

Fairfax Water

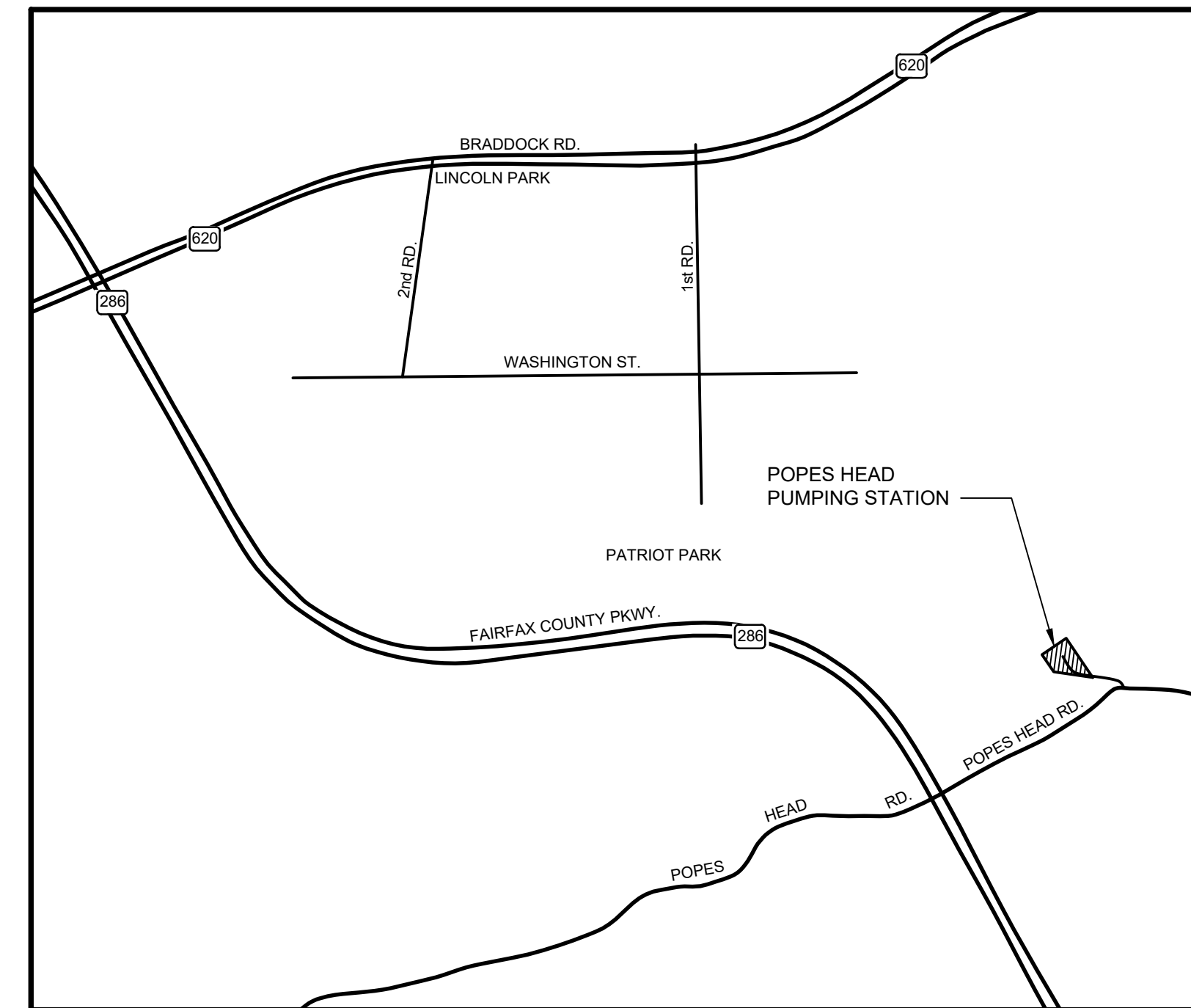
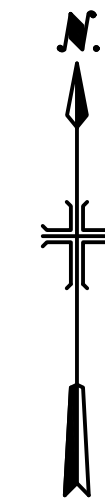
8570 Executive Park Avenue ~ Fairfax ~ Virginia ~ 22031

POPES HEAD PUMPING STATION ELECTRICAL UPGRADES

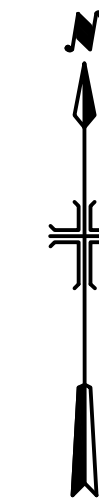
Fairfax Water Authority Project No. P2722, Division 003
11518 POPES HEAD ROAD ~ FAIRFAX ~ Virginia ~ 22030



PROJECT LOCATION MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE



User: TOURTEL01; Spc: AUS-NSMOD; File: C:\USERS\TOURTEL01\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - 7.0 CAD FILES\SHEETS\ELECTRICAL DESIGN\GENERAL\01_COVER_SHEET.DWG; Scale: 1:1; ServedDate: 8/23/2024; Time: 16:56; Plot Date: Tourtel, John; 8/26/2024; 12:40; Layout: 1

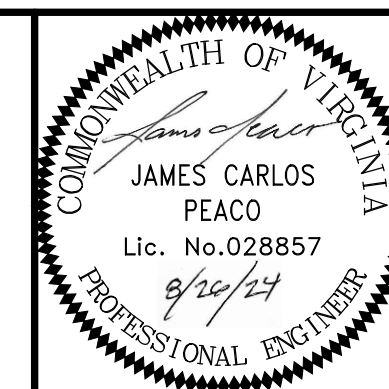
FAIRFAX WATER
PLANNING & ENGINEERING DIVISION
8560 ARLINGTON BOULEVARD
FAIRFAX, VA 22031

DESIGNED: A. BARTLEY
DRAWN: V. TAYLOR
CHECKED: J. PEACO

NO.	DATE	REVISION

SCALE
THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING:

USE TO VERIFY FIGURE REPRODUCTION SCALE



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POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
COVER SHEET

FILE NAME: G01_COVER_SHEET.DWG			
PROJECT	DIVISION	DATE	DRAWING
P2722	003	AUG 2024	G01
TAX MAP:		SHEET	
067-2		1 of 25	



P2722-003

BID DOCUMENTS

AUG 2024

POPES HEAD PUMPING STATION ELECTRICAL UPGRADES

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21	E05	ELECTRICAL SCHEMATICS, INTERCONNECT DIAGRAM, AND MISCELLANEOUS DETAILS
22	E06	POWER PLAN
23	E07	ELECTRICAL ROOM SECTION VIEWS
24	E08	RVSS SCHEMATIC
25	E09	RVSS ELEVATION VIEW AND ELECTRICAL DETAILS

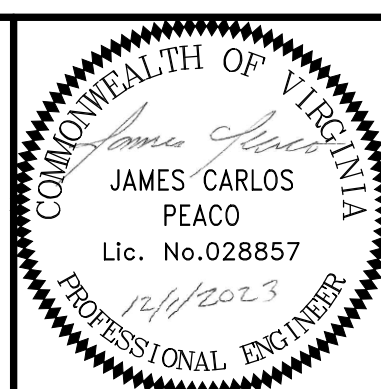
User: TAYLOR, V. J. | Project: POPES HEAD PUMP STATION | Drawing: G02_DRAWING_INDEX.DWG | Scale: 1:1 | Sheet: 2 of 25 | Date: 12/13/2023 | Time: 14:52 | Plot Date: 12/13/2023 | 11:38 | Layout: 2

FAIRFAX WATER
 PLANNING & ENGINEERING DIVISION
 8560 ARLINGTON BOULEVARD
 FAIRFAX, VA 22031

DESIGNED: A. BARTLEY
 DRAWN: V. TAYLOR
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POPES HEAD PUMPING STATION
 ELECTRICAL UPGRADES
 DRAWING INDEX

FILE NAME: G02_DRAWING_INDEX.DWG			
PROJECT	DIVISION	DATE	DRAWING
P2722	003	DEC 2023	G02
TAX MAP:		SHEET	
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GENERAL NOTES 1

(THESE GENERAL NOTES SHALL BE USED WHERE THEY ARE APPLICABLE TO THE PROJECT PLANS)

EROSION AND SEDIMENT CONTROL

I. EROSION CONTROL NARRATIVE

PRIOR TO ANY LAND DISTURBING OPERATIONS, THE EROSION CONTROLS, AS SPECIFIED BY THE ENGINEERING PLANS, SHALL BE INSTALLED. ALL MECHANICAL AND VEGETATIVE PRACTICES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS CONTAINED IN THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM) AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). SLOPE AREAS THAT CANNOT BE ADEQUATELY STABILIZED BY SEEDING, SHALL BE SODDED AND STAKED. AS DISTURBED AREAS, NOT TO BE CONSTRUCTED UPON, ARE FINAL GRADED, THEY SHALL BE PREPARED, LIME AND FERTILIZER APPLIED, SEEDED AND MULCHED. FOR THE AREAS OUTSIDE THE VDOT RIGHT-OF-WAY, THE SEED SHALL CONSIST OF A MATURE KENTUCKY 31 TALL FESCUE AND KENTUCKY BLUEGRASS IN ACCORDANCE WITH DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL SERVICES SPECIFICATIONS OR COUNTY APPROVED ALTERNATE SEED FOR AREAS LOCATED WITHIN THE VDOT RIGHT-OF-WAY, THE SEED MIX SHALL BE IN CONFORMANCE WITH CURRENT VDOT REQUIREMENTS. SEDIMENT CONTROLS AND MECHANICAL DEVICES SHALL BE REMOVED WITHIN 7 DAYS AFTER FINAL GRADING. ALL TEMPORARY SEDIMENT CONTROLS AND MECHANICAL DEVICES SHALL BE REMOVED FROM CONTRIBUTING AREAS AS THEY BECOME STABILIZED. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF THE VESCH AND THE PFM.

II. EROSION, SEDIMENTATION, AND LAND CONSERVATION NOTES

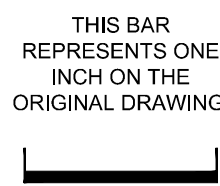
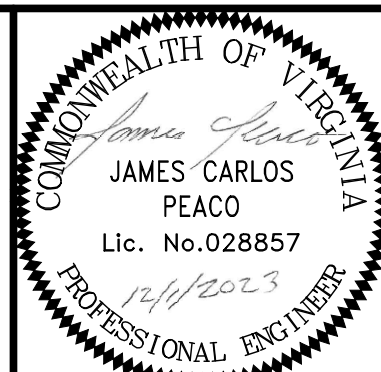


- MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT FEDERAL, STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE COUNTY OF FAIRFAX.
- ALL AREAS, ON OR OFF-SITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON, SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 2:1 AND OR GREATER SHALL BE SODDED AND STAKED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE ENGINEER.
- ANY DISTURBED AREA NOT PAVED, PERMANENTLY SEEDED, SODDED, OR BUILT BY 1ST OF NOVEMBER OR DISTURBED AFTER THAT DATE, IS TO BE SEEDED WITHIN 14 DAYS WITH OATS, ABRUZZI RYE OR APPROVED EQUIVALENT, AND MULCHED WITH HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRE AND OVERSEED BY APRIL 15. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF VESCH AND THE PFM.
- NO ONGOING OR CONTINUOUS ACTIVE AREAS MAY BE LEFT DENUDED FOR A PERIOD LONGER THAN 14 DAYS EXCEPT FOR THAT PORTION OF THE SITE IN WHICH WORK WILL BE CONTINUOUS BEYOND 14 DAYS.
- TEMPORARY DIVERSIONS SEEDED AND MULCHED OR STAKED STRAW BALE DIVERSIONS AND OTHER CONTROL MEASURES NECESSARY ARE TO BE PLACED AS INDICATED ON THE DRAWINGS PRIOR TO OR AS THE FIRST STEP IN EXCAVATION.
- WHEN IN ACCORDANCE WITH STATE AND FEDERAL JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL IS TO BE PLACED IN STREAMS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 14 DAYS IS TO BE SEEDED FOR TEMPORARY VEGETATION AND MULCHED. WHERE SPOIL IS PLACED ON THE DOWNHILL SIDE OF TRENCH, IT IS TO BE BACKSLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE HOSE MUST OUTLET IN A STABILIZED AREA OR A SEDIMENT BASIN.
- WHERE STREAM CROSSINGS ARE REQUIRED FOR EQUIPMENT, TEMPORARY CULVERTS SHALL BE PROVIDED.
- DURING CONSTRUCTION, ALL STORM SEWER INLETS WILL BE PROTECTED BY SILT TRAPS, MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS.
- ALL DISTURBED AREAS ARE TO BE SEEDED AND MULCHED OR SODDED WITHIN 5 DAYS AFTER BACKFILL OF THE APPLICABLE TRENCH SECTION, IN ACCORDANCE WITH THE PROVISIONS CONTAINED IN THE PROJECT SPECIFICATIONS RELATING TO SEEDING AND SODDING. SPEED IS THE ESSENTIAL LAND CONSERVATION ELEMENT FOR A LINEAR PROJECT.
- FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, REFER TO THE PFM AND/OR THE VESCH.
- ALL EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED WITHIN 30 DAYS AFTER THE PROJECT IS STABILIZED.
- AN EROSION AND SEDIMENT CONTROL CONTRACTOR CERTIFICATION IS REQUIRED FOR ALL LAND DISTURBING ACTIVITIES WITHIN VDOT RIGHT-OF-WAY.
- THE CONTRACTOR SHALL PROPERLY INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROLS FOR THE LIFE OF THE PROJECT AND ROUTINELY CHECK CONTROL DEVICES BEFORE, DURING, AND AFTER STORM EVENTS.
- AN 80% GERMINATION MUST BE OBTAINED PRIOR TO VDOT PERMIT RELEASE.
- ADDITIONAL "LAND CONSERVATION NOTES" AND PROJECT SPECIFIC EROSION AND SEDIMENT CONTROL NARRATIVES, IF PROVIDED, WILL BE ON A SEPARATE SHEET AND SHOULD BE NOTED ON PLAN COVER SHEET.

CONSTRUCTION NOTES

- ALL CONSTRUCTION, INCLUDING ANY PROPOSED LANDSCAPING, SHALL CONFORM TO THE CURRENT EDITION OF THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL (PFM) AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT) STANDARDS AND SPECIFICATIONS AND SHALL CONFORM TO THE CURRENT EDITION OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC).
- THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING THE VDOT RIGHT-OF-WAY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN ALL STREETS, ALLAY DUST AND TO TAKE WHATEVER MEASURES NECESSARY TO ENSURE THE ROAD(S) ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
- THE CONTRACTOR SHALL VISIT THE SITE AND SHALL VERIFY EXISTING CONDITIONS PRIOR TO SUBMITTING A BID FOR THE CONSTRUCTION OF THE PROJECT.
- WHERE EXISTING NATURAL DRAINAGE DITCHES OR STREAM BANKS ARE DISTURBED DURING CONSTRUCTION, THE CONTRACTOR SHALL RESTORE THESE AREAS TO ORIGINAL ALIGNMENT, GRADE, AND INVERT.
- THE FOLLOWING PROVISIONS SHALL APPLY TO THE USE OF SHEETING AND SHORING:
 - SHEETING AND SHORING OR OTHER APPROVED METHODS FOR TRENCH BRACING WILL BE REQUIRED ON THIS CONTRACT AS NEEDED TO MEET ALL SAFETY REQUIREMENTS.
 - UNLESS OTHERWISE DIRECTED BY THE ENGINEER, SHEETING AND SHORING WILL BE REMOVED FROM ALL TRENCHES PRIOR TO BACKFILLING OPERATIONS.
 - UNLESS SPECIFICALLY IDENTIFIED IN THE CONTRACT DOCUMENTS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR SHEETING AND SHORING.
- THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS WITH SEED AND MULCH OR SOD IN ACCORDANCE WITH THE RESTORATION SCHEDULE NOTED ON THE APPROPRIATE SHEET.
- ALL PROPERTY MONUMENTS LYING WITHIN CONSTRUCTION LIMITS SHALL BE LOCATED AND DOCUMENTED BY A VIRGINIA LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION. THE CONTRACTOR MUST MAKE ALL REASONABLE EFFORTS TO AVOID DISTURBANCE/HARM TO THE PROPERTY MONUMENTS. IF DISTURBED/HARMED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY FAIRFAX COUNTY LAND SURVEY BRANCH AT 703-324-5151 OF SUCH INCIDENT. AFTER PROJECT CONSTRUCTION IS COMPLETED, THE MONUMENT SHALL BE REPLACED/RESTORED, AT THE CONTRACTOR'S EXPENSE, TO ITS ORIGINAL LOCATION BY A VIRGINIA LICENSED LAND SURVEYOR. THE CONTRACTOR SHALL ALSO NOTIFY LAND SURVEY BRANCH AT 703-324-5151 AFTER THE MONUMENT IS REPLACED AT ITS ORIGINAL LOCATION.

FOR ALL EXCAVATION WORK ANYWHERE IN VIRGINIA!
ALWAYS NOTIFY 811

User: TAYLOR, Spec: AUS-NCSSMOD File: C:\USERS\TAYLOR\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - DOCUMENTS\7.0 CAD FILES\SHEET\SELECTION\DESIGN\GENERAL\G03_GENERAL_NOTES_1.DWG Scale: 1:1 Saved Date: 8/30/2023 Time: 13:04 Plot Date: Taylor, Veronica: 11/28/2023 11:27 Layout: 3

FAIRFAX WATER PLANNING & ENGINEERING DIVISION 8560 ARLINGTON BOULEVARD FAIRFAX, VA 22031	DESIGNED: A. BARTLEY	SCALE THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING:  USE TO VERIFY FIGURE REPRODUCTION SCALE		 LEGAL ENTITY: ARCADIS U.S., INC. 4301 NORTH FAIRFAX DRIVE, SUITE 530 ARLINGTON, VA 22203 COPYRIGHT: 2022		POPES HEAD PUMPING STATION			FILE NAME: G03_GENERAL_NOTES_1.DWG
	DRAWN: V. TAYLOR					PROJECT: P2722	DIVISION: 003	DATE: DEC 2023	
	CHECKED: J. PEACO					ELECTRICAL UPGRADES		DRAWING: G03	
	NO. DATE REVISION					GENERAL NOTES 1		SHEET: 3 of 25	

GENERAL NOTES 2: UTILITIES

(THESE GENERAL NOTES SHALL BE USED WHERE THEY ARE APPLICABLE TO THE PROJECT PLANS)

MISS UTILITY, VA811: CALL 1-800-552-7001 OR 811
<https://va811.com/>

PRIMARY UTILITY COMPANIES (UPDATED NOVEMBER 2020)

UTILITIES NOTES

- THE UTILITY INFORMATION SHOWN ON THESE PLANS IS TAKEN FROM INFORMATION PROVIDED BY AN UNDERGROUND UTILITY DESIGNATING AND LOCATING COMPANY AND IN SOME CASES, FROM INFORMATION RECEIVED FROM THE UTILITY COMPANIES. FAIRFAX WATER DOES NOT GUARANTEE THAT THE UTILITY INFORMATION SHOWN ON THE PLANS IS COMPLETE OR ACCURATE. THE CONTRACTOR MUST VERIFY THE UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
- ALL EXISTING UNDERGROUND UTILITIES SHALL BE MARKED IN THE FIELD BY MISS UTILITY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE FIELD MARKING OF UTILITIES WITH MISS UTILITY (VA811).
- ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED BY THE CONTRACTOR BY HAND EXCAVATION OR TEST HOLES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF THESE UTILITIES.
- THE CONTRACTOR SHALL CONFORM TO THE PROVISIONS AS SPECIFIED IN THE CURRENT VIRGINIA ADMINISTRATIVE CODE (VAC) SECTION 20VAC5-309-140, EXCAVATOR'S RESPONSIBILITIES TO AVOID DAMAGE, DISLOCATING OR DISTURBANCE OF UTILITY LINES, AS FOLLOWS:

NOTE: ANY PERSON EXCAVATING AROUND UNDERGROUND UTILITY LINES SHALL TAKE ALL REASONABLE STEPS TO PROTECT SUCH UTILITY LINES. THESE STEPS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- THE EXCAVATOR SHALL PLAN THE EXCAVATION IN SUCH A MANNER TO AVOID DAMAGE TO, AND MINIMIZE INTERFERENCE WITH, UNDERGROUND UTILITY LINES IN AND NEAR CONSTRUCTION AREA.
 - THE EXCAVATOR SHALL EXPOSE THE UNDERGROUND UTILITY LINE TO ITS EXTREMITIES BY HAND WHEN DIGGING WITHIN THE EXCAVATION AREA WHEN EXCAVATION IS EXPECTED TO COME WITHIN TWO FEET OF THE MARKED LOCATION OF THE UNDERGROUND UTILITY LINE.
 - THE EXCAVATOR SHALL NOT UTILIZE MECHANIZED EQUIPMENT WITHIN TWO FEET OF THE EXTREMITIES OF ALL EXPOSED UTILITY LINES.
 - THE EXCAVATOR SHALL MAINTAIN A REASONABLE CLEARANCE, TO INCLUDE THE WIDTH OF THE UTILITY LINE, IF KNOWN, PLUS 24 INCHES, BETWEEN THE MARKED OR STAKED LOCATION OF AN UNDERGROUND UTILITY LINE AND THE CUTTING EDGE OR POINT OF ANY MECHANIZED EQUIPMENT, CONSIDERING THE KNOWN LIMIT OF CONTROL OF THE CUTTING EDGE OR POINT TO AVOID DAMAGE TO THE UTILITY LINE.
 - THE EXCAVATOR SHALL PROVIDE PROPER SUPPORT FOR UNDERGROUND UTILITY LINES DURING EXCAVATION ACTIVITIES. DURING BACKFILL OPERATIONS, THE EXCAVATOR SHALL USE THE SAME OR SIMILAR BACKFILL MATERIAL THAT WAS ORIGINALLY AROUND THE UTILITY LINE, ENSURE THERE IS PROPER COMPACTION AROUND THE UTILITY LINE, PROTECT ALL TRACER WIRES, AND PROTECT OR REPLACE WARNING TAPES.
- PRIVATE UTILITIES WILL NOT BE LOCATED OR MARKED BY LOCATORS ON BEHALF OF PUBLIC UTILITY OWNERS. THE CONTRACTOR IS RESPONSIBLE THAT POSITIVE COMMUNICATION IS CONDUCTED WITH THE RESPONSIBLE PRIVATE UTILITY OWNER BEFORE, DURING, AND AFTER PERFORMING WORK IN THE AREA OF THE PRIVATE UTILITY.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE EXISTING UTILITIES ARE DISCONNECTED, PRIOR TO CLEARING THE SITE OF TREES, BUILDINGS, FOUNDATIONS, ETC. WITHIN THE LIMITS OF CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS INDICATED ON THE CONSTRUCTION PLANS.
 - IF THE CONTRACTOR DAMAGES A UTILITY LINE, THE CONTRACTOR SHALL TAKE THE FOLLOWING STEPS AS MINIMUM:
 - IF THERE IS AN IMMEDIATE DANGER TO LIFE OR PROPERTY OR A GAS LEAK, IMMEDIATELY CALL 911 AND CLEAR AND SECURE THE AREA.
 - THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE AFFECTED UTILITY OPERATOR(S) (GAS, COMMUNICATION, ELECTRIC, WATER, SEWER, OTHERS) TO IMPLEMENT THE NECESSARY REPAIR WORK.
 - THE CONTRACTOR SHALL THEN NOTIFY FAIRFAX COUNTY OF THE INCIDENT AND PROVIDE UPDATES ON THE REPAIR WORK.
 - CONTRACTOR SHALL NOT BACKFILL AROUND THE UNDERGROUND UTILITY LINE UNTIL THE OPERATOR HAS REPAIRED THE DAMAGE OR HAS GIVEN CLEARANCE TO BACKFILL.
 - THE CONTRACTOR SHALL PROVIDE A WRITTEN PRELIMINARY ACCIDENT REPORT TO THE ENGINEER WITHIN 24 HOURS OF OCCURRENCE AND A COMPLETE WRITTEN REPORT WITHIN 7 CALENDAR DAYS.
 - CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED CONSTRUCTION OR EXCAVATION AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION IN ACCORDANCE WITH CHAPTER 63 OF THE FAIRFAX COUNTY CODE. NAMES AND TELEPHONE NUMBERS OF SELECT OPERATORS OF UNDERGROUND UTILITY LINES IN FAIRFAX COUNTY APPEAR AS PART OF THE UTILITIES NOTES. THESE NUMBERS WILL ALSO BE USED TO SERVE EMERGENCY CONDITION NOTICE AS REQUIRED BY CHAPTER 63 OF THE FAIRFAX COUNTY CODE. THIS IS NOT A COMPLETE LIST OF ALL UNDERGROUND UTILITY OPERATORS IN FAIRFAX COUNTY. IT WAS LAST UPDATED ON NOVEMBER 2020.

APWA UNIFORM COLOR CODE

COLOR	PROPOSED EXCAVATION
WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLE
YELLOW	GAS, OIL, STEAM, PETROLEUM, OR OTHER GASEOUS OR FLAMMABLE MATERIAL
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES OR CONDUIT
BLUE	POTABLE (DRINKABLE) WATER
PURPLE	RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
GREEN	SEWER AND DRAIN LINES

(THIS IS NOT A COMPLETE LIST OF ALL UNDERGROUND UTILITY OPERATORS IN FAIRFAX COUNTY. ITS CURRENT UPDATE IS NOVEMBER 2020)

ANY UTILITY LINE STRIKE OR UNPLANNED CONTACT RESULTING IN AN INTERRUPTION OF SERVICES IS TO BE CONSIDERED AN EMERGENCY SITUATION. IMMEDIATELY INITIATE THE FOLLOWING ACTIONS:

- CALL 911 IMMEDIATELY AND CLEAR THE AREA.
- IMMEDIATELY CALL THE UTILITY OPERATOR/OWNER (GAS, CABLE, ELECTRIC, ETC.). DO NOT CALL MISS UTILITY.
- DO NOT ATTEMPT TO REPAIR THE DAMAGE.
- DO NOT AUTHORIZE BACKFILLING IF THERE IS DAMAGE UNTIL THE UTILITY OWNER STATES THE REPAIR IS COMPLETE.
- COVERING OVER A DAMAGED UTILITY LINE MAY LEAD TO A SERIOUS ACCIDENT LATER.

NO.	2 LTR ID	UTILITY COMPANY	UTILITY 1	UTILITY 2	UTILITY 3	EMERGENCY CONTACTS
1	ANS	AMCS NETWORKING SERVICES, LLC	COMMUNICATIONS	-	-	703-479-0305
2	AMW	AMERICAN WATER - VIRGINIA	SEWER	WATER	-	571-499-3862 (W) 540-408-2640 (ALT)
3	AOC	AOC CONNECT, LLC	COMMUNICATIONS	-	-	877-228-1071
4	ARIA	ARIA ENERGY, LLC	NATURAL GAS	-	-	703-994-1001
5	APW	ARLINGTON COUNTY DEPARTMENT OF PUBLIC WORKS	SEWER	WATER	COMMUNICATIONS	703-228-6555 800-510-2355 800-252-1133 888-634-1840 (PAGER)
6	ATT	AT&T	COMMUNICATIONS	-	-	800-252-1133 888-634-1840 (PAGER)
7	CLS	CALICO SENECA, LLC	SEWER	-	-	703-420-7900
8	QGS	CENTURY LINK (QWEST COMMUNICATIONS)	COMMUNICATIONS	-	-	855-796-7303
9	ALX	CITY OF ALEXANDRIA	SEWER	COMMUNICATIONS	-	571-447-8871 571-309-7010
10	FFX	CITY OF FAIRFAX	SEWER	-	-	703-385-7924
11	FCH	CITY OF FALLS CHURCH	SEWER	-	-	571-238-5127
12	CGC	COGENT COMMUNICATIONS, INC.	COMMUNICATIONS	-	-	877-875-4311
13	CPL	COLONIAL PIPELINE	NATURAL GAS	-	-	800-929-2728
14	CGV	COLUMBIA GAS OF VIRGINIA	NATURAL GAS	-	-	800-544-5606 800-543-5911 703-631-5363 (METRO)
15	CGT	COLUMBIA GAS TRANSMISSION CORPORATION	NATURAL GAS	-	-	800-835-7191 (24 HOURS)
16	CMC	COMCAST COMMUNICATIONS - RESTON	COMMUNICATIONS	-	-	804-640-8230 703-841-7700 (AFTER HOURS)
17	COX	COX COMMUNICATIONS	COMMUNICATIONS	-	-	866-272-5111 877-875-4311 877-686-1662
18	CRN	CROWN CASTLE SOLUTIONS CORPORATIONS	COMMUNICATIONS	-	-	888-632-0931
19	DCS	DC WATER & SEWER AUTHORITY	SEWER	-	-	202-612-3400
20	DOM	DOMINION ENERGY, INC.	ELECTRIC	COMMUNICATIONS	-	866-368-4357
21	DMT	DOMINION TRANSMISSION, INC.	NATURAL GAS	-	-	888-264-8240 (24/7)
22	FCU	FAIRFAX COUNTY - WASTEWATER COLLECTION DIVISION	SEWER	COMMUNICATIONS	RECLAIMED WATER	703-323-1211
23	FCW	FAIRFAX COUNTY WATER AUTHORITY	WATER	-	-	703-698-5600
24	FPC	FAIRFAX PROFESSIONAL CENTER, LP	COMMUNICATIONS	-	-	703-975-9280
25	FWR	FAIRWAY I & FAIRWAY II RESIDENTIAL, LLC	NATURAL GAS	-	-	703-471-5034
26	FCS	FIBER CONNECT, LLC	COMMUNICATIONS	-	-	571-237-2993
27	FBL	FIBERLIGHT, LLC	COMMUNICATIONS	-	-	800-672-0181
28	FTB	FORT BELVOIR RESIDENTIAL COMMUNITIES, LLC	ELECTRIC	WATER	SEWER	571-969-0165
29	GVA	GVA PARTNERSHIP, LLC	NATURAL GAS	-	-	240-994-4407
30	JUC	JONES UTILITIES CONSTRUCTION	COMMUNICATIONS	-	-	703-283-4064
31	KMT	KINDER MORGAN SOUTHEAST TERMINALS	NATURAL GAS	JET FUEL	-	800-510-5678
32	LTC	LEVEL 3 COMMUNICATIONS/CENTURY LINK	COMMUNICATIONS	-	-	877-366-8344
33	LTF	LIGHTTOWER FIBER NETWORKS, LLC	COMMUNICATIONS	-	-	888-583-4237
34	LWS	LOUDOUN WATER	SEWER	WATER	-	571-291-7880 571-291-7878 (AFTER HOURS)
35	LMS	LUMOS NETWORKS, INC.	COMMUNICATIONS	-	-	877-411-6930
36	MHA	MAYMONT HOMEOWNERS ASSOCIATION, INC.	ELECTRIC	RECLAIMED WATER	-	888-788-2678
37	MCI	MCL WORLDCOM (OWNED BY VERIZON)	COMMUNICATIONS	-	-	800-624-9675
38	MDS	METRODUCT SYSTEMS VA, LLC	COMMUNICATIONS	-	-	703-479-0305
39	DCA	METROPOLITAN WASHINGTON AIRPORT AUTHORITY	COMMUNICATIONS	NATURAL GAS	ELECTRIC	703-417-8063
40	MIT	THE MITRE CORPORATION	COMMUNICATIONS	-	-	703-983-6024
41	MTV	MOUNT VERNON LADIES ASSOCIATION	SEWER	-	-	703-799-8678
42	NVE	NORTHERN VIRGINIA ELECTRIC COOPERATIVE (NOVEC)	ELECTRIC	COMMUNICATIONS	-	703-392-1514
43	PPL	PLANTATION PIPELINE COMPANY	NATURAL GAS	-	-	800-510-5678
44	PWS	PRINCE WILLIAM COUNTY SERVICE AUTHORITY	SEWER	WATER	-	703-335-7982
45	RTR	RESTON RELAC, LLC	RECLAIMED WATER	-	-	703-349-3301
46	STC	SHENANDOAH TELECOMMUNICATIONS	COMMUNICATIONS	-	-	540-984-5531
47	SOH	SOUTHERN OAKS HOMEOWNERS ASSOCIATION	ELECTRIC	-	-	703-795-8576
48	SGC	SOUTHGATE CONDOMINIUM ASSOCIATES, INC.	NATURAL GAS	-	-	703-386-6217
49	SLD	SPRINT LONG DISTANCE (GLOBAL ONE)	COMMUNICATIONS	-	-	800-521-0579 (24 HOURS)
50	SIG	SUMMITIG, LLC	COMMUNICATIONS	-	-	855-776-6515
51	TRWWWG	THOMAS R. WILLIAMS COMPANY (OWNS TRANSCO)	NATURAL GAS	-	-	800-440-8475
52	HRN	TOWN OF HERNDON PUBLIC WORKS	SEWER	WATER	ELECTRIC	703-435-6860
53	VNN	TOWN OF VIENNA	SEWER	WATER	-	703-255-6381 703-255-6385 (AFTER 5:00PM)
54	UNF	UNITI FIBER	COMMUNICATIONS	-	-	877-652-2321
55	UOS	UPPER OCCOQUAN SERVICE AUTHORITY	SEWER	-	-	703-282-0105
56	VSN	VERIZON	COMMUNICATIONS	-	-	888-483-1233
57	VSN	VERIZON WIRELESS	COMMUNICATIONS	-	-	571-436-4537
58	VAV	VIRGINIA AMERICAN WATER COMPANY	WATER	-	-	703-549-7080 800-452-6963
59	WGL	WASHINGTON GAS	NATURAL GAS	-	-	703-750-4831 (GAS LEAK)
60	WXN	WINDSTREAM KDL	COMMUNICATIONS	-	-	800-289-1901
61	ZAY	ZAYO BANDWIDTH CENTRAL, LLC	COMMUNICATIONS	-	-	866-236-2824

UTILITY RELOCATION PLANS

- FAIRFAX WATER HAS COORDINATED THE PROPOSED IMPROVEMENTS WITH THE OWNERS OF ALL KNOWN UNDERGROUND UTILITIES IN THE PROJECT AREA. THE CONTRACTOR IS ALSO RESPONSIBLE TO VERIFY THE LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO THE BEGINNING OF EXCAVATIONS.
- UNDERGROUND UTILITY TEST HOLE INFORMATION, NOTING THE HORIZONTAL AND VERTICAL LOCATION OF KNOWN UNDERGROUND UTILITIES THAT ARE IN POTENTIAL CONFLICT WITH THE PROJECT, MAY BE INCLUDED IN THE PLAN SET OR PROVIDED TO THE CONTRACTOR OR UPON REQUEST FOLLOWING AWARD OF THE CONSTRUCTION CONTRACT.
- WHERE UNDERGROUND UTILITIES ARE IN CONFLICT WITH THE PROJECT, FAIRFAX WATER OFTEN ATTEMPTS TO RELOCATE CONFLICTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. HOWEVER, AS WITH ALL CONSTRUCTION ACTIVITIES, EXTREME CARE SHALL BE TAKEN BY THE CONTRACTOR TO ENSURE UTILITY LOCATIONS ARE KNOWN PRIOR TO EXCAVATION.
- MISS UTILITY (VA811) MAY NOT HAVE THE MOST RECENT UP TO DATE INFORMATION CONCERNING UNDERGROUND UTILITIES THAT MAY HAVE BEEN RECENTLY RELOCATED PRIOR TO CONSTRUCTION.
- FAIRFAX WATER MAY PROVIDE AVAILABLE PLANS SHOWING THE APPROXIMATE LOCATION OF RECENTLY RELOCATED UNDERGROUND UTILITIES TO THE CONTRACTOR OR UPON REQUEST FOLLOWING AWARD OF THE CONSTRUCTION CONTRACT. WHERE PRACTICABLE, THE UTILITY RELOCATION PLANS MAY BE INCLUDED IN THE CONTRACT DOCUMENTS.
- ANY NEW UTILITY SERVICE OR KNOWN UNDERGROUND UTILITIES THAT ARE IN CONFLICT WITH THE PROJECT AND/OR SCHEDULED TO BE RELOCATED DURING CONSTRUCTION SHALL BE AS NOTED ON THE PLANS AND/OR SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TIMELY DOCUMENTED COORDINATION AND INSTALLATION OF NEW SERVICE AS WELL AS COMPLETION OF ANY UTILITY RELOCATIONS/DEMOLITION. ALL UTILITY WORK SHALL BE COORDINATED BY THE CONTRACTOR WITH THE APPROPRIATE UTILITY COMPANY UNLESS NOTED OTHERWISE SPECIFICALLY CONVEYED IN WRITING BY THE OWNER OR SHOWN IN THE CONTRACT DOCUMENTS.


