

01.24.24

ADDENDUM #1

**PROJECT: JAMES RIVER POWER STATION UPGRADE 2023-12-14
CITY UTILITIES OF SPRINGFIELD, MO**

DATE: 01/24/24

General: This addendum shall be incorporated into the Contract Documents for the Project referenced above and does not relive responsibility for requirements in other areas of the construction documents except as herein specifically stated.

MECHANICAL ITEMS (DIVISIONS 21, 22, & 23)

ACCEPTED PRODUCT/MANUFACTURER SUBSTITUTIONS

None this addendum.

GENERAL CLARIFICATIONS

1. The exact location and routing of new 8” fire line shall be field determined by contractor and coordinated with City Utilities before installation. Coordinate all requirements for installation, patch, repair, etc with CU.
2. Provide new locking caps for fire department connection as noted per plans.

CHANGES TO THE DRAWINGS

Reference Sheet ME2”

1. The discharge manhole detail was revised for battery powered meter along with discharge and construction details added. The meter model was revised to battery powered unit. Provide meter specified or approved equal.
2. The waste line out of the gravity fed manhole was changed to 6” and main pipe revised to be 6” with cleanouts and end manhole omitted.
3. Above grade heat box power was revised to be powered from Maintenance building.

ELECTRICAL ITEMS (DIVISION 26)

ACCEPTED PRODUCT/MANUFACTURER SUBSTITUTIONS

None this addendum

GENERAL CLARIFICATIONS

None this addendum

CHANGES TO THE DRAWINGS

Reference E1, “Circuit Breaker Panelboard Schedule”:

1. Power for the backflow heat box was revised to be powered from panel “LP”. Provide new breaker as noted.
2. Provide conduit and wire for communication for meter and heated box per plans.

ATTACHMENTS

Sheet ME2, M1, and E1

END OF ADDENDUM NUMBER 1

CIRCUIT BREAKER PANELBOARD SCHEDULE

PANELBOARD DESIGNATION:		MANUFACTURER: SQUARE D		VOLTAGE: 120/240						
"LP"		TYPE: QO LOAD CENTER		PHASE: 1						
		ENCLOSURE/SPACES: NEMA 1 / 30		WIRE: 3						
		MOUNTING/MAX. DIMENSION: SURFACE / 20"Wx5.75"D		MAIN RATING (AMPS): 200 AMP						
		MIN. AIC RATING (AMPS): 10000		MAIN TYPE: 200 MCB						
CIRC NO.	LOAD DESCRIPTION	CIRCUIT BREAKER	CIRCUIT BREAKER ACC.	LOAD (VA)	PHASE LOADS (VA)	LOAD (VA)	CIRCUIT BREAKER	CIRCUIT BREAKER ACC.	LOAD DESCRIPTION	CIRC NO.
1	EXISTING	20		0	0	0	20		EXISTING	2
3	EXISTING	20		0	0	0	20		EXISTING	4
5	EXISTING	20		0	0	0	20		EXISTING	6
7	EXISTING	20		0	0	0	20		EXISTING	8
9	EXISTING	20		0	0	0	20		EXISTING	10
11	EXISTING	20		0	0	0	20		EXISTING	12
13	EXISTING	20		0	0	0	20		EXISTING	14
15	EXISTING	20		0	0	0	20		EXISTING	16
17	SPACE	20		0	0	0	20		EXISTING	18
19	WATER HEATER "WH1"	20		1440	1440	0	40		EXISTING	20
21	SPACE	20		0	0	0	20		SPACE	22
23	ABOVE GRADE HEAT BOX	20	EPD	1040	1040	0	20		SPACE	24
25	SPACE	20		0	0	0	20		SPACE	26
27	SPACE	20		0	0	0	20		SPACE	28
29	SPACE	20		0	0	0	20		SPACE	30
CONNECTED SUBTOTAL (VA):				2690	2480		5170		TOTAL CONNECTED (VA)	
*DIVERSIFIED COOLING TOTAL (VA):				2690	2480				COOLING CONTROLLING LOAD	
*DIVERSIFIED HEATING TOTAL (VA):				2690	2480				1.25 FUTURE FACTOR (INCLUDED)	
PHASE LOADS (AMPS):				23	21		29		CALCULATED PANEL SIZING AMPS	
CIRCUIT BREAKER ACC. ABBREVIATIONS:										
GFI - GROUND-FAULT CIRCUIT INTERRUPTER										
AF - ARC-FAULT CIRCUIT INTERRUPTER										
ST - SHUNT TRIP										
HL-ON - HANDLE-LOCK ON DEVICE										
HL-OFF - HANDLE-LOCK OFF DEVICE										
EPD - EQUIPMENT PROTECTION DEVICE										
PANEL NOTES/ACCESSORIES:				1						
				2						
				3						

(* DIVERSIFIED LOADS HAVE BEEN CALCULATED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.)

PROVIDE NEW 20A, 125V, SINGLE POLE BREAKER.

PROVIDE NEW 15A, 208V, 2 POLE BREAKER.

PROVIDE NEW 20A, 120V, GFD RATED SINGLE POLE BREAKER.

LIGHTING FIXTURE SCHEDULE

MARK	MFG.	CATALOG #	MTG.	FINISH	LAMPS		EQUIVALENT
					TYPE	QTY	
A	WILLIAMS	75R-4-L50/840-VB2-DRV-UNV	SUSP	WHITE	LED	4000K, 5000 LUMENS	1 LJ
B	LUMARK	XTOR3B-PC1	WALL	BRONZE	LED	5000K, 2800 LUMENS	1 LJ,WI
X	WILLIAMS	EXIT/EM/LED-R-WH-RC-D-WETDRHL-D-HL	WALL	WHITE	LED	4000K, 5000 LUMENS	1 LJ,HU

ABBREVIATIONS:

Ab - ABOLITE	Ge - GENERAL ELEC	Lc - LITECONTROL	Pg - PROGRESS	Mtg - MOUNTING
Al - ALICO	Gh - GUTH	Ld - LEVITON	Pp - PRESOLITE	Rec - RECESSED
Ap - APPLETON	Hd - HALO	Ll - LITHONIA	Pt - PASS & SEYMOUR	Surf - SURFACE
Aa - ARCH AREA LIGHTING	Hh - HOLLOWAY	Ll - LONG LIGHTS	Rd - ROBERTS	Trk - TRACK
Ch - CHLORIDE	Hu - HUBBELL	Ll - LINEAR LIGHTING	St - STAFF	Trk - TRACK
Cl - COAST LIGHTING	Hy - HYREL	Lf - LIGHTOLIER	Sp - SPAULDING	Cabl - CABLE
Cs - COLUMBIA	Ic - ICE	Ll - LUMARK	SPI - SPI	Mfg - MANUFACTURER
Ch - CROUSE-HINDS	Id - INDALUX	Md - MARCO	St - STERNER	Qty - QUANTITY
Dd - DEVINE	Kd - KENALL	Md - METALUX	Sr - SURE-LITES	Flr - FLUORESCENT
Dl - DUAL-LITE	Km - KIM	Mg - MCGRAW EDISON	Sv - SYLVAN	Inc - INCANDESCENT
Ed - EDISON PRICE	Kv - KURT VERSEN	Nu - NU-LITE	Ti - TIVOLI	Hid - HIGH INTENSITY DISCHARGE
El - EMER-LITE	Lm - LAM	Pd - PEERLESS	Wi - WILLIAMS	Univ - UNIVERSAL
Fs - FAIL-SAFE	Ld - LIGHTALARMS	Pd - PRUDENTIAL		

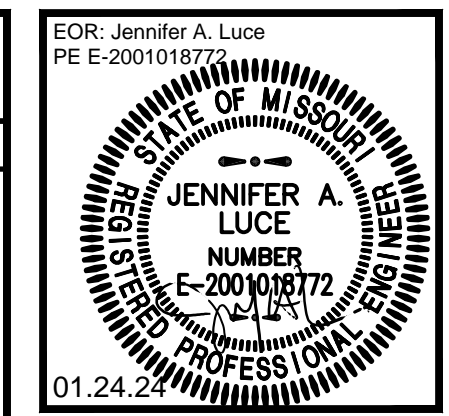
DISCONNECT SWITCH SCHEDULE

MARK	LOAD	SWITCH		FUSE		ENCLOSURE NEMA TYPE	NOTES
		VOLTS	DUTY	AMP	POLE		
DS1	"HP1"	208	GD	30	2	-	3R

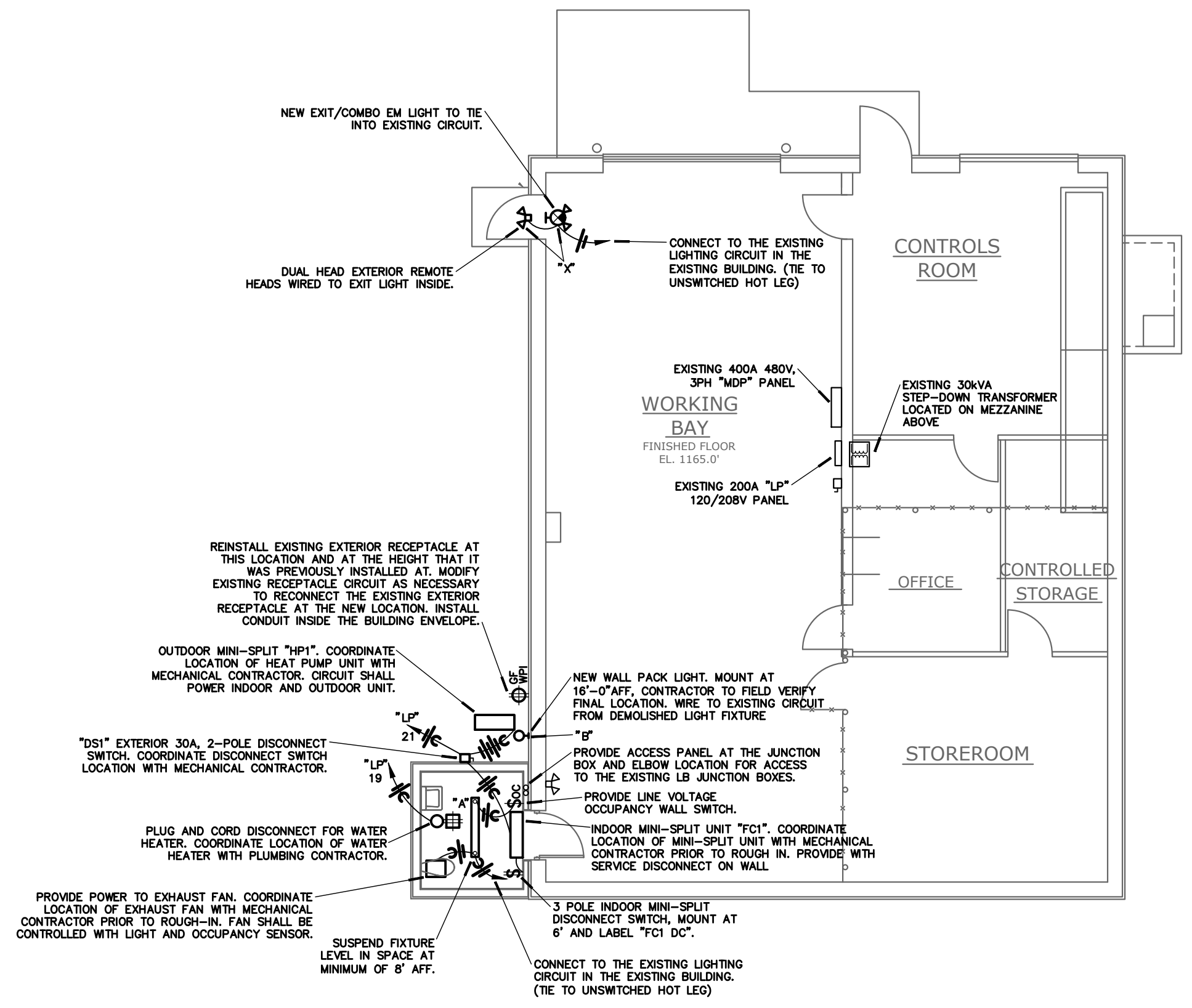
ABBREVIATIONS:

