



Dennis Levinson
County Executive

Atlantic County

Department of Administrative Services

NOTICE TO BIDDERS ADDENDUM #1

BID # 202636.1

For the Renovations of the Bath House and Gazebo
Improvements at the Estell Manor Park, Picnic Area #1
(Bid Bond and Consent of Surety Required)

THIS ADDENDUM SHALL BECOME A PART OF THE BID SPECIFICATIONS AND CONTRACT AND SHALL SUPERSEDE ANYTHING CALLED FOR PREVIOUSLY IN THE SPECIFICATION WHICH MIGHT BE IN VARIANCE. THIS ADDENDUM SHALL BE A PART OF AND ATTACHED TO THE CONTRACT DOCUMENTS.

Tammi Robbins
Department Head

609/343-2289 FAX: 343-2204
TDD: 348-5551

Division of Human Resources
609/343-2211 FAX: 343-2202

Division of Information Technologies
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Division of Budget and Purchasing
609/343-2268 FAX: 343-2193

Questions were posted to the BidExpress Portal:

- Electrical, Plumbing and Mechanical drawings are missing, when will these drawings be ready?
 - A: Please see documents below.
- There are no plumbing, Electrical, mechanical, or structural plans. Are these forthcoming or is the work Not in contract?
 - A: Please see documents below.
- There is no Mechanical, Plumbing or Electric plans? Are they forthcoming to the site?
 - A: Please see documents below.
- The insurance requirements list professional liability insurance in the amount of \$2million. Is this required for a general construction bid?
- A: The professional liability insurance (section E) is now removed and will no longer be required for this project.

END OF ADDENDUM NO. 1

Palma Conover, Purchasing Director
County of Atlantic, New Jersey
DATED: September 9, 2026

VERY IMPORTANT

PLEASE SIGN THE FOLLOWING ACKNOWLEDGMENT UPON RECEIPT OF ADDENDUM #1 AND UPLOAD TO BIDEXPRESS

ACKNOWLEDGMENT I, THE UNDERSIGNED, ACKNOWLEDGE RECEIPT OF ADDENDUM REGARDING BID SPECIFICATIONS FOR THE ABOVE REFERENCED BID.



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ELECTRICAL GENERAL NOTES

1.

DRAWINGS ARE DIAGRAMMATIC AND DEFINE THE INTENT OF THE WORK. LOCATIONS OF EQUIPMENT, FIXTURES, DEVICES, PANELBOARDS, DUCTS, PIPING, DIFFUSERS, PARTITIONS, OPENINGS, ETC. ARE APPROXIMATE AND ARE SUBJECT TO MODIFICATIONS CAUSED BY STRUCTURAL CONDITIONS AND EQUIPMENT PROVIDED BY OTHER CONTRACTORS. SUBCONTRACTORS OR THE OWNER. COORDINATE ALL WORK WITH THE WORK OF OTHER TRADES. DETERMINE ROUGHING LOCATIONS FROM APPROVED SHOP DRAWINGS. MINOR MODIFICATIONS OF LOCATIONS REQUIRED TO EFFECT SUCH COORDINATION SHALL BE MADE AT NO COST TO THE OWNER.
2.

THE DRAWINGS HAVE BEEN PRODUCED ENTIRELY ON FPA CADD SYSTEM. ANY OTHER LETTERING, LINES OR SYMBOLS, OTHER THAN PROFESSIONAL STAMPS AND SIGNATURES, HAVE BEEN MADE WITHOUT THE AUTHORIZATION OF FPA AND ARE INVALID.
3.

REPRODUCTION OF ANY PORTION OF THE CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
4.

SPECIFICATIONS MAY REQUIRE WORK, EQUIPMENT, SYSTEMS, METHODS, ETC. THAT IS NOT INDICATED ON THE DRAWINGS.
5.

DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLEMENTARY TO EACH OTHER. WHERE DISCREPANCIES OR CONFLICTS OCCUR, THE CONTRACTOR SHALL INCLUDE THE MORE COSTLY METHOD IN HIS PROPOSAL. UNLESS CLARIFIED BY BULLETIN OR ADDENDUM ACKNOWLEDGED PRIOR TO RECEIPT OF BIDS.
6.

DRAWINGS SHALL NOT BE SCALED. DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND REQUIREMENTS OF THE WORK. ALTHOUGH SIZE AND LOCATION OF EQUIPMENT IS DRAWN TO SCALE, WHEREVER POSSIBLE, CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACT DOCUMENTS AND VERIFY INFORMATION AT THE PROJECT SITE.
7.

THE OWNER WILL OCCUPY THE SITE AND EXISTING BUILDING(S) DURING THE ENTIRE CONSTRUCTION PERIOD. COOPERATE WITH THE OWNER DURING CONSTRUCTION OPERATIONS TO AVOID ANY CONFLICTS. PERFORM THE WORK SO AS NOT TO INTERFERE WITH THE OWNER'S OPERATIONS. SCHEDULE ALL POWER OUTAGES FOR OVERTIME ON SUNDAYS AND HOLIDAYS AT NO ADDITIONAL COST TO THE OWNER.
8.

EXISTING PROJECT CONDITIONS INDICATED ARE BASED ON FIELD OBSERVATION. EXISTING DESIGN / CONSTRUCTION DOCUMENTS AND EXISTING RECORD DOCUMENTS AND ARE INTENDED TO INDICATE THE SCOPE OF THE WORK AFFECTED BY THIS PROJECT.
9.

THE TERM "OTHERS" SHALL BE UNDERSTOOD TO MEAN CONTRACTORS, SUBCONTRACTORS OR TRADESMEN ON THE PROJECT PERFORMING WORK ON THIS PROJECT UNDER SECTIONS OR DIVISIONS OTHER THAN ELECTRICAL WORK.
10.

VERIFY THAT FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS INDICATED.
11.

PRIOR TO BIDDING VISIT THE PROJECT SITE TO DETERMINE THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. SCHEDULE SITE VISIT WITH OWNER.
12.

PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR THE INSTALLATION, RELOCATION AND CONNECTION OF THE ELECTRICAL WORK.
13.

ALL MATERIAL SHALL BE UNDERWRITERS' LABORATORIES LISTED FOR ITS APPLICATION WHERE SUCH LISTING IS APPLICABLE.
14.

ALL EQUIPMENT SHALL BE AS INDICATED OR AS APPROVED BY THE ENGINEER.
15.