**FOR ALL EXCAVATION WORK ANYWHERE IN VIRGINIA!
 ALWAYS NOTIFY 811
 DIG WITH CARE**

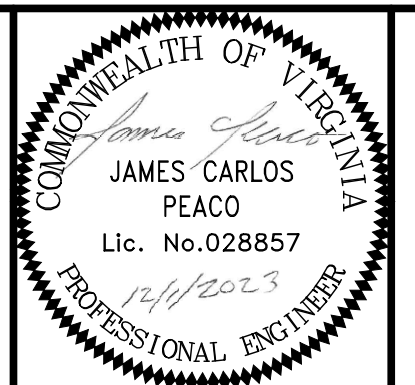
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FAIRFAX WATER
 PLANNING & ENGINEERING DIVISION
 8560 ARLINGTON BOULEVARD
 FAIRFAX, VA 22031

DESIGNED: A. BARTLEY
 DRAWN: V. TAYLOR
 CHECKED: J. PEACO

NO.	DATE	REVISION

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POPES HEAD PUMPING STATION
 ELECTRICAL UPGRADES
 GENERAL NOTES 2

FILE NAME: G04_GENERAL_NOTES_2.DWG			
PROJECT	DIVISION	DATE:	DRAWING
P2722	003	DEC 2023	G04
TAX MAP:		SHEET	
067-2		4 of 25	



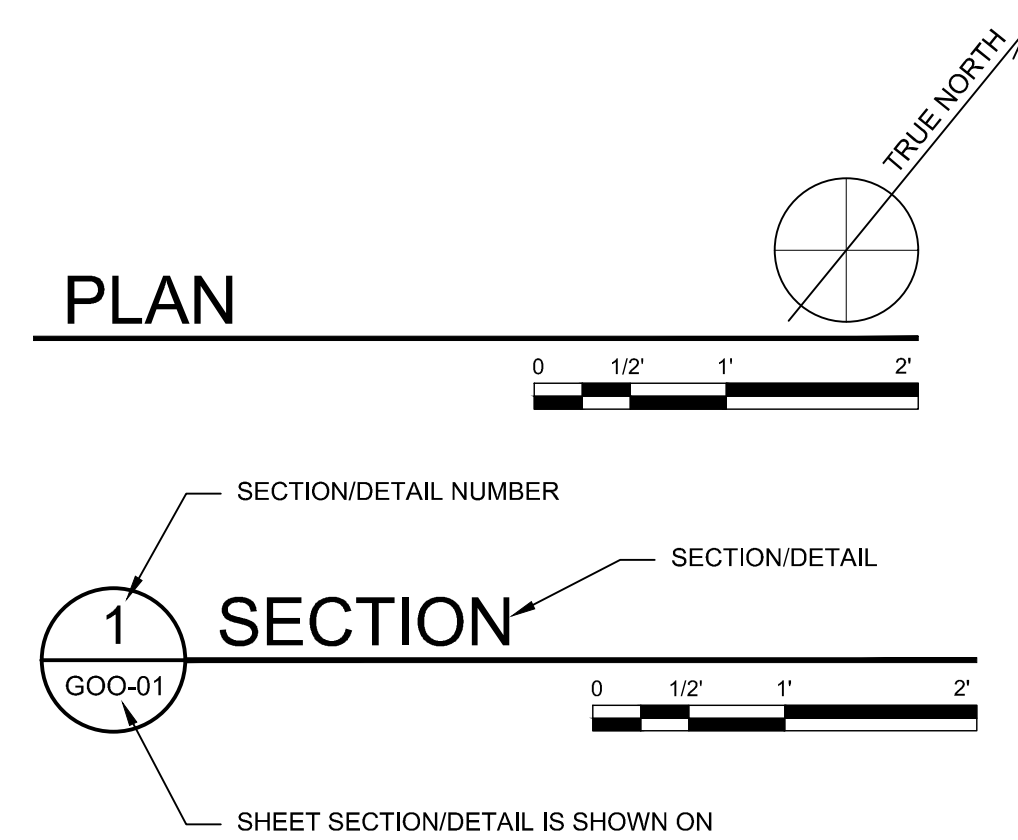
GENERAL NOTES 3

(THESE GENERAL NOTES SHALL BE USED WHERE THEY ARE APPLICABLE TO THE PROJECT PLANS)

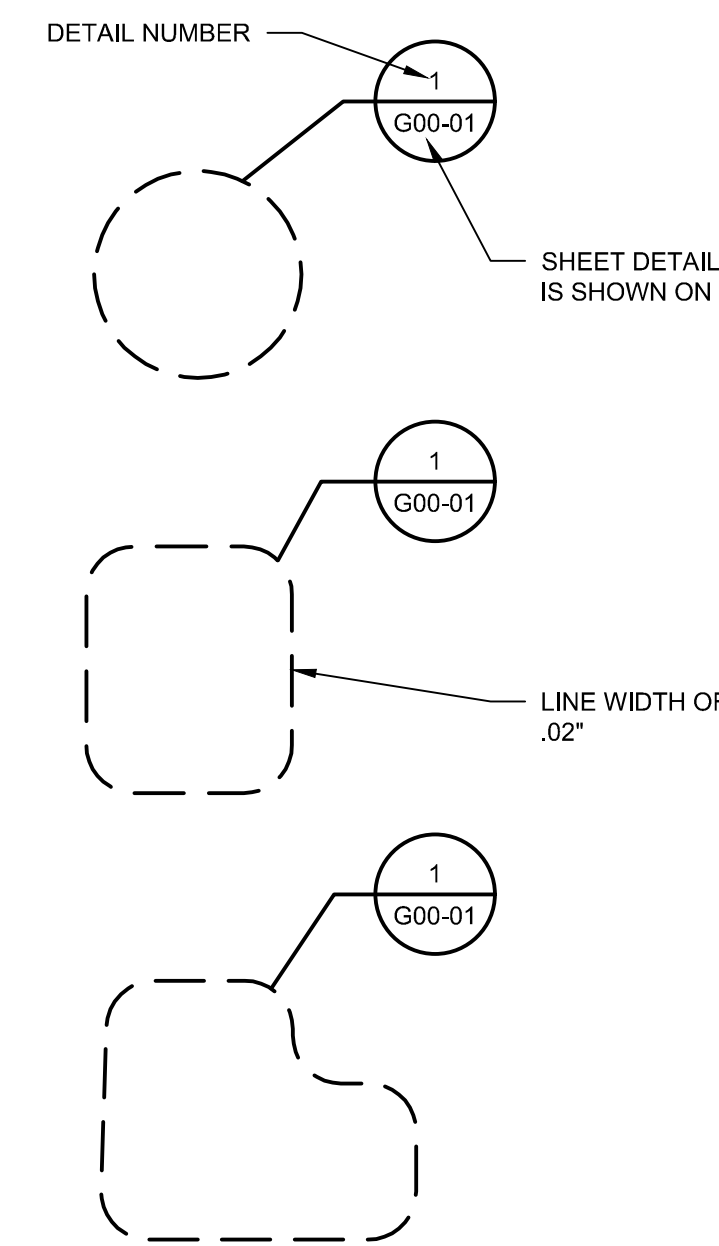
- ALL WORK PERFORMED SHALL BE IN FULL COMPLIANCE WITH THE REQUIREMENTS OF FAIRFAX COUNTY, COMMONWEALTH OF VIRGINIA, AND ALL OTHER AGENCIES WITH JURISDICTION.
- EXISTING UTILITY LOCATIONS, SIZES AND ELEVATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE AND BE INTENDED ONLY TO INDICATE THE EXISTENCE OF SUCH UTILITIES IN THE AREAS SHOWN. BEFORE PROCEEDING WITH THE WORK, THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. ADDITIONAL EXISTING UTILITIES MAY BE PRESENT, CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING. CONTRACTOR SHALL CONTACT MISS UTILITY PRIOR TO EXCAVATION.
- ALL UTILITIES SHALL BE PROTECTED FROM ANY DAMAGE AS A RESULT OF THE WORK INCLUDED IN THIS CONTRACT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE ANY DAMAGED UTILITIES TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS.
- (*) DENOTES DIMENSIONS OR ELEVATIONS TO BE DETERMINED ACCORDING TO EXISTING CONDITIONS AND/OR EQUIPMENT FURNISHED
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR REQUIRED PERMITS THAT PERTAIN TO HIS CONTRACTED WORK. SUCH PERMITS SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO BEGINNING WORK ON THE PORTION OF THE PROJECT REQUIRING SAID PERMITS.
- ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR AS INDICATED ON THE CONTRACT DRAWINGS.
- CONTRACTOR SHALL MAINTAIN ACCESS TO THE CONSTRUCTION SITE AT ALL TIMES. NO ROAD SHALL BE TAKEN OUT OF SERVICE EXCEPT TO ACCOMPLISH WORK REQUIRED UNDER THIS CONTRACT AND THEN ONLY AFTER AN ALTERNATE METHOD OF ACCESS APPROVED BY THE OWNER HAS BEEN PROVIDED.
- ALL ELEVATIONS INDICATED ON THE DRAWINGS ARE BASED ON NGVD29 BENCH MARKS. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH AFFECTED WORK.
- ALL PIPING 4" IN DIAMETER AND SMALLER IS SHOWN SCHEMATICALLY. CONTRACTOR SHALL PROVIDE ALL PIPE, FITTINGS, SUPPORTS AND ACCESSORIES NECESSARY FOR A COMPLETE INSTALLATION.

LEGEND	
	CONTROL POINT
	ELECTRIC BOX
	ELECTRIC METER
	ELECTRIC MANHOLE
	COM. HANDHOLE
	COM. VAULT
	COM. MANHOLE
	COM. MARKER
	COM. BOX
	COM. CABINET
	IRON PIPE
	LIGHT POLE
	GUY ANCHOR
	GUY POLE
	UTILITY POLE
	UTILITY POLE WITH DROP
	POST
	STORM GRATE
	STORM MANHOLE
	STORM CLEAN OUT
	NAIL
	SIGN
	CONIF. SHRUB
	DECID. SHRUB
	EVERGREEN SHRUB
	DECID. TREE
	CONIF. TREE
	HYDRANT
	WATER METER
	WATER VALVE
	CONCRETE MONUMENT
	TELEPHONE POLE
	UTILITY LINE OVERHEAD
	ELECTRIC LINE OVERHEAD
	ELECTRIC LINE UNDERGROUND
	CABLE TV UNDERGROUND
	GROUND CABLE UNDERGROUND
	FIBER OPTIC CABLE UNDERGROUND
	TELEPHONE LINE UNDERGROUND
	SHRUB LINE
	STORM SEWER LINE
	TREE LINE
	WATER LINE UNDERGROUND
	FENCE LINE
	LIMITS OF CONSTRUCTION
	TEMPORARY CONSTRUCTION EASEMENT
	RIGHT-OF-WAY LINE
	PROPERTY LINE
	PERMANENT EASEMENT
	FLOODPLAIN
	SUPER SILT FENCE SERVICE AS TREE PROTECTION
	SUPER SILT FENCE
	CONTOUR
	NEW ASPHALT
	EXISTING ASPHALT
	MILL AND OVERLAY ASPHALT
	CONCRETE
	PAVED ROAD
	GRAVEL AREA

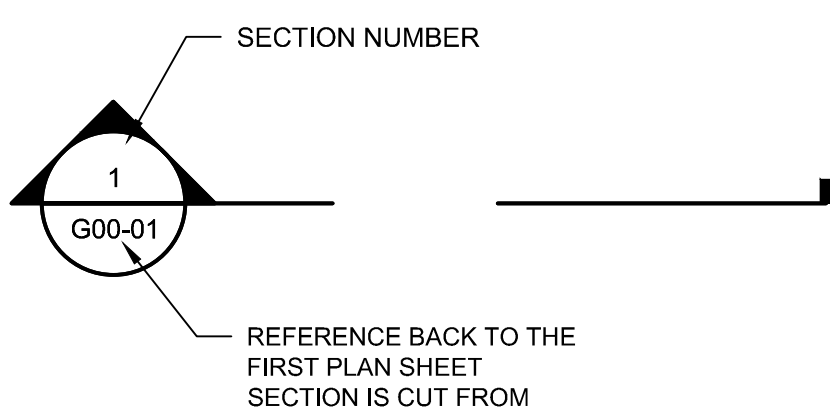
TITLE MARKERS



DETAIL MARKERS



SECTION MARKERS



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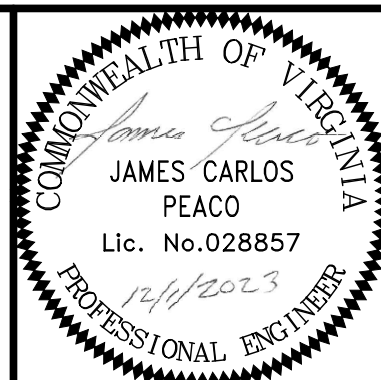
FAIRFAX WATER
PLANNING & ENGINEERING DIVISION
8560 ARLINGTON BOULEVARD
FAIRFAX, VA 22031

DESIGNED: A. BARTLEY
DRAWN: V. TAYLOR
CHECKED: J. PEACO

NO.	DATE	REVISION

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POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
GENERAL NOTES 3 AND LEGEND

FILE NAME: G05_GEN_NOTES_3_AND_LEGEND.DWG			
PROJECT	DIVISION	DATE	DRAWING
P2722	003	DEC 2023	G05
TAX MAP:		SHEET	
067-2		5 of 25	



GENERAL NOTES

- THE SYMBOLS AND ABBREVIATIONS SHOWN ON THE INSTRUMENTATION SYMBOLS AND LEGEND SHEETS ARE STANDARD DESIGNATIONS. NOT ALL SYMBOLS AND ABBREVIATIONS ARE APPLICABLE TO THE INCLUDED DIAGRAMS AND INSTRUMENTATION TAGGING.
- NOT ALL PIPING, FITTINGS, AND TANK DETAILS ARE SHOWN. REFER TO PROCESS DRAWINGS FOR ACTUAL DETAILS

INSTRUMENTATION IDENTIFICATION LEGEND

FIRST LETTER		SECOND LETTER		
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS	ALARM		
B	BURNER FLAME	NOT USED	NOT USED	NOT USED
C	CONDUCTIVITY (ELECTRICAL)		CONTROL	CLOSED
D	DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL		
E	VOLTAGE (EMF)	PRIMARY ELEMENT		
F	FLOW, FLOW RATE	RATIO (FRACTION)		OFF
G	INTRUSION		GLASS GAGE (UNCALIBRATED)	
H	HAND (MANUALLY INDICATED)			HIGH
I	CURRENT(ELECTRICAL)	INDICATE		
J	POWER	SCAN		
K	TIME OR TIME SCHEDULE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)	LOW
M	MOISTURE, HUMIDITY OR MOTOR			MIDDLE OR INTERMEDIATE
N	SEQUENCE STRATEGY	NOT USED	NOT USED	NORMAL
O	NOT USED	ORIFICE (RESTRICTION)	ANALYSIS	OPEN OR ON
P	PRESSURE OR VACUUM		POINT (TEST CONNECTION)	PULSE
Q	QUANTITY	INTEGRATE OR TOTALIZE		
R	RADIOACTIVITY	RECORD OR PRINT	REMOTE	
S	SPEED, FREQUENCY	SAFETY	SWITCH, START OR STOP	
T	TEMPERATURE		TRANSMITTER	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION		VALVE, DAMPER OR LOUVER	
W	WEIGHT OR FORCE		WELL	
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT STATUS	Y AXIS	RELAY OR COMPUTE	
Z	POSITION		DRIVE, ACTUATE, OR UNCLASSIFIED FINAL CONTROL ELEMENT	

LINE TYPES

- MAIN PROCESS LINE
- AUXILIARY LINE
- EXISTING MAIN PROCESS LINE
- EXISTING AUXILIARY LINE
- ELECTRIC (ELECTRONIC) SIGNAL
- SOFTWARE LINK SYSTEM FUNCTION CONNECTION OR COMMUNICATION LINK
- F-F-F- FIBER OPTIC CONNECTION
- S-S-S- (SERIAL) 2 OR 4 CONDUCTOR CABLE
- H-H-H- HDMI CABLE
- C-C-C- COAX CABLE
- E-E-E- (ETHERNET) CAT-6 CABLE
- // -// -// -// PNEUMATIC SIGNAL
- X-X-X-X- CAPILLARY LINE
- L-L-L-L- HYDRAULIC SIGNAL
- PACKAGED SYSTEM BOUNDARY
- FUTURE
- PANEL LIMITS
- EXISTING BUILDING BOUNDARY LINE
- EXISTING ROOM BOUNDARY LINE

INSTRUMENT NUMBERING SYSTEM

FACILITY ABBREVIATION OR NO. HDW-FIT-003-0234
 INSTRUMENT IDENTIFICATION
 P&ID NUMBER (*)
 LOOP NUMBER

* USE THESE NUMBERS ONLY IF REQUIRED FOR THE PROJECT, REMOVE OTHERWISE

VALVE & GATE IDENTIFICATION

VALVE/GATE TYPE (SEE LETTER DESIGNATION IN PARENTHESIS OF EACH VALVE SYMBOL ON THIS SHEET)
 SIZE (*)
 P&ID NUMBER (*)
 SEQUENCE NUMBER

* USE THESE NUMBERS ONLY IF REQUIRED FOR THE PROJECT, REMOVE OTHERWISE

ACTUATOR IDENTIFICATION

OPERATOR TYPE
 SIGNAL NUMBER
 P&ID NUMBER (*)
 LOOP NUMBER (*)

USE THESE NUMBERS ONLY IF REQUIRED FOR THE PROJECT, REMOVE OTHERWISE

INSTRUMENTATION SYMBOLS

- FE ### ORIFICE FLOW ELEMENT
- FIT ### VENTURI FLOW ELEMENT
- FLUME
- FE # MAGNETIC FLOW ELEMENT
- LE ### ULTRASONIC OR RADAR FLOW ELEMENT
- FE ### ROTAMETER
- FR ### AR ### FR & AR TWO FUNCTIONS AS PART OF ONE UNIT (CIRCLES TOUCH)

BASE INSTRUMENTATION SYMBOLS

- MCP-1 / XXX / ## / XXXX CONTROL PANEL NAME (SEE THIS SHEET FOR CONTROL PANEL ABBREVIATIONS)
 FUNCTIONS PROGRAMMED IN SOFTWARE FROM HARD I/O POINT WITH DISPLAY
 XXX = FUNCTION IDENTIFIER
 ## = LOOP NUMBER
- XXX-X / XX / ## / YYY YYY-COMMUNICATION TYPE
 ENT ETHERNET
 CNT CONTROLNET
 DNT DEVICENET
 HART HART
 MOD MODBUS
- XXX-X / XX / ## / YYY FUNCTIONS PROGRAMMED IN SOFTWARE FROM SOFT I/O POINT VIA COMMUNICATION LINK WITH DISPLAY
- XXX-X / XX / ## / YYY FUNCTIONS PROGRAMMED IN SOFTWARE FROM SOFT I/O POINT (VIA CONFIGURED) WITH DISPLAY
- MCP-1 / CS / ## CS - ## = CONTROL STRATEGY NUMBER IN SPECIFICATION
- MCP-1 / IN / ## IN - ## = INTERLOCK NUMBER ON THE DRAWING
- XXX ### FIELD INSTRUMENT, POWER SUPPLY REQUIRED LOCALLY WHERE SHOWN.
- XXX ### INSTRUMENT ON PANEL
- XXX ### INSTRUMENT ON REAR OF PANEL (BROKEN LINE), ACTIVATES AND DEACTIVATES CONTROL AND/OR ALARM SWITCHES AT PRESET SIGNAL.
- Δ DIFFERENCE
 > HIGH SELECTOR
 < LOW SELECTOR
 P/I PNEUMATIC/CURRENT CONVERTER
 I/I CURRENT/CURRENT CONVERTER (REPEATER)
 Σ SUMMATION
 AV AVERAGE
 % RATIO
- XXX INSTRUMENT IDENTIFICATION. (SEE THIS SHEET FOR INSTRUMENT IDENTIFICATION LEGEND AND NUMBERING SYSTEM.)
- ### LOOP NUMBER.

PANEL DEVICE SYMBOLS

- XXX INDICATING LIGHT UNIT
 G GREEN
 R RED
 W WHITE
 A AMBER
 F FLASHES ON ELECTRIC OR MECHANICAL MALFUNCTION
- R RELAY BOX
- ELECTRONIC HORN
- XXX STROBE LIGHT
 A AMBER
 B BLUE
 G GREEN
 R RED
 W WHITE
- X = M ELECTRICALLY DRIVEN MOTOR
 H HYDRAULICALLY DRIVEN MOTOR
 A AIR DRIVEN MOTOR
- V F D (#) R V S (#) VARIABLE FREQUENCY DRIVE OR REDUCED VOLTAGE SOFT STARTER
 # = IDENTIFICATION NUMBER SHOWING LOCAL CONTROL AT VFD OR RVSS
- LOCAL CONTROL AT VFD OR RVSS (KEYPAD SHALL BE PROVIDED, ADDITIONALLY PROVIDE THE FOLLOWING CONTROL)

 - S/S, RUN INDICATION, MALFUNCTION.
 - S/S, RUN INDICATION, MALFUNCTION, H/O/R.
 - S/S, RUN INDICATION, MALFUNCTION, H/O/R, E-STOP.
 - S/S, RUN INDICATION, MALFUNCTION, H/O/R, E-STOP, RESET.
 - S/S, RUN INDICATION, MALFUNCTION, H/O/R, SPEED INDICATION, RESET.
 - S/S, RUN INDICATION, MALFUNCTION, SPEED CONTROL, SPEED INDICATION, RESET.
 - S/S, RUN INDICATION, MALFUNCTION, SPEED CONTROL, SPEED INDICATION, H/O/R, VFD FAULT, RESET.
 - S/S, RUN INDICATION, MALFUNCTION, SPEED CONTROL, SPEED INDICATION, VFD FAULT, RESET.

- M C C (#) MOTOR CONTROL CENTER
 # = IDENTIFICATION NUMBER SHOWING LOCAL CONTROL AT MCC
- LOCAL CONTROL AT MCC

 - S/S, RUN INDICATION, MALFUNCTION.
 - H/O/R, S/S, RUN INDICATION, MALFUNCTION.
 - H/O/R, S/S, E-STOP, RUN INDICATION, MALFUNCTION.
 - H/O/R, S/S, E-STOP, RESET, RUN INDICATION, MALFUNCTION.
 - H/O/R, S/S, RUN INDICATION, RESET, MALFUNCTION.

- L C S (#) LOCAL CONTROL STATION
 # = IDENTIFICATION NUMBER SHOWING LOCAL CONTROL AT LCS
- LOCAL CONTROL AT LCS

 - S/S, RUN INDICATION, MALFUNCTION.
 - H/O/R, S/S, RUN INDICATION, MALFUNCTION.
 - A/M, S/S, RUN INDICATION, MALFUNCTION.
 - H/O/R, S/S, E-STOP, RUN INDICATION, MALFUNCTION.
 - H/O/R, S/S, E-STOP, RESET, RUN INDICATION, MALFUNCTION.
 - L/O/R, O/C, OPEN INDICATION, CLOSE INDICATION, MALFUNCTION.
 - E-STOP, J/O/R, RUN INDICATION, FAIL INDICATION.
 - L/O/R, E-STOP, RUN INDICATION, S/S, MALFUNCTION.

- M P R MOTOR PROTECTION RELAY
- IAS INSTRUMENT AIR SUPPLY
- 120V 120V AC POWER SUPPLY
- 480V 480V AC POWER SUPPLY
- 24V 24V DC POWER SUPPLY

DRAWING CONTINUATION LEGEND

PROCESS LINES (ON / OFF PAGE)

UTILITY LINES (ON / OFF PAGE)

REMARKS 1
 REMARKS 2

INSTRUMENT SIGNAL LINES (ON / OFF PAGE)

PROCESS LINES NOT WITHIN THE BOUNDARY OF THIS SET OF DRAWINGS

UTILITY LINES NOT WITHIN THE BOUNDARY OF THIS SET OF DRAWINGS

REMARKS 1
 REMARKS 2

INSTRUMENT SIGNAL LINES NOT WITHIN THE BOUNDARY OF THIS SET OF DRAWINGS

CONN = CONNECTION NUMBER

EQUIPMENT SYMBOLS

CENTRIFUGAL PUMP

VALVE & GATE SYMBOLS & ABBR.

- BALL VALVE (BV)
- ∩ BUTTERFLY VALVE (BFV)
- ∇ CHECK VALVE/SWING CHECK VALVE (CV)
- ∞ GATE VALVE (GV)
- CONCENTRIC REDUCER
- ||— BLIND FLANGE AT PIPE END

FACILITY ABBREVIATION / NO.		CONTROL PANEL IDENTIFICATION	
PHPS	POPES HEAD PUMP STATION	PCP	PUMP CONTROL PANEL

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COMMONWEALTH OF VIRGINIA
 Robert Norman Sharpe III
 Lic. No. 402056623
 12-1-2023
 PROFESSIONAL ENGINEER

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Fairfax Water

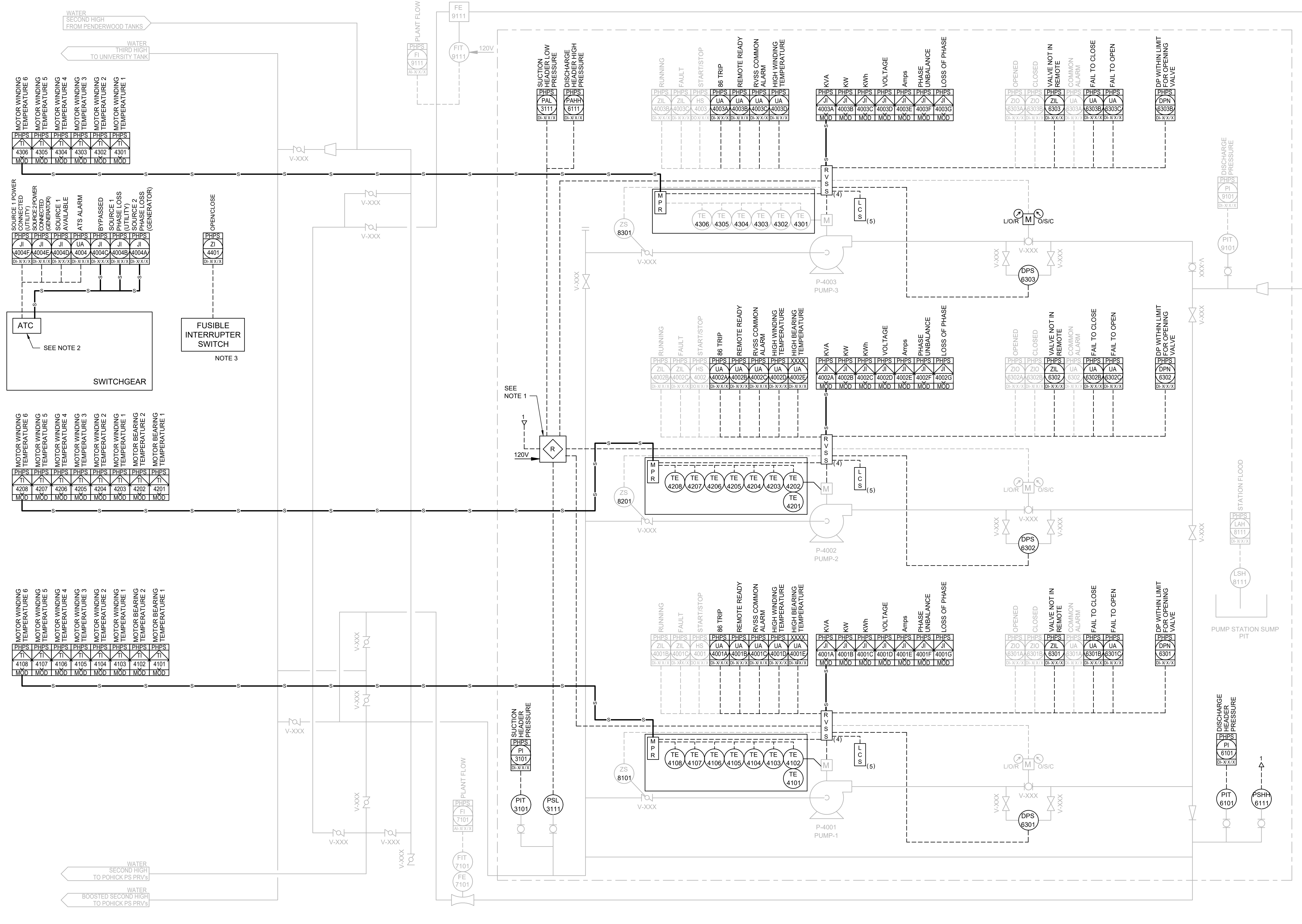
POPES HEAD PUMPING STATION

ELECTRICAL UPGRADES
 SYMBOLS AND LEGEND

FILE NAME: I01_SYMBOLS_AND_LEGEND.DWG	PROJECT: P2722	DIVISION: 003	DATE: DEC 2023
	TAX MAP: 067-2	SHEET: 101	DRAWING: 6 of 25

User: TAYLOR, Spec: AUS-NCSMOD File: C:\USERS\TAYLOR\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - DOCUMENTS\7.0 CAD FILES\SHEET SYMBOLS_AND_LEGEND.DWG Scale: 1:1 Saved Date: 11/16/2023 Time: 11:31 Plot Date: Taylor, Veronica: 11/29/2023 11:28 Layout6

User: TOURTEL01 Spc: AUS-NSCNSMOD File: C:\USERS\TOURTEL01\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - 7.0 CAD FLESHSHEETS\ELECTRICAL DESIGN\INSTRUMENTATION\I02_PUMP_STATION_PID.DWG Scale: 1:1 Saved Date: 7/15/2024 Time: 08:30 Plot Date: Tourtel, John 8/23/2024 14:34 : Layout7

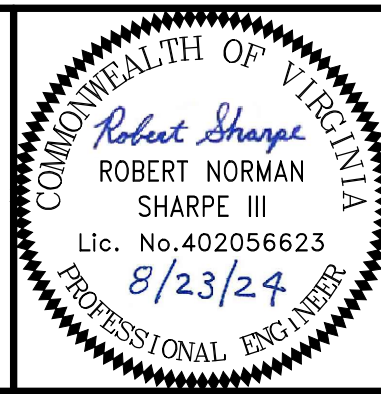


- NOTES:
- SEE ELECTRICAL DRAWING E05 FOR RELAY BOX WIRING DETAILS.
 - THE FOLLOWING ATCS SIGNALS SHALL BE HARDWIRED TO THE PLC: SOURCE 1 POWER CONNECTED (UTILITY), SOURCE 2 POWER CONNECTED (GENERATOR), SOURCE 1 AVAILABLE, ATCS ALARM. THE FOLLOWING ATCS SIGNALS SHALL BE CONNECTED VIA MODBUS TO THE PLC: BYPASSED SOURCE 1 PHASE LOSS (UTILITY), SOURCE 2 PHASE LOSS (GENERATOR). SEE ELECTRICAL DRAWING E05 FOR SERIAL MODBUS NETWORK DIAGRAM.
 - THE FUSIBLE INTERRUPTER SWITCH IS LOCATED UPSTREAM OF THE TRANSFORMERS OUTSIDE THE PUMP STATION BUILDING. SEE ELECTRICAL DRAWING E06 FOR DETAILS.

FAIRFAX WATER
PLANNING & ENGINEERING DIVISION
8560 ARLINGTON BOULEVARD
FAIRFAX, VA 22031

DESIGNED:	JANARDHANAN	
DRAWN:	JANARDHANAN	
CHECKED:	CHIRIYANKANDATH	
NO.	DATE	REVISION

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POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
PUMP STATION P&ID

FILE NAME:	I02_PUMP_STATION_PID.DWG		
PROJECT:	P2722	DIVISION:	003
DATE:	AUG 2024		
DRAWING:	102		
TAX MAP:	067-2	SHEET:	7 of 25



Survey Control
Horizontal Datum: NAVD88
Vertical Datum: NGVD29

Point	Northing	Easting	Elevation	Description
1	6984537.571	11811668.042	366.13	GPSM-Rebar & Cap
2	6984628.914	11811492.670	382.54	GPSM-Rebar & Cap
3	6984700.143	11811604.598	380.67	TRV-Rebar & Cap

STORM AS-BUILT

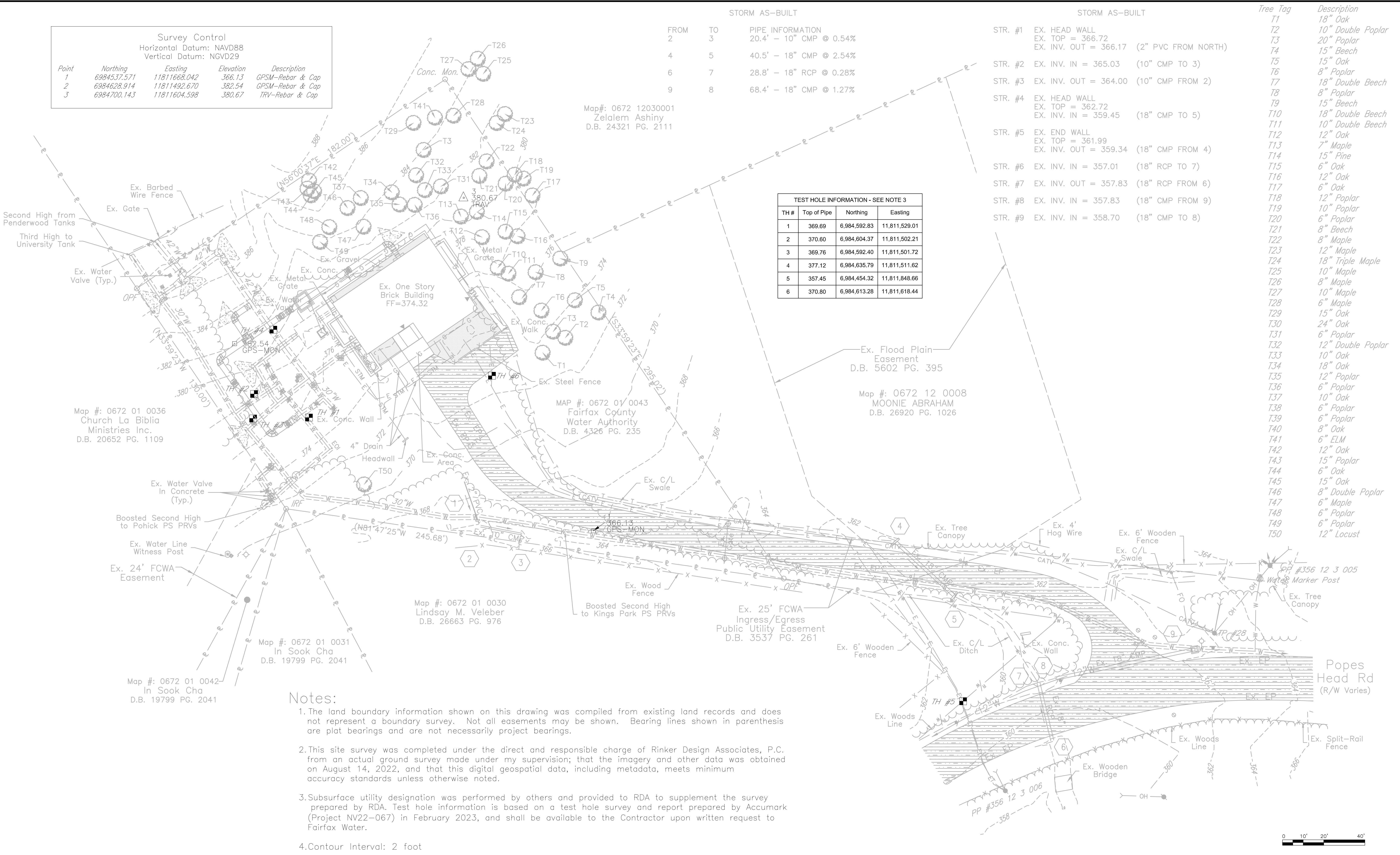
FROM	TO	PIPE INFORMATION
2	3	20.4' - 10" CMP @ 0.54%
4	5	40.5' - 18" CMP @ 2.54%
6	7	28.8' - 18" RCP @ 0.28%
9	8	68.4' - 18" CMP @ 1.27%

STORM AS-BUILT

STR. #	DESCRIPTION	Tree Tag	Description
STR. #1	EX. HEAD WALL	T1	18" Oak
	EX. TOP = 366.72	T2	10" Double Poplar
	EX. INV. OUT = 366.17 (2" PVC FROM NORTH)	T3	20" Poplar
		T4	15" Beech
STR. #2	EX. INV. IN = 365.03 (10" CMP TO 3)	T5	15" Oak
		T6	8" Poplar
STR. #3	EX. INV. OUT = 364.00 (10" CMP FROM 2)	T7	18" Double Beech
		T8	8" Poplar
STR. #4	EX. HEAD WALL	T9	15" Beech
	EX. TOP = 362.72	T10	18" Double Beech
	EX. INV. IN = 359.45 (18" CMP TO 5)	T11	10" Double Beech
STR. #5	EX. END WALL	T12	12" Oak
	EX. TOP = 361.99	T13	7" Maple
	EX. INV. OUT = 359.34 (18" CMP FROM 4)	T14	15" Pine
STR. #6	EX. INV. IN = 357.01 (18" RCP TO 7)	T15	6" Oak
		T16	12" Oak
STR. #7	EX. INV. OUT = 357.83 (18" RCP FROM 6)	T17	6" Oak
		T18	12" Poplar
STR. #8	EX. INV. IN = 357.83 (18" CMP FROM 9)	T19	10" Poplar
		T20	6" Poplar
STR. #9	EX. INV. IN = 358.70 (18" CMP TO 8)	T21	8" Beech
		T22	8" Maple
		T23	12" Maple
		T24	18" Triple Maple
		T25	10" Maple
	T26	8" Maple	
	T27	10" Maple	
	T28	6" Maple	
	T29	15" Oak	
	T30	24" Oak	
	T31	6" Poplar	
	T32	12" Double Poplar	
	T33	10" Oak	
	T34	18" Oak	
	T35	12" Poplar	
	T36	6" Poplar	
	T37	10" Oak	
	T38	6" Poplar	
	T39	6" Poplar	
	T40	8" Oak	
	T41	6" ELM	
	T42	12" Oak	
	T43	15" Poplar	
	T44	6" Oak	
	T45	15" Oak	
	T46	8" Double Poplar	
	T47	6" Maple	
	T48	6" Poplar	
	T49	6" Poplar	
	T50	12" Locust	

TEST HOLE INFORMATION - SEE NOTE 3

TH #	Top of Pipe	Northing	Easting
1	369.69	6,984,592.83	11,811,529.01
2	370.60	6,984,604.37	11,811,502.21
3	369.76	6,984,592.40	11,811,501.72
4	377.12	6,984,635.79	11,811,511.62
5	357.45	6,984,454.32	11,811,848.66
6	370.80	6,984,613.28	11,811,618.44



- Notes:
- The land boundary information shown on this drawing was compiled from existing land records and does not represent a boundary survey. Not all easements may be shown. Bearing lines shown in parenthesis are plat bearings and are not necessarily project bearings.
 - This site survey was completed under the direct and responsible charge of Rinker Design Associates, P.C. from an actual ground survey made under my supervision; that the imagery and other data was obtained on August 14, 2022, and that this digital geospatial data, including metadata, meets minimum accuracy standards unless otherwise noted.
 - Subsurface utility designation was performed by others and provided to RDA to supplement the survey prepared by RDA. Test hole information is based on a test hole survey and report prepared by Accumark (Project NV22-067) in February 2023, and shall be available to the Contractor upon written request to Fairfax Water.
 - Contour Interval: 2 foot

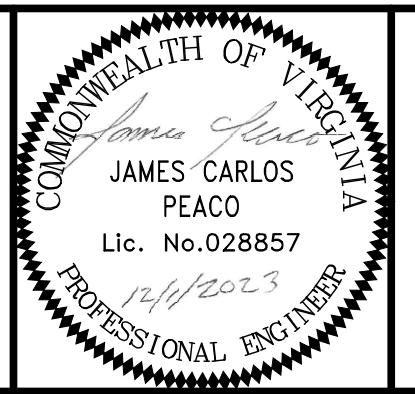


FAIRFAX WATER
PLANNING & ENGINEERING DIVISION
8560 ARLINGTON BOULEVARD
FAIRFAX, VA 22031

DESIGNED: J. CUMMINGS
DRAWN: V. TAYLOR
CHECKED: J. PEACO

NO.	DATE	REVISION

SCALE
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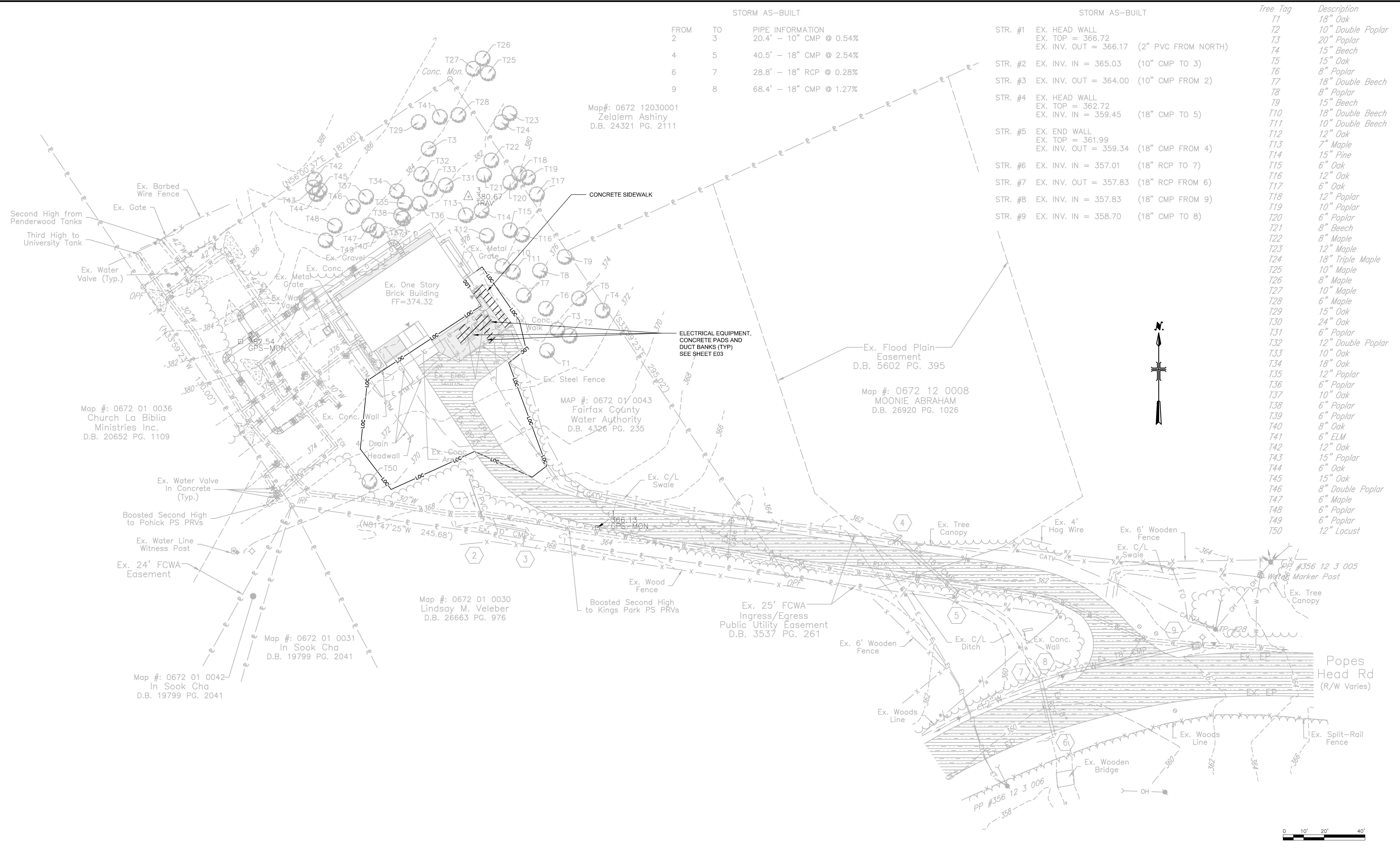
POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
EXISTING SITE PLAN

