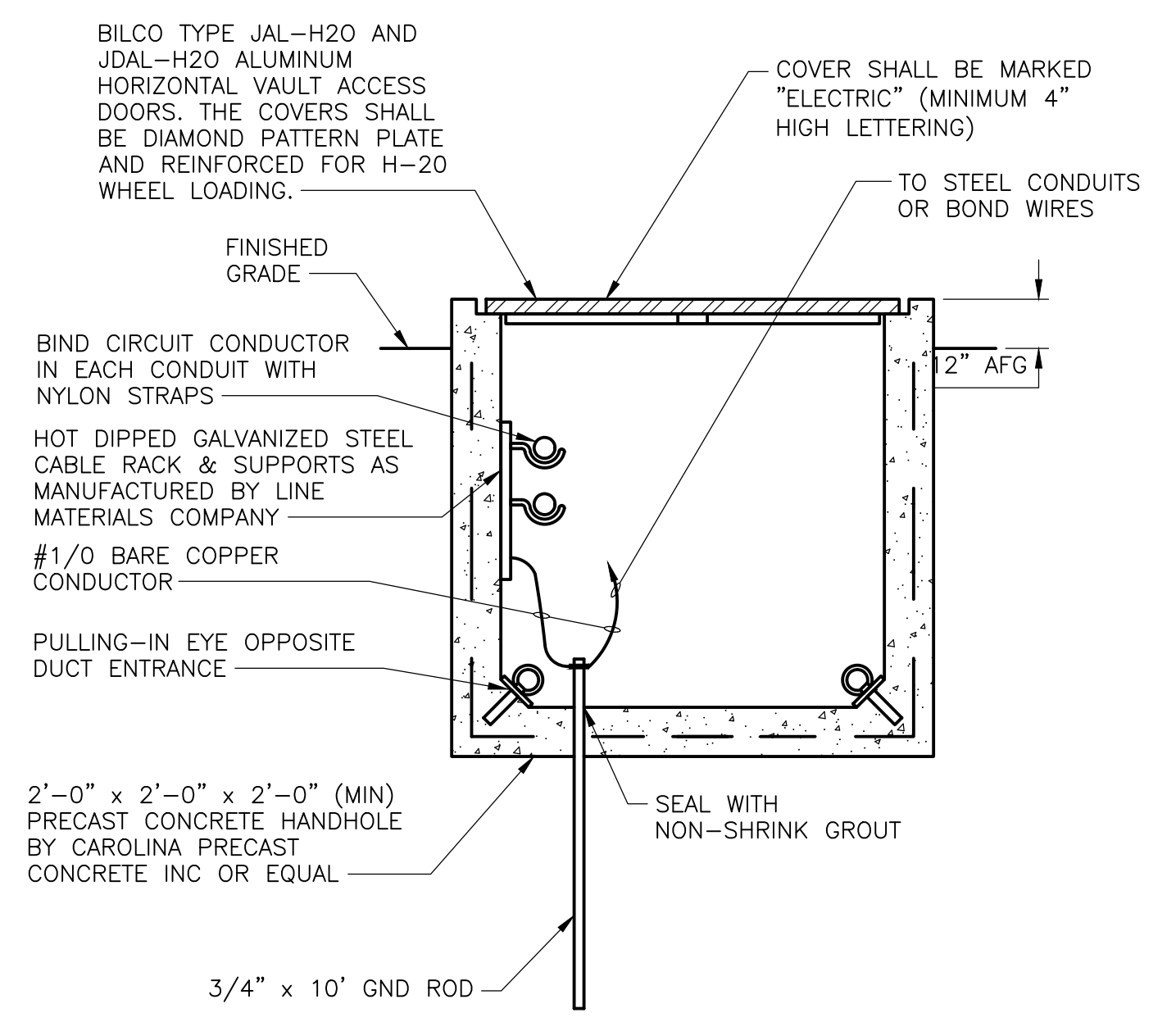
TYPICAL, BELOW GRADE WATERTIGHT CONDUIT PENETRATION
DETAIL N
 NTS



TYPICAL CONDUIT FLOOR PENETRATION
DETAIL P
 NTS



TYPICAL ABOVE GRADE WALL NO WATERTIGHT CONDUIT PENETRATION
DETAIL S
 NTS



NOTES:

- DO NOT SPLICE CABLES IN HANDHOLES UNLESS OTHERWISE NOTED.
- ALL MOUNTING HARDWARE SHALL BE 316 SS.
- HANDHOLES TO BE PLACED ON 6" BASE OF NO. 57 STONE.

HANDHOLE
DETAIL U
 NTS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. SANCHEZ
 DRAWN BY: R. RUCK
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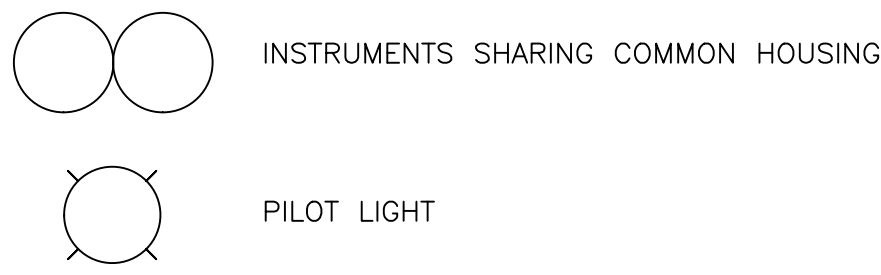
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

ELECTRICAL DETAILS II
 SHEET NO. ED-2

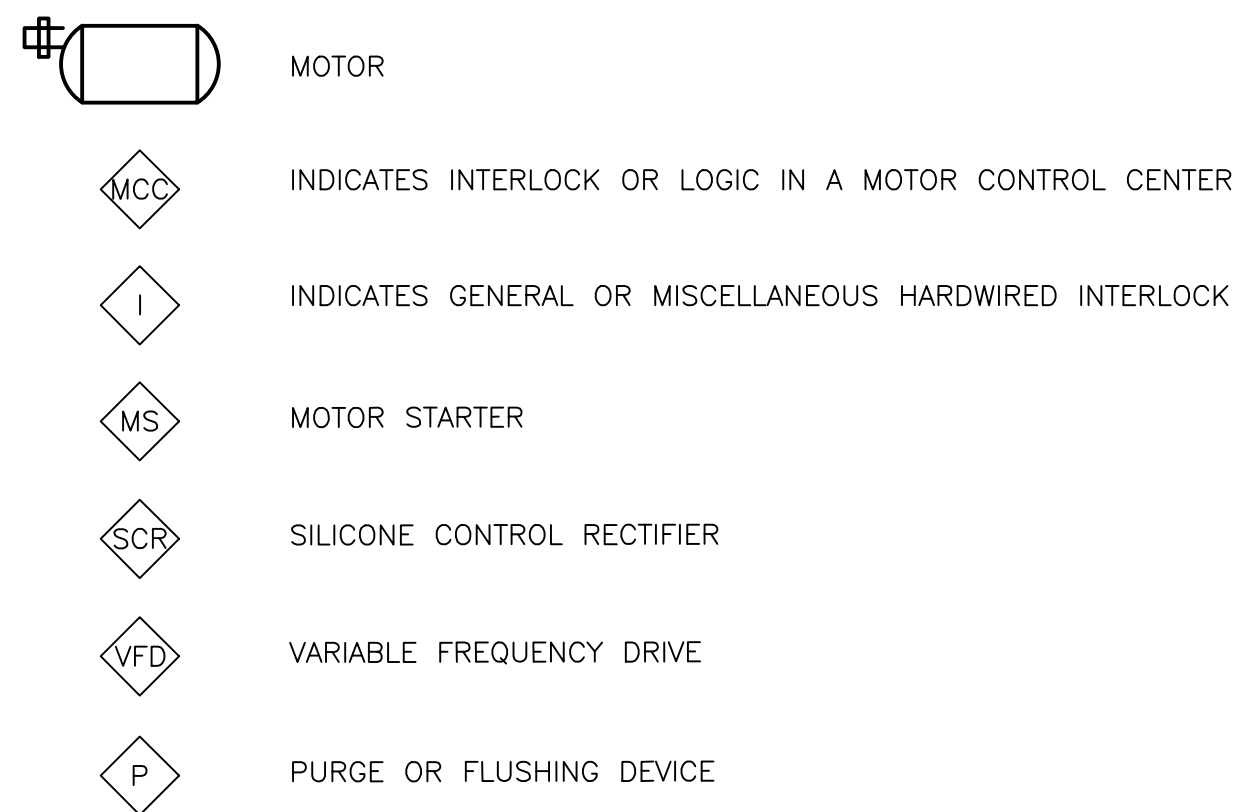
PROJECT NO. 9247-221208
 FILE NAME: ED02NFDT.DWG
 DATE: SPENCER J. PERRY JR
 PE NO. 62587

GENERAL INSTRUMENT OR FUNCTION SYMBOLS

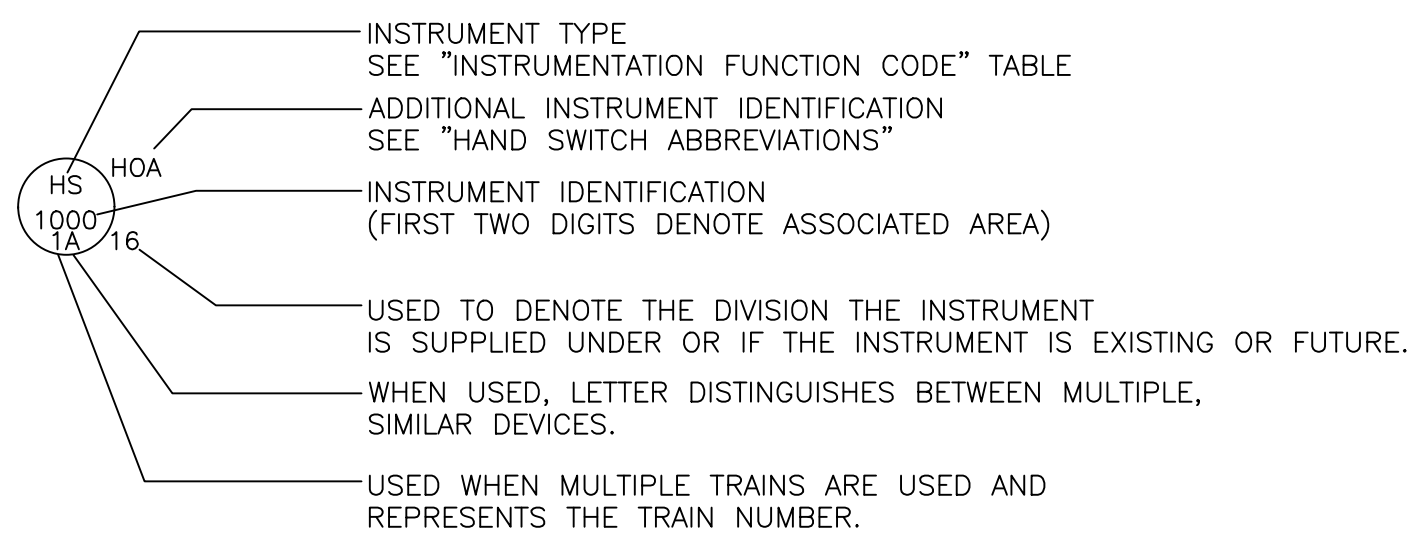
SHARED DISPLAY/ SHARED CONTROL		LOCATION AND ACCESSIBILITY		
PRIMARY CHOICE	SECONDARY CHOICE	COMPUTER SOFTWARE	DISCRETE	
				FIELD MOUNTED AND NORMALLY OPERATOR ACCESSIBLE
				PRIMARY CONTROL PANEL MOUNTED AND NORMALLY OPERATOR ACCESSIBLE
				PRIMARY CONTROL PANEL MOUNTED AND NOT NORMALLY OPERATOR ACCESSIBLE
				SECONDARY CONTROL PANEL MOUNTED AND NORMALLY OPERATOR ACCESSIBLE
				SECONDARY CONTROL PANEL MOUNTED AND NOT NORMALLY OPERATOR ACCESSIBLE