SUBMIT SHOP DRAWINGS, PRODUCT DATA SHEETS AND WIRING DIAGRAMS FOR ALL ELECTRICAL CONSTRUCTION MATERIALS, DEVICES, EQUIPMENT, APPLIANCES AND SYSTEMS.
16.

SUBMIT IN QUANTITY TO ALLOW DISTRIBUTION TO ARCHITECT (1), OWNER (2), ENGINEER (1), PRIME CONTRACTORS (1 EACH), AND CONTRACTOR'S OWN USE AS REQUIRED.
17.

UNLESS SPECIFICALLY INDICATED OR REQUESTED OTHERWISE, BIND ALL PRODUCT DATA TOGETHER INTO A SINGLE SUBMITTAL PROPERLY INDEXED AND IDENTIFIED AND WITH ALL PERTINENT CATALOG NUMBERS, OPTIONS, ETC. HIGHLIGHTED OR TARGETED. LOOSE SHEETS OR BINDING SYSTEMS RELYING ON PAPER CLIPS OR SLIP ON SPLINES WILL BE DISCARDED AND THE TRANSMITTAL RETURNED TO THE CONTRACTOR.
18.

UNLESS SPECIFICALLY INDICATED OR REQUESTED OTHERWISE, BIND ALL PRODUCT DATA TOGETHER INTO A SINGLE SUBMITTAL PROPERLY INDEXED AND IDENTIFIED AND WITH ALL PERTINENT CATALOG NUMBERS, OPTIONS, ETC. HIGHLIGHTED OR TARGETED. LOOSE SHEETS OR BINDING SYSTEMS RELYING ON PAPER CLIPS OR SLIP ON SPLINES WILL BE DISCARDED AND THE TRANSMITTAL RETURNED TO THE CONTRACTOR.
19.

OBTAIN SHOP DRAWINGS AND WIRING DIAGRAMS FROM OWNER AND OTHER CONTRACTORS FOR THE PROPER INSTALLATION OF RELATED ELECTRICAL WORK AND, UNLESS OTHERWISE NOTED, WIRE ALL CONTROL DEVICES, VALVES, THERMOSTATS, ETC. REQUIRED FOR THE PROPER OPERATION OF THEIR SYSTEMS.
20.

OBTAIN ALL PERMITS REQUIRED, HAVE THE WORK INSPECTED FOR CODE COMPLIANCE AND PAY ALL FEES FOR INSPECTION AND CERTIFICATION.
21.

MAKE THE NECESSARY ARRANGEMENTS, AND PAY ALL COSTS, FOR TEMPORARY AND/OR PERMANENT ELECTRIC SERVICE FOR THE PROJECT.
22.

PROVIDE ADEQUATE TEMPORARY ELECTRICAL LIGHT AND POWER FOR THE PROJECT WORK OF ALL TRADES.
23.

EXACT LOCATION OF EQUIPMENT SHALL BE COORDINATED IN THE FIELD.
24.

REFER TO APPROVED REFLECTED CEILING PLANS FOR EXACT LIGHTING LAYOUTS.
25.

REFER TO DRAWINGS AND SPECIFICATIONS OF OTHER TRADES FOR EQUIPMENT LOCATIONS AND CONTROLS.
26.

GROUNDING AND BONDING SHALL MEET NEC AND EQUIPMENT / SYSTEM MANUFACTURER'S REQUIREMENTS.
27.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF DEBRIS GENERATED BY HIS WORK AND WORKERS AT THE END OF EACH WORKING DAY AND FOR GENERAL GOOD HOUSEKEEPING BY HIS WORKERS. CONTRACTOR SHALL PROVIDE REQUIRED REFUSE CONTAINERS.
28.

PERFORM ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THE WORK. CUT NO STRUCTURAL MEMBER WITHOUT WRITTEN PERMISSION FROM THE ENGINEER. FINISH AND PAINT ALL PATCHED SURFACES WITH TWO COATS OF PAINT TO MATCH EXISTING SURFACES AS CLOSELY AS POSSIBLE. SEAL OPENINGS VERMIN AND WATER PROOF AND MAINTAIN FIRE RATING. USE SPECIFIED TECHNOLOGIES, INC. "SPECSEAL" SERIES LCI FOR PENETRATIONS
29.

ALL PENETRATIONS IN FOUNDATION WALLS AND FLOORS INCLUDING SLAB PENETRATIONS SHALL BE SUBSTANTIALLY SEALED BY UTILIZING A NON-CRACKING POLYURETHANE OR SIMILAR CAULK OR EQUIVALENT TO CLOSE OFF THE SOIL GAS ENTRY ROUTES. ALL CONDUITS IN THE SPACE BELOW THE FOUNDATION FLOOR WHICH PENETRATE THESE BARRIERS SHALL HAVE THREADED OR SOLVENTED FITTINGS.
30.

EXISTING CONDUIT MAY BE REUSED IF APPROVED BY THE ENGINEER, WHERE SUCH REUSE IS NOT PRACTICABLE, PROVIDE NEW CONDUIT.
31.

ALL NEW RACEWAY, WIRING AND CABLE IN NEW AND EXISTING FINISHED SPACES SHALL BE RUN CONCEALED IN NEW AND EXISTING CONSTRUCTION UNLESS OTHERWISE INDICATED; CUT AND PATCH AS REQUIRED. PROVIDE PULLBOXES, SIZE AND TYPE AS REQUIRED.
32.

ALL NEW WIRING IS TO BE RUN CONCEALED WHERE POSSIBLE. PROVIDE PULLBOXES, SIZE AND LOCATION AS REQUIRED.
33.

EXPOSED RACEWAY, IF PERMITTED, SHALL BE RUN TRUE, PLUMB AND PARALLEL OR PERPENDICULAR TO BUILDING LINES. [RIGID METAL CONDUIT.] 3/4 INCH MINIMUM, SHALL BE USED OUTDOORS; ELECTRICAL METALLIC TUBING, 3/4 INCH MINIMUM, SHALL BE USED IN INDOOR UNFINISHED SPACES; SURFACE METAL RACEWAY (WIREFOLD) SHALL BE USED IN INDOOR FINISHED SPACES.
34.

ALL WIRING SHALL BE COPPER CONDUCTOR WITH 600 VOLTS INSULATION IN METAL RACEWAY WITH APPROVED FITTINGS UNLESS OTHERWISE INDICATED.
35.