GD - GENERAL DUTY
HD - HEAVY DUTY
SN - SOLID NEUTRAL

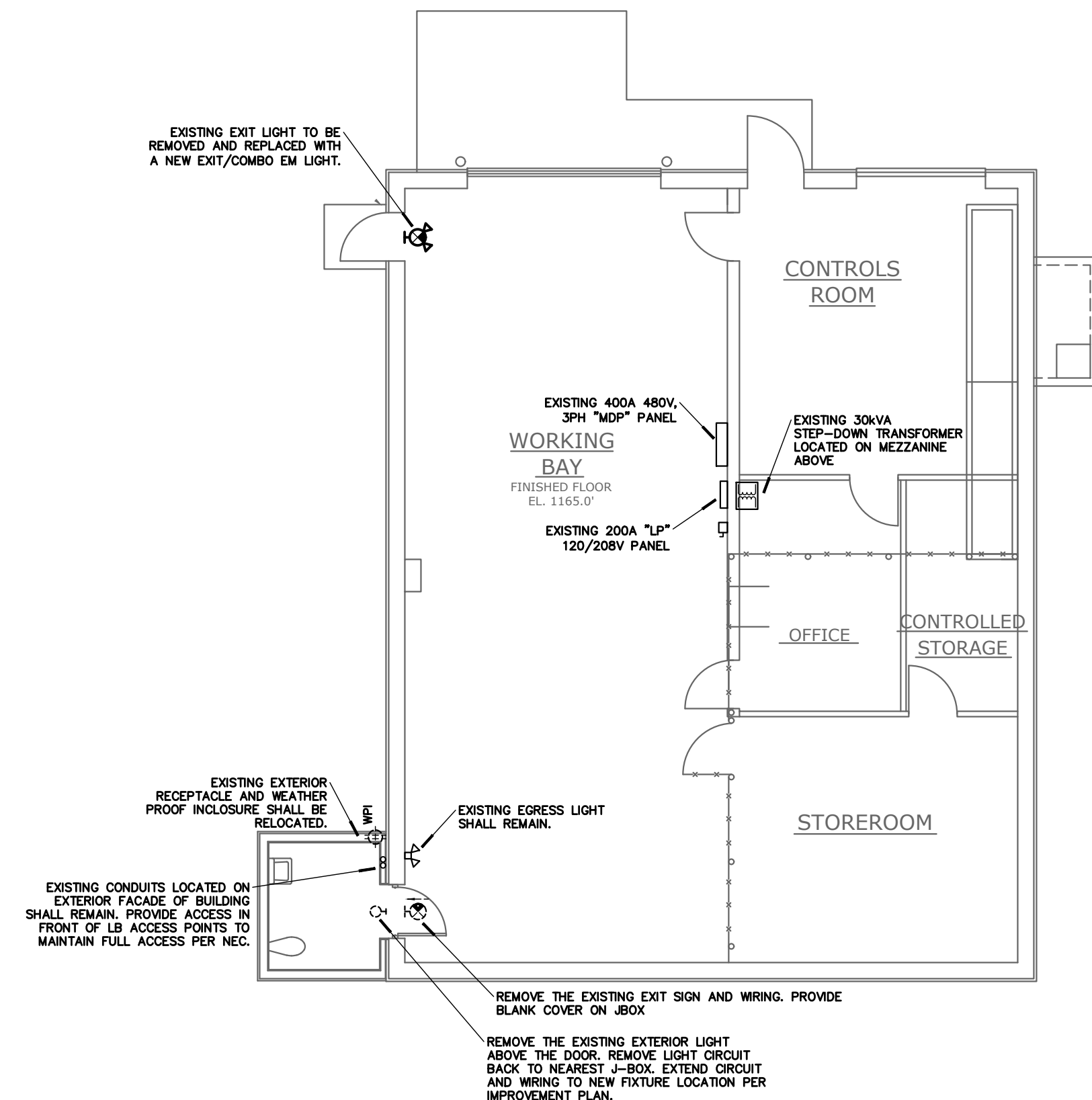
- ### NOTES:
- GENERAL ELECTRICAL NOTES:**
- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE 2017 NATIONAL ELECTRIC CODE AS ADOPTED BY THE CITY OF SPRINGFIELD, MISSOURI.
 - FOR ALL ELECTRICAL QUESTIONS ON THIS PROJECT, CONTACT WITH ENGINEERING CONSULTANTS AT (417) 881-0020. CONTACT: JAMES COUCH.
 - CONTRACTOR SHALL SECURE AND PAY FOR NECESSARY MEP PERMITS AND CERTIFICATES OF INSPECTION REQUIRED BY GOVERNMENTAL ORDINANCES, LAWS, RULES, OR REGULATIONS.
 - FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO THE CONDITION THAT ALL SYSTEMS, EQUIPMENT, APPARATUS, AND APPLIANCES OPERATE SATISFACTORILY AS DESIGNED AND INTENDED. WORK SHALL INCLUDE REQUIRED REPLACEMENT, ADJUSTMENT OF SYSTEMS AND CONTROL EQUIPMENT AND ALL REQUIRED PROGRAMMING. PROVIDE FOR ALL WORK INDICATED ON DRAWINGS OR AS REASONABLY IMPLIED. PROVIDE NECESSARY MATERIALS AND ACCESSORIES FOR THE INSTALLATION OF FIXTURES, EQUIPMENT, ETC AS REQUIRED FOR COMPLETE AND FUNCTIONAL OPERATION AS NOTED ON DRAWINGS OR IN NOTES.
 - ACCESS PANELS SHALL BE PROVIDED WHEREVER NECESSARY TO PROVIDE ACCESS TO VALVES, JUNCTION BOXES, ETC. LOCATED IN CONCEALED SPACES. PROVIDE COVER FOR ANY OPEN JUNCTION BOXES.
 - THE CONTRACTOR SHALL CONTACT THE OWNER AND COORDINATE ALL OUTAGES 5 DAYS PRIOR TO ANY SHUT-OFF OF SERVICES.
 - THE CONTRACTOR SHALL SCHEDULE AND EXECUTE ALL WORK WITH REGARD TO THE OWNER'S USE OF THE BUILDING.
 - PLANS ARE DIAGNAMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
 - PROVIDE PULL BOXES AS REQUIRED TO PROPERLY INSTALL THE RACEWAYS AND CIRCUITS INDICATED.
 - WHERE DEMOLISHED ELECTRICAL DEVICES ARE PART OF A CIRCUIT THAT IS THRU-WIRED OR HAS ADDITIONAL DEVICES ON THE CIRCUIT THAT ARE TO REMAIN UNCHANGED, THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF THE EXISTING CIRCUIT. ANY ADDITIONAL CONDUIT, WIRING, BOXES, ETC. NEEDED TO MODIFY THE EXISTING CIRCUIT TO MAINTAIN THE INTEGRITY ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE INCLUDED IN THE BASE BID.
 - EXISTING CONDITIONS ON THIS SET OF BID DOCUMENTS WERE TAKEN FROM EXISTING DRAWINGS, LIMITED SITE VISITS, AND VISUAL OBSERVATIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. CHANGE ORDERS WILL NOT BE PAID DUE TO UNANTICIPATED CONDITIONS TO MEET INTENT OF WORK.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORING, PATCH, AND REPAIR OF ALL WALL AND FLOOR SYSTEMS AS REQUIRED DUE TO CONSTRUCTION WORK. MAINTAIN ALL FIRE RATINGS.
 - LIGHTING CONTROLS BY WATTSTOPPER, LUTRON, AND LEVITON.
 - PROVIDE CONDUCTORS FOR LISTED APPLICATIONS AS FOLLOWS:
LIGHTING AND RECEPTACLE CIRCUITS: TYPE THHN, 600 VOLT, 75 DEGREE C (194 DEGREE F) THERMOPLASTIC INSULATED BUILDING CONDUCTOR.
 - ALL WIRING SHALL BE CONCEALED IN ALL FINISHED SPACES. ALL WIRING SHALL BE IN EXISTING CONDUIT UNLESS OTHERWISE NOTED. SURFACE MOUNTED CONDUIT IS ACCEPTABLE FOR EXISTING WALLS. FLEXIBLE CONDUIT SHALL BE ACCEPTABLE FOR CONNECTIONS TO LIGHT FIXTURES AND WHERE NEW DEVICES ARE INSTALLED IN EXISTING WALLS.
 - ALL RECEPTACLES SHALL BE AT 18" AFF UNLESS NOTED OTHERWISE.
 - DUPLEX RECEPTACLES SHALL BE HUBBELL MODEL 5352 20A, 125V, NEW CONFIGURATION 5-20R WHITE DUPLEX RECEPTACLE WITH STAINLESS STEEL COVERPLATE TO MATCH EXISTING.
 - CONTRACTOR SHALL PROVIDE A MODIFIED CIRCUIT DIRECTORY FOR ANY PANELS WITH REVISIONS AS NOTED ON PLANS.
 - CONTRACTOR RESPONSIBLE FOR ALL PATCH AND REPAIR OF EXISTING SURFACES AS REQUIRED FOR THE INSTALLATION OF NEW DEVICES. REMOVE AND REPLACE DEVICES ON EXISTING WALL AS NEEDED FOR NEW FINISHES. PROVIDE EXTENSION RINGS WHERE REQUIRED.
 - CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, ACCESSORIES, AND MATERIALS FURNISHED UNDER THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE.



