

DUNES COMMUNITY DEVELOPMENT DISTRICT

REVERSE OSMOSIS MEMBRANE FEED PUMP REPLACEMENT

ISSUED FOR BID
SEPTEMBER 2026

GENERAL NOTES

1. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF CONDITIONS WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THE WORK. THE CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSION REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.
2. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST VERIFY ACTUAL LOCATIONS OF SUCH FEATURES AND BE FULLY RESPONSIBLE FOR ALL DAMAGES WHICH MIGHT BE OCCASIONED BY CONTRACTOR'S FAILURE TO VERIFY ACTUAL LOCATIONS OF FEATURES AFFECTING THE WORK.
3. PRIOR TO BEGINNING CONSTRUCTION THE CONTRACTOR MUST PHYSICALLY VERIFY LOCATION OF ALL UTILITIES, ABOVE AND BELOW GROUND AND NOTIFY THE OWNER 72 HOURS PRIOR TO DIGGING IN ANY PORTION OF THE SITE.
4. THE CONTRACTOR MUST CONTACT THE ENGINEER'S OFFICE IMMEDIATELY UPON FINDING ANY CONFLICTS DURING CONSTRUCTION ON ANY IMPROVEMENTS SHOWN ON THE DRAWINGS.
5. THE CONTRACTOR MUST, BY REPAIR OR REPLACEMENT, RETURN TO EQUAL OR BETTER CONDITION ALL PAVEMENT, SIDEWALKS, LAWNS, UTILITIES, AND OTHER ITEMS DAMAGED BY THE CONSTRUCTION ACTIVITY.
6. THESE PLANS MAY HAVE BEEN CHANGED IN SIZE BY REPRODUCTION. THIS REDUCTION MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.
7. CONTRACTOR MUST BE GRANTED APPROVAL BY OWNER FOR ANY WORK OUTSIDE BUSINESS HOURS (MONDAY THROUGH FRIDAY 7AM – 3:30PM OR ON HOLIDAYS).
8. IN THE EVENT THERE IS A DISCREPANCY IN THE CONTRACT DOCUMENTS THE CONTRACTOR WILL INSTALL THE MOST EXPENSIVE OPTION.
9. SEE EXHIBIT A (FEMA CONTRACT PROVISIONS) FOR FEMA REQUIREMENTS ON THIS PROJECT IF FEMA FUNDING IS PART OF THIS PROJECT.
10. MCC-1 SHUTDOWNS ARE LIMITED TO 4-HOURS PER AN EVENT AND MUST BE COORDINATED WITH THE OWNER 7-DAYS PRIOR TO SHUTDOWN. REFER TO SPECIFICATION 013513.24 SPECIAL PROCEDURES FOR MAINTENANCE OF PLANT OPERATIONS.
11. PROCESS EQUIPMENT SHUTDOWNS MUST BE COORDINATED WITH THE OWNER AT LEAST 72-HOURS PRIOR TO EACH SHUTDOWN.



ADMINISTRATIVE AND
RO PROCESS BUILDING

LOCATION MAP
NOT TO SCALE



4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL COA No. EB-0000020
PROJECT NO. 263019-308471

SHEET NO	DESCRIPTION
GENERAL	
G-0	COVER SHEET AND INDEX OF SHEETS
G-0A	SIGNATURE SHEET
G-1	AREA CLASSIFICATION AND MATERIAL SCHEDULE
ARCHITECTURAL	
A-1	ARCHITECTURAL SHEET INDEX, GENERAL NOTES, ABBREVIATIONS, SYMBOLS, LIFE SAFETY PLAN, AND BUILDING CODE KEY DETERMINATIONS
A-2	ADMINISTRATION AND PROCESS BUILDING DEMOLITION AND CONSTRUCTION FLOOR PLANS
STRUCTURAL	
S-1	STRUCTURAL GENERAL NOTES
MECHANICAL	
M-1	MECHANICAL GENERAL NOTES AND LEGEND
M-2	RO SKID FEED PUMP DEMOLITION PLAN AND SECTIONS
M-3	RO SKID FEED PUMP DEMOLITION TYPICAL PHOTOGRAPHS
M-4	RO SKID FEED PUMPS MODIFICATION TYPICAL PLAN
M-5	RO SKID FEED PUMPS MODIFICATION TYPICAL SECTIONS
MD-1	MECHANICAL DETAILS I
HVAC	
H-1	HVAC LEGEND, SYMBOLS AND ABBREVIATIONS
H-2	ADMINISTRATION AND PROCESS BUILDING HVAC DEMOLITION PLAN
H-3	ADMINISTRATION AND PROCESS BUILDING HVAC MODIFICATION PLAN
H-4	HVAC SCHEDULES, AIRFLOW SCHEMATICS AND SEQUENCE OF OPERATIONS
HD-1	HVAC DETAILS
ELECTRICAL	
E-1	ELECTRICAL LEGEND I
E-2	ELECTRICAL LEGEND II
E-3	ELECTRICAL SITE PLAN
E-4	ELECTRICAL ONE LINE POWER DIAGRAM DEMOLITION
E-5	ELECTRICAL ONE LINE POWER DIAGRAM MODIFICATIONS
E-6	ELECTRICAL FRONT ELEVATIONS
E-7	ELEMENTARY DIAGRAMS AND RISER DIAGRAMS
E-8	ADMINISTRATION AND PROCESS BUILDING ELECTRICAL DEMOLITION PLAN
E-9	ADMINISTRATION AND PROCESS BUILDING ELECTRICAL MODIFICATIONS PLAN
E-10	PANELBOARD SCHEDULES
ED-1	ELECTRICAL DETAILS I
INSTRUMENTATION	
I-1	INSTRUMENTATION LEGEND I
I-2	INSTRUMENTATION LEGEND II
I-3	CONTROL SYSTEM BLOCK DIAGRAM
I-4	PROCESS AND INSTRUMENTATION DIAGRAM RO FEED PUMPS NO. 1 & NO. 2
I-5	PROCESS AND INSTRUMENTATION DIAGRAM RO FEED PUMPS NO. 3 & NO. 4
ID-1	INSTRUMENTATION INSTALLATION DETAILS

Water

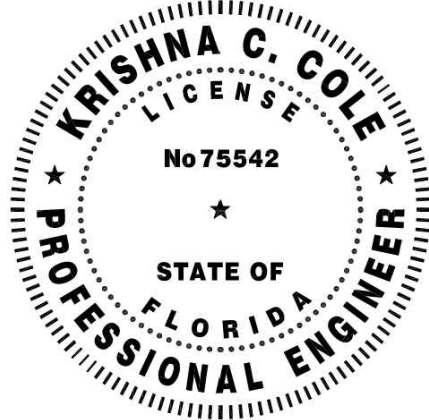
Environment

Transportation

Energy

Facilities

XREFs: (CDMS, 2436) [images: (EMILY SIGN NOTE, JOSHUA SIGN NOTE, KEVIN PE SIGN, KRISHNA SIGN NOTE, OECBSLIN FL 1918, SCOTT PE SIGN, SPENCER PE SIGN, SPENCER SIGN NOTE, WILLIAM SCOTT SIGN NOTE)]
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This item has been digitally signed and sealed by Krishna C. Cole on the date adjacent to the seal. Signature must be verified on any electronic copies.

- G - 0 COVER SHEET AND INDEX OF SHEETS
G - 0A SIGNATURE SHEET
G - 1 AREA CLASSIFICATION AND MATERIAL SCHEDULE

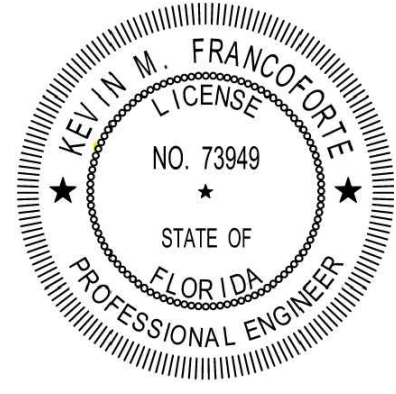
- M - 1 MECHANICAL GENERAL NOTES AND LEGEND
M - 2 RO SKID FEED PUMP DEMOLITION PLAN AND SECTIONS
M - 3 RO SKID FEED PUMP DEMOLITION TYPICAL PHOTOGRAPHS
M - 4 RO SKID FEED PUMPS MODIFICATION TYPICAL PLAN
M - 5 RO SKID FEED PUMPS MODIFICATION TYPICAL SECTIONS
MD - 1 MECHANICAL DETAILS I



This item has been digitally signed and sealed by Emily Oechslin on the date adjacent to the seal. Signature must be verified on any electronic copies.

FL CORP ARCHITECTURE AA-002781
101 SOUTHHALL LANE, SUITE 200
MAITLAND, FL 32571

- A - 1 ARCHITECTURAL SHEET INDEX, GENERAL NOTES, ABBREVIATIONS, SYMBOLS, LIFE SAFETY PLAN, AND BUILDING CODE KEY DETERMINATIONS
A - 2 ADMINISTRATION AND PROCESS BUILDING DEMOLITION AND CONSTRUCTION FLOOR PLANS



This item has been digitally signed and sealed by Kevin M. Francoforte on the date adjacent to the seal. Signature must be verified on any electronic copies.

- S - 1 STRUCTURAL GENRAL NOTES



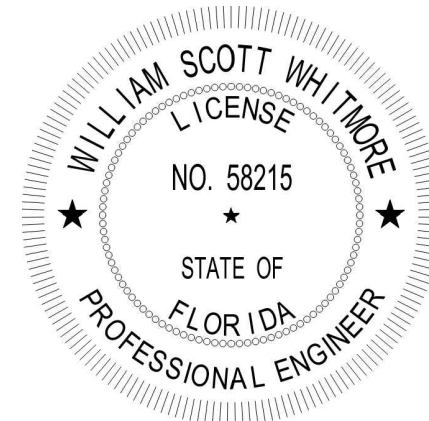
This item has been digitally signed and sealed by Joshua A. Garzione on the date adjacent to seal. Signature must be verified on any electronic copies.

- H - 1 HVAC LEGEND, SYMBOLS AND ABBREVIATIONS
H - 2 ADMINISTRATION AND PROCESS BUILDING HVAC DEMOLITION PLAN
H - 3 ADMINISTRATION AND PROCESS BUILDING HVAC MODIFICATION PLAN
H - 4 HVAC SCHEDULES, AIRFLOW SCHEMATICS AND SEQUENCE OF OPERATIONS
HD - 1 HVAC DETAILS



This item has been digitally signed and sealed by Spencer J. Perry on the date adjacent to the seal. Signature must be verified on any electronic copies.

- E - 1 ELECTRICAL LEGEND I
E - 2 ELECTRICAL LEGEND II
E - 3 ELECTRICAL SITE PLAN
E - 4 ELECTRICAL ONE LINE POWER DIAGRAM DEMOLITION
E - 5 ELECTRICAL ONE LINE POWER DIAGRAM MODIFICATIONS
E - 6 ELECTRICAL FRONT ELEVATIONS
E - 7 ELEMENTARY DIAGRAM AND RISER DIAGRAM
E - 8 ADMINISTRATION AND PROCESS BUILDING ELECTRICAL DEMOLITION PLAN
E - 9 ADMINISTRATION AND PROCESS BUILDING ELECTRICAL MODIFICATIONS PLAN
E - 10 PANELBOARED SCHEDULES
ED - 1 ELECTRICAL DETAILS I



This item has been digitally signed and sealed by William Scott Whitmore on the date adjacent to the seal. Signature must be verified on any electronic copies.

- I - 1 INSTRUMENTATION LEGEND I
I - 2 INSTRUMENTATION LEGEND II
I - 3 CONTROL SYSTEM BLOCK DIAGRAM
I - 4 PROCESS AND INSTRUMENTATION DIAGRAM RO FEED PUMPS NO. 1 & NO. 2
I - 5 PROCESS AND INSTRUMENTATION DIAGRAM RO FEED PUMPS NO. 3 & NO. 4
ID - 1 INSTRUMENTATION INSTALLATION DETAILS

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: B. DIVYA
DRAWN BY: P. DUDHAGI
SHEET CHK'D BY: A. MARATHE
CROSS CHK'D BY: B. DIVYA
APPROVED BY: K. C. COLE
DATE: SEPTEMBER 2026

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FL CDA No. EB-0000020

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

SIGNATURE SHEET

PROJECT NO. 263019-308471
FILE NAME: G001ACSGN.DWG

SHEET NO.

G-0A

XREFs: (CDMS 2436) Images: [KRISHNA PE SIGN]
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FACILITY NUMBER	FACILITY	LOCATION	ROOM / AREA	FIRE PROTECTION SYSTEMS	NEC AREA ELECTRICAL CLASS	NFPA 820 (2024) TABLE REFERENCE	AREA DESIGNATION	NEMA 250 ENCLOSURE TYPE	NEMA 250 ENCLOSURE MATERIAL	MOTOR ENCLOSURE TYPE	CONDUIT TYPE	ELECTRICAL FRAMING CHANNEL MATERIAL	DUCTWORK MATERIAL	PIPING SUPPORTS FOR ALL TRADES (NOTE 5)	GRATING	HANDRAIL	ANCHOR BOLTS FOR ALL TRADES	MOUNTING HARDWARE FOR ALL TRADES (NOTE 6)
-	ADMINISTRATION AND PROCESS BUILDING	INDOOR	RO TRAIN AREA	FE, FAS	UNCLASSIFIED	N/A	FINISHED DAMP	NEMA 4X	316 STAINLESS STEEL	TEFC	RIGID ALUMINUM (RAC)	316 STAINLESS STEEL	ALUMINUM	316 STAINLESS STEEL	N/A	N/A	316 STAINLESS STEEL	316 STAINLESS STEEL
		INDOOR	ELECTRICAL ROOM	FE, FAS	UNCLASSIFIED	N/A	DRY	NEMA 1	PAINTED STEEL	TEFC	RAC EXPOSED / EMT CONCEALED	316 STAINLESS STEEL	N/A	316 STAINLESS STEEL	N/A	N/A	316 STAINLESS STEEL	316 STAINLESS STEEL
		INDOOR	OPERATOR CONTROL ROOM	N/A	UNCLASSIFIED	N/A	DRY	NEMA 1	PAINTED STEEL	TEFC	RAC EXPOSED / EMT CONCEALED	316 STAINLESS STEEL	N/A	316 STAINLESS STEEL	N/A	N/A	316 STAINLESS STEEL	316 STAINLESS STEEL
		OUTDOOR	BUILDING EXTERIOR	N/A	UNCLASSIFIED	N/A	WET	NEMA 4X	316 STAINLESS STEEL	REFER TO SPECIFICATIONS	RIGID ALUMINUM (RAC)	316 STAINLESS STEEL	316 STAINLESS STEEL	316 STAINLESS STEEL	N/A	N/A	316 STAINLESS STEEL	316 STAINLESS STEEL
-	SITE	OUTDOOR	UNDERGROUND	N/A	UNCLASSIFIED	N/A	WET	N/A	N/A	N/A	PVC SCHEDULE 40 OR PVC SCHEDULE 80	N/A	N/A	-	N/A	N/A	N/A	N/A

NOTES:

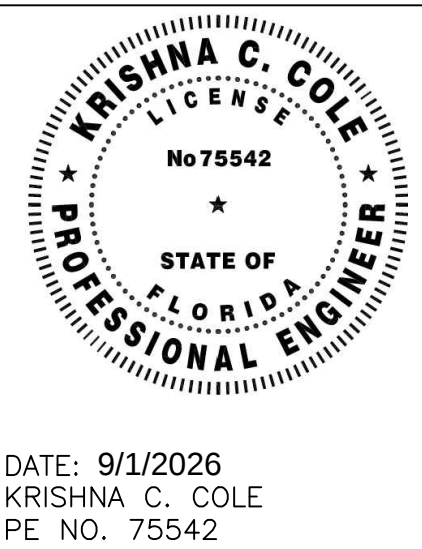
- CLASSIFICATION IN ACCORDANCE WITH NEMA 250.
- MATERIALS SHOWN APPLY TO ALL AREAS OF THE PROJECT UNLESS OTHERWISE NOTED.
- FOUNDATION EMBEDDED, UNDERSLAB ENCASED, OR REINFORCED CONCRETE ENCASED CONDUITS SHALL TRANSITION TO PVC-COATED ALUMINUM BEGINNING AT 90-DEGREE BEND PRIOR TO BECOMING EXPOSED TO THE FIRST FITTING OR END ON CONDUIT.
- DEFINITIONS:
 - CONCEALED SHALL REFER TO CONDUITS CONCEALED INSIDE FRAMED WALLS, ABOVE CEILING SYSTEMS, AND WITHIN VERTICAL CHASES.
 - EMBEDDED SHALL REFER TO CONDUITS EMBEDDED INSIDE A CAST-IN-PLACE CONCRETE SLAB OR WALL, OR CMU WALL.
 - ENCASED SHALL REFER TO CONDUITS ENCASED IN A REINFORCED CONCRETE DUCTBANK OR CLSM FILL.
 - EXPOSED SHALL REFER TO CONDUITS EXPOSED IN AN EXTERIOR OR INTERIOR SPACE.
- PIPE SUPPORT MATERIALS SHALL BE SIMILAR FOR PROCESS MECHANICAL, PLUMBING, FIRE, HVAC PIPING SYSTEMS. ALL SUBMERGED (CONTINUOUS AND INTERMITTENT) PIPE SUPPORTS SHALL BE 316 STAINLESS STEEL.
- HARDWARE MATERIALS SHALL BE SIMILAR FOR PROCESS MECHANICAL, PLUMBING, FIRE, HVAC, ELECTRICAL, AND INSTRUMENTATION & CONTROL SYSTEMS. ALL SUBMERGED HARDWARE SHALL BE 316 STAINLESS STEEL.
- SEE SPECIFICATION 233113 FOR METAL DUCTS HANGERS AND SUPPORTS SYSTEM REQUIREMENTS.
- SEE SPECIFICATION SECTION 230529 FOR HVAC PIPING AND EQUIPMENT HANGERS AND SUPPORTS SYSTEM REQUIREMENTS.

LEGEND:
(THIS SHEET ONLY)

FIRE PROTECTION MEASURES:

- CGD - COMBUSTIBLE GAS DETECTION
- FAS - FIRE ALARM SYSTEM
- FDS - FIRE DETECTION SYSTEM
- PFE - PORTABLE FIRE EXTINGUISHER
- FSS - FIRE SUPPRESSION SYSTEM
- H - HYDRANT PROTECTION
- VF - VENTILATION FAILURE

This item has been digitally signed and sealed by Krishna C. Cole on the date adjacent to the seal. Signature must be verified on any electronic copies.



DATE: 9/1/2026
KRISHNA C. COLE
PE NO. 75542

REV. NO.	DATE	DRWN	CHKD	REMARKS	

DESIGNED BY: B. DIVYA
DRAWN BY: G. HARI
SHEET CHK'D BY: A. MARATHE
CROSS CHK'D BY: B. DIVYA
APPROVED BY: K. C COLE
DATE: SEPTEMBER 2026

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DUNES COMMUNITY DEVELOPMENT DISTRICT

REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

AREA CLASSIFICATION AND MATERIAL SCHEDULE

PROJECT NO. 263019-308471
FILE NAME: G001RODS.DWG

SHEET NO.

G-1

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REUSE OF DOCUMENTS:

ABBREVIATIONS

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

—	CONTINUOUS — NEW CONSTRUCTION
- - -	DASHED ON CONSTRUCTION PLANS/SHEETS — HIDDEN ELEMENTS ABOVE, BELOW, OR BEYOND

MATERIAL SYMBOLS

	EARTH, SOIL
	GRAVEL
	BRICK
	CONCRETE BLOCK
	PRECAST CONCRETE
	CONC CAST IN PLACE
	WOOD-BLOCKING
	WOOD-FINISH
	PLYWOOD
	RIGID INSULATION
	BLANKET INSULATION
	STEEL
	ALUMINUM
	GROUT
	CAULK
	GLASS
	SHEET METAL, STEEL, GLASS, WATERPROOFING

GENERAL NOTES

HEIGHT OF INTERIOR CMU PARTITIONS ARE FROM FLOOR TO THE UNDERSIDE OF ROOF DECK (UNLESS OTHERWISE NOTED)

NOT ALL EQUIPMENT IS SHOWN FOR CLARITY. REFER TO THE APPROPRIATE DISCIPLINE SHEETS FOR SPECIFIC EQUIPMENT LAYOUT AND OTHER REQUIREMENTS

SEE "C" SHEETS FOR SIDEWALK, ROAD PAVING AND FINISH GRADE ELEVATIONS.

SEE "S" SHEETS FOR SIZE AND LOCATION OF CONCRETE PADS, TRENCHES, VAULTS, SUMPS, ETC

SEE "S" SHEETS FOR CONCRETE AND MASONRY REINFORCEMENT

ALL CMU WALLS SHALL BE PROVIDED WITH INSULATION INSERTS (SEE SPEC 042000)

DO NOT SCALE FROM THE DRAWINGS

NOTIFY ARCHITECT IF CONSTRUCTION DOCUMENTS DIFFER FROM ACTUAL FIELD CONDITIONS PRIOR TO FABRICATION OR NEW CONSTRUCTION

CONTRACTOR TO PROVIDE CONDENSATE PIPING AND ROUTE TO DRY WELL MEETING THE REQUIREMENT OF DETAILS B AND C ON SHEET HD-1. ENSURE CONDENSATE AND REFRIGERATED PIPE ARE PROVIDED WITH SCHEDULE 40 STAINLESS STEEL SLEEVE AT ALL PENETRATION. REFER TO SPECIFICATION 13.423.16 FOR MORE DETAILS.

LIFE SAFETY LEGEND

	NEW SPACE EXIT
	EXISTING EXIT ACCESS
	PATH OF TRAVEL
	TRAVEL DISTANCE (FEET)
	COMMON PATH OF EGRESS TRAVEL (FEET)
	EXISTING FIRE EXTINGUISHER
	NEW FIRE EXTINGUISHER
	EXISTING EXIT SIGN
	NEW EXIT SIGN

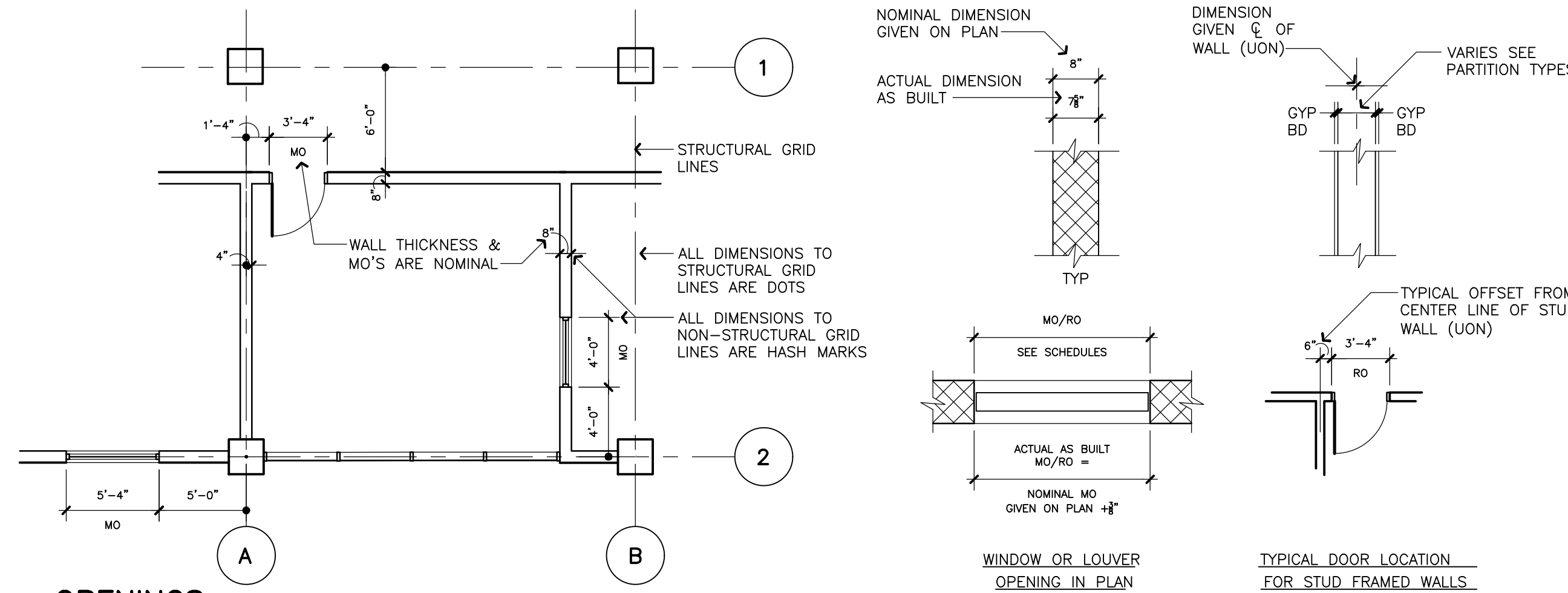
ARCHITECTURAL SHEET INDEX

A-1	ARCHITECTURAL SHEET INDEX, GENERAL NOTES, ABBREVIATIONS, SYMBOLS, LIFE SAFETY PLAN, AND BUILDING CODE KEY DETERMINATIONS
A-2	DEMOLITION AND CONSTRUCTION FLOOR PLANS

BUILDING CODE KEY DETERMINATIONS - ADMINISTRATION & PROCESS BUILDING

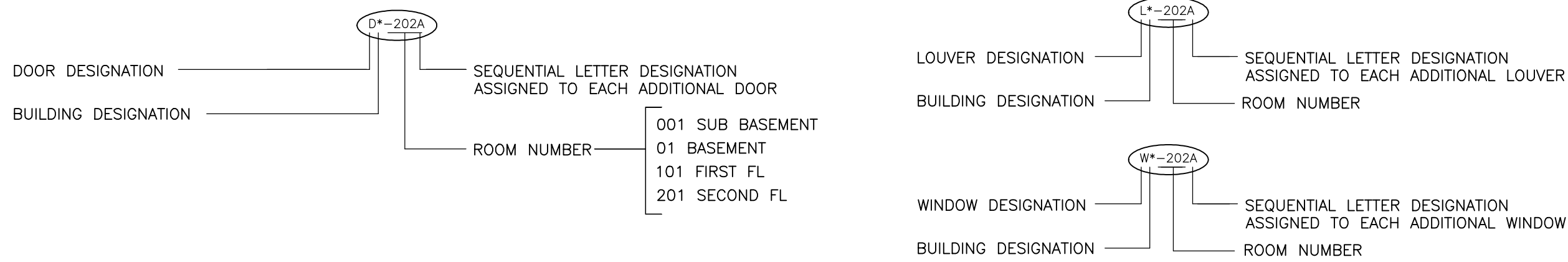
CODES REVIEWED	2023 FLORIDA BUILDING CODE (FBC) 2023 FLORIDA ACCESSIBILITY CODE (FAC) 2023 FLORIDA EXISTING BUILDING CODE (FBC) 2023 FLORIDA MECHANICAL CODE (FMC) 2023 FLORIDA FIRE PREVENTION CODE (FFPC) NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) NATIONAL ELECTRICAL CODE (NEC)
ADMINISTRATION AND PROCESS BUILDING	
CLASSIFICATION OF WORK (FBC SECTION 603)	LEVEL 2 ALTERATION ADDITION OF DOORS, THE RECONFIGURATION OR EXTENSION OF ANY SYSTEM, OR THE INSTALLATION OF ANY ADDITIONAL EQUIPMENT AND THE WORK AREA IS LESS THAN 50 PERCENT OF THE BUILDING AREA- SEE SPECIFICATION SECTION 011000 FOR ENTIRE PROJECT SCOPE OF WORK.
BUILDING CLASSIFICATION OCCUPANCY (FBC SECTION 304 & 306) CONSTRUCTION (FBC TABLE 601)	EXISTING MIXED USE, GROUP F - FACTORY-INDUSTRIAL AND GROUP B- BUSINESS - NO CHANGE EXISTING TYPE IV - UNPROTECTED (CONVERTS TO IIB IN CURRENT CODE) - NO CHANGE
BUILDING HEIGHTS AND AREAS (FBC TABLES 504.3 & 506.2)	NO CHANGE
OCCUPANT LOAD (FBC TABLE 1004.5)	INDUSTRIAL 100 GROSS CALCULATED 75 OCCUPANTS ACTUAL 10 OCCUPANTS OR LESS
EXITS PER SPACE (FBC SECTION 1006.2.1)	2 EXITS FROM OPERATOR CONTROL ROOM - NO CHANGE IN BUILDING EXITS
MAX TRAVEL DISTANCE (FBC TABLE 1017.2)	200 FEET; NON-SPRINKLER - NO CHANGE
ACCESSIBILITY (FAC SECTION 203.5)	SPACE FREQUENTED ONLY BY SERVICE PERSONNEL FOR MAINTENANCE, REPAIR OR OCCASIONAL MONITORING OF EQUIPMENT ARE NOT REQUIRED TO COMPLY - NO CHANGE

DIMENSIONING SYSTEM



OPENINGS

USUALLY LABELED IN PLAN VIEW; HOWEVER, OPENINGS NOT SHOWN IN PLAN ARE LABELED ON ELEVATIONS

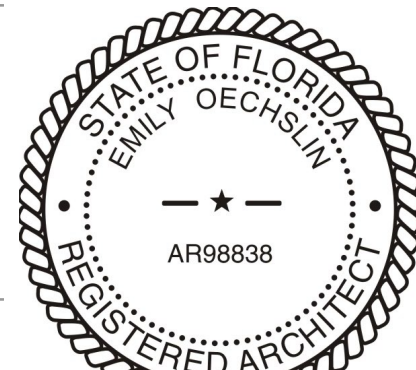
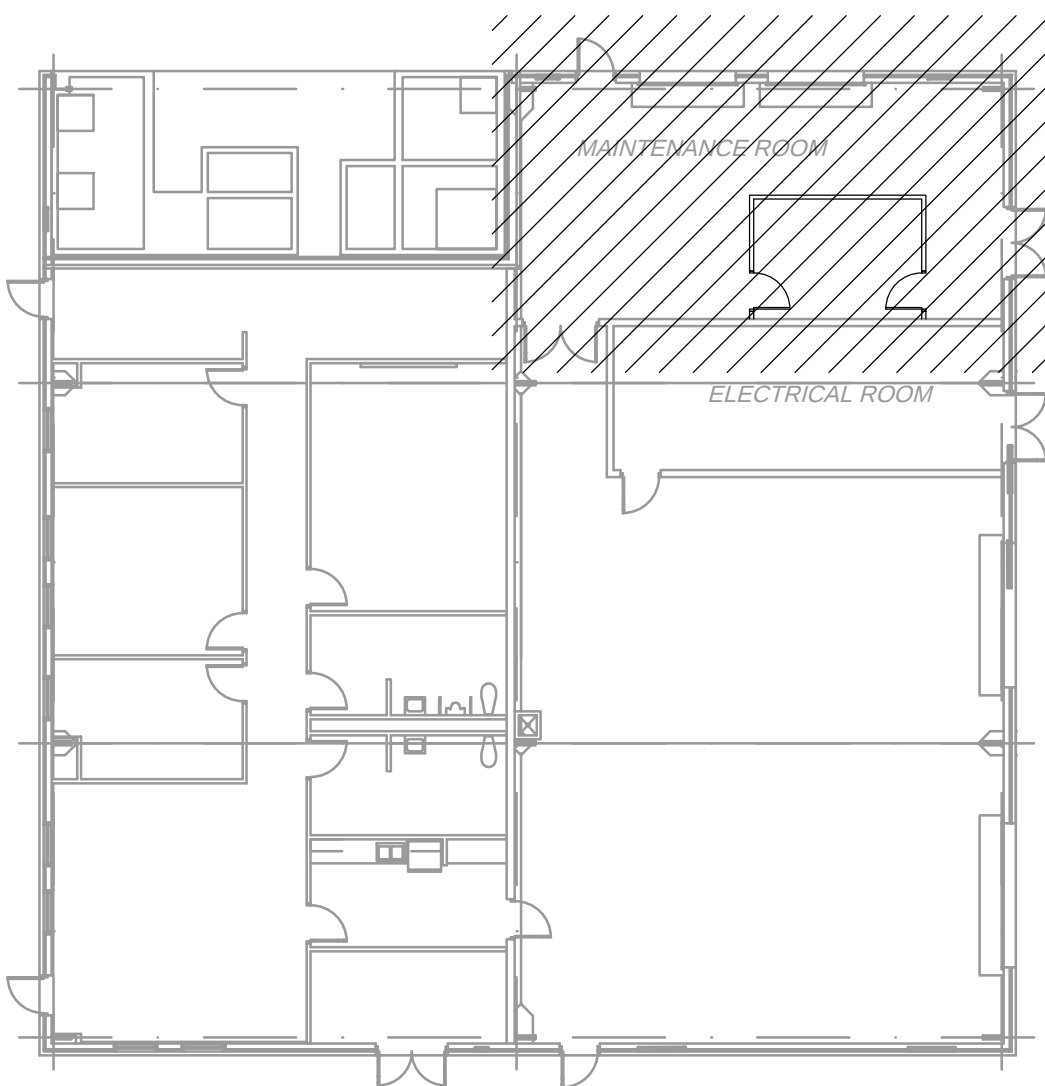
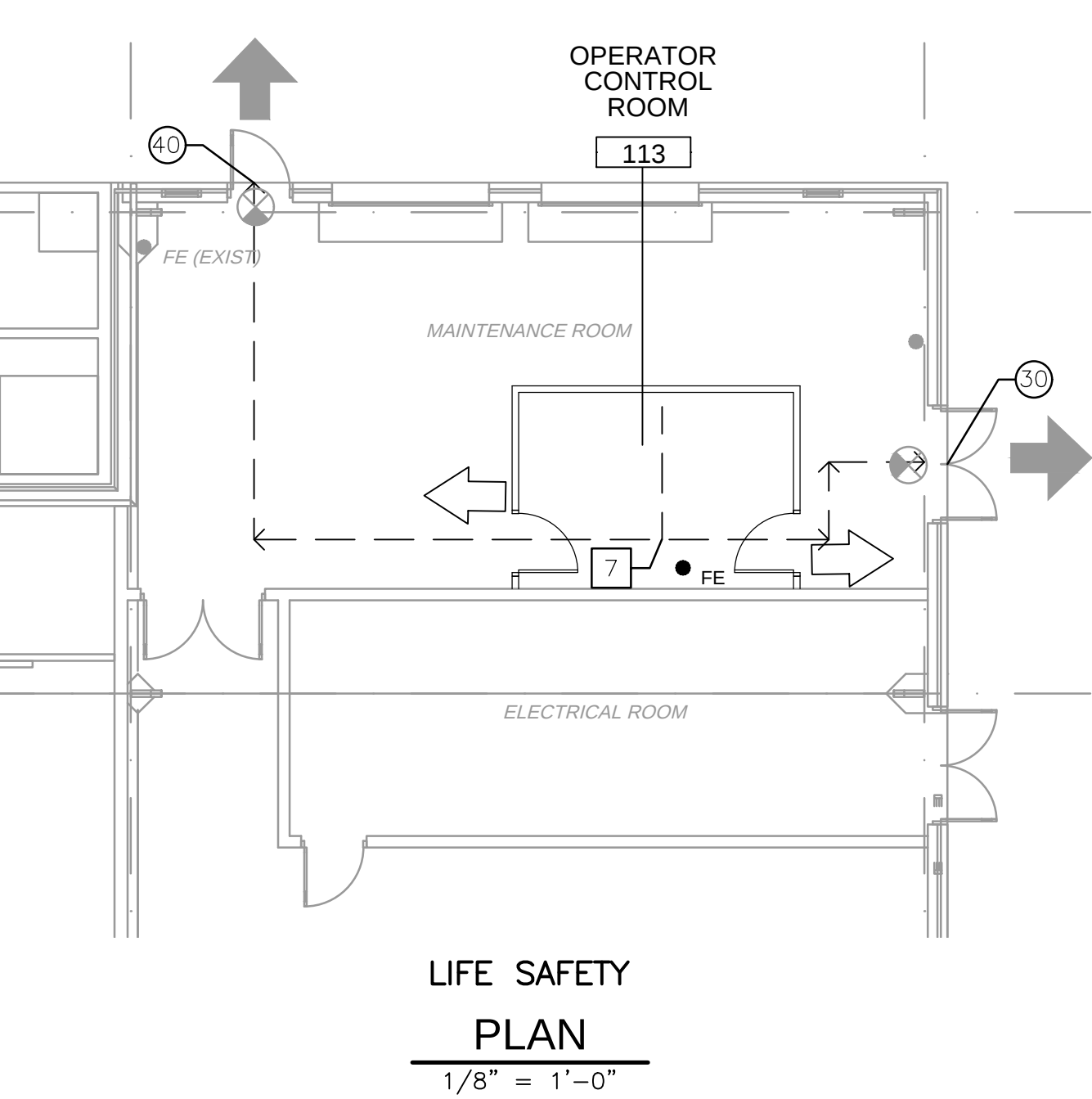


ACCESSORIES & EQUIPMENT

GB42	EQUIPMENT, LABORATORY CASEWORK, OR ACCESSORY SYMBOL AS NOTED
R-13	TOILET ROOM ACCESSORIES (SEE SPECIFICATION SECTION 10800)

SYMBOLS

E	COLUMN TAG & CENTER LINE
EL 501.25	ELEVATION TAG
FE	FIRE EXTINGUISHER (SEE SPEC 10522)
FE	SEMI RECESSED CABINET AND FIRE EXTINGUISHER (SEE SPEC 10522)
7-2	PARTITION TYPE
7-2	SUFFIX 1,2,3,4 IS FIRE RESISTANCE RATING W/A
7-2	SUFFIX A,B,C ETC. W/A SEE NOTE ON TYPE DESCRIPTION
A-102	PREFIX BUILDING DESIGNATION (IF APPLICABLE)
A-102	ROOM NUMBER
A-102	001 SUB BASEMENT 01 BASEMENT 101 FIRST FL 201 SECOND FL
A-2	BUILDING SECTION INDICATOR
A-2	WALL SECTION INDICATOR
A-2	DETAIL INDICATOR
A-2	IF SECTION OR DETAIL IS DRAWN ON THE SAME SHEET THAT IT IS TAKEN FROM, THE SHEET NUMBER IS A HYPEN. IF THE SECTION IS REFERENCED ON MULTIPLE SHEETS, THE SHEET NUMBER SHOWN INDICATES THE FIRST SHEET THE SECTION IS TAKEN FROM.