MISCELLANEOUS SYMBOLS



TYPICAL TAG NUMBERS & DESIGNATION

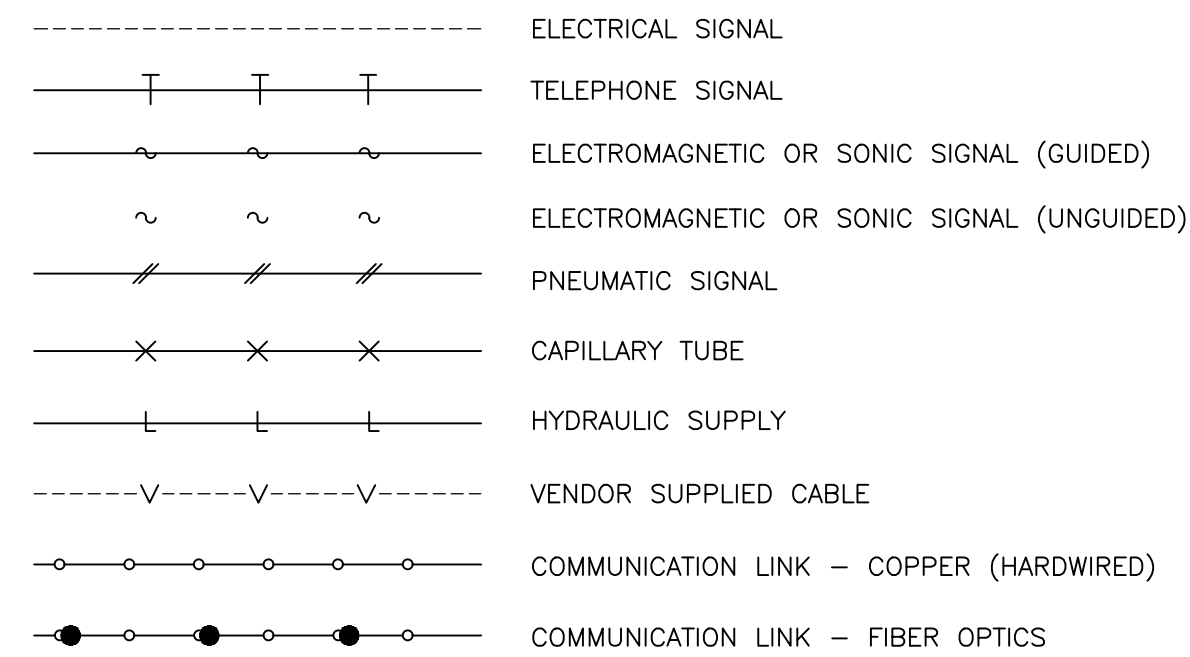


INSTRUMENTATION FUNCTION CODE

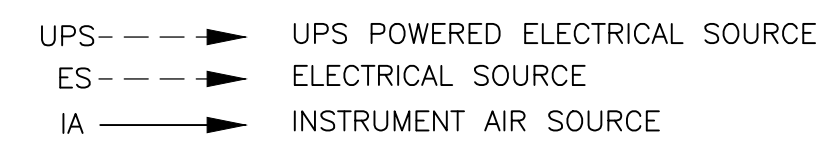
FIRST LETTERS		SUCCEEDING LETTERS		
COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
MEASURED/INITIATING VARIABLE	VARIABLE MODIFIER	READOUT/PASSIVE FUNCTION	OUTPUT/ACTIVE FUNCTION	FUNCTION MODIFIER
A	ANALYSIS		ALARM	
B	BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE
C	USER'S CHOICE		CONTROL	CLOSED
D	USER'S CHOICE	DIFFERENCE, DIFFERENTIAL		DEVIATION
E	VOLTAGE		SENSOR, PRIMARY ELEMENT	
F	FLOW, FLOW RATE	RATIO		
G	USER'S CHOICE		GLASS, GAUGE, VIEWING DEVICE	
H	HAND			HIGH
I	CURRENT		INDICATE	
J	POWER		SCAN	
K	TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION
L	LEVEL		LIGHT	LOW
M	MOISTURE			MIDDLE, INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE, RESTRICTION	OPEN
P	PRESSURE		POINT (TEST CONNECTION)	
Q	QUANTITY	INTEGRATE, TOTALIZE		
R	RADIATION		RECORD	RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH STOP
T	TEMPERATURE		TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	
V	VIBRATION, MECHANICAL, ANALYSIS		VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL, PROBE	
X	UNCLASSIFIED (1)	X-AXIS	ACCESSORY DEVICES, UNCLASSIFIED (1)	UNCLASSIFIED (1)
Y	EVENT, STATE, PRESENCE	Y-AXIS		AUXILIARY DEVICES
Z	POSITION, DIMENSION	Z-AXIS, SAFETY INSTRUMENT SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED, FINAL CONTROL ELEMENT

TABLE NOTES:
(1) WHEN USED SYMBOL OR SIGNAL LINE IS ANNOTATED.

INSTRUMENT LINE SYMBOLS



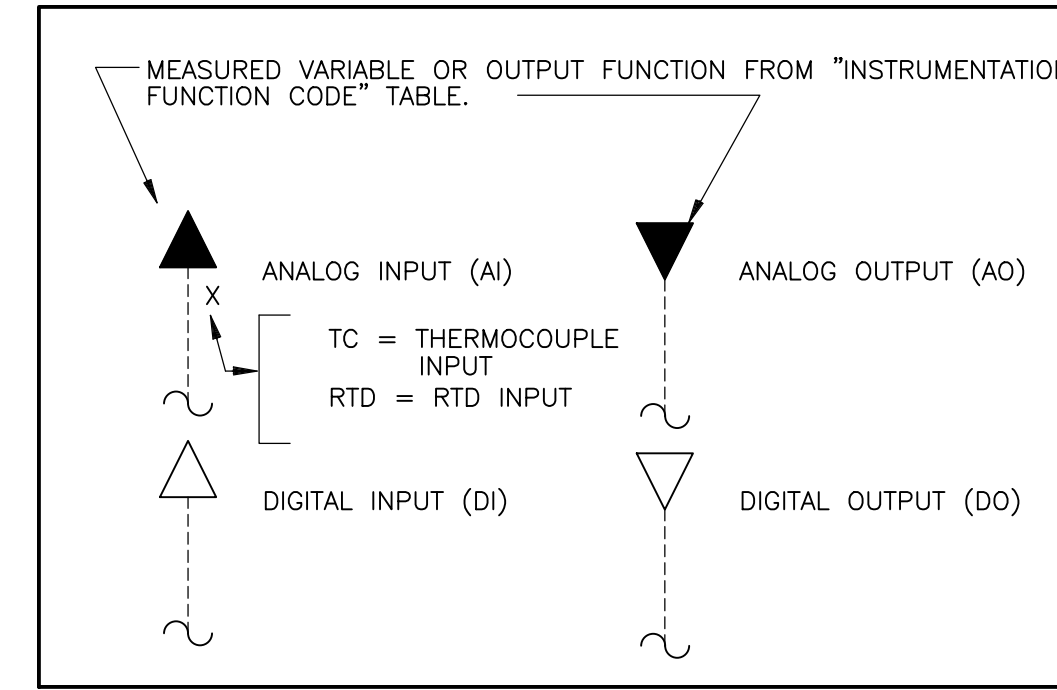
ELECTRICAL / AIR SOURCES



HAND SWITCH ABBREVIATIONS

- AO = AUTO/OFF
- AM = AUTO/MANUAL
- CM = COMPUTER/MANUAL
- CL = COMPUTER/LOCAL
- E-STOP = EMERGENCY STOP
- FR = FORWARD/REVERSE
- FOR = FORWARD/OFF/REVERSE
- FS = FAST SLOW
- FOS = FAST/OFF/SLOW
- HOA = HAND/OFF/AUTO
- LLS = LEAD/LAG/STANDBY
- LOC = LOCAL/OFF/COMPUTER
- LOR = LOCAL/OFF/REMOTE
- LOS = LOCKOUT/STOP
- LA = LOCAL/AUTO
- LR = LOCAL/REMOTE
- OC = OPEN/CLOSE
- OCA = OPEN/CLOSE/AUTO
- OQ = ON/OFF
- OQA = ON/OFF/AUTO
- OSC = OPEN/STOP/CLOSE
- RSL = RAISE/STOP/LOWER
- SS = START/STOP
- SOR = START/OFF/RESET