SERVICE ENTRANCE CONDUCTORS UNDERGROUND IN RACEWAY: TYPE THHN-THWN 90 DEGREE C. WHERE EXPOSED WITHIN THE BUILDING OR STRUCTURE, ENCASE RACEWAY IN CONCRETE, MINIMUM 2-INCHES THICK.
36.

FEEDERS AND BRANCH CIRCUITS UNDERGROUND IN RACEWAY: TYPE THHN-THWN 90 DEGREE C
37.

INTERIOR FEEDERS AND BRANCH CIRCUITS IN RACEWAY: TYPE THHN 90 DEGREE C.
38.

UNDERGROUND DIRECT BURIAL BRANCH CIRCUITS BEYOND BUILDING: TYPE UF, 75 DEGREE C.
39.

BRANCH CIRCUIT HOMERUNS TO FIRST OUTLET: TYPE THHN IN RACEWAY. AFTER THE FIRST OUTLET BOX, APPROVED CABLE MAY BE USED.
40.

FEEDERS SHALL BE MINIMUM #8 AWG; BRANCH CIRCUIT WIRING MINIMUM #12 AWG; CONTROL WIRING MINIMUM #14 AWG; UNLESS OTHERWISE INDICATED. FEEDER AND BRANCH CIRCUIT WIRING LARGER THAN #10 AWG SHALL BE STRANDED CONDUCTOR; #10 AWG AND SMALLER, STRANDED CONDUCTOR OR SOLID CONDUCTOR; CONTROL WIRING, STRANDED CONDUCTOR.
41.

METAL CLAD CABLE TYPE MC WITH 600 VOLT THHN INSULATION AND INSULATED GROUND CONDUCTOR MAY BE USED IN NON-HEALTH CARE FACILITIES FOR BRANCH CIRCUITS RUN IN HOLLOW SPACES, FISHED ABOVE EXISTING HUNG CEILINGS, FIXTURE CONNECTIONS AND ELSEWHERE AS PERMITTED BY THE NEC AND THE ENGINEER.
42.

DO NOT INSTALL CONDUCTORS, WIRES OR CABLES OF ANY OTHER SYSTEM IN THE SAME RACEWAY OR CABLE WITH FIRE ALARM POWER SUPPLY CIRCUITS, NON-POWER LIMITED FIRE ALARM CIRCUITS OR POWER LIMITED FIRE ALARM CIRCUITS.
43.

MAKE FLEXIBLE CONNECTIONS TO MOTORS AND OTHER ROTATING / VIBRATING EQUIPMENT.
44.

BRANCH CIRCUIT AND FEEDER TAPS SHALL BE FULL CIRCUIT SIZE UP TO THEIR OVERCURRENT PROTECTION DEVICE.
45.

CONNECTIONS TO FIXTURE AND MOTOR LEADS #10 AWG AND SMALLER SHALL BE MADE WITH 3M "SCOTCHLOK" PRE-INSULATED SPRING PRESSURE CONNECTORS TYPES Y, R OR G OR APPROVED EQUAL.
46.

STRANDED WIRING CONDUCTORS SHALL BE MADE UP TO SCREW TERMINALS WITH 3M, T&B OR PANDUIT LOCKING FORK CRIMP TERMINALS WITH NYLON INSULATED GRIPS.
47.

UNLESS OTHERWISE INDICATED: ALL CONTROL, INTERLOCK AND TEMPERATURE CONTROL WIRING FOR HVAC EQUIPMENT AND SYSTEMS SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE MECHANICAL OR AUTOMATIC TEMPERATURE CONTROL CONTRACTOR; ALL CONTROL AND INTERLOCK WIRING FOR PLUMBING EQUIPMENT AND SYSTEMS SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR; ALL ELECTRICAL POWER WIRING TO CONTROL PANELS, MOTOR OPERATED DAMPERS, MOTOR STARTERS, MOTORS AND ALL MECHANICAL DEVICES THAT REQUIRE LINE VOLTAGE POWER SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR; ALL CONTROL AND INTERLOCK WIRING FROM AUTOMATIC TEMPERATURE CONTROL PANELS TO CONTROLLED OR INTERLOCKED DEVICES SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE MECHANICAL OR AUTOMATIC TEMPERATURE CONTROL CONTRACTOR; REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR REQUIREMENTS.
48.

ALL CONTROL, INTERLOCK AND TEMPERATURE CONTROL WIRING INCLUDING CONNECTION TO THE BUILDING AUTOMATION SYSTEM SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS AND SPECIFICATIONS FOR REQUIREMENTS.
49.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL 120V CONTROL POWER WIRING FEEDERS AND CIRCUIT BREAKERS REQUIRED FOR THE INSTALLATION OF MECHANICAL EQUIPMENT. STARTERS AND POWER DISCONNECT SWITCHES SHALL BE BY THE MECHANICAL CONTRACTOR. REFER TO SPECIFICATION SECTIONS AND COORDINATE WITH THE MECHANICAL CONTRACTOR FOR EXTENT OF WORK REQUIRED.
50.

WIRE EMERGENCY LIGHTING FIXTURES (UNIT EQUIPMENT) TO LOCAL AREA LIGHTING CIRCUIT SERVING THE RESPECTIVE AREA AHEAD OF SWITCH / DIMMER CONTROL.
51.

WIRE EXIT LIGHTS TO THE CIRCUITS INDICATED.
52.

CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION AND INSTALLATION DETAILS AND VERIFY ALL MANUFACTURER'S REQUESTS PRIOR TO ANY SUBMISSION FOR CONSIDERATION BY THE ARCHITECT, ENGINEER OR OWNER.
53.

WIRING RUNS INDICATED ON THE DRAWINGS EXPRESS THE INTENT OF CIRCUIT ASSIGNMENT AND SWITCH CONTROL. ACTUAL

WIRING METHODS USED SHALL BE SUITED FOR THE CONSTRUCTION OF THE BUILDING. REFER TO DRAWINGS OF OTHER TRADES AND EXISTING CONDITIONS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS. NUMBER OF CONDUCTORS IS NOT ALWAYS INDICATED

54.

PROVIDE DISCONNECTS FOR ALL APPLIANCES, EQUIPMENT, MOTORS AND CONTROLLERS.
55.

PROVIDE UN-SWITCHED 125 VOLT 20 AMP RECEPTACLE OUTLETS LOCATED ON THE SAME LEVEL AND WITHIN 25 FEET OF ALL HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT UNLESS OTHERWISE NOTED.
56.