PROJECT NO. 263019-308471
FILE NAME: A001SYMB.DWG
SHEET NO.
A-1

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

ARCHITECTURAL SHEET INDEX,
GENERAL NOTES, ABBREVIATIONS, SYMBOLS,
LIFE SAFETY PLAN, AND BUILDING
CODE KEY DETERMINATIONS

ISSUED FOR BID

1. COORDINATE DEMOLITION AND DISPOSAL WITH THE REQUIREMENTS OF THE OWNER.
2. SCREENED TEXT AND INFORMATION ON THE ADMINISTRATION AND PROCESS BUILDING DEMOLITION AND MODIFICATION PLANS IS TAKEN FROM RECORD DRAWINGS DATED SEPTEMBER 2007. ALL EXISTING CONSTRUCTION RELATED CONDITIONS, INFORMATION AND DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY CONTRACTOR PRIOR TO STARTING DEMOLITION, FABRICATION AND CONSTRUCTION WORK.
3. CONTRACTOR SHALL, AT ALL TIMES, MAINTAIN THE BUILDING IN A WEATHERTIGHT CONDITION.
4. ALL DEMOLITION AND CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE OWNER TO MINIMIZE DISRUPTION OF THE NORMAL DAILY FUNCTIONS OF THE BUILDING AREAS. REFER TO SPECIFICATION 013513.24 FOR SPECIFIC REQUIREMENTS FOR MOPO.
5. EXISTING ITEMS, EQUIPMENT, PLUMBING, FIXTURES AND SIMILAR ITEMS TO REMAIN IN PLACE SHALL BE PROTECTED FROM DIRT AND DAMAGE DURING DEMOLITION AND CONSTRUCTION.
6. THE OWNER WILL RETAIN ALL SALVAGE THAT IS OF VALUE AS DESIGNATED BY OWNER. OWNER WILL DIRECT THE CONTRACTOR AS TO THE LOCATION OF STORAGE AREA FOR VARIOUS ITEMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING FROM THE BUILDING AND THE CONSTRUCTION SITE ALL CONSTRUCTION DEBRIS AND ITEMS NOT RETAINED BY OWNER.
7. CONTRACTOR TO PROVIDE TEMPORARY SHORING TO EXISTING STRUCTURE, AS REQUIRED.

A. MULTIPURPOSE DRY-CHEMICAL TYPE IN STEEL CONTAINER. UL-RATED 4-A-60-B-C, 10-LB NOMINAL CAPACITY, WITH MONOAMMONIUM PHOSPHATE-BASED DRY CHEMICAL IN ENAMELED-STEEL CONTAINER.

1. VALVES: MANUFACTURER'S STANDARD
2. HANDLES AND LEVERS: MANUFACTURER'S STANDARD
3. INSTRUCTION LABELS: INCLUDE PICTORIAL MARKING SYSTEM COMPLYING WITH NFPA 10, APPENDIX B.

B. MOUNTING BRACKETS: MANUFACTURER'S STANDARD STEEL, DESIGNED TO SECURE FIRE EXTINGUISHER TO WALL OR STRUCTURE, OR SIZES REQUIRED FOR TYPES AND CAPACITIES OF FIRE EXTINGUISHERS INDICATED, WITH PLATED OR RED BAKED-ENAMEL FINISH.

C. IDENTIFICATION: LETTERING COMPLYING WITH AUTHORITIES HAVING JURISDICTION FOR LETTER STYLE, SIZE, SPACING, AND LOCATION. LOCATE AS INDICATED BY ENGINEER-IDENTIFIED BRACKET-MOUNTED FIRE EXTINGUISHERS WITH THE WORDS "FIRE EXTINGUISHER" IN RED LETTER DECALS APPLIED TO MOUNTING SURFACE A. ORIENTATION: VERTICAL.

D. SPECIAL WARRANTY: MANUFACTURER'S STANDARD FORM IN WHICH MANUFACTURER AGREES TO REPAIR OR REPLACE FIRE EXTINGUISHERS THAT FAIL IN MATERIALS OR WORKSMANSHIP WITHIN SPECIFIED WARRANTY PERIOD.

1. FAILURES INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:
 - A. FAILURE OF HYDROSTATIC TEST ACCORDING TO NFPA 10 WHEN TESTING INTERVAL REQUIRED BY NFPA 10 IS WITHIN THE WARRANTY PERIOD.
 - B. FAULTY OPERATION OF VALVES OR RELEASE LEVERS.
2. WARRANTY PERIOD: SIX YEARS FROM DATE OF SUBSTANTIAL COMPLETION.

A. JOINT-SEALANT APPLICATION: INTERIOR JOINTS IN VERTICAL SURFACES AND HORIZONTAL NONTRAFFIC SURFACES.

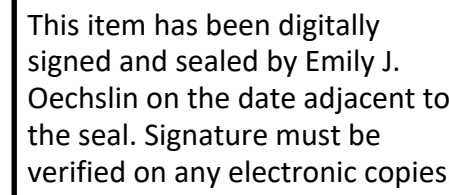
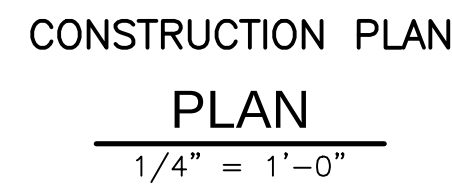
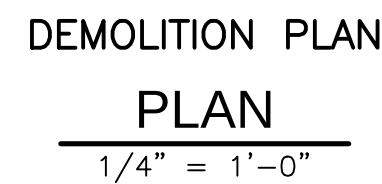
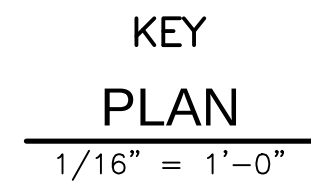
1. JOINT LOCATIONS:

A. CONTROL AND EXPANSION JOINTS ON EXPOSED INTERIOR SURFACES OF EXTERIOR WALLS.

B. VERTICAL JOINTS ON EXPOSED SURFACES OF CONCRETE WALLS AND PARTITIONS.

2. JOINT SEALANT: URETHANE, S, NS, 25, NT: SINGLE-COMPONENT, NONSAG, NONTRAFFIC-USE, PLUS 25 PERCENT AND MINUS 25 PERCENT MOVEMENT CAPABILITY, URETHANE JOINT SEALANT; ASTM C920, TYPE S, GRADE NS, CLASS 25, USE NT.

SEE SHEET A-1 FOR ADDITIONAL GENERAL NOTES



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: E. OECHSLIN
DRAWN BY: E. GOLDBERG
SHEET CHK'D BY: E. WYSS
CROSS CHK'D BY: C. SOLLOG
APPROVED BY: E. OECHSLIN
DATE: SEPTEMBER 2026

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

ADMINISTRATION AND PROCESS BUILDING DEMOLITION AND CONSTRUCTION FLOOR PLANS

PROJECT NO. 263019-308471
FILE NAME: A002ROPL.DWG
SHEET NO.
A-2

REFS: [CDMS-2436, AFD00R0] Images: []
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GENERAL NOTES

DESIGN CRITERIA:

CODES:

- FLORIDA BUILDING CODE EIGHTH EDITION (2023)
- FLORIDA EXISTING BUILDING CODE EIGHTH EDITION (2023)
- ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"

DESIGN LOADS:

- LIVE LOADS:
- SLABS ON GRADE 200 PSF

WIND DESIGN DATA:

- ULTIMATE DESIGN WIND SPEED, V_{ULT} (3-SECOND GUST): 143 MPH
- TORNADO SPEED, V_T : 50 MPH
- NOMINAL DESIGN WIND SPEED, V_{ASD} : 111 MPH
- RISK CATEGORY: III
- EFFECTIVE PLAN AREA, A_E : 100,000 SF
- WIND EXPOSURE CATEGORY: C
- INTERNAL PRESSURE COEFFICIENT: N/A

RAIN LOADS:

- RAINFALL INTENSITY 4.53 IN/HR (60 MIN)
8.6 IN/HR (15 MIN)

FLOOD DESIGN DATA:

- PER NFIP FIRM MAP NO. 12035C0133E, PANEL 133 OF 345, DATED JUNE 6, 2018, NOT IN A FLOOD ZONE

CONCRETE 28-DAY STRENGTH:

- STRUCTURAL CONCRETE 4000 PSI

REINFORCING STEEL:

- ALL BARS ASTM A615, GRADE 60

FOUNDATIONS:

- NET ALLOWABLE BEARING PRESSURE 2,000 PSF PER DRAWINGS PRODUCED BY CH2MHILL TITLED "DUNES COMMUNITY DEVELOPMENT DISTRICT RO WATER TREATMENT PLANT FLAGLER COUNTY, FLORIDA", DATED SEPTEMBER 2007.

GENERAL CONDITIONS:

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

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

FOR ALL ITEMS EMBEDDED IN OR PASSED THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO ELECTRICAL DRAWINGS FOR TYPE, SIZE, LOCATION AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS.

THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATION AND OTHERS.

SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.

ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURES.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

CONCRETE:

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

ALL CONCRETE SHALL BE AIR-ENTRAINED AT 28 DAYS UNLESS OTHERWISE NOTED.

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494.

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

ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE A MINIMUM CHAMFER OF $\frac{3}{4}$ " UNLESS OTHERWISE NOTED.

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

REINFORCING STEEL:

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS.

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

- CONCRETE CAST AGAINST EARTH 3"
- FORMED SURFACES IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER 2"

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

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

STRUCTURAL STEEL:

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

ALL CONNECTION HARDWARE SHALL BE 316 SS.

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

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

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

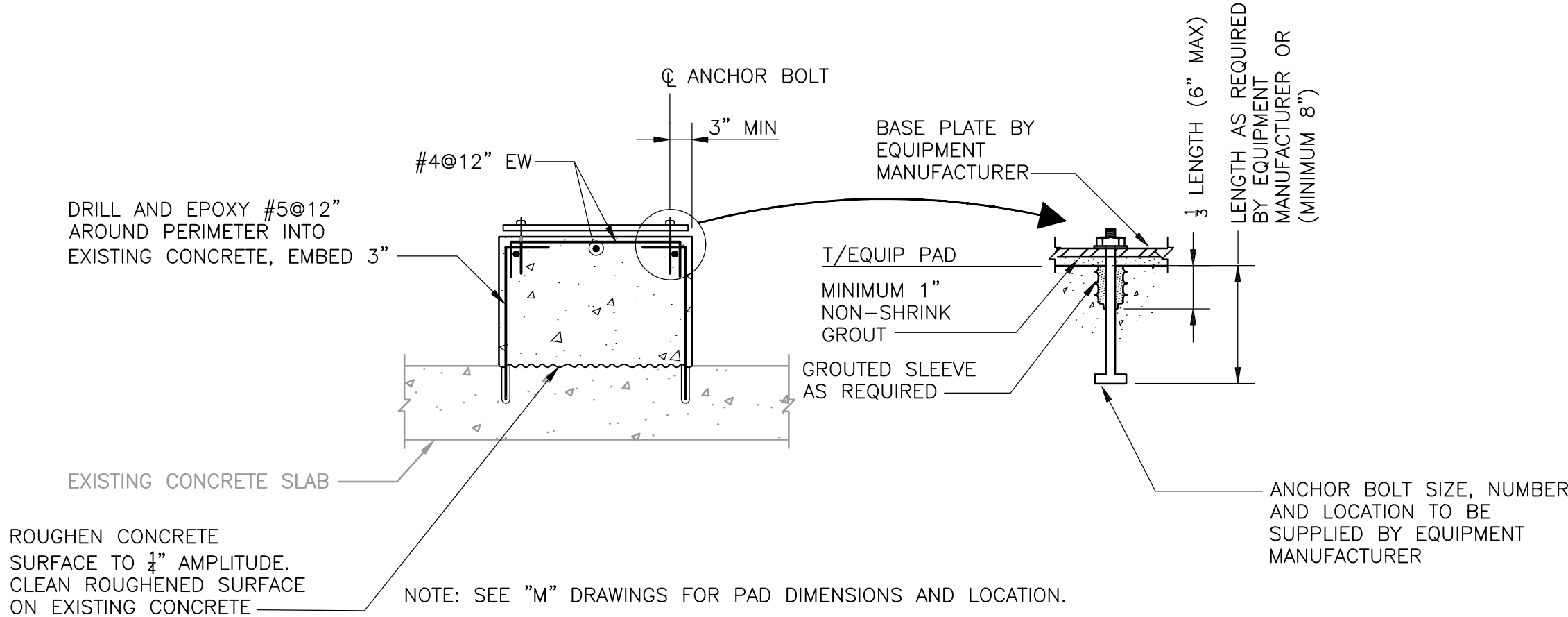
DELEGATED DESIGN SUBMITTALS

- THE FOLLOWING PORTIONS OF THE PROJECT ARE DELEGATED DESIGN SUBMITTAL ITEMS AND HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD:
 - EQUIPMENT SUPPORTS AND ANCHORAGES
 - DUCT SUPPORTS, CONNECTIONS AND ANCHORAGE
 - MODULAR BUILDING AND ANCHORAGE/CONNECTION TO EXISTING
- DELEGATED DESIGN SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW DURING THE CONSTRUCTION PHASE OF THE PROJECT.
- DELEGATED DESIGN SUBMITTAL ITEMS SHALL BE STAMPED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
- DELEGATED DESIGN SUBMITTAL ITEMS SHALL NOT BE ERECTED OR INSTALLED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE STRUCTURE.

ABBREVIATIONS:

AL	ALUMINUM	NF	NEAR FACE
BLDG	BUILDING	NTS	NOT TO SCALE
BOT	BOTTOM	OC	ON CENTER
CC	CENTER TO CENTER	PCJ	PARTIAL CONTRACTION JOINT
CONC	CONCRETE	PL	PLATE
CONT	CONTINUOUS	PLF	POUNDS PER LINEAR FOOT
DIA	DIAMETER	PROJ	PROJECTION
DWG	DRAWING	PSF	POUNDS PER SQUARE FOOT
EF	EACH FACE	PSI	POUNDS PER SQUARE INCH
EL	ELEVATION	REINF	REINFORCEMENT
EW	EACH WAY	SPECS	SPECIFICATIONS
FF	FAR FACE	SS	STAINLESS STEEL
FTG	FOOTING	STD	STANDARD
HORIZ	HORIZONTAL	T&B	TOP AND BOTTOM
HP	HIGH POINT	T/STRUCTURE	TOP OF STRUCTURE
ID	INSIDE DIAMETER	TYP	TYPICAL
LP	LOW POINT	UON	UNLESS OTHERWISE NOTED
MAT'L	MATERIAL	VERT	VERTICAL
MAX	MAXIMUM	VIF	VERIFY IN FIELD
MIN	MINIMUM	WWF	WELDED WIRE FABRIC
MISC	MISCELLANEOUS		

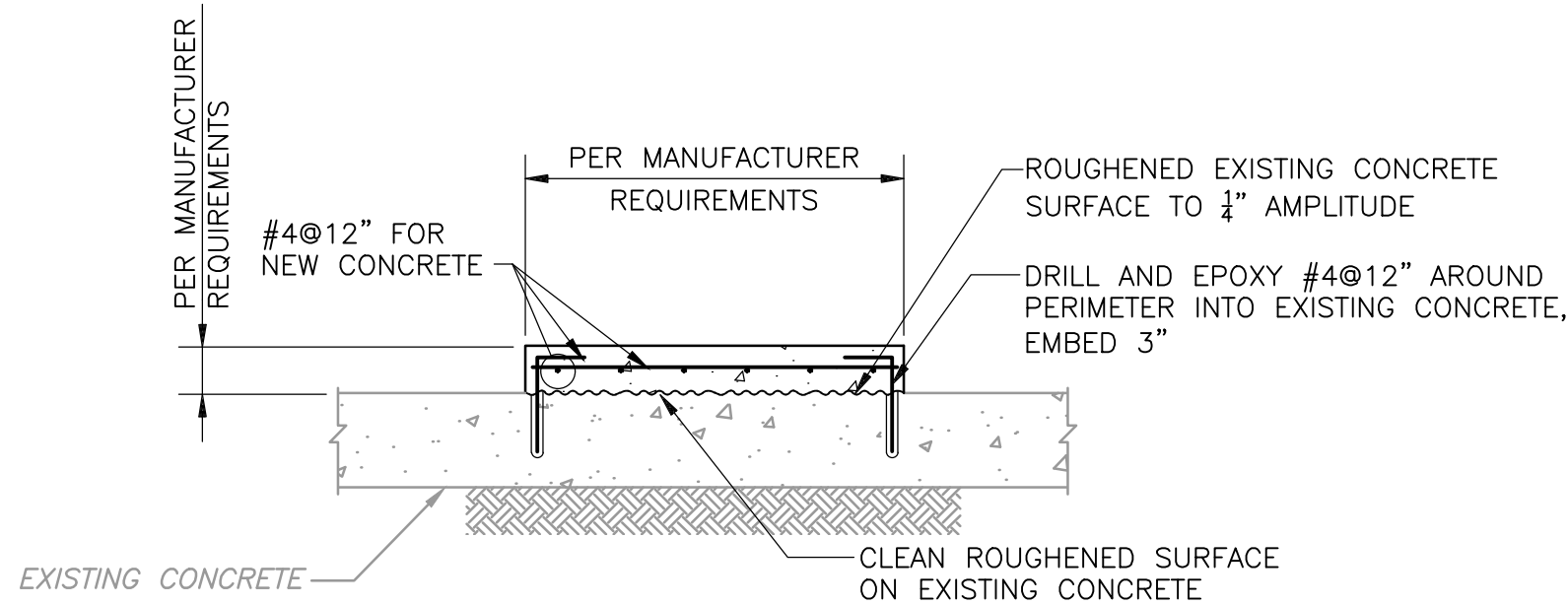
NOTE: THESE ABBREVIATIONS ARE FOR USE ON STRUCTURAL DRAWINGS ONLY.



PUMP PAD

DETAIL A

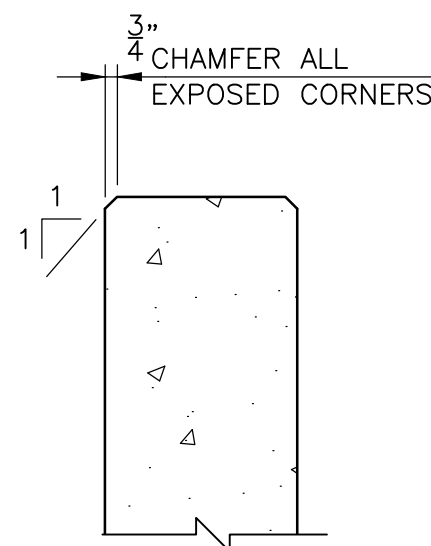
NTS



HOUSEKEEPING PAD FOR EXISTING SLAB

DETAIL B

NTS

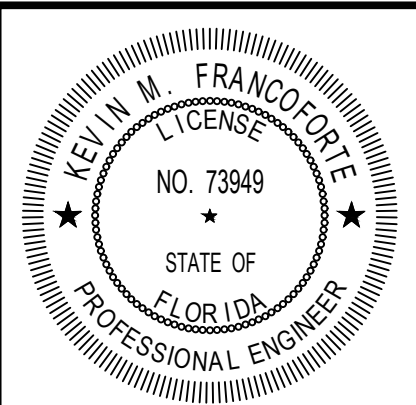


CHAMFER

DETAIL C

NTS

This item has been digitally signed and sealed by Kevin M. Francort on the date adjacent to the seal. Signature must be verified on any electronic copies.



DATE: 9/1/2026
KEVIN M. FRANCOFORTE
PE NO. 73949

PROJECT NO. 263019-308471
FILE NAME: S001STNT.DWG

SHEET NO.

S-1

ISSUED FOR BID

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: K. FRANCOFORTE
DRAWN BY: P. SCHIAVO
SHEET CHK'D BY: K. FRANCOFORTE
CROSS CHK'D BY: P. KALARIA
APPROVED BY: K. FRANCOFORTE
DATE: SEPTEMBER 2026

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

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

STRUCTURAL GENERAL NOTES
AND DETAILS

XREFs: (CDMS 2436) Images: (KRISHNA PE SIGN)
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PROCESS PIPE IDENTIFICATION

PROCESS FLOW STREAMS

CA	PLANT AIR (COMPRESSED)
CCW	CHEMICAL CARRIER WATER
D	DRAIN
DF	DIESEL FUEL
EX	EXHAUST
FILL	CHEMICAL FILL LINE
FINW	FINISHED WATER (POST STORAGE TANK)
LPA	LOW PRESSURE AIR (FROM BLOWERS)
OG	OFF GAS
PW	PROTECTED WATER
RW	RAW WATER
SAN	SANITARY SEWER
SHC	SODIUM HYPOCHLORITE
SPL	SAMPLE LINE
SUC	SUCTION
TKD	TANK DRAIN
V	VENT

PIPE MATERIALS

CI	CAST IRON
STL	STEEL
CU	COPPER
CPVC	CHLORINATED POLYVINYL CHLORIDE
DI	DUCTILE IRON
FRP	FIBERGLASS REINFORCED PLASTIC
GS	GALVANIZED STEEL
HDPE	HIGH DENSITY POLYETHYLENE PRESTRESSED
PCCP	CONCRETE CYLINDER PIPE
PVC	POLYVINYL CHLORIDE PRESSURE PIPE
POLYP	POLYPROPYLENE
RUB	RUBBER
SST	STAINLESS STEEL

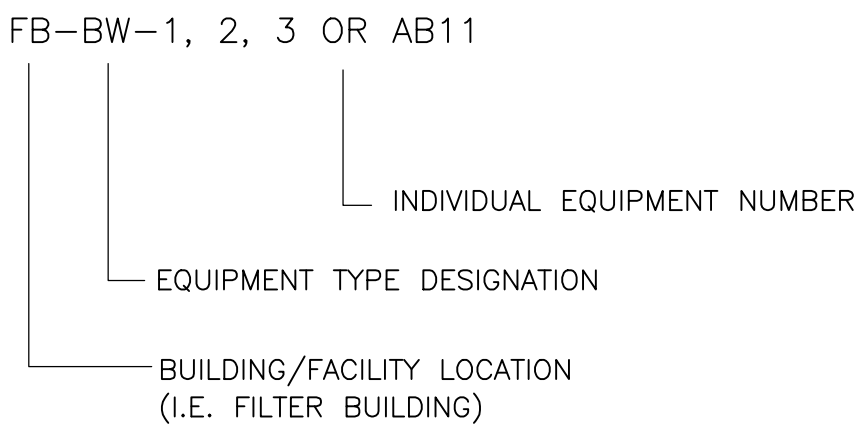
PIPE JOINTS

FLG	FLANGE
PE	PLAIN END
MJ	MECHANICAL JOINT
HFAC	HARNESSED FLANGE ADAPTER COUPLING

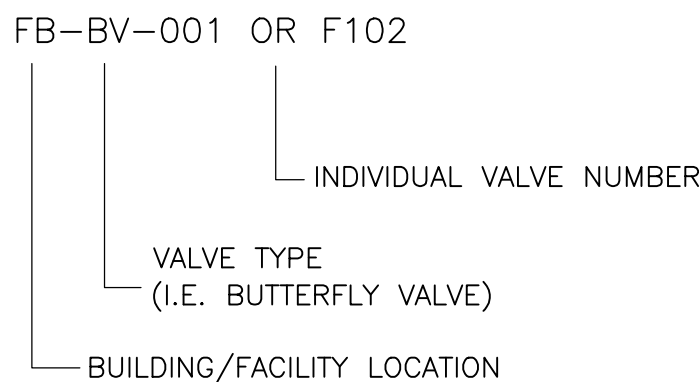
VALVES

BV	BALL VALVE
GV	GATE VALVE
CV	CHECK VALVE
BFV	BUTTERFLY VALVE
ARV	AIR RELEASE VALVE
GLV	GLOBE VALVE
SV	SOLENOID VALVE
PRV	PRESSURE REGULATING VALVE

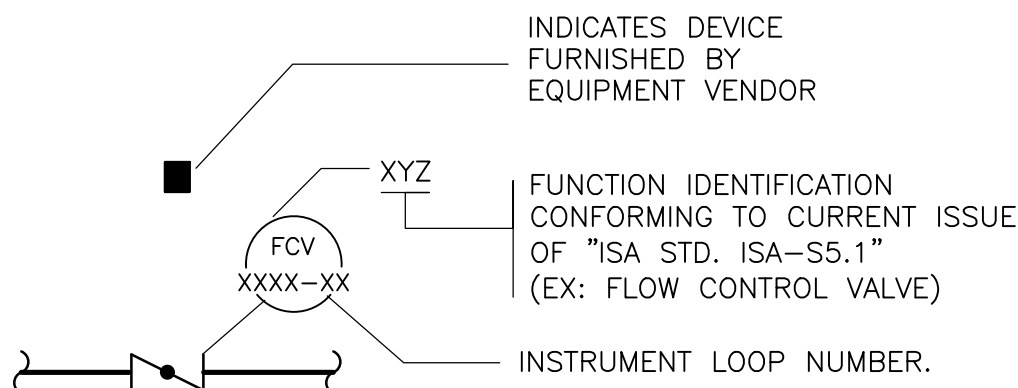
EQUIPMENT TAG



VALVE TAG



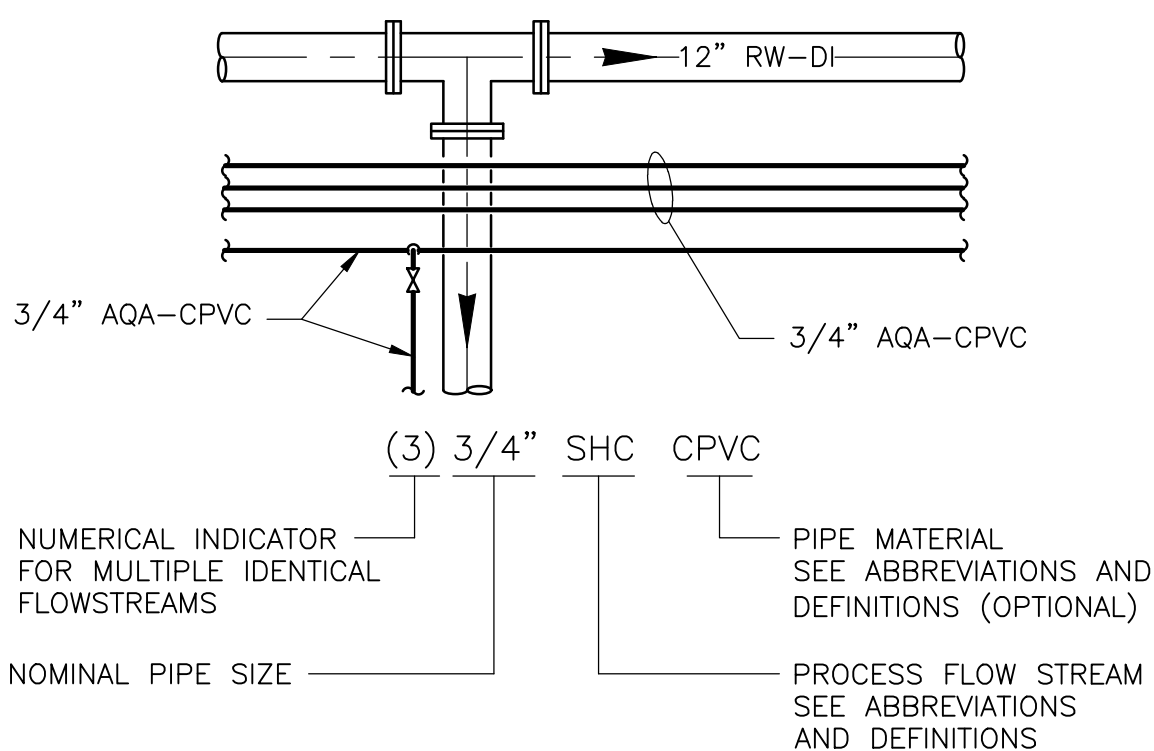
PROCESS VALVE LOOP IDENTIFICATION



MECHANICAL DRAWINGS SHOW ONLY PRIMARY INSTRUMENT ELEMENTS. FOR ADDITIONAL DETAILS REFER TO INSTRUMENTATION SPECIFICATIONS.

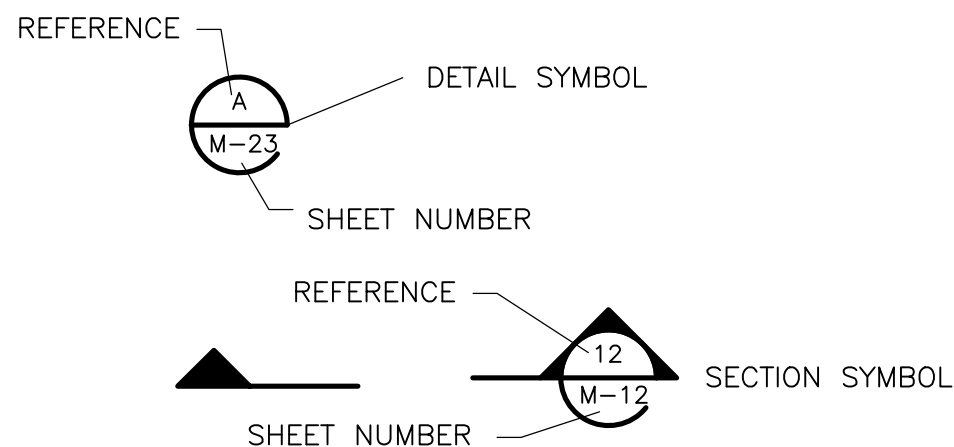
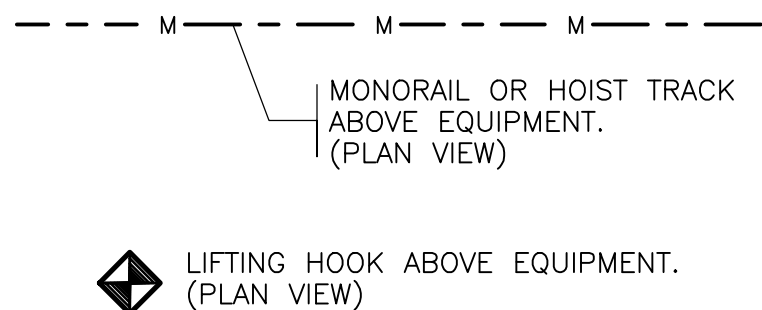
TYPICAL INSTRUMENTATION AND LOOP TAG

PIPE TAG



NUMERICAL INDICATOR FOR MULTIPLE IDENTICAL FLOWSTREAMS
PIPE MATERIAL SEE ABBREVIATIONS AND DEFINITIONS (OPTIONAL)
PROCESS FLOW STREAM SEE ABBREVIATIONS AND DEFINITIONS

MISCELLANEOUS SYMBOLS



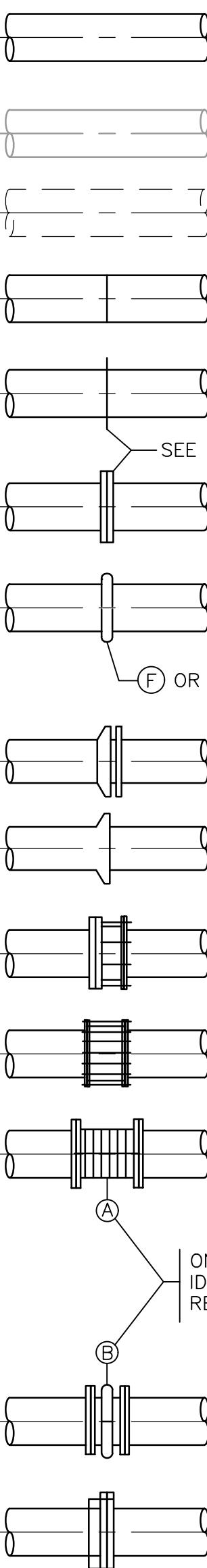
RO SKID NO 3 AND 4
PLAN
1/2" = 1'-0"

LEGENDS SYMBOLS AND ABBREVIATIONS SHOWN ON SHEETS M-1 INDICATE STANDARD SYMBOLS AND ABBREVIATIONS AND ARE PERTINENT TO THE CONDITIONS ON THIS SET OF DRAWINGS TO THE EXTENT APPLICABLE.

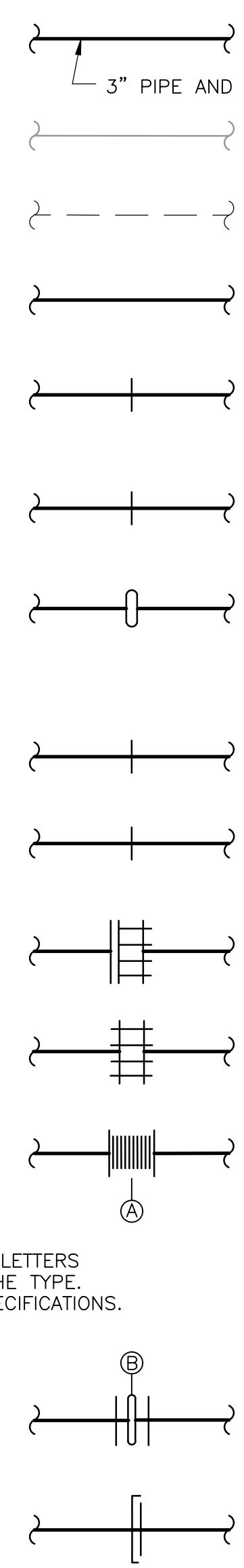
ADDITIONAL LEGENDS AND/OR ABBREVIATIONS MAY APPEAR IN THIS SET OF DRAWINGS TO INDICATE SPECIFIC CONDITIONS.