FILE NAME: C01_EXISTING_SITE_PLAN.DWG	PROJECT: P2722	DIVISION: 003	DATE: DEC 2023
TAX MAP: 067-2	DRAWING: C01	SHEET: 8 of 25	



User: TAYLOR, V. J. Date: 11/17/2023 11:25:11 AM. Plot Date: 11/17/2023 11:25:11 AM. Plot Time: 15:03. Plot User: Taylor, Veronica. 11/20/2023 11:25:11 AM. Layout: 8

User: TAYLOR, Spec: AUS-NGS000, File: C:\USERS\TAYLOR\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - DOCUMENTS\7.0 CAD FILES\SHEET\ELECTRICAL DESIGN\DEMOLITION PLAN.DWG, Scale: 1:1, SavedDate: 11/18/2023, Time: 09:02, Plot Date: Taylor, Veneniar, 11/20/2023, 11:25:1, Layout: 9



STORM AS-BUILT

FROM	TO	PIPE INFORMATION
2	3	20.4' - 10" CMP @ 0.54%
4	5	40.5' - 18" CMP @ 2.54%
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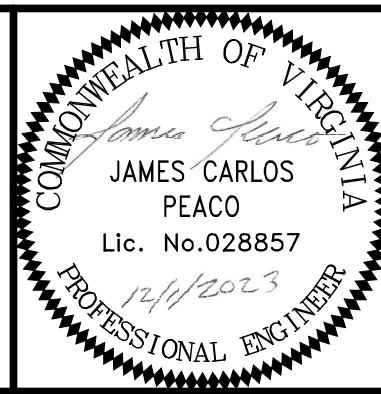
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T13	7" Maple
T14	15" Pine
T15	6" Oak
T16	12" Oak
T17	6" Oak
T18	12" Poplar
T19	10" Poplar
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T30	24" Oak
T31	6" Poplar
T32	12" Double Poplar
T33	10" Oak
T34	18" Oak
T35	12" Poplar
T36	6" Poplar
T37	10" Oak
T38	6" Poplar
T39	6" Poplar
T40	8" Oak
T41	6" ELM
T42	12" Oak
T43	15" Poplar
T44	6" Oak
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T49	6" Poplar
T50	12" Locust

FAIRFAX WATER
PLANNING & ENGINEERING DIVISION
8560 ARLINGTON BOULEVARD
FAIRFAX, VA 22031

DESIGNED: A. BARTLEY
DRAWN: V. TAYLOR
CHECKED: J. PEACO

NO.	DATE	REVISION

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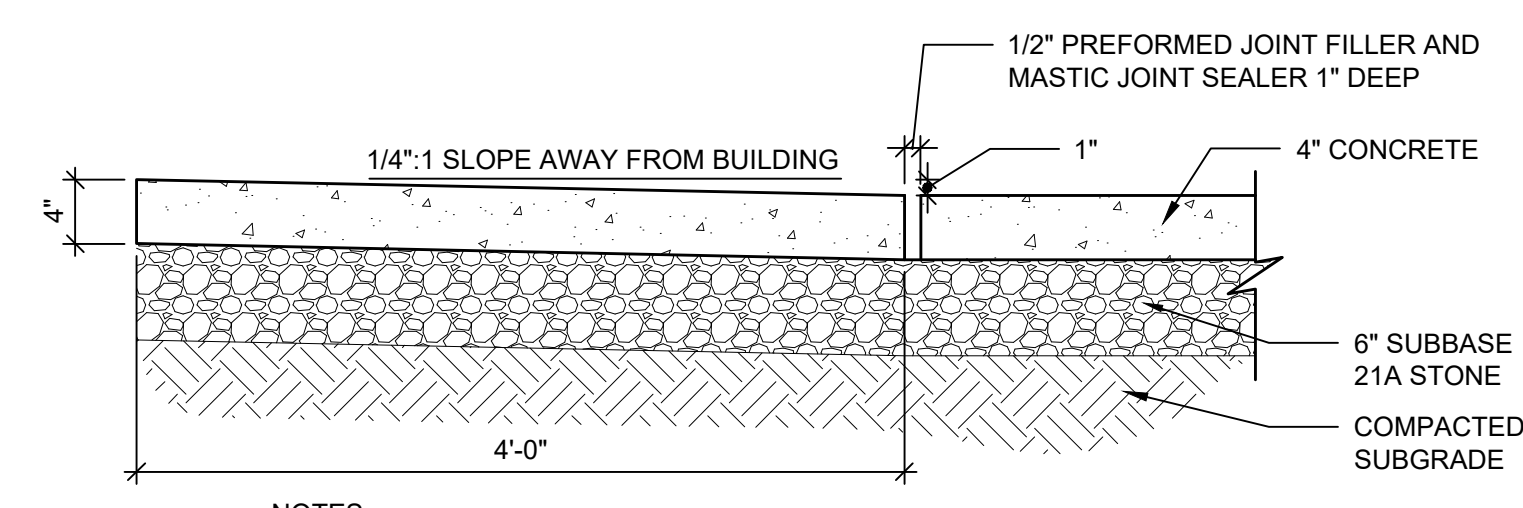
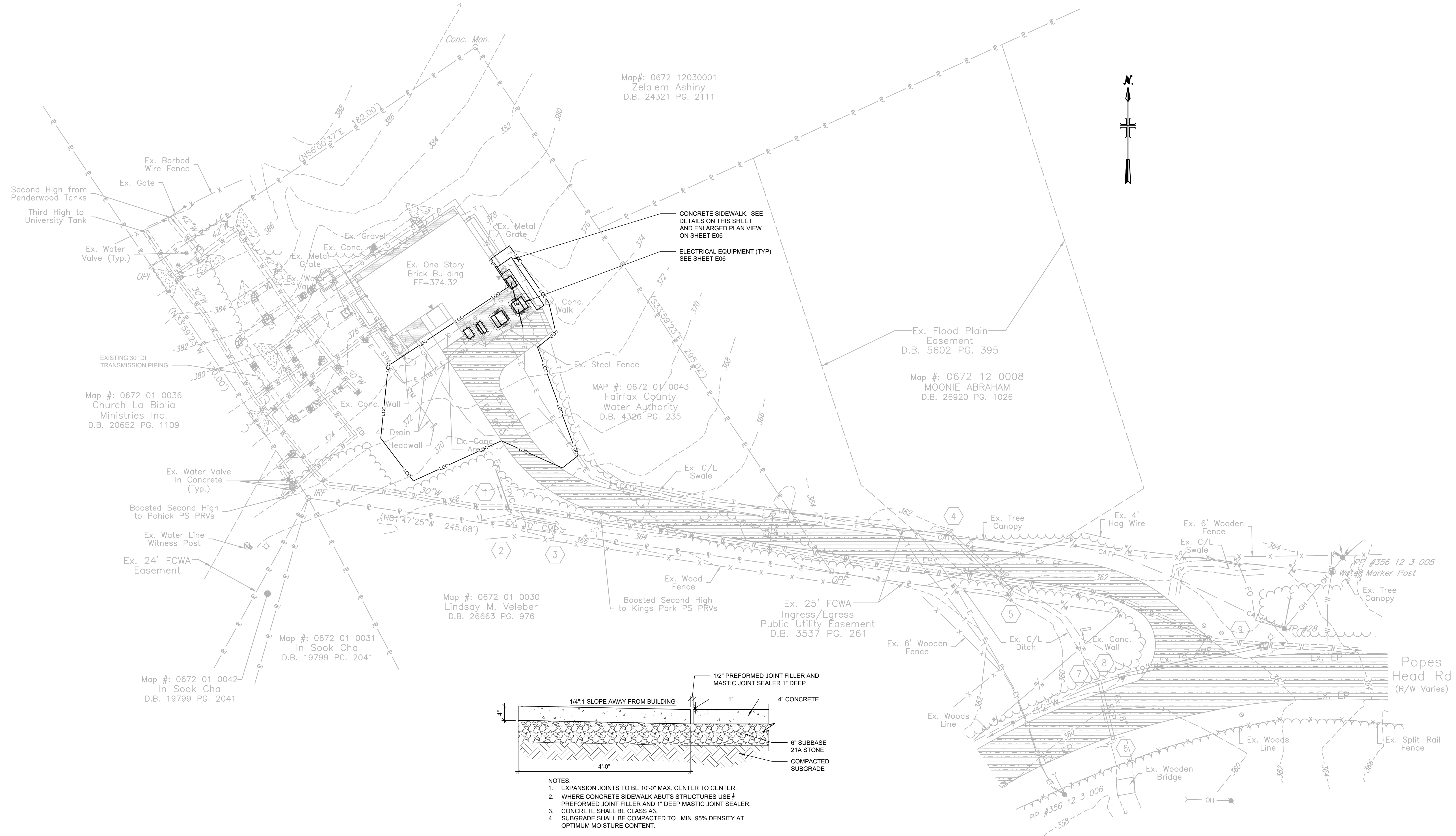


POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
SITE DEMOLITION PLAN

FILE NAME:	C02_SITE_DEMOLITION_PLAN.DWG		
PROJECT:	P2722	DIVISION:	003
DATE:	DEC 2023		
DRAWING:	C02		
TAX MAP:	067-2	SHEET:	9 of 25



User: TOURTEL01; Spc: AUS-NC5M0D; File: C:\USERS\TOURTEL01\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - 7.0 CAD FILES\SHEETS\ELECTRICAL\DESIGN\ML03_PROPOSED_SITE_PLAN_SIDEWALK.DWG; Scale: 11 Sawed; Date: 8/23/2024; Time: 16:56; Plot Date: 8/26/2024; 12:42; Layout: 10



- NOTES:**
1. EXPANSION JOINTS TO BE 10'-0" MAX. CENTER TO CENTER.
 2. WHERE CONCRETE SIDEWALK ABUTS STRUCTURES USE 1/2" PREFORMED JOINT FILLER AND 1" DEEP MASTIC JOINT SEALER.
 3. CONCRETE SHALL BE CLASS A3.
 4. SUBGRADE SHALL BE COMPACTED TO MIN. 95% DENSITY AT OPTIMUM MOISTURE CONTENT.

STANDARD SIDEWALK & EXPANSION JOINT DETAIL

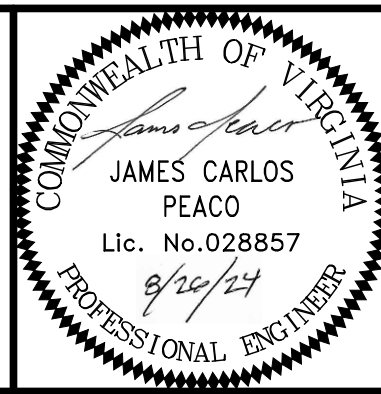
SCALE: NOT TO SCALE

FAIRFAX WATER
PLANNING & ENGINEERING DIVISION
8560 ARLINGTON BOULEVARD
FAIRFAX, VA 22031

DESIGNED: J. CUMMINGS
DRAWN: V. TAYLOR
CHECKED: J. PEACO

NO.	DATE	REVISION

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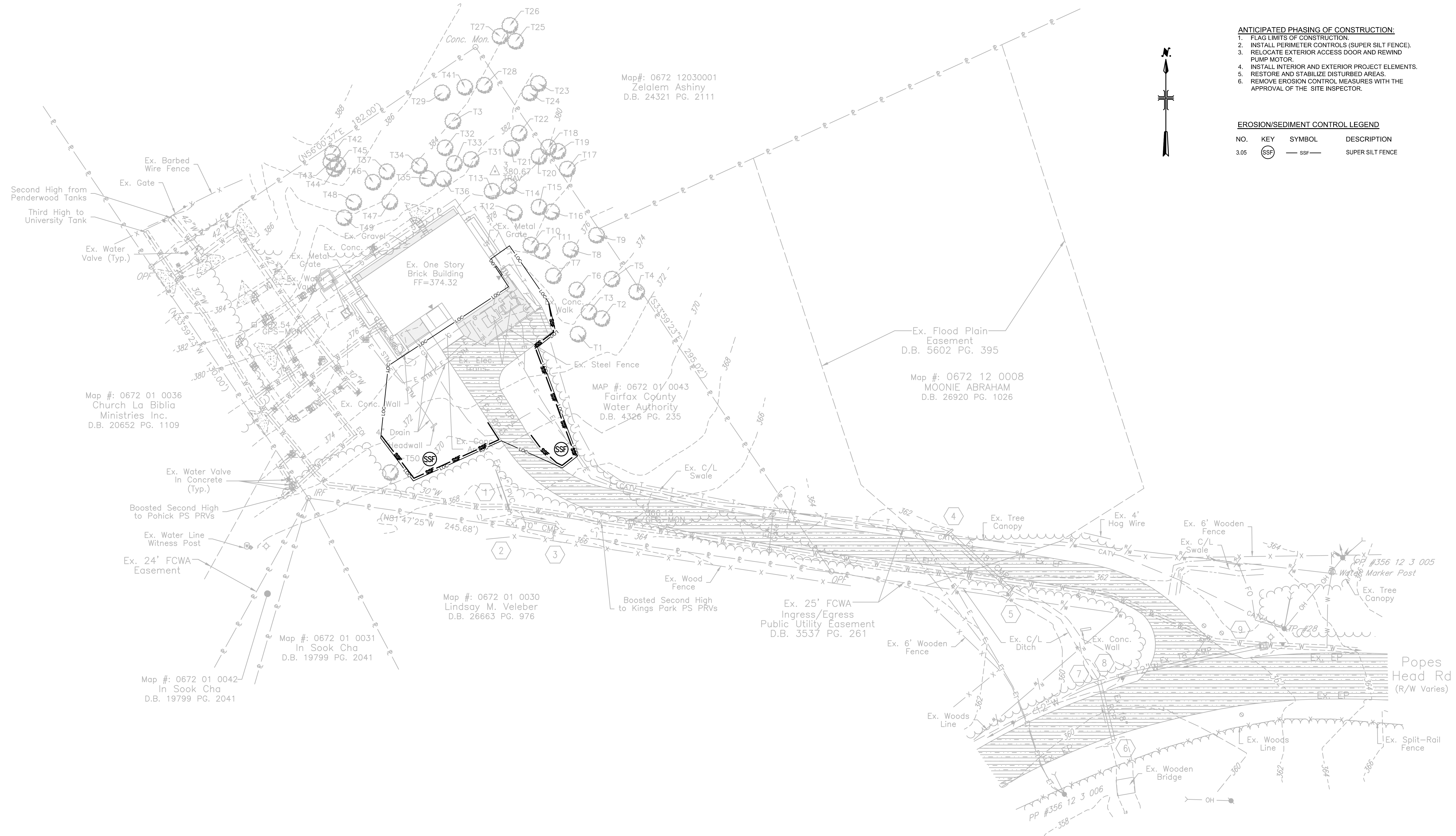


POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
PROPOSED SITE PLAN
AND SIDEWALK DETAILS

FILE NAME: C03_PROPOSED_SITE_PLAN_SIDEWALK.DWG	PROJECT: P2722	DIVISION: 003	DATE: AUG 2024
TAX MAP: 067-2	SHEET: 10 of 25	DRAWING: C03	



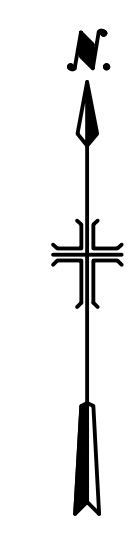
User: TAYLOR, JAMES CARLOS; Project: POPES HEAD PS UPGRADE - DOCUMENTS\7.0 CAD FILES\SHEET\ELECTRICAL DESIGN\04. ESC_CONTROL_PLAN.DWG; Scale: 1:1; Saved Date: 11/17/2023; Time: 15:09; Plot Date: Taylor, Veronica; 11/29/2023; 11:25; Layout: 1



- ANTICIPATED PHASING OF CONSTRUCTION:**
1. FLAG LIMITS OF CONSTRUCTION.
 2. INSTALL PERIMETER CONTROLS (SUPER SILT FENCE).
 3. RELOCATE EXTERIOR ACCESS DOOR AND REWIND PUMP MOTOR.
 4. INSTALL INTERIOR AND EXTERIOR PROJECT ELEMENTS.
 5. RESTORE AND STABILIZE DISTURBED AREAS.
 6. REMOVE EROSION CONTROL MEASURES WITH THE APPROVAL OF THE SITE INSPECTOR.

EROSION/SEDIMENT CONTROL LEGEND

NO.	KEY	SYMBOL	DESCRIPTION
3.05	(SSF)	— ssf —	SUPER SILT FENCE



GENERAL UTILITY NOTES

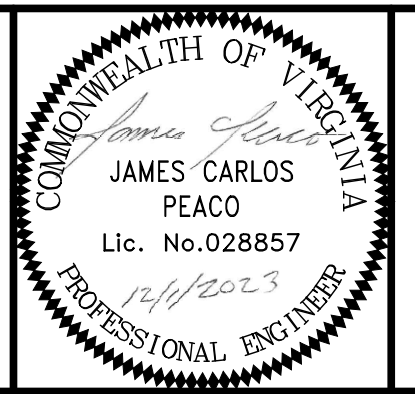
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POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
EROSION AND SEDIMENT CONTROL PLAN

FILE NAME:	C04_ESC_CONTROL_PLAN.DWG		
PROJECT:	P2722	DIVISION:	003
DATE:	DEC 2023		
DRAWING:	C04		
TAX MAP:	067-2	SHEET:	11 of 25



FAIRFAX COUNTY PRIORITY RATING FORM FOR EROSION & SEDIMENT CONTROL

PROJECT NAME: Popes Head Pumping Station Upgrades PROJECT NUMBER: P2722
 TAX MAP: 0672 01 0043 EVALUATOR: DATE:

A. Percentage of Denuded Area to Total Site Area

Rating
> 60% [] 5
31 to 60% [] 3
10 to 30% [✓] 1

If the denuded area is greater than 10 acres, the project is initially rated a high priority.

B. Watercourse Crossing

Rating
Yes [] 5
No [✓] 0

*If yes, project is initially rated a high priority.

C. Distance of Denuded Area to Downstream Adjacent Property

Rating
< 50-feet [] 5
50 to 150-feet [✓] 3
> 150-feet [] 0

D. Distance of Any Portion of the Denuded Area to a Natural Watercourse

Rating
< 50-feet [] 5
50 to 150-feet [] 3
> 150-feet [✓] 0

E. *Minimum Vegetative Buffer (Trees, Shrubs, Grasses and other Plants)

Rating
< 50-feet [✓] 0
50 to 150-feet [] -3
> 150-feet [] -5

*Vegetation in Resource Protection Areas are not to be included as vegetative buffers for this application.

F. Distance Between the Site Outfall and any Downstream, Wet Pond, Wetland, Parkland or other Land Deemed Environmentally Sensitive by the Director.

Rating
< 2,500-feet [✓] 5
2,500 to 5,000-feet [] 3
> 5,000-feet [] 0

G. Critical Slopes Within 50-feet of Adjacent Property

Rating	
Are there any slopes of 0 to 7%; greater than or equal to 300-feet in length; or	[] 5
Are there any slopes of 7 to 15%; greater than or equal to 150-feet in length; or	[] 3
Are there any slopes greater than 15% and greater than or equal to 75-feet in length	[] 0

If Yes to any of the above [] 5

Not Applicable if critical slope is > 50-feet from adjacent property [✓] 0

H. Soil Erodibility (Based on Physiographic Setting)

Rating
Triassic Basin [] 5
Piedmont Upland [✓] 3
Coastal Plain [] 1

TOTAL/OVERALL RATING: 12

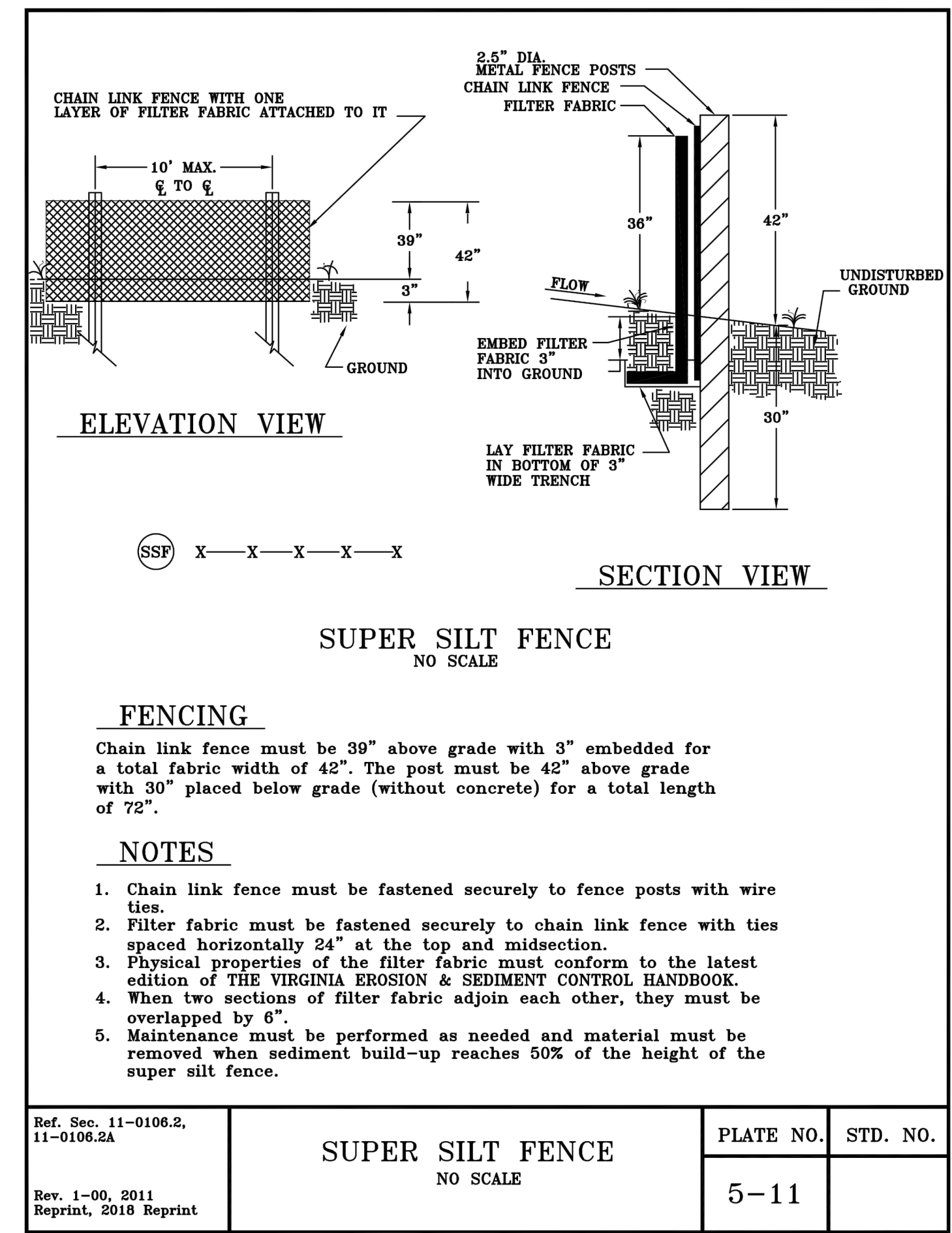
OVERALL RATING

PRIORITY (Mark with an "X")
If > 22 []
If > 14 and < or = to 22 []
If < or = to 14 [✓]

PROJECT PRIORITY LEVEL: Low

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 APPROVED BY: DATE: Plan Reviewer

Descriptions on Reverse Side



EROSION AND SEDIMENT CONTROL MINIMUM STANDARDS

PERMANENT OR TEMPORARY SOIL STABILIZATION NOTE:

(MS-1) PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE LEFT DORMANT FOR MORE THAN ONE YEAR.

SOIL STOCKPILES AND BORROW AREAS NOTE:

(MS-2) DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE. TOPSOIL THAT HAS BEEN STOCKPILED IS TO BE SURROUNDED BY SILT FENCE AND SHALL BE PROTECTED BY MULCH AND/OR TEMPORARY VEGETATION IMMEDIATELY AFTER GRADING.

PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER AND COUNTY FOR REVIEW AND APPROVAL.

PERMANENT VEGETATIVE COVER NOTE:

(MS-3) A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION. (MS-7) CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. THE USE OF SURFACE ROUGHENING TECHNIQUES SHALL BE EMPLOYED. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED AS DIRECTED BY THE SITE INSPECTOR.

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING. SEEDING SHALL BE SELECTED ACCORDING TO STD & SPEC 3.32, TABLES 3.32-A&B OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. THE PLANTING SOIL MUST HAVE ENOUGH FINE GRADED SOIL, FAVORABLE pH, SUFFICIENT PORE SPACE, SUFFICIENT DEPTH AND FREE FROM TOXIC AMOUNTS OF HARMFUL MATERIALS OR EXCESSIVE QUANTITIES OF ROOTS/STONES AND SHALL BE MULCHED WITH STD & SPEC 3.30. AFTER SEED IS IN PLACE, IT MUST BE PROTECTED WITH A MULCH TO HOLD MOISTURE AND MODIFY TEMPERATURE EXTREMES, AND TO PREVENT EROSION WHILE SEEDLINGS ARE GROWING.

IF SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH WORKING DAY, OR IMMEDIATELY IF PUBLIC SAFETY IS HINDERED IN ANY WAY. SEDIMENT SHALL BE REMOVED FROM ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.

UNDERGROUND UTILITY INSTALLATION NOTES (MS-16)

UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
 A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
 B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
 C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
 D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
 E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
 F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

EROSION, SEDIMENTATION, AND LAND CONSERVATION NOTES:

- MEASURES TO CONTROL EROSION AND SILTATION SHALL BE PROVIDED PURSUANT TO AND IN COMPLIANCE WITH CURRENT FEDERAL, STATE AND LOCAL REGULATIONS. THE INFORMATION CONTAINED IN THE CONSTRUCTION PLANS AND/OR THE APPROVAL OF THE PLANS SHALL IN NO WAY RELIEVE THE CONTRACTOR OR HIS AGENT OF ANY LEGAL RESPONSIBILITY WHICH MAY BE REQUIRED BY THE CODE OF VIRGINIA OR ANY ORDINANCE ENACTED BY THE COUNTY OF FAIRFAX.
- ALL AREAS, ON OR OFF-SITE, WHICH ARE DISTURBED BY THIS CONSTRUCTION AND WHICH ARE NOT PAVED OR BUILT UPON SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION. ACCEPTABLE STABILIZATION SHALL CONSIST OF PERMANENT GRASS SEED MIXTURE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. ALL SLOPES 2:1 AND GREATER SHALL BE SODDED AND STAKED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE ENGINEER.
- ANY DISTURBED AREA NOT PAVED, PERMANENTLY SEEDED, SODDED, OR BUILT UPON BY 1 NOVEMBER OR DISTURBED AFTER THAT DATE, IS TO BE SEEDED WITHIN 14 DAYS WITH OATS, ABRUZZI RYE OR APPROVED EQUIVALENT, AND MULCHED WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONES PER ACRE. FOR ADDITIONAL DETAILS, REFER TO THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
- NO AREA SHALL BE DENUDED AND BE DISTURBED FOR A PERIOD LONGER THAN 14 DAYS IN ACCORDANCE WITH THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL.
- TEMPORARY DIVERSIONS, SEEDED AND MULCHED OR STAKED STRAW BALE DIVERSION AND OTHER CONTROL MEASURES NECESSARY ARE TO BE PLACED AS INDICATED ON THE DRAWINGS PRIOR TO OR AS THE FIRST STEP IN EXCAVATION.
- WHEN IN ACCORDANCE WITH STATE AND FEDERAL JOB SAFETY REQUIREMENTS, ALL EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF TRENCHES. NO MATERIAL IS TO BE PLACED IN STREAMS. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 14 DAYS IS TO BE SEEDED FOR TEMPORARY VEGETATION AND MULCHED. WHERE SPOIL PLACED ON THE DOWNHILL SIDE OF TRENCH, IT IS TO BE BACK-SLOPED TO DRAIN TOWARD THE TRENCH. WHEN NECESSARY TO DEWATER THE TRENCH, THE PUMP DISCHARGE MUST OUTLET IN A STABILIZED AREA OR A SEDIMENT BASIN.
- ALL DISTURBED AREAS ARE TO BE SEEDED AND MULCHED OR SODDED WITHIN 5 DAYS AFTER BACKFILL OF THE APPLICABLE TRENCH SECTION, IN ACCORDANCE WITH THE PROVISIONS CONTAINED IN THE PROJECT SPECIFICATIONS RELATING TO SEEDING AND SODDING. SPEED IS THE ESSENTIAL LAND CONSERVATION ELEMENT FOR A LINEAR PROJECT.
- FOR FURTHER REQUIREMENTS AND DETAILS OF TREE PRESERVATION, PLANTING, EROSION AND SEDIMENT CONTROL, SEE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL AND/OR THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
- ALL EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED WITHIN 30 DAYS AFTER THE PROJECT IS STABILIZED. (MS-18)
- AN EROSION AND SEDIMENT CONTROL CONTRACTOR CERTIFICATION (E.S.C.C.) IS REQUIRED FOR ALL LAND DISTURBING ACTIVITIES.
- THE CONTRACTOR SHALL PROPERLY INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROLS FOR THE LIFE OF THE PROJECT; AND ROUTINELY CHECK CONTROL DEVICES BEFORE, DURING AND AFTER STORM EVENTS.

EROSION AND SEDIMENT CONTROL NARRATIVE:

THE PURPOSE OF THIS PROJECT IS TO REPLACE INTERIOR AND EXTERIOR ELECTRICAL EQUIPMENT AND UNDERGROUND MEDIUM VOLTAGE DISTRIBUTION CONDUCTORS.

EXISTING SITE CONDITIONS:

CURRENTLY THE SITE IS AN OPEN LOT WITH A PUMP STATION BUILDING AND ASPHALT ACCESS ROAD. STORMWATER RUNOFF FROM THE SITE GENERALLY FLOWS OVERLAND FROM SOUTH TO SOUTHEAST TO POPES HEAD CREEK.

ADJACENT PROPERTY:

THE PROPERTY IS BOUNDED BY POPES HEAD ROAD ON THE SOUTH SIDE AND RESIDENTIAL PROPERTIES ON THE WEST, NORTH AND EAST SIDES.

OFFSITE AREAS:

AN EXISTING OFF-SITE NOVEC POWER POLE DROP CONNECTION WILL NEED TO BE ACCESSED FOR NON-EXCAVATORY REMOVAL AND REPLACEMENT OF UNDERGROUND MEDIUM VOLTAGE DISTRIBUTION CONDUCTORS.

CRITICAL AREAS:

THE PUMP STATION PROPERTY IS LOCATED ENTIRELY OUTSIDE OF THE 100-YEAR FLOOD PLAIN. A PORTION OF THE ACCESS ROAD FROM POPES HEAD, OUTSIDE OF THE PUMP STATION PROPERTY BUT INSIDE AN EXISTING 25-FOOT WIDE PUBLIC UTILITY ACCESS EASEMENT (FCWA, D.B. 3537, PG. 261), IS LOCATED INSIDE AN EXISTING FAIRFAX COUNTY FLOODPLAIN EASEMENT (D.B. 5602, PG. 395)

STORM WATER MANAGEMENT PRACTICES:

THE EXISTING DRAINAGE PATTERN WILL BE MAINTAINED UPON COMPLETION OF THE TRANSMISSION PIPING INSTALLATION.

EROSION AND SEDIMENT CONTROL MEASURES:

THE EROSION AND SEDIMENT CONTROL PROGRAM HAS BEEN PROPOSED IN ONE PHASE WHERE THE EROSION CONTROL MEASURES SHALL BE INSTALLED BEFORE ASSOCIATED CONSTRUCTION ACTIVITIES START.

ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ACCOMPLISHED AS DESCRIBED HEREIN AND IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL PLAN HANDBOOK (VESCH) LATEST EDITION AND PUBLIC FACILITIES MANUAL (PFM).

EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE I WILL INCLUDE:

- THE CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES AS DEFINED IN THE VIRGINIA STATE EROSION AND SEDIMENT CONTROL HANDBOOK TO PREVENT SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES AND REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS OR HARM ANIMAL OR PLANT LIFE.
- SUPER SILT FENCE (3.05) TO FILTER RUNOFF FROM DISTURBED AREAS BEFORE IT LEAVES THE PROPERTY. SUPER SILT FENCE SHOULD BE REPLACED ON A REGULAR BASIS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

EROSION AND SEDIMENT CONTROL MEASURES FOR PHASE II WILL INCLUDE:

- THE CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES AS DEFINED IN THE VIRGINIA STATE EROSION AND SEDIMENT CONTROL HANDBOOK TO PREVENT SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES AND REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS OR HARM ANIMAL OR PLANT LIFE.
- ALL PERIMETER CONTROLS REMOVED AT THE END OF PHASE I SHALL BE REINSTALLED IN-KIND AT THE INITIATION OF PHASE II.

MAINTENANCE:

- ALL EROSION AND SEDIMENT CONTROL SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH SIGNIFICANT RAINFALL. ANY DAMAGED STRUCTURAL MEASURES SHALL BE REPAIRED BY THE END OF THE DAY. THE FOLLOWING ITEMS SHOULD BE CHECKED IN PARTICULAR:
- SUPER SILT FENCE SHALL BE CHECKED FOR UNDERMINING "END RUNS" AND FABRIC INTEGRITY. REMOVE SEDIMENT WHEN THE LEVEL OF DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.
 - CHECK SEEDED AREAS TO ENSURE THAT A GOOD STAND IS MAINTAINED. RESEED AND FERTILIZE AS NEEDED.

EROSION CONTROL REMOVAL NOTE:

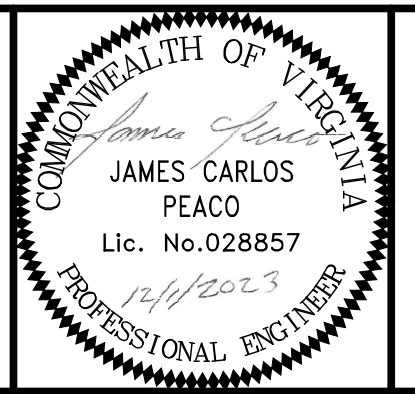
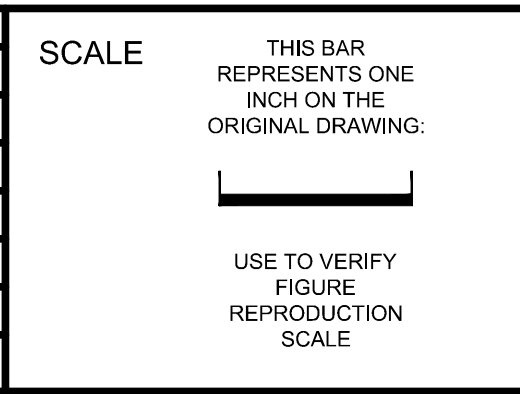
(MS-18) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

User: TAYLOR, J. S. Date: 11/29/2023 11:28:11 AM. Plot Date: Taylor, Veronica, 11/29/2023 11:28:11 AM. Layout: 12

FAIRFAX WATER
 PLANNING & ENGINEERING DIVISION
 8560 ARLINGTON BOULEVARD
 FAIRFAX, VA 22031

DESIGNED: J. CUMMINGS
 DRAWN: V. TAYLOR
 CHECKED: J. PEACO

NO.	DATE	REVISION



POPES HEAD PUMPING STATION

ELECTRICAL UPGRADES

EROSION AND SEDIMENT CONTROL

NARRATIVE AND DETAILS

FILE NAME: C05_ESC_CONTROL_NARRATIVE_DETAILS.DWG	PROJECT: P2722	DIVISION: 003	DATE: DEC 2023	DRAWING: C05
TAX MAP: 067-2	SHEET: 12 of 25			

ABBREVIATIONS

ACOUS	ACOUSTICAL	IN	INCH
ACT	ACOUSTICAL CEILING TILE	ID	INSIDE DIMENSION
ADH	ADHESIVE	INSUL	INSULATION
ADMIN	ADMINISTRATION	INT	INTERIOR
AFF	ABOVE FINISH FLOOR	JC	JANITOR'S CLOSET
ALUM	ALUMINUM	JT	JOINT
ANSI	AMERICAN NATIONAL STANDARDS	LAB	LABORATORY
	INSTITUTE	LAV	LAVATORY
ALT	ALTERNATE	LP	LOW POINT
&	AND	MFR	MANUFACTURER
A	ARCHITECTURAL	MATL	MATERIAL
@	AT	MAX	MAXIMUM
B & B	BALLED & BURLAPPED	MECH	MECHANICAL
BSMT	BASEMENT	MTL	METAL
BM	BEAM	MEZZ	MEZZANINE
BTWN	BETWEEN	MIN	MINIMUM
BITUM	BITUMINOUS	MISC	MISCELLANEOUS
BLK	BLOCK	MOD	MODULAR
BD	BOARD	NEC	NATIONAL ELECTRICAL CODE
BOT	BOTTOM	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
BO	BOTTOM OF	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
BRK	BRICK	N	NORTH
BC	BRICK COURSES	NTS	NOT TO SCALE
BLDG	BUILDING	NO	NUMBER
CAB	CABINET	OC	ON CENTER
CPT	CARPET	OPNG	OPENING
CIP	CAST IN PLACE	OPP	OPPOSITE
CLG	CEILING	OPH	OPPOSITE HAND
CT	CERAMIC TILE	OD	OUTSIDE DIAMETER
C/S	CIVIL SANITARY	OCD	OVERHEAD COILING DOOR
CLO	CLOSET	OSD	OVERHEAD SLIDING DOOR
COL	COLUMN	PNT	PAINT(ED)
CONC	CONCRETE	PNL	PANEL
CB	CONCRETE BLOCK	PART	PARTITION
CMU	CONCRETE MASONRY UNIT	P	PLASTER
CONSTR	CONSTRUCTION	PL	PLATE
CONT	CONTINUOUS	PLBG	PLUMBING
CJ	CONTROL JOINT	PVC	POLYVINYL CHLORIDE
CORR	CORRIDOR	PVF	POLYVINYL FLUORIDE
CSK	COUNTERSUNK	PCP	PORTLAND CEMENT PLASTER
CU	CUBIC	PSF	POUNDS PER SQUARE FOOT
CLR	CLEAR	PJ	PREMOLDED JOINT
DBL	DOUBLE	PT	PRESSURE TREATED
DEMO	DEMOLITION	QUAN	QUANTITY
DETS	DETAILS	QT	QUARRY TILE
DF	DRINKING FOUNTAIN	RAD	RADIUS
DIA	DIAMETER	REF	REFERENCE
DIM	DIMENSION	REINF	REINFORCING
DN	DOWN	REQD	REQUIRED
DO	DOOR OPENING	R	RISER
DPT	DEPTH	RD	ROOF DRAIN
DR	DOOR	RM	ROOM
DWL	DOWEL	RO	ROUGH OPENING
DWG	DRAWING	SECT	SECTION
EA	EACH	SHTHG	SHEATHING
E	EAST	SHT	SHEET
EW	ELECTRIC WATER COOLER	SMS	SHEET METAL SCREWS
ELEC	ELECTRICAL	SIM	SIMILAR
EL	ELEVATION	SOUTH	SOUTH
EMBED	EMBEDMENT	SPECS	SPECIFICATIONS
ENGR	ENGINEER	SQ	SQUARE
EQ	EQUAL	SST	STAINLESS STEEL
EQUIP	EQUIPMENT	STD	STANDARD
EX	EXISTING	STA	STATION
EXP	EXPANSION	STL	STEEL
EJ	EXPANSION JOINT	STOR	STORAGE
EXT	EXTERIOR	STRUC	STRUCTURAL
FT	FEET	SUSP	SUSPENDED
FRP	FIBER REINFORCED PLASTIC	SYS	SYSTEM
FWP	FIBROUS WOOD PANEL	TEMP	TEMPORARY
FIN	FINISH	TER	TERRAZZO
FIN FLR	FINISH FLOOR	TC	TERRA COTTA
FE	FIRE EXTINGUISHER	THK	THICK(NESS)
FIXT	FIXTURE	TOS	TOP OF SLAB/STEEL
FLR	FLOOR	TOPP	TOPPING
FD	FLOOR DRAIN	TRANS	TRANSOM
FDTN	FOUNDATION	T	TREAD
GA	GAGE	TYP	TYPICAL
GALV	GALVANIZED	UL	UNDERWRITER'S LABORATORIES
GEN	GENERAL	UON	UNLESS OTHERWISE NOTED
GL	GLASS	UNFIN	UNFINISHED
GST	GLAZED STRUCTURAL TILE	VAR	VARIES
GR	GRADE	VERT	VERTICAL
GCFFB	GROUND AND CEMENTITIOUS	VIF	VERIFY IN FIELD
	FILLED FACE CONCRETE BLOCK	VT	VINYL TILE
	GROUND AND CEMENTITIOUS	VP	VISION PANEL
	FILLED FACE - SLOTTED	WC	WATER CLOSET
	ACOUSTICAL BLOCK	WT	WEIGHT
	GYPSUM	W	WEST
GYP	GYPSUM WALLBOARD	W/	WITH
GWB	HARDENER	W/O	WITHOUT
HDN	HARDWARE	WD	WOOD
HDW	HEATING, VENTILATING AND AIR	WDT	WIDTH
HVAC	CONDITIONING		
	HEAVY DUTY CONCRETE TOPPING		
HDCT	HEIGHT		
HT	HIGH POINT		
HP	HOLLOW METAL		
HM	HORIZONTAL		
HORIZ	INFORMATION		
INFO			

LEGEND

	STRUCTURAL COLUMN CENTERLINE, WALL CENTERLINE IF NOT COLUMN
	EXISTING STRUCTURAL COLUMN CENTERLINE, WALL CENTERLINE IF NOT COLUMN
#	NUMBER
	CENTERLINE
	BRICK MASONRY
	CONCRETE MASONRY
	CONCRETE
	EXISTING BRICK MASONRY
	EXISTING CONCRETE MASONRY
	EXISTING CONCRETE
	GROUT
	STEEL
	EARTH
	RIGID INSULATION

GENERAL ARCHITECTURAL NOTES

1. THE LEGEND AND ABBREVIATIONS LIST ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS. THEREFORE NOT ALL THE SYMBOLS AND ABBREVIATIONS CONTAINED IN THIS LIST ARE NECESSARILY USED ON THIS PARTICULAR PROJECT AND SHOULD BE USED FOR CLARIFICATION ONLY.
2. ITEMS NOT NOTED ON DRAWINGS SHALL BE CONSIDERED THE SAME AS NOTED ITEMS WHICH ARE GRAPHICALLY REPRESENTED IN THE SAME MANNER.
3. ASTERISK (*) INDICATES VERIFY DIMENSION WITH MANUFACTURER OF EQUIPMENT SUPPLIED.
4. FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS.
5. FOR CONCRETE AND STEEL SIZES AND CONFIGURATIONS SEE 'S' DRAWINGS.
6. FOR FINAL GRADING AND BUILDING LOCATION SEE 'C' DRAWINGS.
7. COORDINATE WITH ELECTRICAL DRAWINGS FOR LOCATION AND SIZE OF RECESSED ELECTRICAL DEVICES IN WALLS. SEE ELECTRICAL DRAWINGS FOR LOCATIONS AND DETAILS.
8. COORDINATE WITH ELECTRICAL DRAWINGS FOR LIGHT FIXTURE TYPES AND LOCATIONS.
9. COORDINATE EXTENT OF DEMOLITION WORK WITH 'D' DRAWINGS.