PROJECT: JAMES RIVER POWER STATION UPGRADE 2023-12-14
CITY UTILITIES OF SPRINGFIELD, MO



2 E1 ELECTRICAL IMPROVEMENT PLAN
SCALE: 1/8"=1'-0" NORTH

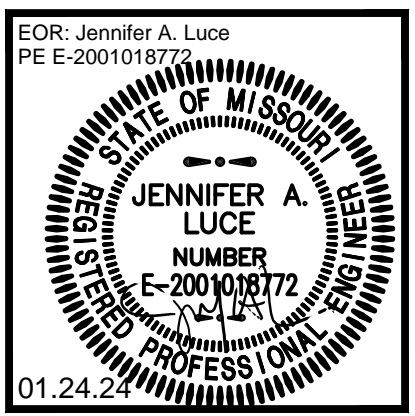


1 E1 ELECTRICAL DEMO PLAN
SCALE: 1/8"=1'-0" NORTH



DATE	01/05/2024
PROJECT NUMBER	23.CU.001
DRAWN BY	JMC
CHECKED BY	JAL
SHEET NUMBER	E1

REVISIONS:
1 01.24.2024 - ADDENDUM #1



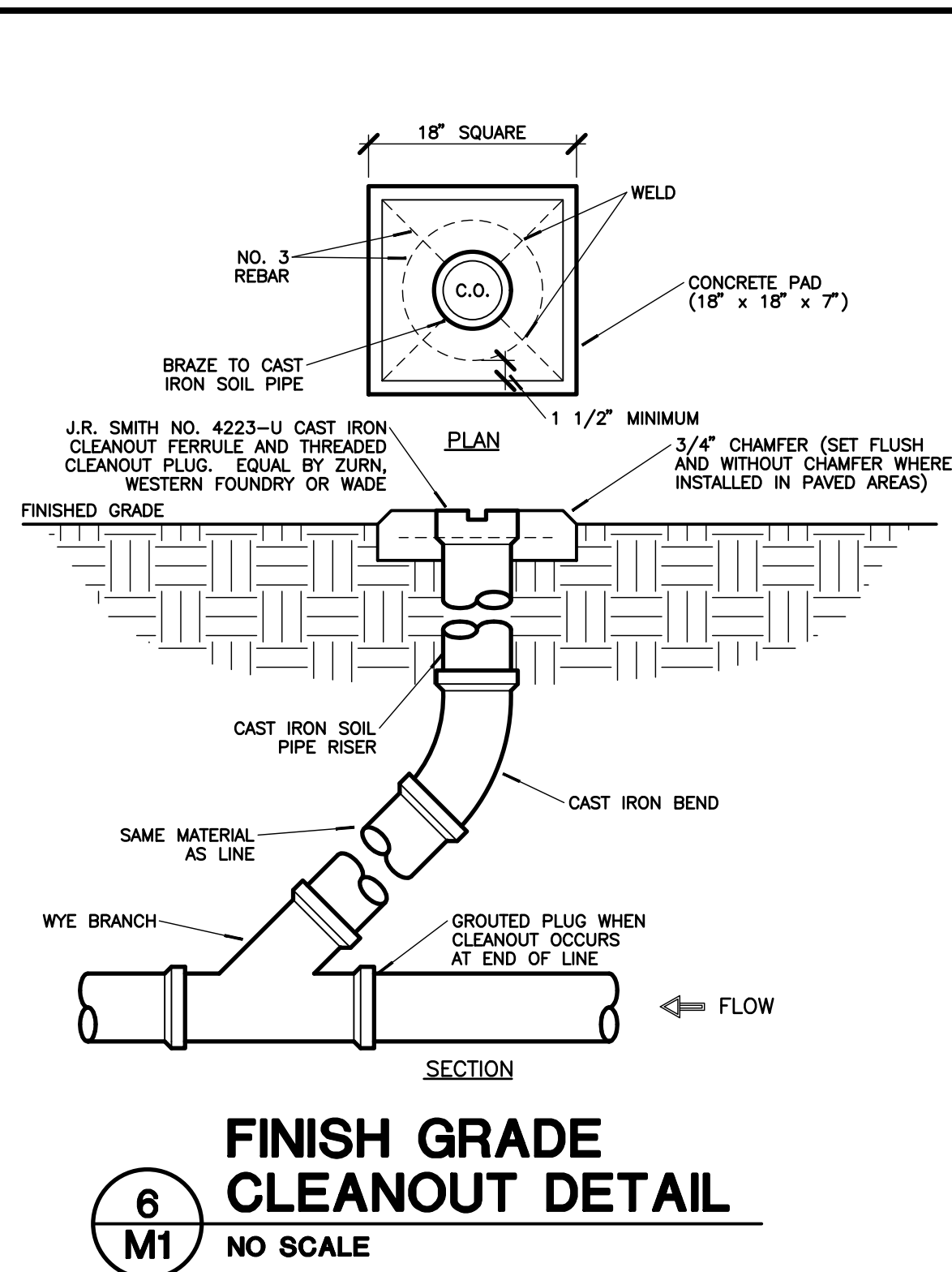
PROJECT: JAMES RIVER POWER STATION UPGRADE 2023-12-14
 CITY UTILITIES OF SPRINGFIELD, MO



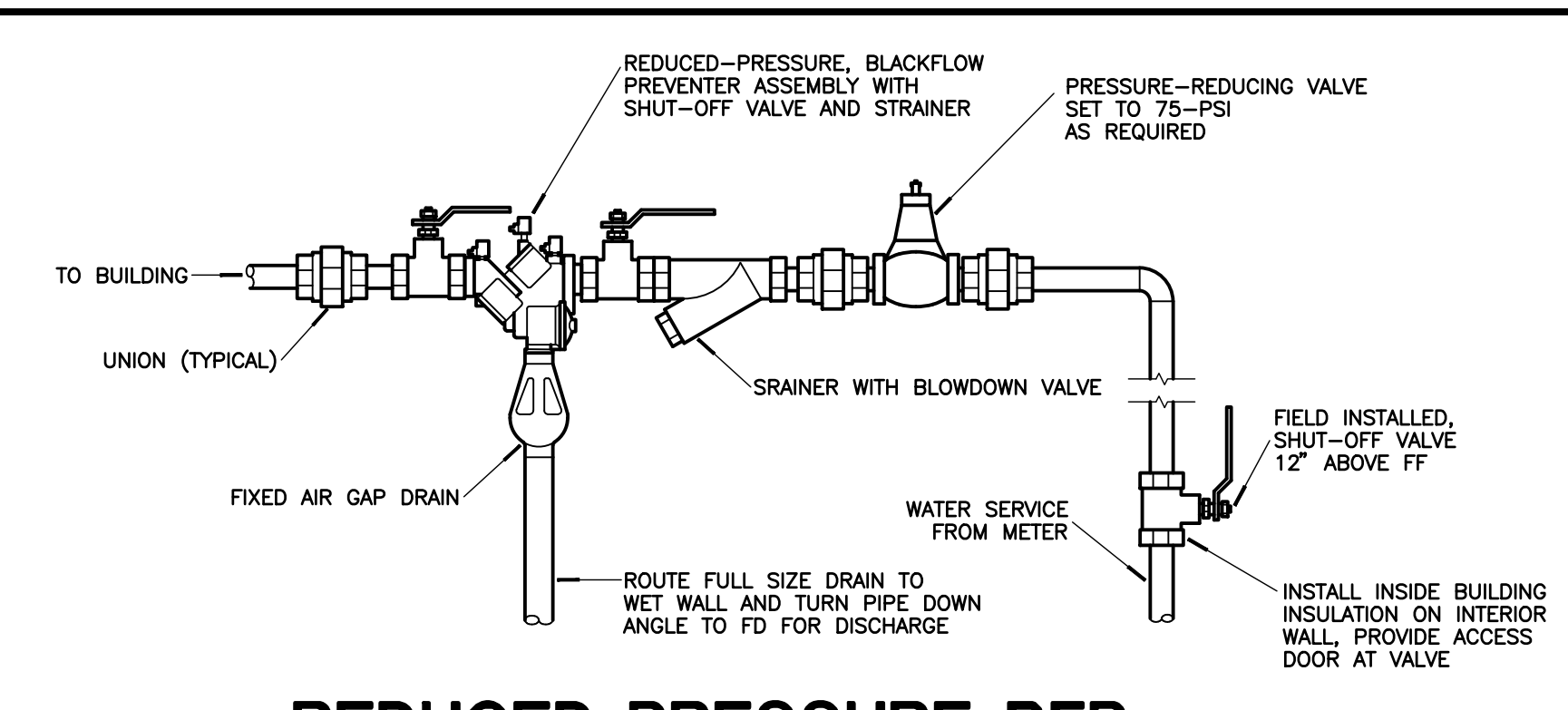
DATE: 01/05/2024
 PROJECT NUMBER: 23.CU.001
 DRAWN BY: ZM
 CHECKED BY: JAL
 SHEET NUMBER: M1