PIPE AND FITTING SYMBOLS

DOUBLE LINE PIPING



SINGLE LINE PIPING



PROCESS PIPING
3" PIPE AND SMALLER
EXISTING PROCESS PIPING
FUTURE PROCESS PIPING
WELDED JOINT
FLANGED JOINT SIMPLIFIED REPRESENTATION. (SEE NOTE 1)
FLANGED JOINT (SEE NOTE 1)
COUPLING FOR GROOVED END JOINTS:
(F) FLEXIBLE
(R) RIGID
MECHANICAL JOINT (SEE NOTE 1)
PUSH ON JOINT OR CAULKED BELL & SPIGOT JOINT (SEE NOTE 1)
FLANGE x PLAIN END PIPE COUPLING (FLANGE ADAPTOR)
PIPE COUPLING (SLEEVE-TYPE)
FLEXIBLE COUPLING OR EXPANSION JOINT (SLEEVE TYPE)
ONE OR TWO LETTERS IDENTIFYING THE TYPE. REFER TO SPECIFICATIONS.
FLEXIBLE COUPLING OR EXPANSION JOINT (BELLOWS TYPE)
FLANGE GUARD

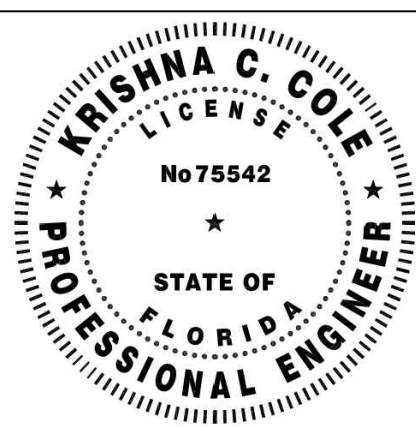
PIPE AND FITTING SYMBOLS NOTES:

- GENERIC JOINT SYMBOL IS USED FOR ALL SINGLE LINE PIPING SHOWN ON THE INTERIOR AND EXTERIOR PIPING DRAWINGS.
- BOTH, DETAILED AND SIMPLIFIED FLANGE REPRESENTATION SYMBOLS MAY BE SHOWN ON THE DRAWINGS.
- UNLESS MODIFIED BY THE GENERAL PROJECT NOTES OR DETAILED ON THE LAYOUT AND SCHEMATIC DRAWINGS PIPE AND FITTING JOINT REQUIREMENTS FOR THE VARIOUS PIPE MATERIALS ARE DEFINED IN THE SPECIFICATIONS AND ARE INDICATED ON THE PROCESS PIPE SCHEDULES.

GENERAL NOTES

- PROCESS EQUIPMENT DIMENSIONS, LOCATIONS AND PIPING SYSTEM LAYOUTS ARE BASED ON EQUIPMENT SELECTED AND SPECIFIED BY THE DESIGN ENGINEER. IF THE CONTRACTOR PROPOSES TO FURNISH EQUIPMENT THAT REQUIRES AN ARRANGEMENT OR SPACE DIFFERING FROM THAT INDICATED ON THE DRAWINGS OR SPECIFIED, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER AND OWNER FOR APPROVAL DETAILED STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION, AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT AND/OR THIS INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO PROCESS SYSTEM PROPOSED. PLANS, SECTIONS, DETAILS AND SCHEMATICS OF ALL APPURTENANCES REQUIRED.
- SIZES OF EQUIPMENT FOUNDATIONS AND EQUIPMENT PADS INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FOR THE EQUIPMENT FURNISHED. ALL FLOOR MOUNTED EQUIPMENT SHALL BE SET ON CONCRETE PADS CONFORMING TO DETAILS SHOWN ON THE STRUCTURAL AND/OR MECHANICAL DRAWINGS.
- CONTRACTOR SHALL COORDINATE EXACT LOCATION AND LENGTHS REQUIRED FOR ALL PIPING CONNECTIONS WITH THE EQUIPMENT SUPPLIERS.
- WATER SUPPLY CONNECTIONS TO PROCESS EQUIPMENT AND PROCESS PIPES ARE SHOWN ON THE MECHANICAL DRAWINGS. DETAILS OF CONTROL VALVE STATIONS, MAKE-UP WATER CONNECTIONS, FLUSHING CONNECTIONS etc. ARE SHOWN ON THE MECHANICAL DRAWINGS. IF APPLICABLE, LIMITS OF WORK ARE SHOWN ON THE MECHANICAL, INSTRUMENTATION, ELECTRICAL AND PLUMBING DRAWINGS.
- DIELECTRIC COUPLINGS, FLANGES OR UNIONS SHALL BE INSTALLED AT ALL DISSIMILAR MATERIAL CONNECTIONS.
- MECHANICAL PLANS AND SECTIONS DO NOT SHOW ALL VALVES, GAUGES, SWITCHES, OPERATORS, DRAINS, VENTS, etc. REQUIRED FOR THE COMPLETE SYSTEM. CERTAIN SMALL DIAMETER PROCESS PIPING RUNS MAY NOT BE SHOWN IN THEIR ENTIRETY. GENERALLY, SMALL PIPING IS SHOWN DIAGRAMMATICALLY IN THE INSTRUMENTATION DRAWINGS. SHOULD A POTENTIAL ROUTING INTERFERENCE BE DISCOVERED, NOTIFY ENGINEER AND OWNER. THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL PIPING SYSTEMS AS INDICATED ON THE INSTRUMENTATION DRAWINGS TO PROVIDE THE COMPLETE SYSTEM.
- STANDARD PIPE SUPPORT DETAILS ARE PROVIDED IN THE MECHANICAL DETAIL DRAWINGS. SUPPORT PIPES IN ACCORDANCE WITH SPECIFICATION SECTION 400507, "HANGERS AND SUPPORTS FOR PROCESS PIPING.
- PIPING SHALL BE INSTALLED SUCH THAT ANY PIPE, LAYER OF PIPING OR EQUIPMENT CAN BE REMOVED WITHOUT DISTURBING REMAINING PIPES AND SUPPORTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAGGING ALL PROCESS PIPING VALVES AND EQUIPMENT AND RECORDING AS-BUILT LOCATIONS FOR THE SAME. PROCESS IDENTIFICATION SYSTEM SHALL BE AS DETAILED IN THE SPECIFICATIONS.
- PORTIONS OF NONPROCESS PIPING (PLUMBING) ARE SHOWN FOR CLARITY AND FOR COORDINATION BETWEEN DISCIPLINES. REFER TO APPROPRIATE DRAWINGS AND SPECIFICATIONS.

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DATE: 9/1/2026
KRISHNA C. COLE
PE NO. 75542

PROJECT NO. 263019-308471
FILE NAME: MO01GNNT.DWG

SHEET NO.

M-1

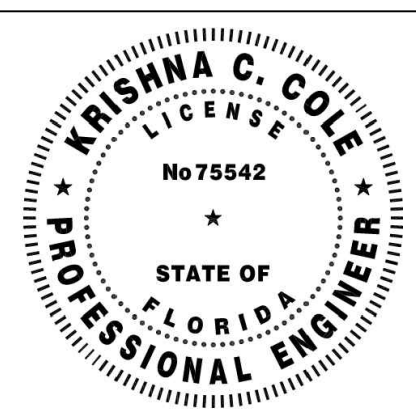
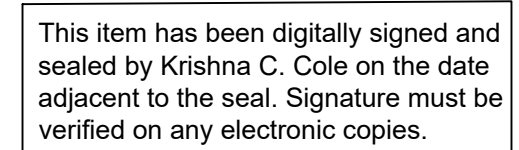
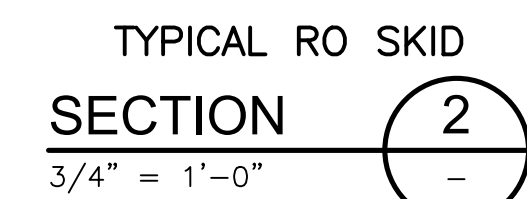
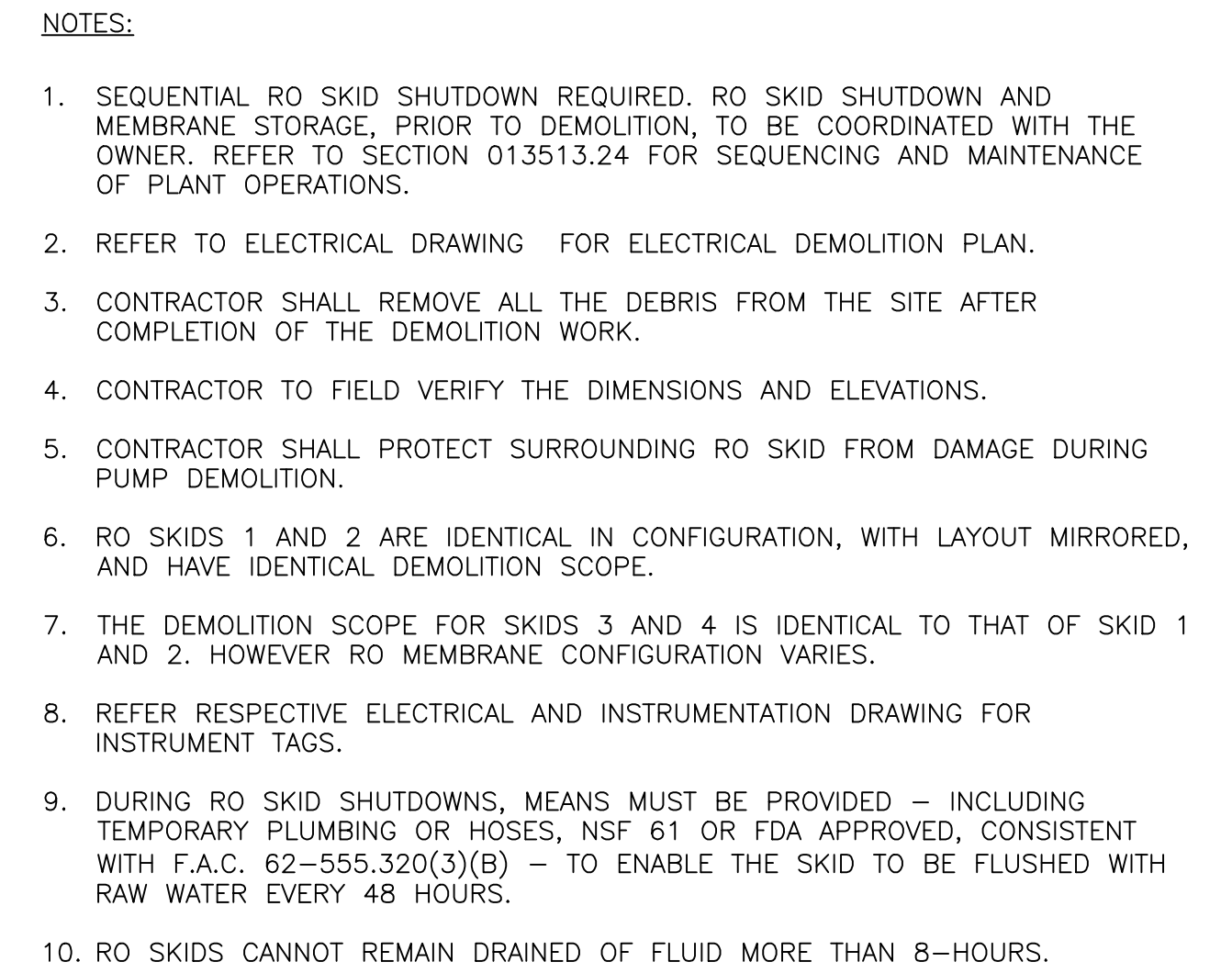
ISSUED FOR BID

DESIGNED BY: B. DIVYA
DRAWN BY: G. HARI
SHEET CHK'D BY: A. MARATHE
CROSS CHK'D BY: B. DIVYA
APPROVED BY: K. C. COLE
DATE: SEPTEMBER 2026

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

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

MECHANICAL GENERAL NOTES
AND LEGEND



DATE: 9/1/2026
KRISHNA C. COLE
PE NO. 75542

PROJECT NO. 263019-308471
FILE NAME: M002ROPS.DWG

SHEET NO.

M-2

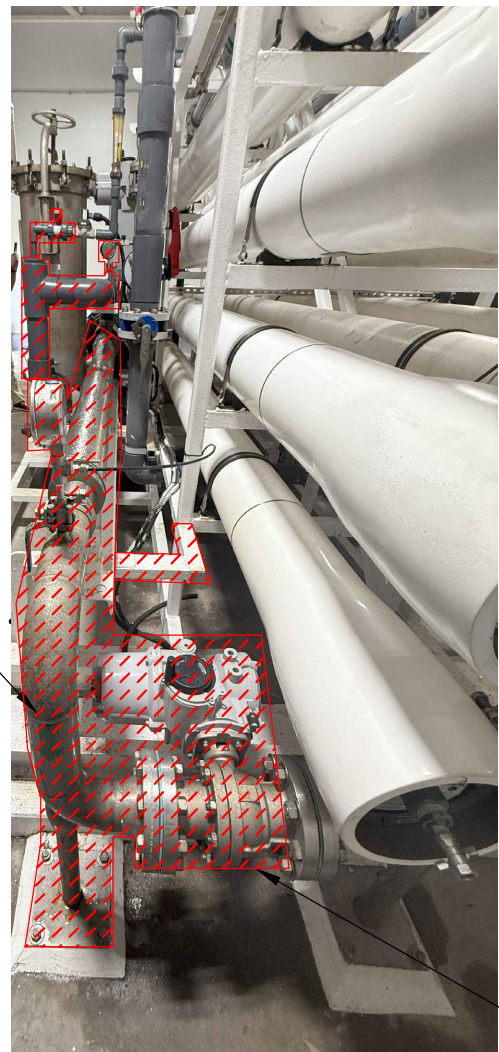
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TYPICAL EXISTING RO SKID FEED PUMP-SIDE PROFILE
PHOTOGRAPH 1
NTS



TYPICAL EXISTING RO SKIDS FEED PUMP-DISCHARGE END
PHOTOGRAPH 2
NTS



TYPICAL EXISTING RO SKID FEED PUMP AND CONTROL VALVE AT PUMP-DISCHARGE END
PHOTOGRAPH 3
NTS

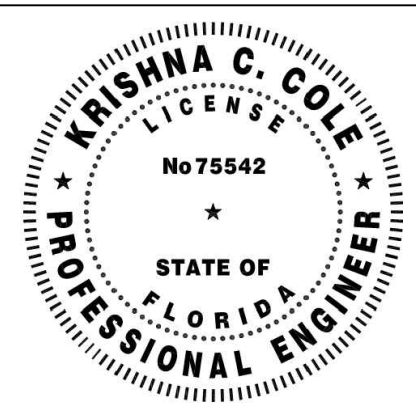


TYPICAL EXISTING RO SKID FEED PUMP, MOTOR, BASE AND SUCTION PIPING
PHOTOGRAPH 4
NTS

NOTES:

1. SEQUENTIAL RO SKID SHUTDOWN REQUIRED. RO SKID SHUTDOWN AND MEMBRANE STORAGE, PRIOR TO DEMOLITION, TO BE COORDINATED WITH THE OWNER. REFER TO SECTION 013513.24 FOR SEQUENCING AND MAINTENANCE OF PLANT OPERATIONS.
2. REFER TO ELECTRICAL DRAWING E-6 FOR ELECTRICAL DEMOLITION PLAN.
3. CONTRACTOR SHALL REMOVE ALL THE DEBRIS FROM THE SITE AFTER COMPLETION OF THE DEMOLITION WORK.
4. CONTRACTOR TO FIELD VERIFY THE DIMENSIONS AND ELEVATIONS.
5. CONTRACTOR SHALL PROTECT SURROUNDING RO SKID FROM DAMAGE DURING PUMP DEMOLITION.
6. RO SKIDS 1 AND 2 ARE NEARLY IDENTICAL IN CONFIGURATION, RO SKIDS 3 AND 4 WITH LAYOUT MIRRORED.
7. THE DEMOLITION SCOPE FOR SKIDS 3 AND 4 IS IDENTICAL TO THAT OF SKID 1 AND 2.
8. DEMOLISH 2" CONNECTION FLANGE ON RO SKID 3 AND 4 ALONG WITH REDUCERS.
9. PROVIDE TEMPORARY PLUMBING OR HOSES FOR FLUSHING EVERY 48 HOURS WHILE THE RO SKID IS SHUTDOWN PER SECTION 013513.24 FOR SEQUENCING AND MAINTENANCE OF PLANT OPERATIONS.

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DATE: 9/1/2026
KRISHNA C. COLE
PE NO. 75542

PROJECT NO. 263019-308471
FILE NAME: M003ROPS.DWG

SHEET NO.

M-3

ISSUED FOR BID

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: B. DIVYA
DRAWN BY: G. HARI
SHEET CHK'D BY: A. MARATHE
CROSS CHK'D BY: B. DIVYA
APPROVED BY: K. C. COLE
DATE: SEPTEMBER 2026

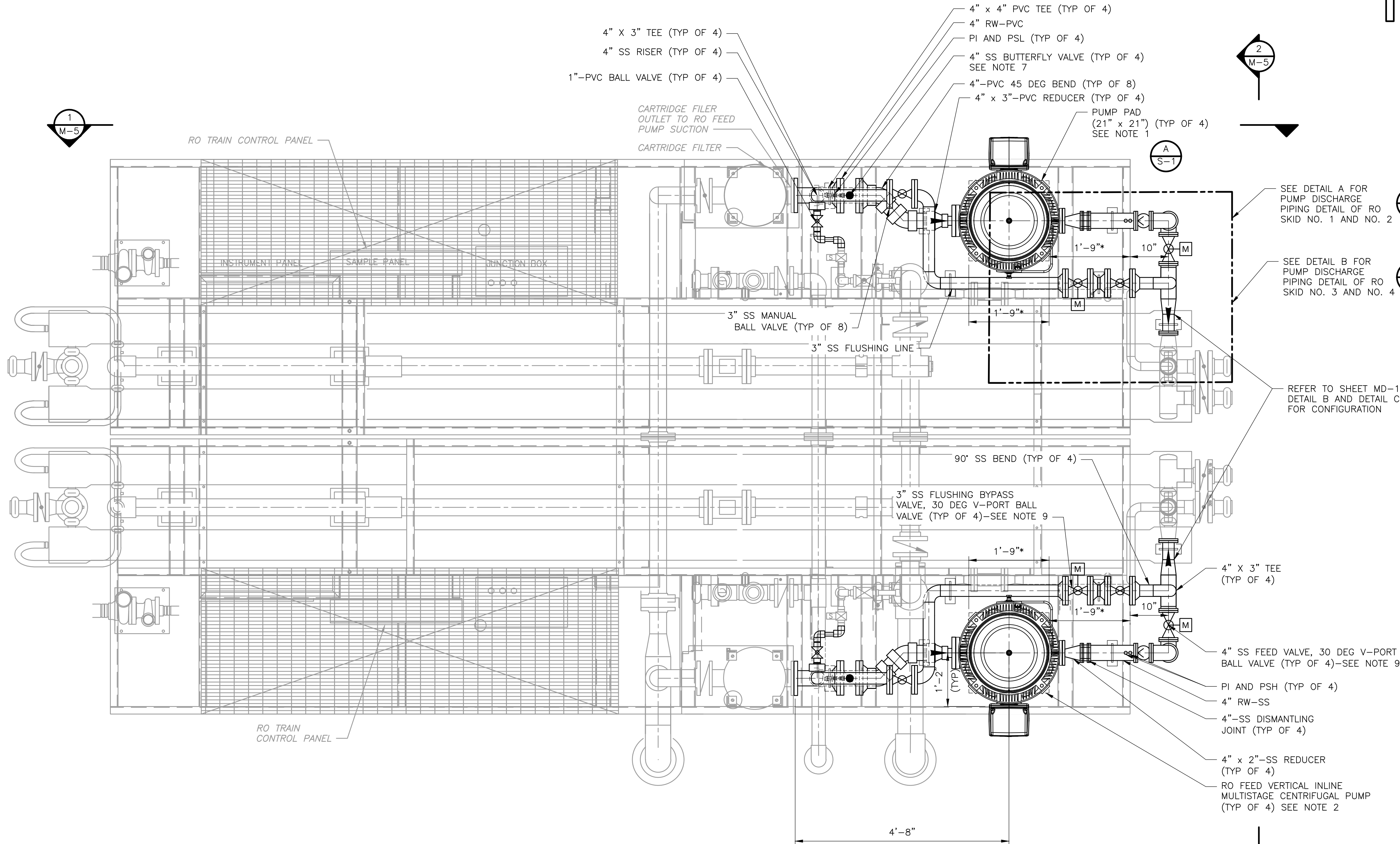
CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL CQA No. EB-0000020

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

RO SKID FEED PUMP DEMOLITION
TYPICAL PHOTOGRAPHS

XREFS: [CDMS, 2436, MEP001TR, MWP002RO] Images: [KRISHNA PE SIGN]
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REUSE OF DOCUMENTS:



TYPICAL RO SKID FEED PUMP
PLAN
3/4" = 1'-0"

EQUIPMENT:	RO SKID NO. 1	RO SKID NO. 2	RO SKID NO. 3	RO SKID NO. 4
RO FEED VERTICAL INLINE MULTISTAGE CENTRIFUGAL PUMP, SEE NOTE 2	P-22-1	P-22-2	P-22-3	P-22-4
SUCTION 4"-SS BUTTERFLY VALVE	BFV-21-4-1	BFV-21-4-2	BFV-28-4-1	BFV-28-4-2
PERMEATE 1"-PVC BALL VALVE	BV-21-11	BV-21-12	BV-28-11	BV-28-12
DISCHARGE 4"-SS GLOBE TYPE SILENT CHECK VALVE	CHK-22-1	CHK-22-2	CHK-22-3	CHK-22-4
4" SS FEED VALVE, 30 DEG V-PORT BALL VALVE, SEE NOTE 9	BV-22-1-1	BV-22-2-1	BV-22-3-1	BV-22-4-1
PRESSURE INDICATOR (PI) AND LOW PRESSURE SWITCH (PSL) (SUCTION SIDE)	PI/PSL 22-1-1	PI/PSL 22-2-1	PI/PSL 22-3-1	PI/PSL 22-4-1
PRESSURE INDICATOR (PI) AND HIGH PRESSURE SWITCH (PSH) (DISCHARGE SIDE)	PI/PSH 22-1-2	PI/PSH 22-2-2	PI/PSH 22-3-2	PI/PSH 22-4-2
FLUSHING BYPASS 3"-SS MANUAL BALL VALVE	BV-22-1-2	BV-22-2-2	BV-22-3-2	BV-22-4-2
3" SS FLUSHING BYPASS VALVE, 30 DEG V-PORT BALL VALVE, SEE NOTE 9	BV-22-1-3	BV-22-2-3	BV-22-3-3	BV-22-4-3
FLUSHING BYPASS 3"-SS MANUAL BALL VALVE	BV-22-1-4	BV-22-2-4	BV-22-3-4	BV-22-4-4

RO SKID FEED PUMP, INSTRUMENTS AND VALVE TAGS
DETAIL
NTS

NOTES:

- PUMP PADS TO BE INSTALLED PRIOR TO DEMOLITION. REFER TO SECTION 013513.24 FOR SEQUENCING AND MAINTENANCE OF PLANT OPERATIONS.
- LAYOUT IS BASED ON PUMP MODEL 2x3-13 ILVS-E BY AFTON CONTRACTOR TO COORDINATE FOR LAYOUT IF OTHER PUMP MODEL/MANUFACTURER IS SELECTED.
- PIPE SUPPORTS SHOWN ARE INDICATIVE AND TO BE DESIGNED PER SPECIFICATION SECTION 400507.
- REFER TO ELECTRICAL DRAWINGS FOR CONTROL PANEL MODIFICATION DETAILS.
- * INDICATES PUMP PAD DIMENSIONS TO BE COORDINATED BY THE CONTRACTOR WITH THE MANUFACTURER OF THE APPROVED EQUIPMENT PRIOR TO FABRICATION AND CONSTRUCTION. REFER TO DETAIL A/S-1 FOR EQUIPMENT PAD DETAILS.
- THE DRAWING SHOWS TYPICAL ARRANGEMENT OF TWO RO SKIDS AND ASSOCIATED FEED PUMPS. EACH OF THE FOUR RO SKIDS FEED PUMPS TO BE REPLACED.
- PROVIDE STAINLESS STEEL AWWA C504 SHORT BODY FLANGED BUTTERFLY VALVE BY DEZURIK, VALMATIC, KENNEDY, M&H, PRATT OR APPROVED EQUAL. VALVE SHALL BE NSF61 COMPLIANT.
- FLUSHING BYPASS LINE ALIGNMENT AND ROUTING TO BE FIELD VERIFIED AND CONFIRMED PRIOR TO INSTALLATION.
- ROTORK IQTM-125 7010-100-04 ACTUATOR OR ROTORK EQUIVALENT.

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DATE: 9/1/2026
KRISHNA C. COLE
PE NO. 75542

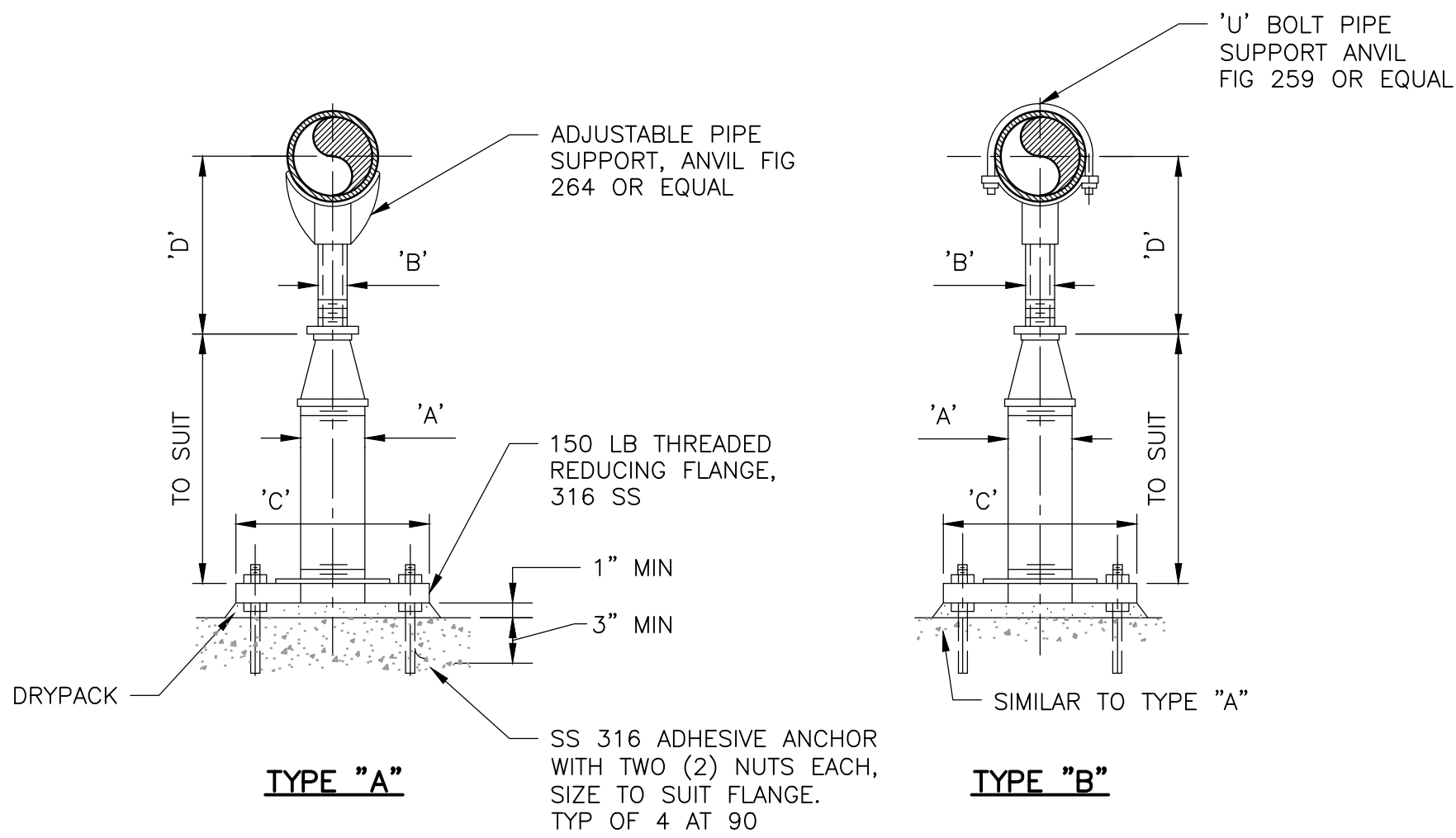
PROJECT NO. 263019-308471
FILE NAME: M004ROPS.DWG

SHEET NO.

M-4

ISSUED FOR BID

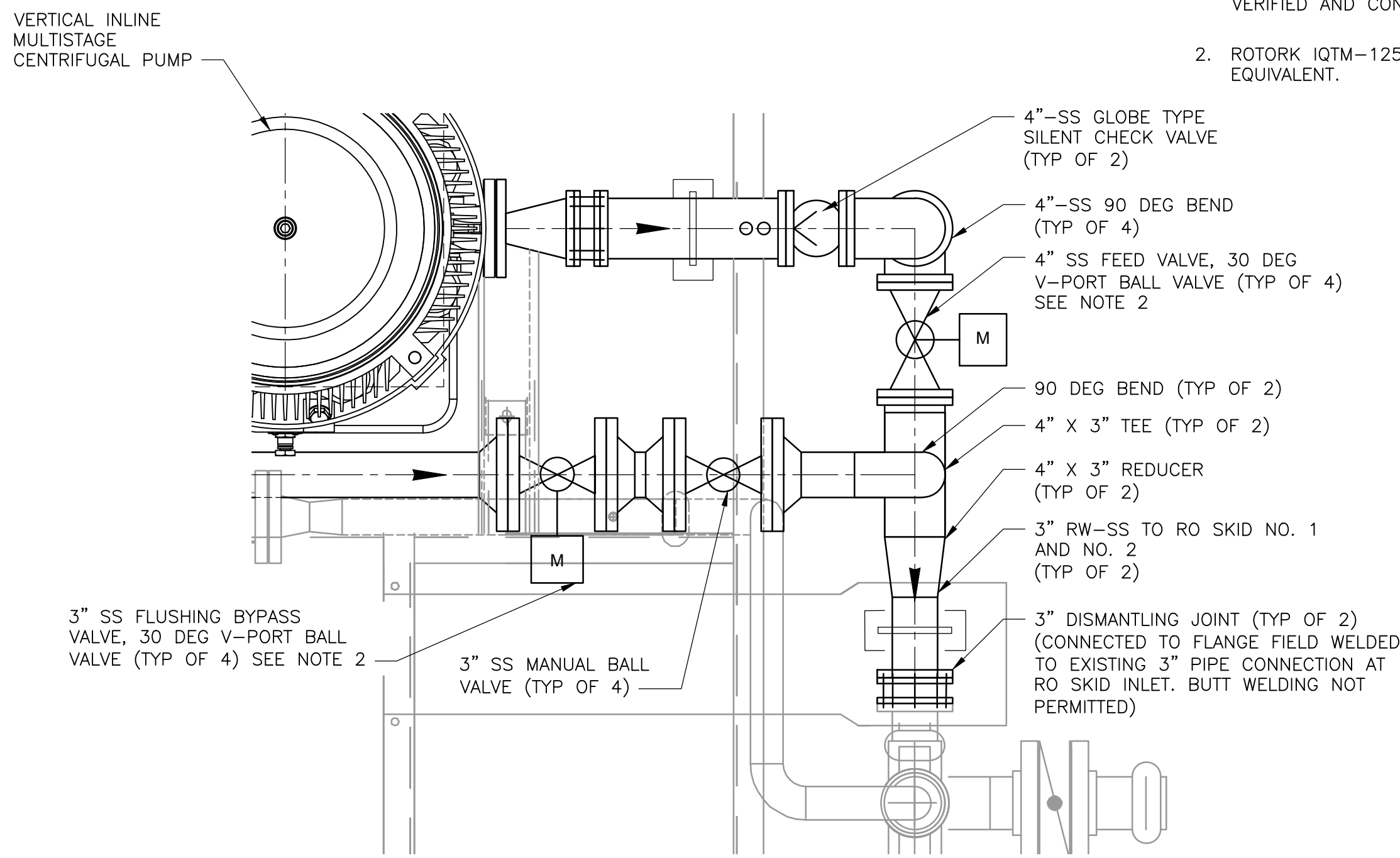
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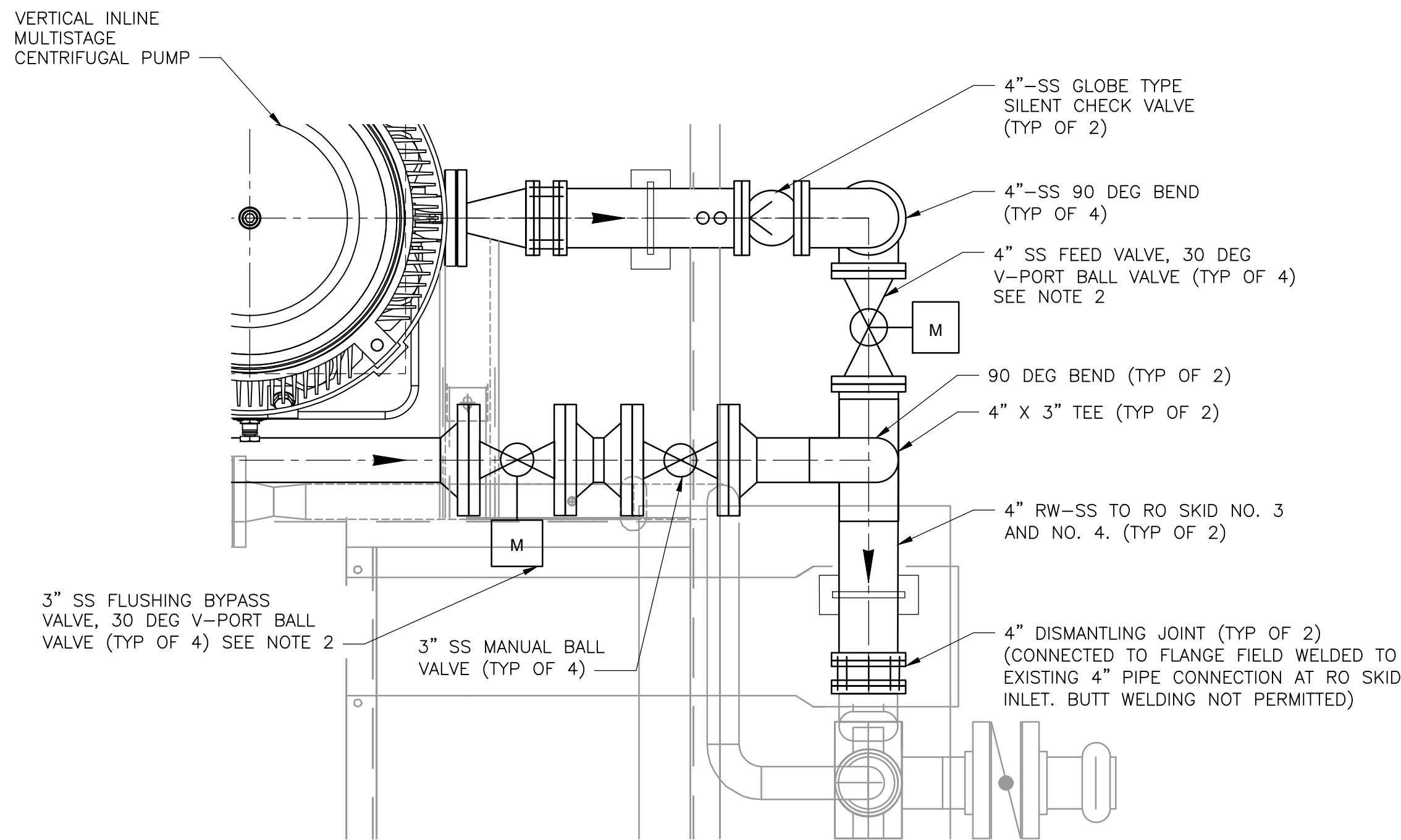
ADJUSTABLE PIPE SUPPORT APPROX DIMENSIONS IN INCHES					
PIPE SIZE	A	B	C	D MIN	D MAX
2	2	1	9	8	11
3	2	1	9	8	11
3	2	1	9	8	12
4	3	2	9	10	14
6	3	2	9	11	15

- NOTES:
- UNDER VALVES, METERS OR OTHER SPECIAL APPURTENANCES A FABRICATED SUPPORT PIECE MAY BE UTILIZED AS ACCEPTABLE TO ENGINEER.
 - 316 STAINLESS STEEL FOR ALL PIPE SUPPORT MATERIALS AND HARDWARE.