CONSTRUCTION NOTES

1. INSTALL HOLLOW METAL DOOR FRAMES AS SHOWN AND SPECIFIED AS THE WORK PROGRESSES. DO NOT HANG DOORS AND INSTALL FINISH HARDWARE UNTIL ALL WORK BY ALL CONTRACTORS HAS BEEN COMPLETED IN AN AREA AND THERE IS NO FURTHER CONSTRUCTION ACTIVITIES OR REQUIRED ENTRY BY ANY CONTRACTOR. DOORS AND FINISHED HARDWARE INSTALLED AND SUBSEQUENTLY DAMAGED IN ANY WAY FOR ANY REASON SHALL BE IMMEDIATELY REPLACED BY GENERAL CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. IMMEDIATELY MEANS FROM THE TIME THE DAMAGE IS OBSERVED AND REPORTED TO THE GENERAL CONTRACTOR BY CONSTRUCTION MANAGEMENT TO THE TIME OF REINSTALLATION SHALL NOT BE MORE THAN ONE MONTH.
2. DOORS FRAMES SHALL BE BOXED OUT IN WOOD TO PREVENT CONSTRUCTION DAMAGE.
3. INSTALL TEMPORARY 3/4" PLYWOOD DOORS AND LOCKS. REMOVE WHEN CONSTRUCTION ACCESS AND ACTIVITIES ARE FINISHED IN AN AREA AT THE TIME WHEN STAINLESS STEEL DOORS AND FINISH HARDWARE ARE INSTALLED.
4. PAINTING - COORDINATE INSTALLATION OF PAINTING IN ORDER TO PERFORM WORK BEFORE INSTALLATION OF WORK PERFORMED UNDER THIS CONTRACT.

BUILDING CODE INFORMATION		
2018 VIRGINIA CONSTRUCTION CODE		
CODE ITEM	CODE REFERENCE	
OCCUPANCY CLASSIFICATION	CHAPTER 3	GROUP U
CONSTRUCTION CLASSIFICATION	CHAPTER 6	TYPE IIB

User: TAYLOR, Spec: AUS-NCMS000, File: C:\USERS\TAYLOR\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - DOCUMENTS\7.0 CAD FILES\SHEET ELECTRICAL DESIGN\ARCHITECTURAL\GEN NOTES_ABBREV_AND_LEGEND.DWG Scale: 1:1, Saved Date: 10/19/2023, Time: 13:49, Plot Date: 11/20/2023, 11:24, Layout: 13

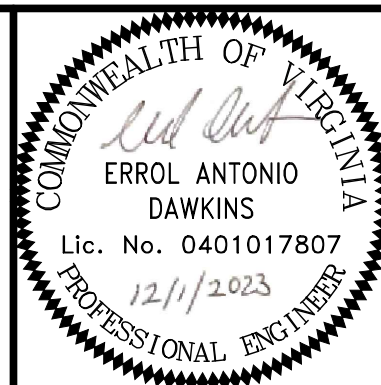
FAIRFAX WATER
PLANNING & ENGINEERING DIVISION
8560 ARLINGTON BOULEVARD
FAIRFAX, VA 22031

DESIGNED:	G. BIONDI	
DRAWN:	D. MARTINS	
CHECKED:	E. DAWKINS	
NO.	DATE	REVISION

SCALE

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING:

USE TO VERIFY FIGURE REPRODUCTION SCALE



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POPES HEAD PUMPING STATION

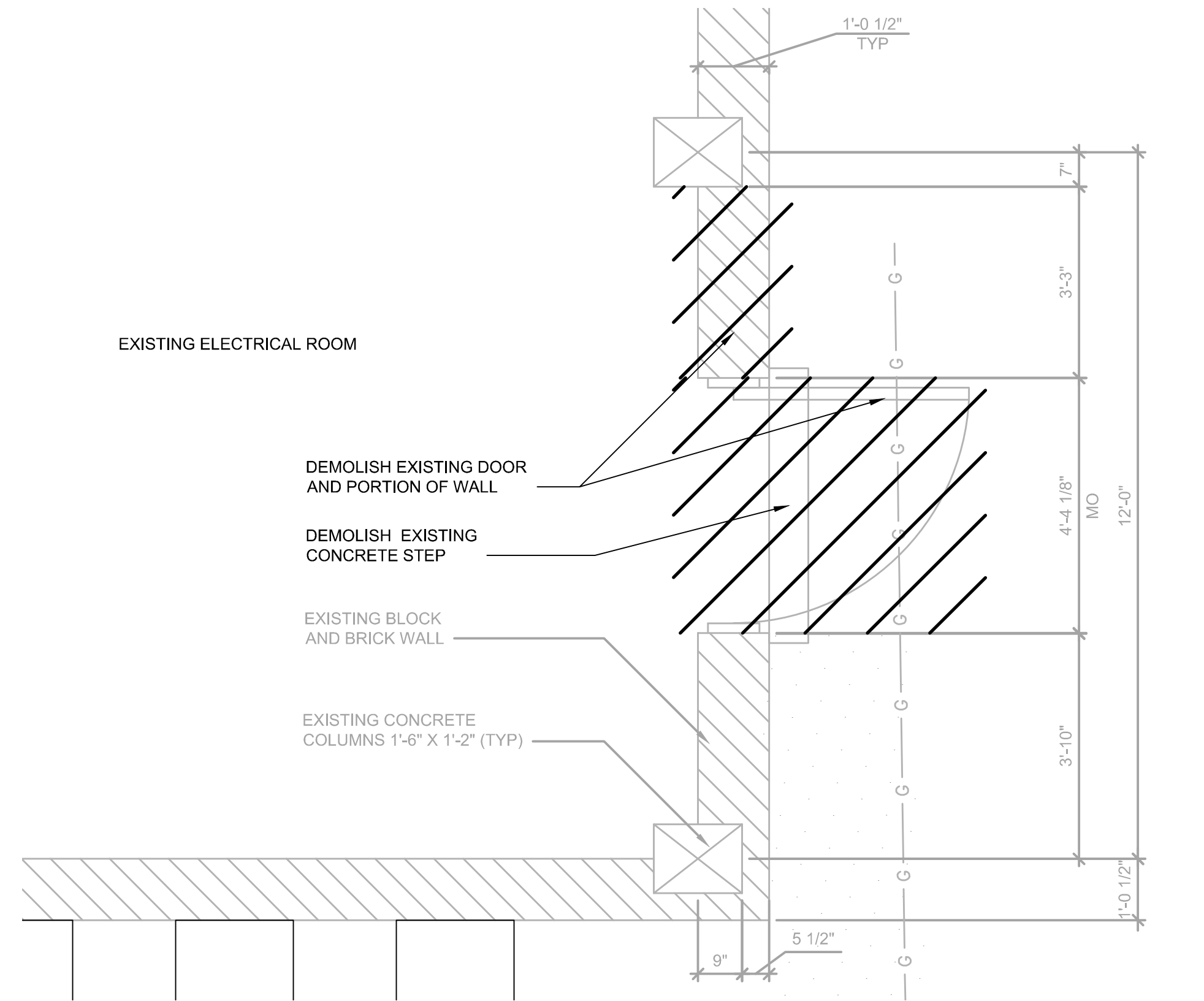
ELECTRICAL UPGRADES

GENERAL NOTES, ABBREVIATIONS AND LEGEND

FILE NAME:	A01_GEN_NOTES_ABBREV_AND_LEGEND.DWG		
PROJECT	DIVISION	DATE:	DEC 2023
P2722	003	DRAWING	A01
TAX MAP:	SHEET		
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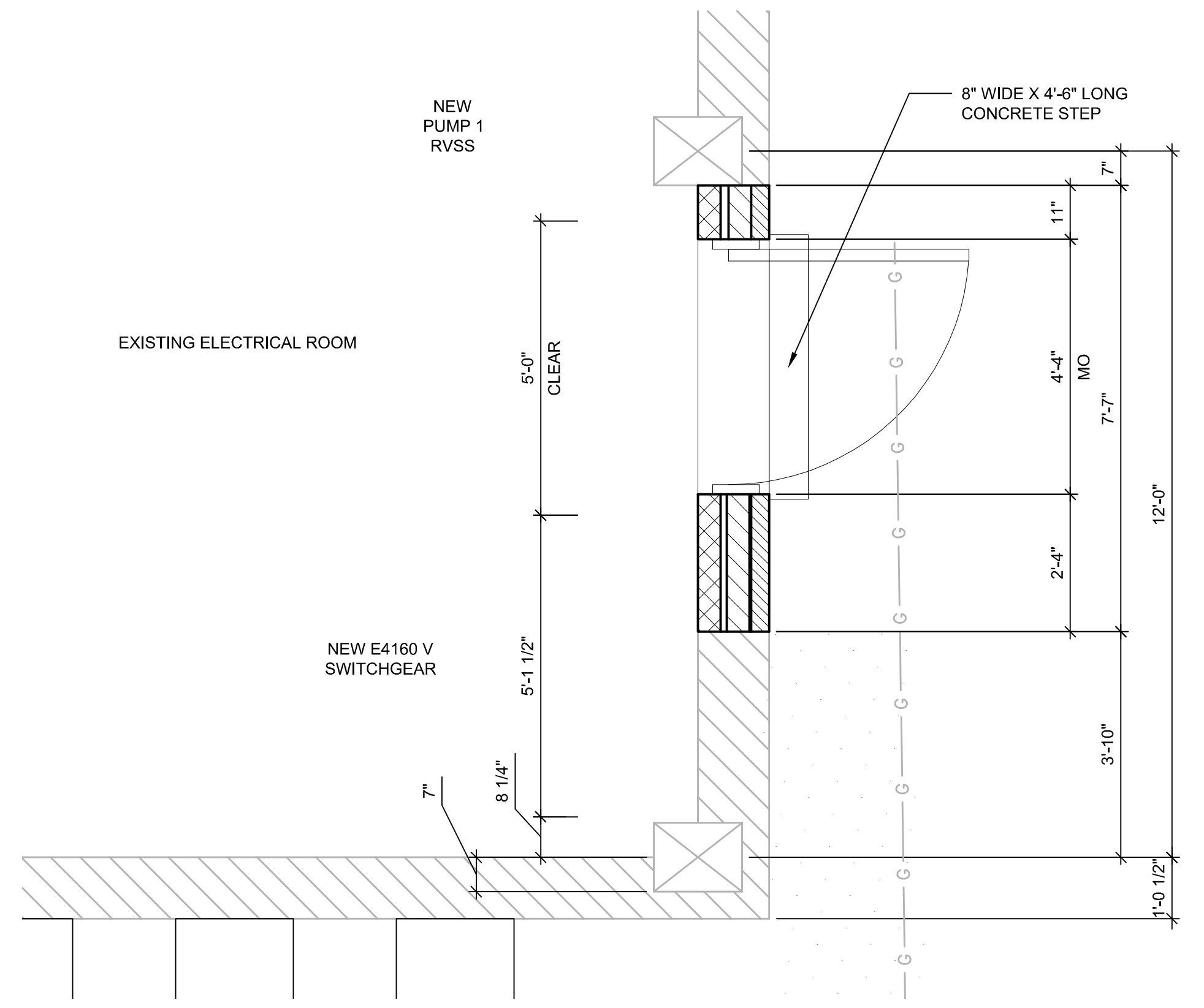
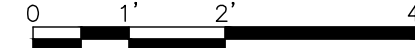


User: TAYLOR, Spec: AUS-NCSSMOD File: C:\USERS\TAYLOR\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - DOCUMENTS\7.0 CAD FILES\SHEETS\ELECTRICAL DESIGN\ARCHITECTURAL\A02_PLANS_AND_DETAILS.DWG Scale: 1:1 SaveDate: 8/3/2023 Time: 15:07 Plot Date: Taylor, Veronica: 11/28/2023 11:25 Layout: 1.4



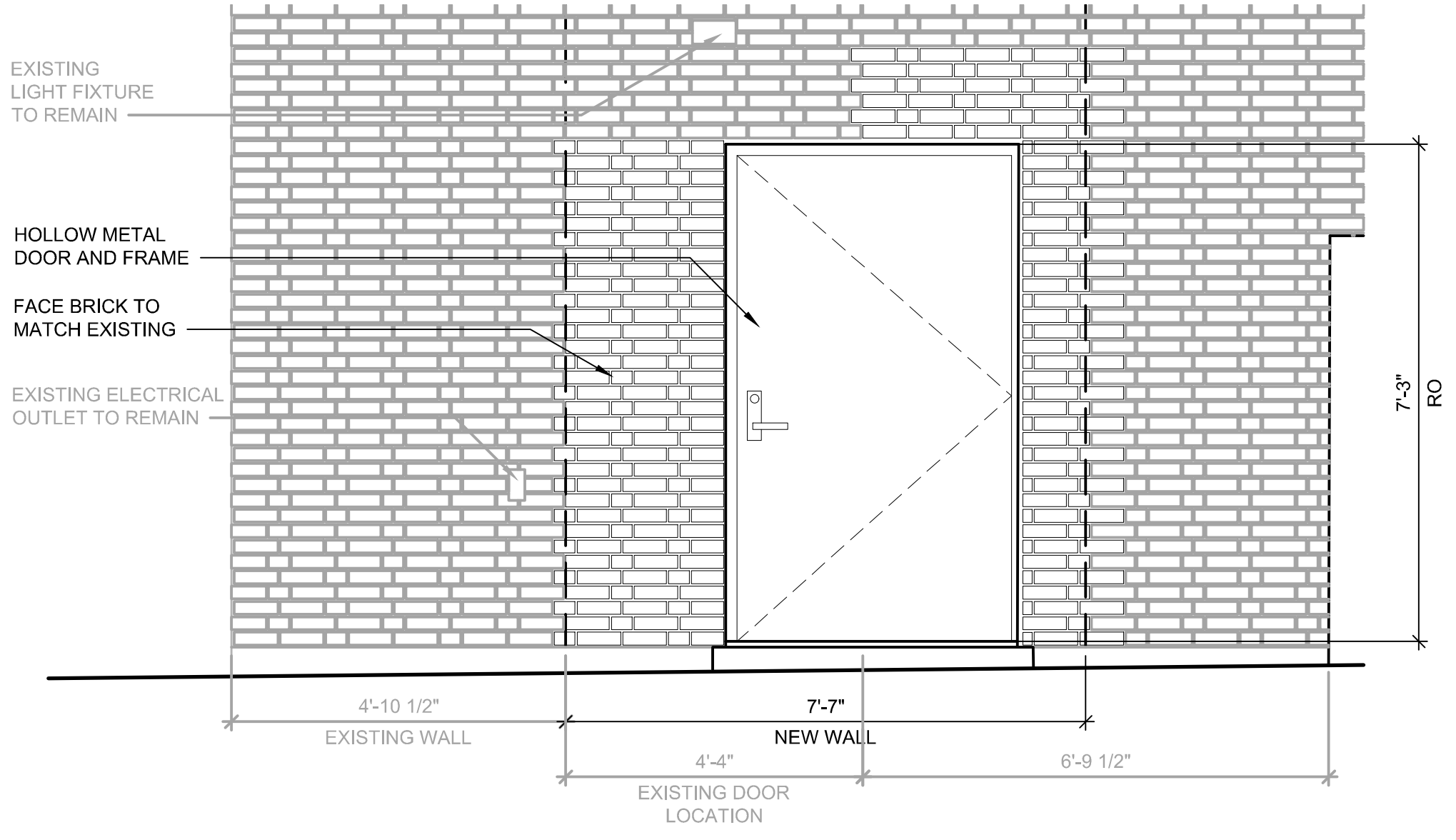
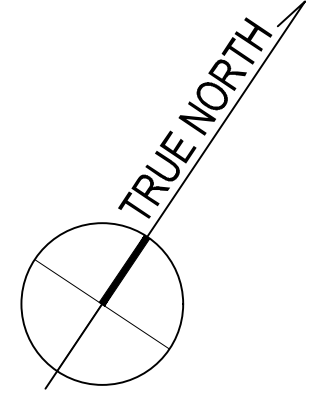
ELECTRICAL ROOM DEMOLITION PLAN

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



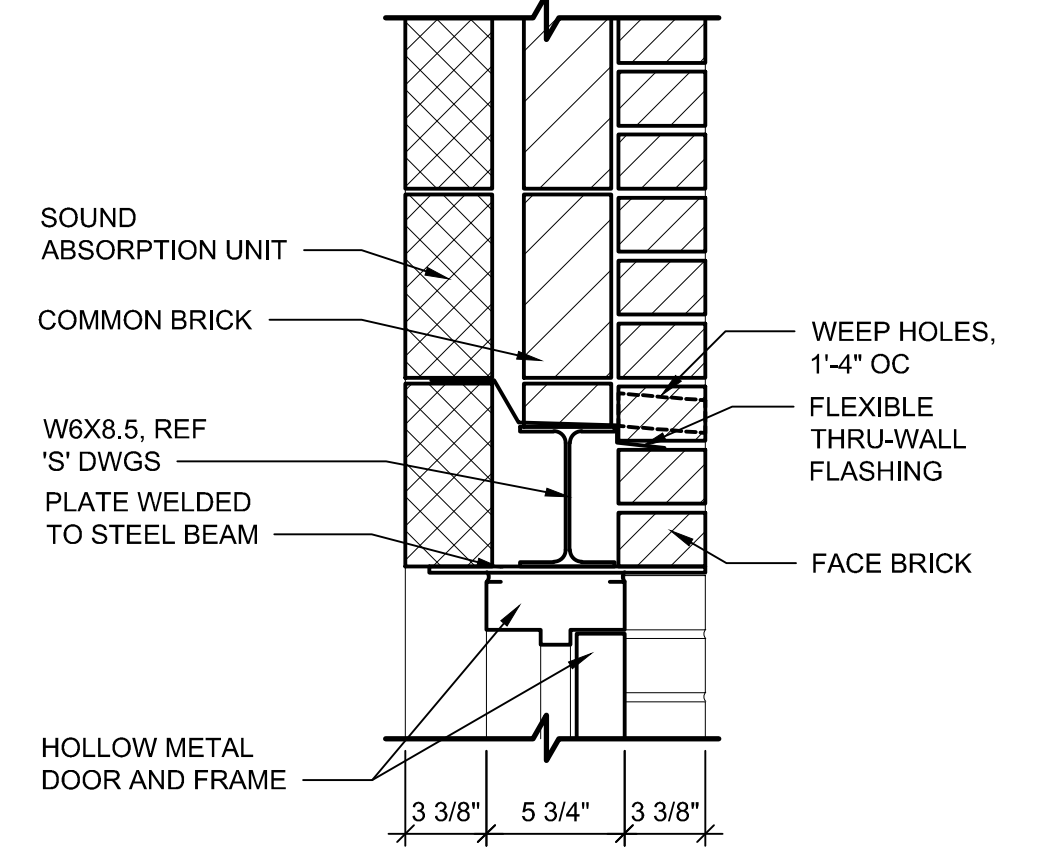
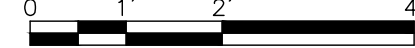
ELECTRICAL ROOM CONSTRUCTION PLAN

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

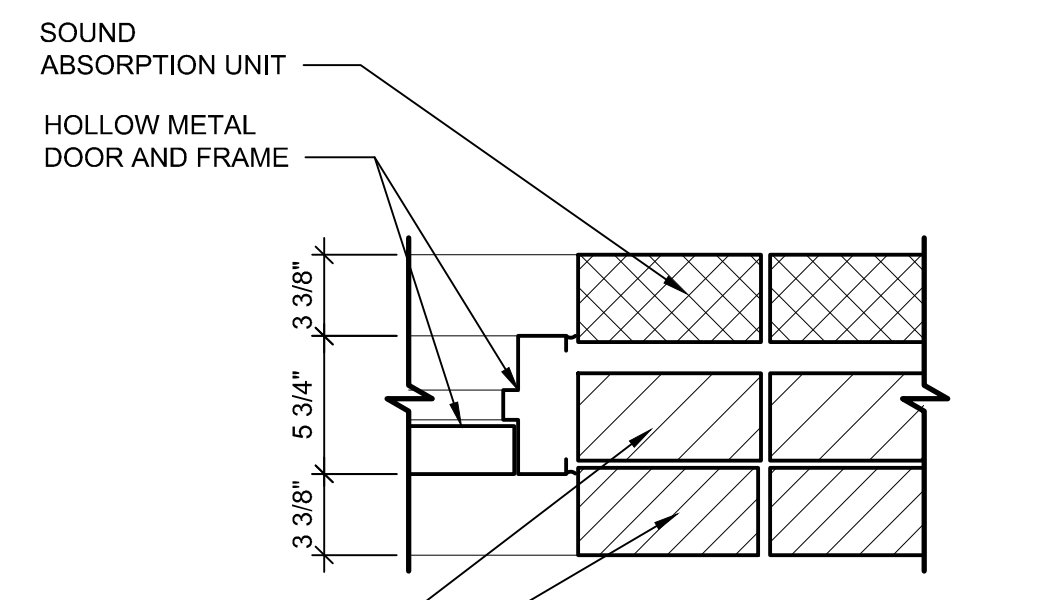


ELECTRICAL ROOM DOOR RELOCATION ELEVATION

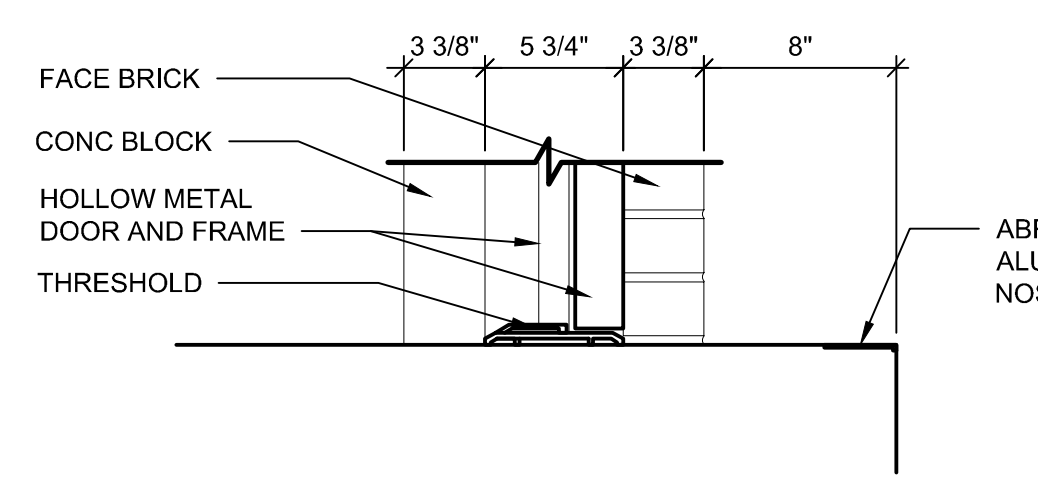
SCALE: 1/2" = 1'-0"



HEAD DETAIL

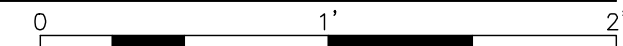


JAMB DETAIL



**THRESHOLD DETAIL
DOOR DETAILS**

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

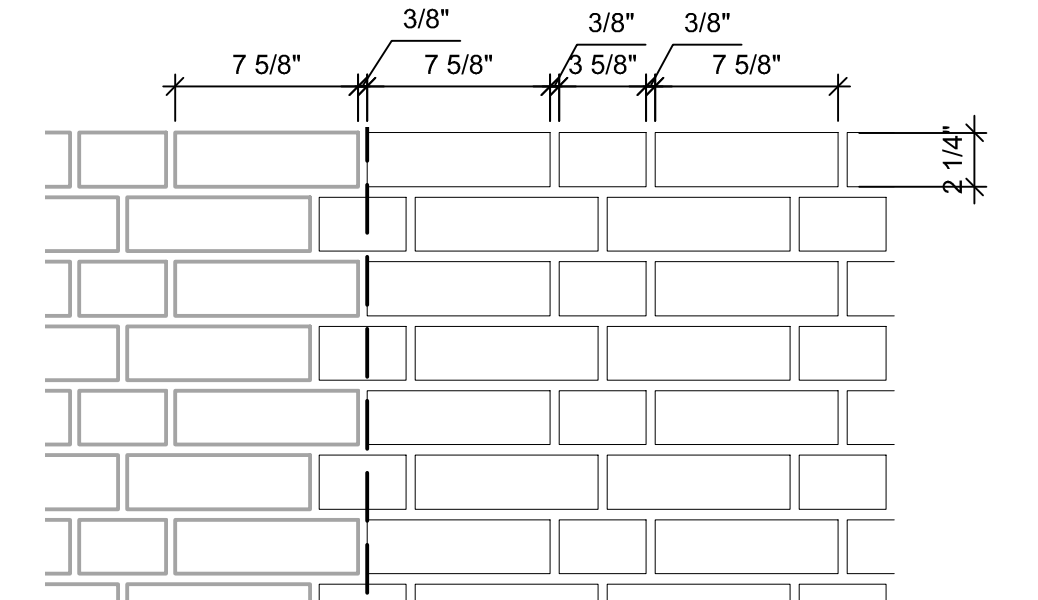


DEMOLITION NOTES:

1. CONTRACTOR SHALL REMOVE DOOR AND FRAME ALONG WITH SECTION OF MASONRY WALL AS SHOWN.
2. CONTRACTOR SHALL RELOCATE ANY ELECTRICAL SWITCHES, CONDUITS, LIGHTS AS REQUIRED. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

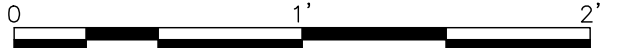
CONSTRUCTION NOTES:

1. REFER TO STRUCTURAL DRAWINGS FOR INSTALLATION OF NEW STEEL BEAM HEADER.



BRICK PATTERN

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



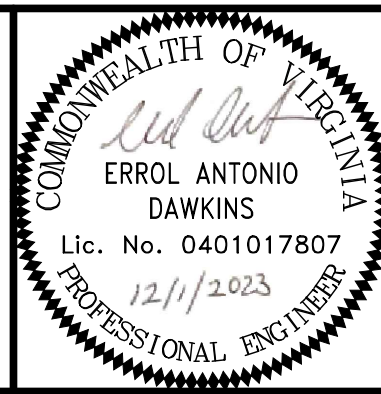
FAIRFAX WATER
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FAIRFAX, VA 22031

DESIGNED: G. BIONDI
DRAWN: D. MARTINS
CHECKED: E. DAWKINS

NO.	DATE	REVISION

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POPES HEAD PUMPING STATION
**ELECTRICAL UPGRADES
PLANS AND DETAILS**

FILE NAME: A02_PLANS_AND_DETAILS.DWG			
PROJECT	DIVISION	DATE	DEC 2023
P2722	003	DRAWING	A02
TAX MAP:		SHEET	14 of 25
067-2			

GENERAL

- STANDARD DETAILS SHOWN ON STRUCTURAL TYPICAL DRAWINGS SHALL BE USED WHEN REFERRED TO, WHEN OTHER DIFFERENT DETAILS ARE NOT SHOWN ON THE DRAWINGS, OR WHEN OTHER DETAILS ARE NOT AVAILABLE.
- NEW DESIGN IS IN ACCORDANCE WITH AND CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF 2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC), EXCEPT WHERE OTHER APPLICABLE CODES AND THE CONTRACT DOCUMENTS ARE MORE RESTRICTIVE.
- IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR REVIEW AND APPROVAL.
- ALL EXISTING DIMENSIONS INDICATED ARE TO BE VERIFIED EITHER BY FIELD MEASUREMENTS FOR EXISTING STRUCTURES OR BY SHOP DRAWINGS FOR EQUIPMENT FURNISHED. STRUCTURAL DIMENSIONS NOT SHOWN BUT CONTROLLED BY OR RELATED TO EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR WITH THE MANUFACTURER PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IN WRITING OF DEVIATIONS FROM WHAT IS SHOWN ON THE CONTRACT DRAWINGS.
- EQUIPMENT ANCHOR BOLT SIZES, TYPES AND PATTERNS SHALL BE AS REQUIRED BY APPROVED EQUIPMENT MANUFACTURER. ALL BOLT PATTERNS SHALL BE TEMPLATED TO ENSURE ACCURACY OF PLACEMENT.
- STRUCTURAL DRAWINGS SHALL BE USED IN COORDINATION WITH DRAWINGS OF ALL OTHER DISCIPLINES AND MANUFACTURER'S SHOP DRAWINGS.
- IF A CONFLICT IS FOUND BETWEEN DIFFERENT PORTIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY. CONTINUED CONSTRUCTION OF THE AREA IN CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK UNTIL THE CONFLICT IS RESOLVED BY THE OWNER.
- STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURE. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND TEMPORARY SUPPORTS WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR. OVERSTRESSING OF ANY STRUCTURAL ELEMENT IS PROHIBITED.
- DO NOT SCALE THESE DRAWINGS, USE DIMENSIONS.
- CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

DESIGN AND CODE INFORMATION

DESIGN LOADS: PER 2018 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (USBC)

- LIVE LOAD :**
LL = AS SHOWN ON THE DRAWINGS
- WIND LOAD :**
ULTIMATE WIND SPEED 118 MPH
WIND EXPOSURE CATEGORY C
BUILDING RISK CATEGORY III
- SEISMIC LOAD:**
SEISMIC IMPORTANCE FACTOR 1.25
SEISMIC OCCUPANCY RISK CATEGORY II
S_p=0.139
S_s=0.044
SITE CLASS D
SPECTRAL RESPONSE COEFFICIENTS S_{ps}=0.149
S_{pd}=0.071
SEISMIC DESIGN CATEGORY B
- SNOW LOAD:**
SNOW IMPORTANCE FACTOR 1.10
GROUND SNOW LOAD 25 PSF
- FOUNDATION DESIGN:**
ASSUMED ALLOWABLE SOIL BEARING CAPACITY 2000 PSF

THE CONTRACTOR SHALL RETAIN THE SERVICES OF A GEOTECHNICAL ENGINEER REGISTERED IN THE STATE OF VIRGINIA TO VERIFY THE SOIL BEARING CAPACITY AND CONSISTENCY WHEN THE FOUNDATION EXCAVATION HAS BEEN CARRIED DOWN TO THE PROPOSED ELEVATIONS. GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF VIRGINIA RETAINED BY THE CONTRACTOR SHALL PROVIDE A LETTER CERTIFYING SOIL BEARING CAPACITY AND SUBBASE REQUIREMENTS FOR THE PROPOSED STRUCTURES.

CAST-IN-PLACE CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO ACI 301, ACI 318, ACI 315, ACI 315R DETAILING MANUAL, AND AWS D1.4.
- MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:
ASTM C 33 - STANDARD SPECIFICATION FOR CONCRETE AGGREGATE
ASTM C 150 - STANDARD SPECIFICATION FOR PORTLAND CEMENT
ASTM C 260 - STANDARD SPECIFICATION FOR AIR-ENTRAINING ADMIXTURES FOR CONCRETE
ASTM C 309 - STANDARD SPECIFICATION FOR LIQUID MEMBRANE-FORMING COMPOUNDS FOR CURING CONCRETE
ASTM C 494 - STANDARD SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE
ASTM C 618 - STANDARD SPECIFICATION FOR COAL FLY ASH AND RAW OR CALCINATED NATURAL POZZOLAN FOR USE IN CONCRETE, CLASS F
- MINIMUM 28-DAY SPECIFIED COMPRESSIVE STRENGTH F'C REQUIREMENTS:
DESCRIPTION OF CONCRETE SLUMP
STRENGTH 4500 PSI
2 TO 4 INCHES BEFORE ADDING HIGH-RANGE WATER-REDUCING ADMIXTURE OR PLASTICIZING ADMIXTURE.
- CONCRETE MIX DESIGN: "CLASS A"
AIR ENTRAINMENT OF NOT LESS THAN OR EQUAL TO 3% AND NO GREATER THAN 5% OF THE VOLUME OF THE CONCRETE.
WATER CEMENT RATIO 0.42.
MATERIAL REQUIREMENTS:
PORTLAND CEMENT: ASTM C150, TYPE I/II OR ASTM C595, TYPE II (MS) WITH MAX HEAT OF HYDRATION PER ASTM 1702 SHALL BE 284.5 KJ/Kg AND MAXIMUM C3A SHALL BE 8%
AGGREGATES: ASTM C33.
FINE AGGREGATE: CLEAN, SHARP, NATURAL SILICA SAND FREE OF LOAM, CLAY, LUMPS, AND OTHER DELETERIOUS SUBSTANCES ARE UNACCEPTABLE. MANUFACTURED SAND IS NOT ALLOWED.
COARSE AGGREGATE: CLEAN, UNCOATED, PROCESSED AGGREGATE CONTAINING NO CLAY, MUD, LOAM, OR FOREIGN MATTER.
COARSE AGGREGATE SIZE: ASTM C33, NOS. 57, UNLESS OTHERWISE APPROVED BY ENGINEER.
FLY ASH : ASTM C618 , CLASS F
MAX CONTENT 20% BY WEIGHT.
WATER: CLEAN, POTABLE.
ADMIXTURES:
USE ONLY ADMIXTURES THAT HAVE BEEN TESTED AND APPROVED IN THE MIX DESIGNS. DO NOT USE CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CHLORIDE IONS.
- ALL CONCRETE IS NORMAL WEIGHT CONCRETE.
- ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL, CONFORMING TO ASTM A-615, DEFORMED GRADE 60 (F_y=60,000 PSI). DO NOT TACK WELD REINFORCING STEEL. SUPPORT REINFORCING STEEL 4'-0" ON CENTER..
- ALL BAR SPLICES SHALL BE CLASS "B" TENSION SPLICES PER TABLE ON THIS SHEET.
- CONCRETE COVER FOR REINFORCING:
SURFACES CAST AGAINST EARTH 3"
ALL OTHER SURFACES 2"
- THE CONTRACTOR SHALL INVESTIGATE ACTUAL LOCATIONS OF UNDERGROUND UTILITIES AND LINES BEFORE EXCAVATING AND ADVISE THE ENGINEER OF ANY VARIATIONS. ALL EXCAVATIONS NEAR THESE LINES MUST BE CARRIED OUT WITH EXTREME CAUTION.
- NON-SHRINK GROUT : PRE-MIXED COMPOUND CONSISTING OF NON-METALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICIZING AGENTS; CAPABLE OF DEVELOPING MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI IN 28 DAYS; MASTER BUILDERS MASTERFLOW 713, OR APPROVED EQUAL.