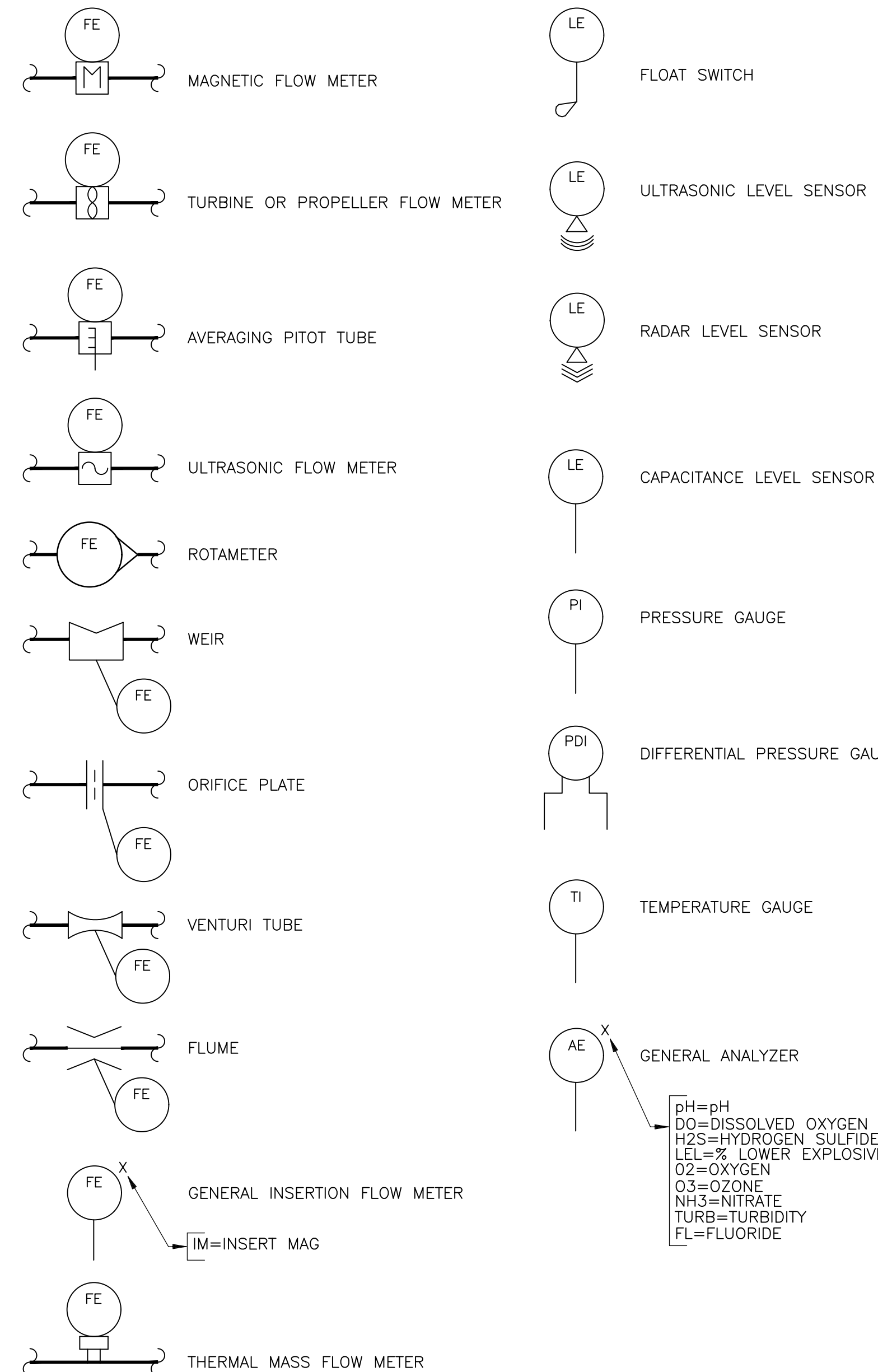
I/O SIGNALS



GENERAL NOTES

- THIS LEGEND APPLIES TO P&IDS ONLY AND MAY DIFFER FROM LEGENDS FOR OTHER SHEETS.
- IN GENERAL THIS LEGEND SHEET AND THE P&IDS ARE BASED ON THE INTERNATIONAL SOCIETY OF AUTOMATION (ISA) STANDARDS AND RECOMMENDED PRACTICES FOR INSTRUMENTATION AND CONTROL. SOME MODIFICATIONS, ADDITIONS AND ALTERATIONS HAVE BEEN MADE AS REQUIRED TO ACCOMMODATE PROJECT REQUIREMENTS.
- SOME PROCESS ITEMS SUCH AS EQUIPMENT ISOLATION VALVES, BYPASS LINES, ETC., WHICH ARE NOT CRITICAL FOR AN UNDERSTANDING OF THE INSTRUMENTATION FUNCTIONS ARE NOT SHOWN ON THE P&IDS.
- SEE ELECTRICAL AND MECHANICAL SHEETS AND SPECIFICATIONS FOR ADDITIONAL CONTROL AND INTERLOCK REQUIREMENTS.
- LIGHTER WEIGHT LINES, SHOWN AS _____, INDICATE EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE EXISTING. WEIGHTED LINES, SHOWN AS _____, INDICATE EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE NEW. DASHED WEIGHTED LINES, SHOWN AS _____, INDICATED EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE GROUPED AS A PACKAGE.

PRIMARY ELEMENTS



GENERAL ABBREVIATIONS

- AI ANALOG IN
- AO ANALOG OUT
- CPU CENTRAL PROCESSOR UNIT
- DI DIGITAL OR DISCRETE INPUT
- DO DIGITAL OUTPUT
- FC FAIL CLOSED
- FO FAIL OPEN OR FIBER OPTIC
- HMI HUMAN MACHINE INTERFACE
- MCC MOTOR CONTROL CENTER
- NC NORMALLY CLOSED
- NPW NON-POTABLE WATER
- NO NORMALLY OPEN
- PLC PROGRAMMABLE LOGIC CONTROLLER
- PW PLANT WATER
- RIO REMOTE INPUT/OUTPUT
- UPS UNINTERRUPTIBLE POWER SUPPLY
- VFD VARIABLE FREQUENCY DRIVE

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REV. NO.	DATE	DRWN	CHKD	REMARKS

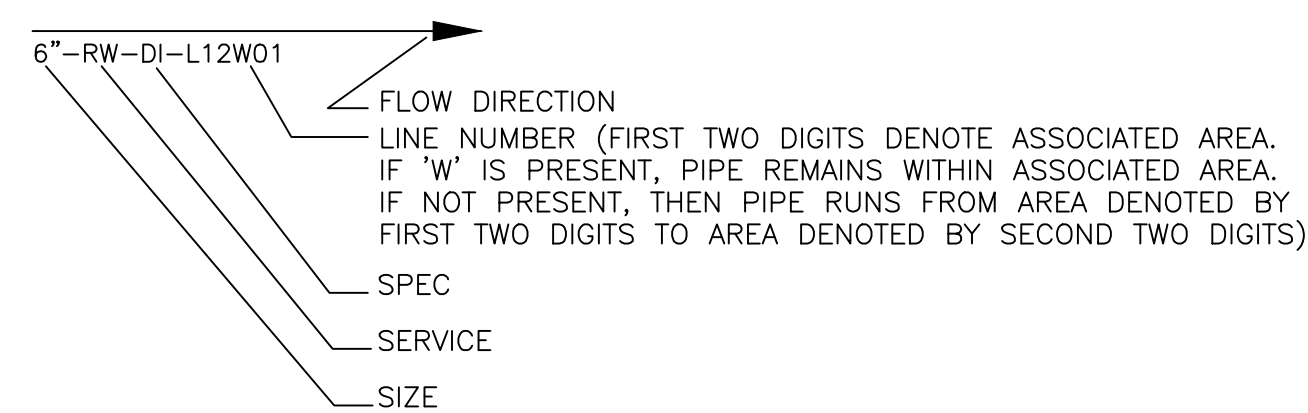
DESIGNED BY: F. ALCALA	<p>4651 Salisbury Road, Suite 420 Jacksonville, FL 32256 Tel: (904) 731-7109 FL COA No. EB-0000020</p>
DRAWN BY: R. CHARITY	
SHEET CHK'D BY: F. ALCALA	
CROSS CHK'D BY: D. UBERT	
APPROVED BY: F. ALCALA	
DATE: MAY 2022	

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
BLACK CREEK WATER RESOURCE
DEVELOPMENT PROJECT
INTAKE AND PUMP STATION

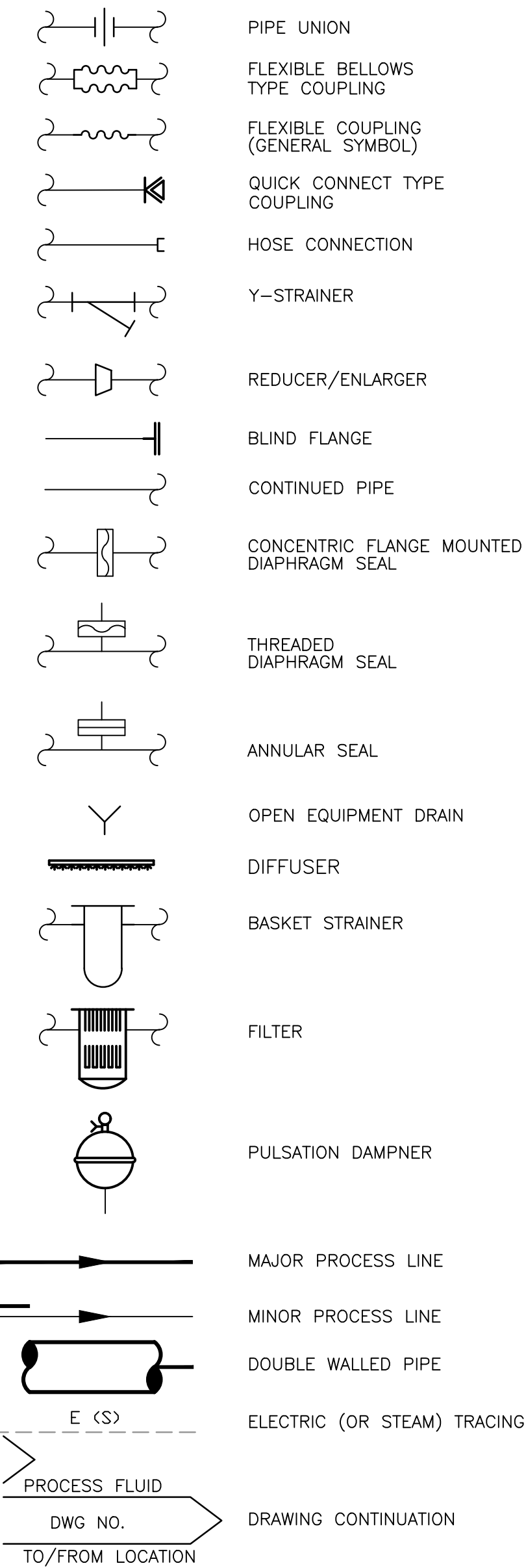
INSTRUMENTATION LEGEND SHEET
(SHEET 1 OF 2)