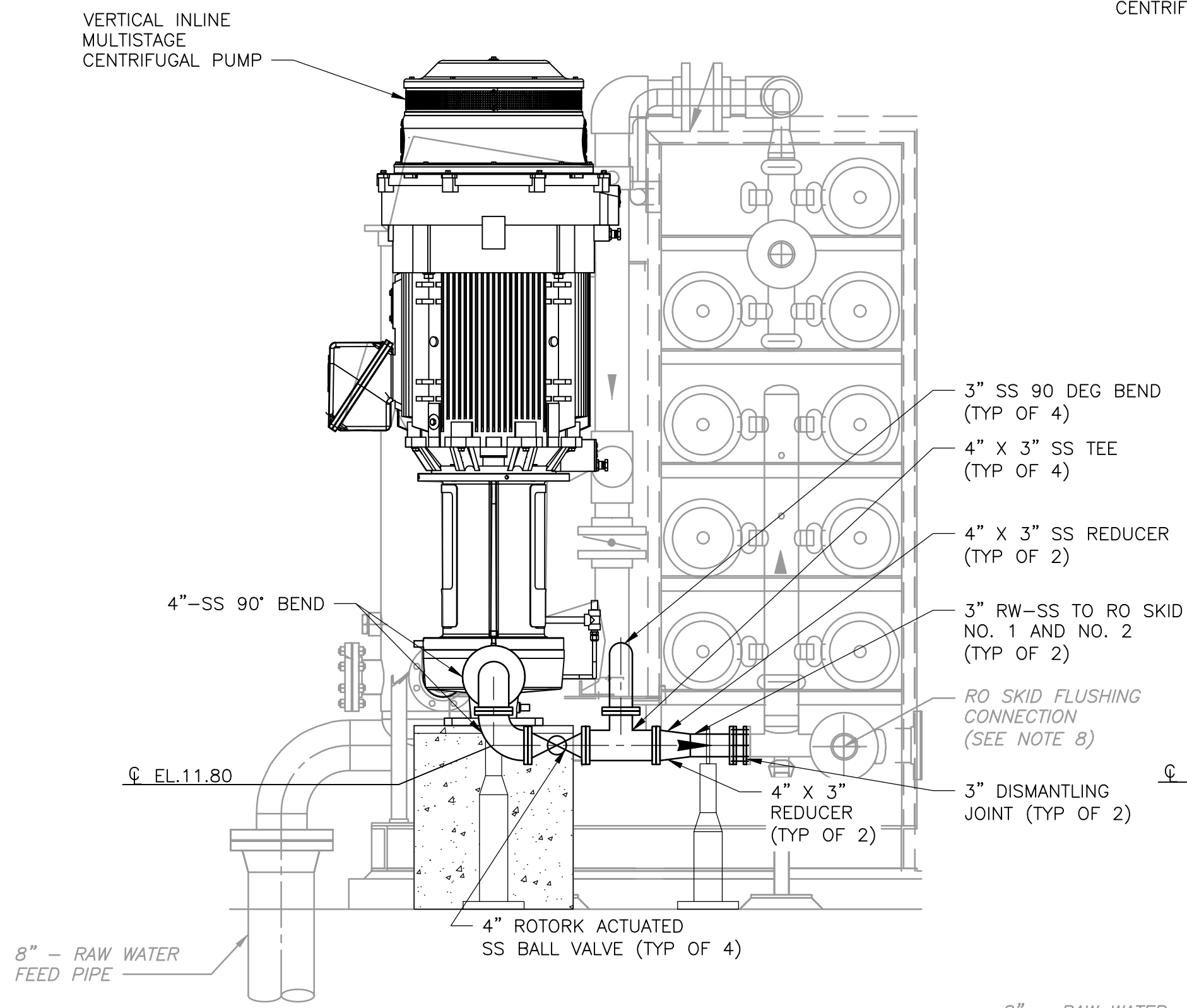
ADJUSTABLE PIPE SUPPORT
DETAIL A
NTS



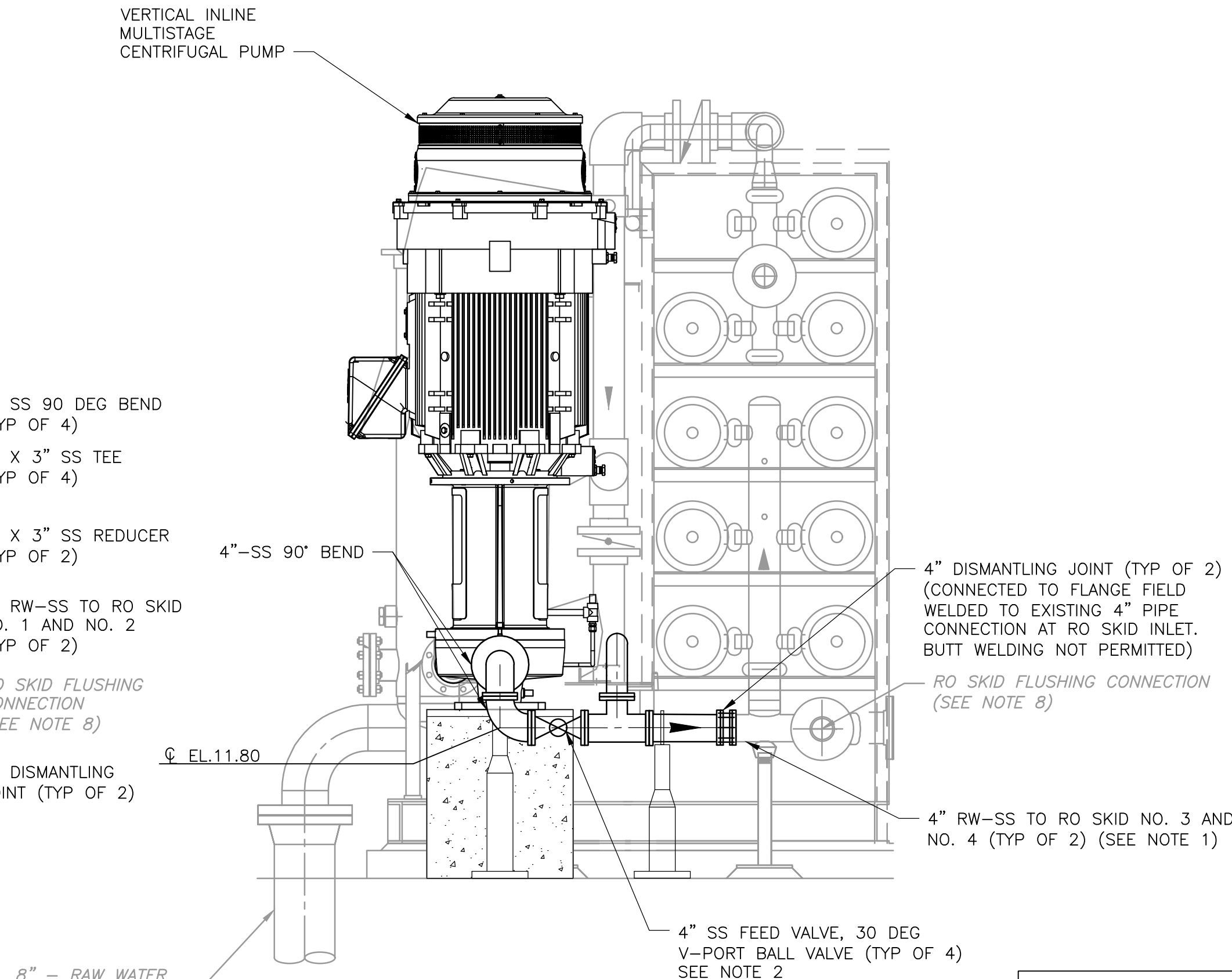
RO SKID NO. 1 AND NO. 2
DETAIL B
1 1/2" = 1'-0"



RO SKID NO. 3 AND NO. 4
DETAIL C
1 1/2" = 1'-0"



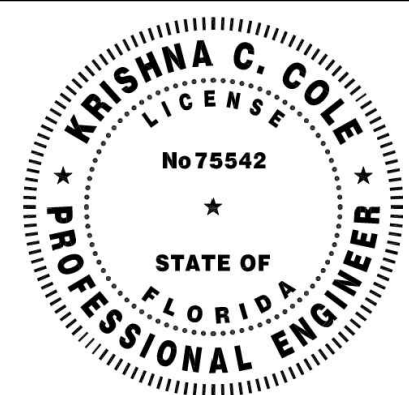
RO SKID NO. 1 AND NO. 2
DETAIL D
3/4" = 1'-0"



RO SKID NO. 3 AND NO. 4
DETAIL E
3/4" = 1'-0"

- NOTES:
- FLUSHING BYPASS LINE ALIGNMENT AND ROUTING TO BE FIELD VERIFIED AND CONFIRMED PRIOR TO INSTALLATION.
 - ROTORK IQTM-125 7010-100-04 ACTUATOR OR ROTORK EQUIVALENT.

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DATE: 9/1/2026
KRISHNA C. COLE
PE NO. 75542

PROJECT NO. 263019-308471
FILE NAME: MD01MDDT.DWG

SHEET NO.

MD-1

ISSUED FOR BID

DESIGNED BY: B. DIVYA
DRAWN BY: G. HARI
SHEET CHK'D BY: A. MARATHE
CROSS CHK'D BY: B. DIVYA
APPROVED BY: K. C. COLE
DATE: SEPTEMBER 2026

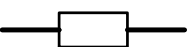
CDM Smith
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL CCA No. ES-0000020

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

MECHANICAL DETAILS I

XREFs: [CDWS-2436] Images: []
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HVAC SYMBOLS

 UNCLASSIFIED. TYPE AS SHOWN ON THE DRAWINGS ADJACENT TO SYMBOL

 FLOW METER

 GATE VALVE

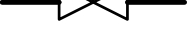
 GLOBE VALVE

 BALL VALVE

 FLOW BALANCING AND SHUTOFF VALVE

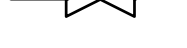
 BUTTERFLY VALVE

 CHECK VALVE, GENERAL SYMBOL

 SOLENOID VALVE

 ANGLE VALVE

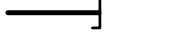
 2-WAY CONTROL VALVE

 AUTOMATIC AIR RELEASE VENT

 GATE VALVE (NC) WITH HOSE CONNECTOR

 CAP

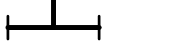
 BOTTOM CONNECTION

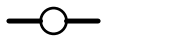
 TOP CONNECTION

 ELBOW UP

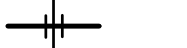
 ELBOW DOWN

 TEE

 TEE UP

 TEE DOWN

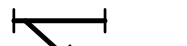
 UNION-SCREWED

 UNION-FLANGED

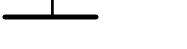
 HUMIDISTAT

 PRESSURE GAGE AND COCK

 STRAINER

 THERMOMETER

 PRESS. DIFF. W/ INDICATOR LIGHT & REMOTE ALARM @ ATC

 THERMOSTAT

 HIGH TEMPERATURE THERMOSTAT/SWITCH

 SMOKE DETECTOR

 FLOW SENSOR

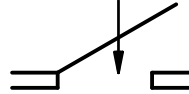
 TO SPACE

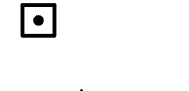
 FROM SPACE

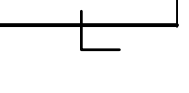
 1/2" UC 100 CFM UNDERCUT DOOR

NOTE: THIS IS A GENERAL LIST OF SYMBOLS AND ABBREVIATIONS. NOT ALL ITEMS SHOWN HERE APPEAR ON THE CONTRACT DRAWINGS.

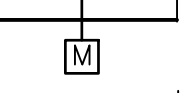
HVAC SYMBOLS

 20X12 LD OR DG 200 CFM LOUVER DOOR OR DOOR GRILLE

 SMOKE TEST BOX FOR SMOKE SENSORS

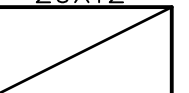
 MANUAL VOLUME DAMPER

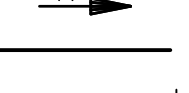
 FIRE DAMPER 1.5(1-1/2HR RATED)

 MOTOR OPERATED DAMPER

 DIRECTION OF FLOW

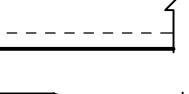
 DUCT SIZE- FIRST NUMBER IS SIDE SHOWN

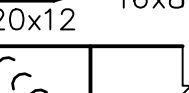
 DUCT SECTION, POSITIVE PRESS. FIRST NUMBER IS TOP

 DUCT SECTION, NEGATIVE PRESS. FIRST NUMBER IS TOP

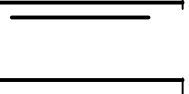
 ELEVATION CHANGE (R) RISE, (D) DROP

 ACCESS DOOR

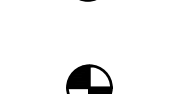
 FLEXIBLE CONNECTION

 FLEXIBLE DUCT

 DUCT LINING

 TRANSITION

 TURNING VANES

 SIDE MOUNTED DEVICE

 BOTTOM MOUNTED DEVICE

 TO BE DEMOLISHED

 EXTENT OF DEMOLITION

 POINT OF CONNECTION NEW TO EXISTING

HVAC ABBREVIATIONS	
A	AMPS
ACU	AIR COOLED CONDENSER
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AG	ABOVE GRADE
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
AUX	AUXILIARY
AVG	AVERAGE
BBD	BACK DRAFT DAMPER
BHP	BRAKE HORSEPOWER
BOT	BOTTOM
BTU	BRITISH THERMAL UNIT
C	CONDENSATE
CF	CEILING FAN
CFM	CUBIC FEET PER MINUTE
DB	DRY BULB
DIA	DIAMETER
DN	DOWN
DW	DOUBLE WALL
DWG	DRAWING
EA	EXHAUST AIR
EF	EXHAUST FAN
EMERG	EMERGENCY
ENT	ENTERING
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
F	FAHRENHEIT
FD	FIRE DAMPER
FLR	FLOOR
FPM	FEET PER MINUTE
FS	FLOW SENSOR
GPM	GALLONS PER MINUTE
GS	GALVANIZED STEEL
HP	HORSEPOWER
HT	HIGH TEMPERATURE THERMOSTAT/SWITCH
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
HZ	HERTZ
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
M	MOTOR
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MFR	MANUFACTURER
MIN	MINIMUM
NO.	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OUTSIDE AIR
PAC	PACKAGED AIR CONDITIONER
PH	PHASE
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
R	REFRIGERANT
RA	RETURN AIR
RLA	RATED LOADED AMPS
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SUPPLY FAN
SP	STATIC PRESSURE
SS	STAINLESS STEEL
T	THERMOSTAT
TEFC	TOTALLY ENCLOSED FAN COOLED
TEMP	TEMPERATURE
V	VOLTS
VAV	VAIRABLE AIR VOLUME
W/	WITH
W/O	WITHOUT
WB	WET BULB

- ### HVAC NOTES

 - HVAC EQUIPMENT DIMENSIONS, LOCATIONS, DUCTWORK AND PIPING SYSTEM LAYOUTS ARE BASED ON EQUIPMENT SELECTED BY THE ENGINEER. IF THE CONTRACTOR PROPOSES TO FURNISH EQUIPMENT THAT REQUIRES AN ARRANGEMENT OR SPACE DIFFERING FROM THAT INDICATED ON THE DRAWINGS, OR SPECIFIED, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER, FOR APPROVAL, DETAILED ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION, HVAC AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT THE CONTRACTOR PROPOSES TO FURNISH. THIS INFORMATION SHALL INCLUDE BUT SHALL NOT BE LIMITED TO PLANS, SECTIONS, DETAILS, AND SCHEMATICS OF ALL APPURTENANCES REQUIRED. SUCH CHANGES, IF APPROVED BY THE ENGINEER, SHALL BE AT NO EXTRA COST TO THE OWNER. THE CONTRACTOR SHALL ASSUME THE COST OF, AND THE RESPONSIBILITY FOR, SATISFACTORILY ACCOMPLISHING ALL THE NECESSARY CHANGES CORRESPONDING TO THE DIMENSIONS AND CHARACTERISTICS OF THE EQUIPMENT SUBMITTED AND APPROVED BY THE ENGINEER. REFER TO SPECIFICATIONS FOR FURTHER DETAILS.
 - SIZES OF EQUIPMENT PADS INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FOR THE EQUIPMENT FURNISHED. ALL FLOOR MOUNTED EQUIPMENT SHALL BE SET ON CONCRETE PADS CONFORMING TO DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.
 - DIELECTRIC COUPLINGS, FLANGES OR UNIONS SHALL BE INSTALLED AT ALL CONNECTIONS OF COPPER PIPE TO OTHER TYPES OF METALLIC PIPING.
 - HVAC PIPING AND DUCTWORK DRAWINGS DO NOT SHOW ALL DRAINS, VENTS, OFFSETS AND FITTINGS ETC. REQUIRED FOR THE COMPLETE SYSTEM. SMALL PIPING IS SHOWN APPROXIMATELY TO SCALE BUT NOT EVERY FITTING AND OFFSET IS SHOWN. SOME VALVES AND APPURTENANCES MAY BE OMITTED FOR THE SAKE OF CLARITY. THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL HVAC SYSTEMS SHOWN ON THE DRAWINGS AND DETAILS, AND/OR AS DEFINED IN THE SPECIFICATIONS TO PROVIDE THE COMPLETE SYSTEM.
 - UNLESS OTHERWISE SHOWN ON THE DRAWING, ALL WALL PENETRATIONS SHALL BE AS SHOWN ON THE WALL PENETRATION DETAILS. ABOVE GROUND EXTERIOR WALL AND ROOF PENETRATIONS SHALL BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS. IF APPROVED BY THE ENGINEER, THE CONTRACTOR MAY SUBSTITUTE ALTERNATE METHODS PROVIDING THEY MEET INTENDED DESIGN REQUIREMENTS.
 - NOT ALL AND ONLY CERTAIN TYPES OF SUPPORTS ARE SHOWN ON THE HVAC DRAWINGS. UNLESS OTHERWISE DETAILED ON THE DRAWINGS ALL PIPE AND DUCT SUPPORTS SHALL BE DESIGNED, FURNISHED AND INSTALLED BY THE CONTRACTOR AS SPECIFIED AND TO THE APPROVAL OF THE ENGINEER.
 - UNLESS OTHERWISE NOTED, MOUNT ALL DUCTWORK AND PIPING TIGHT TO STRUCTURE. MAINTAIN A MINIMUM 7'-6" CLEAR HEIGHT BELOW DUCTWORK, INCLUDING SUPPORTS. COORDINATE INSTALLATION OF DUCTWORK WITH ALL OTHER NEW AND EXISTING EQUIPMENT, PIPING, CONDUIT, ETC.
 - SEE ELECTRICAL DRAWINGS FOR AREA ELECTRICAL/CODE RATING. ALL HVAC EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF THOSE AREA CLASSIFICATIONS.
 - PROVIDE HVAC UNITS WITH REFRIGERANT LEAK DETECTORS AND ALL OTHER APPURTENANCES REQUIRED FOR A2L REFRIGERANTS PER CODE.

ENERGY CODE NOTE ELECTRICAL BUILDING

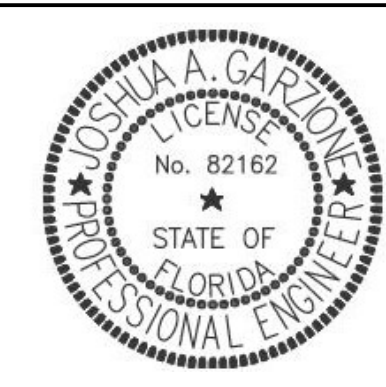
THE ELECTRICAL BUILDING IS EXEMPT FROM THE REQUIREMENTS OF THE FLORIDA ENERGY CODE. FOR COMMERCIAL BUILDINGS, THE APPLICABLE EXEMPTION FROM THE FLORIDA BUILDING CODE — ENERGY CONSERVATION IS C101.4.2.4, EXEMPTION 4:

C101.4.2.4 EXEMPTION 4: "ELECTRICAL EQUIPMENT SWITCHING BUILDINGS WHICH PROVIDE SPACE CONDITIONING FOR EQUIPMENT ONLY AND IN WHICH NO OPERATORS WORK ON A REGULAR BASIS EXCEPT THAT THE PROVISIONS OF SECTION C405 SHALL APPLY."

THE ELECTRICAL ROOM IS A NORMALLY UNOCCUPIED AREA ON A WATER TREATMENT PLANT SITE THAT HOUSES ELECTRICAL EQUIPMENT ESSENTIAL TO THE WATER TREATMENT PROCESS. THE ELECTRICAL ROOM COOLING EQUIPMENT PROVIDES SPACE CONDITIONING FOR THE EQUIPMENT ONLY.

CALCULATION OF COOLING	
ADMINISTRATION AND PROCESS BUILDING SUMMARY SHEET	
PROJECT NAME/OWNER	DUNES COMMUNITY DEVELOPMENT DISTRICT REVERSE OSMOSIS MEMBRANE FEED PUMP REPLACEMENT
SIZING METHOD	CARRIER HAP 5.11 CALCULATION SOFTWARE
PROJECT AREA	ELECTRICAL ROOM (388 SQ. FT.) (20-PAC-1)
EXTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	34.1 °F
SUMMER DRY BULB	92.2 °F
SUMMER WET BULB	77.4 °F
INTERIOR DESIGN CONDITIONS	
WINTER DRY BULB	50.0 °F
SUMMER DRY BULB	80.0 °F
RELATIVE HUMIDITY	44 %
GRAINS WATER (DIFFERENCE)	1.0 GR/LB.DA
TOTAL SENSIBLE GAIN	125,700 BTU/HR
TOTAL LATENT GAIN	1,900 BTU/HR
BUILDING COOLING LOAD	127,600 BTU/HR
BUILDING HEATING LOAD	N/A
DESIGNER STATEMENT:	
TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THE BUILDING COMPLIES WITH THE MECHANICAL SYSTEM AND EQUIPMENT REQUIREMENTS OF THE 2023 FL MECHANICAL CODE AND 2023 FL ENERGY CODE.	

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JOSHUA A. GARZIONE ON THE DATE ADJACENT TO THE SEAL. SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.



DATE: 9/1/2026
JOSHUA A. GARZIONE
PE NO. 82162

REV.	NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. BEER
DRAWN BY: V. LECAROS
SHEET CHK'D BY: J. GARZIONE
CROSS CHK'D BY: P. POULIOT
APPROVED BY: J. GARZIONE
DATE: SEPTEMBER 2026



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DUNES COMMUNITY DEVELOPMENT DISTRICT

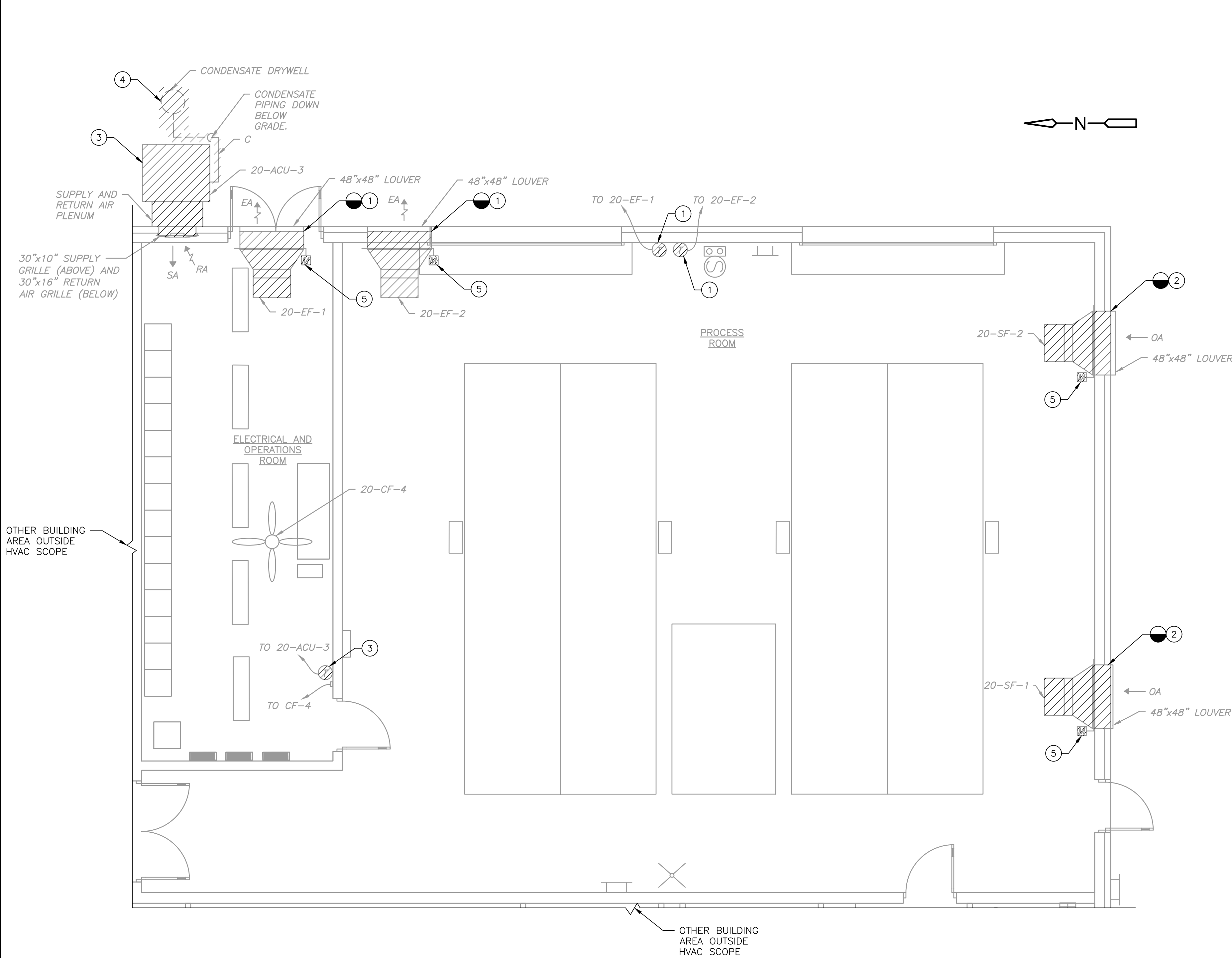
REVERSE OSMOSIS MEMBRANE FEED PUMP REPLACEMENT

HVAC LEGEND, SYMBOLS AND ABBREVIATIONS

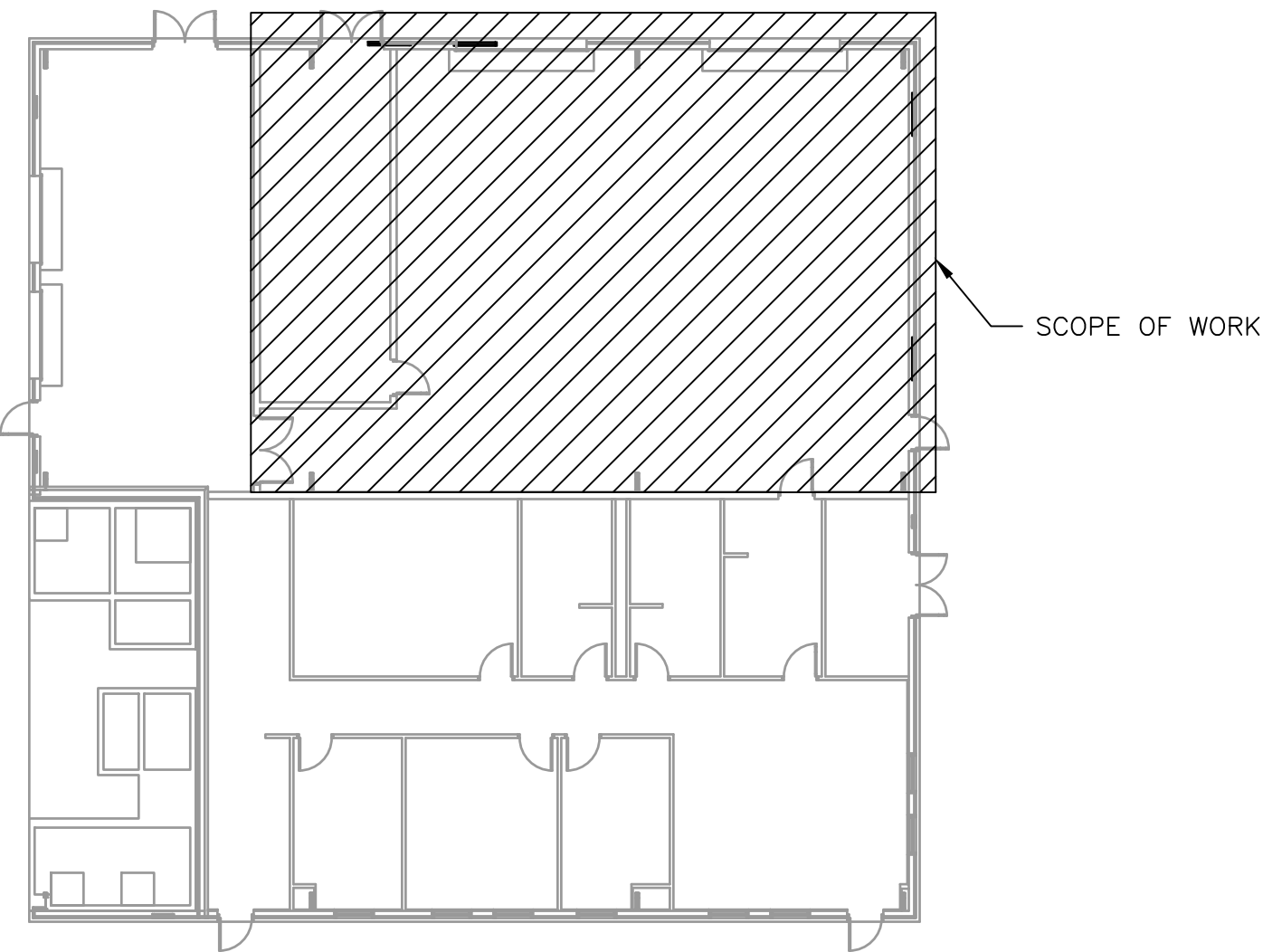
PROJECT NO. 263019-308471
FILE NAME: H001SYMB.DWG

SHEET NO.
H-1

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REUSE OF DOCUMENTS:



ADMINISTRATION AND PROCESS BUILDING HVAC DEMOLITION PLAN
PLAN
1/4" = 1'-0"



KEYPLAN
NTS

- GENERAL NOTES:**
- WHERE MCC-1 SHUTDOWNS ARE REQUIRED, THEY SHALL BE COORDINATED WITH THE OWNER AT LEAST 7-DAYS IN ADVANCE. MCC-1 SHUTDOWNS ARE LIMITED TO 4 HOURS PER AN OCCURANCE. REFER TO SECTION 013513.24 FOR SEQUENCING AND MAINTENANCE OF PLANT OPERATIONS.
 - COORDINATE DEMOLITION AND DISPOSAL WITH THE REQUIREMENTS OF THE SPECIFICATIONS AND THE OWNER.
 - CONTRACTOR SHALL FIELD VERIFY LOCATIONS, DIMENSIONS, AND CONFIGURATION OF ALL EXISTING EQUIPMENT, DUCTWORK, HANGERS, SUPPORTS, ANCHORS, CONTROLS. ETC.
 - REFER TO PROCESS MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION IN THESE AREAS.

KEY NOTES (X)	
①	DISCONNECT AND REMOVE EXISTING EXHAUST FAN, THERMOSTAT, ASSOCIATED DUCTWORK, FITTINGS, INSECT SCREEN ON LOUVER, AND SUPPORTS. EXISTING LOUVER TO REMAIN.
②	DISCONNECT AND REMOVE EXISTING SUPPLY FAN, ASSOCIATED DUCTWORK, FITTINGS, INSECT SCREEN ON LOUVER, AND SUPPORTS. EXISTING LOUVER TO REMAIN.
③	DISCONNECT AND REMOVE EXISTING PACKAGED AIR HANDLING UNIT, THERMOSTAT, PLENUM, ASSOCIATED DUCTWORK, FITTINGS, SUPPORTS, EQUIPMENT PAD, AND SUPPLY AND RETURN AIR GRILLES. PROVIDE TEMPORARY COVER AND SEAL OPENINGS WEATHER TIGHT BETWEEN DEMOLITION AND INSTALLATION OF NEW SYSTEM.
④	FILL EXISTING DRYWELL WITH CONCRETE AND ABANDON IN PLACE.
⑤	DISCONNECT AND REMOVE EXISTING MOTOR OPERATED DAMPERS.

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JOSHUA A. GARZIONE ON THE DATE ADJACENT TO THE SEAL. SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.



DATE: 9/1/2026
JOSHUA A. GARZIONE
PE NO. 82162

PROJECT NO. 263019-308471
FILE NAME: H002NFPL.DWG

SHEET NO.