ALL 125 VOLT, SINGLE PHASE, 15- AND 20-AMPERE SINGLE AND DUPLEX RECEPTACLES WHICH DO NOT SERVE A DEDICATED APPLIANCE AND ARE WITHIN A 6 FOOT RADIUS OF A SINK, ARE INSTALLED IN WET LOCATIONS, ARE INSTALLED IN BATHROOMS, ON ROOFS, OR OUTDOORS WITH DIRECT GRADE ACCESS, SHALL BE GROUND FAULT CIRCUIT INTERRUPTING TYPE WHERE AVAILABLE OR SHALL BE PROTECTED BY GROUND FAULT CIRCUIT INTERRUPTING CIRCUIT BREAKERS.
57.

DO NOT INSTALL EXPOSED WIRING, OR CABLE NOT UL LISTED FOR THE PURPOSE, WOOD SUPPORTS OR ANCHORAGES, NONMETALLIC CONDUIT, BOXES OR FITTINGS, OR VINYL, PLASTIC, NYLON, OR OTHER COMBUSTIBLE OR SMOKE PRODUCING IDENTIFICATION OR CONSTRUCTION MATERIALS IN THE SPACE ABOVE HUNG CEILINGS USED AS A PLENUM FOR THE RETURN OF ENVIRONMENTAL AIR.
58.

DEMONSTRATE PRODUCT CAPABILITY AND COMPLIANCE WITH REQUIREMENTS OF ALL ELECTRICAL DEVICES, EQUIPMENT AND SYSTEMS.
59.

PERFORM MANUFACTURER'S RECOMMENDED TESTS AND SUBMIT RESULTS.
60.

VERIFY PROPER ROTATION OF ALL ROTATING ELECTRICAL MACHINERY.
61.

TEST SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, CABLES, BUS DUCTS, SWITCHES, CIRCUIT BREAKERS, GROUNDING SYSTEM, GROUND FAULT PROTECTION SYSTEM, SURGE ARRESTORS AND TVSS DEVICES, GENERATORS, AND TRANSFER SWITCHES IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE CURRENT EDITION OF THE INTERNATIONAL ELECTRICAL TESTING ASSOCIATION ACCEPTANCE TESTING SPECIFICATIONS FOR ELECTRIC POWER DISTRIBUTION EQUIPMENT AND SYSTEMS (NETA ATS), PERFORM EACH VISUAL AND MECHANICAL INSPECTION AND ELECTRICAL TEST LISTED.
62.

PROVIDE TWO SETS OF OPERATION AND MAINTENANCE MANUALS, BOUND AND INDEXED, WITH INSTRUCTIONS FOR ALL ELECTRICAL DEVICES, EQUIPMENT, APPLIANCES AND SYSTEMS.
63.

PROVIDE ONE SET OF REPRODUCIBLE CONTRACT DRAWINGS, OR DIGITAL DATA FILES USING SAME SOFTWARE PROGRAM, VERSION, AND OPERATING SYSTEM AS CONTRACT DOCUMENTS, THAT HAVE BEEN REVISED AND ANNOTATED TO REFLECT THE AS-BUILT CONDITIONS OF THE PROJECT.
64.

DELIVER CERTIFICATES OF ELECTRICAL AND OTHER INSPECTIONS, OR COPIES THEREOF, TO THE OWNER AT THE COMPLETION OF THE PROJECT WITH COPIES TO THE ENGINEER.
65.

GUARANTEE ALL WORK IN WRITING TO THE OWNER AGAINST ANY AND ALL DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE AND PERFORM ALL CORRECTIVE WORK AT NO COST TO THE OWNER.
66.

A CONTRACTOR MAKING A BID FOR WORK ON THIS PROJECT IS MADE AWARE BY THIS NOTE THAT IT IS THE INTENT OF THE OWNER TO HAVE A COMPLETELY INSTALLED JOB. THE CONTRACTOR MAKING A BID FOR THIS WORK WARRANTS THAT HE WILL COMPLETE AND WIRE, PROVIDING ALL NECESSARY ELECTRICAL WORK FOR EQUIPMENT SHOWN AND / OR DETAILED ON ANY PROJECT DRAWINGS OR SPECIFICATIONS AND NOT JUST THOSE COMMONLY REFERRED TO AS A SINGLE TRADE DRAWING UNLESS SPECIFICALLY IDENTIFIED ELSEWHERE AS WORK OF OTHER TRADES. WHERE EQUIPMENT REQUIRING WIRING IS SPECIFIED OR SHOWN ON DRAWINGS OTHER THAN ELECTRICAL DRAWINGS, OR INDICATED, OR IMPLIED, SUCH AS ON SHOP DRAWINGS SUBMITTED LATER, THE CONTRACTOR CAN AND SHALL REQUEST DIRECTION REGARDING CIRCUIT SIZING PROTECTION AND ROUTING WHERE NECESSARY BUT SHALL UNDERSTAND ALL NECESSARY WORK TO COMPLETE THE INSTALLATION SHALL BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER OR PROJECT.
68.

ALL NEW CONSTRUCTION WORK SHOWN ON THE DRAWINGS AND CONTAINED IN THE SPECIFICATIONS (UNLESS OTHERWISE NOTED AS "NOT IN CONTRACT" OR "N.I.C.") IS THE RESPONSIBILITY OF THE SINGLE PRIME GENERAL CONTRACTOR. REFERENCES TO SPECIFIC TRADE SUBCONTRACTORS (PLUMBING, MECHANICAL, ELECTRICAL, ETC.) ARE PROVIDED TO ASSIST THE SINGLE PRIME GENERAL CONTRACTOR IN THE DELINEATION OF SUBCONTRACTOR WORK. THE SINGLE PRIME GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DELINEATION OF ITS SUBCONTRACTORS' WORK AND THEREFORE SHALL NOT RELY ON SPECIFIC TRADE REFERENCES SHOWN ON THE CONTRACT DOCUMENTS.
69.

CONTRACTOR SHALL COORDINATE THE SHORT CIRCUIT RATING WITH THE UTILITY COMPANY. PROVIDE FIELD MARKINGS ON ELECTRICAL SERVICE EQUIPMENT TO INCLUDE THE AVAILABLE SHORT CIRCUIT RATING FROM THE UTILITY PER NEC 110.24.
70.

CONTRACTOR SHALL PROVIDE AND INSTALL A LOCAL LOCKABLE DISCONNECT SWITCH BY EACH PIECE OF MOTORIZED OR PACKAGED EQUIPMENT. DISCONNECT CAPACITY RATINGS SHALL AT LEAST MATCH THAT OF THE UPSTREAM CIRCUIT BREAKER PROTECTING THE EQUIPMENT. INDOOR DISCONNECTS SHALL BE NEMA 1 TYPE AND OUTDOOR DISCONNECTS SHALL BE NEMA 3R TYPE.
71.

CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY OF ANY CONFLICT DISCOVERED BEFORE PERFORMING ANY WORK RELATED TO SUCH CONFLICT.

WIRING DEVICE LEGEND

SYMBOLS	DESCRIPTION
	NEMA 5-20R DUPLEX RECEPTACLE. "X" INDICATES CIRCUIT NUMBER. SYMBOL WITH LINE THRU IT DENOTES MOUNTED ABOVE 18". COORDINATE HEIGHT WITH ARCHITECTURAL DRAWINGS.
	NEMA 5-20R DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER. "X" INDICATES CIRCUIT NUMBER. SYMBOL WITH LINE THRU IT DENOTES MOUNTED ABOVE 18". COORDINATE HEIGHT WITH ARCHITECTURAL DRAWINGS.
	NEMA 5-20R DUPLEX RECEPTACLE WITH GROUND FAULT CURRENT INTERRUPTER. "X" INDICATES CIRCUIT NUMBER. SYMBOL WITH LINE THRU IT DENOTES MOUNTED ABOVE 18". COORDINATE HEIGHT WITH ARCHITECTURAL DRAWINGS.
	TIMECLOCK
	LIGHTING FIXTURE TYPE: SEE LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.

ABBREVIATIONS

A	AMPERE	GND, G	GROUND
AFF	ABOVE FINISHED FLOOR	IC	INTER interrupting CAPACITY
AFG	ABOVE FINISHED GRADE	IG	ISOLATED GROUND
C	CONDUIT(S)	IL	INTERLOCKED
CB	CIRCUIT BREAKER	MC	MECHANICAL CONTRACTOR
CH	COUNTER HEIGHT	MOD	MOTOR OPERATED DAMPER
CO	CONDUIT ONLY	NIC	NOT IN CONTRACT
CT	CURRENT TRANSFORMER	NL	NIGHT LIGHT
CU	COPPER	NTS	NOT TO SCALE
EC	ELECTRICAL CONTRACTOR	RGS	RIGID GALVANIZED STEEL
EG	EQUIPMENT GROUND	SPD	SURGE PROTECTIVE DEVICE
EM	EMERGENCY	TVSS	TRANSIENT VOLTAGE
EMT	ELECTRICAL METALLIC TUBING	T/C	SURGE SUPPRESSOR
ETR	EXISTING TO REMAIN	UCON	TIME CLOCK
EW	ELECTRIC WATER COOLER	V	UNLESS OTHERWISE NOTED
FA	FIRE ALARM	WP	VOLTS
FBO	FURNISHED BY OTHERS		WALL MOUNTED
GFI	GROUND FAULT INTERRUPTER		WEATHERPROOF

SYMBOL LIST NOTES

1. SYMBOLS ARE INDICATED FOR GENERAL REFERENCE ONLY. THE PRESENCE OF A SYMBOL DOES NOT INDICATE ITS USE ON THIS PROJECT. REFER TO PLAN DRAWINGS FOR SPECIFIC SYMBOLS USED.
2. ALL WIRING DEVICES SHALL BE LABELED WITH PANEL AND CIRCUIT NUMBER ON DEVICE PLATES. LABELS SHALL BE CLEAR SELF-ADHESIVE WITH BLACK LETTERING UNLESS OTHERWISE INDICATED OR DIRECTED.

APPLICABLE CODES:

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST CODES AND SUBCODES AS ADOPTED BY THE STATE OF NEW JERSEY:

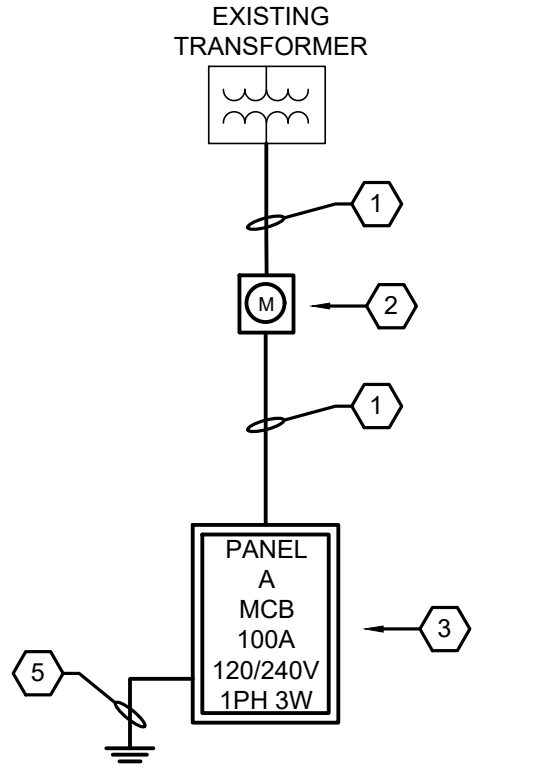
- NEW JERSEY UNIFORM CONSTRUCTION CODE (NJUCC)
- REHABILITATION SUBCODE 5:23-6
- 2020 NATIONAL ELECTRICAL CODE
- 2019 ENERGY CODE - ASHRAE STANDARD 90.1
- REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION.

MOUNTING HEIGHTS

HEIGHT	DESCRIPTION
10'-0"	EMERGENCY BATTERY UNITS (OR 1'-0" BELOW CEILING)
6'-6"	TOP OF ELECTRICAL PANEL BOARDS (LIGHTING OR POWER)
6'-0"	TOP OF HIGHEST ELECTRICAL DISCONNECT SWITCH OR STARTER
1'-6"	BOTTOM OF RECEPTACLES, TELEPHONE/TELEDATA OUTLETS, TELEVISION JACKS, ETC.
0'-0"	FINISHED FLOOR ELEVATION.

POWER DEVICE LEGEND

SYMBOLS	DESCRIPTION
	SURFACE MOUNTED PANELBOARD, POWER AND LIGHTING
	JUNCTION BOX - WALL MOUNTED
	DISCONNECT SWITCH. "X" INDICATES SWITCH SIZE, "Y" INDICATES NUMBER OF POLES, "Z" INDICATES FUSE SIZE (NF = NON-FUSED).
	MOTOR RATED DISCONNECT SWITCH. UNLESS OTHERWISE NOTED, DISCONNECT SWITCH IS 20A/1P HEAVY DUTY RATED.