PROJECT NO. 9247-221208
FILE NAME: 1001SYMB.DWG
SHEET NO. I-1

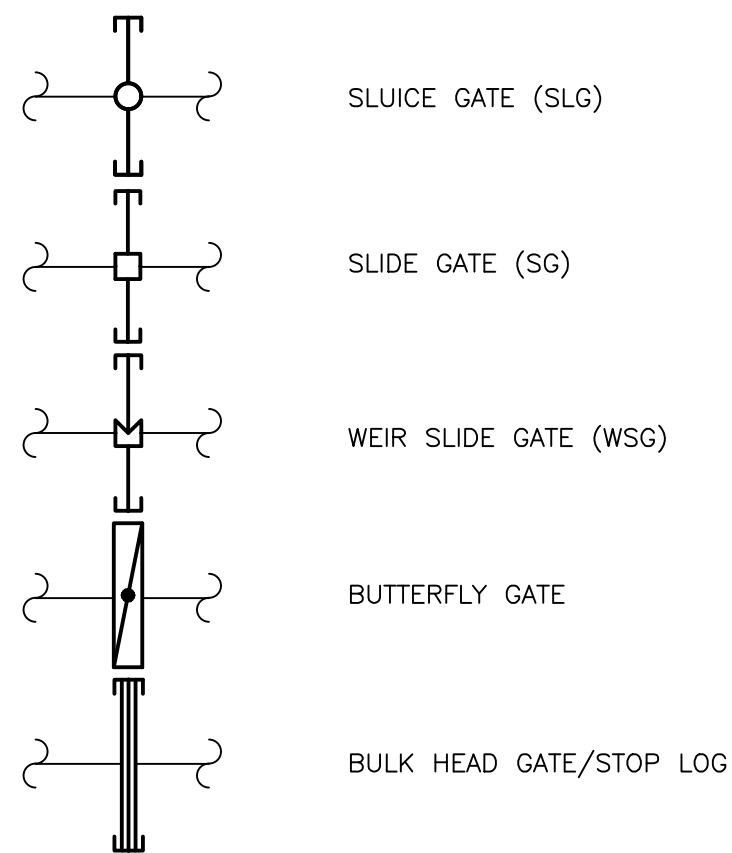
TYPICAL PIPE TAG NUMBERS & DESIGNATION



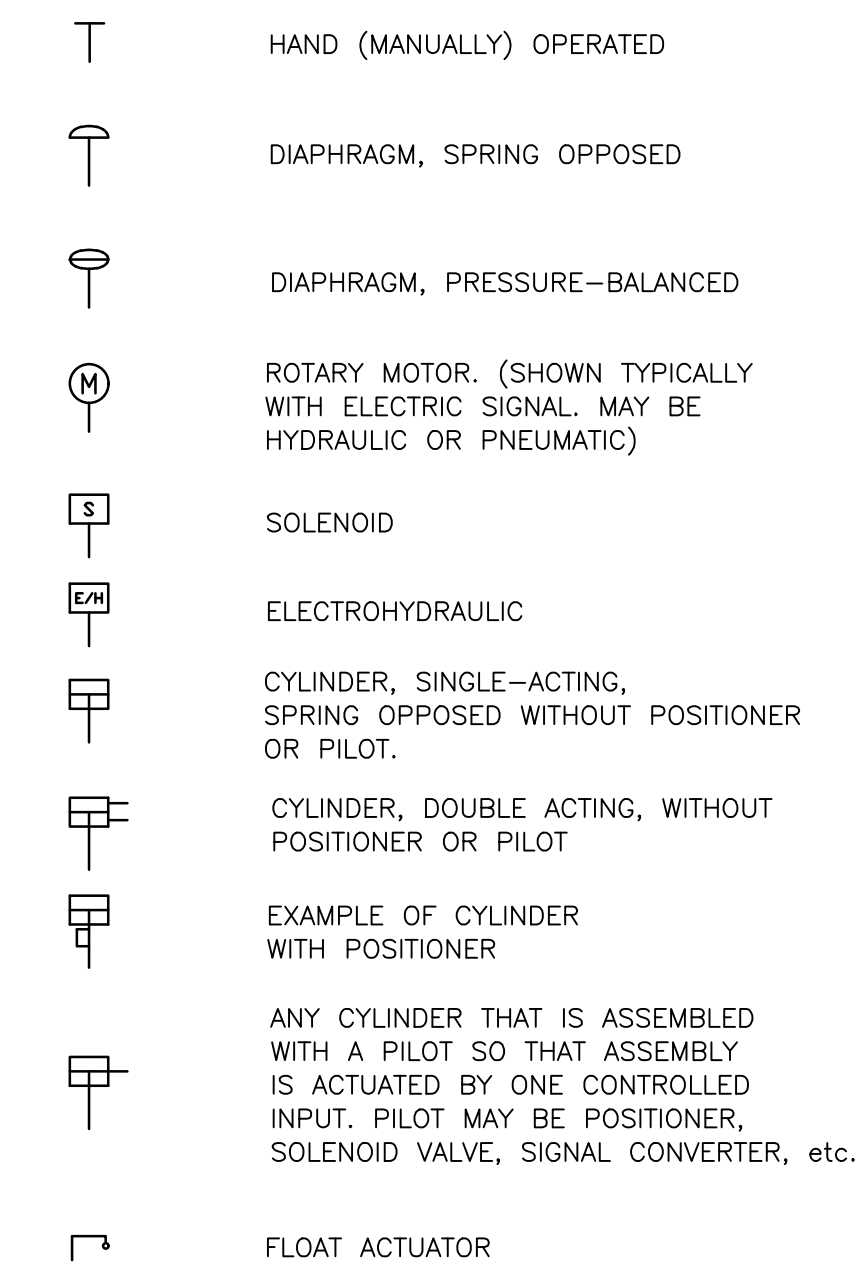
PIPE LINE SYMBOLS



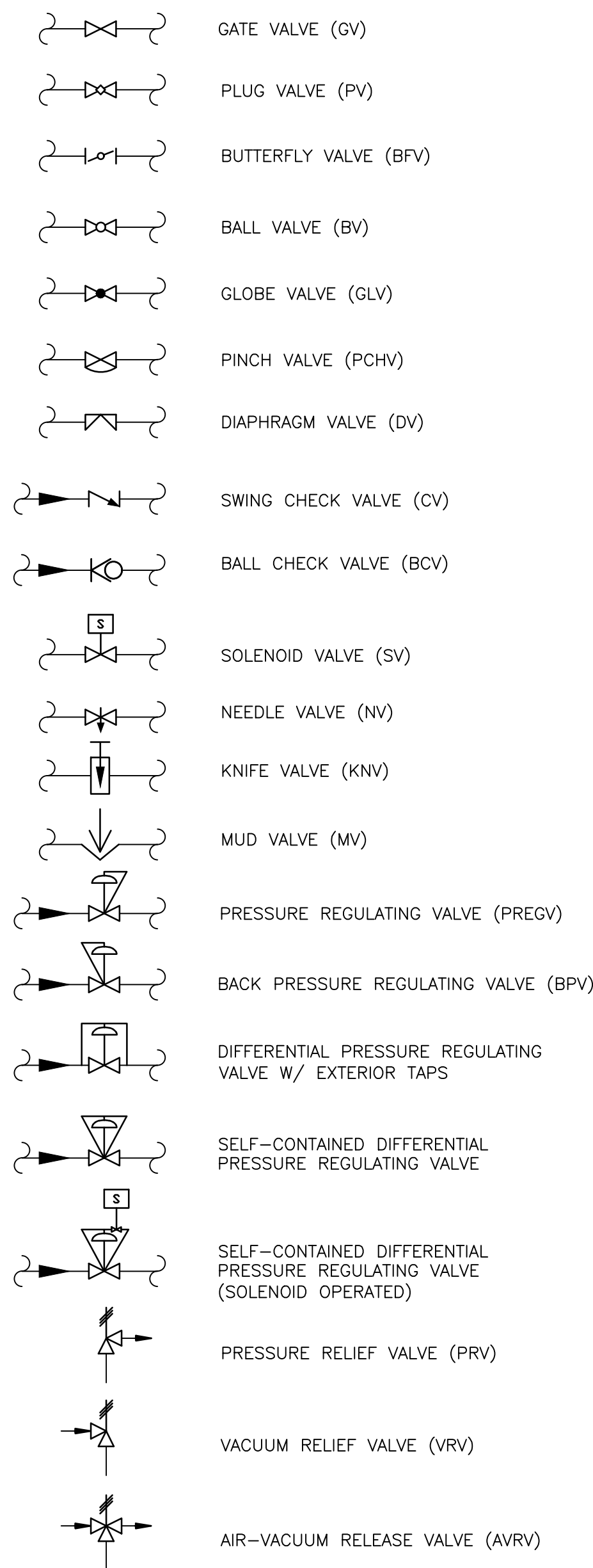
GATE SYMBOLS



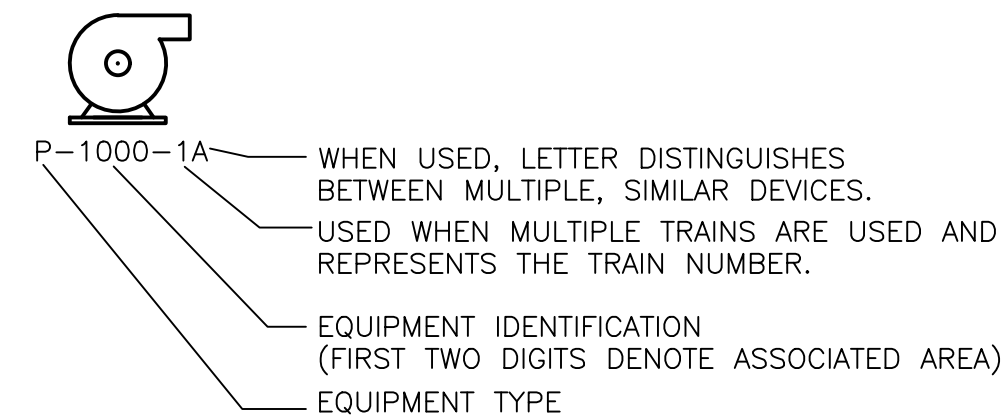
VALVE ACTUATORS



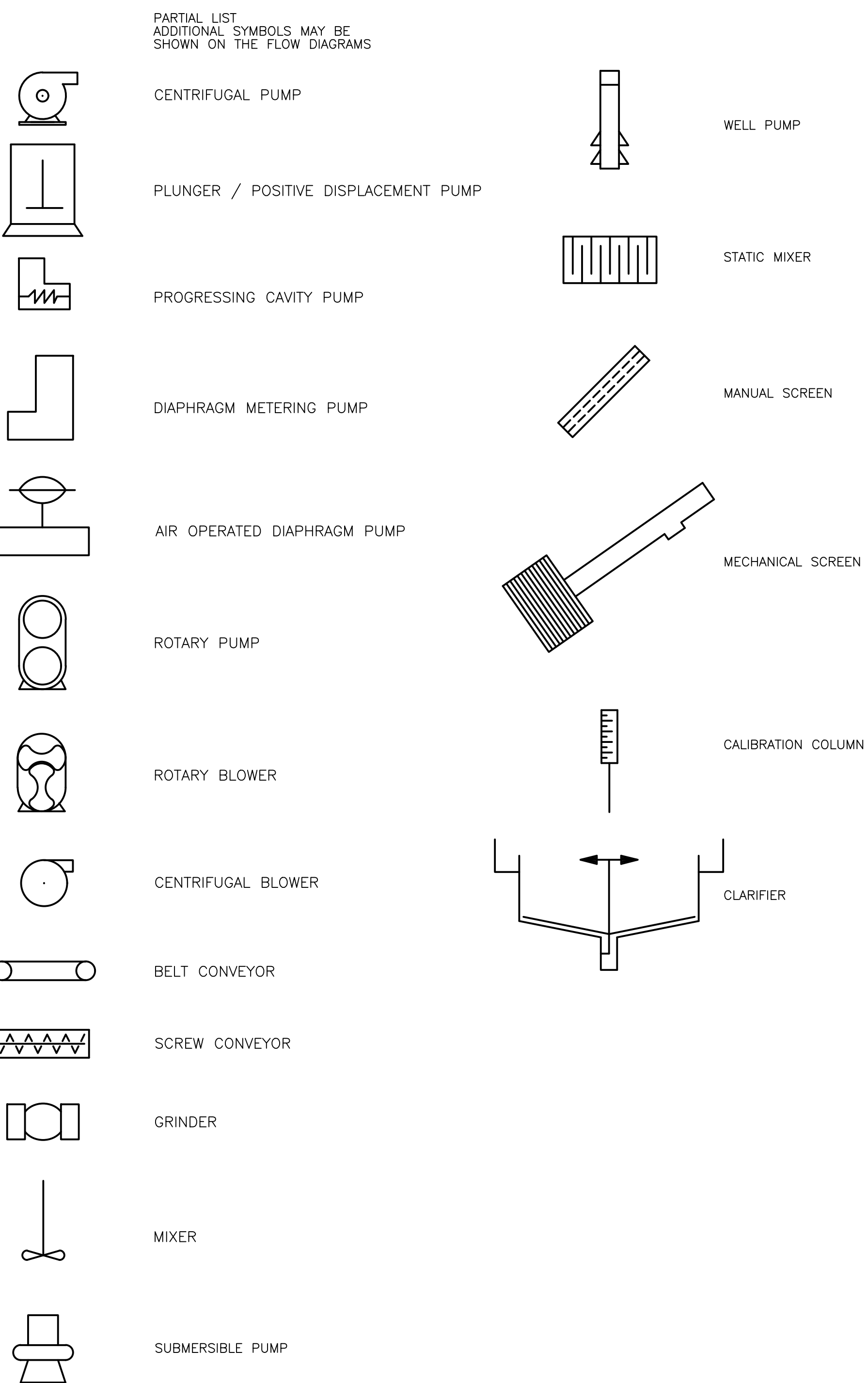
VALVE SYMBOLS



TYPICAL EQUIPMENT TAG NUMBERS & DESIGNATION



PROCESS EQUIPMENT



GENERAL NOTES

1. REFER TO SHEET I-1 FOR ADDITIONAL NOTES

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REV. NO.	DATE	DRWN	CHKD	REMARKS