H-2

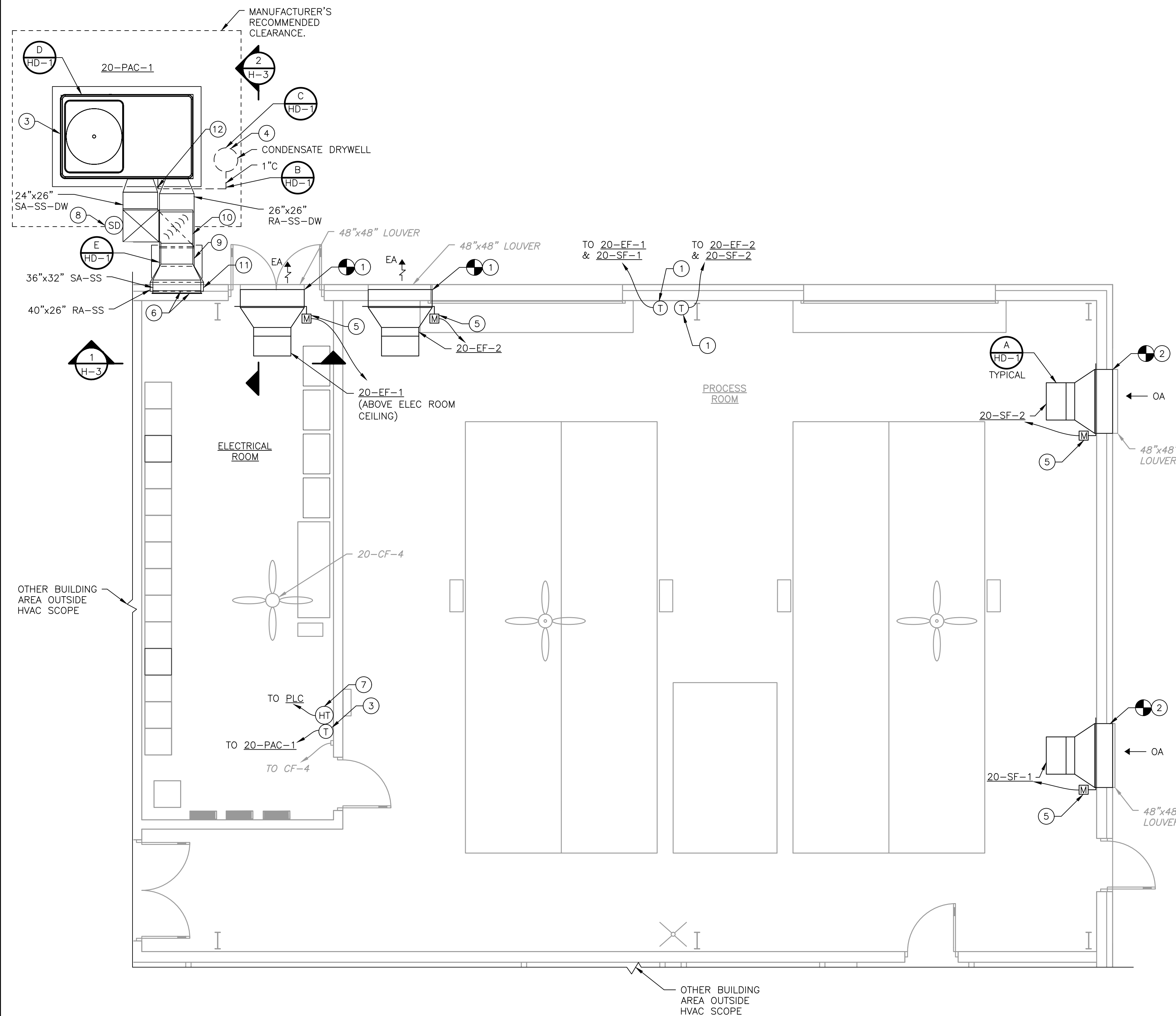
ISSUED FOR BID

DESIGNED BY: A. BEER
DRAWN BY: V. LECAROS
SHEET CHK'D BY: J. GARZIONE
CROSS CHK'D BY: P. POULIOT
APPROVED BY: J. GARZIONE
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DUNES COMMUNITY DEVELOPMENT DISTRICT
**REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT**

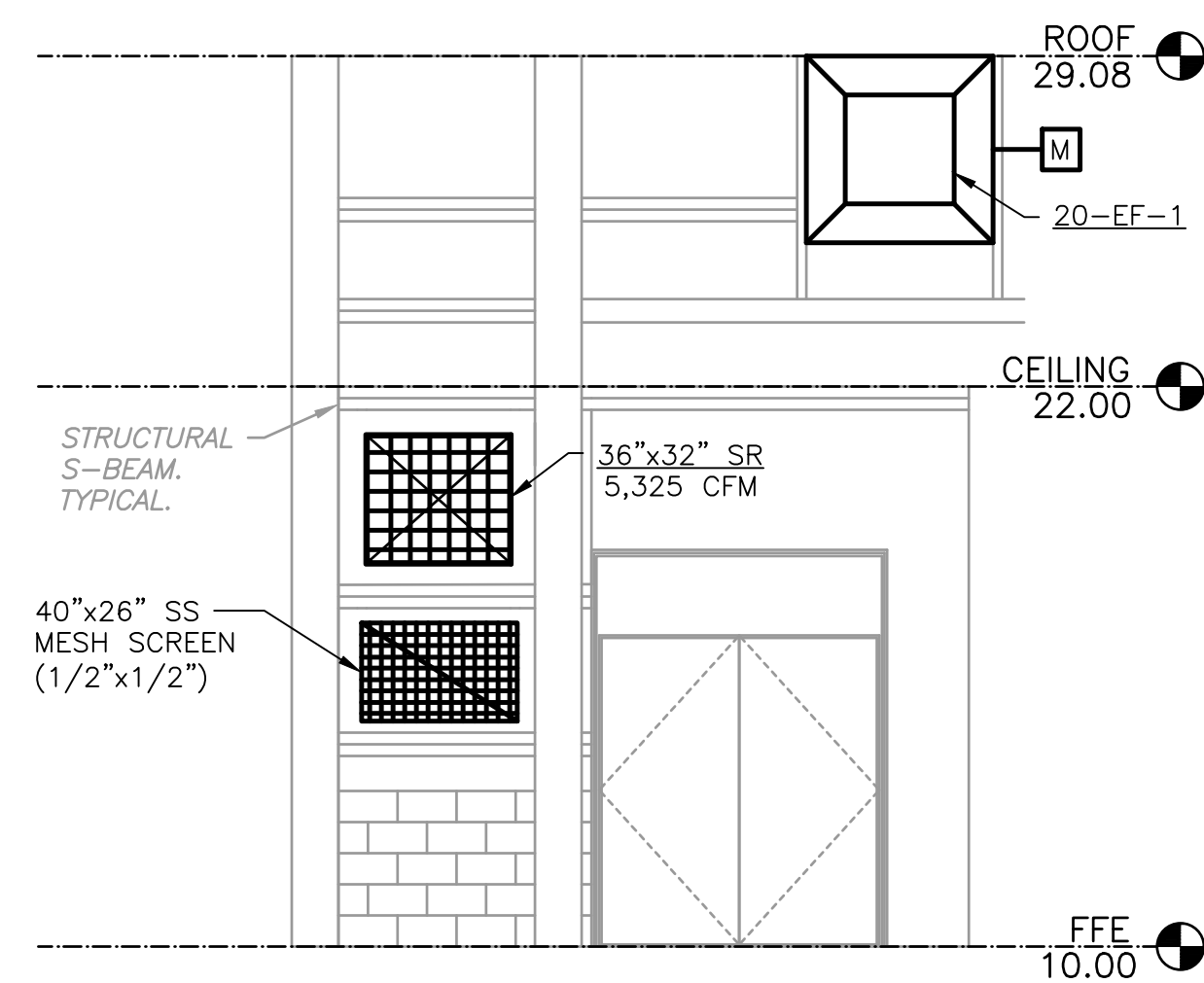
**ADMINISTRATION AND PROCESS BUILDING
HVAC DEMOLITION PLAN**



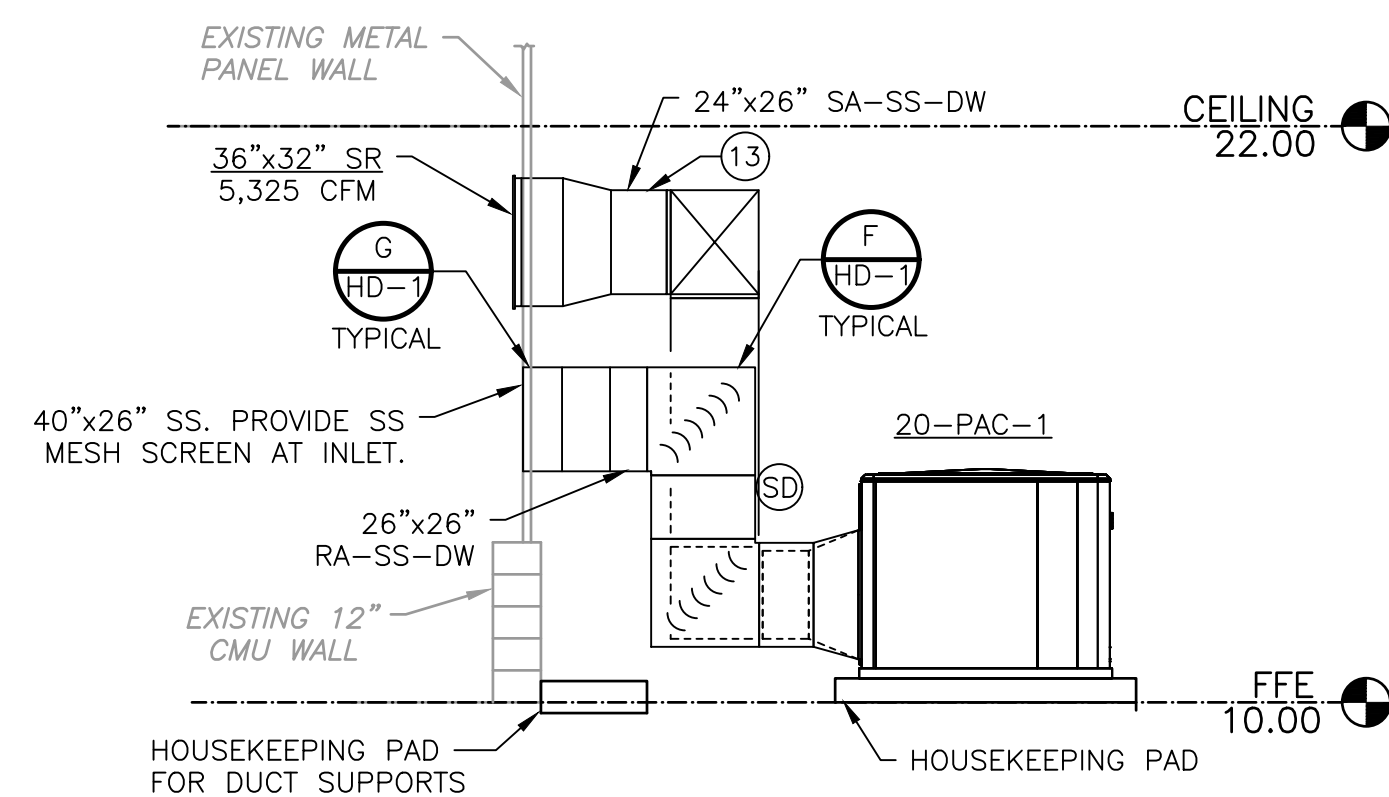
ADMINISTRATION AND PROCESS BUILDING HVAC MODIFICATION PLAN

PLAN

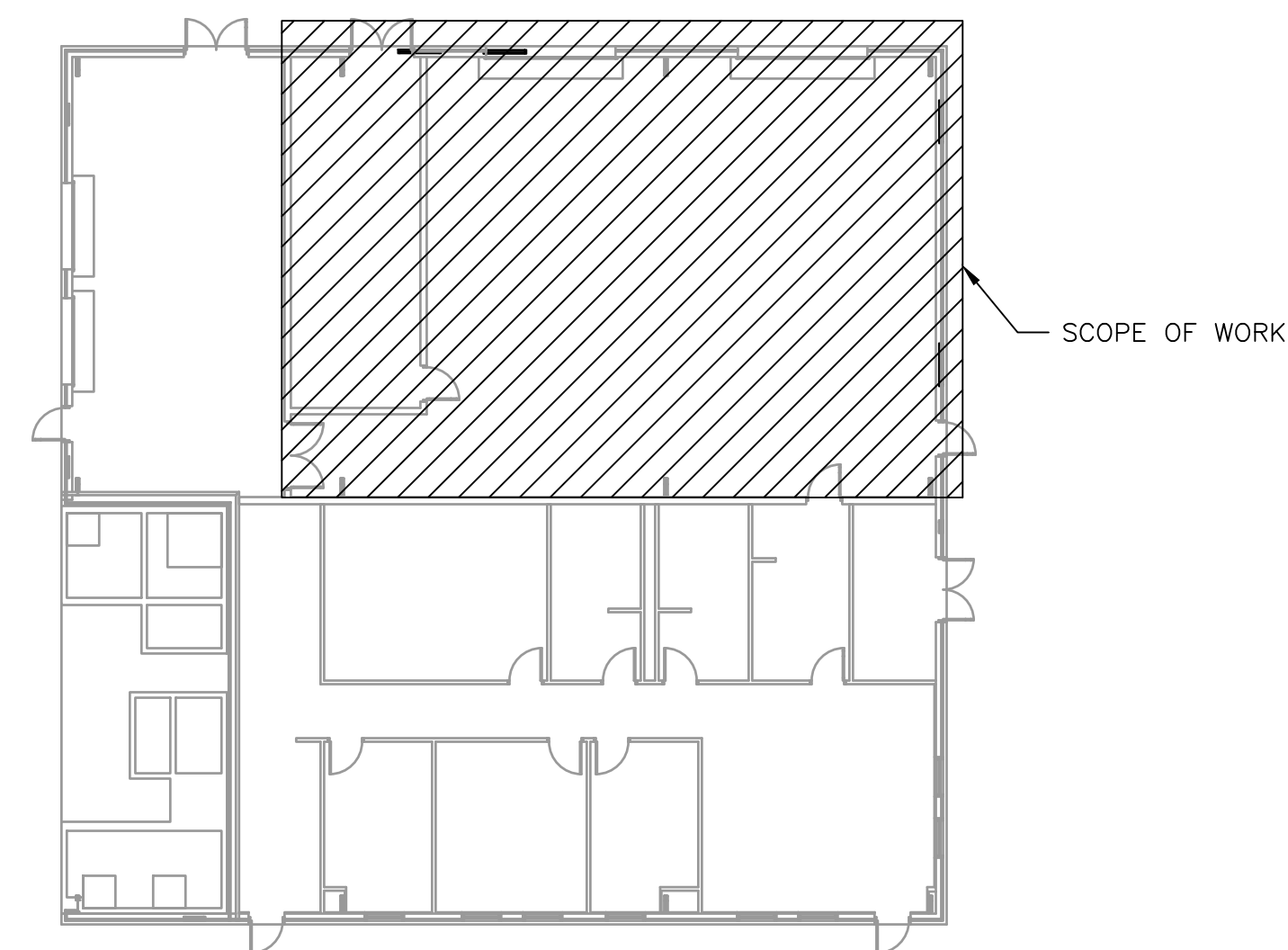
/4" = 1'-0"



1 HVAC SECTION – INTERIOR



2 HVAC SECTION – EXTERIOR



KEYPLAN
NTS

- GENERAL NOTES:
1. CONTRACTOR SHALL FIELD VERIFY LOCATIONS, DIMENSIONS, AND CONFIGURATION OF ALL EXISTING EQUIPMENT, DUCTWORK, HANGERS, SUPPORTS, ANCHORS, CONTROLS, ETC.
 2. COORDINATE LOCATION OF ALL NEW HVAC PIPING, DUCTWORK, AND EQUIPMENT WITH ALL OTHER UTILITIES, PIPING, ELECTRICAL, DUCT BANKS, CONDUIT, WIRING, LIGHTING, BUILDING STRUCTURES, ETC.
 3. REFER TO PROCESS MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL MODIFICATIONS IN THESE AREAS.

KEY NOTES (X)	
①	PROVIDE NEW PROPELLER EXHAUST FAN PER MANUFACTURER'S RECOMMENDATIONS AND REQUIRED CLEARANCES. RECONNECT TO EXISTING LOUVER. PROVIDE NEW THERMOSTAT, DUCTWORK, FITTINGS, ETC. AS NEEDED. RECONNECT TO MATCH EXISTING OPERATION AND SEQUENCE. PROVIDE NEW INSECT SCREEN FOR LOUVER.
②	PROVIDE NEW PROPELLER SUPPLY FAN PER MANUFACTURER'S RECOMMENDATIONS AND REQUIRED CLEARANCES. RECONNECT TO EXISTING LOUVER. PROVIDE NEW DUCTWORK, FITTINGS, ETC. AS NEEDED. RECONNECT TO MATCH EXISTING OPERATION AND SEQUENCE. PROVIDE NEW INSECT SCREEN FOR LOUVER.
③	PROVIDE NEW PACKAGED AIR CONDITIONING UNIT PER MANUFACTURER'S RECOMMENDATIONS AND REQUIRED CLEARANCES INCLUDING THERMOSTAT AND ALL OTHER ASSOCIATED APPURTENANCES. PROVIDE NEW EQUIPMENT PAD AS SHOWN IN DETAILS.
④	PROVIDE NEW CONDENSATE DRYWELL AND PROVIDE ANY PIPING, FITTINGS, INSULATION AS NEEDED FOR CONNECTION TO NEW UNIT. THE EXACT LOCATION OF THE DRYWELL AND CONDENSATE PIPING SHALL BE COORDINATED WITH ALL NEW AND EXISTING PIPING, STRUCTURES, AND EQUIPMENT PRIOR TO ANY WORK.
⑤	PROVIDE NEW MOTORIZED DAMPER ACTUATOR, LINKAGE, WIRING AND CONTROLS. RECONNECT TO MATCH EXISTING OPERATION AND SEQUENCE.
⑥	PROVIDE NEW 36"x32" SUPPLY REGISTER AND 40"x26" SS MESH SCREEN ON RETURN OPENING. PROVIDE DUCTWORK, FITTINGS, AND SUPPORTS AS REQUIRED TO CONNECT TO NEW EXTERIOR PACKAGED AIR CONDITIONING UNIT. BALANCE TO 5,325 CFM. COORDINATE OPENINGS WITH EXISTING STRUCTURE.
⑦	INSTALL NEW HIGH TEMPERATURE SENSOR.
⑧	PROVIDE NEW SMOKE DETECTOR IN SUPPLY AIR DUCTWORK.
⑨	ALL EXTERIOR SUPPLY AND RETURN DUCTWORK SHALL BE DOUBLE WALLED, INSULATED STAINLESS STEEL.
⑩	RUN SUPPLY DUCTWORK OVER RETURN.
⑪	WALL OPENING TO BE 1" LARGER THAN DUCTWORK IN EACH DIRECTION (2" IN LENGTH AND 2" IN WIDTH) FOR BOTH SUPPLY AND RETURN DUCTS. OPENING MODIFICATIONS AND CONNECTIONS SHALL BE DESIGNED BY A DELEGATE ENGINEER IN COORDINATION WITH THE BUILDING MANUFACTURER. SEE SPECIFICATION 018839.
⑫	CONDENSATE PIPING DOWN BELOW GRADE.
⑬	STAND-ALONE SUPPORT TO BE PROVIDED FOR EXTERIOR DUCTWORK PER DETAIL E/HD-1. SUPPORT FROM WALL IS NOT PERMITTED.

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SEALED BY JOSHUA A. GARZIONE ON THE DATE
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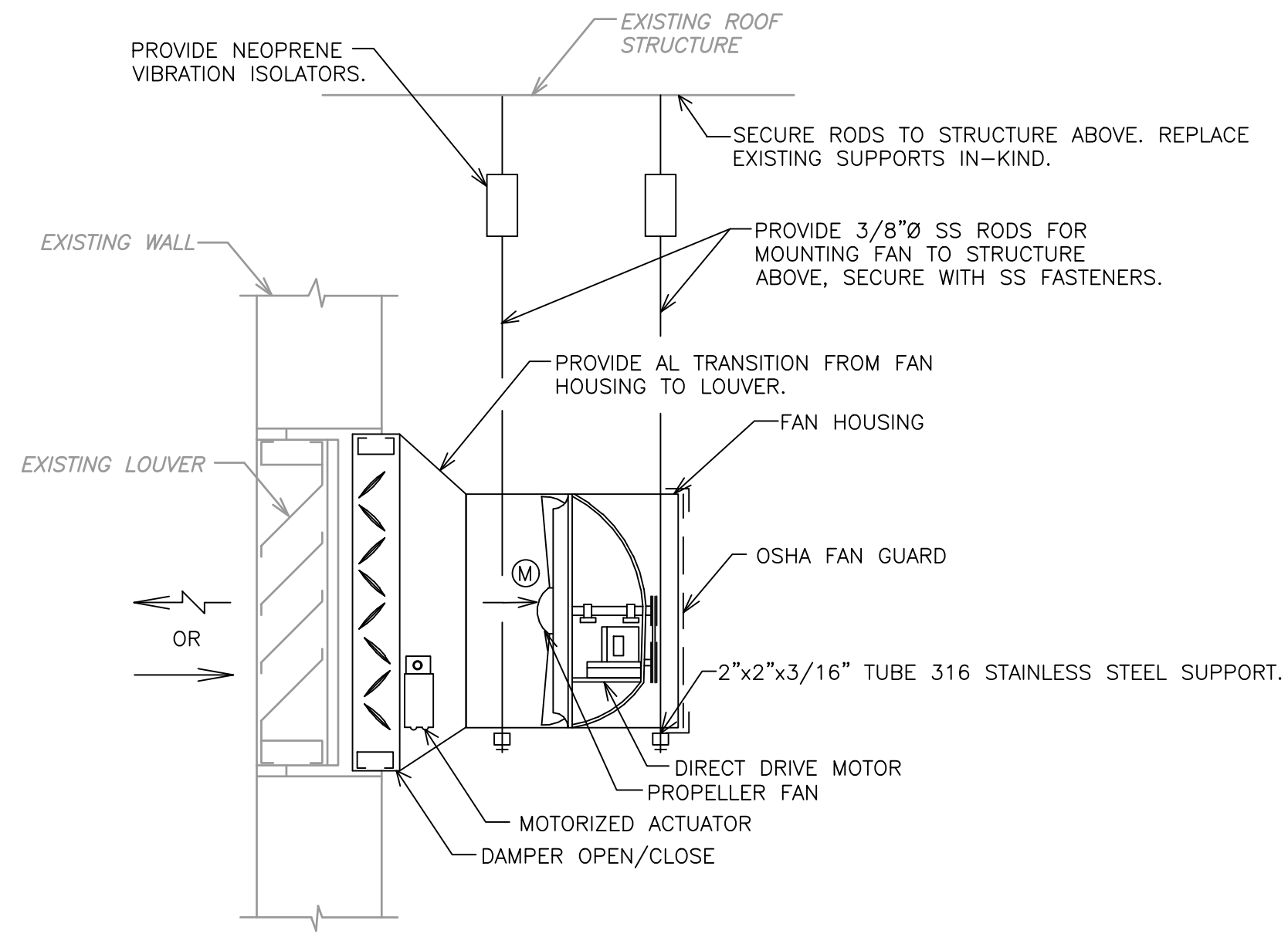
DATE: 9/1/2026
JOSHUA A. GARZIONE
PE NO. 82162

PROJECT NO. 263019-308471
FILE NAME: H003NFPL.DWG

SHEET NO.

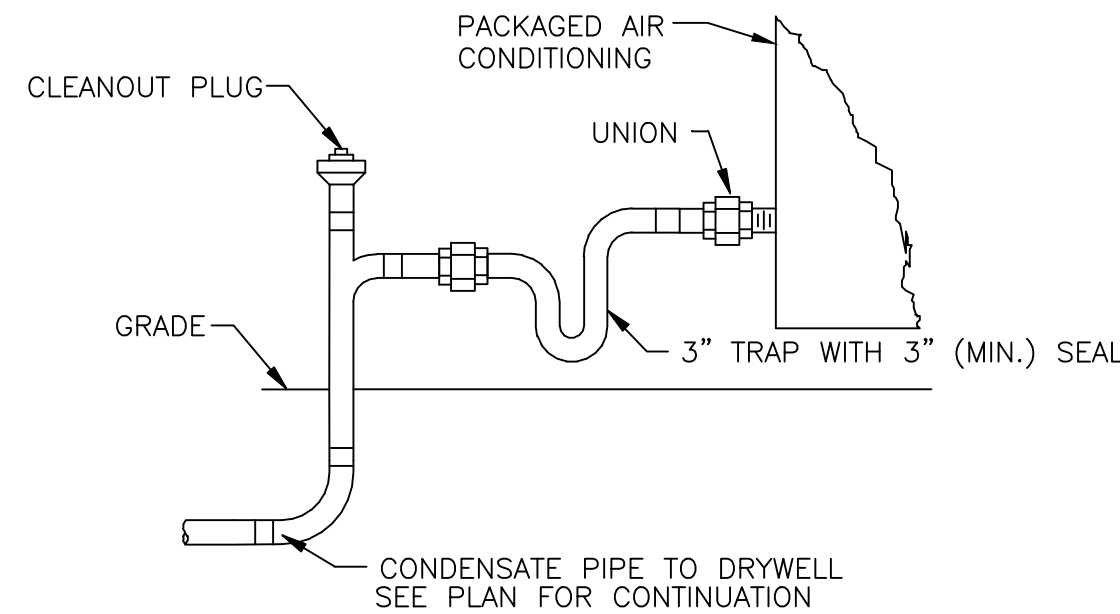
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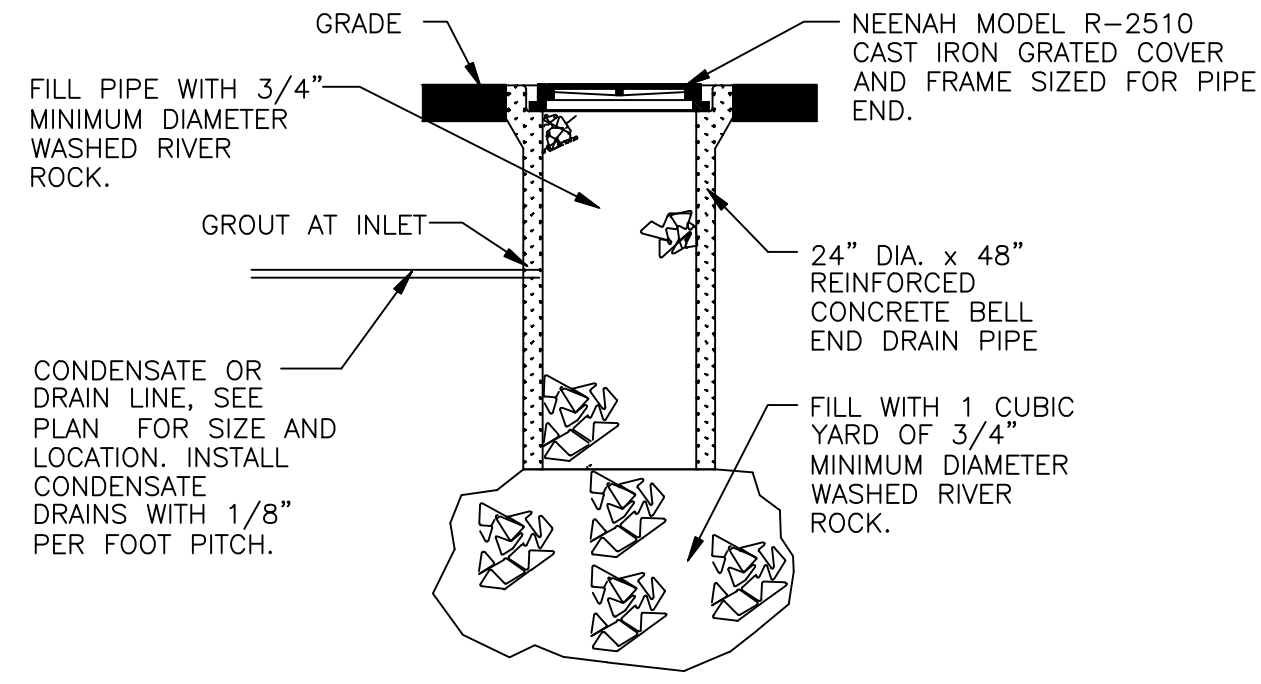
WALL MOUNTED PROPELLER FAN

A DETAIL
- NTS



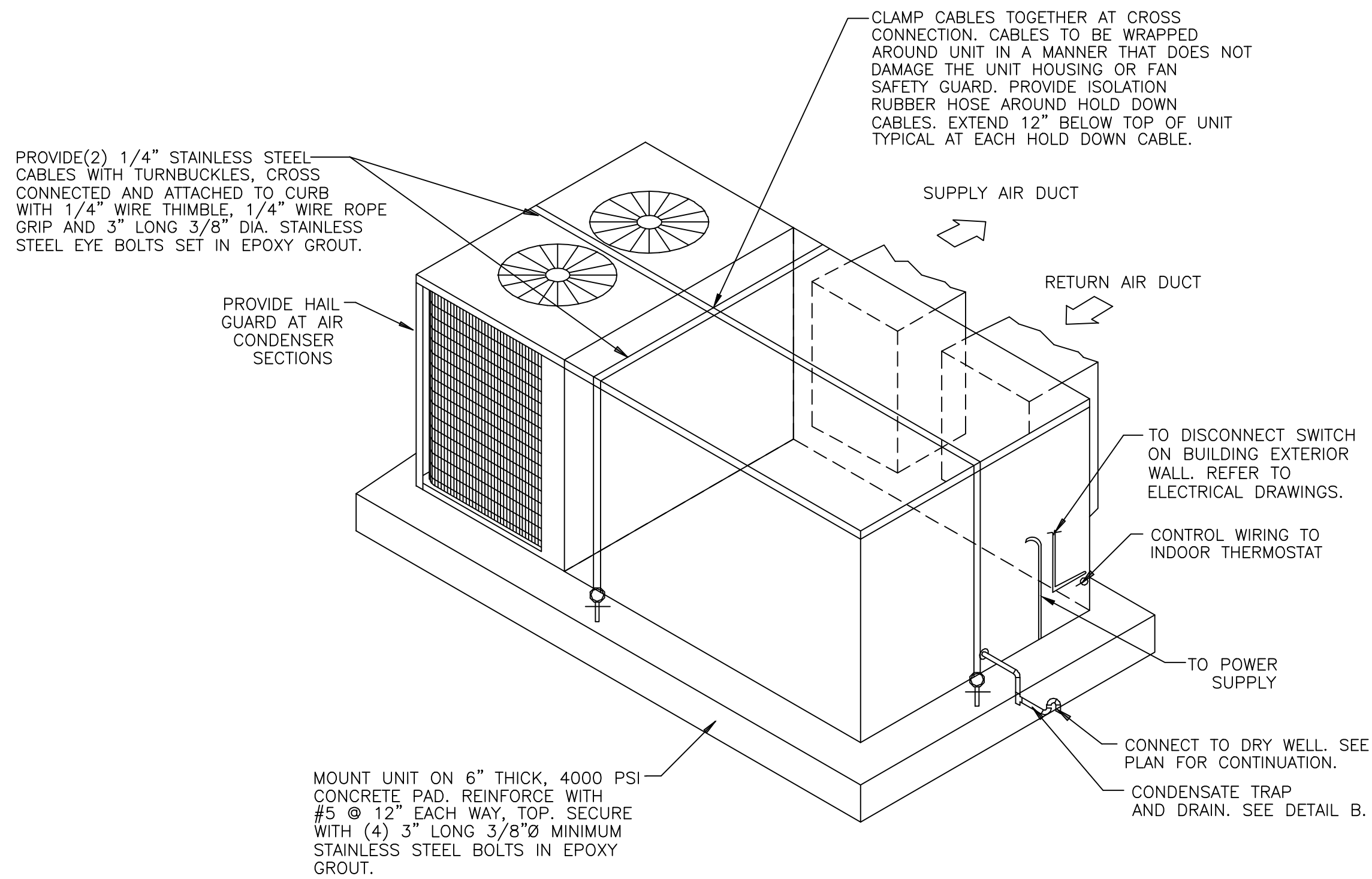
CONDENSATE DRAIN

B DETAIL
- NTS



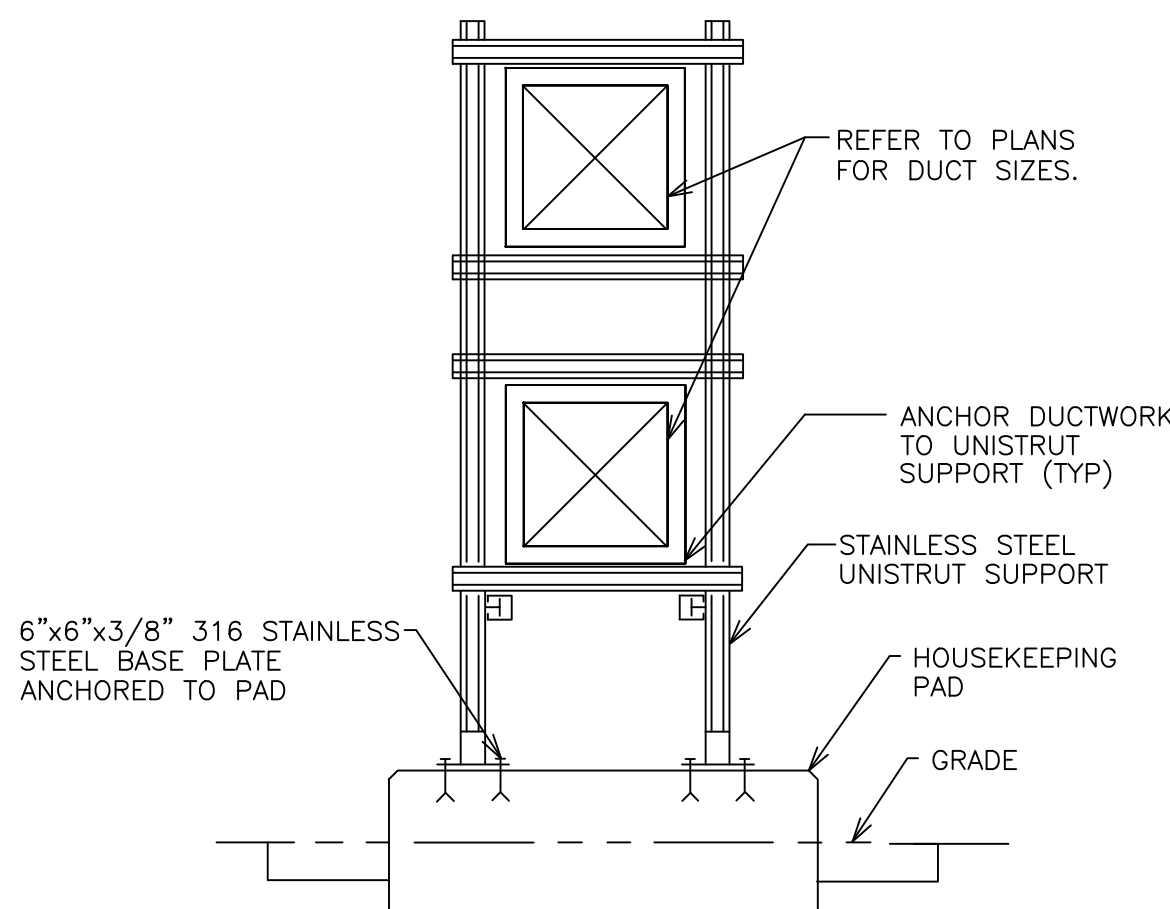
CONDENSATE DRYWELL

C DETAIL
- NTS



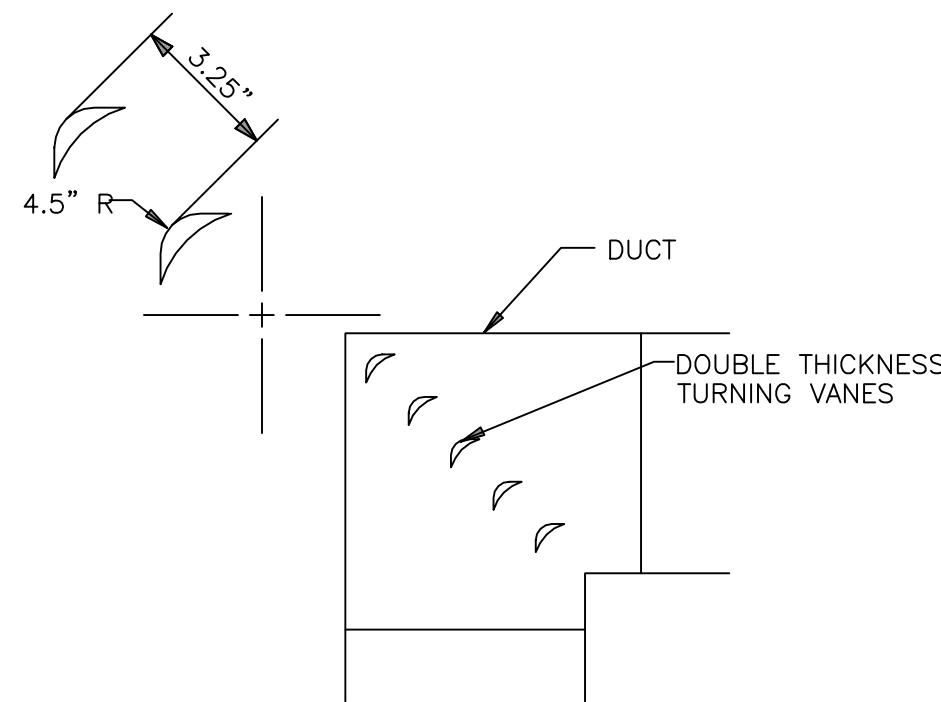
GRADE MOUNTED PACKAGED UNIT

D DETAIL
- NTS



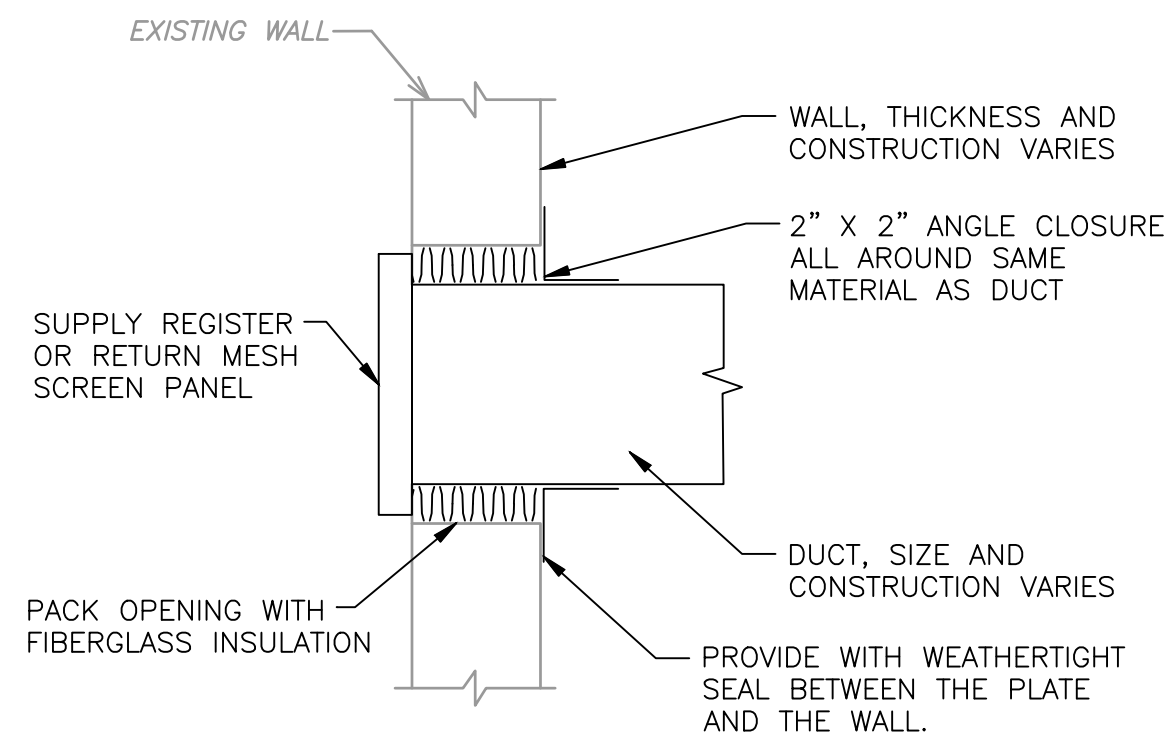
EXTERIOR DUCT SUPPORT

E DETAIL
- NTS



SHEET METAL TURNING VANES

F DETAIL
- NTS



DUCT PENETRATION THROUGH EXTERIOR WALL

G DETAIL
- NTS

- NOTE:
1. LOCATION OF CONDENSATION PIPE, SUPPLY/ RETURN DUCTING AND ELECTRICAL SYSTEM COULD VARY BASED ON UNIT CONFIGURATION.