STRUCTURAL STEEL

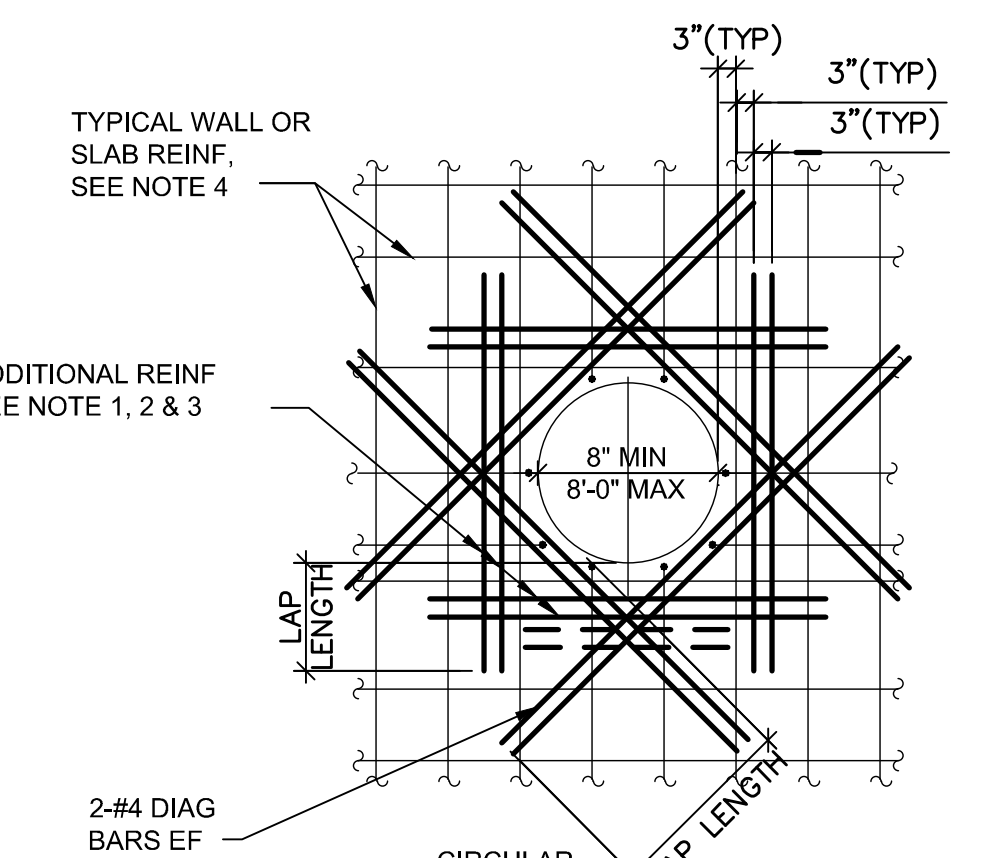
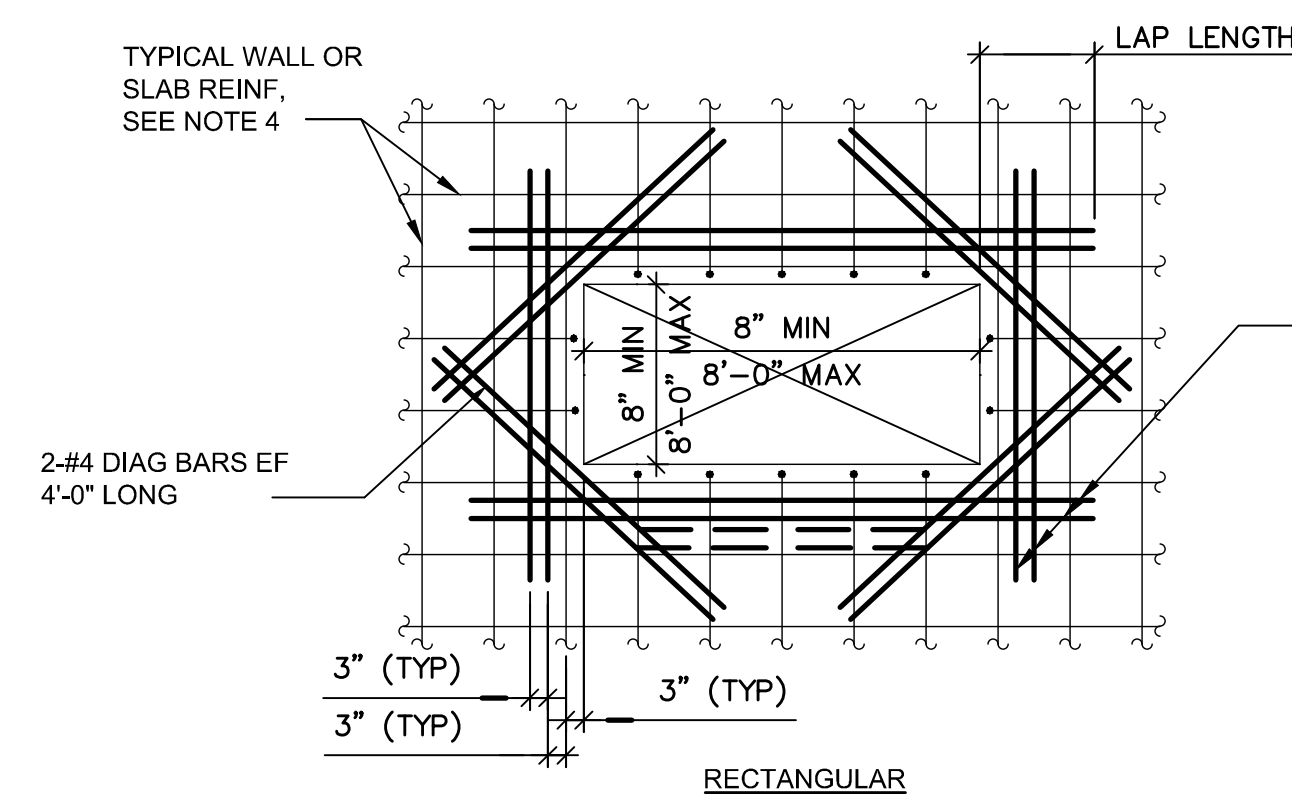
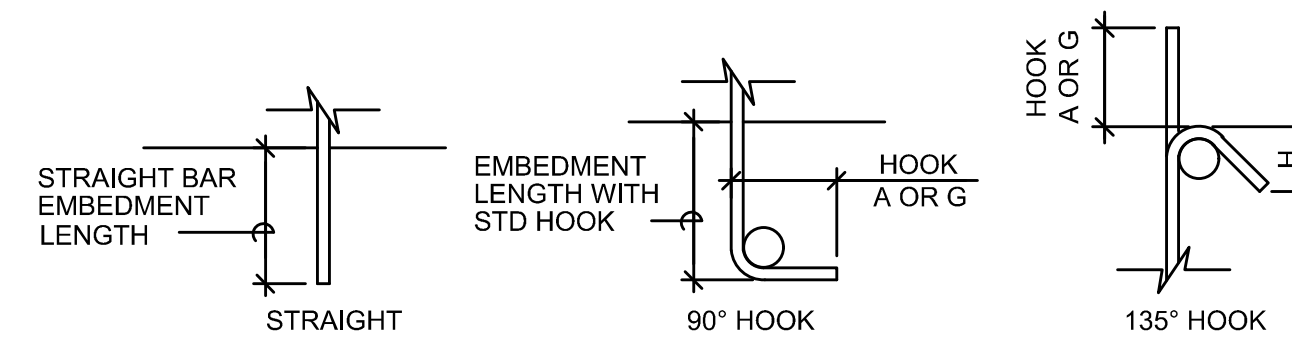
- DETAIL, FABRICATE, AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LATEST EDITION. WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1 "STRUCTURAL WELDING CODE", BY THE AMERICAN WELDING SOCIETY. ERECTION SHALL BE IN ACCORDANCE WITH OSHA 29 CFR 1026 - SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION.
- STEEL MATERIAL:
STEEL CHANNELS : ASTM A572 GRADE 50.
WIDE FLANGE BEAMS : ASTM A992.
STEEL ANGLES AND PLATES : ASTM A36
HOLLOW STRUCTURAL SHAPES (HSS) : ASTM A500 GRADE C
- ALL STEEL TO BE HOT DIPPED GALVANIZED.
- ALL GROOVE AND BUTT WELDS SHALL BE FULL PENETRATION UON.
- WELDING ELECTRODES SHALL BE AWS D1.1 E70XX.
- FILLET WELD SIZES SHALL BE THE MINIMUM SIZE REQUIRED BY AISC CODE FOR PLATE SIZES TO BE CONNECTED AND SHALL BE APPLIED TO THE ENTIRE JOINT CONTACT LENGTH, BUT NOT LESS THAN 3/16 INCH UNLESS NOTED OTHERWISE.
- PROVIDE SEAL WELDS AS REQUIRED FOR GALVANIZED STRUCTURAL STEEL.
- WHENEVER ONE MEMBER IS FASTENED TO ANOTHER WITH FASTENINGS (BOLTS, WELDS, ETC.) SET AT A UNIFORM SPACING, THERE SHALL BE A MINIMUM OF TWO FASTENINGS PER PIECE CONNECTED AND THE FIRST AND LAST FASTENINGS SHALL BE LOCATED NOT TO EXCEED 1/4 SPACE FROM EACH END.
- HIGH STRENGTH BOLTS SHALL BE ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX 3/4"Ø MECHANICALLY GALVANIZED ACCORDING TO ASTM B695 CLASS 55, UON.
- ANCHOR RODS SHALL BE ASTM F1554 GRADE 55 WELDABLE HOT DIP GALVANIZED, UON.

ABBREVIATIONS

ARCH.	- ARCHITECT OR ARCHITECTURAL
ASTM	- AMERICAN SOCIETY FOR TESTING MATERIALS
COL.	- COLUMN
CTR.	- CENTER
CONC.	- CONCRETE
DIA.	- DIAMETER
EL.	- ELEVATION
EMBD.	- EMBEDDED
LLH	- LONG LEG HORIZONTAL
LLV	- LONG LEG VERTICAL
MAX.	- MAXIMUM
MIN.	- MINIMUM
MO	- MASONRY OPENING
RO	- ROUGH OPENING
STD.	- STANDARD
STL.	- STEEL
STR.	- STRUCTURAL
T/	- TOP OF
T&B	- TOP AND BOTTOM
THK.	- THICK
TYP.	- TYPICAL
UON	- UNLESS OTHERWISE NOTED
VERT.	- VERTICAL
W/	- WITH
W/O	- WITHOUT

LAP SPLICE AND EMBEDMENT LENGTH TABLE

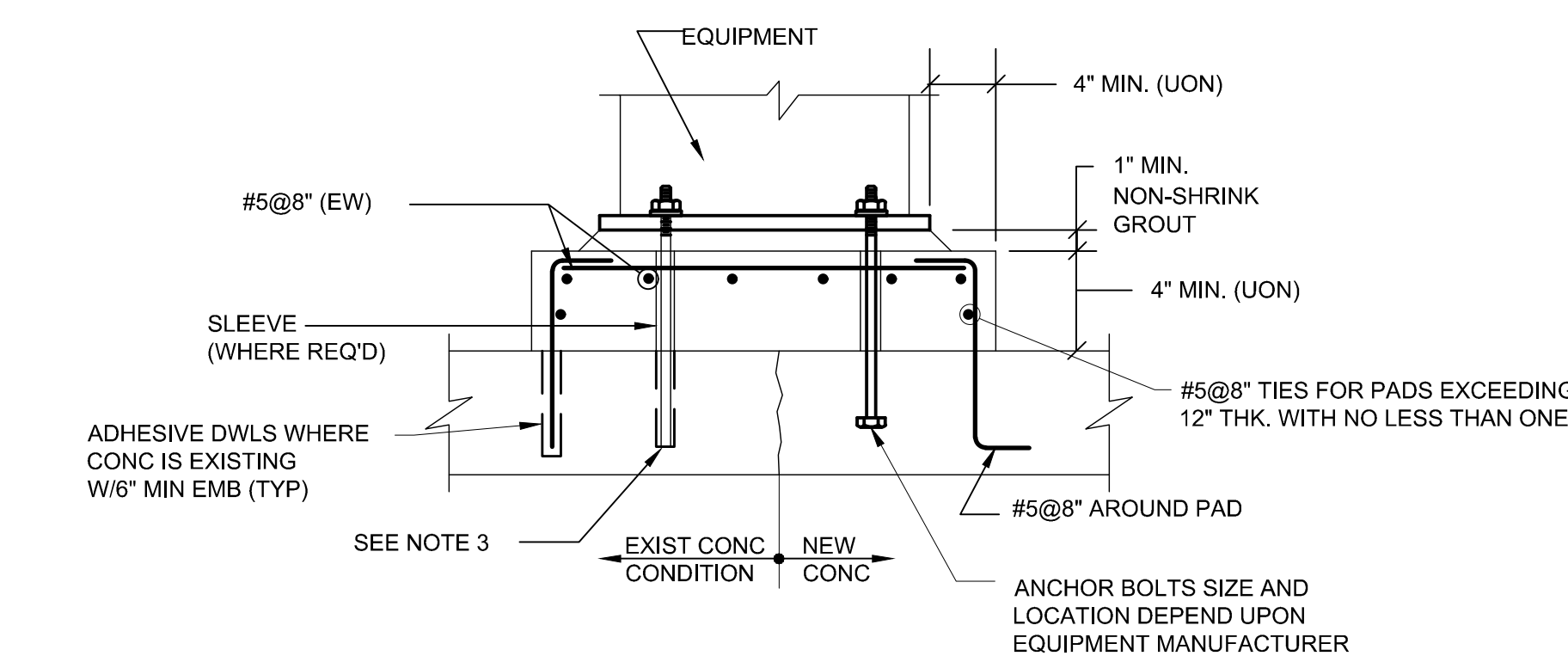
BAR SIZE	REINFORCEMENT LAP SPLICE, EMBEDMENT LENGTH AND STANDARD HOOKS (INCHES)												
	MIN LAP LENGTHS FOR					MIN EMBEDMENT LENGTHS					MIN STD. HOOKS		
	BEAMS AND COLUMNS*		SLABS AND WALLS**			FOR BEAMS AND COLUMNS*		FOR SLABS AND WALLS**			WITH STD HOOKS		
	CLASS B	OTHERS	TOP***	OTHERS	TOP***	OTHERS	TOP***	OTHERS	TOP***	OTHERS	A	G	H
#3	25	19	16	16	19	15	12	12	5	6	2.5		
#4	33	25	20	16	25	19	15	12	7	8	3		
#5	41	31	25	19	31	24	19	15	9	10	3.75		
#6	49	37	29	23	37	29	23	18	10	12	4.5		
#7	71	54	43	33	54	42	33	25	12	14	5.25		
#8	81	62	49	37	62	48	37	29	14	16	6		
#9	91	70	60	46	70	54	46	36	15	19	-		
#10	102	79	74	57	79	61	57	44	17	22	-		
#11	114	87	89	69	87	67	68	53	19	24	-		



REINFORCING AROUND OPENING IN WALL AND SLAB

NOTES:

- PROVIDE ADDITIONAL REINFORCEMENT AT EACH SIDE OF ALL OPENINGS, ACCESS HATCHES, PIPE PENETRATIONS, ETC. EQUAL IN AREA TO 1/2 OR MORE THE AREA OF REINFORCEMENT CUT BY OPENING IN EACH DIRECTION. ADDITIONAL REINFORCEMENT TO MATCH SIZE OF TYPICAL REINFORCEMENT (MIN. 2 BARS ES AND EF) AND PLACED BETWEEN TYPICAL REINFORCEMENT @3" SPACING ON EACH SIDE OF OPENING. IF A WALL OR BEAM IS ADJACENT TO THE OPENING, THE ADDITIONAL REINFORCEMENT ON THAT SIDE OF THE OPENING CAN BE OMITTED.
- ANY OPENING 6" OR LESS TO AN ADJACENT WALL DOES NOT REQUIRE ADDITIONAL REINFORCEMENT AT THAT SIDE OF OPENING.
- PROVIDE MATCHING DOWELS WHERE REQUIRED TO PROVIDE CLASS "B" LAP WITH ADDITIONAL REINFORCEMENT. (WHERE LAPPING OF ADDITIONAL REINFORCEMENT FROM ADJACENT OPENINGS OCCUR, ADDITIONAL REINFORCEMENT SHALL BE COMBINED).
- PROVIDE STANDARD HOOK AT END OF ALL BARS TERMINATING AT OPENING.
- DO NOT WELD REINFORCEMENT TO PIPE SLEEVES OR INSERTS.



TYPICAL EQUIPMENT SUPPORT PAD DETAIL

NOTES:

- PROVIDE TYP. 4" MINIMUM CONCRETE SUPPORT PAD FOR ALL EQUIPMENT UNLESS OTHERWISE NOTED.
- COORDINATE LOCATION AND SIZE OF PADS WITH OTHER DRAWINGS AND MANUFACTURER'S CERTIFIED DRAWINGS.
- FOR EXISTING SLABS, DRILL HOLE DIAMETER AND DEPTH IN EXISTING SLAB PER EQUIPMENT MANUFACTURER'S REQUIREMENTS FOR ADHESIVE ANCHORAGE SYSTEM USED.
- SEE ELECTRICAL SHEETS FOR OTHER SPECIFIC ELECTRICAL EQUIPMENT PAD REQUIREMENTS AND EMBEDDED ITEMS.

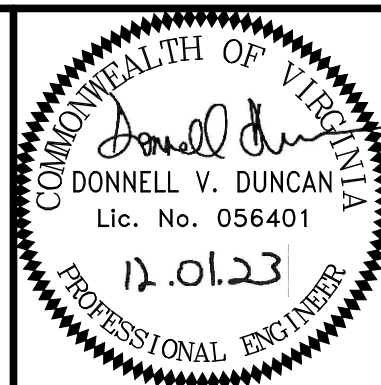
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FAIRFAX WATER
PLANNING & ENGINEERING DIVISION
8560 ARLINGTON BOULEVARD
FAIRFAX, VA 22031

DESIGNED: H.HOBI
DRAWN: S.DANDANE
CHECKED: D.DUNCAN

NO.	DATE	REVISION

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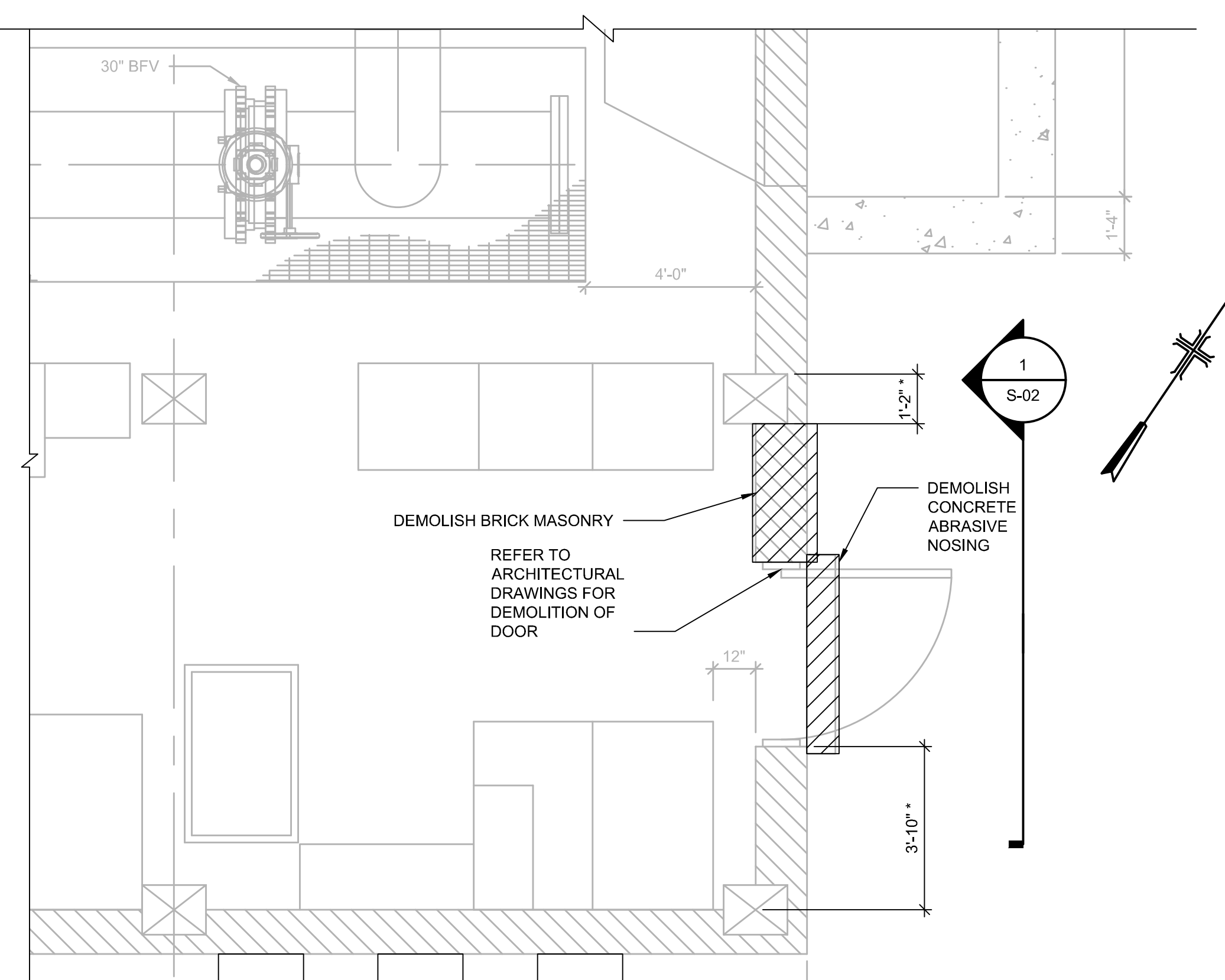


POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
GENERAL NOTES AND TYPICAL DETAILS

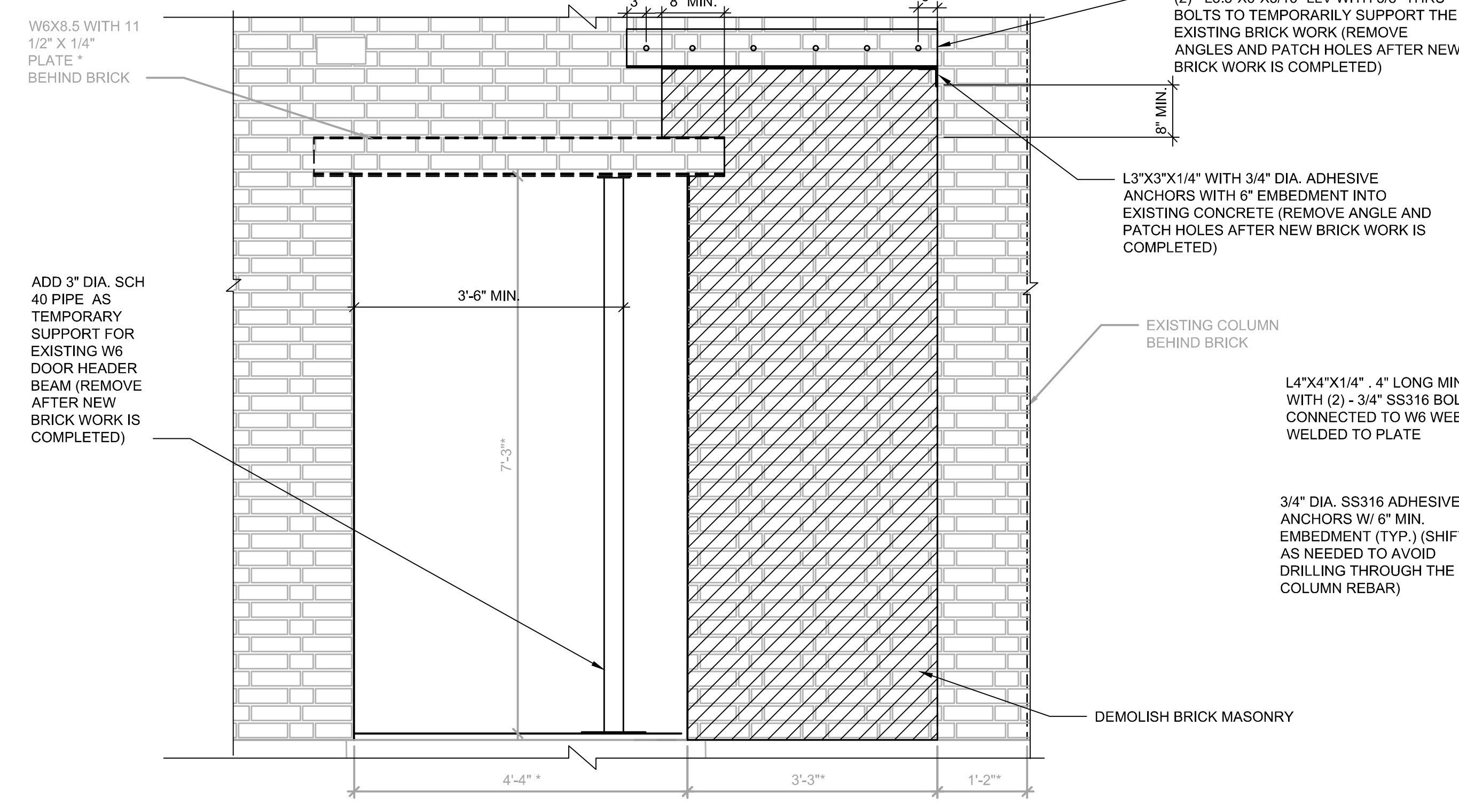
FILE NAME:	S01_GEN_NOTES_AND_TYP_DETAILS.DWG		
PROJECT:	P2722	DIVISION:	003
DATE:	DEC 2023		
TAX MAP:	067-2	DRAWING:	S01
		SHEET:	15 of 25



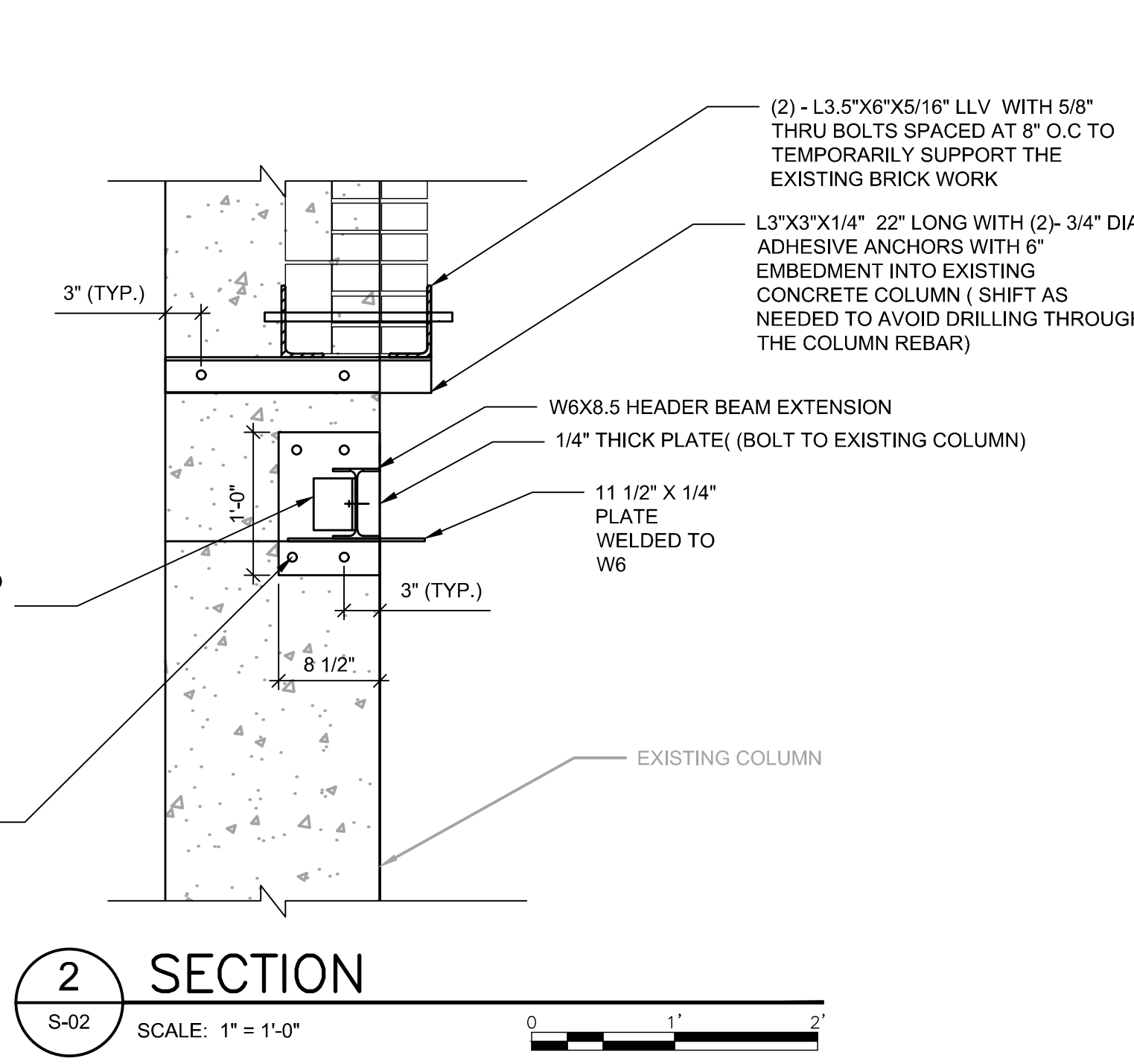
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ELECTRICAL ROOM DEMOLITION PLAN
SCALE: 3/8" = 1'-0"



1 ELECTRICAL ROOM DEMOLITION ELEVATION
SCALE: 3/8" = 1'-0"



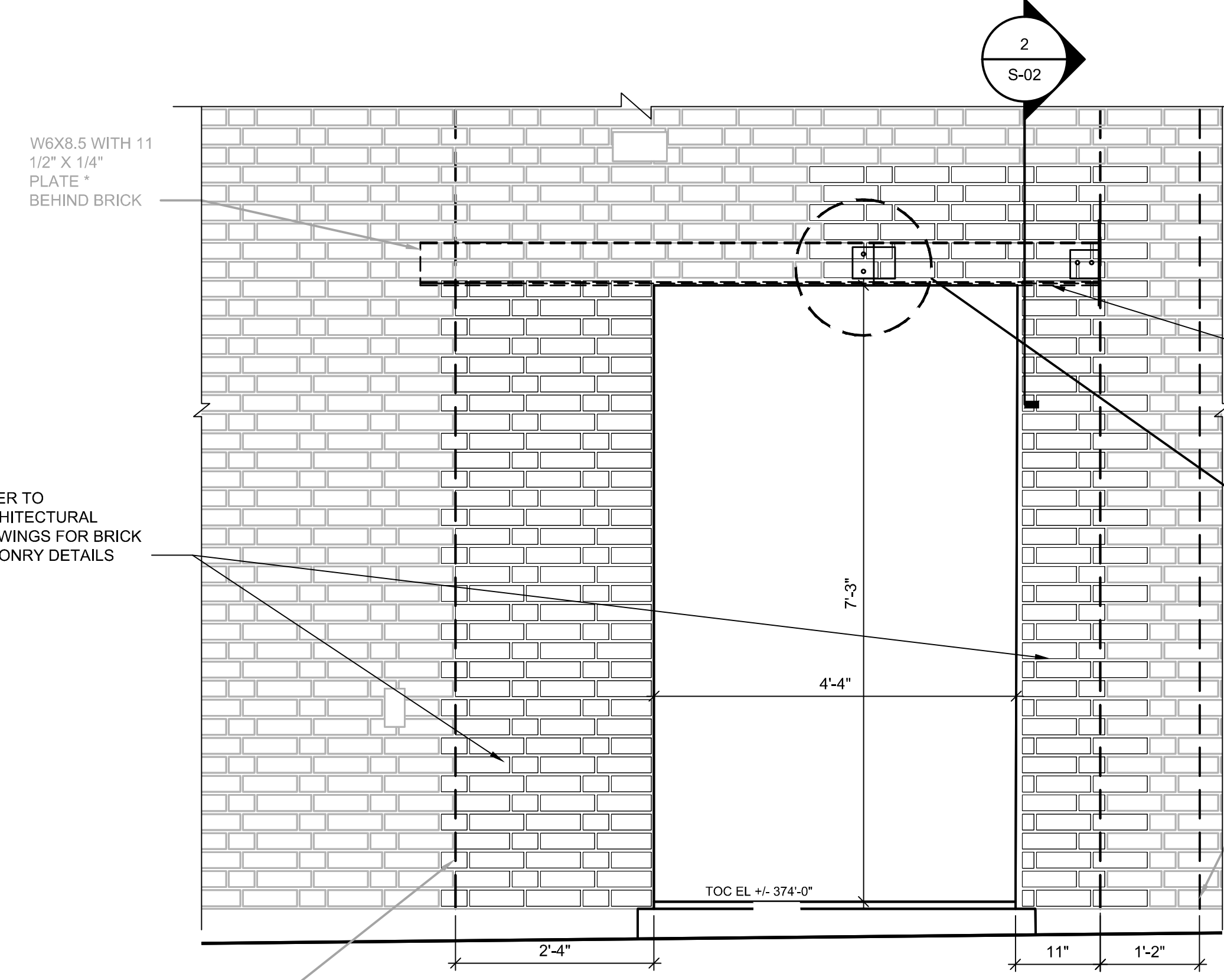
2 SECTION
SCALE: 1" = 1'-0"

CONSTRUCTION SEQUENCE NOTES:

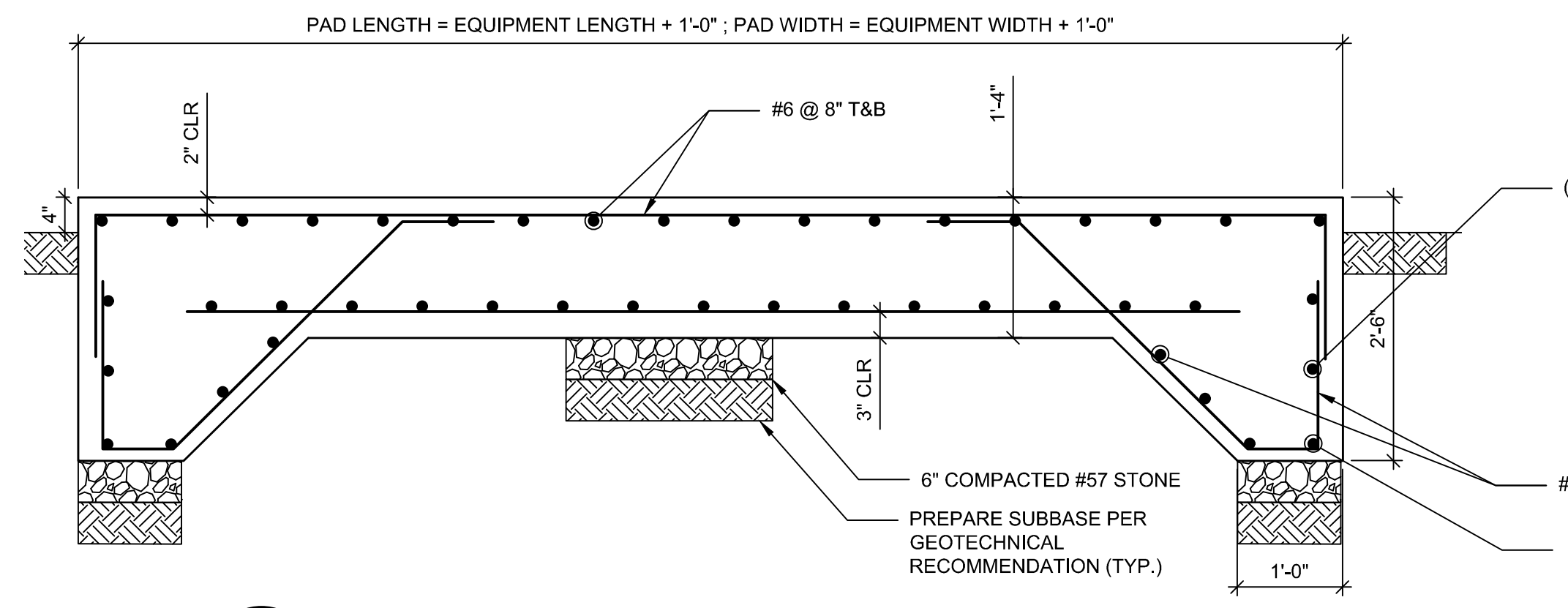
1. REMOVE EXISTING DOOR.
2. REMOVE EXISTING DOOR FRAME
3. TEMPORARILY SUPPORT THE EXISTING W6 (HEADER BEAM) AS SHOWN IN THE DEMOLITION ELEVATION.
4. ADD THE NEW L3"x3"x1/4" SUPPORT ANGLE TO THE COLUMN AS SHOWN IN THE PROPOSED ELEVATION.
5. ADD THE TWO L3.5"x6"x5/16" LLV WITH 5/8" DIA. THROUGH BOLTS, AS SHOWN WITH 8" MIN. BEARING, TO TEMPORARILY SUPPORT THE BRICK MASONRY ABOVE.
6. DEMOLISH THE EXISTING MASONRY AS INDICATED.
7. BOLT THE NEW HEADER BEAM SUPPORT PLATE TO THE EXISTING COLUMN AS SHOWN ON THE PROPOSED ELEVATION.
8. BOLT THE NEW HEADER BEAM TO THE PLATE AT THE COLUMN AND TO THE END OF THE EXISTING HEADER BEAM.
9. WELD THE NEW HEADER BEAM TO THE EXISTING HEADER BEAM AS SHOWN.
10. BUILD BACK THE NEW BRICK MASONRY. REFER TO ARCHITECTURAL DRAWINGS.

GENERAL NOTES:

1. ALL STRUCTURAL STEEL SHALL BE PAINTED STEEL.
2. FIELD VERIFY ALL THE DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURE.
3. IT IS ASSUMED THAT THE EXISTING STRUCTURE IS IN GOOD CONDITION, IF THE CONTRACTOR OBSERVES ANY DEFICIENCIES NOTIFY ENGINEER.
4. ANCHORAGE OF ELECTRICAL EQUIPMENT IS THE RESPONSIBILITY OF THE EQUIPMENT MANUFACTURER. PROVIDE ANCHORAGE DESIGN CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF VIRGINIA.