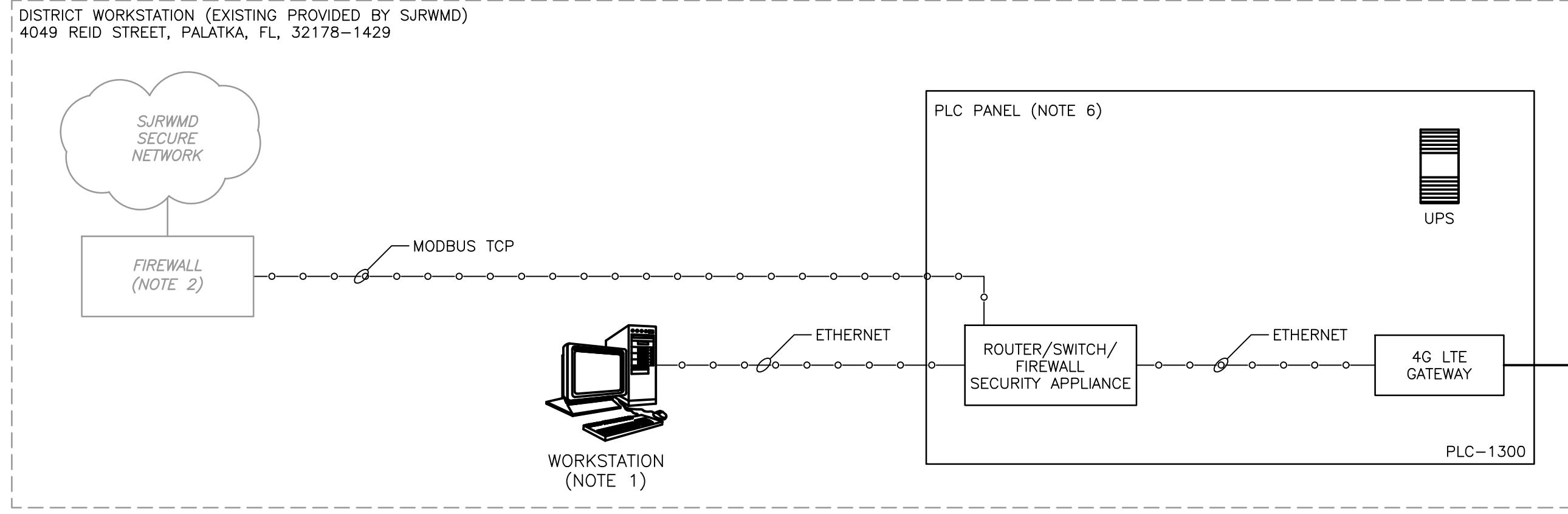
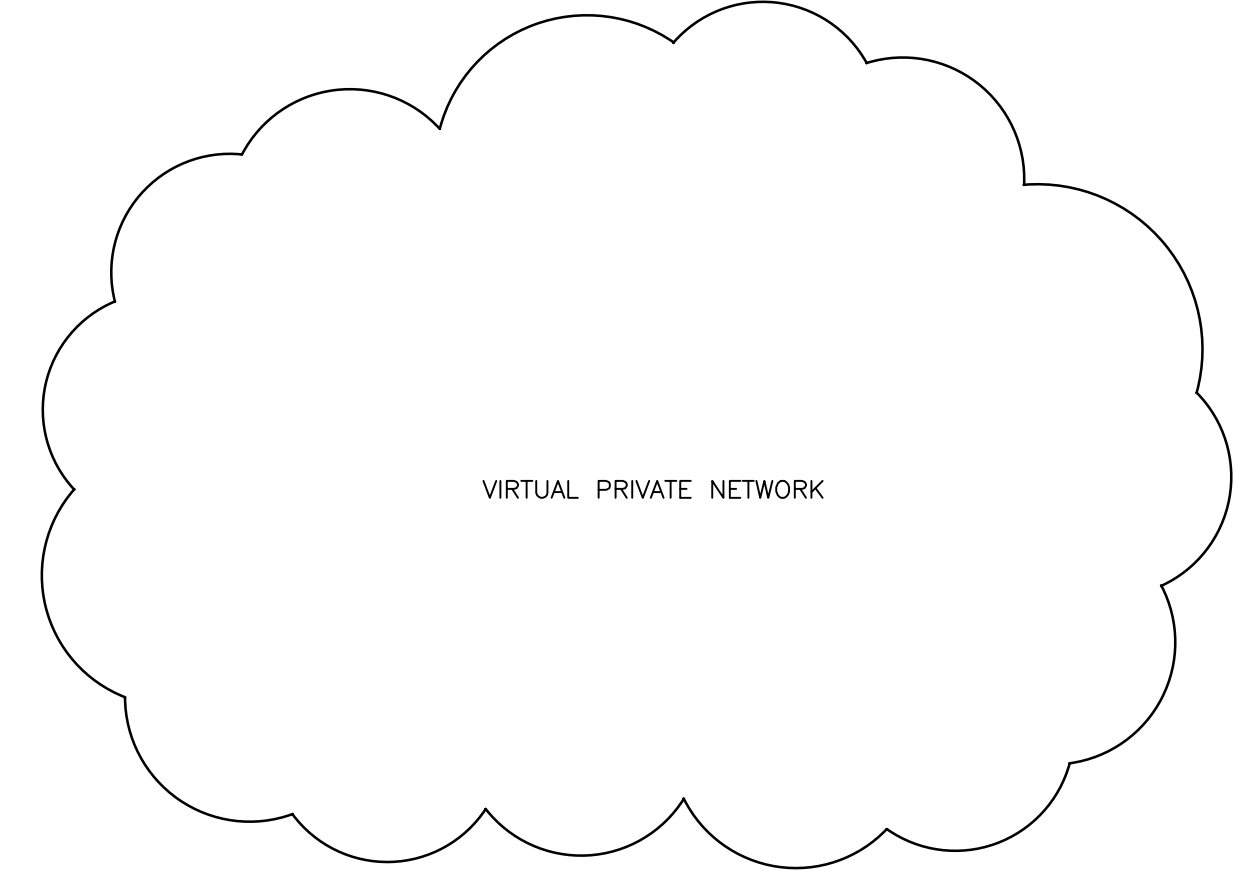
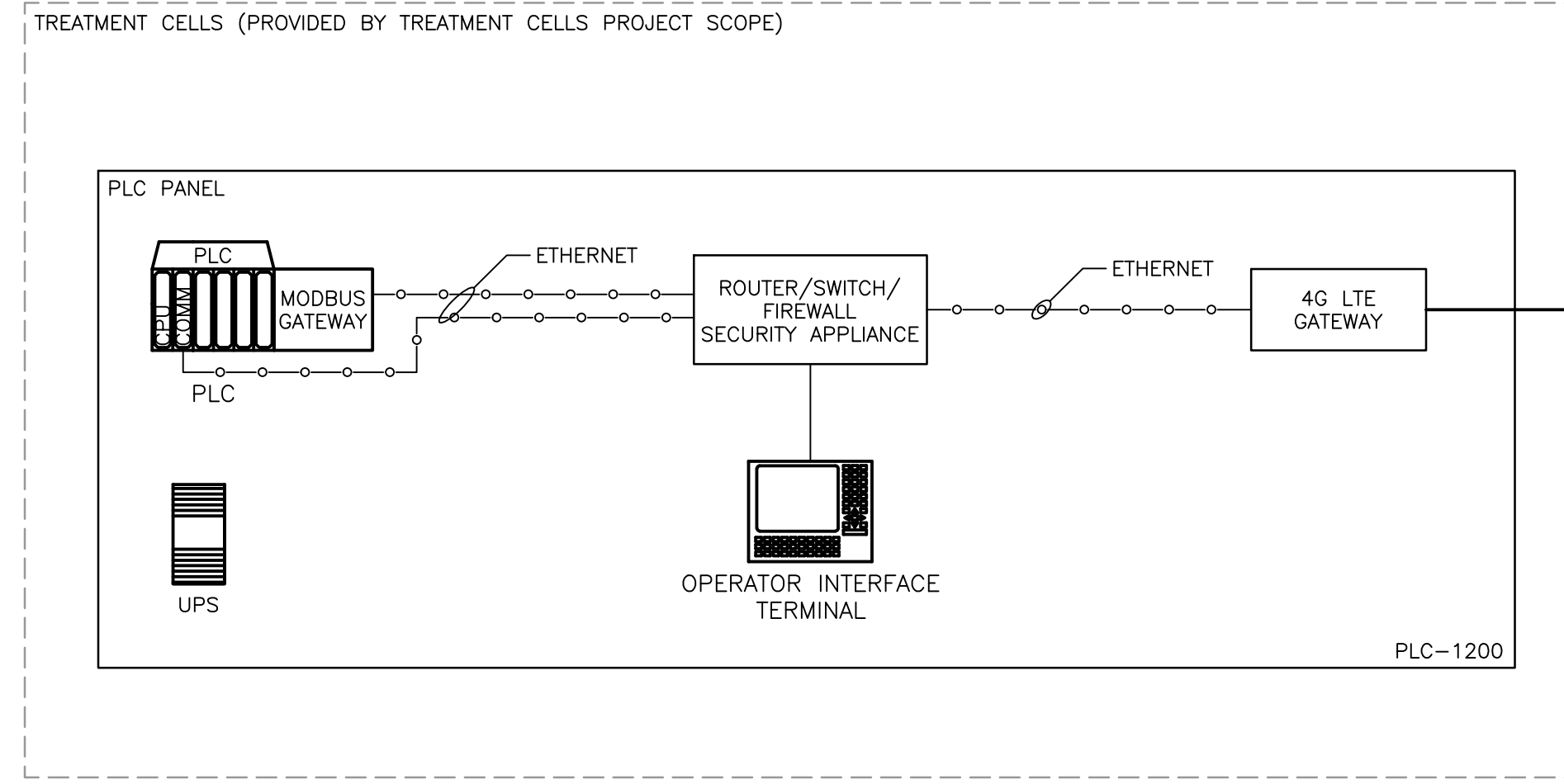
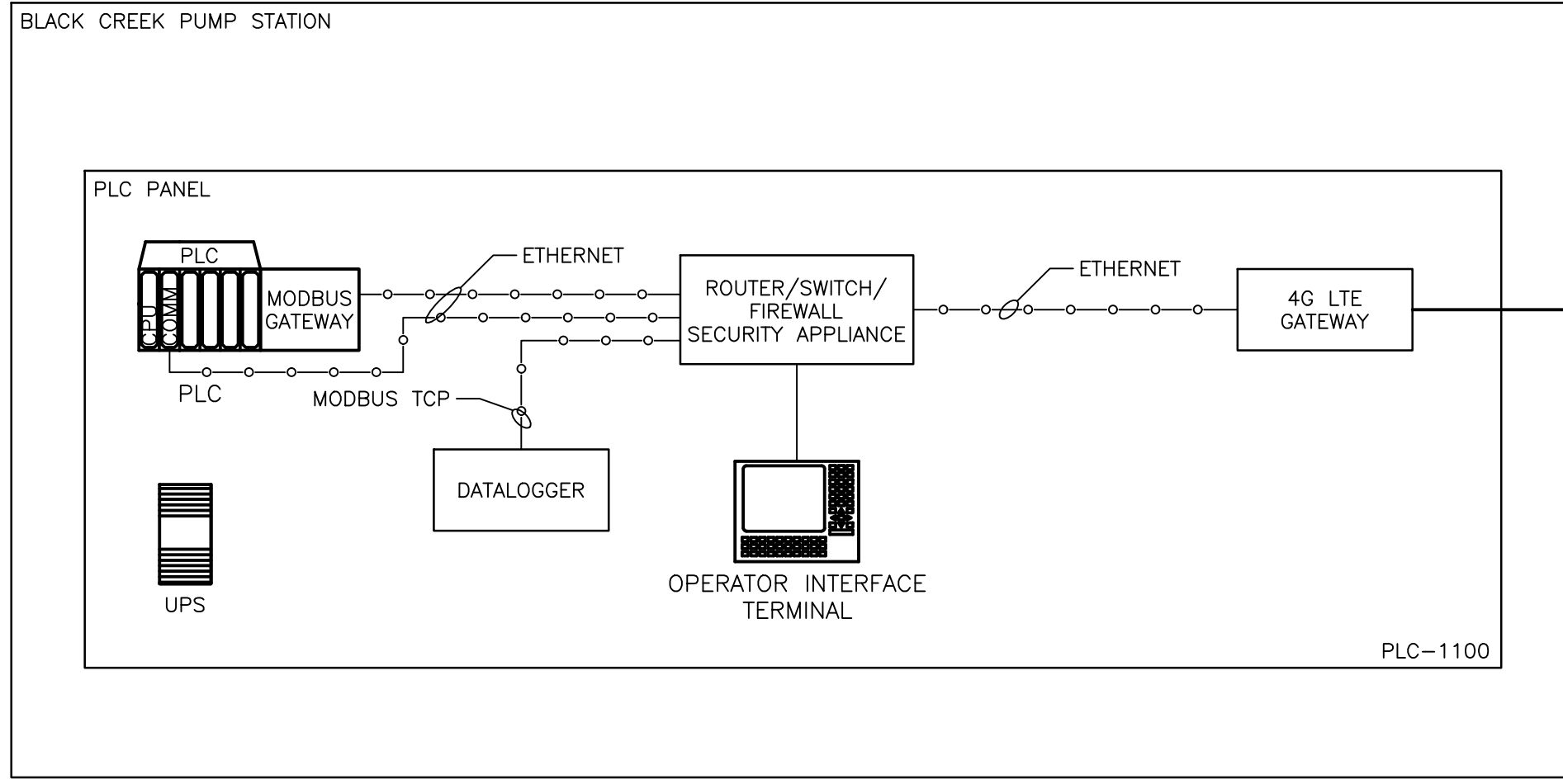
DESIGNED BY: <u>F. ALCALA</u>	 4651 Salisbury Road, Suite 420 Jacksonville, FL 32256 Tel: (904) 731-7109 FL COA No. EB-0000020
DRAWN BY: <u>R. CHARITY</u>	
SHEET CHK'D BY: <u>F. ALCALA</u>	
CROSS CHK'D BY: <u>D. UBERT</u>	
APPROVED BY: <u>F. ALCALA</u>	
DATE: <u>MAY 2022</u>	

**ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION**

**INSTRUMENTATION LEGEND SHEET
 (SHEET 2 OF 2)**

PROJECT NO. 9247-221208
FILE NAME: I002SYMB.DWG
SHEET NO. I-2

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- NOTES:
1. LOADED WITH LOGGNET SOFTWARE.
 2. COORDINATE WITH OWNER ACCESS TO SJRWMD INSTRUMENTS AND TELEMETRY SYSTEMS THROUGH SECURE NETWORK TO:
 - A. TRANSMIT TO BLACK CREEK PUMP STATION REAL TIME LEVEL SIGNAL FROM ALLIGATOR CREEK LEVEL SITE.
 - B. SJRWMD FACILITY
 3. COORDINATE WITH SJRWMD LOCATION FOR COMMUNICATION EQUIPMENT AND WORKSTATION.
 4. COORDINATE WITH SJRWMD DATA INTEGRATION TO RECEIVE LEVELS FROM LAKE BROOKLYN AND ALLIGATOR CREEK.
 5. COORDINATE WITH SJRWMD INTERCONNECTION TO SECURE NETWORK.
 6. PROVIDE ENCLOSURE IF REQUIRED IN LOCATION TO BE COORDINATED WITH SJRWMD.
 7. PROVIDE CELLULAR SURVEY TO DETERMINE MOUNTING ANTENNA INSIDE OR OUTSIDE OF THE BUILDING.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: F. ALCALA
 DRAWN BY: R. CHARITY
 SHEET CHK'D BY: F. ALCALA
 CROSS CHK'D BY: D. UBERT
 APPROVED BY: F. ALCALA
 DATE: MAY 2022



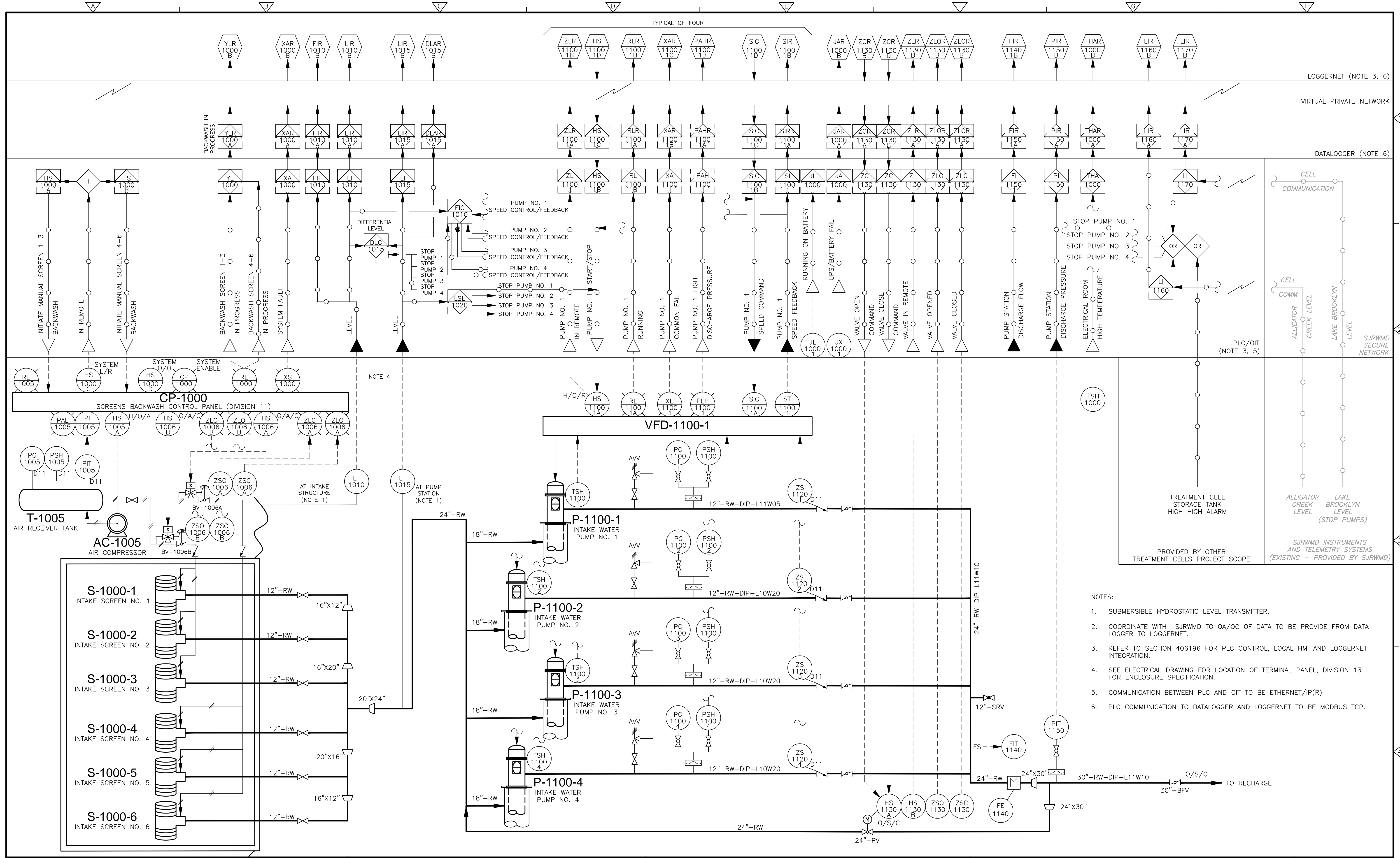
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 Jacksonville, FL 32256
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 FL COA No. EB-0000020

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

PROCESS & INSTRUMENTATION DIAGRAM
 CONTROL BLOCK DIAGRAM

PROJECT NO. 9247-221208
 FILE NAME: 1003PID.DWG
 SHEET NO. I-3

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- NOTES:
1. SUBMERSIBLE HYDROSTATIC LEVEL TRANSMITTER.
 2. COORDINATE WITH SJRWMD TO QA/QC OF DATA TO BE PROVIDED FROM DATA LOGGER TO LOGGNET.
 3. REFER TO SECTION 406196 FOR PLC CONTROL, LOCAL HMI AND LOGGNET INTEGRATION.
 4. SEE ELECTRICAL DRAWING FOR LOCATION OF TERMINAL PANEL, DIVISION 13 FOR ENCLOSURE SPECIFICATION.
 5. COMMUNICATION BETWEEN PLC AND OIT TO BE ETHERNET/IP(R)
 6. PLC COMMUNICATION TO DATALOGGER AND LOGGNET TO BE MODBUS TCP.