- ### NOTES:
- GENERAL NOTES:**
- ALL MECHANICAL WORK SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL MECHANICAL CODE AS ADOPTED BY THE CITY OF SPRINGFIELD, MISSOURI.
 - FOR ALL PLUMBING QUESTIONS ON THIS PROJECT, CONTACT WITH ENGINEERING CONSULTANTS AT (417) 881-0020. CONTACT: JAMES COUCH.
 - CONTRACTOR SHALL SECURE AND PAY FOR NECESSARY MEP PERMITS AND CERTIFICATES OF INSPECTION REQUIRED BY GOVERNMENTAL ORDINANCES, LAWS, RULES, OR REGULATIONS.
 - FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO THE CONDITION THAT ALL SYSTEMS, EQUIPMENT, APPARATUS, AND APPLIANCES OPERATE SATISFACTORILY AS DESIGNED AND INTENDED. WORK SHALL INCLUDE REQUIRED REPLACEMENT, ADJUSTMENT OF SYSTEMS AND CONTROL EQUIPMENT AND ALL REQUIRED PROGRAMMING. INSTALLATION, PROVIDE FOR ALL WORK INDICATED ON DRAWINGS OR AS REASONABLY IMPLIED.
 - TEST ALL LINES, SYSTEMS, EQUIPMENT BEFORE THEY ARE USED. PAINTED OR CONCEALED BY CONSTRUCTION OR BACKFILLING. PROVIDE FUEL, WATER, ELECTRICITY, MATERIALS, LABOR, AND EQUIPMENT REQUIRED FOR TESTS. REPAIR OR REPLACE DEFECTIVE PARTS, AND MATERIALS FAILURES REVEALED BY TESTS AND THEN RETESTED UNTIL SATISFACTORY. MAKE REPAIRS WITH NEW MATERIALS.
 - PROVIDE NECESSARY MATERIALS AND ACCESSORIES FOR INSTALLATION OF FIXTURES, EQUIPMENT, ETC AS REQUIRED FOR COMPLETE AND FUNCTIONAL OPERATION AS NOTED ON DRAWINGS OR IN NOTES.
 - ALL EQUIPMENT, FIXTURES, MATERIALS, ETC SHALL BE INSTALLED IN NEAT, PROFESSIONAL MANNER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - EXISTING CONDITIONS ON THIS SET OF BID DOCUMENTS WERE TAKEN FROM EXISTING DRAWINGS, LIMITED SITE VISITS AND VISUAL OBSERVATIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. CHANGE ORDERS WILL NOT BE PAID DUE TO UNANTICIPATED CONDITIONS TO MEET INTENT OF WORK.
 - PLANS ARE DIAGNOSTIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
 - ALL METAL DUCTWORK SPECIFIED TO RECEIVE EXTERIOR WRAP INSULATION.
 - MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR TRANSITIONS TO ALL EQUIPMENT CONNECTION SIZES.
 - ALL PLUMBING WORK SHALL BE IN ACCORDANCE WITH THE 2018 EDITION OF THE INTERNATIONAL PLUMBING CODE AS ADOPTED BY THE CITY OF SPRINGFIELD, MISSOURI.
 - FOR ALL MECHANICAL QUESTIONS ON THIS PROJECT, CONTACT WITH ENGINEERING CONSULTANTS AT (417) 881-0020. CONTACT: JAMES COUCH.
 - CONTRACTOR SHALL SECURE AND PAY FOR NECESSARY MEP PERMITS AND CERTIFICATES OF INSPECTION REQUIRED BY GOVERNMENTAL ORDINANCES, LAWS, RULES, OR REGULATIONS.
 - PROVIDE NECESSARY MATERIALS AND ACCESSORIES FOR INSTALLATION OF FIXTURES, EQUIPMENT, ETC AS REQUIRED FOR COMPLETE AND FUNCTIONAL OPERATION AS NOTED ON DRAWINGS OR IN NOTES.
 - DUCT MATERIALS SHALL BE AS FOLLOWS: ROUND EXHAUST/OUTSIDE AIR DUCT - 1" PRESSURE CLASS OR LESS; GALVANIZED SHEET METAL PIPE WITH GALVANIZED JOINTS TYPED. WRAP WITH 1.5" 3.0 LB DENSITY FIBERGLASS DUCT WRAP WITH FOIL-SCRM-KRAFT FACING.
 - ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. MANUAL, 15G. ALL SUPPLY AIR DUCT PRESSURE CLASSES SHALL BE THE SAME AS THE EXTERNAL STATIC PRESSURE (ESP) OF THE EQUIPMENT SUPPLYING THE DUCT. THE EQUIPMENT ESP SHALL BE THE PRESSURE CLASS FOR THE ENTIRE SUPPLY DUCT SYSTEM.
 - EQUIVALENT MANUFACTURERS OF EXHAUST FANS SHALL BE LOREN COOK, FENWICK, JENI INDUSTRIES, OR GREENHECK.
 - PROVIDE FLEXIBLE CONNECTION FOR ALL DUCTS CONNECTING TO NEW EQUIPMENT.
 - ALL NEW EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL INCLUDE COMPLETE TEST AND BALANCE OF SYSTEMS TO ENSURE FUNCTIONALITY.
 - WALL LOUVERS/CAPS SHALL BE PROVIDED WITH BIRD SCREEN AND SHALL HAVE THE CAPABILITY TO BE PAINTED WITH A CUSTOM COLOR.
 - INSULATE ALL DOMESTIC WATER, REFRIGERANT, AND CONDENSATE DRAIN LINES WITH 1/2" AP ARMAFLEX. ALL INSULATION MATERIALS SHALL HAVE A FLAME SPREAD RATING NO GREATER THAN 25 AND A SMOKE DEVELOPED RATING NO GREATER THAN 50. INSULATION SHALL BE CONTIGUOUS AT ALL HANGERS, SUPPORTS, AND FRAMES. 120 DEGREE HOT WATER PIPING SHALL BE 1" INSULATION FOR PIPING.
 - FINISHED FLOOR CLEANOUTS SHALL BE J. R. SMITH MODEL 4031 CAST IRON CLEANOUT WITH ROUND NICKEL BRONZE SCORRIATED COVER. EQUIVALENT FINISHED FLOOR CLEANOUTS BY JONESPEC, WADE, OR ZURN. FINISH GRADE CLEANOUTS SHALL BE J. R. SMITH 4223 CAST IRON WITH EXTRA DUTY CAST IRON TOP SET IN 18"X18" CONCRETE PAD UNLESS ALREADY IN PAVED SURFACE.
 - FLOOR DRAIN SHALL BE J. R. SMITH MODEL 2010-A INSIDE CAULK CAST IRON BODY FLOOR DRAIN WITH INTEGRAL FLASHING COLLAR AND ADJUSTABLE ROUND NICKEL BRONZE STRAINER HEAD. NEOPRENE PUSH ON GASKET MAY BE USED IN LIEU OF INSIDE CAULK AT CONTRACTOR'S OPTION. PROVIDE A P-TRAP FOR ALL FLOOR DRAINS. EQUIVALENT FLOOR DRAINS BY JONESPEC, WADE, OR ZURN. PROVIDE HOLE IN GRATE OR FUNNEL WHERE FLOOR DRAIN IS DEDICATED FOR EQUIPMENT DRAINAGE.
 - ALL SHUTOFF VALVES ON DOMESTIC WATER SHALL BE APOLLO SERIES 70-00 BRONZE FULL PORT BALL VALVE AND PSI-HOG WITH TEFLOON SEATS, BRONZE BALL, SILICON BRONZE TEST INSULATED HANDLE, AND SCREWED SOLDER ENDS. EQUIVALENT VALVES BY MIRO-SCOTT, CRANE, FAIRBANKS, HALL, MUESS STOCKHAM, KENNEDY, KEYSTONE, OR POWELL. EACH VALVE SHALL BE INSTALLED SO THAT IT IS EASILY ACCESSIBLE FOR OPERATION, VISUAL INSPECTION, AND MAINTENANCE.
 - EQUIVALENT PLUMBING FIXTURES BY AMERICAN STANDARD, KOHLER, ELJER, OR CRANE.
 - EQUIVALENT WATER HEATERS BY EEMAX, BRADFORD WHITE, OR EQUAL COMMERCIAL GRADE MANUFACTURER.
 - EQUIVALENT FAUCETS AND FITTINGS BY AMERICAN STANDARD, KOHLER, ELJER, CRANE, MOEN, OR DELTA.
 - THE EXISTING BUILDING IS PROVIDED WITH AN AUTOMATIC FIRE SPRINKLER SYSTEM. THE WORK INCLUDES PROVIDING A FULLY OPERATIONAL AUTOMATIC FIRE SPRINKLER SYSTEM FOR ALL AREAS OF THE BUILDING INCLUDING ADDING FOR NEW ADDITION. ALL FIRE SPRINKLER MATERIALS AND INSTALLATION SHALL COMPLY WITH NFPA 13, STATE AND LOCAL CODES AND FACTORY MUTUAL ENGINEERING REQUIREMENTS. FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING HIS OWN FLOW READINGS OR PURPOSES OF DESIGN. FIRE SPRINKLER SYSTEM CONTRACTOR SHALL ENGINEER AND INSTALL THE FIRE SPRINKLER SYSTEM AS REQUIRED TO PROVIDE PROPER COVERAGE FOR THE ENTIRE BUILDING. BEFORE ANY SPRINKLER WORK BEGINS SUBMIT SCALED DRAWINGS INDICATING THE LOCATIONS OF SPRINKLER HEADS AND HOW THEY INTERFERE WITH CEILING TILES, LIGHTING FIXTURES, HVAC GRILLES AND DIFFUSERS, ETC. LAYOUT DRAWINGS SHALL ALSO INCLUDE, BUT NOT LIMITED TO PIPE SIZES AND LOCATIONS, ELEVATIONS AND SLOPES OF HORIZONTAL PIPING RUNS, COORDINATION OF PIPING WITH DUCTWORK, PIPING, ETC. AND HANGER LOCATIONS DRAWINGS AND CALCULATIONS SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER. THE SPRINKLER SYSTEM SHALL BE A COMPLETE SYSTEM AS REQUIRED BY LOCAL AUTHORITIES. SUBMIT TO THE AGENCY HAVING JURISDICTION FOR APPROVAL WITHIN 30 DAYS OF ISSUANCE OF BUILDING PERMITS. SUBMIT ONE APPROVED COPY BEARING THE STAMP AND/OR SIGNATURE OF THE AGENCY HAVING JURISDICTION BEFORE PROCEEDING WITH INSTALLATION. NO FIRE SPRINKLER WORK SHALL BEG UNLESS FINAL SHOP DRAWINGS ARE APPROVED. PROVIDE CHROME PLATED SPRINKLER HEADS IN FINISHED AREA. FIRE PROTECTION WORK SHALL BE INSTALLED BY A QUALIFIED CONTRACTOR (SPRINKLER FITTER OR FIRE JURISDICTIONAL DICTATES) WITH AT LEAST 3 YEARS OF INSTALLATION EXPERIENCE ON PROJECTS WITH FIRE PROTECTION WORK SIMILAR TO THAT REQUIRED FOR THE PROJECT.
 - CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, ACCESSORIES, AND MATERIAL FURNISHED UNDER THIS CONTRACT FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE.