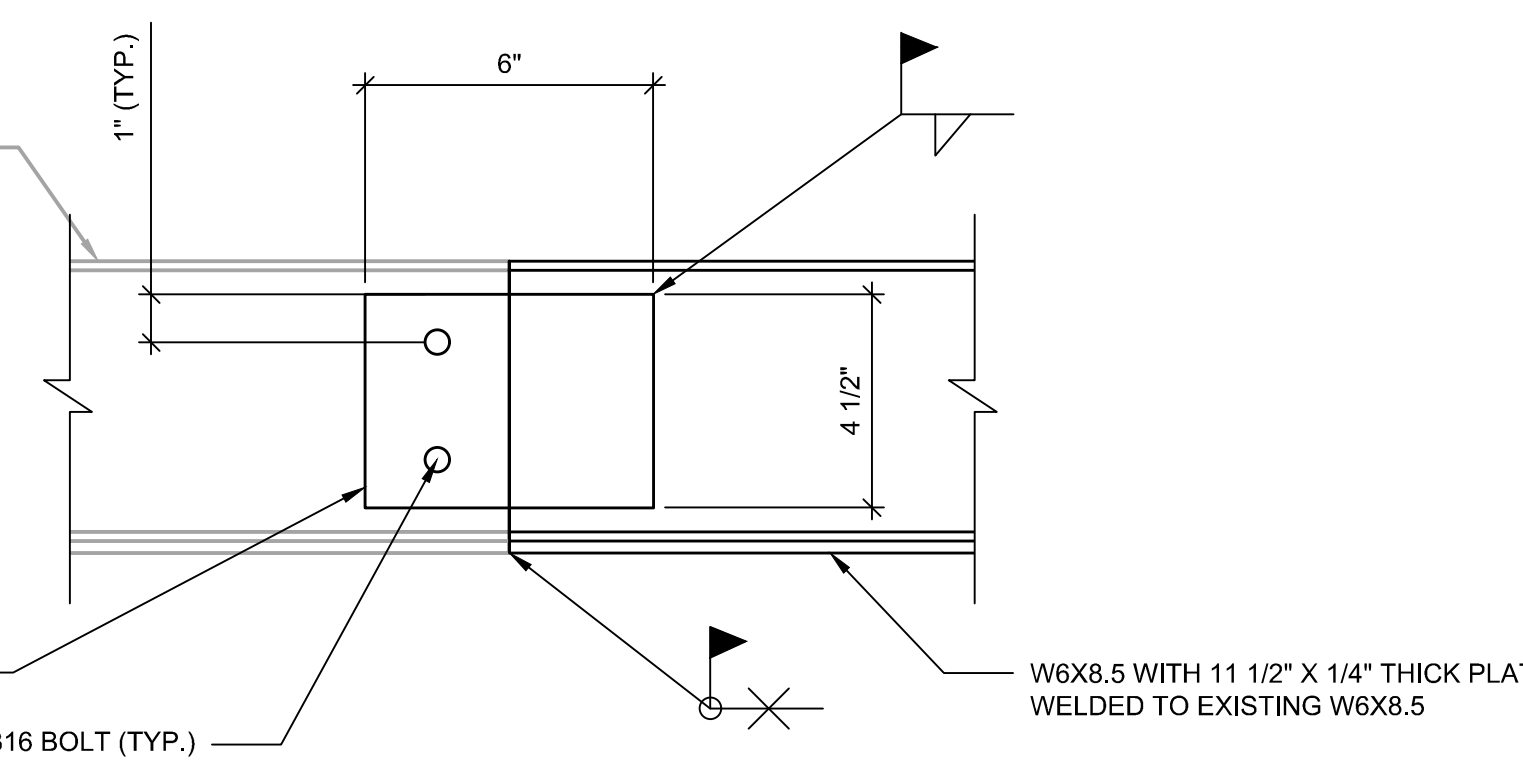


ELECTRICAL ROOM PROPOSED ELEVATION
SCALE: 3/8" = 1'-0"

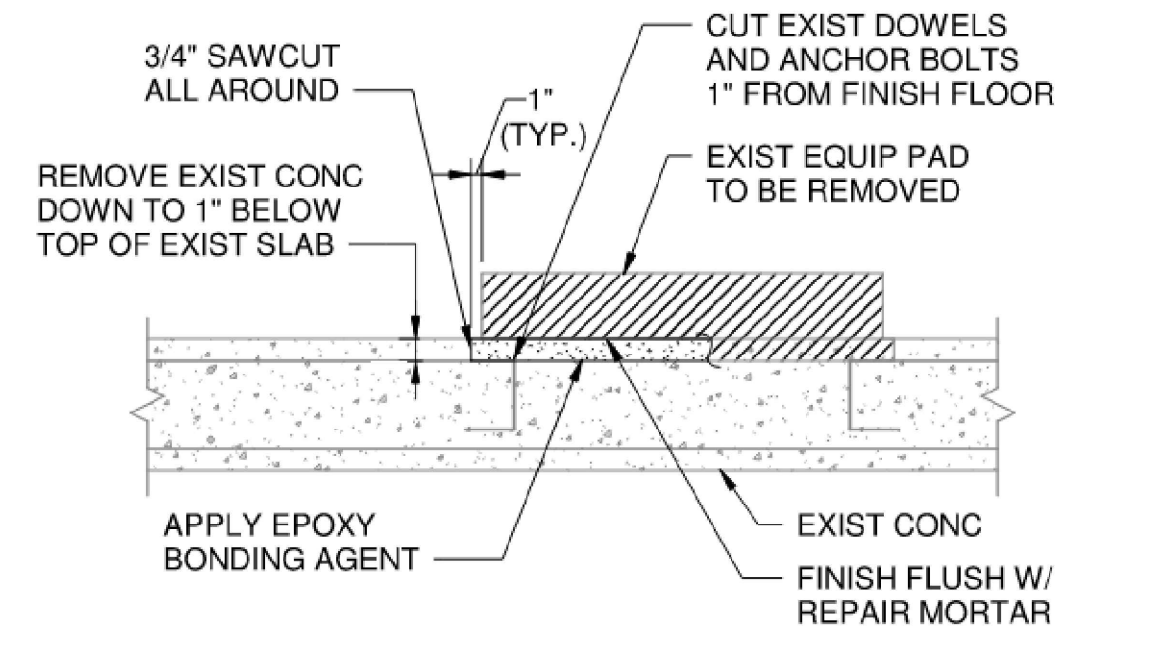


4 OUTDOOR EQUIPMENT PAD DETAIL
SCALE: 3/4" = 1'-0"

- NOTES:**
1. REFER TO OTHER DISCIPLINE DRAWINGS FOR LOCATION OF THE OUTDOOR PAD.
 2. PROVIDE ADDITIONAL REINFORCEMENT AROUND OPENINGS PER TYPICAL DETAILS.
 3. REFER TO SHEET S01 FOR FOUNDATION NOTES.
 4. DESIGN LIVE LOAD : 300 PSF



3 DETAIL
SCALE: 3" = 1'-0"



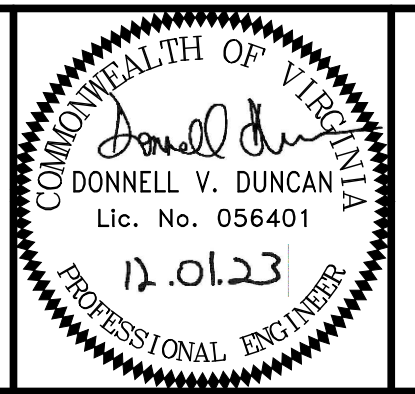
EXISTING EQUIPMENT PAD REMOVAL DETAIL

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PLANNING & ENGINEERING DIVISION
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FAIRFAX, VA 22031

DESIGNED: H.HOBI
DRAWN: S.DANDANE
CHECKED: D.DUNCAN

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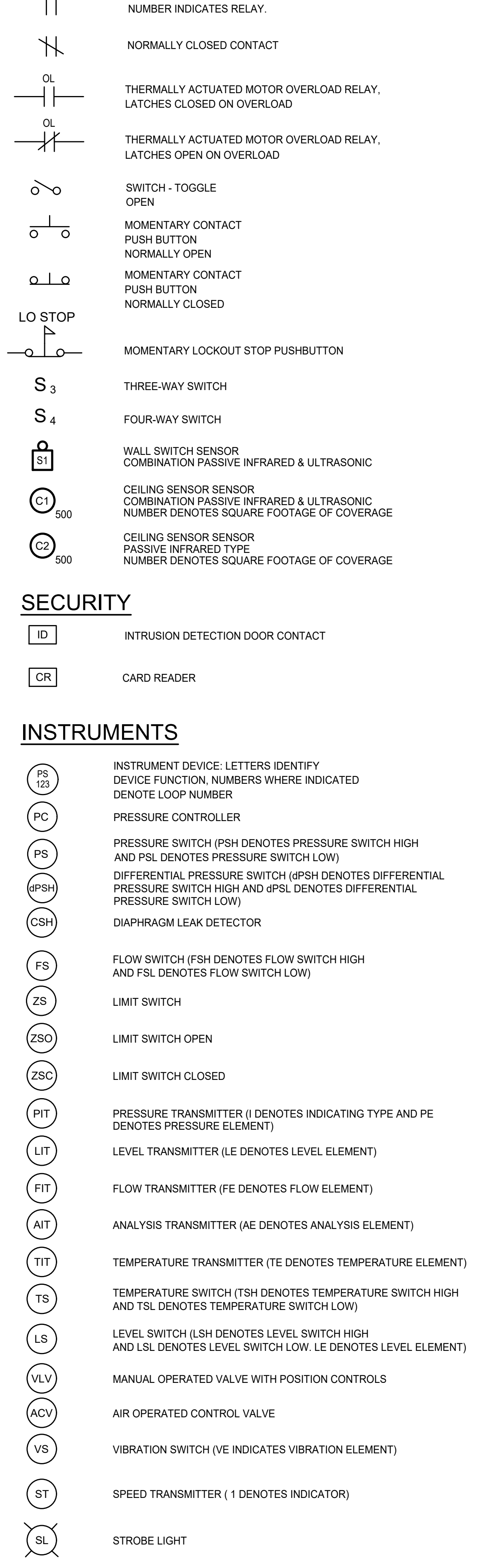
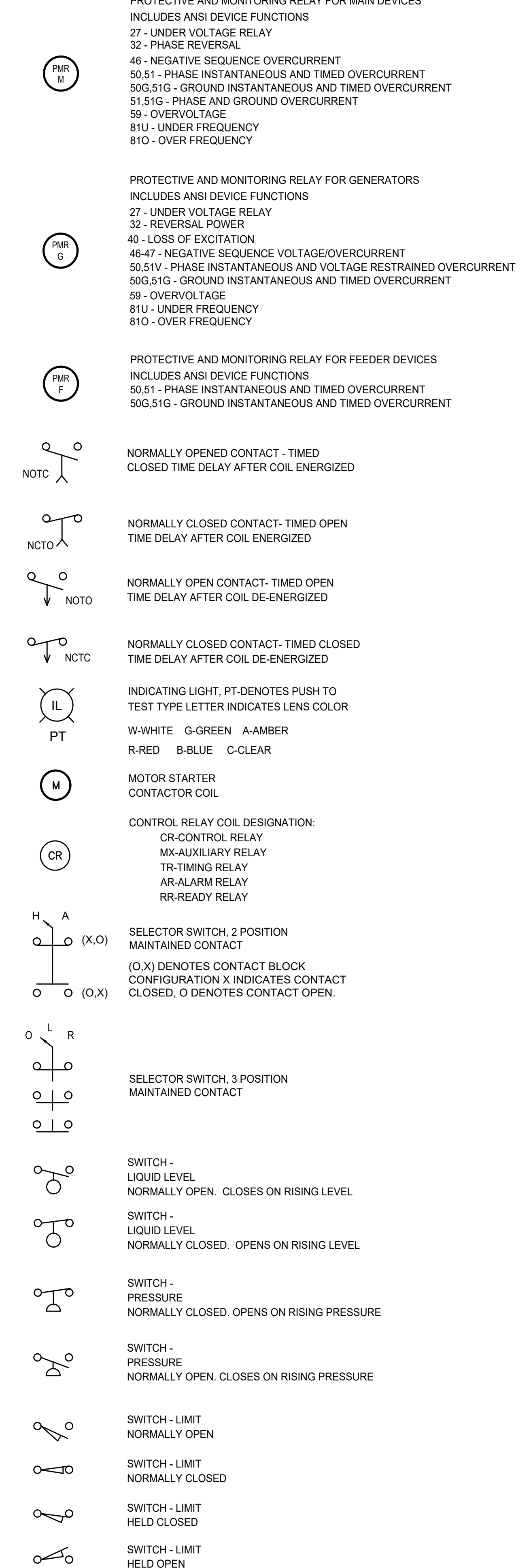
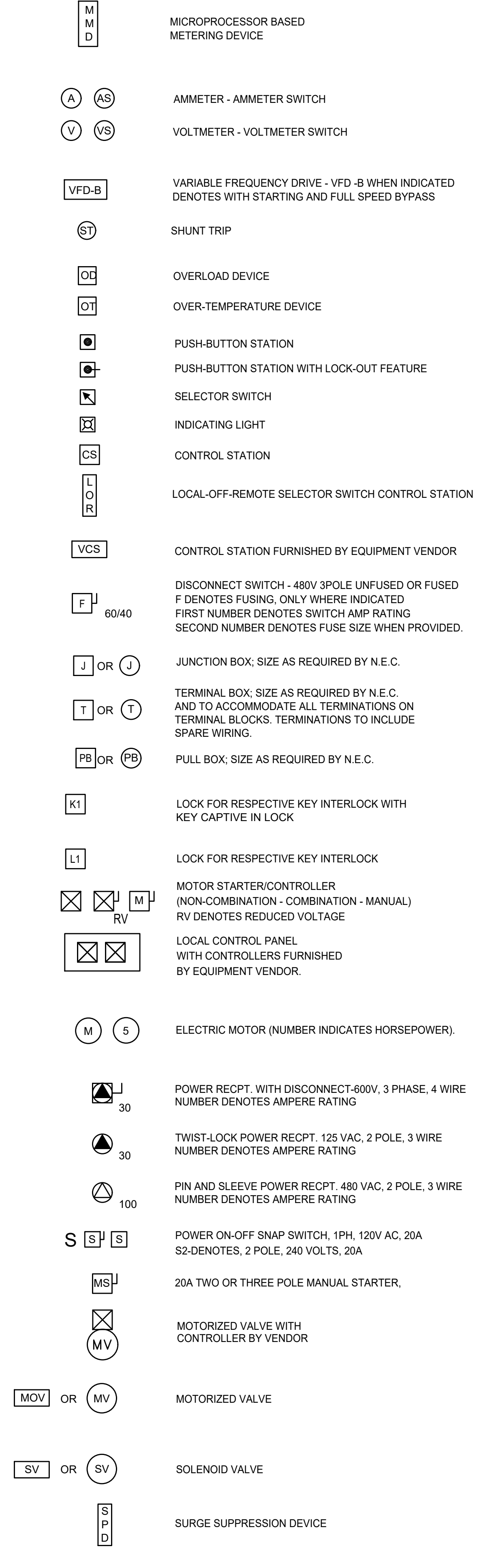
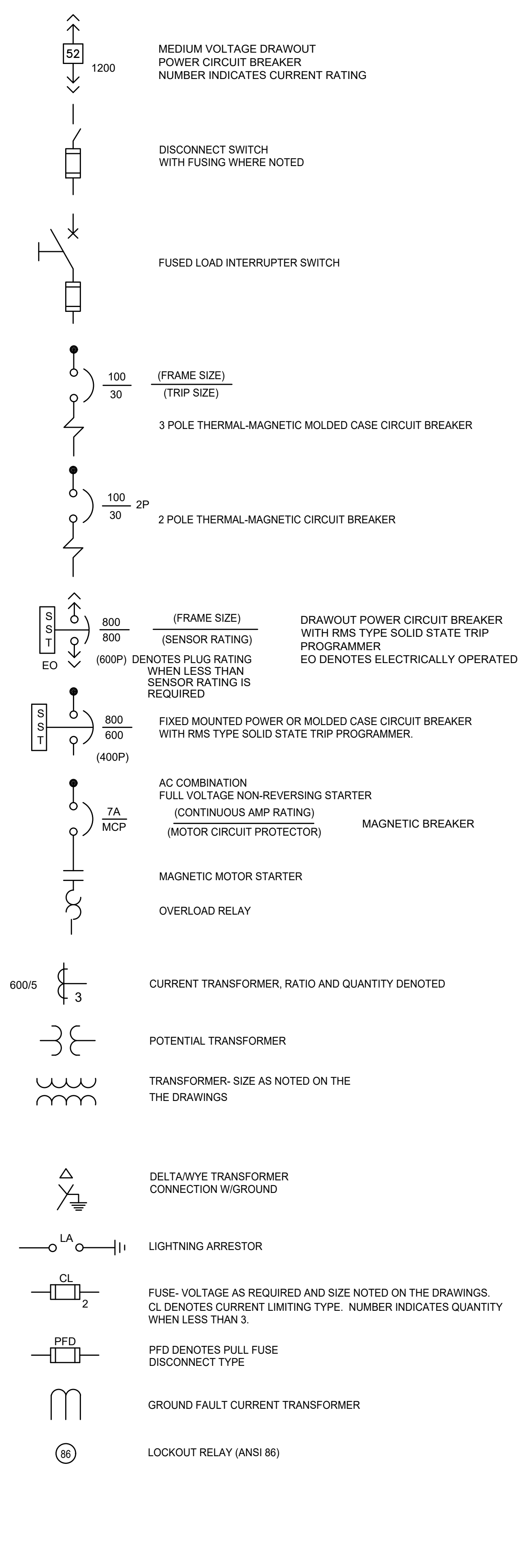


POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
ELECTRICAL ROOM PROPOSED WORK
PLAN AND SECTIONS

FILE NAME: S02_ELEC_ROOM_PLAN_AND_SECTIONS.DWG	PROJECT: P2722	DIVISION: 003	DATE: DEC 2023
TAX MAP: 067-2	DRAWING: S02	SHEET: 16 of 25	



DIAGRAMS



GENERAL NOTES

- THE SYMBOLS AND ABBREVIATIONS LISTED ON THIS SHEET REPRESENT A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS. THEREFORE, NOT ALL OF THE SYMBOLS AND ABBREVIATIONS CONTAINED ON THESE SHEETS ARE NECESSARILY USED ON THIS PARTICULAR CONTRACT.
- SEE SECTION 01140, LIMITATION ON SEQUENCE OF CONSTRUCTION, FOR WORK SCHEDULE REQUIREMENTS.

CONDUITS

- INDICATES NEW EQUIPMENT/EXPOSED CONDUIT
- INDICATES EXISTING EQUIPMENT/CONDUIT
- INDICATES CONCEALED EQUIPMENT/CONDUIT
- INDICATES UNDERGROUND ELECTRICAL SEE PLANS FOR DUCT BANK OR DIRECT BURIED CONDUIT DETAILS
- CONDUIT TURNING DOWN
- CONDUIT TURNING UP
- CONDUIT CAPPED

GROUNDING

- GROUND ROD
- GROUND TEST POINT
- GROUND GRID CABLE CONNECTION
- GROUND
- #4/0 GROUND CABLE BURIED 2'-6" BELOW GRADE UNLESS NOTED OTHERWISE

CONDUIT AND WIRE CODES

AA	2-#14, 1-#14 GND, 3/4"C
AB	3-#14, 1-#14 GND, 3/4"C
AC	4-#14, 1-#14 GND, 3/4"C
AD	5-#14, 1-#14 GND, 3/4"C
AE	6-#14, 1-#14 GND, 3/4"C
AF	7-#14, 1-#14 GND, 3/4"C
AG	8-#14, 1-#14 GND, 3/4"C
AH	9-#14, 1-#14 GND, 3/4"C
BA	2-#12, 1-#12 GND, 3/4"C
BB	3-#12, 1-#12 GND, 3/4"C
CA	2-#10, 1-#10 GND, 3/4"C
CB	3-#10, 1-#10 GND, 3/4"C
DA	2-#8, 1-#10 GND, 3/4"C
DB	3-#8, 1-#10 GND, 1"C
EB	3-#6, 1-#10 GND, 1"C
FB	3-#2, 1-#6 GND, 1-1/2"C

ABBREVIATIONS

ATS	AUTOMATIC TRANSFER SWITCH
C	CONDUIT
DI	DIGITAL INPUT
E-STOP	EMERGENCY STOP
ESP	ECHOSMART POWER SUPPLY
FE	FLOW ELEMENT
FO	FIBER OPTIC
FOC	FIBER OPTIC CABLE
MB	MODBUS RTU
MSH	MOTOR SPACE HEATER
RVSS	REDUCED VOLTAGE SOFT STARTER
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TYP	TYPICAL

AREA CLASSIFICATIONS

SPACE	ELECTRICAL AREA DESIGN	NEC HAZARD CLASSIFICATION
INDOOR AREAS	DUSTY	UNCLASSIFIED
OUTDOOR AREAS	WET AND CORROSIVE	UNCLASSIFIED

* NEMA 1G (GASKETED) RVSSs ARE PERMITTED IN THE PUMP STATION.

User: TOURTEL0T Spec: AUS-NC5300D File: C:\USERS\TOURTEL0T\ARCADIS\FAIRFAX WATER - POPES HEAD FS UPGRADE - 7.0 CAD FILES\SHEETS\ELECTRICAL\LEGEND_AND_NOTES.DWG Scale: 1:1 Sheet: 0114 Date: 8/23/2024 Time: 14:14 Plot Date: Tourtel0t_John: 8/23/2024 14:27 Layout: 17

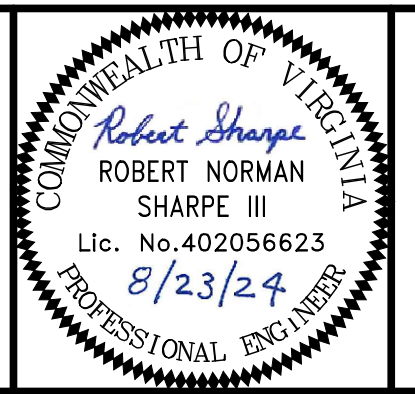
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PLANNING & ENGINEERING DIVISION
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FAIRFAX, VA 22031

DESIGNED: R. SHARPE
DRAWN: A.CANNON
CHECKED: G. MOORE

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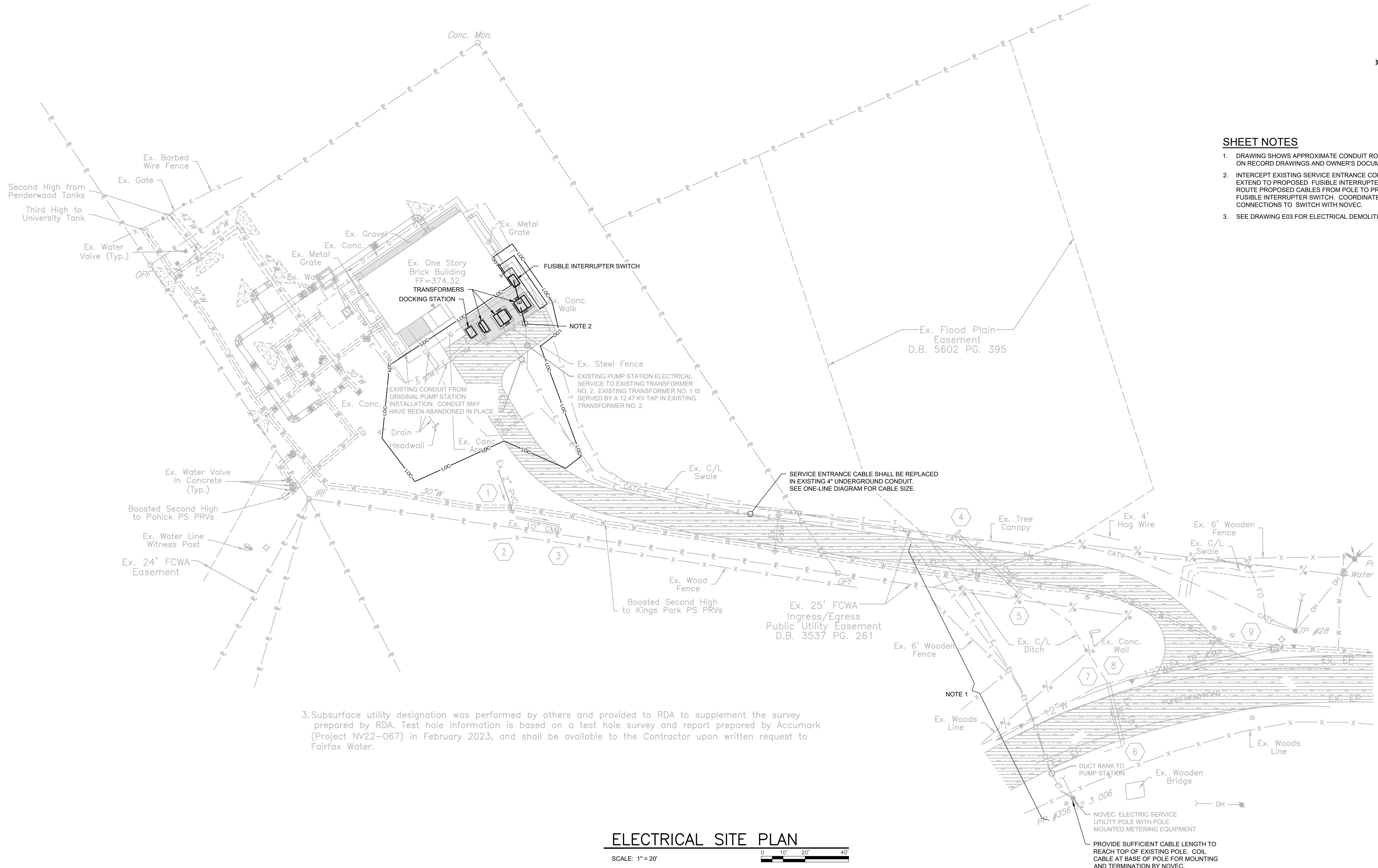
POPES HEAD PUMPING STATION
**ELECTRICAL UPGRADES
ELECTRICAL LEGEND,
ABBREVIATIONS, AND NOTES**

FILE NAME: E01_LEGEND_ABBREV_AND_NOTES.DWG			
PROJECT	DIVISION	DATE:	AUG 2024
P2722	003	DRAWING	E01
TAX MAP:		SHEET	17 of 25
067-2			



SHEET NOTES

1. DRAWING SHOWS APPROXIMATE CONDUIT ROUTING BASED ON RECORD DRAWINGS AND OWNER'S DOCUMENTATION.
2. INTERCEPT EXISTING SERVICE ENTRANCE CONDUIT AND EXTEND TO PROPOSED FUSIBLE INTERRUPTER SWITCH. ROUTE PROPOSED CABLES FROM POLE TO PROPOSED FUSIBLE INTERRUPTER SWITCH. COORDINATE CONNECTIONS TO SWITCH WITH NOVEC.
3. SEE DRAWING E03 FOR ELECTRICAL DEMOLITION.



3. Subsurface utility designation was performed by others and provided to RDA to supplement the survey prepared by RDA. Test hole information is based on a test hole survey and report prepared by Accumark (Project NV22-067) in February 2023, and shall be available to the Contractor upon written request to Fairfax Water.

ELECTRICAL SITE PLAN
SCALE: 1" = 20'



NOVEC ELECTRIC SERVICE UTILITY POLE WITH POLE MOUNTED METERING EQUIPMENT
PROVIDE SUFFICIENT CABLE LENGTH TO REACH TOP OF EXISTING POLE. COIL CABLE AT BASE OF POLE FOR MOUNTING AND TERMINATION BY NOVEC.

User: TOURTEL01; Spc: AUS-NC5MOD; File: C:\USERS\TOURTEL01\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - 7.0 CAD FILES\SHEETS\ELECTRICAL\DESIGN\ELECTRICAL\SITE_PLAN\DWG Scale: 1:1; SavedDate: 8/23/2024; Time: 14:14; Plot Date: Tourtel01; John; 8/23/2024; 14:27; Layout: 18

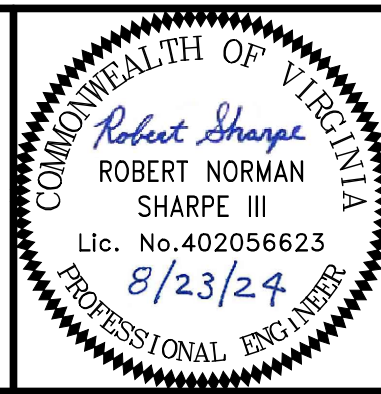
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FAIRFAX, VA 22031

DESIGNED: R. SHARPE
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CHECKED: G. MOORE

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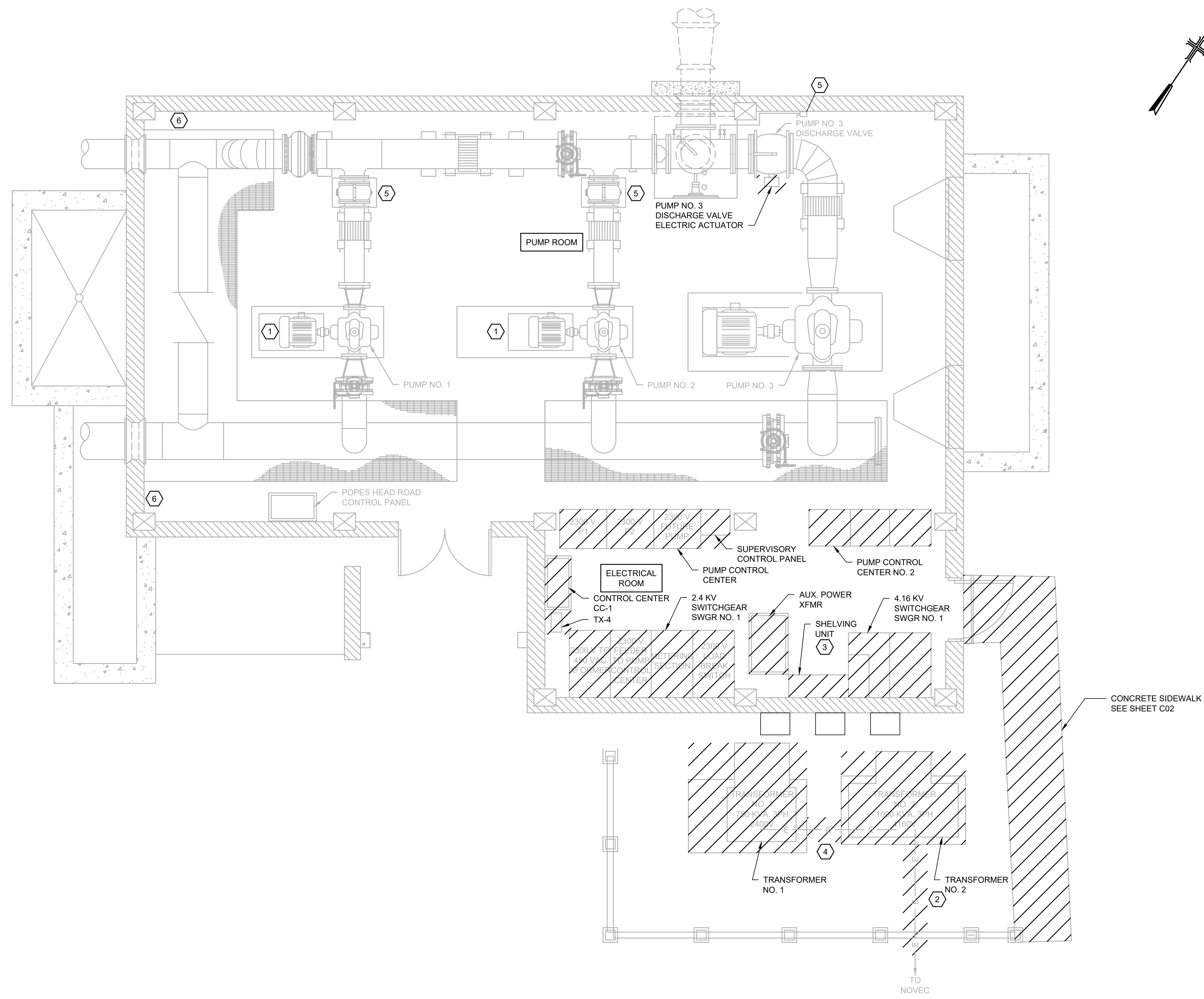
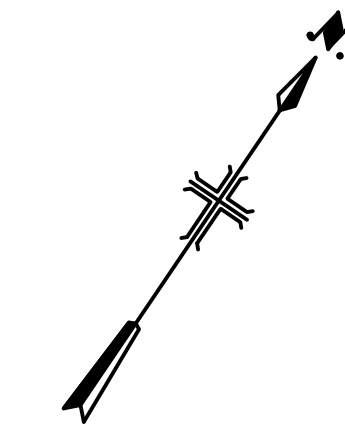
POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
ELECTRICAL SITE PLAN

FILE NAME:	E02_ELECTRICAL_SITE_PLAN.DWG		
PROJECT:	P2722	DIVISION:	003
DATE:	AUG 2024		
DRAWING:	E02		
TAX MAP:	067-2	SHEET:	18 of 25

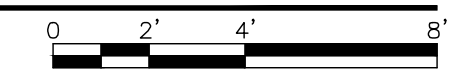


SHEET KEYNOTES

1. EXISTING MOTORS WILL BE REWOUND FOR 4160 VAC OPERATION.
2. DEMOLISH EXISTING DUCT BANK FROM TRANSFORMER TO FENCE AND REROUTE TO PROPOSED FUSED INTERRUPTER SWITCH.
3. RELOCATE SHELVING UNIT TO AREA OF DEMOLISHED 2.4 KV SWITCHGEAR (SWGR NO. 1) AT END OF PROJECT.
4. CONDUIT BETWEEN TRANSFORMER NO. 1 AND TRANSFORMER NO. 2 CAN BE ABANDONED IN PLACE. REMOVE ALL CABLES.
5. DEMOLISH EXISTING PRESSURE DIFFERENTIAL SWITCH AT THIS LOCATION. SWITCH SHALL BE REPLACED.
6. DEMOLISH EXISTING PRESSURE INDICATING TRANSMITTER AND PRESSURE SWITCH AT THIS LOCATION. TRANSMITTER AND SWITCH SHALL BE REPLACED.



PUMP STATION DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



User: TOURTEL01; Spc: AUS-NSMOD; File: C:\USERS\TOURTEL01\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - 7.0 CAD FLESSHETS\ELECTRICAL DESIGN\ELECTRICAL\E03_PUMP_STATION_DEMO_PLAN.DWG; Scale: 1/4" = 1'-0"; Plot Date: 8/23/2024; 14:27; Layout: 19

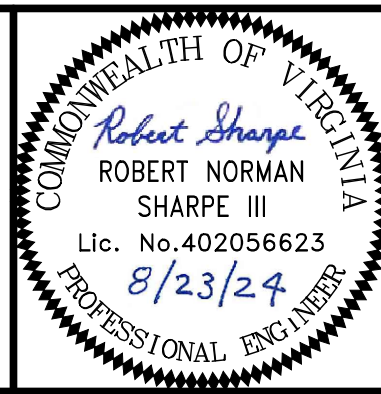
FAIRFAX WATER
PLANNING & ENGINEERING DIVISION
8560 ARLINGTON BOULEVARD
FAIRFAX, VA 22031

DESIGNED: R. SHARPE
DRAWN: A. CANNON
CHECKED: G. MOORE

NO.	DATE	REVISION

SCALE
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USE TO VERIFY FIGURE REPRODUCTION SCALE

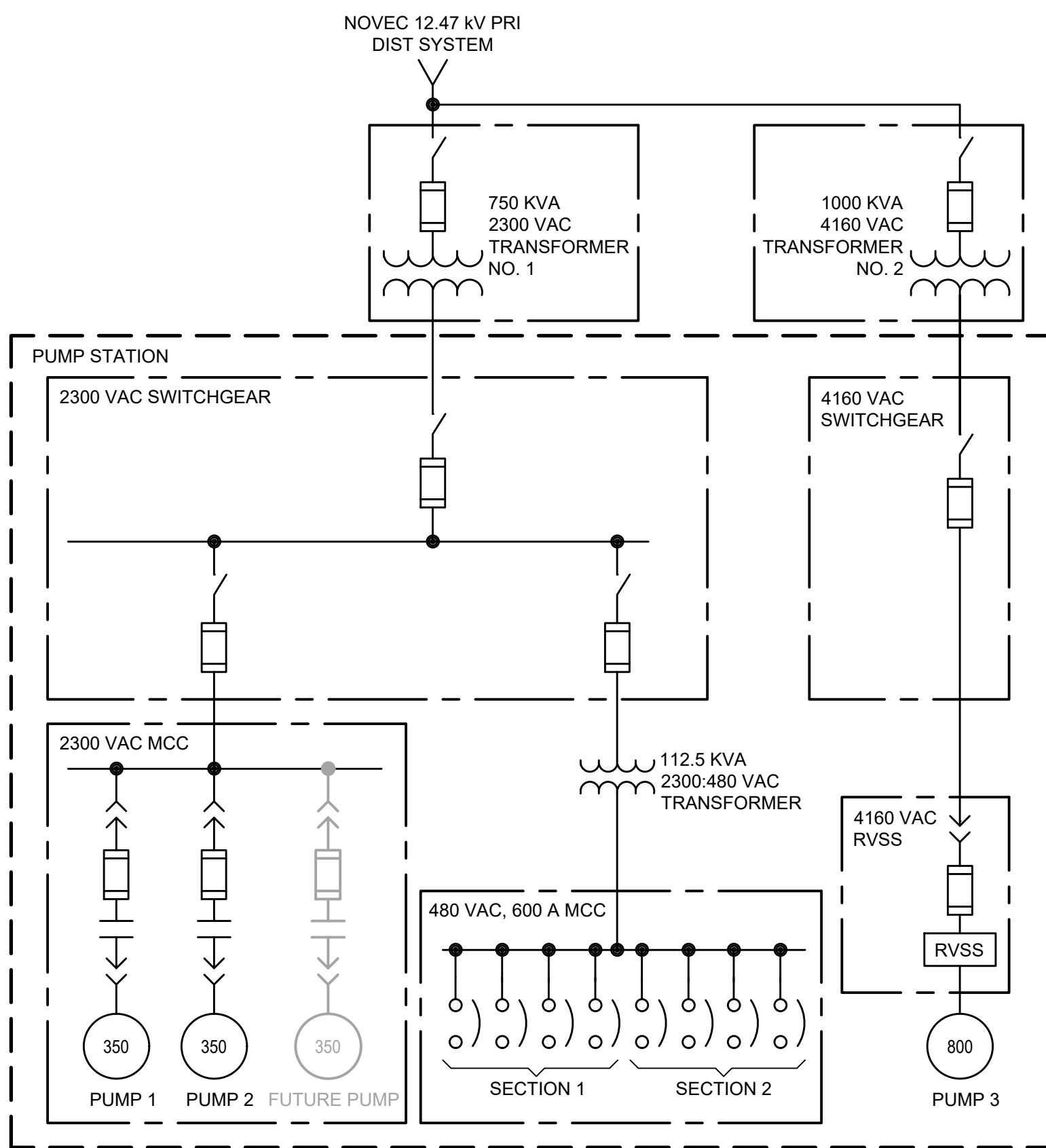


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POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
PUMP STATION DEMOLITION PLAN

FILE NAME: E03_PUMP_STATION_DEMO_PLAN.DWG			
PROJECT	DIVISION	DATE:	AUG 2024
P2722	003	DRAWING	E03
TAX MAP:	SHEET		
067-2	19 of 25		