PARTIAL ONE LINE DIAGRAM

NOT TO SCALE

ONE LINE DIAGRAM KEY NOTES

- PROVIDE 3#3 & 1#8EG IN 1-1/2" C
- PROVIDE NEW SELF CONTAINED METER PAN. COORDINATE EXACT REQUIREMENTS WITH UTILITY COMPANY.
- PROVIDE PANELBOARD 'A'. COORDINATE FINAL MOUNTING LOCATION AND HEIGHT IN FIELD.
- PROVIDE SERVICE FROM EXISTING UTILITY TRANSFORMER. REFER TO SITE PLANS FOR MORE INFORMATION.
- SIZE PER NEC. REFER TO TYPICAL GROUNDING AND BONDING DETAIL FOR MORE INFORMATION.

ONE-LINE DIAGRAM DEVICE LEGEND

SYMBOLS	DESCRIPTION
	ELECTRICAL PANELBOARD
	SELF CONTAINED METER
	UTILITY TRANSFORMER

1. PATCHING AND CUTTING
 - A. PERFORM ALL CUTTING, FITTING AND PATCHING WORK THAT MAY BE REQUIRED BY ITS WORK AND AS SHOWN OR REASONABLY IMPLIED BY THE DRAWINGS AND NOTES.
 - B. PERFORM WORK IN ADVANCE OF THE WORK OF OTHERS WHENEVER POSSIBLE IN ORDER TO MINIMIZE CUTTING AND PATCHING.
 - C. ALL DAMAGED AREAS AND EXISTING AREAS EFFECTED BY DEMOLITION OR NEW CONSTRUCTION WORK SHOWN ON DRAWINGS SHALL BE PATCHED AS REQUIRED TO MATCH IMMEDIATE EXISTING ADJACENT AREAS IN MATERIAL, FIRE RATING, FINISH COLOR, UNLESS OTHERWISE NOTED.
 - D. THE ELECTRICAL CONTRACTOR IS TO REPLACE THE INTEGRITY OF RATED PARTITIONS, COLUMNS AND BEAM FIREPROOFING EFFECTED BY ITS WORK. REPLACEMENT TO COMPLY WITH LOCAL CODES.
 - E. PROVIDE SUPPORTS TO ASSURE STRUCTURAL INTEGRITY OF SURROUNDINGS, DEVICES AND METHODS TO PROTECT OTHER PORTIONS OF PROJECT FROM DAMAGE.
 - F. EXECUTE WORK BY METHODS TO AVOID DAMAGE TO OTHER WORK, AND WHICH WILL PROVIDE SUPERIOR SURFACES TO RECEIVE PATCHING AND FINISHING.

A. FURNISH AND INSTALL ALL ELECTRICAL WORK AS SHOWN ON THE DRAWINGS AND THESE SPECIFICATIONS HEREIN. WORK INCLUDES THE FOLLOWING UNDERSTANDINGS:

a. CONTRACT DRAWINGS ARE DIAGRAMMATIC AND INTENDED TO OUTLINE BASIC ENGINEERING AND SYSTEMS DESIGN. THEREFORE DO NOT SHOW MINOR DETAILS AND ACCESSORIES. BECAUSE A MINOR COMPONENT IS NOT SHOWN, SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR FURNISHING AND INSTALLING ALL SUCH ITEMS NECESSARY TO PROVIDE COMPLETE, OPERATIONAL AND PROPERLY INSTALLED SYSTEMS TO THE OWNER UNDER THE BASIC CONTRACT. IF THERE ARE ANY DOUBTS AS TO WORK REQUIRED, THE CONTRACTOR SHALL OBTAIN A CLARIFICATION FROM THE ENGINEER IN THE BID STAGE.

- b. THE CONTRACT DRAWINGS SHOW THE INTENDED LOCATION OF THE EQUIPMENT, HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MINOR ADJUSTMENTS OR RELOCATIONS NECESSARY DUE TO CHOICE OF EQUIPMENT AND COORDINATION CONFLICTS. ALL EQUIPMENT RELOCATIONS MUST BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL.
- c. THE PROJECT DRAWINGS, THIS SPECIFICATION, AND OTHER RELATED DOCUMENTS ARE COMPLEMENTARY. ITEMS REQUIRED BY ONE SHALL DENY THE REQUIREMENT BY THE OTHER. WHETHER EXPLICITLY STATED OR NOT, WHERE DOCUMENTS CONFLICT, THE WORK OF THE MORE STRONGER NATURE SHALL BE REQUIRED.
- d. COOPERATION AND COORDINATION WITH UTILITIES, OWNER, AND OTHER SUBCONTRACTORS IS MANDATORY.
- e. EXISTING WORK AND UTILITIES WHICH ARE DAMAGED OR DISTURBED DUE TO ANY PHASE OF OPERATIONS, SHALL BE RESTORED TO THE SATISFACTION OF FPA, THE OWNER, AND THE GOVERNING AUTHORITIES.
- f. PROCUREMENT AND INSTALLATION OF MATERIALS, PRODUCTS AND EQUIPMENT SHALL BE COORDINATED WITH THE WORK OF THE OTHER TRADES, BY GOING ALL WORK SHOWN ON THE PLUMBING, MECHANICAL, ELECTRICAL, FIRE PROTECTION, AND ARCHITECTURAL DRAWINGS.
- B. CLEARANCES FOR WORKING SPACE AND MAINTENANCE SHALL BE MAINTAINED AS REQUIRED BY GOING ALL MANUFACTURER'S REQUIREMENT, WHICHEVER IS MORE STRINGENT.
- C. "PROVIDE" AND/OR "FURNISH AND INSTALL" MEANS PURCHASE, ARRANGE DELIVERY, UNLOAD, INSTALL, CONNECT, TEST, AND LEAVE READY FOR OPERATION.
- D. THE WORK CALLED FOR ON THE DRAWINGS AND SPECIFICATIONS HEREIN SHALL BE COORDINATED WITH THE STRUCTURE AND WORK OF ALL OTHER TRADES AND SHALL BE SO ARRANGED THAT THERE WILL BE NO DELAY IN THE PROPER INSTALLATION AND COMPLETION OF ANY PART OR PARTS OF EACH PERSPECTIVE WORK WHEREIN IT MAY BE INTERRELATED WITH THAT OF THIS CONTRACT SO THAT GENERALLY ALL WORK CAN PROCEED IN ITS NATURAL SEQUENCE WITHOUT UNNECESSARY DELAY.
- E. REFER TO OTHER ENGINEERING DRAWINGS FOR ALL NECESSARY FIRE DAMPERS, ALARMS, SMOKE DETECTORS, AND FIRE COMMUNICATIONS EQUIPMENT AND INSTALL PER ALL APPLICABLE CODES, AGENCIES, AND LOCAL LAWS.
- F. WHERE EXISTING POWER CIRCUITS HAVE BEEN DISTURBED, ALL COSTS FOR RECURRING OF SAME IS TO BE INCLUDED.