- NOTE:
1. OPENING MODIFICATIONS AND CONNECTIONS SHALL BE DESIGNED BY A DELEGATE ENGINEER IN COORDINATION WITH THE BUILDING MANUFACTURER. SEE SPECIFICATION 018839.

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JOSHUA A. GARZIONE ON THE DATE ADJACENT TO THE SEAL. SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.



DATE: 9/1/2026
JOSHUA A. GARZIONE
PE NO. 82162

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	A. BEER
DRAWN BY:	V. LECAROS
SHEET CHK'D BY:	J. GARZIONE
CROSS CHK'D BY:	P. POULIOT
APPROVED BY:	J. GARZIONE
DATE:	SEPTEMBER 2026

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FL CDA No. EB-0000020

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

HVAC DETAILS

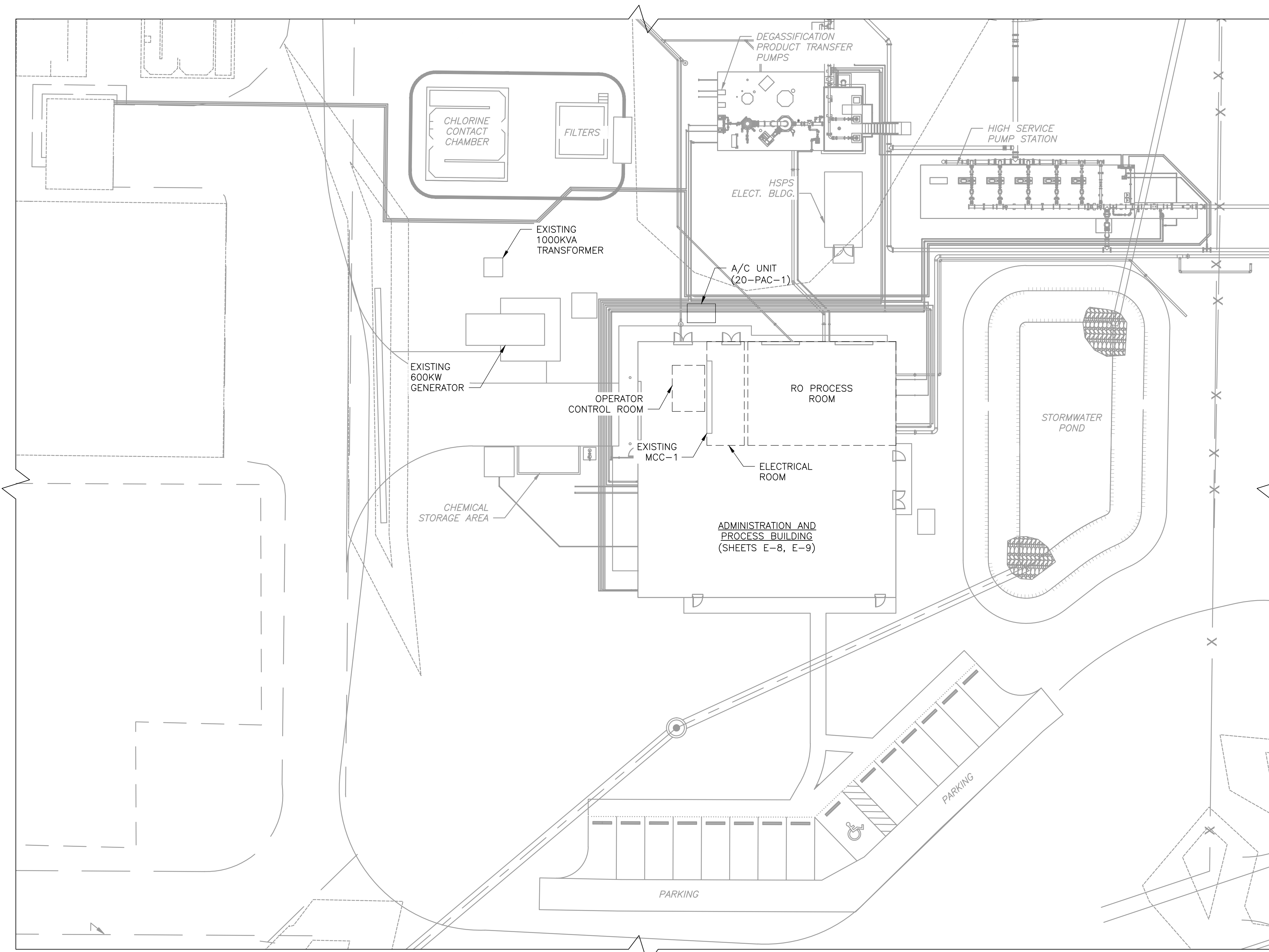
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FILE NAME: HD01DETS.DWG

SHEET NO.

HD-1

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PLAN

GENERAL NOTES:

- DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO THE CIVIL, STRUCTURAL DRAWINGS, AND APPROVED MANUFACTURERS SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT. SEE CIVIL DRAWINGS FOR PLAN AND PROFILE OF UNDERGROUND UTILITIES. COORDINATE INSTALLATION OF DUCT BANK WITH OTHER UNDERGROUND WORK.
- ALL WORK SHALL COMPLY WITH THE NEC AND LOCAL CODES.
- CONDUCTORS SHALL NOT BE SPLICED EXCEPT AS NOTED IN SPECS.
- ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250.122 OF THE NEC (UNLESS OTHERWISE NOTED).
- CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND UTILITIES PIPING, ETC. REROUTE NEW CONDUITS, DUCTBANK, MANHOLES, HANDHOLES, ETC., AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.

REV#	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. HENDELS
DRAWN BY: M. OTTO
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: K. COLE
APPROVED BY: S. PERRY
DATE: SEPTEMBER 2026

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DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

ELECTRICAL SITE PLAN

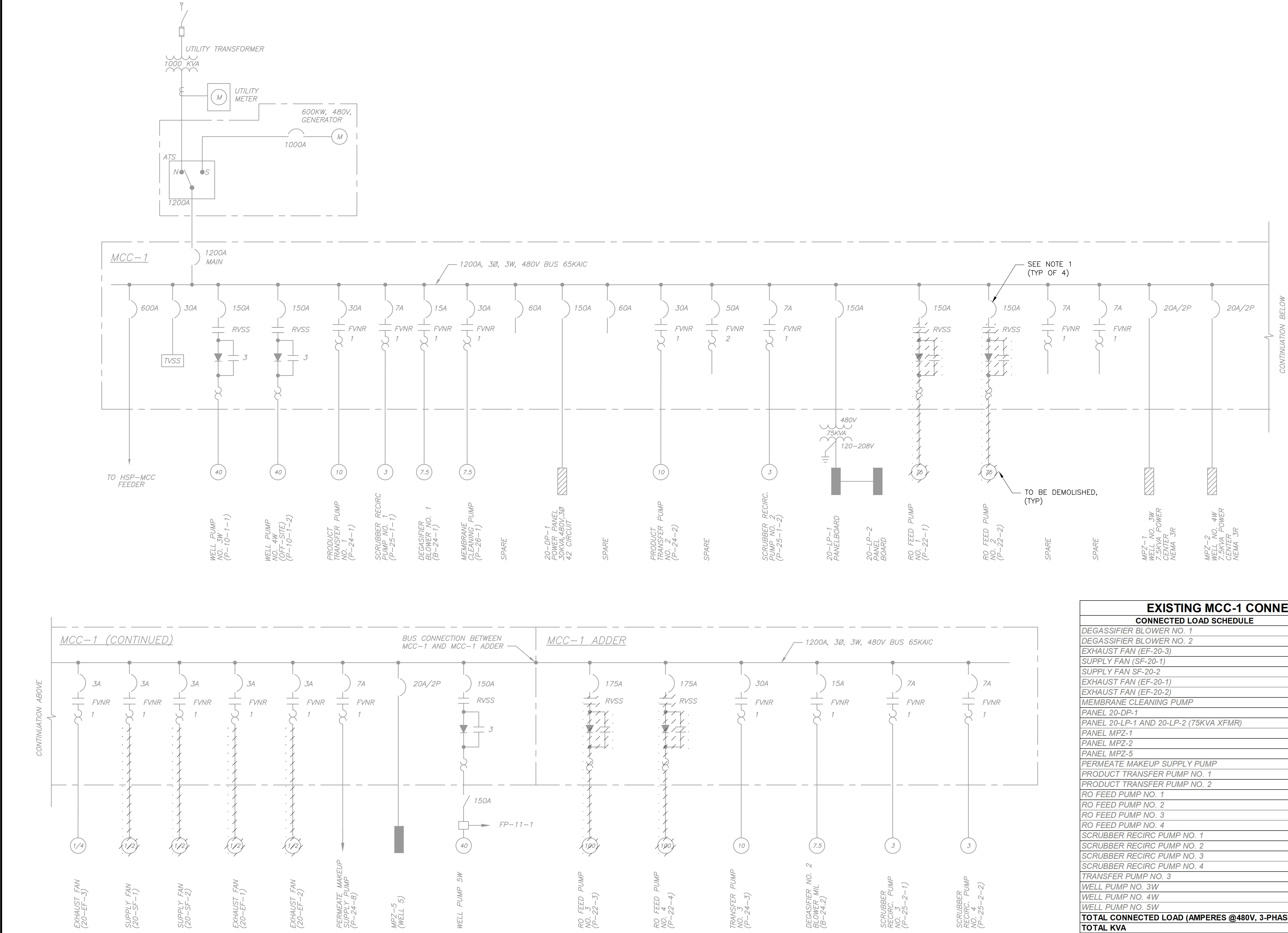
This item has been digitally signed and sealed by
Spencer J. Perry Jr on the date adjacent to the seal.
Signature must be verified on any electronic copies.

DATE: 9/1/2026
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 263019-308471
FILE NAME: EO03STPL.DWG

SHEET NO.
E-3

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ONE LINE POWER DIAGRAM
DEMOLITION

NOTES:

- FOR THE RO FEED PUMPS, REMOVE THE FOUR EXISTING BUCKET MOUNTED RVSS, DEVICES, AND ALL ASSOCIATED FIELD WIRING WITHIN THE BUCKET AND TO THE PUMP MOTORS. RETURN THE FOUR RVSS TO THE OWNER. THE EXISTING CIRCUIT BREAKERS SHALL BE LEFT IN PLACE FOR USE SPARE. THE BUCKET IDENTIFICATION PLATES SHALL BE REVISED AND MARKED AS "SPARE".
- FOR THE EXHAUST AND SUPPLY FANS, REMOVE EXISTING WIRING FROM THE MCC TO THE FANS.
- WHERE MCC-1 SHUTDOWNS ARE REQUIRED, THEY SHALL BE COORDINATED WITH THE OWNER AT LEAST 7-DAYS IN ADVANCE. MCC-1 SHUTDOWNS ARE LIMITED TO 12 HOURS PER AN OCCURANCE. REFER TO SECTION 013513.24 FOR SEQUENCING AND MAINTENANCE OF PLANT OPERATIONS.
- SEQUENTIAL RO SKID SHUTDOWN REQUIRED. RO SKID SHUTDOWN AND MEMBRANE STORAGE, PRIOR TO DEMOLITION, TO BE COORDINATED WITH THE OWNER. REFER TO SECTION 013513.24 FOR SEQUENCING AND MAINTENANCE OF PLANT OPERATIONS.

This item has been digitally signed and sealed by
Spencer J. Perry Jr on the date adjacent to the seal.
Signature must be verified on any electronic copies.



DATE: 9/1/2026
SPENCER J. PERRY JR
PE NO. 62587

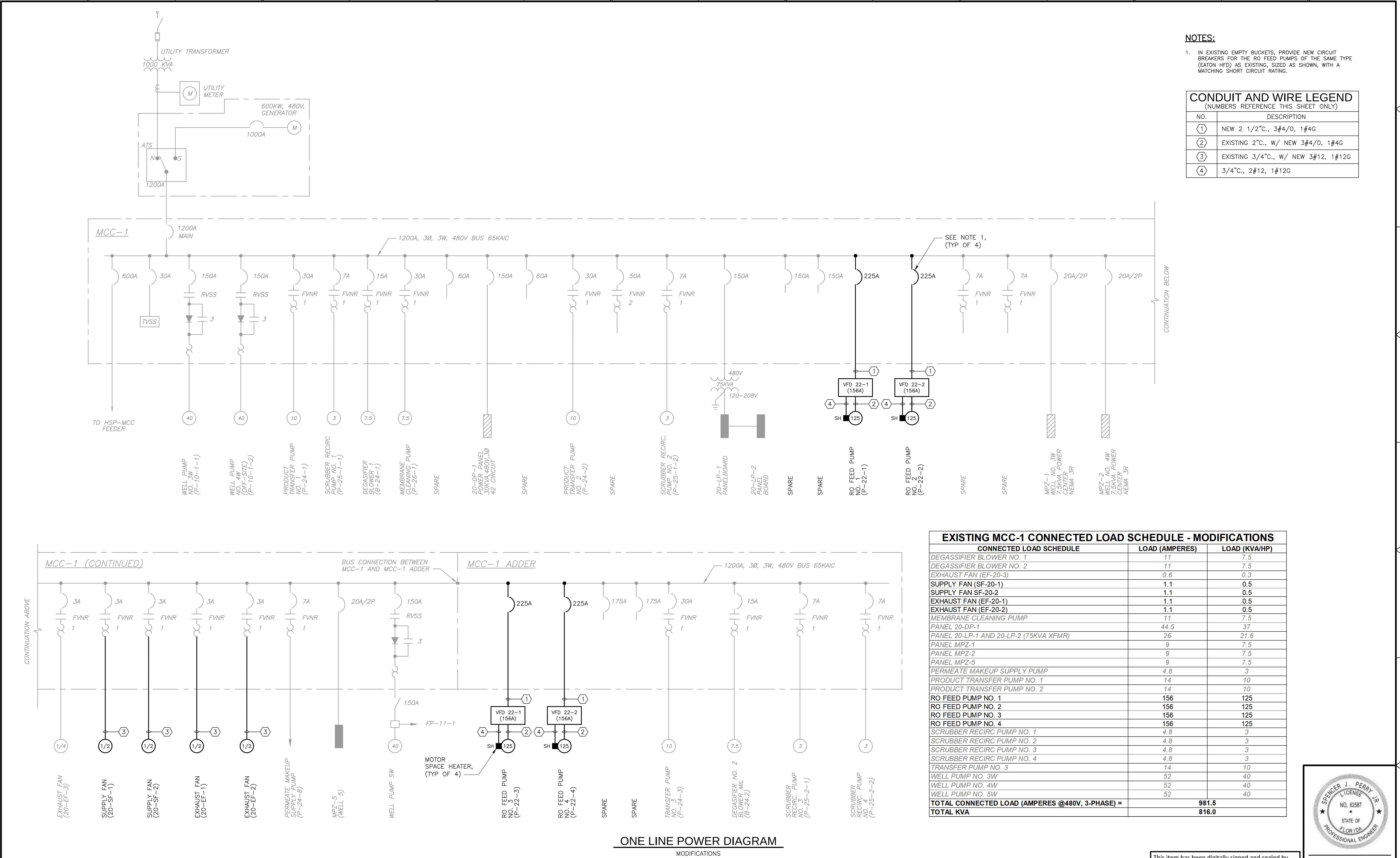
PROJECT NO. 263019-308471
FILE NAME: E004NFOL.DWG

SHEET NO.

E-4

ISSUED FOR BID

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DESIGNED BY: A. HENDELS
DRAWN BY: M. OTTO
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: K. COLE
APPROVED BY: S. PERRY
DATE: SEPTEMBER 2026

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. HENDELS
DRAWN BY: M. OTTO
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: K. COLE
APPROVED BY: S. PERRY
DATE: SEPTEMBER 2026

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

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

ELECTRICAL
ONE LINE POWER DIAGRAM
MODIFICATIONS

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Spencer J. Perry Jr on the date adjacent to the seal.
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DATE: 9/1/2026
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 263019-308471
FILE NAME: E005NFOL.DWG
SHEET NO.
E-5

ISSUED FOR BID

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REUSE OF DOCUMENTS:

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. HENDLS
DRAWN BY: M. OTTO
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: K. COLE
APPROVED BY: S. PERRY
DATE: SEPTEMBER 2026

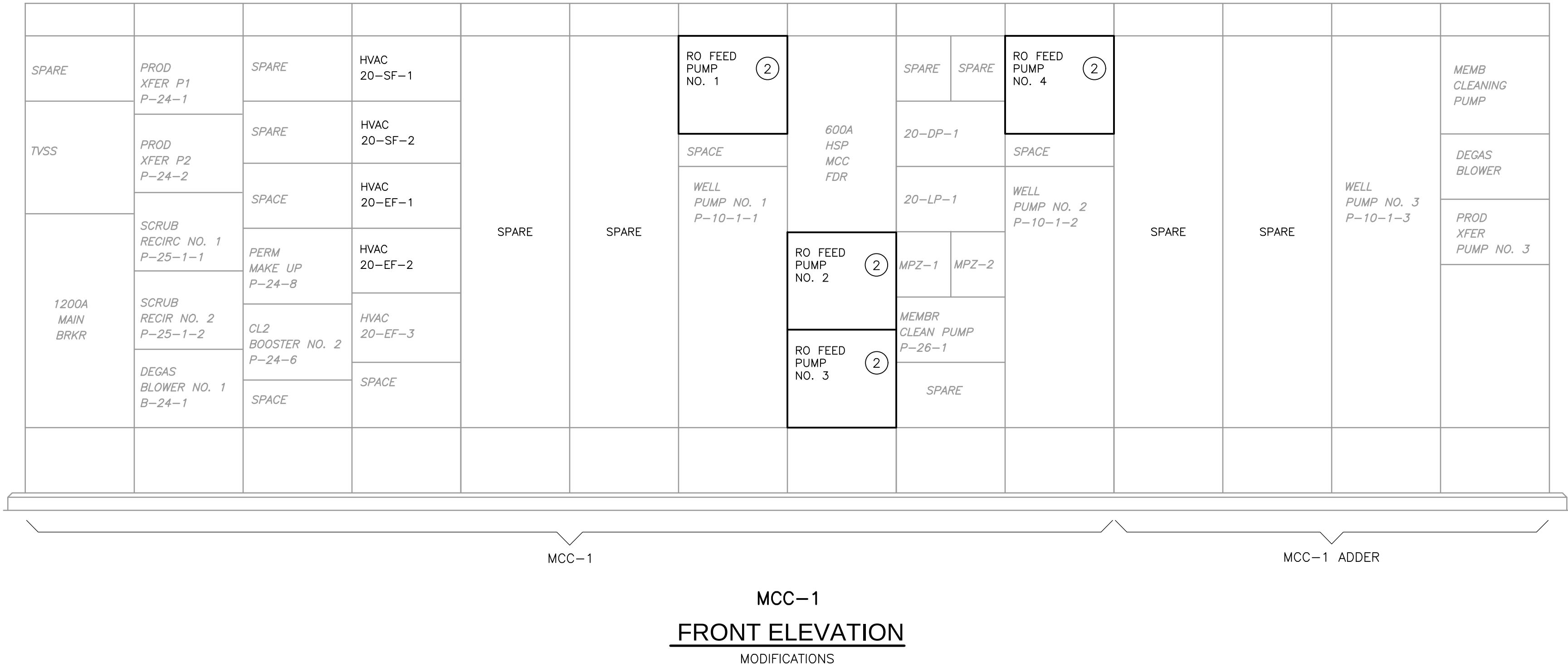
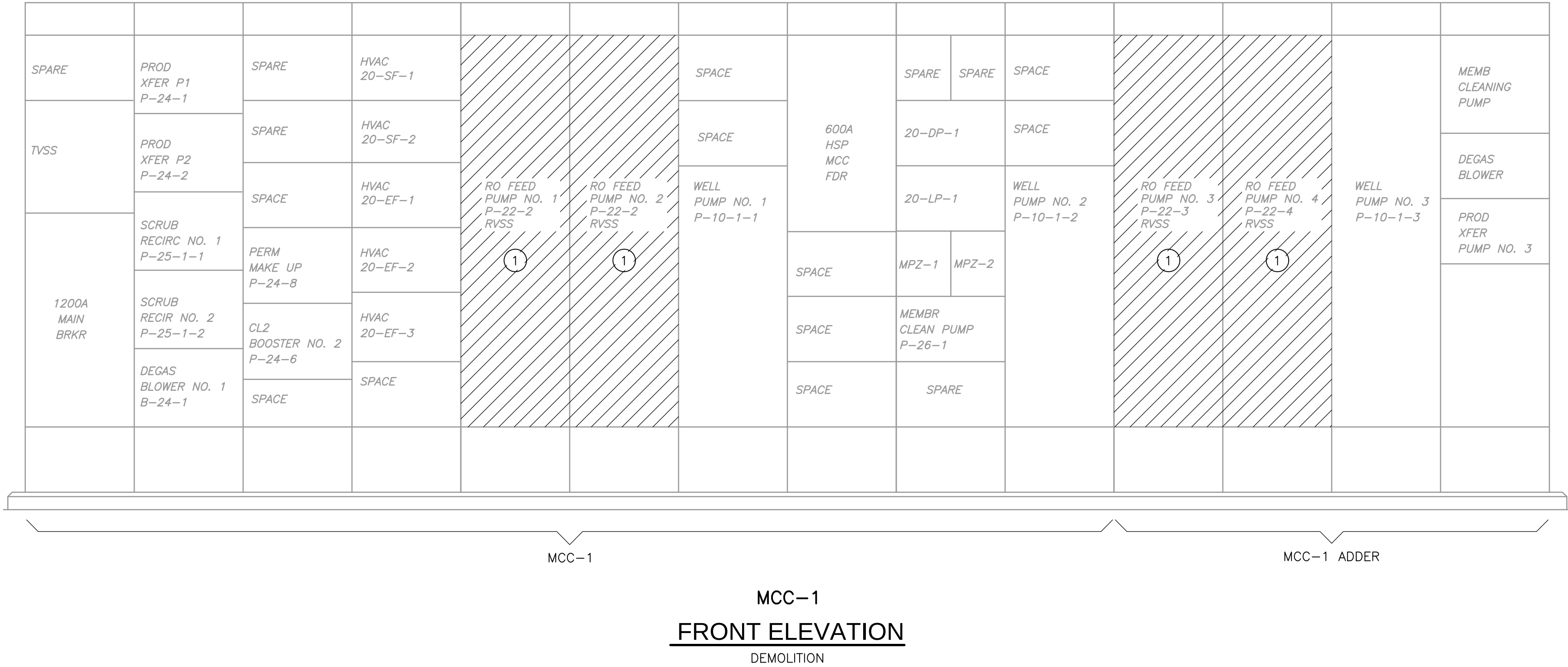
**CDM
Smith**
4651 Salisbury Road, Suite 420
Jacksonville, FL 32256
Tel: (904) 731-7109
FL CCA No. EB-0000020

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

ELECTRICAL
FRONT ELEVATIONS

PROJECT NO. 263019-308471
FILE NAME: EO06NFOL.DWG
SHEET NO.
E-6

- KEY NOTES:**
- 1 THE EXISTING CIRCUIT BREAKER SHALL BE DISCONNECTED AND LEFT IN PLACE FOR USE AS A SPARE. THE BUCKET IDENTIFICATION PLATE SHALL BE REVISED AND MARKED AS "SPARE".
 - 2 PROVIDE A NEW CIRCUIT BREAKER WITHIN THE EXISTING BUCKET. REFER TO ONE LINE DIAGRAMS.
- NOTES:**
1. WHERE MCC-1 SHUTDOWNS ARE REQUIRED, THEY SHALL BE COORDINATED WITH THE OWNER AT LEAST 7-DAYS IN ADVANCE. MCC-1 SHUTDOWNS ARE LIMITED TO 12 HOURS PER AN OCCURANCE. REFER TO SECTION 013513.24 FOR SEQUENCING AND MAINTENANCE OF PLANT OPERATIONS.
 2. SEQUENTIAL RO SKID SHUTDOWN REQUIRED. RO SKID SHUTDOWN AND MEMBRANE STORAGE, PRIOR TO DEMOLITION, TO BE COORDINATED WITH THE OWNER. REFER TO SECTION 013513.24 FOR SEQUENCING AND MAINTENANCE OF PLANT OPERATIONS.

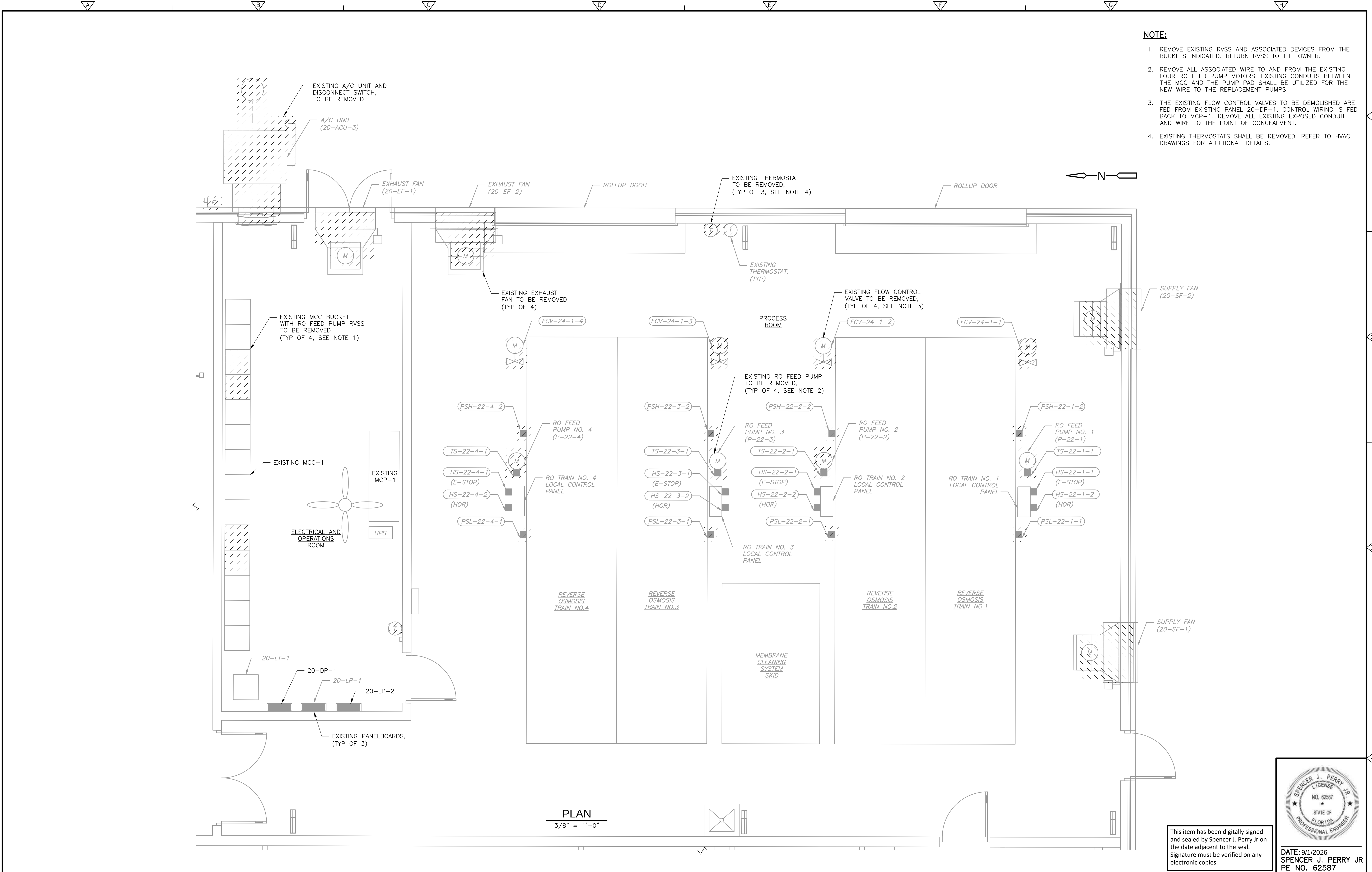


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Spencer J. Perry Jr on the date adjacent to the seal.
Signature must be verified on any electronic copies.

DATE: 9/1/2026
SPENCER J. PERRY JR
PE NO. 62587



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REUSE OF DOCUMENTS:



- NOTE:**
1. REMOVE EXISTING RVSS AND ASSOCIATED DEVICES FROM THE BUCKETS INDICATED. RETURN RVSS TO THE OWNER.
 2. REMOVE ALL ASSOCIATED WIRE TO AND FROM THE EXISTING FOUR RO FEED PUMP MOTORS. EXISTING CONDUITS BETWEEN THE MCC AND THE PUMP PAD SHALL BE UTILIZED FOR THE NEW WIRE TO THE REPLACEMENT PUMPS.
 3. THE EXISTING FLOW CONTROL VALVES TO BE DEMOLISHED ARE FED FROM EXISTING PANEL 20-DP-1. CONTROL WIRING IS FED BACK TO MCP-1. REMOVE ALL EXISTING EXPOSED CONDUIT AND WIRE TO THE POINT OF CONCEALMENT.
 4. EXISTING THERMOSTATS SHALL BE REMOVED. REFER TO HVAC DRAWINGS FOR ADDITIONAL DETAILS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. HENDELS
DRAWN BY: M. OTTO
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: K. COLE
APPROVED BY: S. PERRY
DATE: SEPTEMBER 2026

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

DUNES COMMUNITY DEVELOPMENT DISTRICT
**REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT**

**ADMINISTRATION AND PROCESS BUILDING
ELECTRICAL DEMOLITION PLAN**

SPENCER J. PERRY JR.
LICENSE
NO. 62587
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

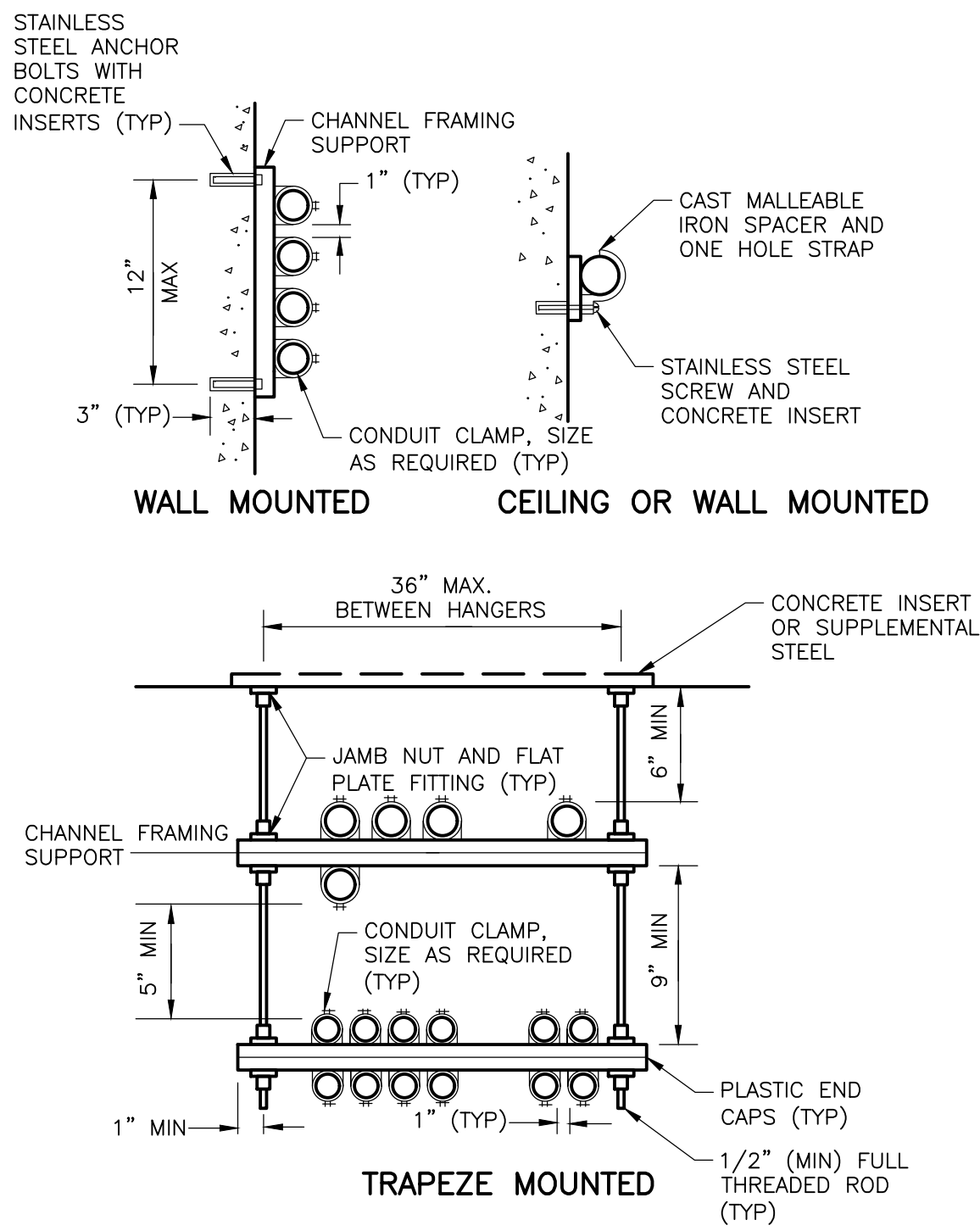
DATE: 9/1/2026
SPENCER J. PERRY JR
PE NO. 62587