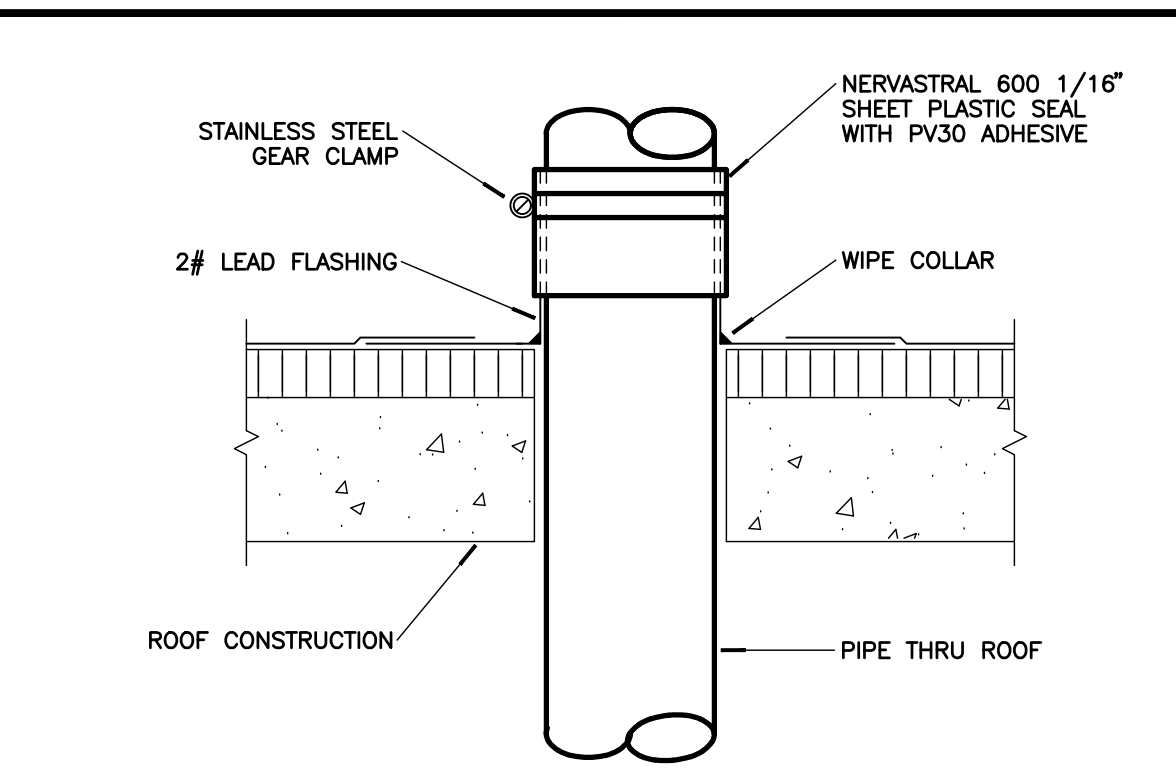
32. PROVIDE PLUMBING FIXTURES AS SHOWN ON DRAWINGS AS SPECIFIED COMPLETE INCLUDING PIPING AND CONNECTIONS. FIXTURES FITTING AGAINST WALLS SHALL HAVE GROUND BACKS. EXPOSED PIPING AND FITTING SHALL BE CHROME PLATED. SET FIXTURES TRUE AND LEVEL WITH ALL NECESSARY SUPPORTS FOR FIXTURES INSTALLED BEFORE PLASTERING IS DONE. NIPPLES THROUGH WALL TO FIXTURE CONNECTION SHALL BE CHROME PLATED BRASS. CONTRACTOR MAY USE COPPER STUB OUTS TO STOPS UNDER LAVATORIES. PROVIDE DEEP ESCUTCHEONS ARE USED AND NO COPPER IS VISIBLE IN LIEU OF CHROME NIPPLES. PROVIDE ALL NEW CHROME PLATED BRASS TRAPS AND STAINLESS-STEEL SUPPLIES WITH COMPRESSION INLET ANGLE COMPRESSION STOP AT ALL APPLICABLE FIXTURES. PROVIDE OFFSET TRAPS AND FLUSH LEVER FOR URINALS AND WATER CLOSET AS REQUIRED FOR ADA COMPLIANCE. PROVIDE FLOOR MOUNT NEW CARRIERS FOR PLUMBING FIXTURES. ALL FIXTURES SHALL BE INSTALLED FOR ADA COMPLIANCE.
- PLUMBING FIXTURE SCHEDULE**
- FLOOR MOUNT, FLUSH VALVE, BOTTOM OUTLET WATER CLOSET: ZURN #Z605-9M1; ELONGATED BOWL, VITREOUS CHINA, FLOOR MOUNTED, BOTTOM OUTLET, SIPHON JET, 1.6 GALLONS PER FLUSH, 1 1/2" TOP SPUD WATER CLOSET WITH ZURN #Z605M1 FLUSH VALVE CLOSE-COUPLED WATER CLOSET WITH OLSONITE #95 OPEN FRONT WHITE SEAT LESS COVER.
 - WALL MOUNTED SERVICE SINK, 25" X 19.5", WALL HANGER SUPPORT, STAINLESS STEEL, ELKAY DW5250, FAUCET TYPE 1: ASSE1070 THERMOSTATIC MIXING VALVE, CONCEALED HEAVY DUTY WALL CARRIER, AND ALL SUPPLIES, FAUCET AND GRID DRAIN SYSTEM, REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING AND ELEVATIONS. MOUNT AND SECURE MIXING VALVE TIGHT UNDER SINK.
 - WALL MOUNTED SERVICE SINK FAUCET, T85 #B-1148-01, CHROME PLATED BRASS BODY, WALL MOUNT 2-15/16" SWIVEL GOOSENECK WITH QUARTER TURN COMPRESSION CARTRIDGES, COLOR CODED LEVER HANDLES, 2.2 AERATOR AND GRID DRAIN.