- G. SHOP DRAWINGS AND DATA SHEETS ARE REQUIRED FOR ASSEMBLIES AND EQUIPMENT. THEY SHALL PROVIDE ALL PERTINENT DATA AND INFORMATION NECESSARY TO EVALUATE EACH ITEM. IRRELEVANT INFORMATION ON DRAWINGS AND DATA SHEETS SHALL BE COMPLETELY MARKED OUT LEAVING ONLY DATA THAT PERTAINS TO THE ITEMS SUBMITTED FOR APPROVAL. DRAWINGS AND DATA SHEETS SHALL SHOW:
- a. PRINCIPAL DIMENSIONS AND DETAILS OF CONSTRUCTION.
 - b. WEIGHTS OF PRINCIPAL PARTS AND TOTAL WEIGHTS WITH INFORMATION REQUIRED FOR THE DESIGN OF SUPPORTS AND FOUNDATIONS.
 - c. PERFORMANCE DATA AND ALL REQUIRED CALCULATIONS.
 - d. UNDERWRITERS LABEL AND OTHER AUTHORITIES HAVING JURISDICTION OF EQUIPMENT REQUIRING LABELS.
 - e. ALL MANUFACTURER'S TEST REPORTS THAT MAY HAVE BEEN CONDUCTED AT THE FACTORY ON TRANSFORMERS, AND INSULATION TESTS ON MEDIUM VOLTAGE CABLE INCLUDING HIGH POTENTIAL POWER AND POWER FACTOR TEST RESULTS.
 - f. CERTIFIED PERFORMANCE GUARANTEES.

- I. FURNISH TEMPORARY CONNECTIONS TO SERVICES AND THE INSTRUMENTS FOR TESTING.
- J. OVERLOAD DEVICES SHALL BE ADJUSTED AND SET TO SUIT THE LOADS WHICH THEY CONTROL.
- K. ALL CHANGES SHALL BE MADE THAT ARE NECESSARY FOR ADJUSTING, SETTING, AND BALANCING.
- L. PHASE ROTATION AT ALL BUSES, PANELS, SWITCHGEAR ETC. SHALL BE CHECKED TO SEE THAT IT CONFORMS WITH RECOGNIZED STANDARDS.
- M. BEFORE ENERGIZING ANY FACTORY FABRICATED EQUIPMENT, INSPECT EACH UNIT IN DETAIL. BOLTS AND CONNECTIONS SHALL BE TIGHT (TORQUE TIGHT WHERE REQUIRED) PER MANUFACTURERS SPECIFICATIONS. COMPONENTS SHALL BE ALIGNED AND THE EQUIPMENT SHALL BE PLACED IN A SAFE OPERATIONAL CONDITION.
- N. THE COMPLETE ELECTRICAL SYSTEM SHALL BE FREE OF GROUNDS AND SHORT CIRCUITS. IT SHALL OPERATE PROPERLY UNDER FULL LOAD CONDITIONS WITHOUT EXCESSIVE HEATING AT ANY POINT IN THE SYSTEM.

- O. FURNISH AND INSTALL 120VAC CONTROL WIRING FOR THE MECHANICAL EQUIPMENT. WIRING DIAGRAMS TO BE OBTAINED FROM THE MECHANICAL CONTRACTOR AND CONTROL SHOP DRAWINGS.
- P. OBTAIN ALL NECESSARY CONTROL WIRING DIAGRAMS FROM THE EQUIPMENT MANUFACTURER.
- Q. PROVIDE ALL NECESSARY CONTROL CIRCUITS AND INTERLOCK WIRING BETWEEN UNITS.
- R. INSTALL AND WIRE ALL CONTROL DEVICES AS INDICATED ON THE DRAWING. THE MECHANICAL CONTRACTOR WILL FURNISH ALL CONTROL DEVICES. THE ELECTRICAL CONTRACTOR AND WILL ASSIST IN THE INSTALLATION OF SAME, UNLESS OTHERWISE NOTED.

A. ALL CONDUIT SHALL BE CONCEALED IN CONCRETE SLAB, IN WALLS, OR ABOVE FINISHED CEILINGS, UNLESS OTHERWISE NOTED.

B. WHERE INDICATED, IN SERVICE AREAS, EXPOSED CONDUIT SHALL BE INSTALLED TO PROVIDE THE MAXIMUM HEADROOM BUT IN NO CASE SHALL CONDUIT BE INSTALLED LESS THAN SEVEN (7) FEET ABOVE THE FINISHED FLOOR. CONDUIT INSTALLED IN AREAS WHERE HUNG CEILINGS OR OTHER FURRED SPACES ARE INDICATED SHALL BE INSTALLED CONCEALED.