REV. NO.	DATE	DRWN	CHKD	REMARKS

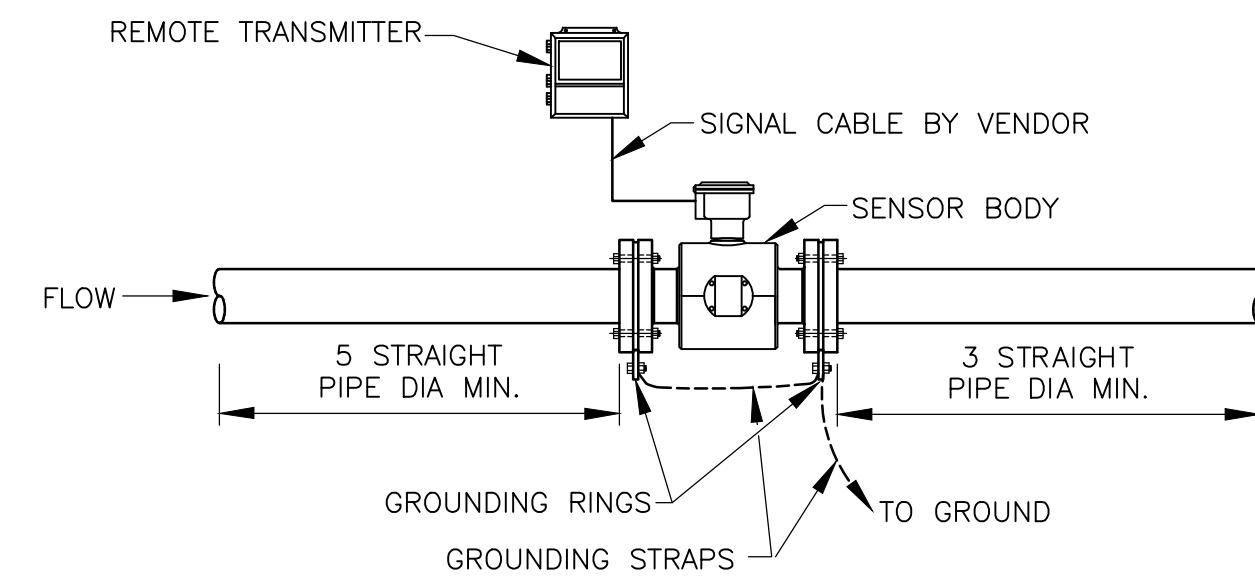
DESIGNED BY: F. ALCALA
 DRAWN BY: R. CHARITY
 SHEET CHK'D BY: F. ALCALA
 CROSS CHK'D BY: D. UBERT
 APPROVED BY: F. ALCALA
 DATE: MAY 2022



ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

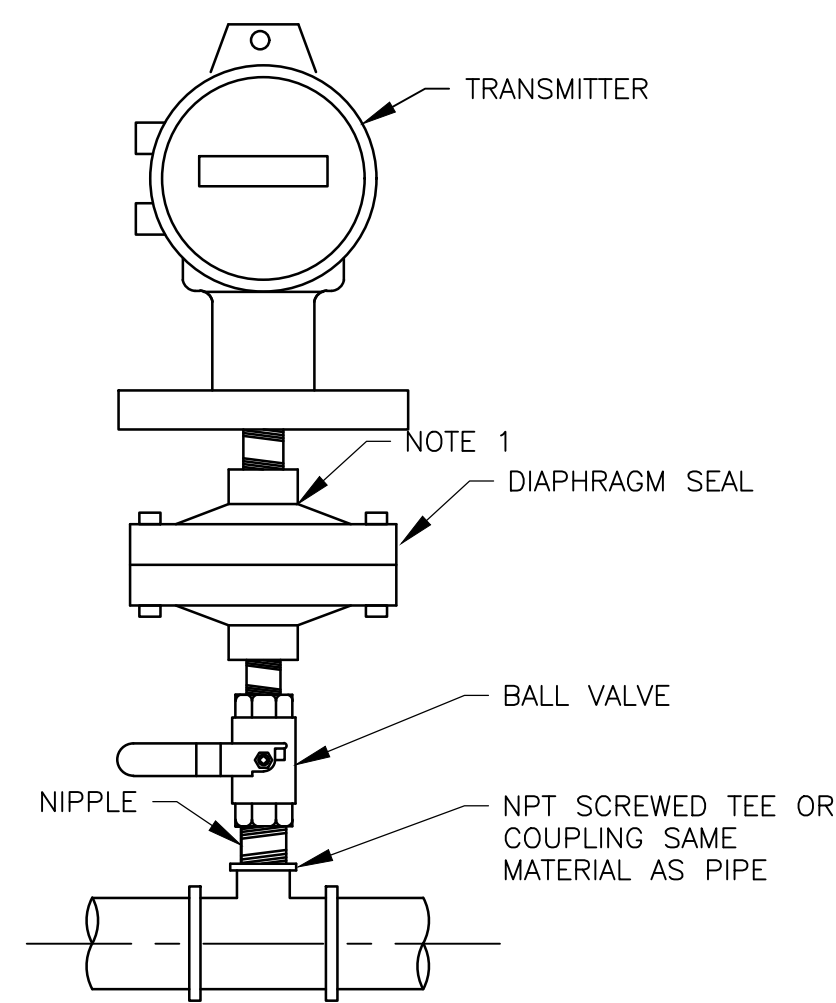
PROCESS & INSTRUMENTATION DIAGRAM
 INTAKE STRUCTURE AND PUMP STATION

PROJECT NO. 9247-221208
 FILE NAME: 1004PIDI.DWG
 SHEET NO. 1-4
 ISSUED FOR BID



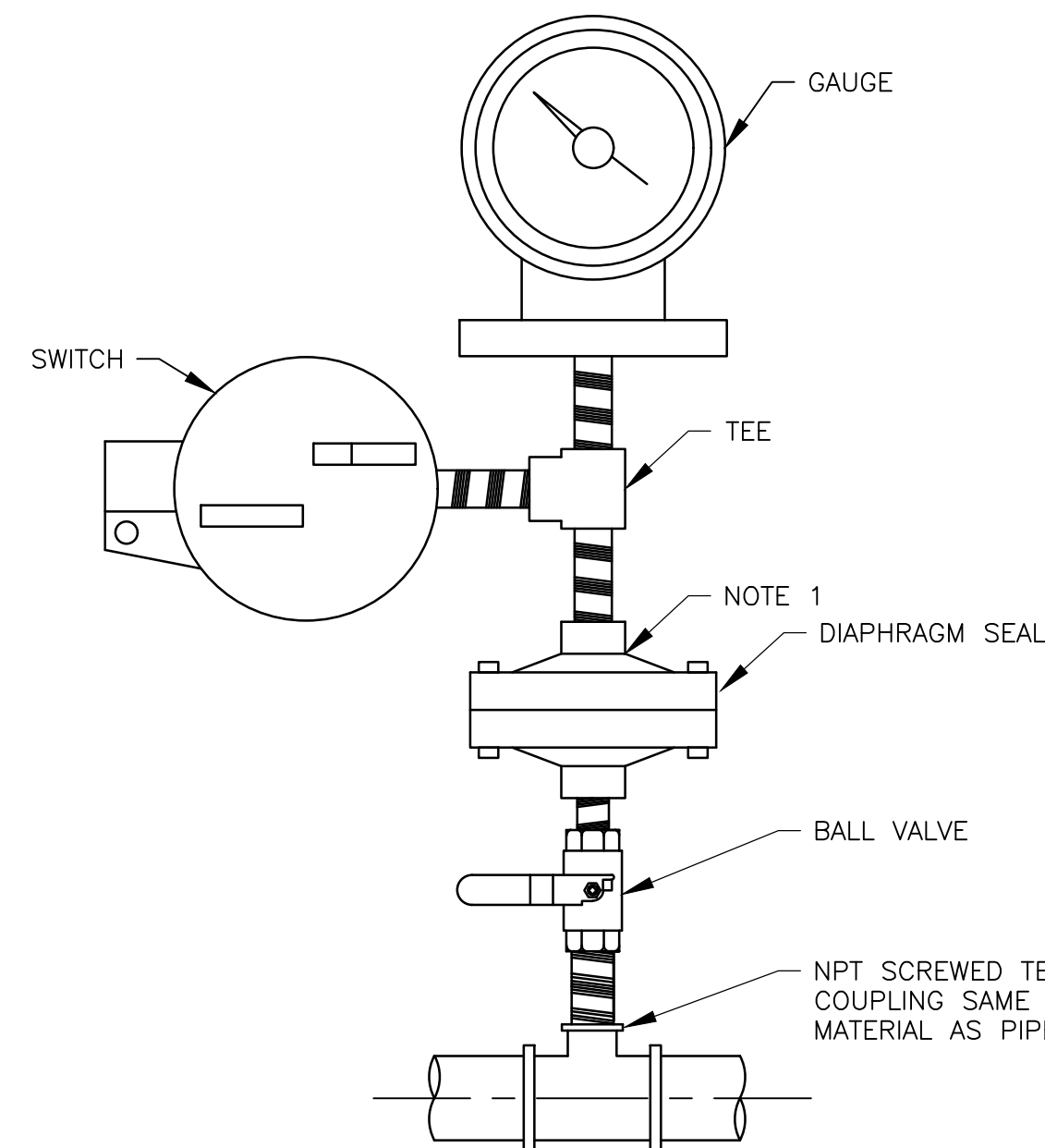
- NOTES:
1. PROVIDE GROUNDING RING(S) AS RECOMMENDED BY MANUFACTURER.