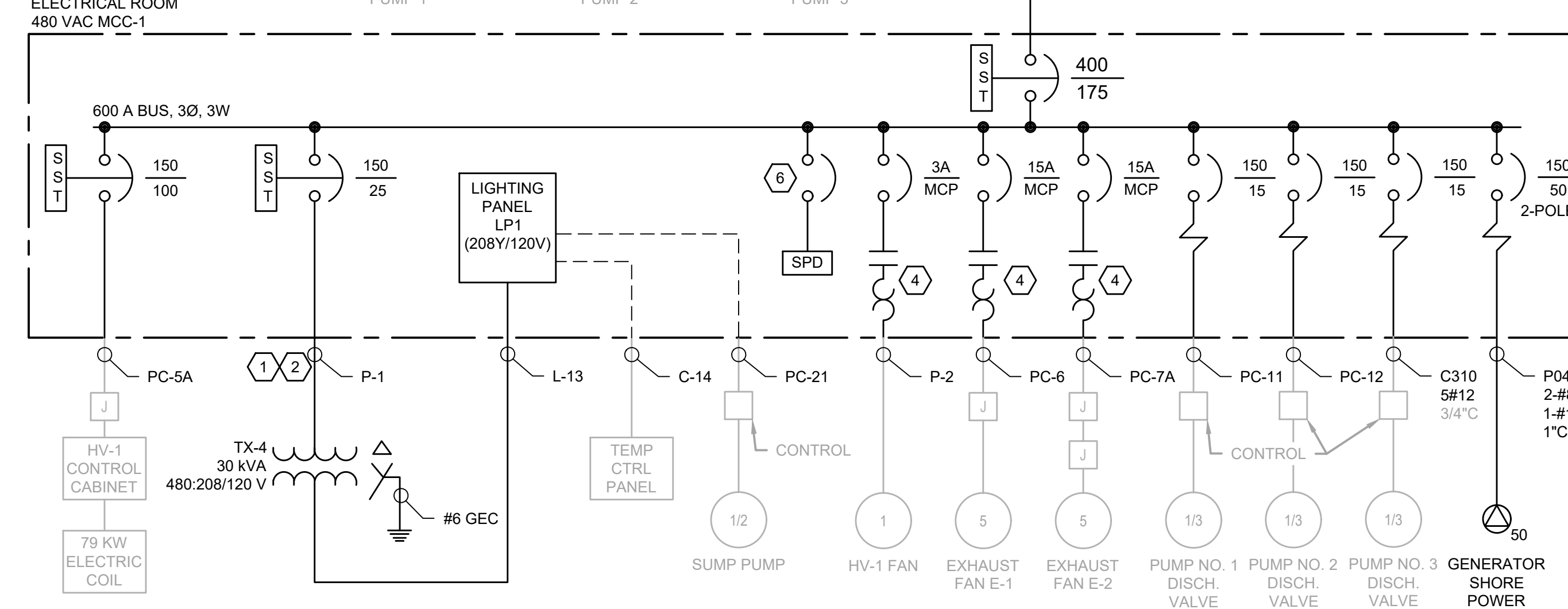
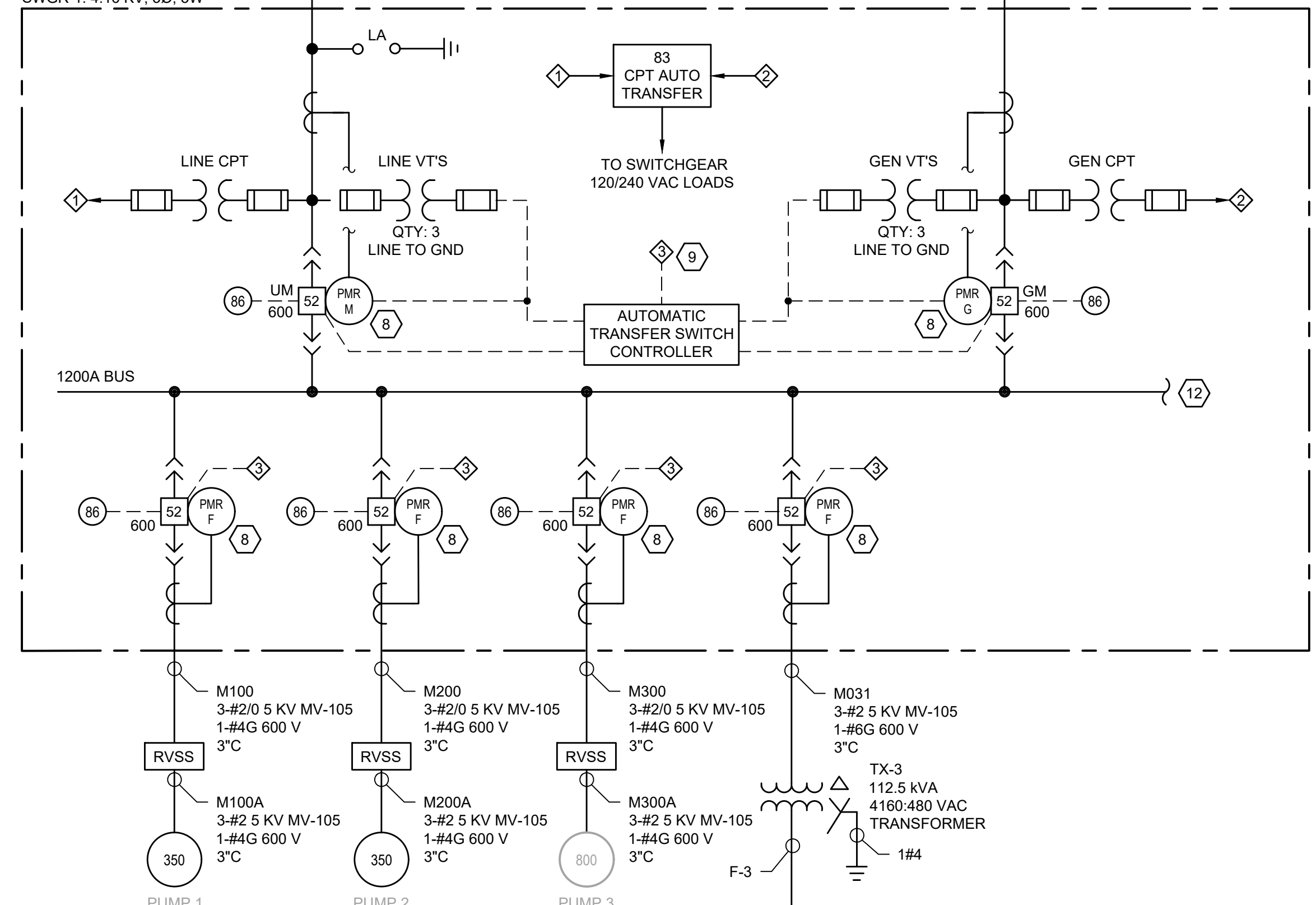
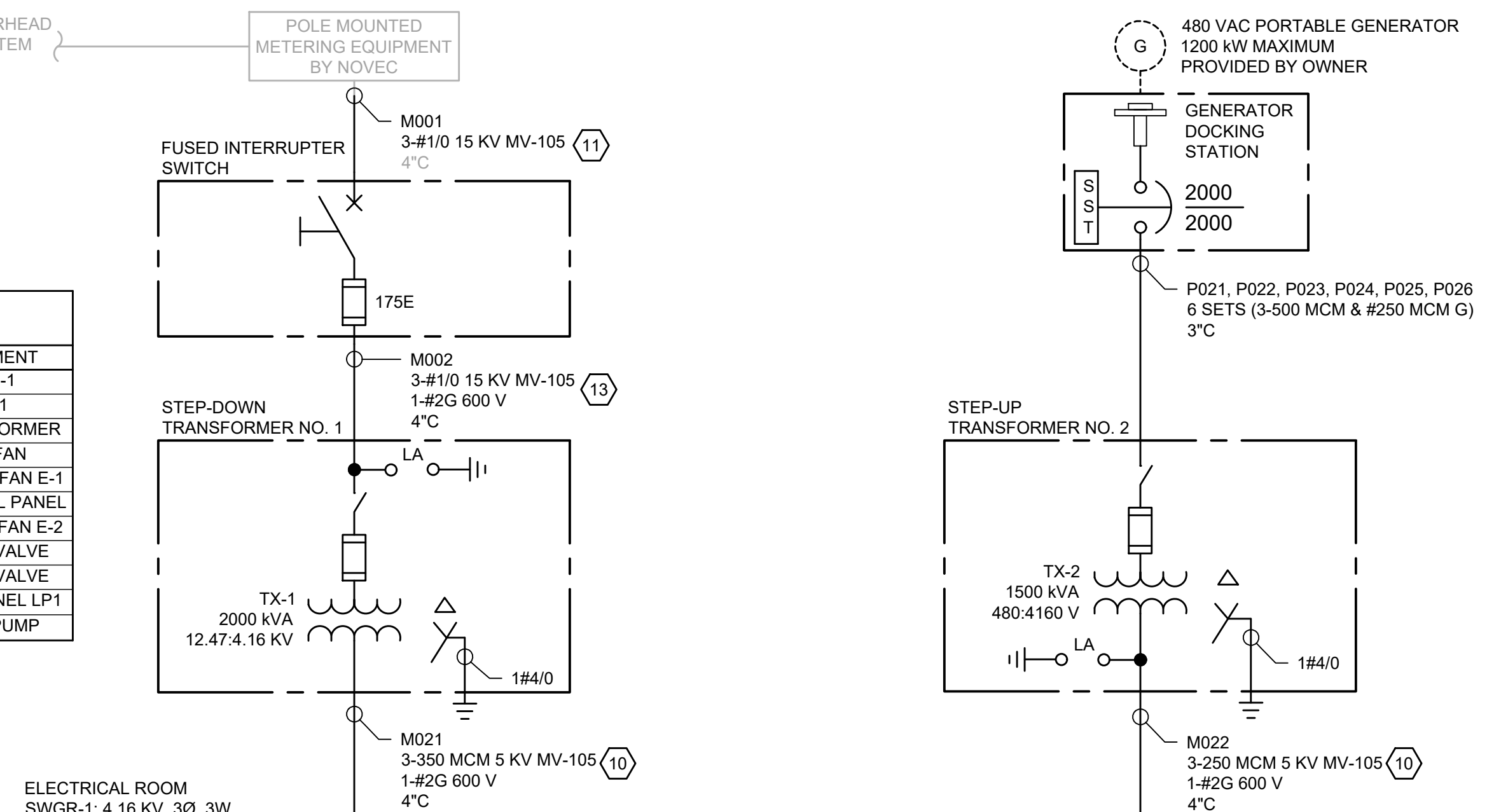


EXISTING ONE-LINE DIAGRAM

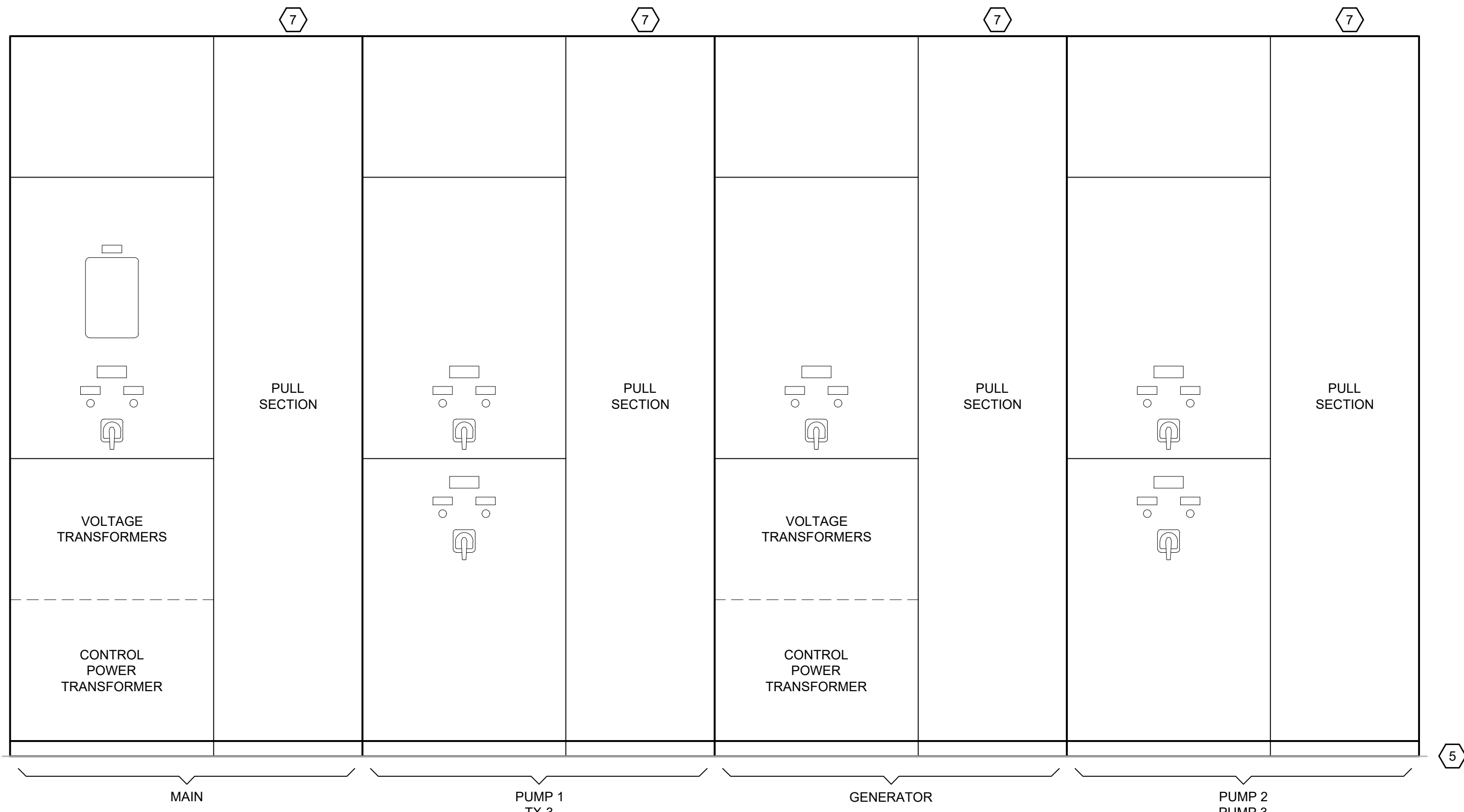
- ### SHEET KEYNOTES
1. REPLACE EXISTING POWER AND CONTROL WIRING FROM MCC TO FIRST TERMINATION OF EXISTING WIRING. TYPICAL OF ALL MCC LOADS.
 2. CONTROL WIRING SHOWN TO FIELD EQUIPMENT IS BASED ON RECORD DRAWINGS. ALLOW FOR 5% ADDITIONAL WIRING FOR UNDOCUMENTED ADDITIONS AFTER EXISTING CONTROL CENTER INSTALLATION.
 3. CONDUITS AND WIRE COUNTS SHOWN ARE BASED ON RECORD DRAWINGS. ADJUST WIRE COUNTS TO MATCH EXISTING CONNECTIONS.
 4. SEE DRAWING E05 FOR MCC-1 CONTROL SCHEMATICS.
 5. SWITCHGEAR SHALL BE MOUNTED DIRECTLY ON EXISTING ELECTRICAL ROOM FLOOR. NO EQUIPMENT PAD SHALL BE INSTALLED TO MAXIMIZE CLEARANCE ABOVE SWITCHGEAR.
 6. SIZE ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
 7. FRONT ACCESSIBLE ONLY SWITCHGEAR. ALL CABLES SHALL ENTER SWITCHGEAR FROM THE TOP. SEE DRAWING E07.
 8. BREAKERS HAVE ONBOARD TRIP UNITS.
 9. LOAD CONTROL SIGNAL.
 10. UM AND GM SET AT 300 AMPS MAXIMUM FOR SECONDARY CABLE PROTECTION.
 11. SERVICE ENTRANCE CABLE SHALL BE REPLACED IN EXISTING 4" UNDERGROUND CONDUIT. EXISTING CONDUIT SHALL BE EXTENDED TO FUSED INTERRUPTER SWITCH.
 12. EQUIP POWER AND GROUND BUSES FOR CONNECTION TO FUTURE SECTION. SEE POWER PLAN DRAWING E06 FOR LOCATION.
 13. DIRECT BURY CONDUIT UNDERGROUND.

CONDUIT AND WIRE SCHEDULE

TAG	CONDUIT	WIRE	EQUIPMENT
F-3	2"	3#2/0 & #4G	MCC-1
PC-5A	1.5"	3#1, #8G & 8#14	HV-1
P-1	1"	3#8 & #10G	15 KVA XFORMER
P-2	3/4"	3#12	HV-1 FAN
PC-6	1"	3#12 & 4#14	EXHAUST FAN E-1
C-14	1.25"	20#14	TEMP CTRL PANEL
PC-7A	1"	3#12 & 6#14	EXHAUST FAN E-2
PC-11	1.25"	3#12 & 18#14	PUMP 1 VALVE
PC-12	1.25"	3#12 & 18#14	PUMP 2 VALVE
L-13	1.25"	4#3 & #8G	LIGHT PANEL LP1
PC-21	1.5"	3#12 & 4#14	SUMP PUMP



PROPOSED ONE-LINE DIAGRAM



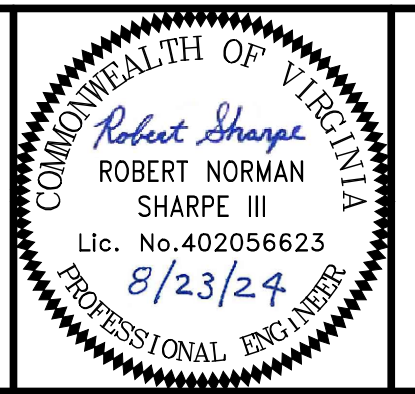
SWITCHGEAR ELEVATION VIEW

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PLANNING & ENGINEERING DIVISION
8560 ARLINGTON BOULEVARD
FAIRFAX, VA 22031

DESIGNED: R. SHARPE
DRAWN: A. CANNON
CHECKED: G. MOORE

NO.	DATE	REVISION

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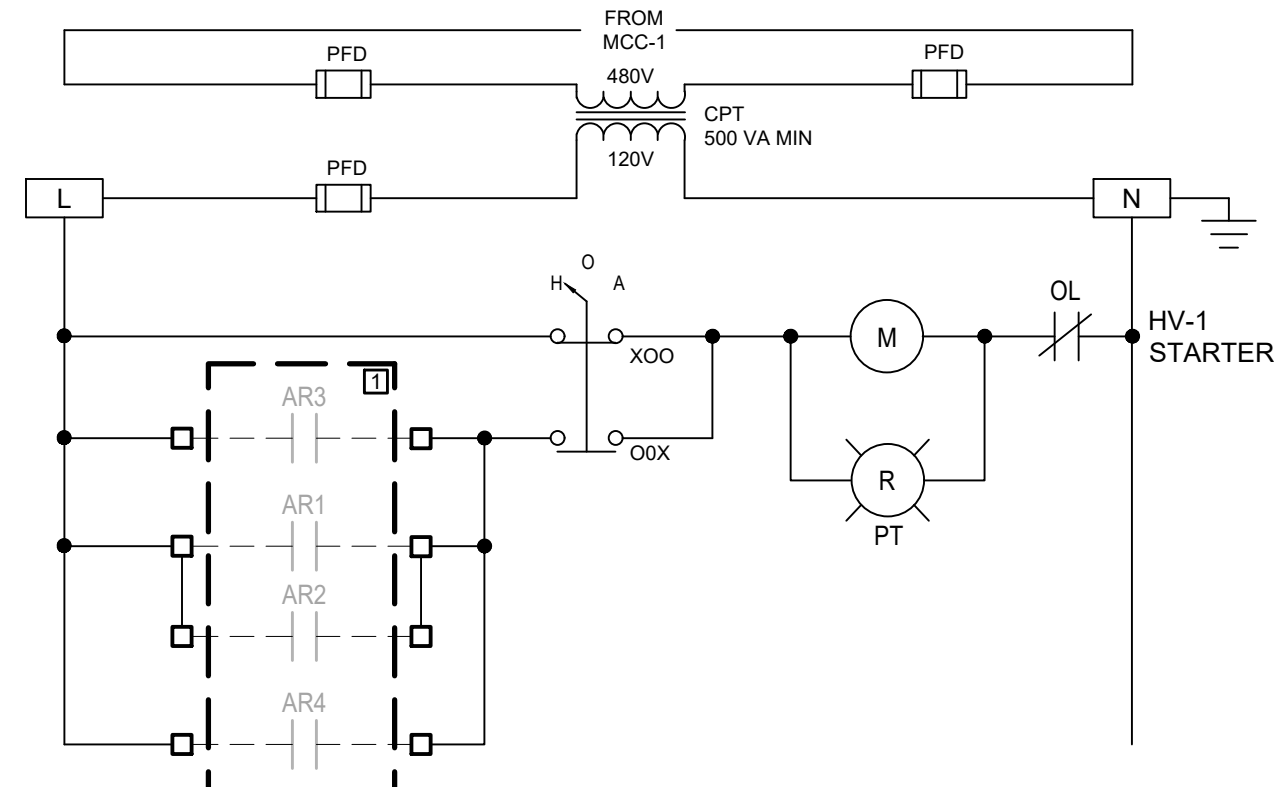
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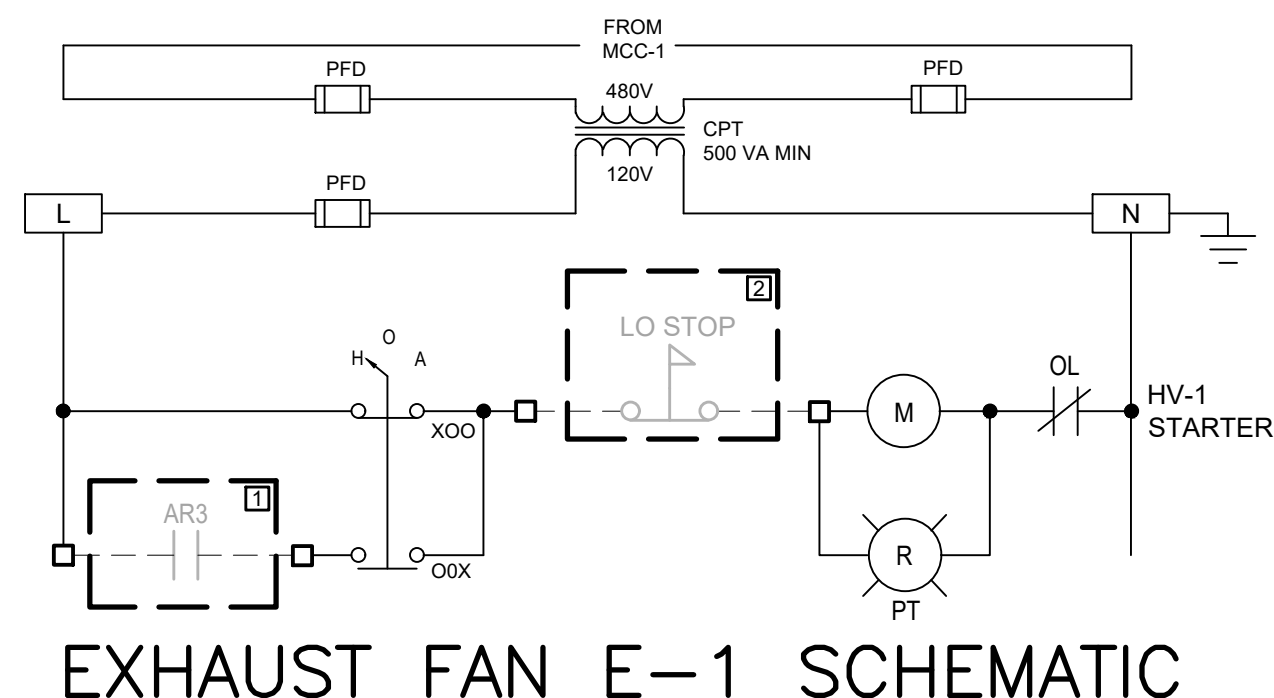
POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
ONE-LINE DIAGRAMS AND
SWITCHGEAR ELEVATION VIEW

FILE NAME: E04_ONE_LINE_DIAGRAM_AND_ELEV.DWG	PROJECT: P2722	DIVISION: 003	DATE: AUG 2024
TAX MAP: 067-2	SHEET: 20 of 25		

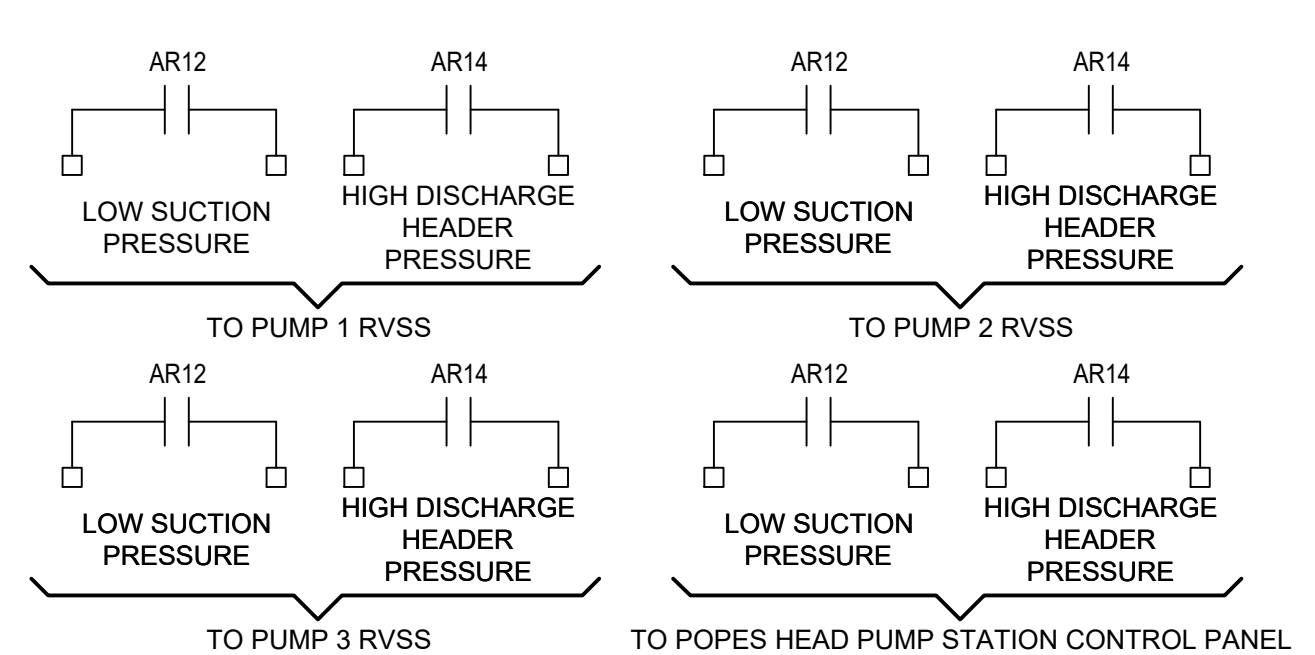
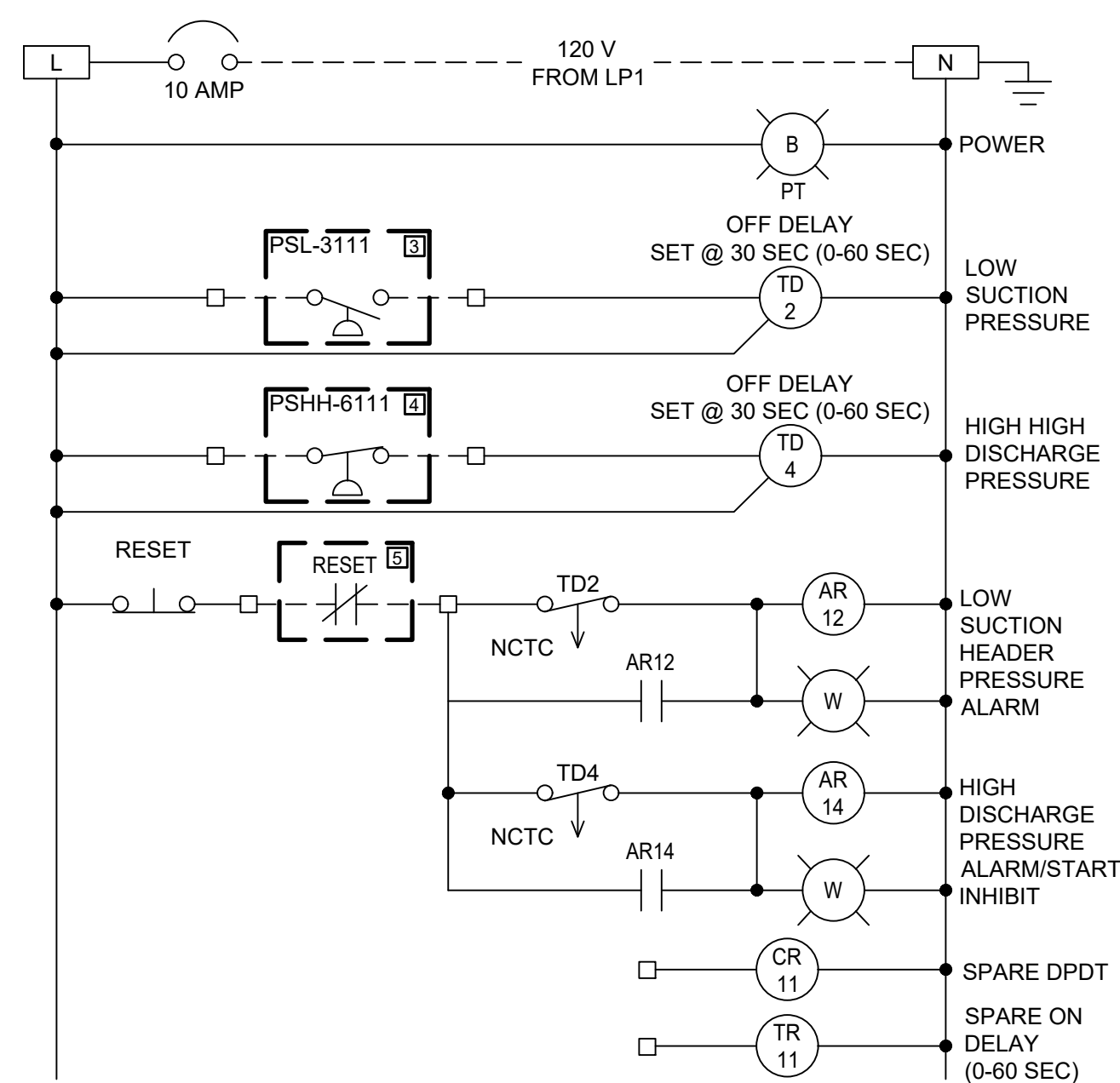
User: TOURTEL01; Spc: AUS-NCNSMOD; File: C:\USERS\TOURTEL01\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - 7.0 CAD FLESHSHEETS\ELECTRICAL\DESIGN\ELECTRICAL\ONE_LINE_DIAGRAM_AND_ELEV.DWG; Scale: 1:1; SavedDate: 8/23/2024; Time: 14:14; Plot Date: Tourtel01; John; 8/23/2024; 14:27; Layout: 20



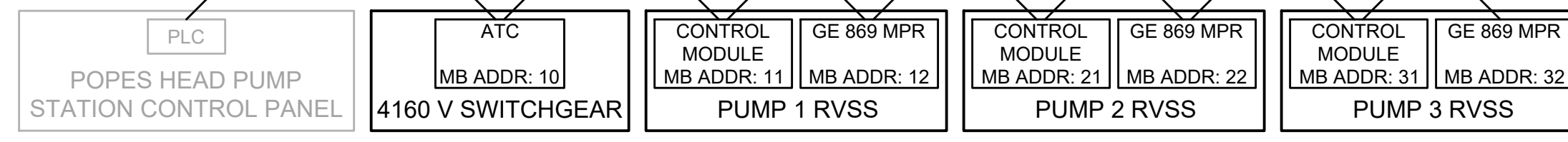
SUPPLY FAN HV-1 SCHEMATIC



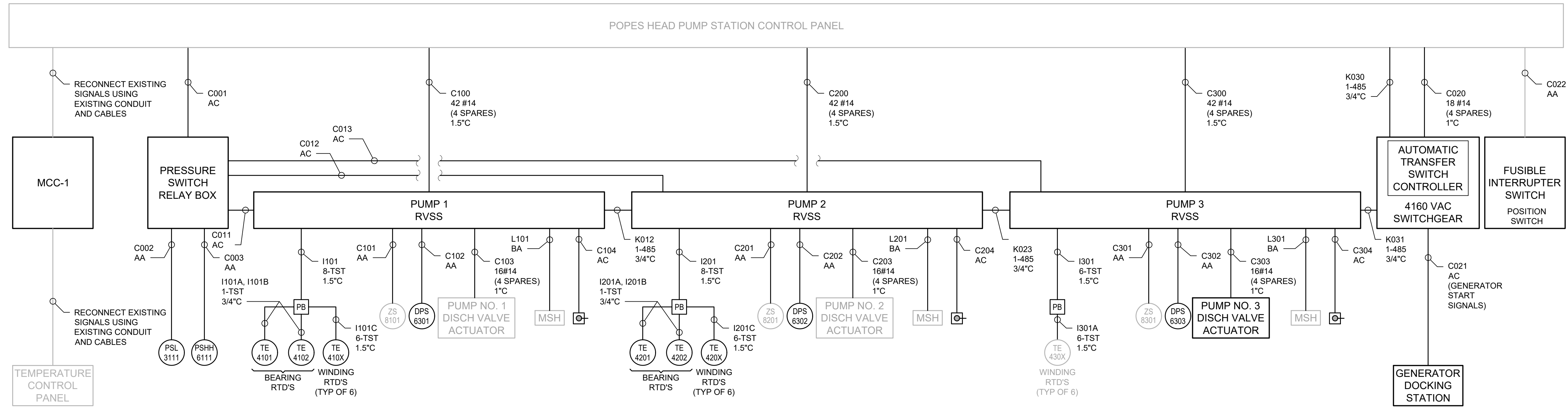
EXHAUST FAN E-1 SCHEMATIC
(TYPICAL OF EXHAUST FAN E-2)



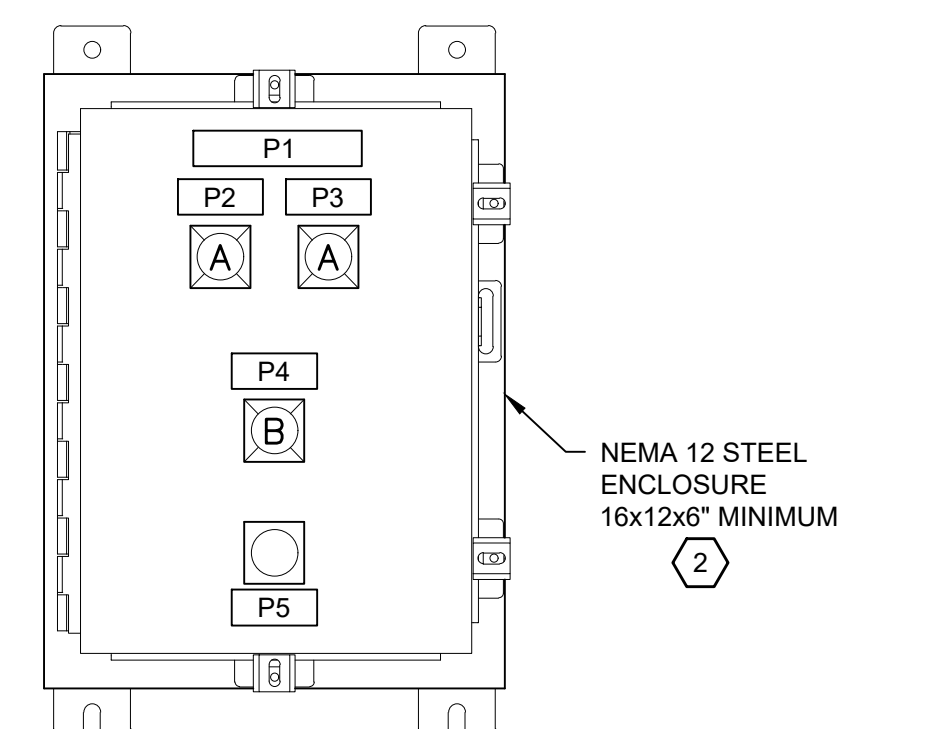
RELAY BOX



SERIAL MODBUS NETWORK DIAGRAM



INTERCONNECT DIAGRAM



MCC-1 ELEVATION

RELAY BOX NAMEPLATE SCHEDULE

P1	RELAY BOX (PRESSURE SWITCH SIGNAL REPLICATOR)
P2	LOW SUCTION PRESSURE
P3	HIGH HIGH DISCHARGE PRESSURE
P4	POWER
P5	RESET

FRONT PANEL LAYOUT
NOT TO SCALE

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	KVA PER PHASE			POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
						A	B	C						
1	20	PUMP ROOM & ELECTRICAL ROOM LIGHTS	1.5	12.5	1	2.6			1	9.2	1.1	PUMP ROOM & ELECTRICAL ROOM LIGHTS	20	2
3	20	PUMP ROOM LIGHTS	1.8	15.0	1		2.0		1	1.7	0.2	PUMP ROOM LIGHTS	20	4
5	20	PUMP ROOM LIGHTS	1.8	15.0	1			2.1	1	2.1	0.25	EXTERIOR LIGHTS ABOVE DOORS	20	6
7	20	MOTOR SPACE HEATERS	0.8	6.7	1	1.1			1	2.3	0.28	METER VAULT LIGHT	20	8
9	20	PUMP AUXILIARY RELAYS	0.1	0.8	1		0.4		1	2.5	0.3	ANNUNCIATOR	20	10
11	20	TRANSMITTERS	0.15	1.2	1			0.8	1	5.0	0.6	PIPE TRENCH SUMP PUMP	20	12
13	30	PORTABLE GENERATOR SHORE POWER 1	1	8.3	1	3.9			1	24.0	2.88	PORTABLE GENERATOR SHORE POWER 2	30	14
15	20	DOCKING STATION SPACE HEATER	0.25	2.1	1		0.6		1	2.5	0.3	PUMP STATION CONTROL PANEL	20	16
17	20	RELAY BOX POWER	0.1	0.8	1			0.4	1	2.1	0.25	INTERRUPTER SWITCH SPACE HEATER	20	18
19	20	TX-2 SPACE HEATER	0.25	2.1	1	0.3			1			SPARE	20	20
21	20	SPARE			1		0.0		1			SPARE	20	22
23	20	SPARE			1			0.0	1			SPARE	20	24
25	20	SPARE			1	0.0			1			SPARE	20	26
27	20	SPARE			1		0.0		1			SPARE	20	28
29	20	SPARE			1			0.0	1			SPARE	20	30
31	15	SPARE			1	0.0			1			SPARE	15	32
33	20	SPACE			1		0.0		1			SPACE	20	34
35	20	SPACE			1			0.0	1			SPACE	20	36
37	20	SPACE			3	0.0		0.0	3			SPACE	20	38
TOTAL KVA						7.8	3.0	3.2	SERVICE CHARACTERISTICS					
GRAND CONNECTED TOTAL KVA						13.9			VOLTS: 208 PHASE: 3 WIRE: 4 10k MIN AIC SYMM, FULLY RATED ASSEMBLY					

LP1 PANEL SCHEDULE

SHEET KEYNOTES

- LOADS SHOWN REPRESENT EXISTING LOADS DOCUMENTED ON RECORD DRAWINGS AND PROPOSED 120 VAC LOADS ADDED AS PART OF THIS WORK. RECONNECT ALL EXISTING 120/208 VAC LOADS IN EXISTING PANEL LP-1 TO PANEL LP1.
- SEE SECTION 13430, PANELS AND ENCLOSURES FOR RELAY BOX CONSTRUCTION SPECIFICATIONS. SEE SECTION 16144, CONTROL STATIONS, FOR INDICATING LIGHTS AND PUSHBUTTON SPECIFICATIONS.

SHEET LOCATION LEGEND:

- - EQUIPMENT LOCATED IN TEMPERATURE CONTROL PANEL
- - EQUIPMENT LOCATED NEAR MOTOR
- - DEVICE LOCATED IN SUCTION HEADER
- - DEVICE LOCATED IN DISCHARGE HEADER
- - POPES HEAD ROAD PUMP STATION CONTROL PANEL

User: TOURTEL0T Spc: AUS-NC5300 File: C:\USERS\TOURTEL0T\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - 7.0 CAD FILES\SHEETS\ELECTRICAL DESIGN\ELECTRICAL SCHEMATICS_INTERCONNECT_DIAG.DWG Scale: 1:1 Saved Date: 8/23/2024 Time: 14:14 Plot Date: Tourtel0t, John, 8/23/2024, 14:27, Layout21

FAIRFAX WATER PLANNING & ENGINEERING DIVISION 8560 ARLINGTON BOULEVARD FAIRFAX, VA 22031	DESIGNED: R. SHARPE	SCALE THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE				POPES HEAD PUMPING STATION			FILE NAME: E05 SCHEMATICS_INTERCONNECT_DIAG.DWG		
	DRAWN: A. CANNON					ELECTRICAL UPGRADES			PROJECT: P2722	DIVISION: 003	DATE: AUG 2024
	CHECKED: G. MOORE					ELECTRICAL SCHEMATICS, INTERCONNECT DIAGRAM, AND MISCELLANEOUS DETAILS			DRAWING: E05	TAX MAP: 067-2	SHEET: 21 of 25

SHEET KEYNOTES

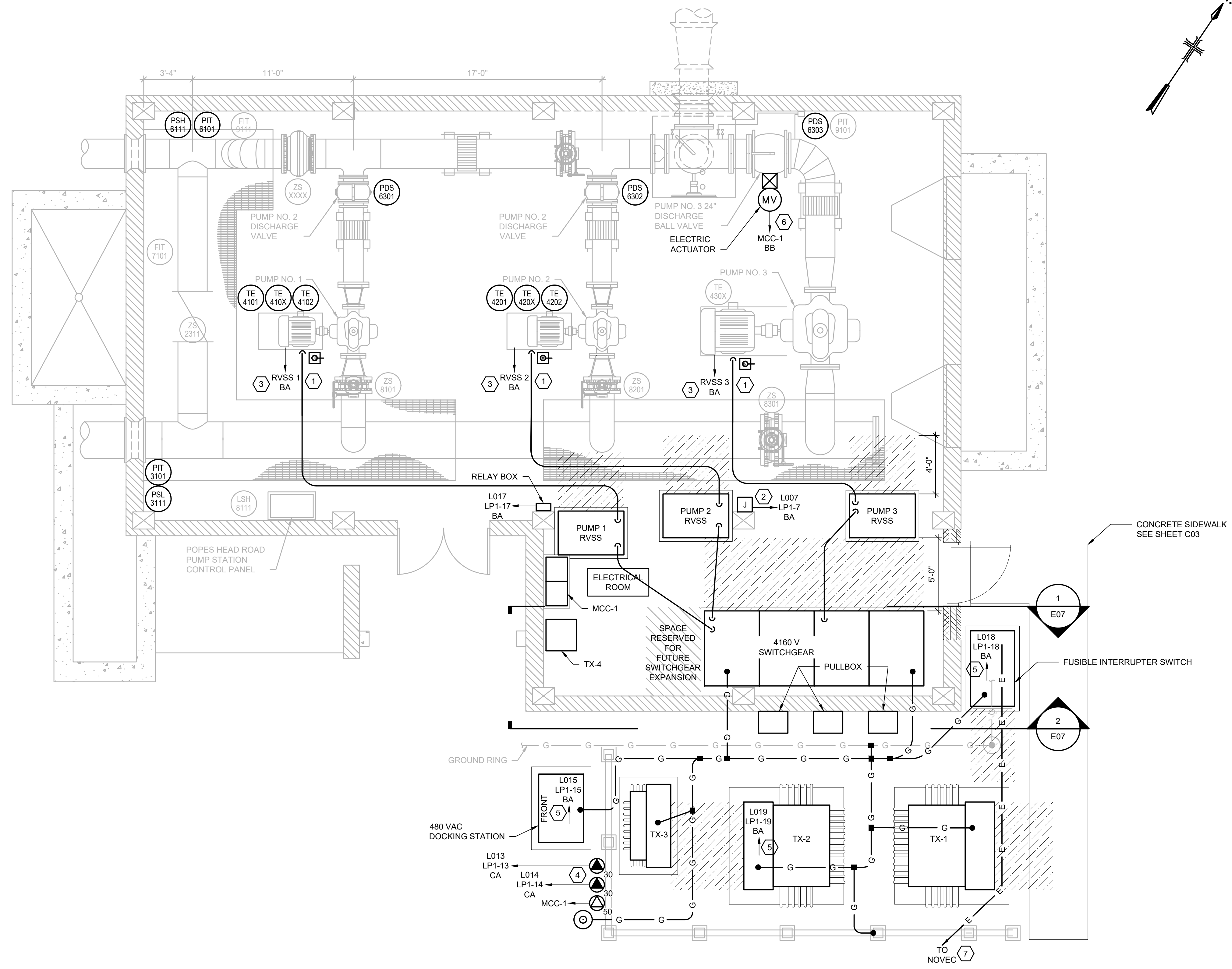
1. MOTOR CONDUITS SHALL BE INSTALLED OVERHEAD AND AVOID THE AREA DIRECTLY ABOVE THE MOTORS AND PUMPS FOR FUTURE MAINTENANCE AND REMOVAL.
2. DISTRIBUTE MOTOR SPACE HEATER POWER FROM JUNCTION BOX TO RVSS'S.
3. MOTOR SPACE HEATER POWER.
4. SEE DRAWING E9 FOR RECEPTACLE LAYOUT DETAIL.
5. SPACE HEATER POWER.
6. EXISTING CONDUITS CAN BE USED FOR POWER TO PROPOSED ACTUATOR. EXTEND CONDUIT AS REQUIRED TO ACTUATOR CONDUIT ENTRY POINT.
7. CONNECT TO EXISTING UNDERGROUND SERVICE ENTRANCE CONDUIT. SERVICE ENTRANCE CABLES ARE TO BE REPLACED AS PART OF THE WORK.