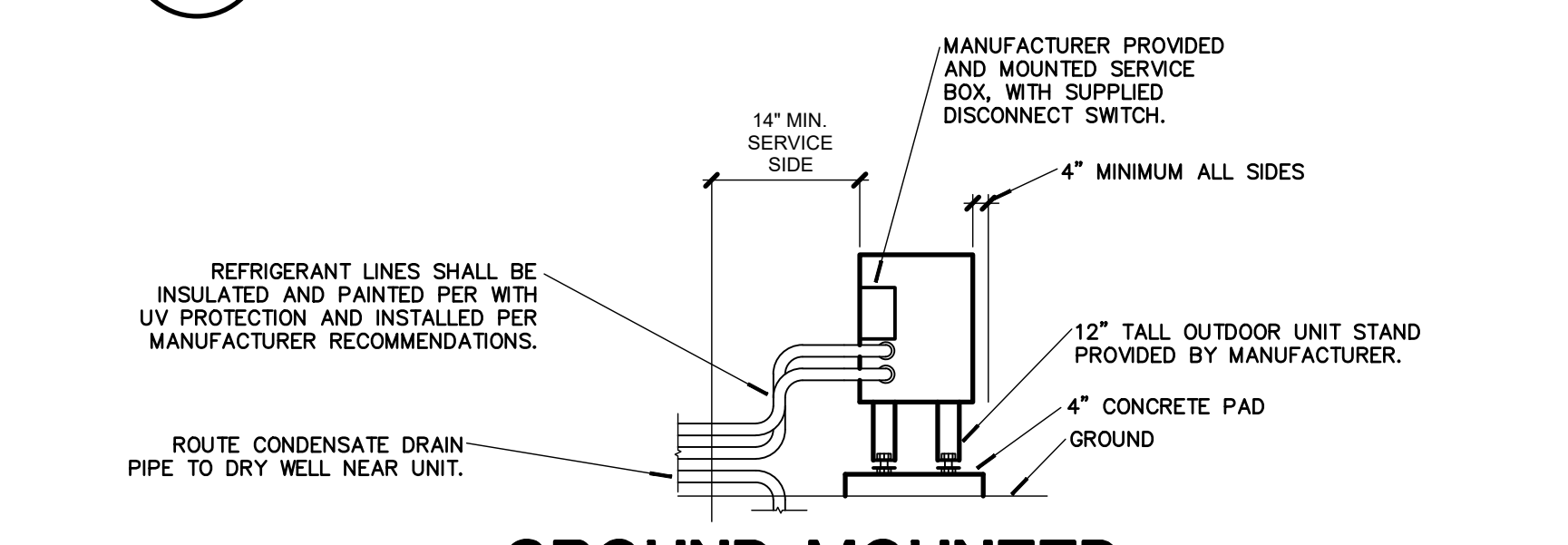
6
M1 NO SCALE



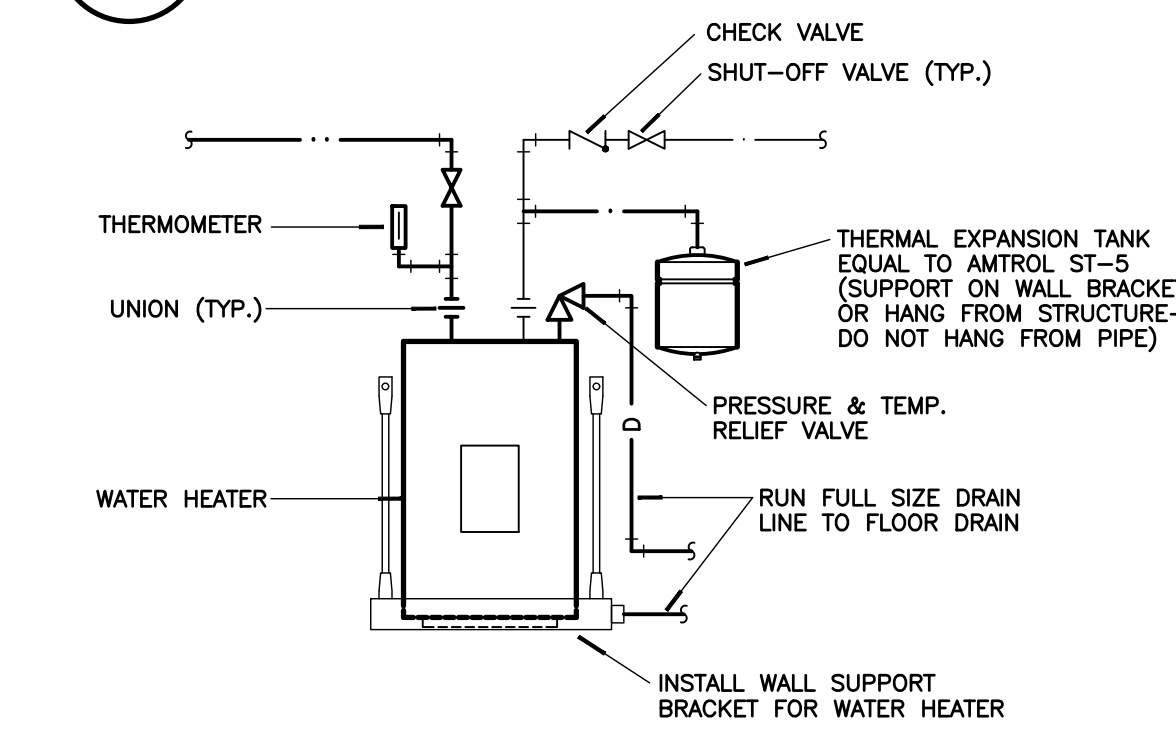
5
M1 NO SCALE



4
M1 NO SCALE



7
M1 NO SCALE



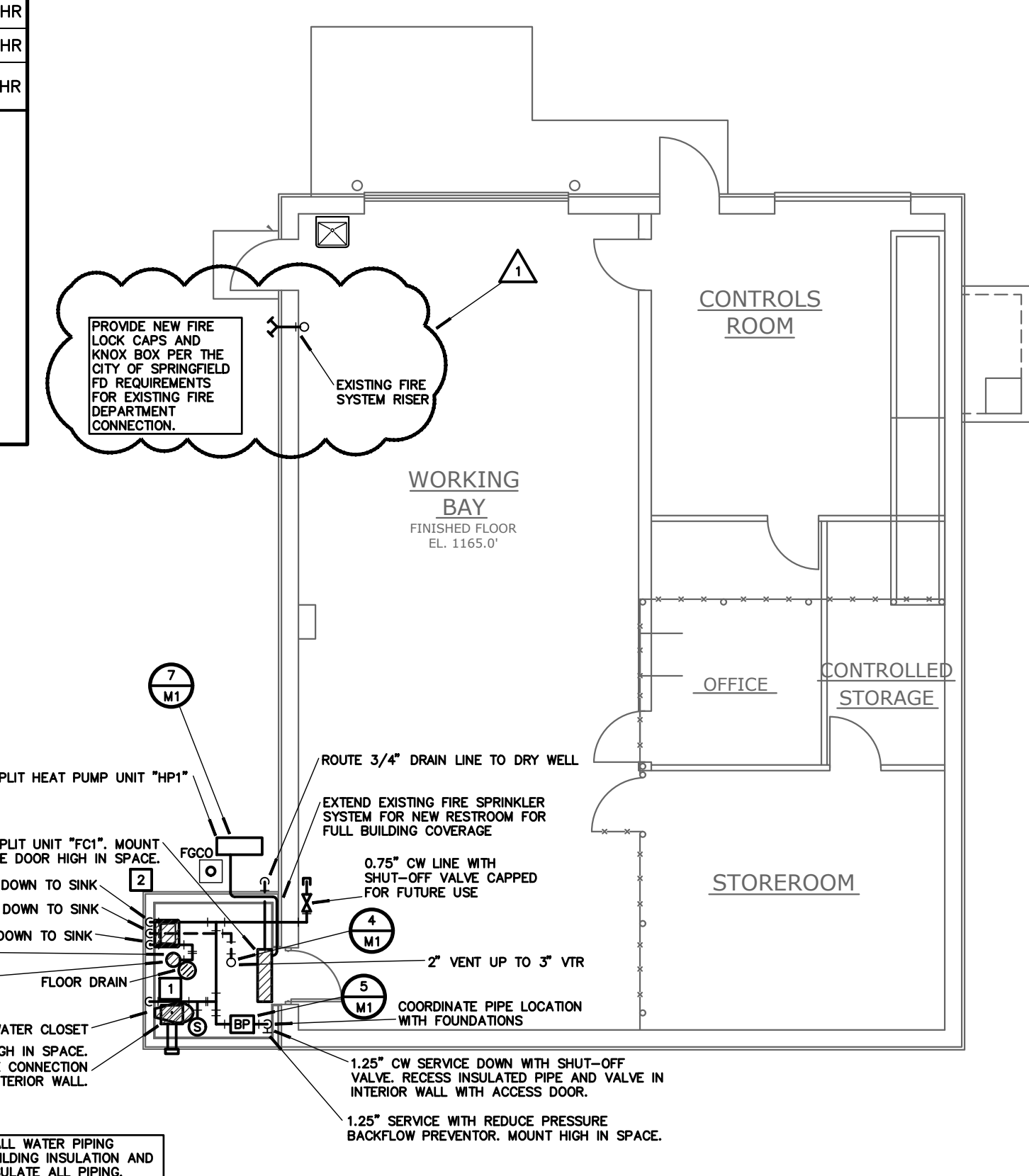
3
M1 NO SCALE

RESTROOM A/C UNIT SCHEDULE												
DUCTLESS MINI-SPLIT INDOOR UNIT												
MARK	MFG.	MODEL #	CFM	COOLING DATA			HEATING DATA			ELECTRICAL DATA		ACCESSORIES
				SHC	THC	THC	VOLT/PH	FLA	MCA	MOP(A)		
FC1	MITSUBISHI	MSZ-FS06NA	140	8640	9000	12,840	208/1	.65	1	-	THERMOSTAT, FILTER	
OUTDOOR HEAT PUMP												
MARK	MFG.	MODEL #	AMB. TEMP.	COOLING CAPACITY	SEER	HEATING CAPACITY	MIN COP	ELECTRICAL DATA		ACCESSORIES		
								VOLT/PH	MCA	MOP(A)		
HP1	MITSUBISHI	MUZ-FS06NA	95	9000	32.2	10,500*	2.46	208/1	10	15	HAIL GUARD, 12" STAND	
ABBREVIATIONS: * - EVALUATED AT 5 DEGREE FAHRENHEIT												

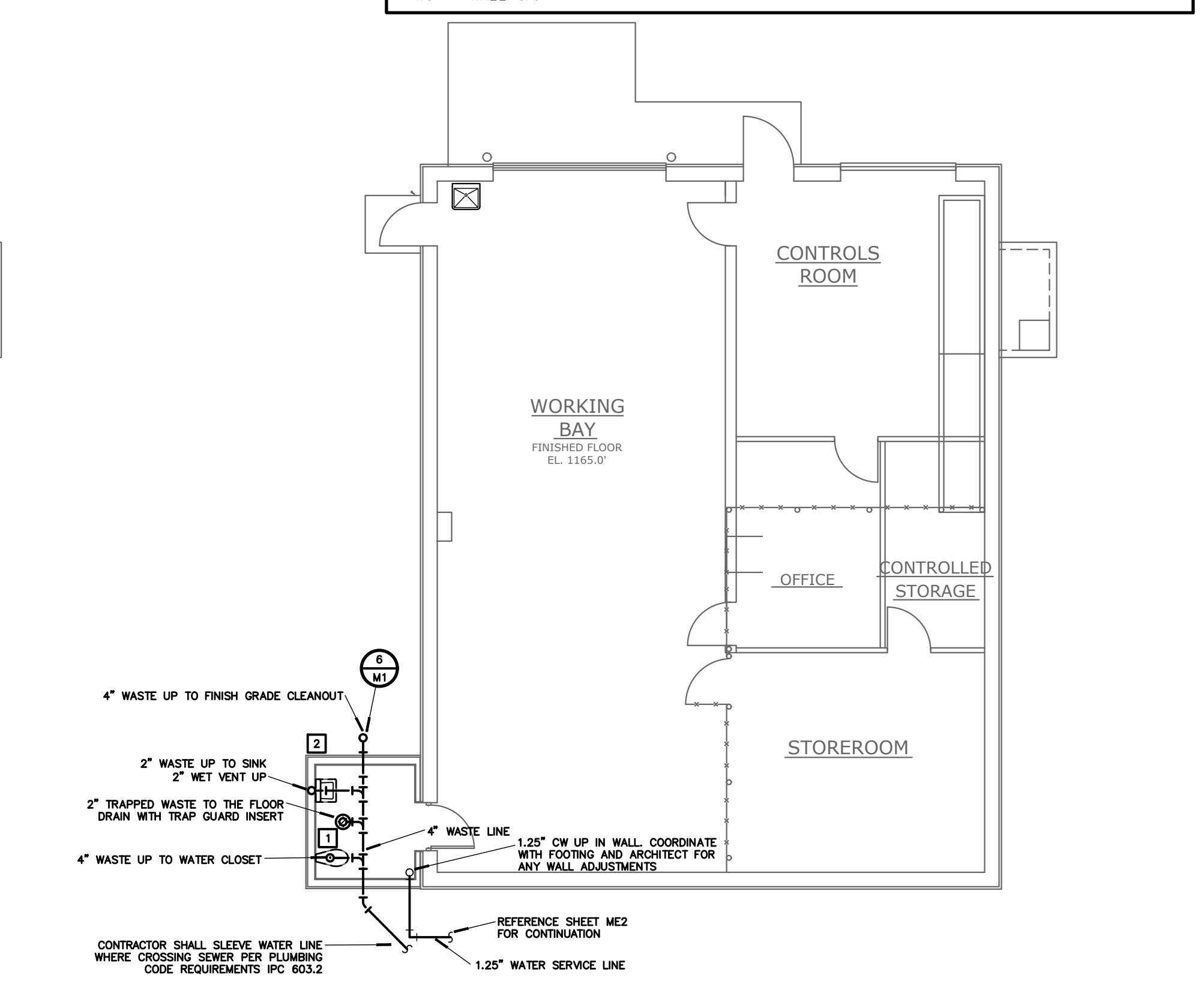
EXHAUST FAN SCHEDULE							
MARK	MANUFACTURER	CATALOG NUMBER	CFM	EST. ESP.	VOLTS/ PHASE	MOTOR	ACCESSORIES
EF1	LOREN COOK	GC-146	114	.2	120/1	34.4W	CG, GBD, HK, WC
ABBREVIATIONS:							
ARC	ACID RESISTANT COATING						
CG	WHITE ALUMINUM CEILING GRILLE						
DM	DISCONNECT MEANS						
GBD	GRAVITY BACKDRAFT DAMPER						
GK	GREASE TERMINATION KIT						
HB	HINGED BASE						
HK	VIBRATION ISOLATOR HANGING KIT						
MBD	MOTORIZED BACKDRAFT DAMPER						
RP	ROOF CAP WITH INSULATED ROOF CURB						
RC	INSULATED ROOF CURB						
RJ	ROOF JACK						
SC	SPEED CONTROLLER						
VC	VENT ILAPATED ROOF CURB						
WC	WALL CAP						

PIPING MATERIAL SCHEDULE											
SYSTEM	PIPING				FITTINGS		MAX. WORKING		FIELD TEST		
	SIZE	TYPE	SCH	GRD	ASTM	MATERIAL	MAT. TYPE	PRESS (PSI)	TEMP (°F)	PRESS (PSI)	TIME
DOMESTIC WATER SERVICE	ALL	PVC	80	-	D1785	PVC	SW	125	40-90	200	1 HR
DOMESTIC WATER ABOVE GRADE	ALL	L	-	-	B88	CP	CP	120	40-180	150	1 HR
TEMPERATURE & PRESSURE RELIEF DRAIN	ALL	M	-	-	B88	CP	DR/S	10 FT	140-120	10 FT	1 HR
WASTE & VENT BELOW GRADE	ALL	DWV	40	-	2865	PVC	PVC DR/SW	10 FT	50-140	10 FT	1 HR
FIRE SERVICE ABOVE GRADE	ALL	DI	-	-	C150	DI	MJ	200 FT	50-90	200 FT	2 HR
FIRE SERVICE BELOW GRADE	ALL	PVC	-	-	C900	PVC	DI MJ	200 FT	50-90	200 FT	2 HR
WASTE & VENT ABOVE GRADE (DUCTED RETURN)	ALL	DWV	40	-	2865	PVC	PVC DR/SW	10 FT	50-140	10 FT	1 HR
ATP - ARMO TRUSS PIPE BLK - BLACK BS - BELL & SPIGOT CF - CRIMPED FITTING CI - CAST IRON CP - COPPER CS - CARBON STEEL CTD - PIPE LINE SERVICE COMPANY X-TRU-COAT DI - DUCTILE IRON DR - DRAINAGE FITTING GLV - GALVANIZED HF - HEAT FUSED LC - LEAD CAULKING MI - MALLEABLE IRON MJ - MECHANICAL JOINT NG - NEOPRENE GASKET NH - NO-HUB PE - POLYETHYLENE PVC - POLYVINYL CHLORIDE SJ - BRAZED JOINT - SILVER BRAZING ALLOY SS - SOLDER JOINT 95-5 TIN-ANTIMONY SL - SEAMLESS STEEL SS - STANDARD STRENGTH - SERVICE WEIGHT SW - SOLVENT WELD TS - TY-SEAL THRD - THREADED VCP - VITRIFIED CLAY PIPE WELD - WELDED XH - EXTRA HEAVY											

WATER HEATER SCHEDULE									
MARK	MANUFACTURER	MODEL NO.	TYPE	GALLON CAP.	GPH @ 90 F	INPUT	OUTPUT	VOLT/PH	ACCESSORIES
WH1	RHEEM	XE02P08PU14U0	ELEC	2.5	6.8	1.4kW	1.4kW	120/1	PTRV, WALL BRACKET
ABBREVIATIONS: PTRV - PRESSURE & TEMPERATURE RELIEF VALVE									