MAGNETIC FLOW METER
DETAIL A
 NTS



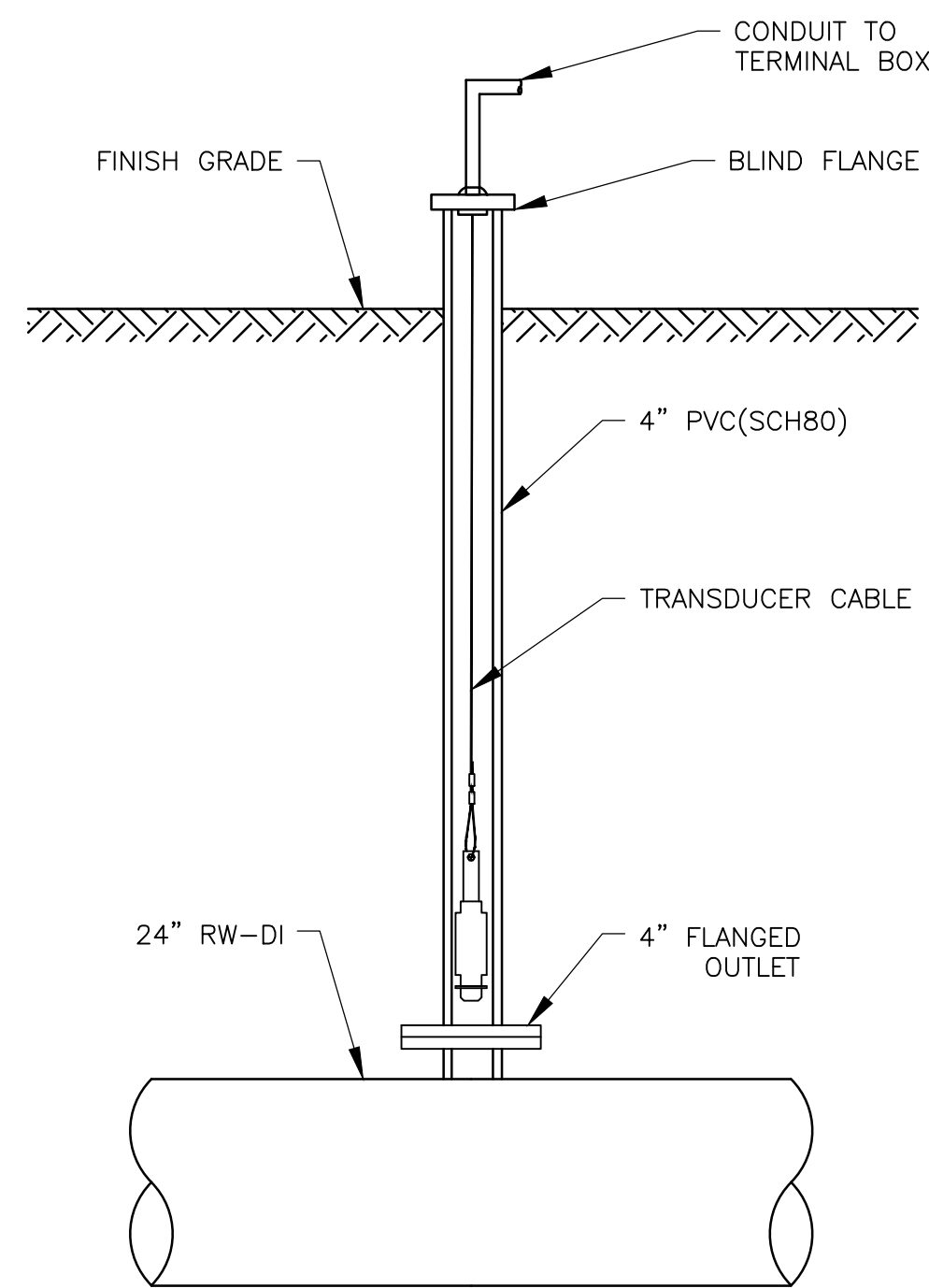
- NOTES:
1. FOR PROPER OPERATION, EVACUATE SECTION BETWEEN DIAPHRAGM AND PRESSURE DEVICE OF AIR AND SEAL WITH OIL.

PRESSURE TRANSMITTER (WITH DIAPHRAGM SEAL)
DETAIL C
 NTS

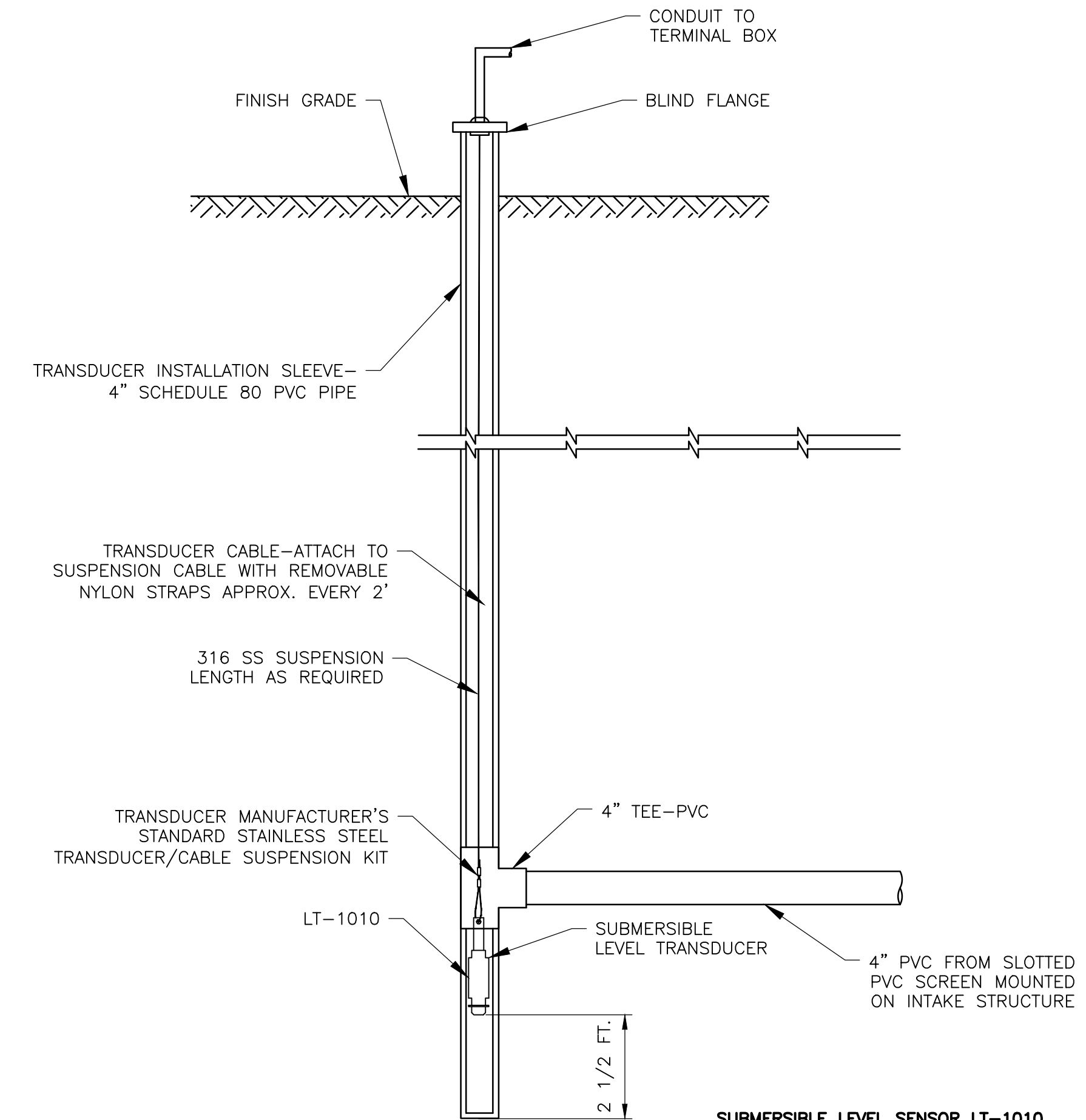


- NOTES:
1. FOR PROPER OPERATION, EVACUATE SECTION BETWEEN DIAPHRAGM AND PRESSURE DEVICE OF AIR AND SEAL WITH OIL.

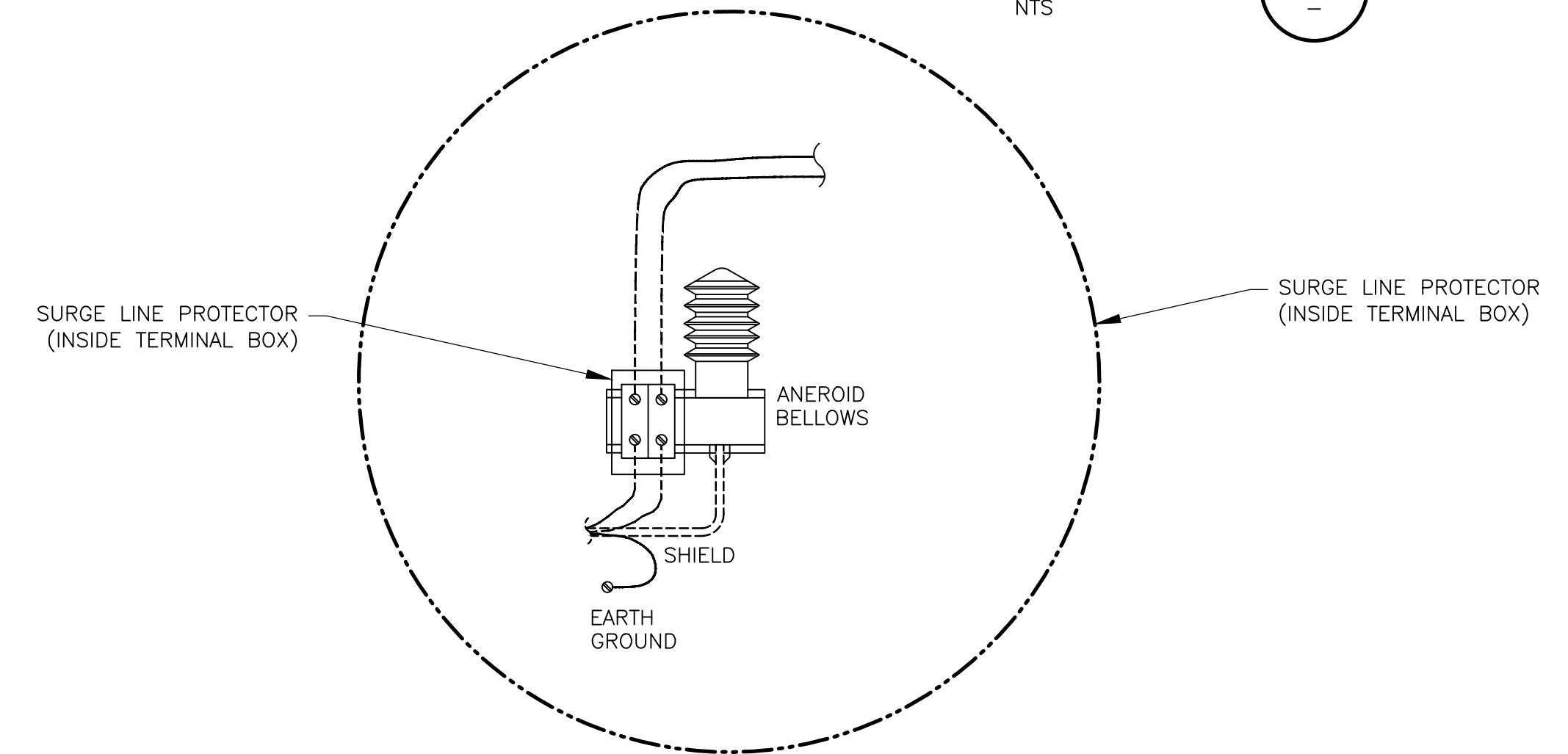
PRESSURE GAUGE/SWITCH (WITH DIAPHRAGM SEAL)
DETAIL B
 NTS



SUBMERSIBLE LEVEL SENSOR LT-1015 (WITH ANEROID BELLOWS)
DETAIL D
 NTS



SUBMERSIBLE LEVEL SENSOR LT-1010
DETAIL E
 NTS



- NOTES:
1. PROVIDE 10" X 10" MINIMUM TERMINATION PANEL. PROVIDE J-HOOK INSIDE PANEL TO COIL EXTRA CABLE. PROVIDE TERMINATION BLOCKS. INSTALL ANEROID BELLOWS WITHIN THE JUNCTION BOX. ALL CABLES AND WIRES SHALL BE LABELED.

LT CONNECTION WITH ANEROID BELLOWS
DETAIL F
 NTS

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SHEET CHK'D BY:	F. ALCALA
CROSS CHK'D BY:	D. UBERT
APPROVED BY:	F. ALCALA
DATE:	MAY 2022

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ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 BLACK CREEK WATER RESOURCE
 DEVELOPMENT PROJECT
 INTAKE AND PUMP STATION

INSTRUMENTATION INSTALLATION DETAILS

PROJECT NO.	9247-221208
FILE NAME:	1005PIDT.DWG
SHEET NO.	I-5

ISSUED FOR BID