GENERAL SHEET NOTES

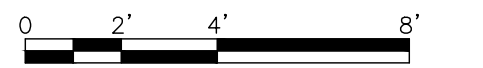
1. SEE ONE-LINE DIAGRAM AND INTERCONNECT DIAGRAM FOR ADDITIONAL CONDUIT AND WIRING.
2. MOUNT ALL PRESSURE TRANSMITTERS AND SWITCHES 5 FT ABOVE FINISHED FLOOR.
3. SEE DRAWING S01 FOR INTERIOR EQUIPMENT PAD DETAILS. SEE DETAIL 4 ON DRAWING S02 FOR EXTERIOR TRANSFORMER PAD DETAILS.

LEGEND:

 NEC REQUIRED WORKING SPACE



POPES HEAD ROAD PUMP STATION POWER PLAN




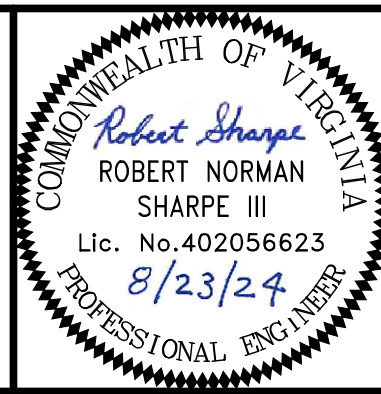
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FAIRFAX WATER
PLANNING & ENGINEERING DIVISION
8560 ARLINGTON BOULEVARD
FAIRFAX, VA 22031

DESIGNED: R. SHARPE
DRAWN: A. CANNON
CHECKED: G. MOORE

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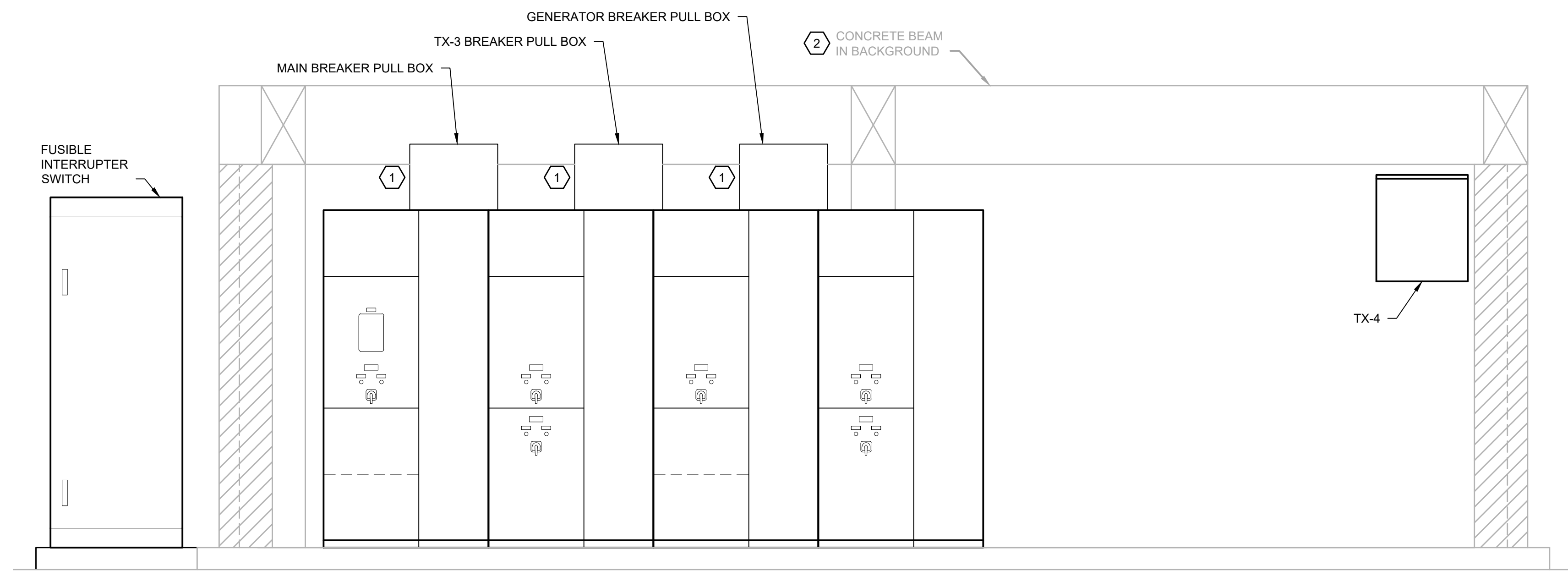
POPES HEAD PUMPING STATION
ELECTRICAL UPGRADES
POWER PLAN

FILE NAME:	E06_POWER_PLAN.DWG		
PROJECT:	P2722	DIVISION:	003
DATE:	AUG 2024		
DRAWING:	E06		
TAX MAP:	067-2	SHEET:	22 of 25

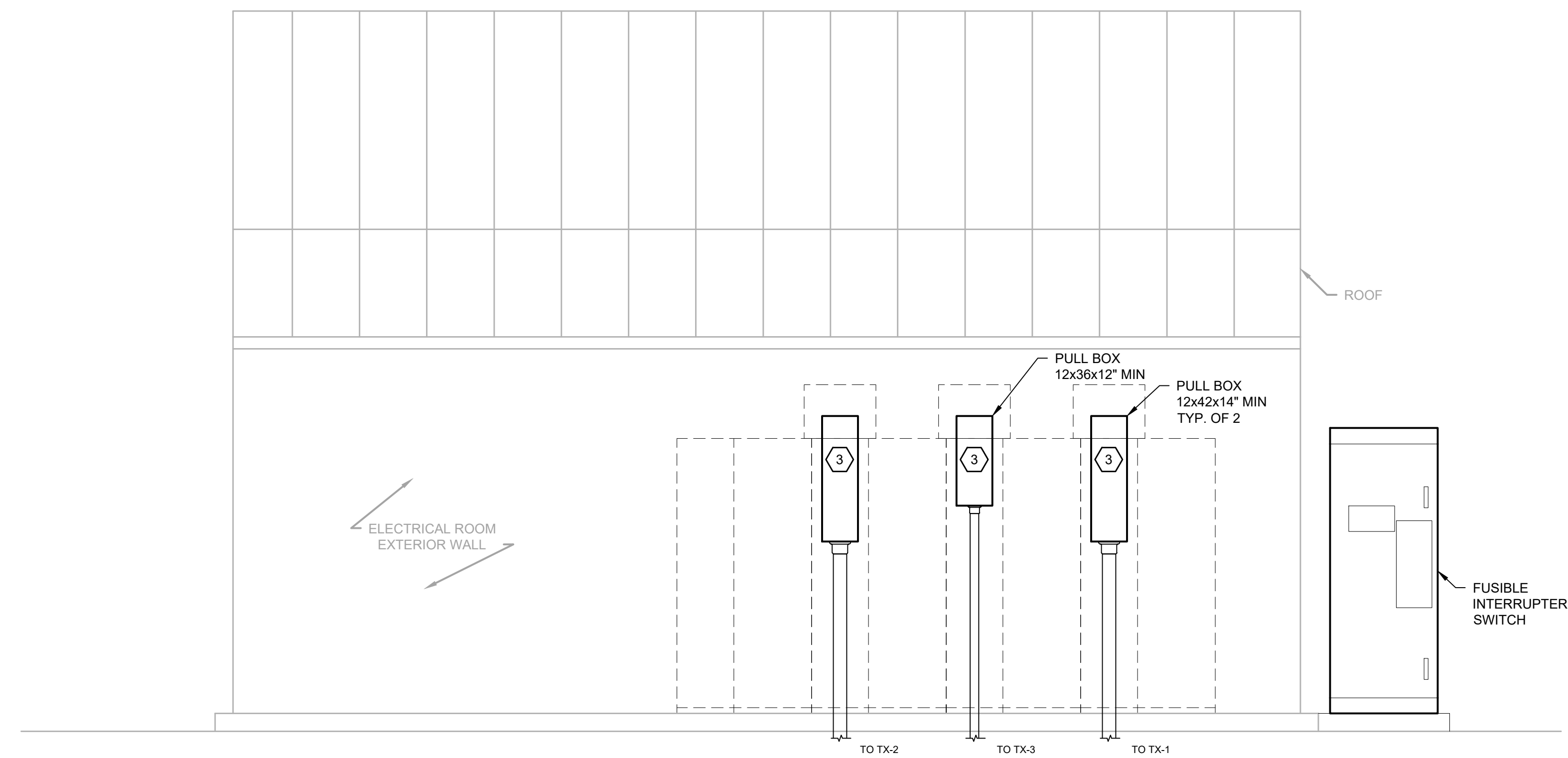


SHEET KEYNOTES

1. CONDUITS FROM OUTDOOR EQUIPMENT SHALL PENETRATE EXTERIOR WALL OF ELECTRICAL ROOM AND CONNECT TO TOP HAT PULL BOXES. SIZE PULL BOXES ACCORDING TO NEC ARTICLE 314.
2. DO NOT CORE DRILL CONCRETE BEAM.
3. SIZE PULL BOXES ACCORDING TO NEC ARTICLE 314.



1 ELECTRICAL ROOM SECTION VIEW
 E06 SCALE: 1/2" = 1'-0"



2 ELECTRICAL ROOM EXTERIOR VIEW
 E06 SCALE: 3/8" = 1'-0"

User: TOURTEL01; Spc: AUS-NC5MOD; File: C:\USER\STOURTEL01\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - 7.0 CAD FLESHSHEETS\ELECTRICAL DESIGN\ELECTRICAL ROOM_SECTION_VIEWS.DWG; Scale: 1:1; SavedDate: 8/23/2024; Time: 14:14; Plot Date: Tourtel01; John: 8/23/2024; Time: 14:27; Layout: 23

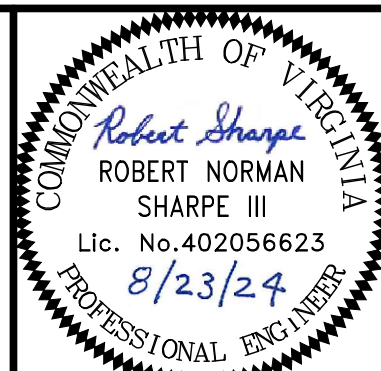
FAIRFAX WATER
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 8560 ARLINGTON BOULEVARD
 FAIRFAX, VA 22031

DESIGNED: R. SHARPE
 DRAWN: A. CANNON
 CHECKED: G. MOORE

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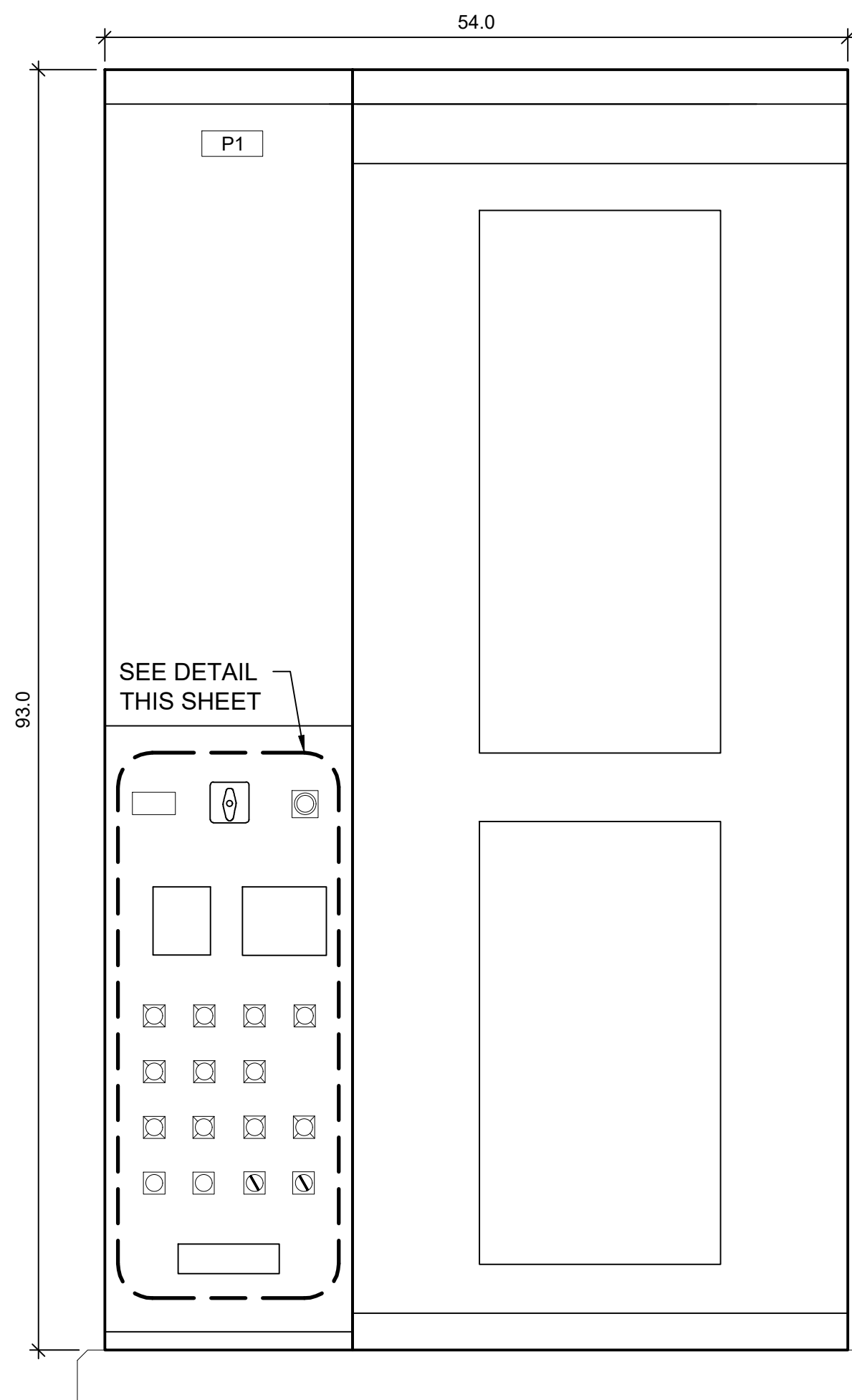
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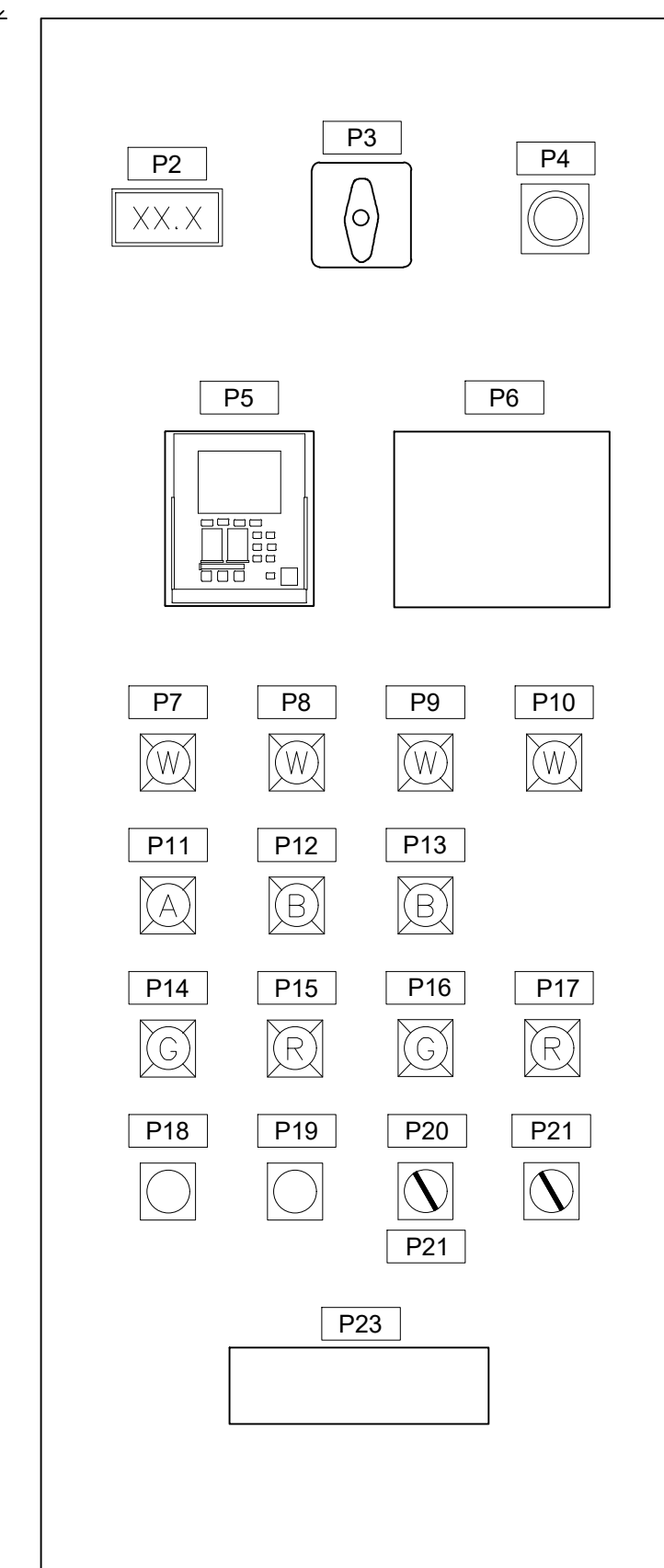
POPES HEAD PUMPING STATION
 ELECTRICAL UPGRADES
 ELECTRICAL ROOM SECTION VIEWS

FILE NAME: E07_ELECTRICAL_ROOM_SECTION_VIEWS.DWG		
PROJECT	DIVISION	DATE
P2722	003	AUG 2024
DRAWING		E07
TAX MAP:		SHEET
067-2		23 of 25



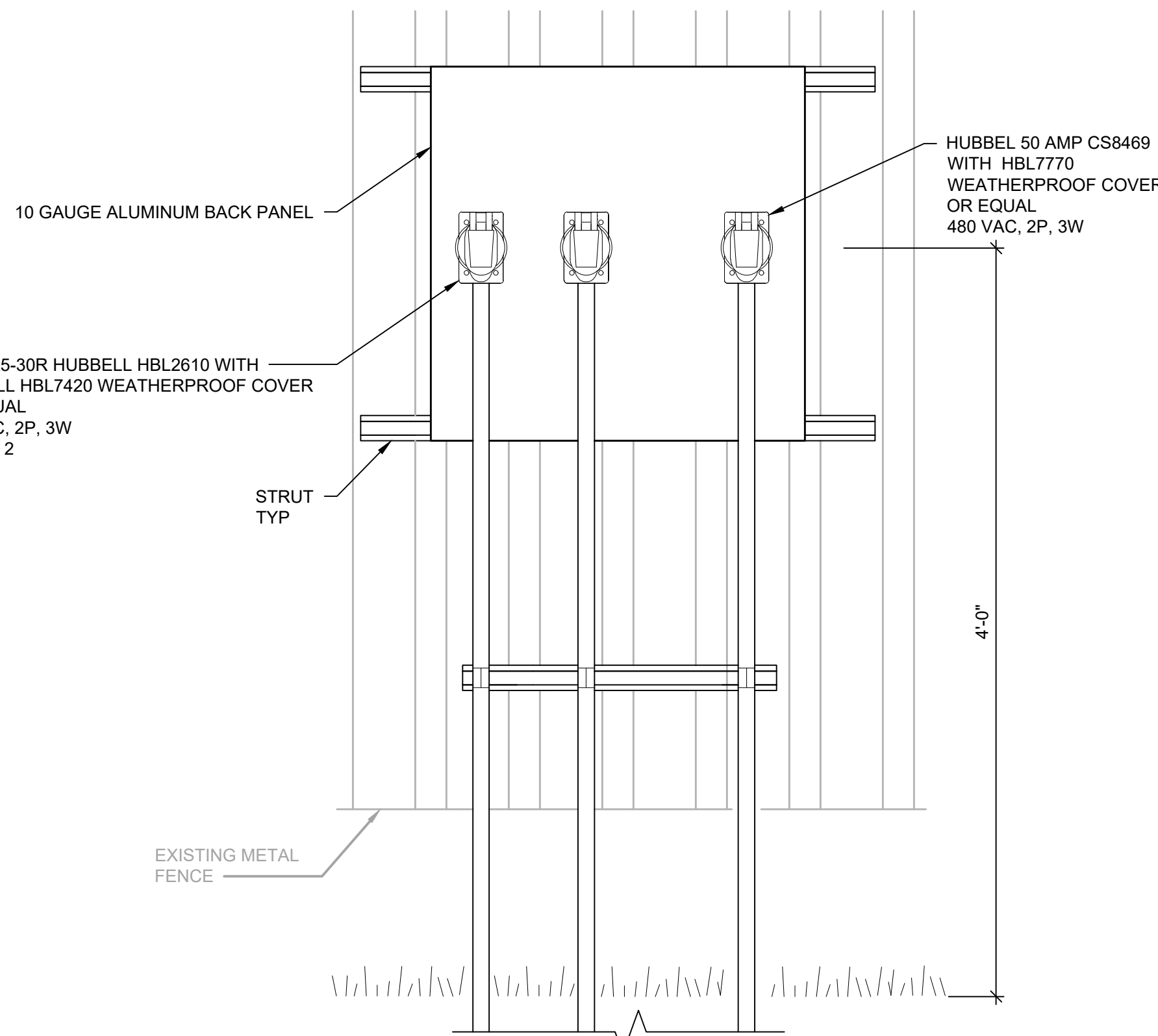


PUMP NO. 1 RVSS ELEVATION VIEW
(TYPICAL OF PUMP NO. 2 AND NO. 3 RVSS)



FRONT PANEL LAYOUT
NOT TO SCALE

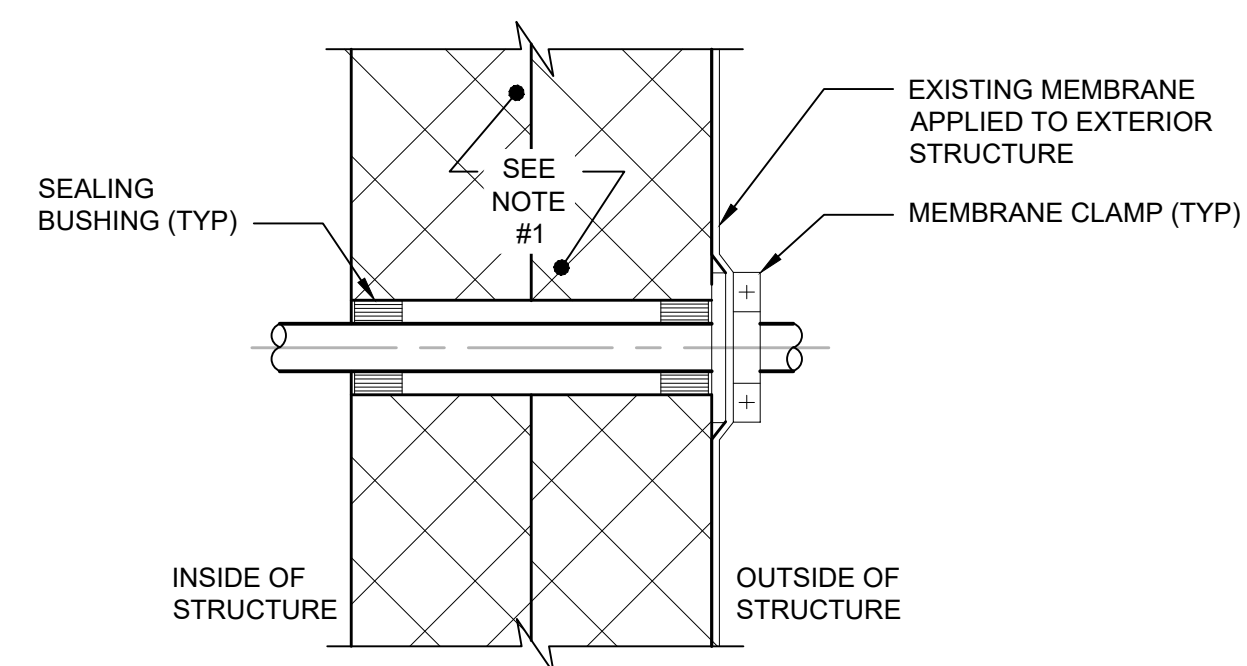
PHPS RVSS NAMEPLATE SCHEDULE	
PUMP NO. 1, NO. 2, AND NO. 3 RVSS	
P1	PUMP NO. X RVSS
P2	ELAPSED TIME METER
P3	LOCKOUT RELAY
P4	EMERGENCY STOP
P5	MOTOR PROTECTION RELAY
P6	RVSS HMI
P7	LOW SUCTION PRESSURE
P8	HIGH DISCHARGE PRESSURE
P9	DISCHARGE VALVE FAIL TO OPEN
P10	DISCHARGE VALVE FAIL TO CLOSE
P11	REMOTE READY
P12	BYPASS MODE
P13	CURRENT LOSS CONTROL FAULT
P14	PUMP STOPPED
P15	PUMP RUNNING
P16	DISCHARGE VALVE CLOSED
P17	DISCHARGE VALVE OPEN
P18	STOP
P19	START
P20	LOCAL-OFF-REMOTE
P21	RVSS-BYPASS
P22	SWITCH TO OFF TO RESET ALARMS
P23	TEST SWITCH



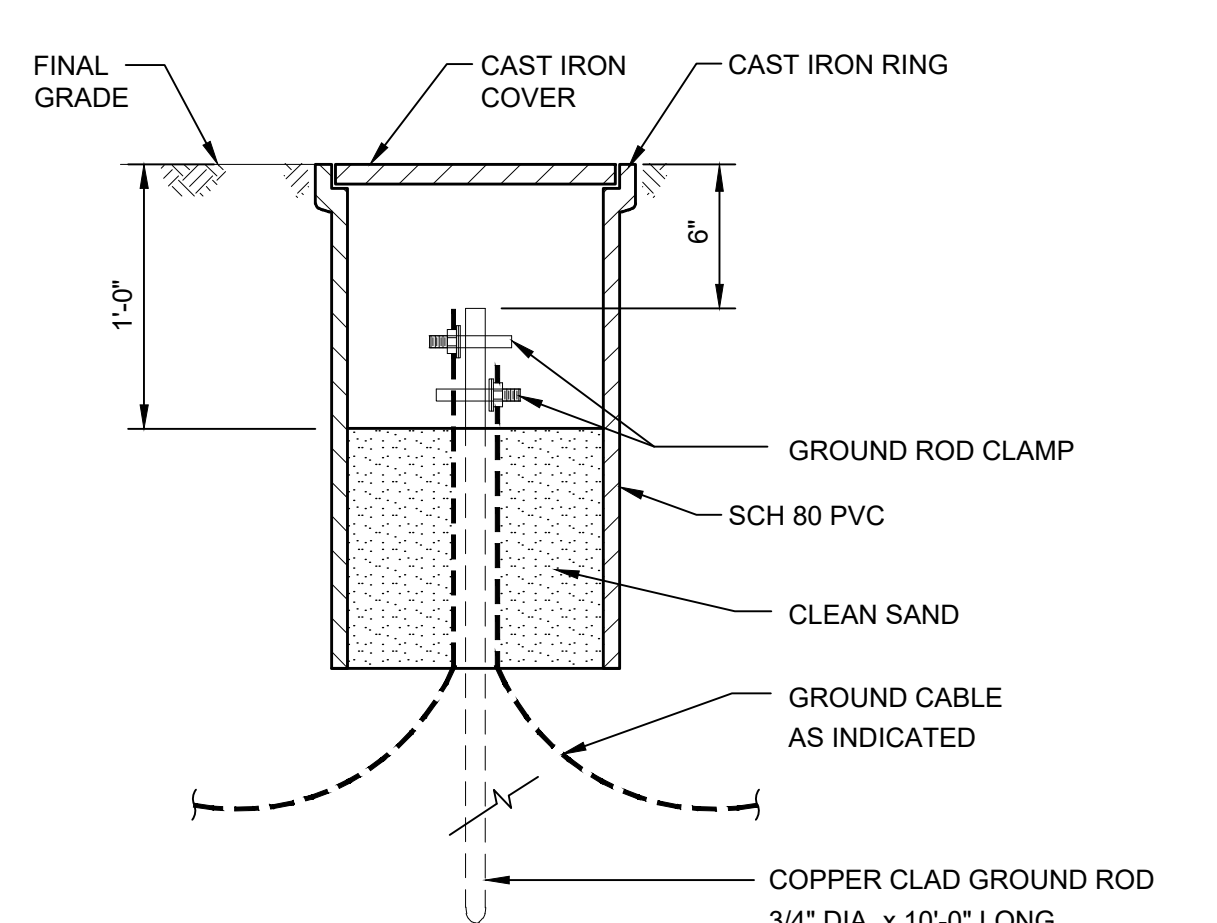
GENERATOR SHORE POWER RECEPTACLES

TYPE OF CONNECTION	BOLTED OR COMPRESSION		WELDED
	BURNDY CAT#	T&B CAT#	CADWELL CAT#
CABLE TO LUG	YA	54000 SERIES	LA
CABLE TO ROD	-	53000 SERIES	GT
ROD TO ROD	GAR	-	GR
CABLE TO CABLE	GX	53000 SERIES	TV OR TA
CABLE TO PIPE	-	-	HA OR VS
CABLE TO FLAT SURFACE	GB	-	HA OR HS
BRAID TO PIPE	GG	-	-

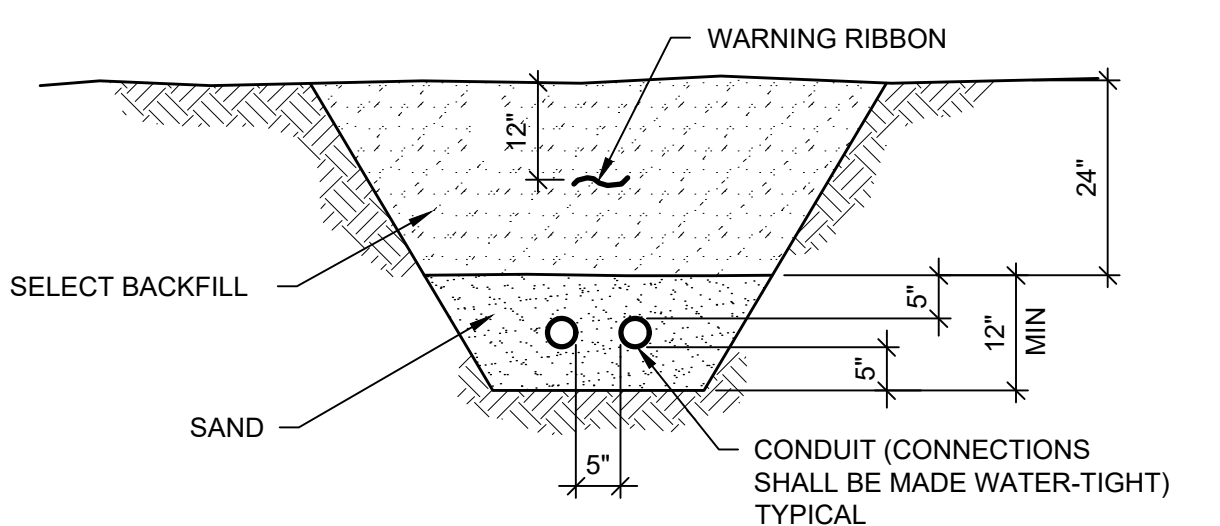
GROUNDING CONNECTIONS



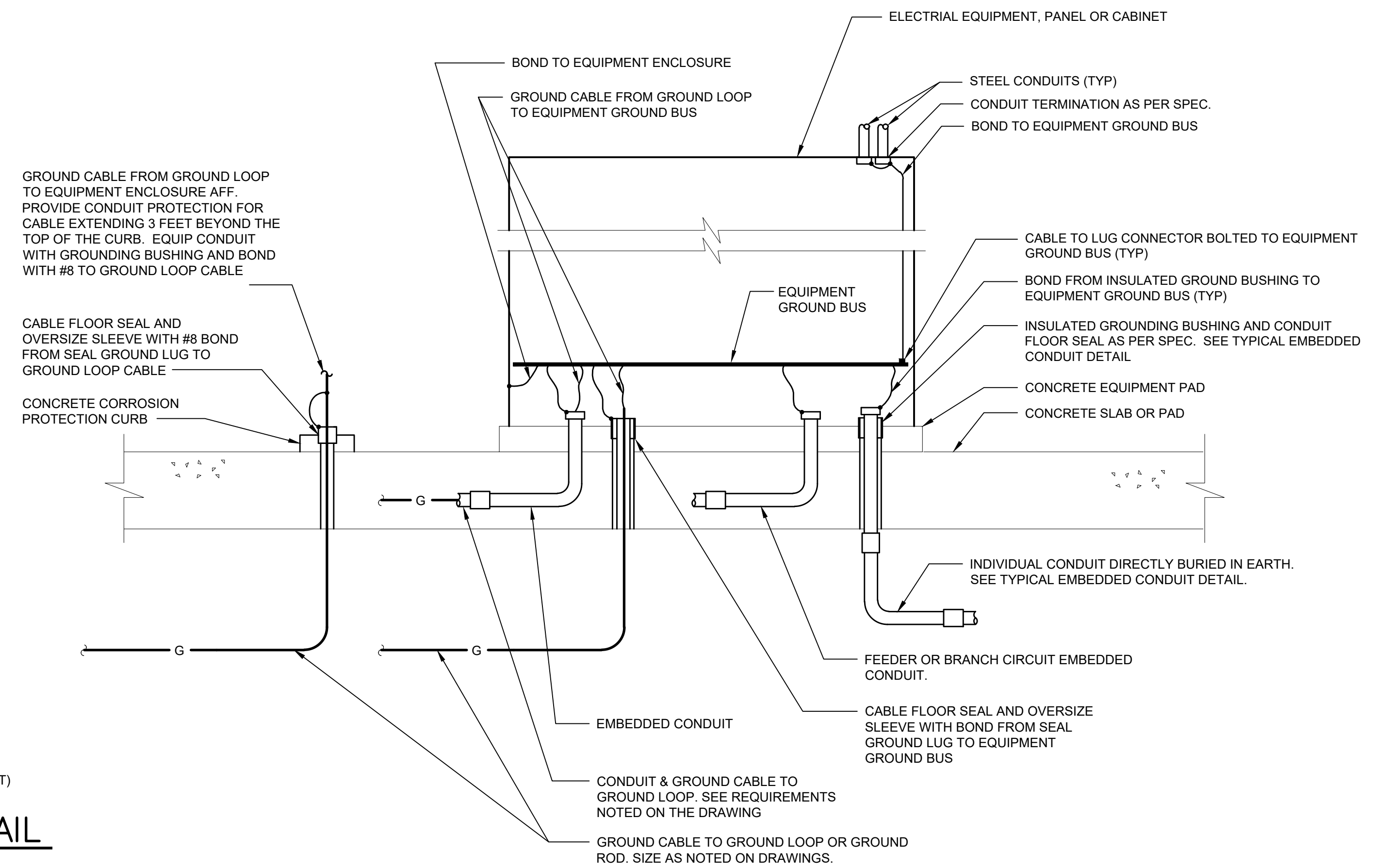
CONDUIT WALL PENETRATION



EXTERIOR GROUND TEST WELL



DIRECT-BURIED CONDUIT DETAIL



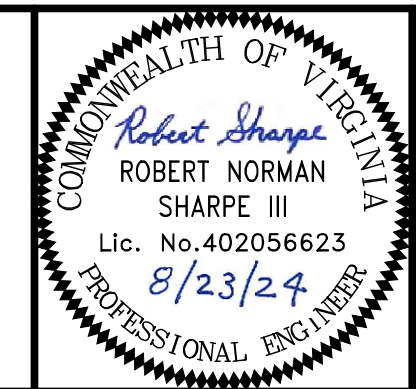
EQUIPMENT GROUNDING DETAIL

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 PLANNING & ENGINEERING DIVISION
 8560 ARLINGTON BOULEVARD
 FAIRFAX, VA 22031

DESIGNED: R. SHARPE
 DRAWN: A. CANNON
 CHECKED: G. MOORE

NO.	DATE	REVISION

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POPES HEAD PUMPING STATION
 ELECTRICAL UPGRADES
 RVSS ELEVATION VIEW AND ELECTRICAL DETAILS

FILE NAME: E09_RVSS_ELEVATION_AND_DETAILS.DWG			
PROJECT	DIVISION	DATE	DRAWING
P2722	003	AUG 2024	E09
TAX MAP:	SHEET		
067-2	25 of 25		



User: TOURTEL01\ARCADIS\FAIRFAX WATER - POPES HEAD PS UPGRADE - 7.0 CAD FILES\SHEETS\ELECTRICAL\DESIGN\ELECTRICAL\E09_RVSS_ELEVATION_AND_DETAILS.DWG Scale: 1:1 Sheet Date: 8/23/2024 Time: 14:14 Plot Date: Tourtel01, John, 8/23/2024, 14:27, Layout25