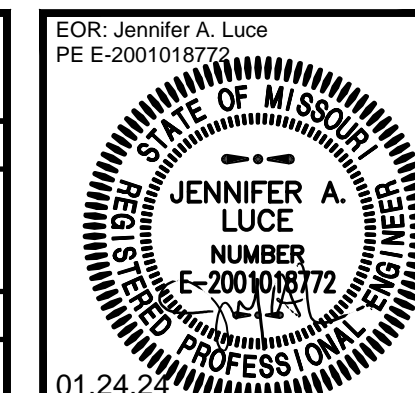


2
M1 SCALE: 1/8"=1'-0" NORTH



1
M1 SCALE: 1/8"=1'-0" NORTH

REVISIONS:
01.24.2024 - ADDENDUM #1



PROJECT: JAMES RIVER POWER STATION UPGRADE 2023-12-14
CITY UTILITIES OF SPRINGFIELD, MO



DATE: 01/05/2024
PROJECT NUMBER: 23.CU.001
DRAWN BY: JMC
CHECKED BY: JAL
SHEET NUMBER

ME2

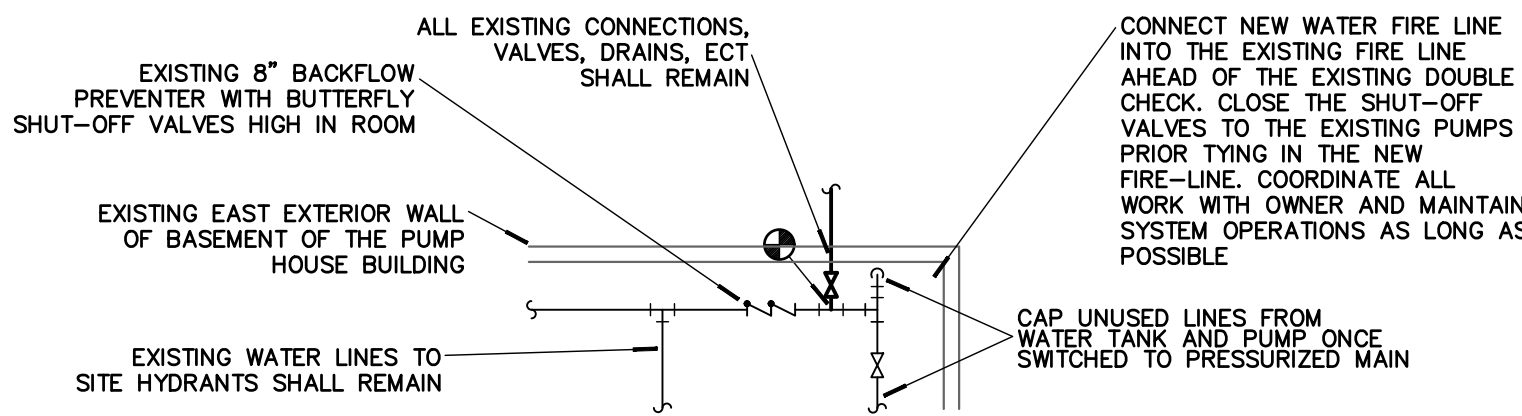
DOMESTIC WATER DEMAND TABLE				
FIXTURE (SITE ADDITION)	QUANT.	SFU	TOTAL SFU	GPM
PUMP HOUSE/FIRE SYSTEM	1	-	-	2150
RO WATER TREATMENT TRAILER	1	-	-	300
FIXTURE (RESTROOM ADDITION)	QUANT.	SFU	TOTAL SFU	GPM
SINK (1 FAUCET)	1	2.0	2.0	-
WATER CLOSET, PUBLIC (FLUSH VALVE)	1	10.0	10.0	-
TOTAL RESTROOM ADDITION			12	29

NOTES:

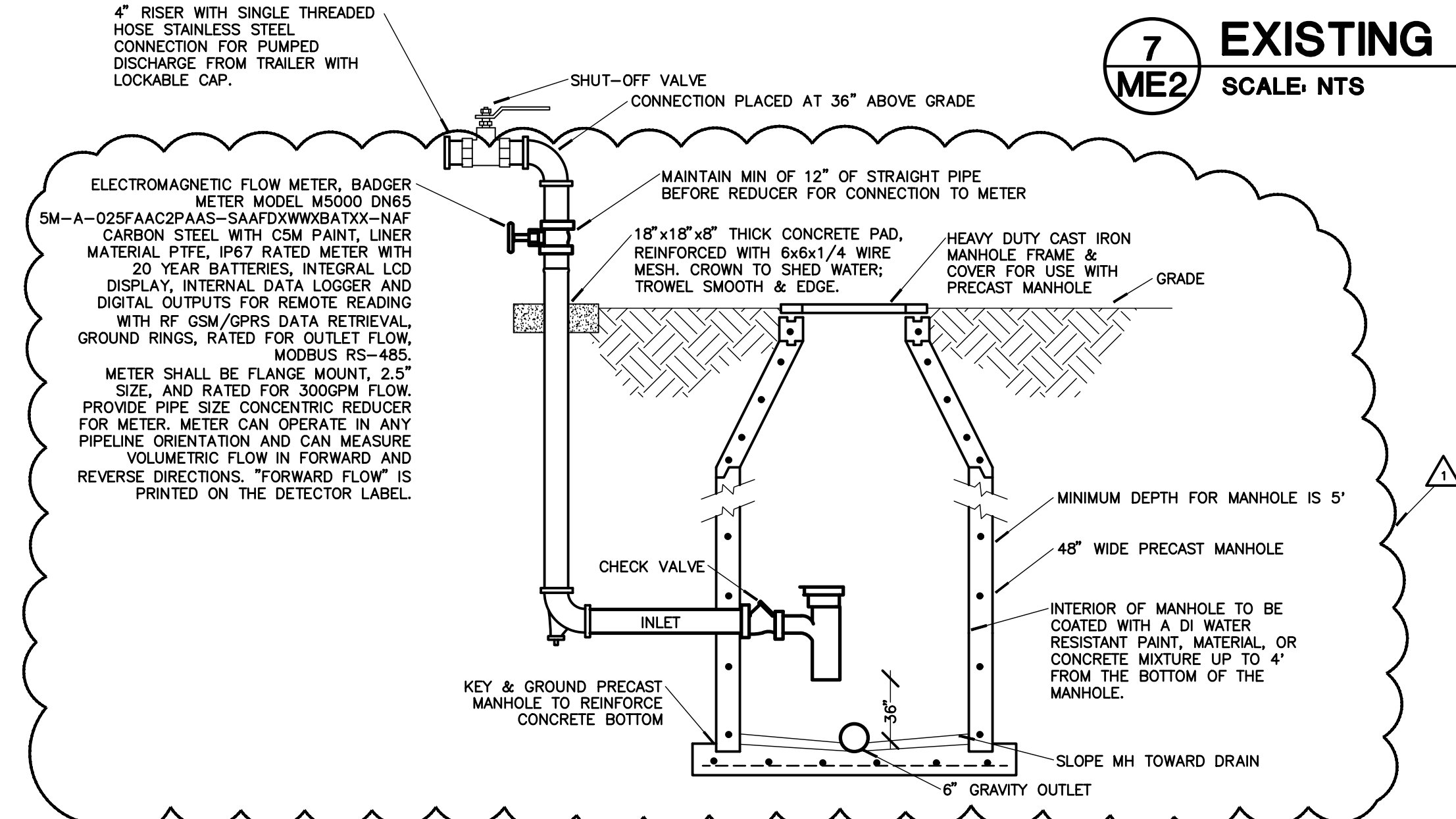
- GENERAL NOTES:**
- CONTRACTOR SHALL INSTALL PIPING, VALVES, AND UTILITY SERVICES FOR WATER AND FIRE SERVICE BEFORE DISCONNECTING EXISTING FIRE WATER SUPPLY. COORDINATE SWITCHOVER AND OUTAGE WITH OWNER AND FIRE DEPARTMENT.
 - CONTRACTOR SHALL CONTACT THE LOCAL WATER DEPARTMENT AND ARRANGE FOR WATER SERVICE AND FIRE SERVICE AS INDICATED ON THE DRAWINGS. INCLUDE ALL COSTS, CHARGES, FEES, ETC. INCURRED BY LOCAL AUTHORITIES INTO BID. PROVIDE ALL THE MATERIALS AS REQUIRED BY LOCAL AUTHORITIES FOR WATER SERVICE. INSTALLATION, ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AUTHORITIES.
 - CONTRACTOR SHALL CONTACT THE LOCAL AUTHORITIES AND ARRANGE FOR SEWER SERVICE AS INDICATED ON THE DRAWINGS. INCLUDE ALL COSTS, CHARGES, FEES, ETC. INCURRED BY LOCAL AUTHORITIES INTO BID. PROVIDE ALL THE MATERIALS AS REQUIRED BY LOCAL AUTHORITIES FOR SEWER SERVICE. INSTALLATION, ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AUTHORITIES.
 - CONTRACTOR SHALL PAINT AND LABEL ALL NEW EXPOSED PIPING FOR TRAILER WASTE AND WATER CONNECTIONS TO MATCH EXISTING.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCHING, BORING, AND BACKFILLING AS REQUIRED. GRADE SHALL BE RETURNED TO SAME CONDITION BEFORE WORK. COORDINATE WITH OWNER.

BRANCH CIRCUIT & FEEDER SCHEDULE:

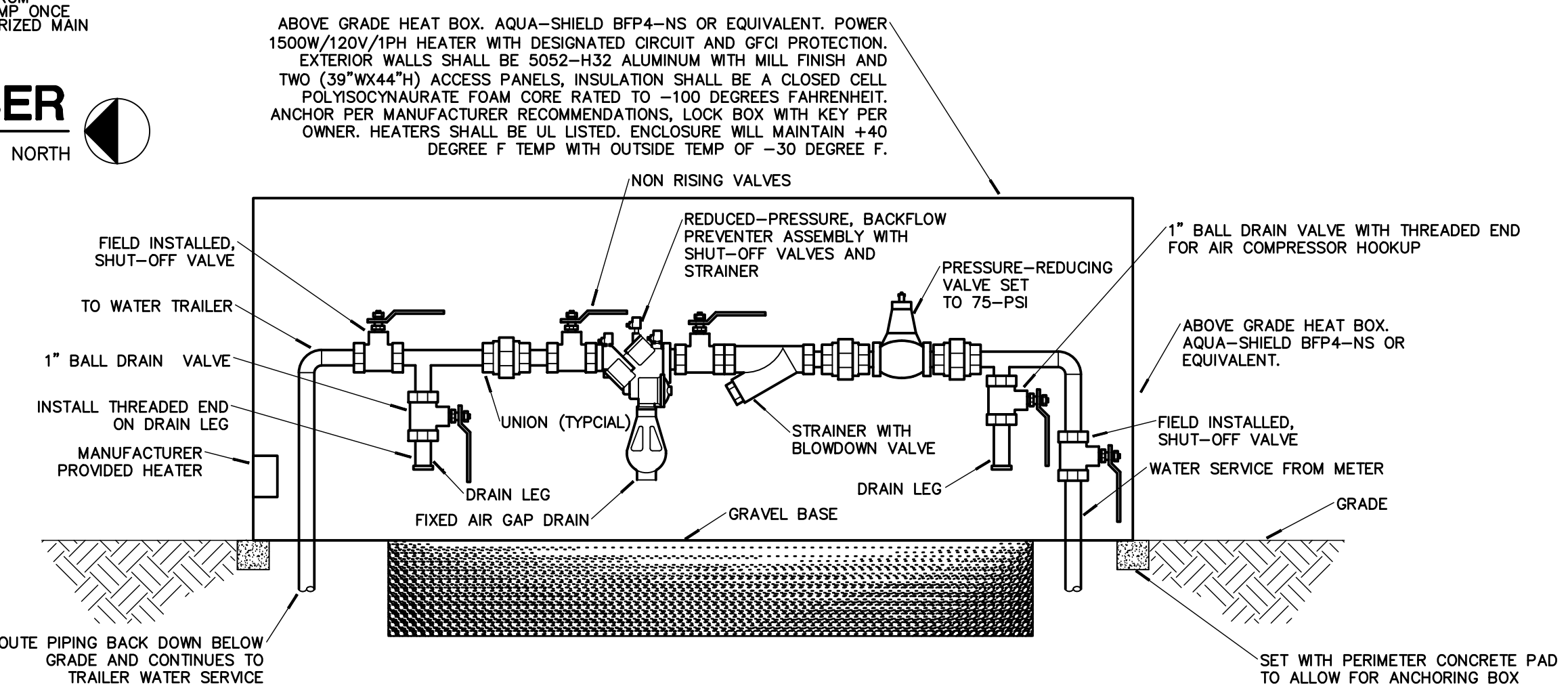
- (1) - #2 CU AND 1 - #6 GROUND IN 1.5" CONDUIT
- (2) - #18 CU 4 PAIR TWISTED SHIELDED WIRE IN 0.5" CONDUIT