PROJECT NO. 263019-308471
FILE NAME: EO08NFAP.DWG

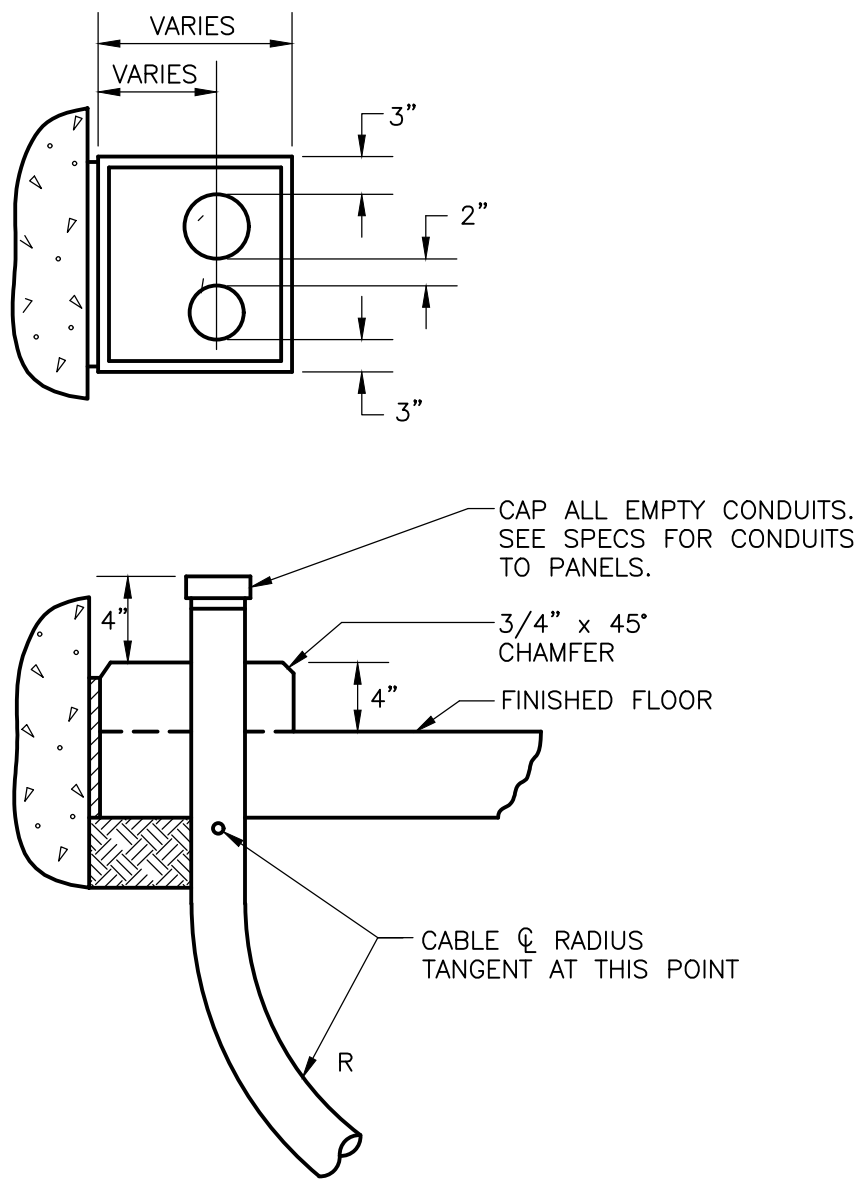
SHEET NO.
E-8

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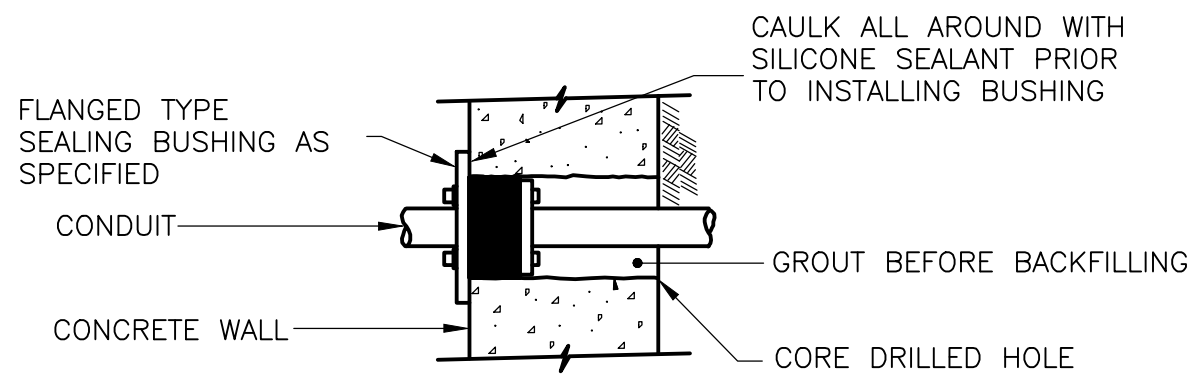
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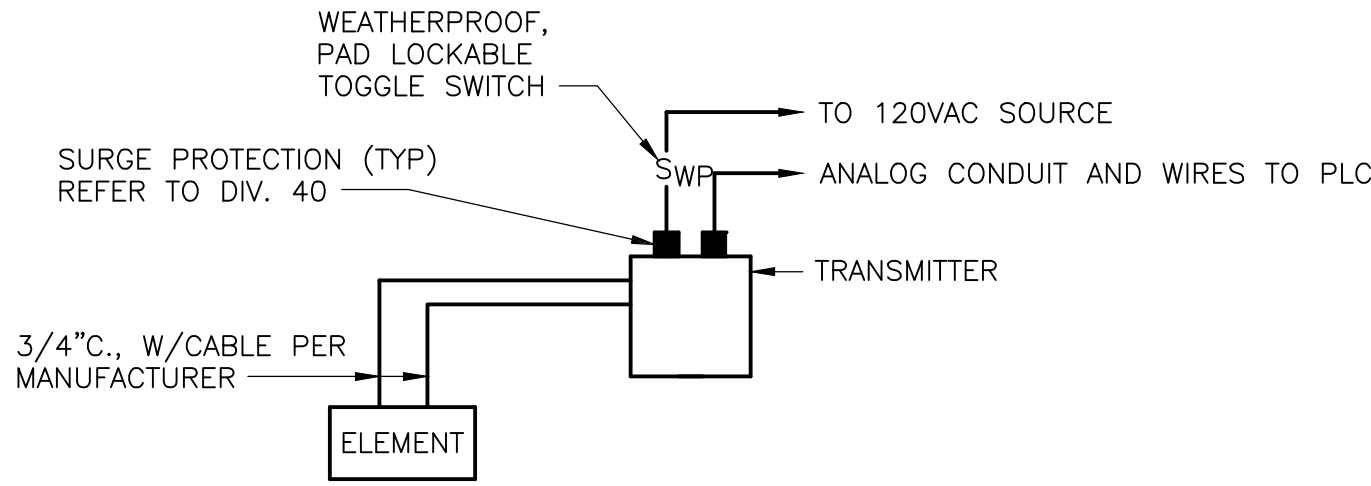
CONDUIT MOUNTING
DETAIL A
NTS



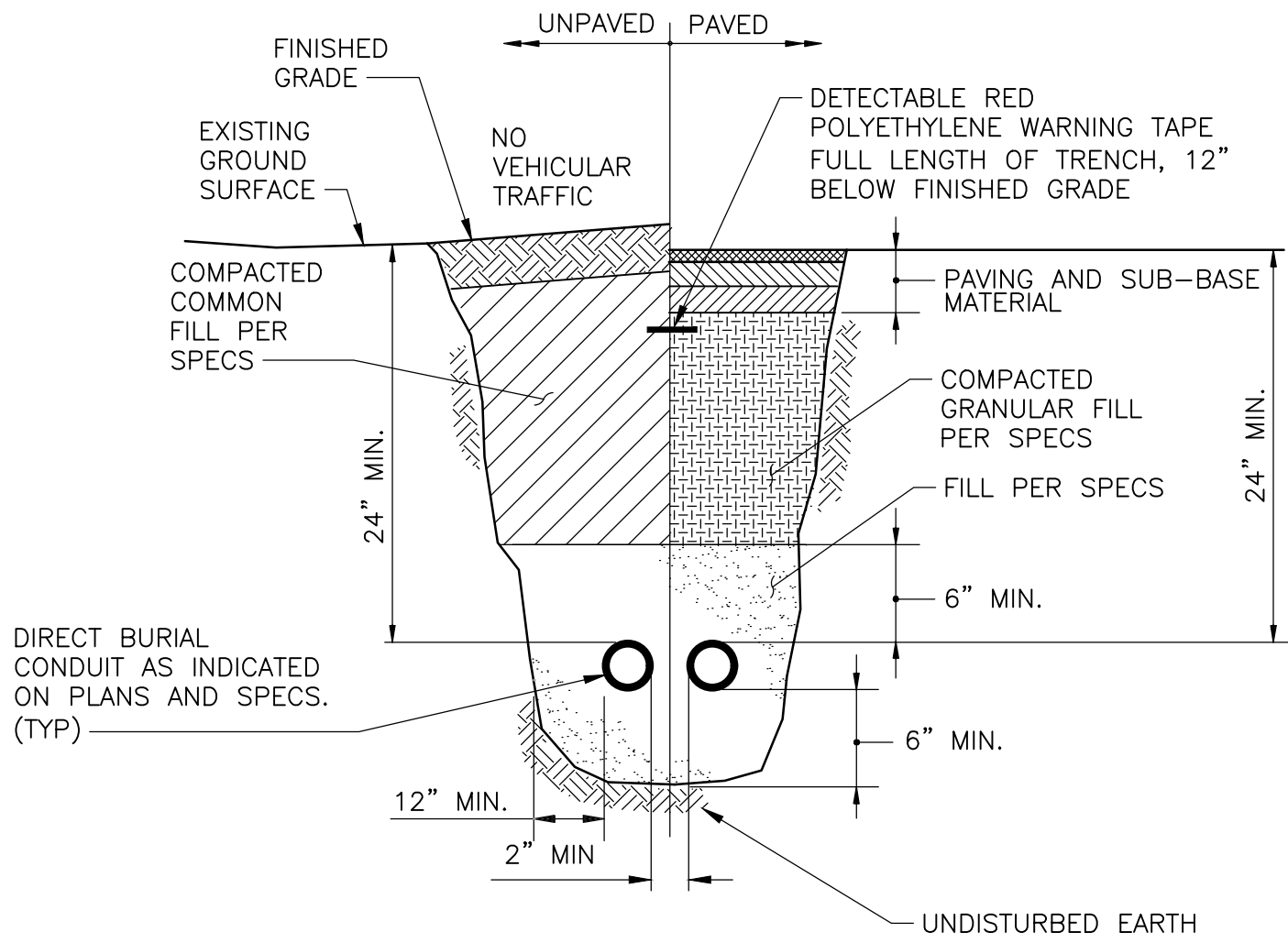
TYPICAL CONDUIT THROUGH SLAB
DETAIL B
NTS



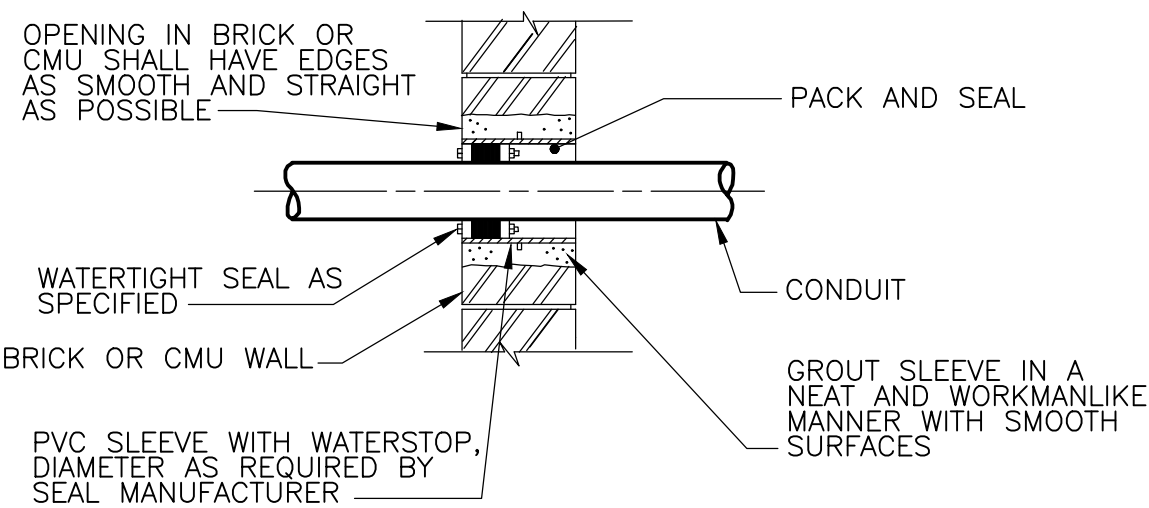
CONDUIT PENETRATION THROUGH EXISTING CONCRETE WALL
DETAIL C
NTS



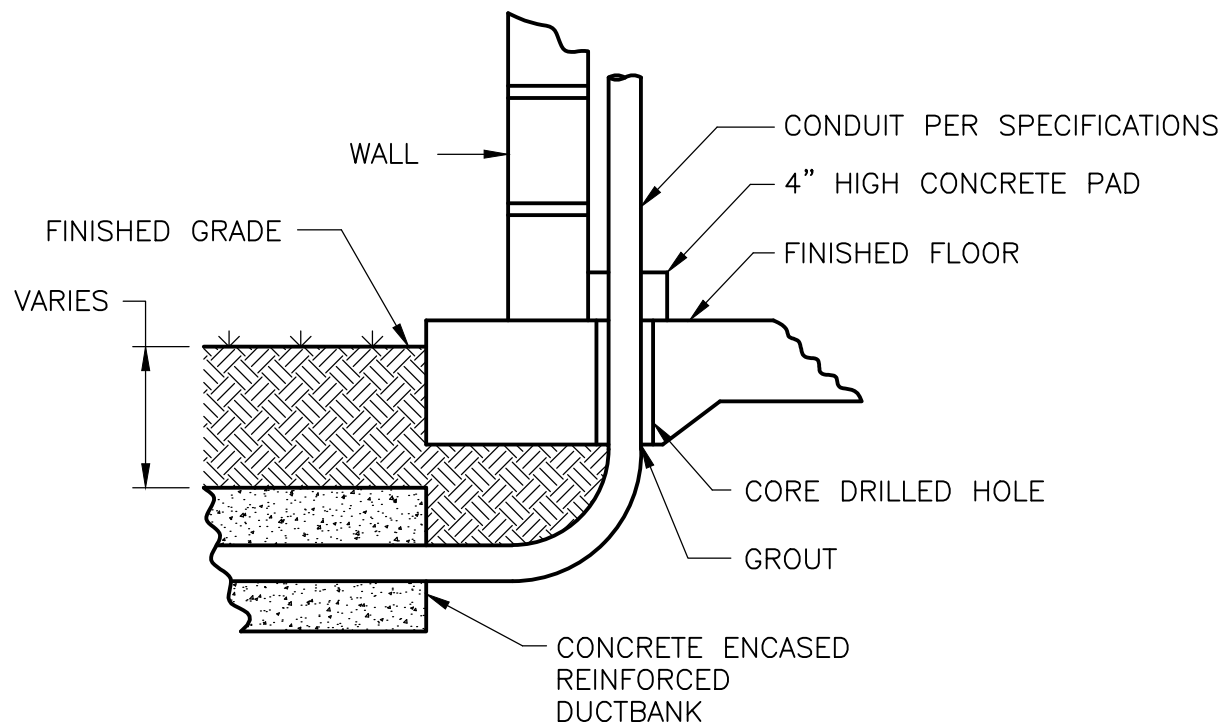
TYPICAL TRANSMITTER
DETAIL D
NTS



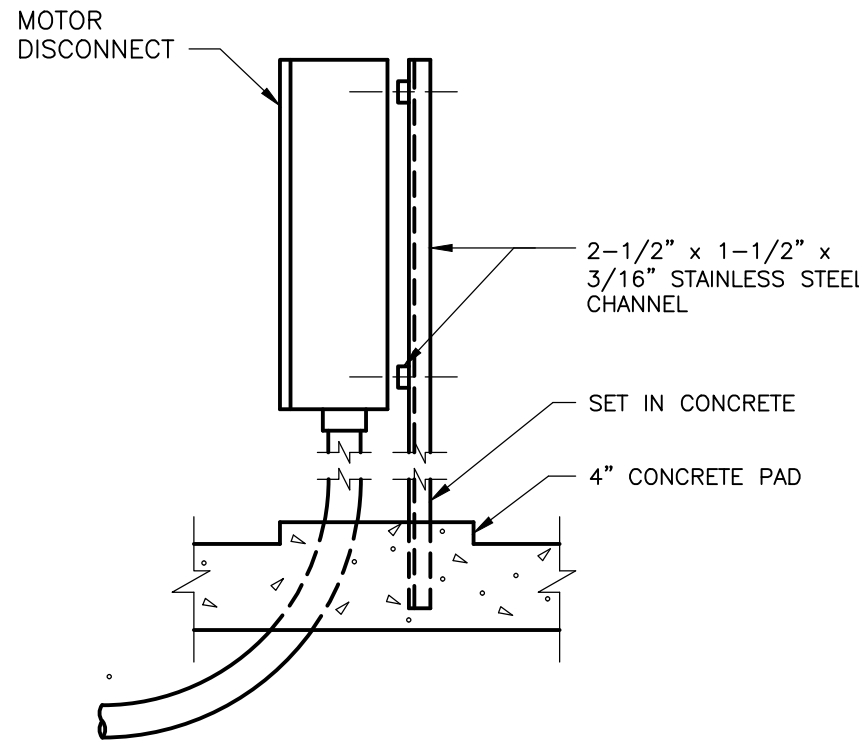
TYPICAL DIRECT BURIED CONDUIT
DETAIL E
NTS



WATERTIGHT CONDUIT PENETRATION
DETAIL F
NTS



CORE DRILL
DETAIL G
NTS



TYPICAL DISCONNECT
DETAIL H
NTS

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DATE: 9/1/2026
SPENCER J. PERRY JR
PE NO. 62587

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. HENDELS
DRAWN BY: M. OTTO
SHEET CHK'D BY: S. PERRY
CROSS CHK'D BY: K. COLE
APPROVED BY: S. PERRY
DATE: SEPTEMBER 2026

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

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

ELECTRICAL DETAILS I

PROJECT NO. 263019-308471
FILE NAME: ED01NFD1.DWG
SHEET NO.
ED-1

ISSUED FOR BID

GENERAL INSTRUMENT OR FUNCTION SYMBOLS

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

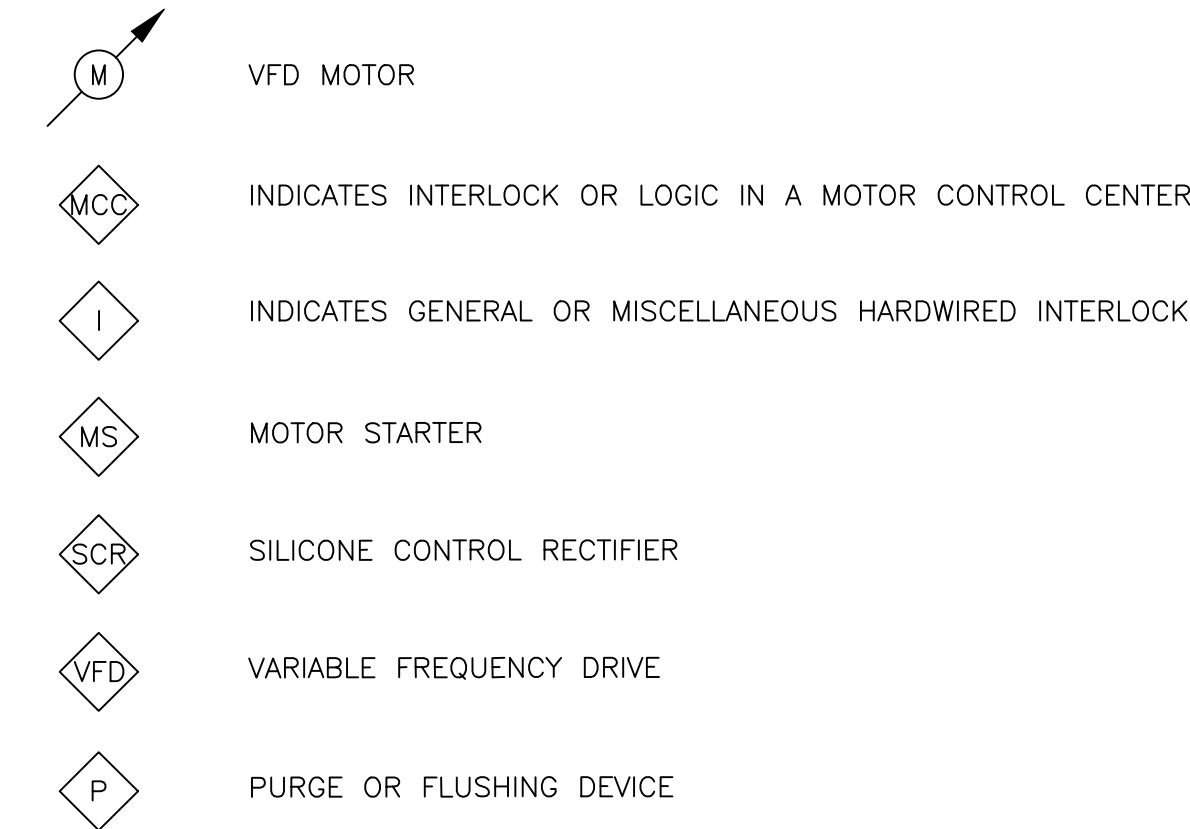


INSTRUMENTS SHARING COMMON HOUSING

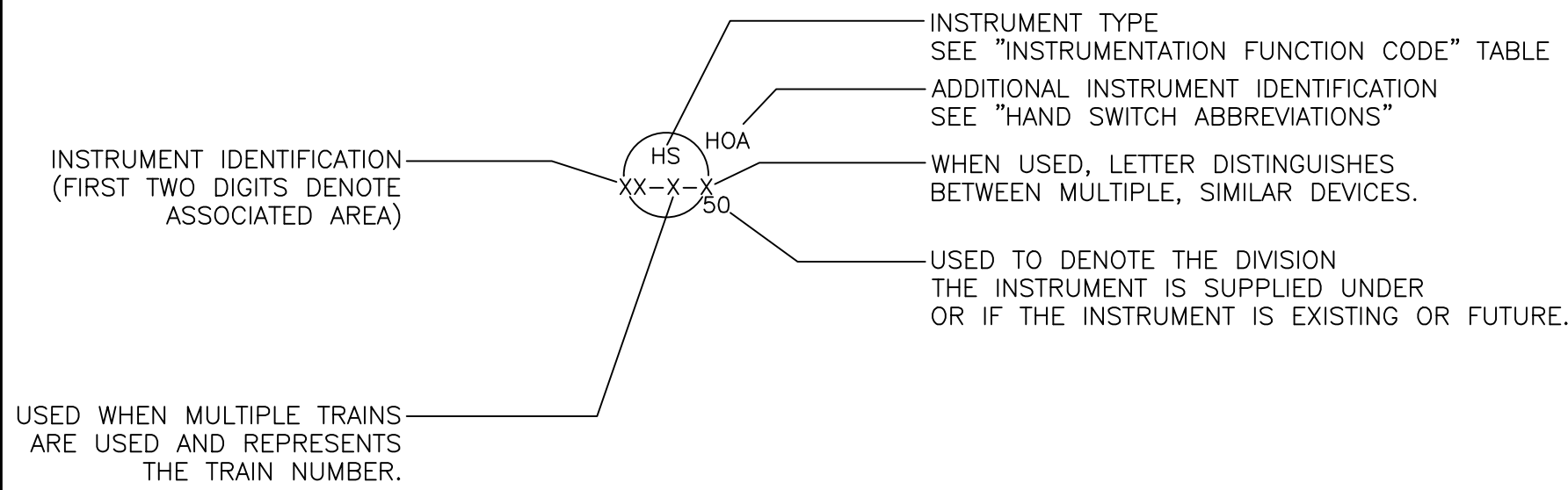


PILOT LIGHT

MISCELLANEOUS SYMBOLS



TYPICAL TAG NUMBERS & DESIGNATION



HAND SWITCH ABBREVIATIONS

- AO = AUTO/OFF

AM = AUTO/MANUAL

CM = COMPUTER/MANUAL

CL = COMPUTER/LOCAL

ES = EMERGENCY STOP

FR = FORWARD/REVERSE

FOR = FORWARD/OFF/REVERSE

FS = FAST SLOW

FOS = FAST/OFF/SLOW

HOA = HAND/OFF/AUTO

LIS = LEAD/LAG/STANDBY

LOC = LOCAL/OFF/COMPUTER
- LOR = LOCAL/OFF/REMOTE

LOS = LOOKOUT/STOP

LA = LOCAL/AUTO

LR = LOCAL/REMOTE

OC = OPEN/CLOSE

OCA = OPEN/CLOSE/AUTO

OO = ON/OFF

OOA = ON/OFF/AUTO

OSC = OPEN/STOP/CLOSE

RSL = RAISE/STOP/LOWER

SS = START/STOP

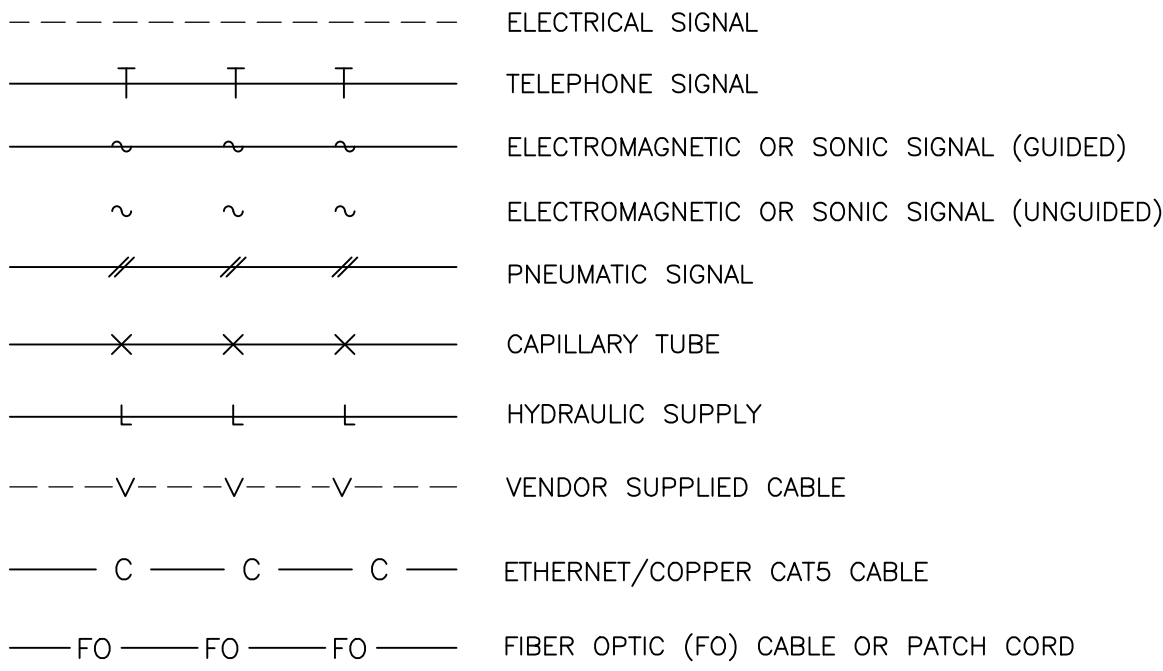
SOR = START/OFF/RESET

INSTRUMENTATION FUNCTION CODE

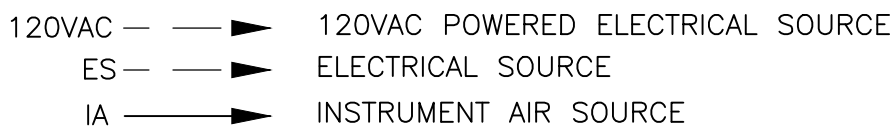
FIRST LETTERS		SUCCEEDING LETTERS		
COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
MEASURED/INITIATING VARIABLE	VARIABLE MODIFIER	READOUT/PASSIVE FUNCTION	OUTPUT/ACTIVE FUNCTION	FUNCTION MODIFIER
A ANALYSIS		ALARM		
B BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C USER'S CHOICE			CLOSED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

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

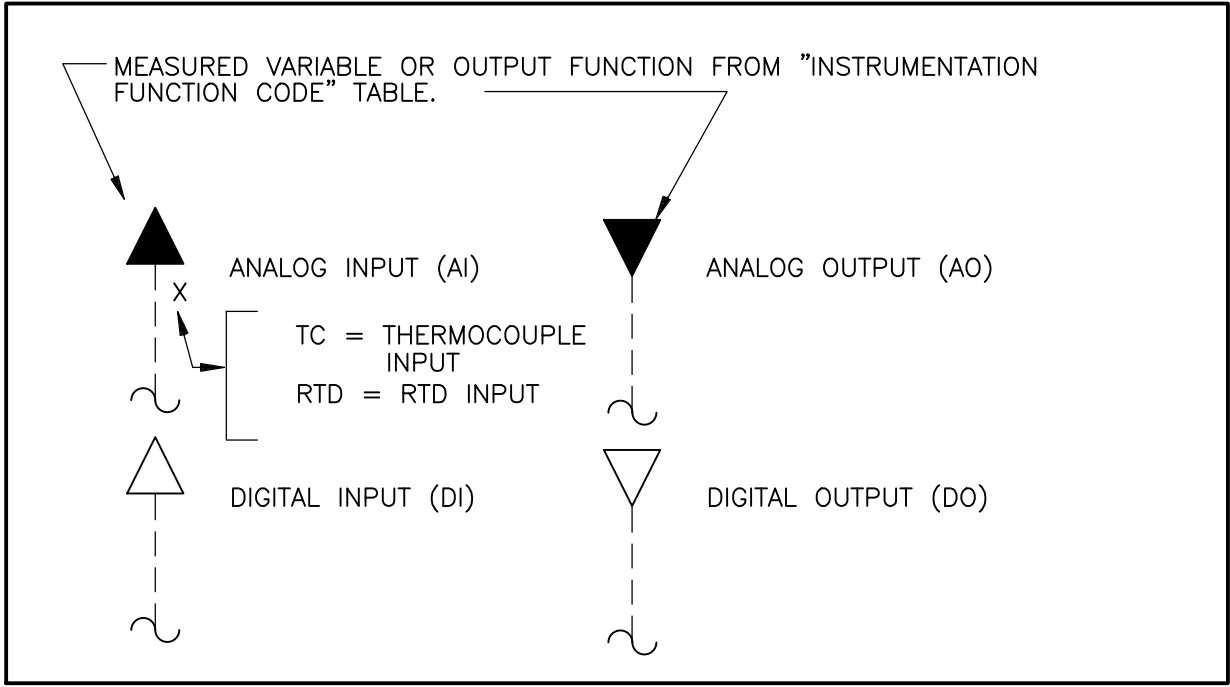
INSTRUMENT LINE SYMBOLS



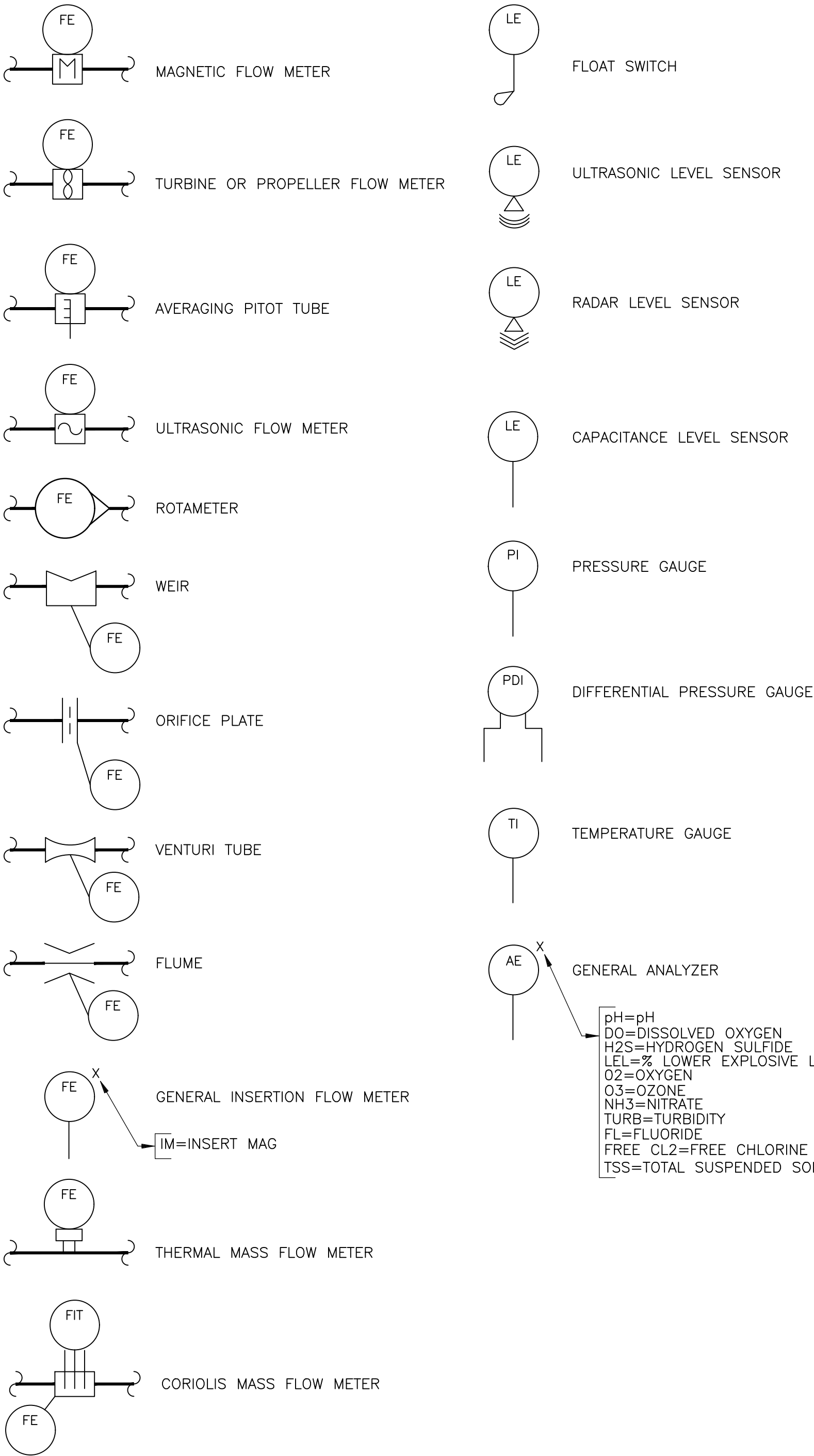
ELECTRICAL / AIR SOURCES



I/O SIGNALS



PRIMARY ELEMENTS



GENERAL NOTES

1. THIS LEGEND APPLIES TO P&IDS ONLY AND MAY DIFFER FROM LEGENDS FOR OTHER SHEETS.

2. IN GENERAL THIS LEGEND SHEET AND THE P&IDS ARE BASED ON THE INTERNATIONAL SOCIETY OF AUTOMATION (ISA) STANDARDS AND RECOMMENDED PRACTICES FOR INSTRUMENTATION AND CONTROL. SOME MODIFICATIONS, ADDITIONS AND ALTERATIONS HAVE BEEN MADE AS REQUIRED TO ACCOMMODATE PROJECT REQUIREMENTS.

3. SOME PROCESS ITEMS SUCH AS EQUIPMENT ISOLATION VALVES, BYPASS LINES, ETC., WHICH ARE NOT CRITICAL FOR AN UNDERSTANDING OF THE INSTRUMENTATION FUNCTIONS ARE NOT SHOWN ON THE P&IDS.

4. SEE ELECTRICAL AND MECHANICAL SHEETS AND SPECIFICATIONS FOR ADDITIONAL CONTROL AND INTERLOCK REQUIREMENTS.

5. LIGHTER WEIGHT LINES, SHOWN AS _____, INDICATE EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE EXISTING. WEIGHTED LINES, SHOWN AS _____ OR HEAVIER _____, INDICATE EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE NEW. DASHED WEIGHTED LINES, SHOWN AS _____, INDICATED EQUIPMENT, INSTRUMENTS OR PIPING THAT ARE GROUPED AS A PACKAGE.

GENERAL ABBREVIATIONS

- AI

AO

CPU

CV

DI

DO

ES

FC

FLC

FO

HMI

LCS

MCC

MP

MX

NC

NO

NPW

OCF

PLC

PMP

PNL

POL

PW

RIO

SPD

SPMP

THS

TNK

UPS

VFD
- ANALOG IN

ANALOG OUT

CENTRAL PROCESSOR UNIT

CONTROL VALVE (MOTOR OPERATED)

DIGITAL OR DISCRETE INPUT

DIGITAL OUTPUT

EMERGENCY STOP PANEL

FAIL CLOSED

FLOCCULATOR

FAIL OPEN OR FIBER OPTIC

HUMAN MACHINE INTERFACE

LOCAL CONTROL STATION

MOTOR CONTROL CENTER

METERING PUMP

MIXER

NORMALLY CLOSED

NORMALLY OPEN

NON-POTABLE WATER

OPEN CHANNEL FLOW

PROGRAMMABLE LOGIC CONTROLLER

PUMP

PANEL (VENDOR PROVIDED)

POLYMER

PLANT WATER

REMOTE INPUT/OUTPUT

SURGE PROTECTION DEVICES

SUMP PUMP

THIOSULFATE

TANK

UNINTERRUPTIBLE POWER SUPPLY

VARIABLE FREQUENCY DRIVE

PROCESS ABBREVIATIONS

- MF

MP

PVC

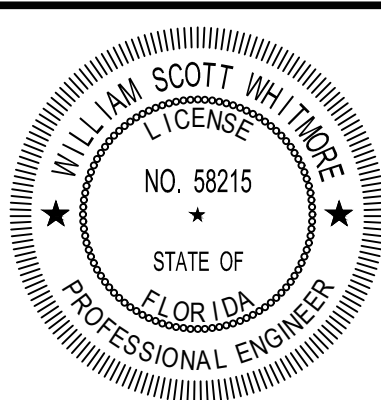
SST
- MEMBRANE FEED

MEMBRANE PERMEATE

POLYVINYL CHLORIDE

STAINLESS STEEL

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DATE: 9/1/2026
WILLIAM S. WHITMORE
PE NO. 58215

PROJECT NO. 263019-308471
FILE NAME: 1001SYMB.DWG

SHEET NO.