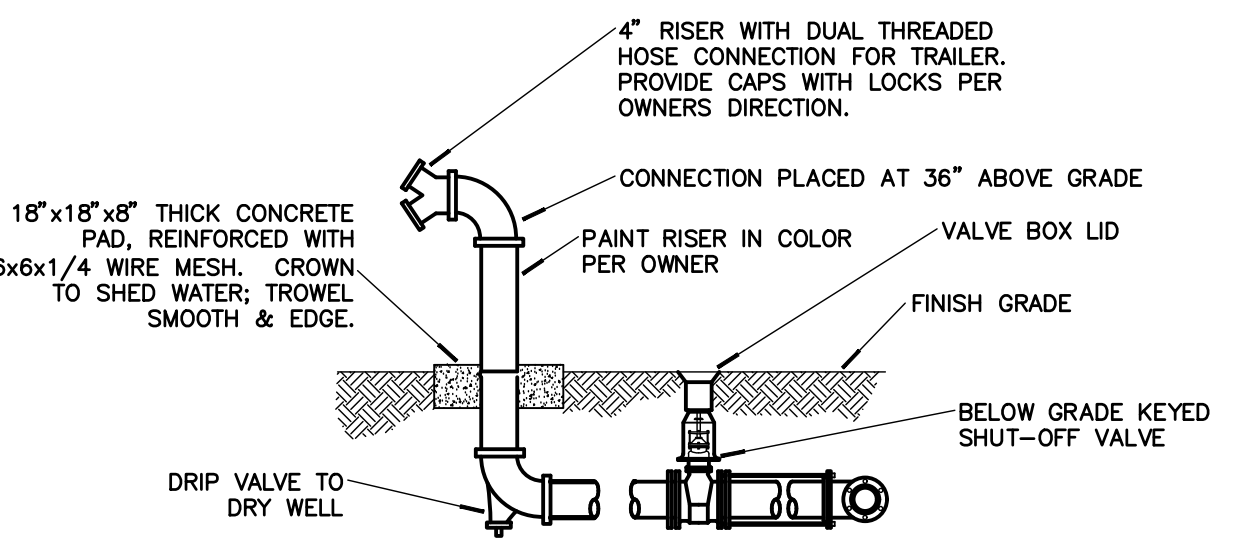
7 EXISTING PUMP HOUSE RISER
ME2 SCALE: NTS



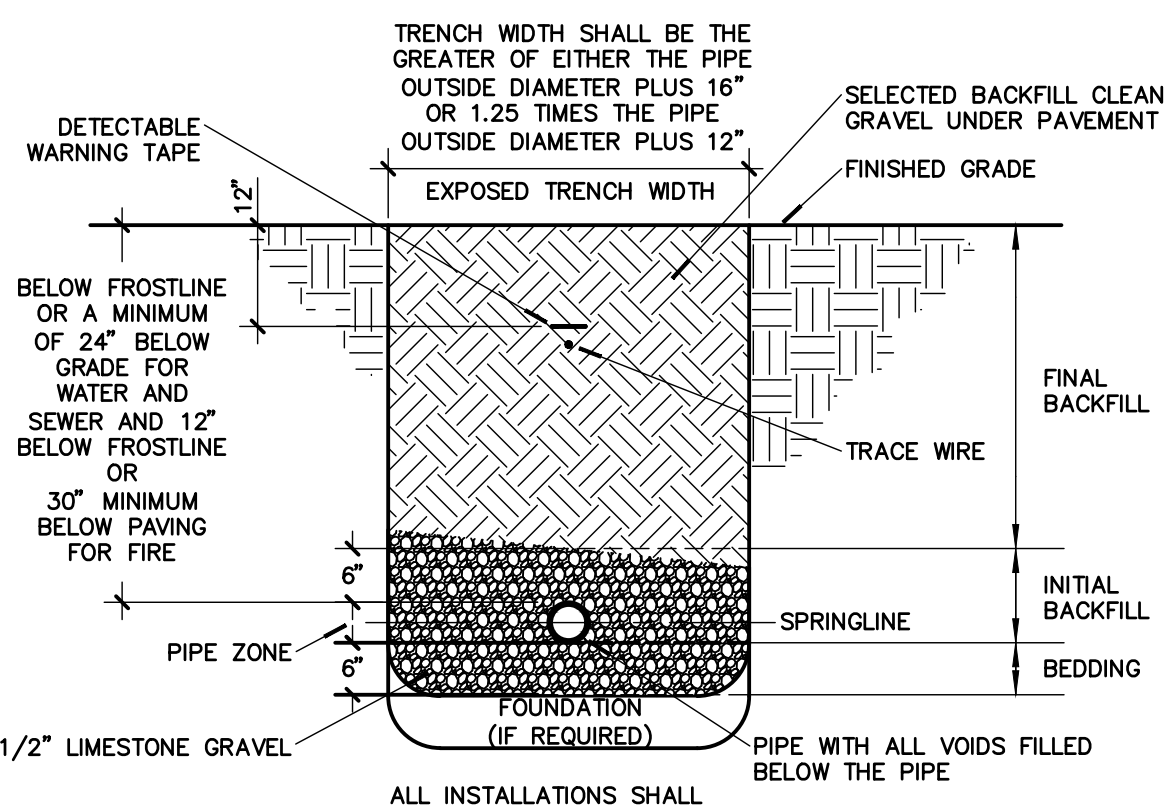
4 RO WASTE PIT DETAIL
ME2 NO SCALE



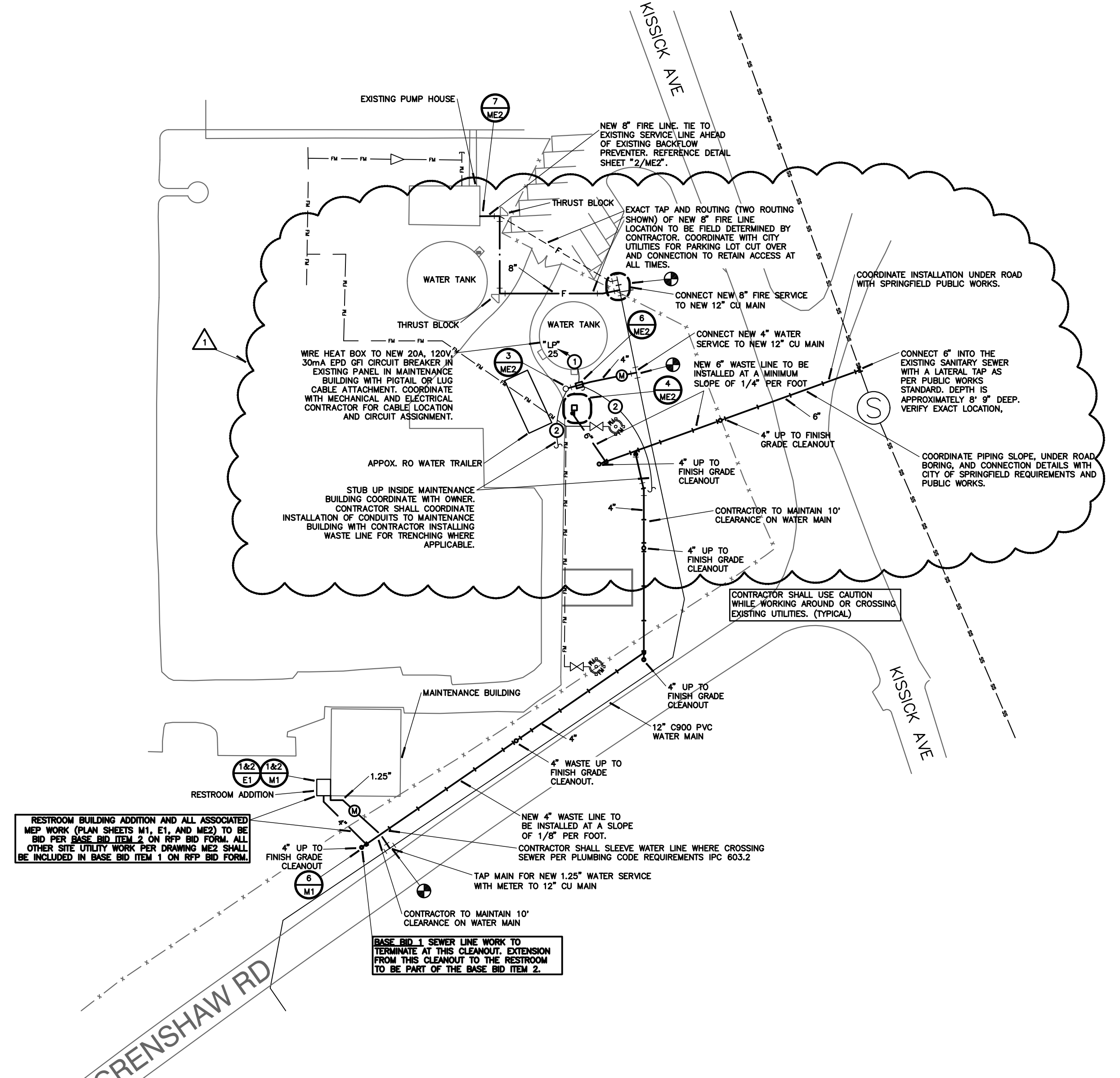
6 REDUCED PRESSURE BFP RO WATER TRAILER SERVICE
ME2 NO SCALE



3 RO WATER TRAILER WATER SERVICE DETAIL
ME2 NO SCALE



2 PIPE INSTALLATION DETAIL
ME2 NO SCALE



1 SITE UTILITY PLAN
ME2 SCALE: 1"=50'

REVISIONS:
01.24.2024 - ADDENDUM #1