I-1

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

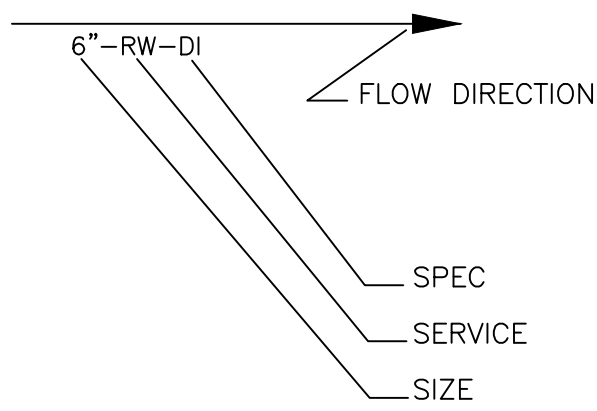
INSTRUMENTATION LEGEND I

DESIGNED BY: R. CHARITY
DRAWN BY: R. CHARITY
SHEET CHK'D BY: W. WHITMORE
CROSS CHK'D BY: M. ALOK
APPROVED BY: W. WHITMORE
DATE: AUGUST 2026

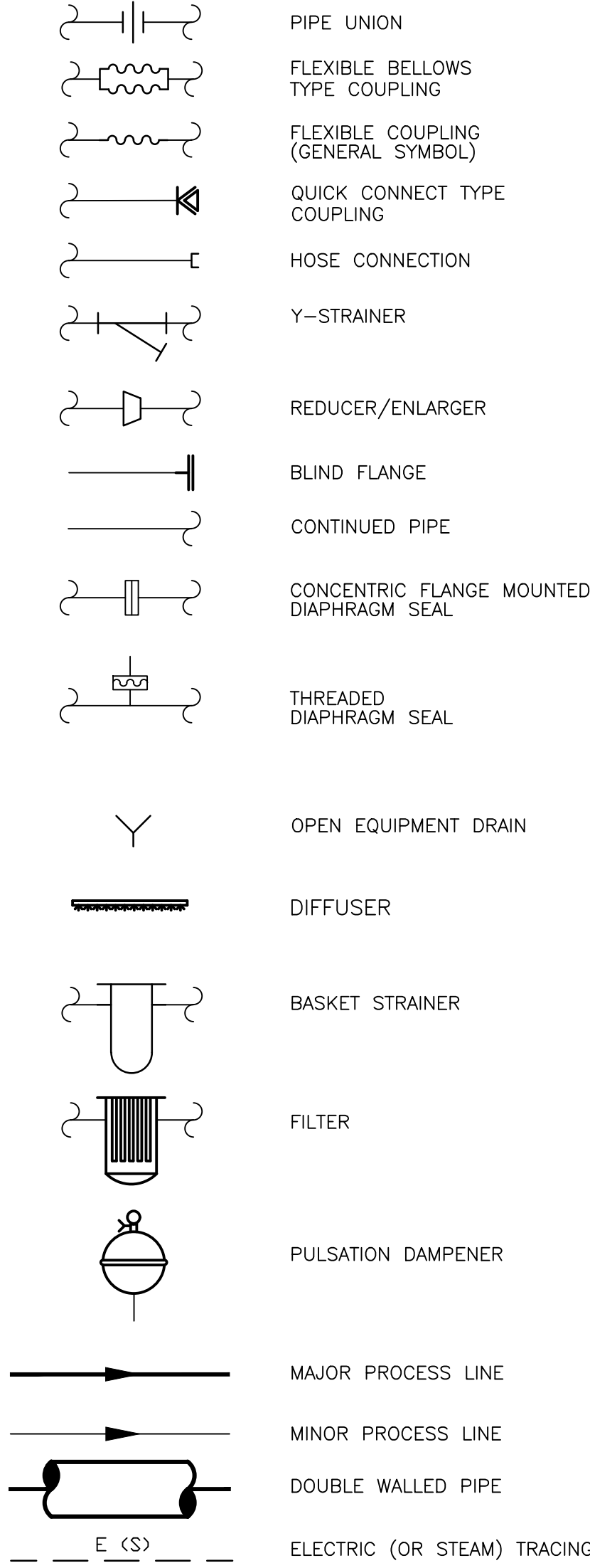


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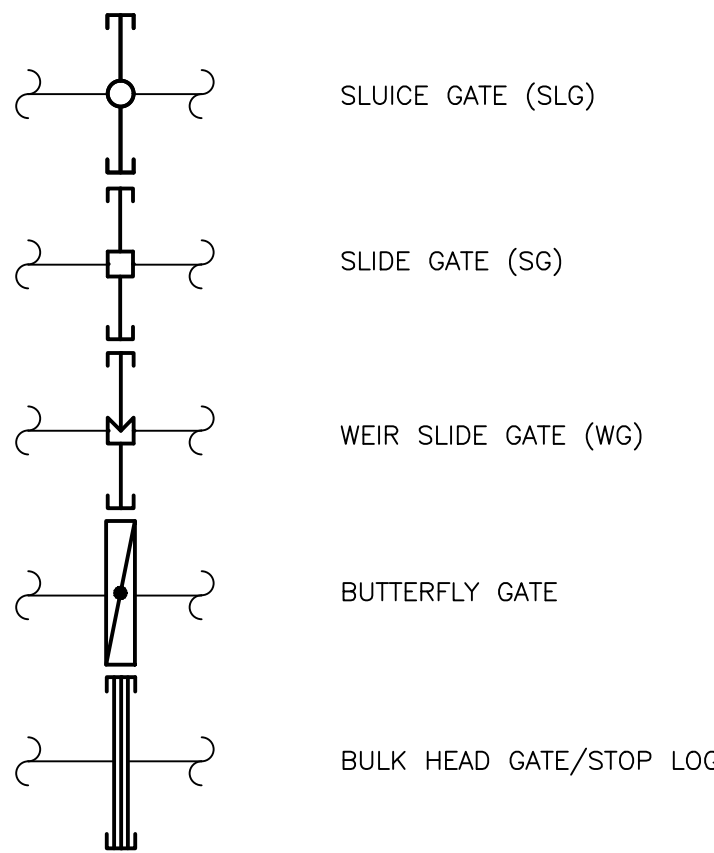
TYPICAL PIPE TAG NUMBERS & DESIGNATION



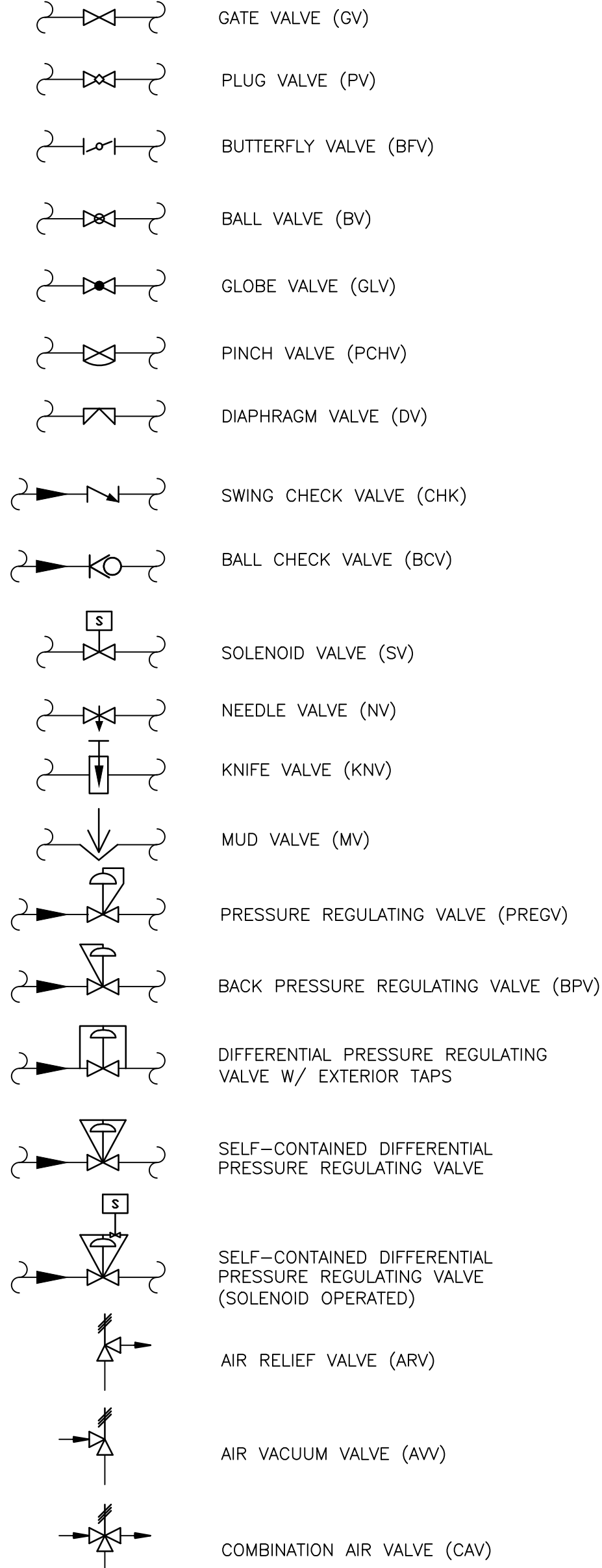
PIPE LINE SYMBOLS



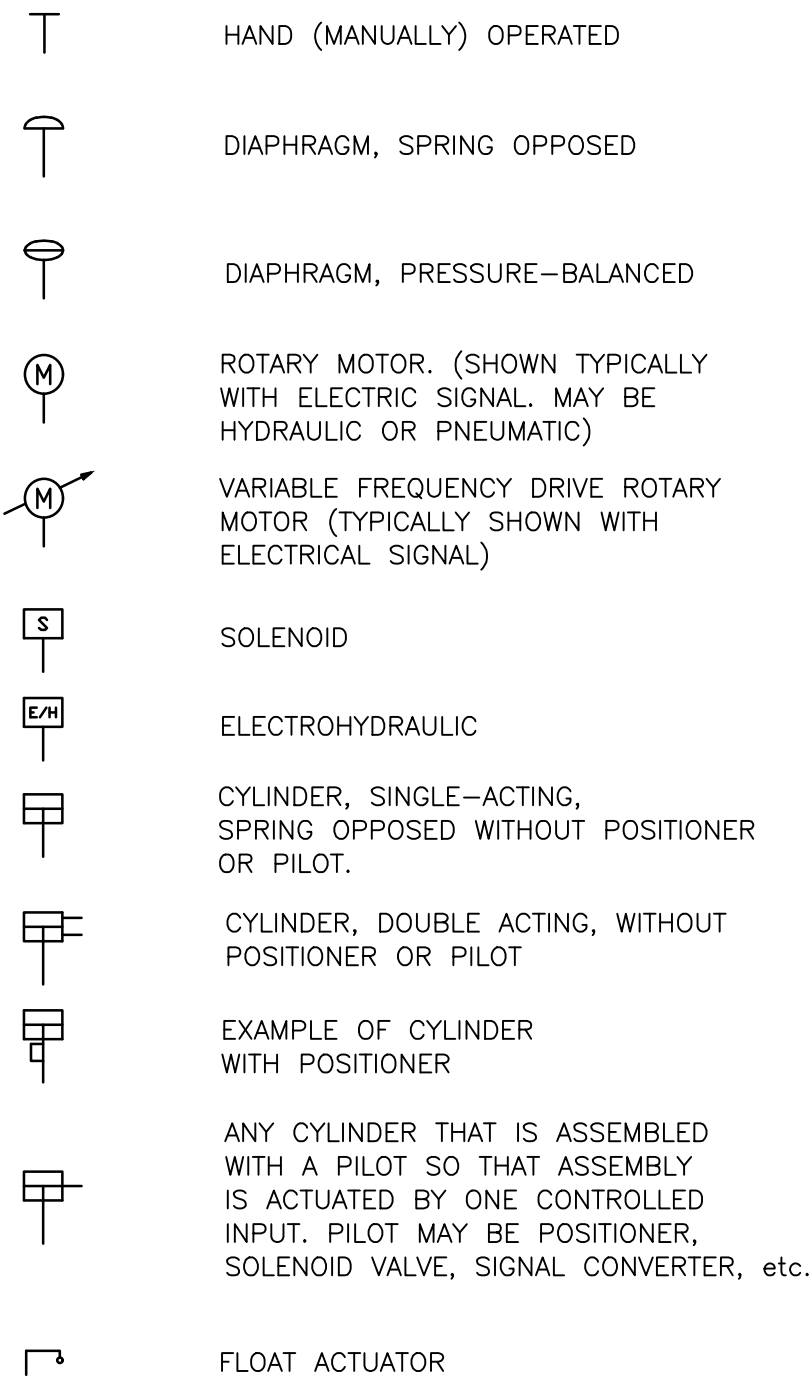
GATE SYMBOLS



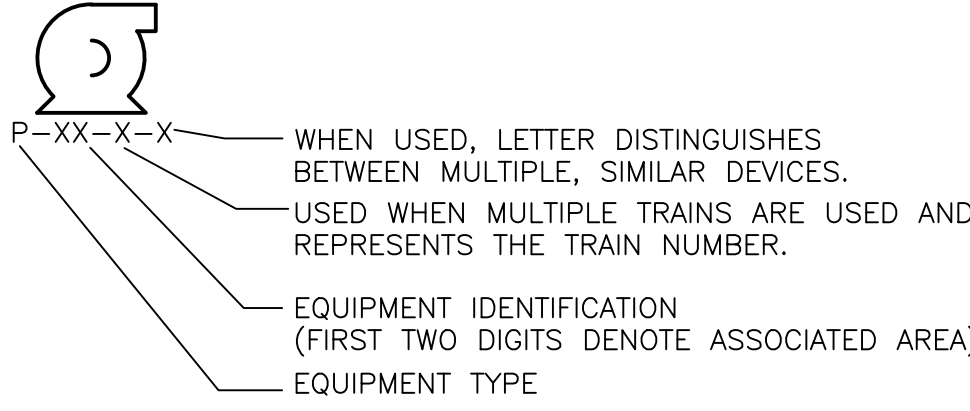
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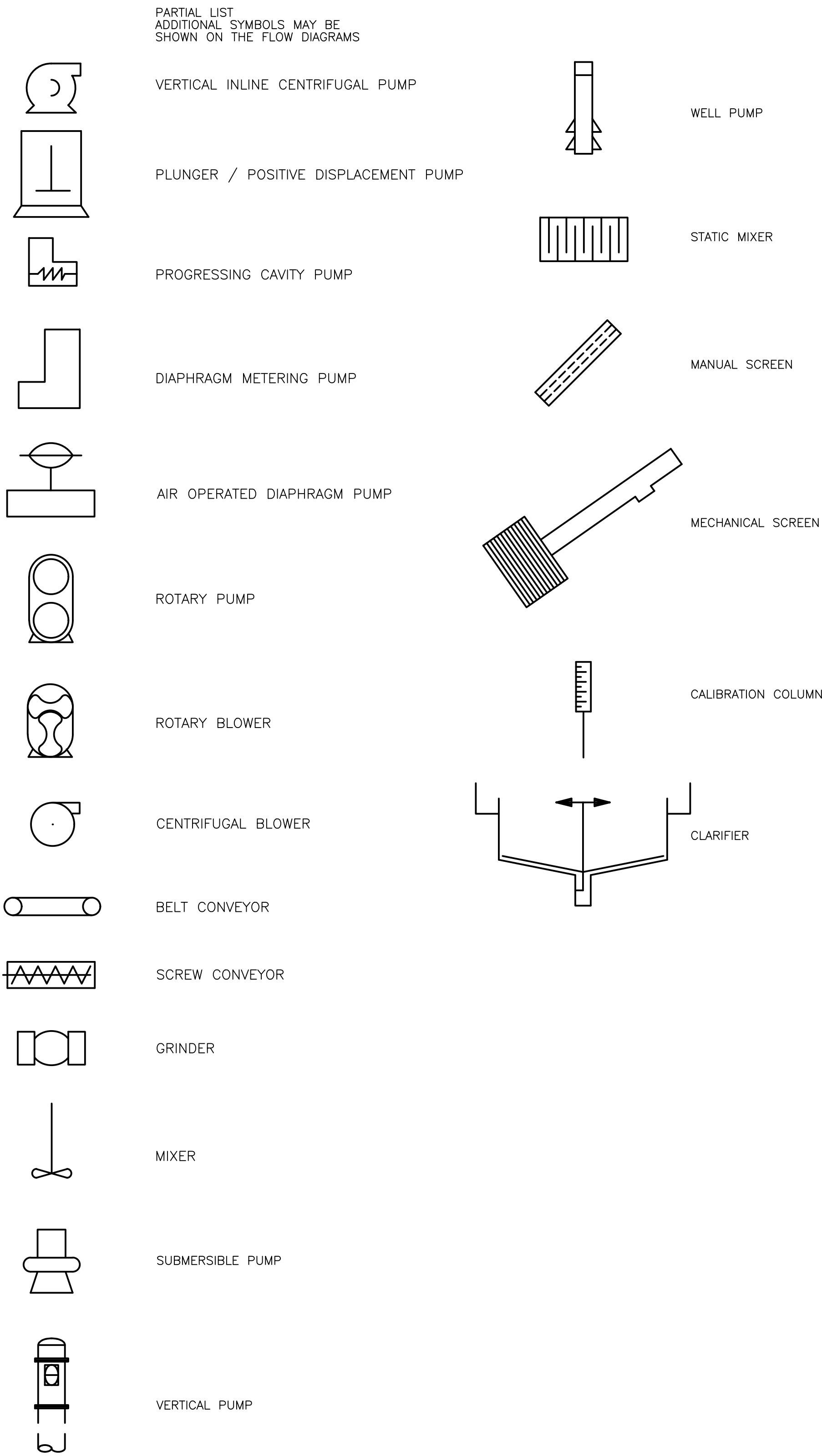
VALVE ACTUATORS



TYPICAL EQUIPMENT TAG NUMBERS & DESIGNATION



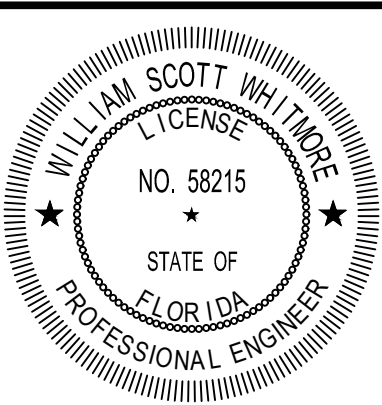
PROCESS EQUIPMENT



GENERAL NOTES

1. REFER TO SHEET I-1 FOR ADDITIONAL NOTES

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DATE: 9/1/2026
WILLIAM S. WHITMORE
PE NO. 58215

PROJECT NO. 263019-308471
FILE NAME: 1002SYMB.DWG

SHEET NO.

I-2

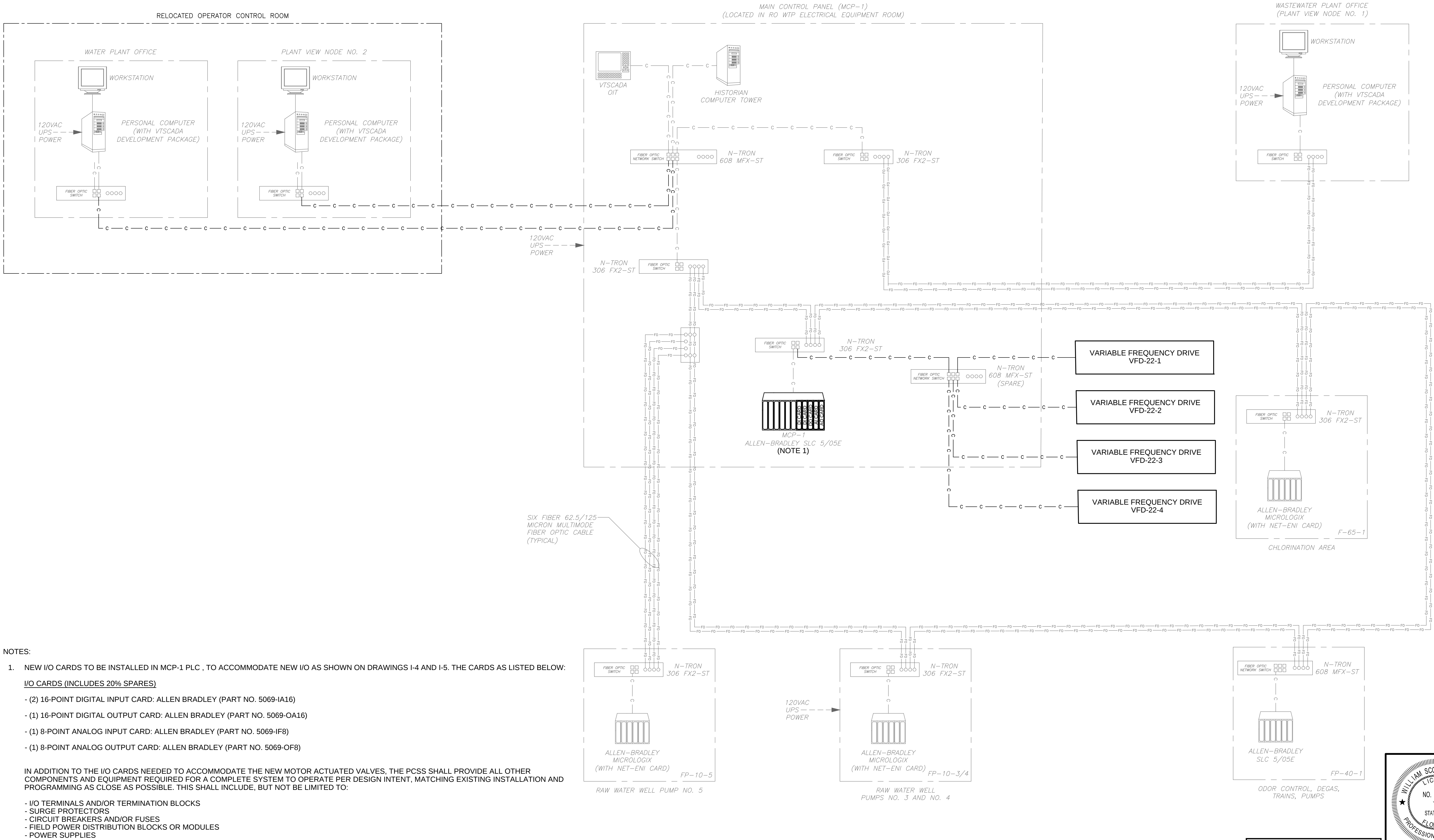
DESIGNED BY: R. CHARITY
DRAWN BY: R. CHARITY
SHEET CHK'D BY: W. WHITMORE
CROSS CHK'D BY: M. ALOK
APPROVED BY: W. WHITMORE
DATE: AUGUST 2026

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

DUNES COMMUNITY DEVELOPMENT DISTRICT
REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

INSTRUMENTATION LEGEND II

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- NOTES:
- NEW I/O CARDS TO BE INSTALLED IN MCP-1 PLC , TO ACCOMMODATE NEW I/O AS SHOWN ON DRAWINGS I-4 AND I-5. THE CARDS AS LISTED BELOW:
I/O CARDS (INCLUDES 20% SPARES)
 - (2) 16-POINT DIGITAL INPUT CARD: ALLEN BRADLEY (PART NO. 5069-IA16)
 - (1) 16-POINT DIGITAL OUTPUT CARD: ALLEN BRADLEY (PART NO. 5069-OA16)
 - (1) 8-POINT ANALOG INPUT CARD: ALLEN BRADLEY (PART NO. 5069-IF8)
 - (1) 8-POINT ANALOG OUTPUT CARD: ALLEN BRADLEY (PART NO. 5069-OF8)
- IN ADDITION TO THE I/O CARDS NEEDED TO ACCOMMODATE THE NEW MOTOR ACTUATED VALVES, THE PCSS SHALL PROVIDE ALL OTHER COMPONENTS AND EQUIPMENT REQUIRED FOR A COMPLETE SYSTEM TO OPERATE PER DESIGN INTENT, MATCHING EXISTING INSTALLATION AND PROGRAMMING AS CLOSE AS POSSIBLE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO:
- I/O TERMINALS AND/OR TERMINATION BLOCKS
 - SURGE PROTECTORS
 - CIRCUIT BREAKERS AND/OR FUSES
 - FIELD POWER DISTRIBUTION BLOCKS OR MODULES
 - POWER SUPPLIES

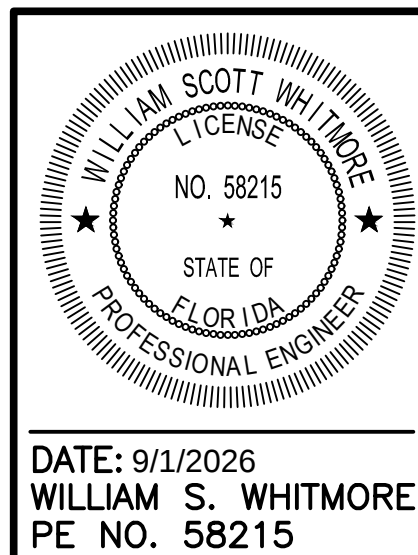
	08/26	RWC	WSW	CHECKED OR UPDATED	AUGUST 2026
REV. NO.	DATE	DRWN	CHKD	REMARKS	

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CONTROL SYSTEM BLOCK DIAGRAM



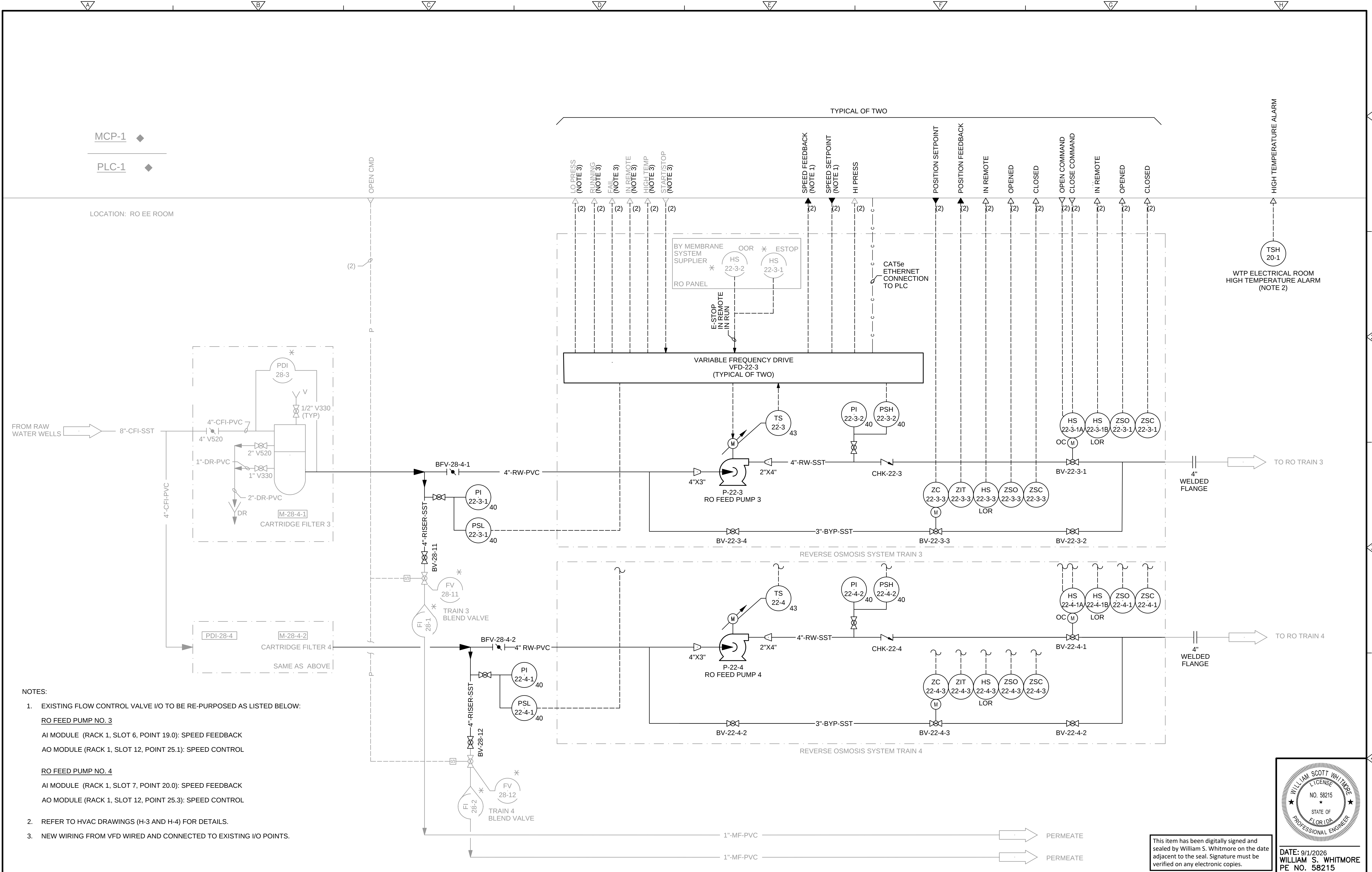
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DATE: 9/1/2026
WILLIAM S. WHITMORE
PE NO. 58215

PROJECT NO. 263019-308471
FILE NAME: 1003PIDT.DWG
SHEET NO.

I-3

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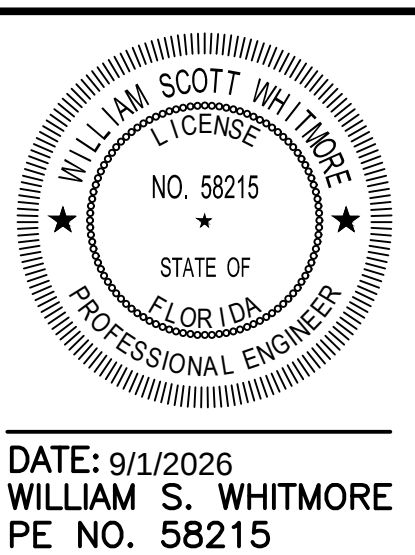


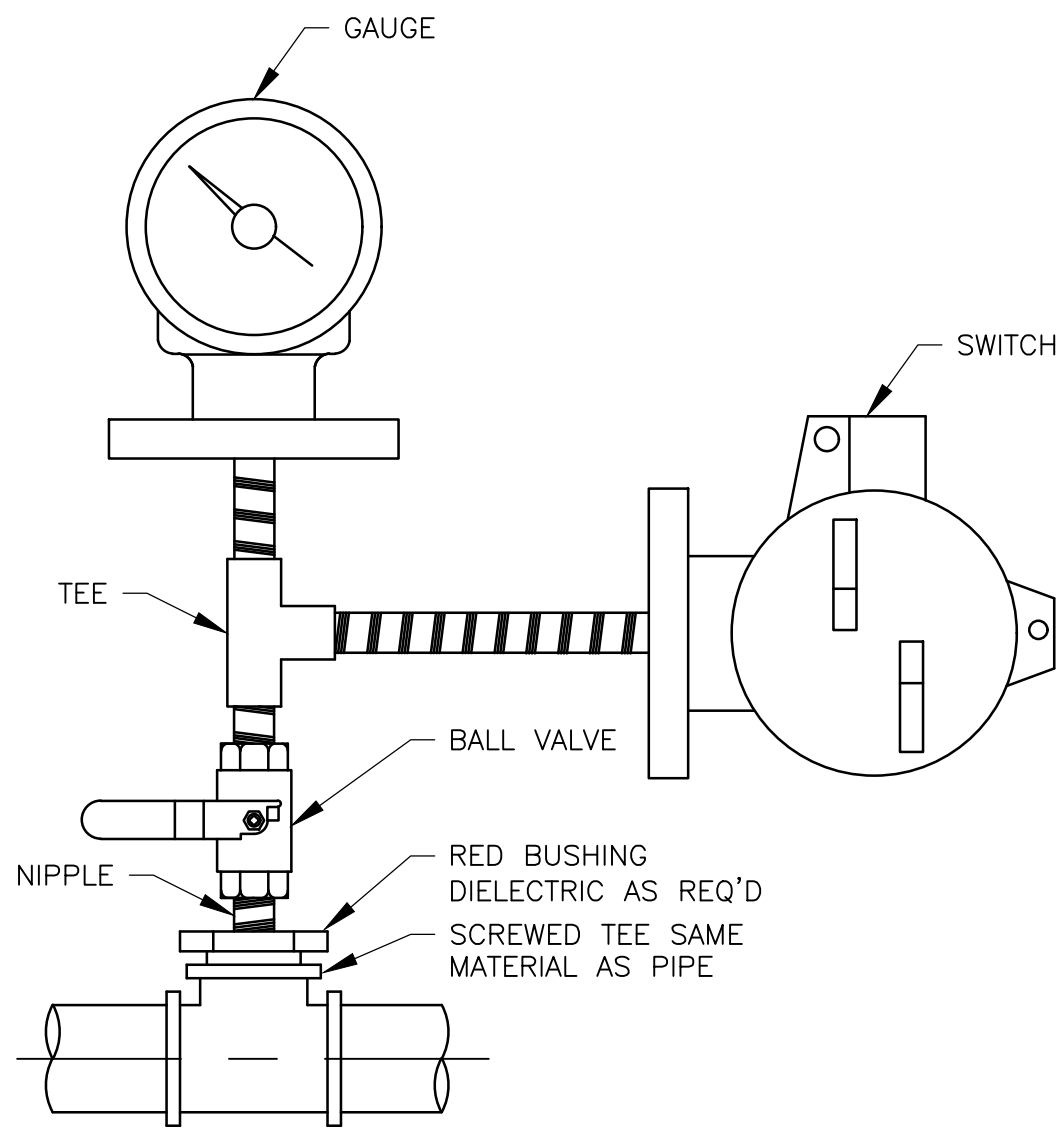
- NOTES:
- EXISTING FLOW CONTROL VALVE I/O TO BE RE-PURPOSED AS LISTED BELOW:
RO FEED PUMP NO. 3
AI MODULE (RACK 1, SLOT 6, POINT 19.0): SPEED FEEDBACK
AO MODULE (RACK 1, SLOT 12, POINT 25.1): SPEED CONTROL

RO FEED PUMP NO. 4
AI MODULE (RACK 1, SLOT 7, POINT 20.0): SPEED FEEDBACK
AO MODULE (RACK 1, SLOT 12, POINT 25.3): SPEED CONTROL
 - REFER TO HVAC DRAWINGS (H-3 AND H-4) FOR DETAILS.
 - NEW WIRING FROM VFD WIRED AND CONNECTED TO EXISTING I/O POINTS.

DESIGNED BY: R. CHARITY	CDM Smith	DUNES COMMUNITY DEVELOPMENT DISTRICT	PROCESS & INSTRUMENTATION DIAGRAM	PROJECT NO. 263019-308471
DRAWN BY: R. CHARITY		REVERSE OSMOSIS	RO FEED PUMPS NO. 3 & NO. 4	FILE NAME: 1005PIDI.DWG
SHEET CHK'D BY: W. WHITMORE		MEMBRANE FEED PUMP REPLACEMENT		SHEET NO. I-5
CROSS CHK'D BY: M. ALOK				
APPROVED BY: W. WHITMORE				
DATE: AUGUST 2026				
REV. NO.	DATE	DRWN	CHKD	REMARKS
	08/26	RWC	WSW	CHECKED OR UPDATED AUGUST 2026

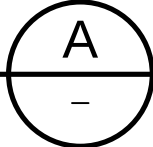
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PRESSURE GAUGE AND SWITCH ASSEMBLY
(WITHOUT DIAPHRAGM SEAL)

DETAIL
NTS



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	R. CHARITY
DRAWN BY:	R. CHARITY
SHEET CHK'D BY:	W. WHITMORE
CROSS CHK'D BY:	M. ALOK
APPROVED BY:	W. WHITMORE
DATE:	AUGUST 2026

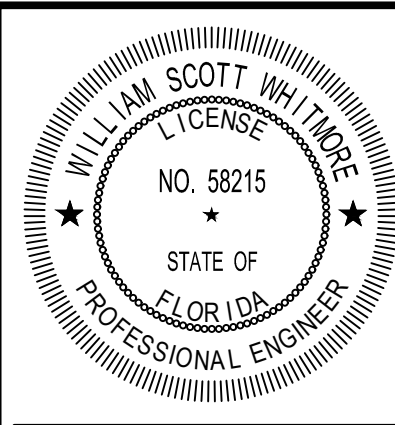
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REVERSE OSMOSIS
MEMBRANE FEED PUMP REPLACEMENT

INSTRUMENT INSTALLATION DETAILS

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DATE: 9/1/2026
WILLIAM S. WHITMORE
PE NO. 58215

PROJECT NO. 263019-308471
FILE NAME: ID01PIDT.DWG

SHEET NO.

ID-1