- C. WHERE WORK IS TO BE CONCEALED, CARE SHALL BE TAKEN TO INSURE THAT IT DOES NOT PROJECT BEYOND THE FINISHED LINES OF FLOORS, CEILINGS, OR WALLS.
- D. EXPOSED CONDUIT AND CONDUIT ABOVE CEILINGS SHALL BE RUN PARALLEL & PERPENDICULAR TO LINES OF THE BUILDING. BENDS SHALL BE FREE FROM DENTS OR FLATTENING. CONDUIT SHALL BE SUPPORTED AND SECURELY FASTENED.
- E. CONDUIT SHALL BE INSTALLED TO MAINTAIN CLEARANCE FROM OTHER PIPING, VALVES, OR OTHER MECHANICAL EQUIPMENT, AND SHALL NOT BE INSTALLED WITHIN 6" OF HOT WATER, STEAM PIPING, HEATING FLUES, OR SIMILAR HOT SURFACES.
- F. POCKETS OR TRAPS IN ALL CONDUIT RUNS WHERE MOISTURE MAY COLLECT SHALL BE AVOIDED. WHERE DIPS ARE UNAVOIDABLE, AN APPROVED DRAIN FITTING SHALL BE LOCATED AT EACH LOW POINT IN ORDER TO PROVIDE A MEANS FOR DRAINAGE.
- G. CONDUIT SIZES SHALL BE IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF THE NEC, EXCEPT NO 1/2" CONDUIT WILL BE PERMITTED (ALL CONDUIT IN WALLS, FLOORS, ABOVE CEILINGS, EXPOSED, OR UNDERGROUND SHALL BE A MINIMUM OF 3/4").
- H. SLEEVES PASSING THROUGH FIRE RATED WALL CONSTRUCTION AND ALL SLEEVES PASSING THROUGH FLOORS SHALL BE SIZED TO ALLOW SUFFICIENT SPACE BETWEEN SLEEVE AND CONDUIT FOR FIREPROOFING WITH 3M FIRE BARRIER CAULKING MATERIAL CP25WB+; ALL SPARE SLEEVES PASSING THROUGH FIRE RATED WALL CONSTRUCTION OR FLOORS SHALL BE THOROUGHLY PACKED WITH 3M FIRE BARRIER PUTTY 303 AND CAPPED.
- I. FLEXIBLE (LIQUID TIGHT) CONDUIT SHALL BE PROVIDED TO CONNECT TO ALL MOTORS, DELICATE INSTRUMENTS AND CONTROLS, AND TO VIBRATING EQUIPMENT.
- J. INSTALLATION SHALL BE SUCH SO AS TO SUPPORT CONDUIT WITHOUT SAGGING AND SHALL BE CLEAR OF THE WORK OF OTHER TRADES. PROVISIONS FOR EXPANSION AND CONTRACTION SHALL BE MADE.
- K. CONDUITS SHALL BE FREE OF MOISTURE AND MANHOLES SHALL BE DRY.
- L. CONDUIT WORK, IN AREAS WHERE NO HUNG CEILINGS ARE PROVIDED SHALL BE RUN EXPOSED UNLESS SPECIFICALLY NOTED OTHERWISE. IN EXPOSED AND HUNG CEILINGS ALL LIGHTING, RECEPTACLE, AND SWITCH BRANCH CIRCUITS SHALL BE RUN IN EMT. A SIX FOOT WHIP OF MC FLEXIBLE CONDUIT SHALL BE CONNECTED TO LIGHTING FIXTURES. IN STUD WALLS VERTICAL DROPS SHALL BE MC FLEXIBLE CONDUIT. IN FINISHED OR UNFINISHED BLOCK WALLS VERTICAL DROPS SHALL BE EMT CONDUIT RUN IN THE WALL.

- A. PULL BOXES SHALL BE OF AMPLE SIZE FOR THE APPLICATION, AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NEC REQUIREMENTS.
- B. PULL BOXES SHALL BE INSTALLED BETWEEN A MAXIMUM OF EVERY 3 RIGHT ANGLE BENDS OR THE EQUIVALENT. LONG CONDUTS RUNS SHALL HAVE A PULL BOX AT LEAST EVERY 100'-0".
- C. ALL PULL BOXES SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS.
- D. ALL OUTLET BOXES FOR INTERIOR USE SHALL BE GALVANIZED STAMPED STEEL 4" SQUARE FURNISHED WITH KNOCKOUTS.

- A. USE ONLY APPROVED TYPE LUBRICANT TO FACILITATE THE PULLING OF WIRE AND CABLE.
- B. CONDUCTORS SHALL RUN CONTINUOUS FROM OUTLET TO OUTLET. SPLICES AND TAPS WILL NOT BE ALLOWED ALONG THE CONDUCTOR. CONDUCTORS SHALL TERMINATE IN TERMINAL LUGS OR CONNECTORS MADE UP OF INSULATED TERMINAL POSTS, APPROVED AND LISTED FOR THE PURPOSE.
- C. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER 75°C TYPE THWN AND THHN. ALL SIZES SHOWN ON THE DRAWINGS ARE BASED ON THHN COPPER.
- D. WHENEVER MULTIPLE SETS OF FEEDERS ARE RUN TO A DEVICE OR RIG OF EQUIPMENT, EACH SET SHALL RUN IN ITS OWN CONDUIT. MULTIPLE SETS OF FEEDERS ARE NOT PERMITTED IN A COMMON CONDUIT. NO EXCEPTIONS.

- E. ALL CONDUCTORS SHALL BE COPPER. ALUMINUM CONDUCTORS SHALL NOT BE USED.
- F. ALL PHASE LEG, NEUTRAL AND GROUND CONDUCTORS SHALL BE PROPERLY COLOR CODED IN ALL PANELS, TROUGHS, CABINETS, AND BOXES IN ACCORDANCE WITH THE NEC.
- G. UNLESS OTHERWISE SPECIFIED, FURNISH ALL LABOR AND MATERIALS NECESSARY FOR THE COMPLETE INSTALLATION AND PROPER OPERATION OF ALL ELECTRICAL WORK AND EQUIPMENT ASSOCIATED WITH THE PLUMBING, FIRE PROTECTION, HEATING, VENTILATING, AND AIR CONDITIONING EQUIPMENT, AND PROCESS EQUIPMENT.
- H. CONDUCTORS UP TO AND INCLUDING SIZE #6 AWG. SHALL BE TYPE THWN-THHN. CONDUCTORS LARGER THAN SIZE #6 AWG. SHALL BE TYPE THWN, ALL RATED 600 VOLTS, COPPER CONDUCTORS.
- I. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG FOR POWER AND #14 AWG. FOR CONTROL UNLESS OTHERWISE NOTED.
- J. MAKE DIRECT CONNECTIONS AS REQUIRED TO ALL EQUIPMENT NOT FURNISHED WITH CORD AND PLUG.
- K. ALL FEEDER WIRING RUN WITHIN THE BUILDING SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING (EMT) ALL WIRES SHALL BE RUN IN EMT TO FIRST DEVICE. MC CABLE MAY BE USED AFTER FIRST DEVICE AND ONLY IN STUDDED WALLS AND ABOVE ACUSTICAL CEILING.

A. GROUNDING OF THE NON-CURRENT CARRYING METALLIC PARTS OF

ALL ELECTRICAL EQUIPMENT AND ENCLOSURES INCLUDING CONDUITS, SUPPORTS, CABINETS, TRANSFORMERS, MOTOR FRAMES, SWITCHGEAR ENCLOSURES, CONTROL PANELS, ETC., WHICH ARE INSTALLED OR CONNECTED UNDER THIS CONTRACT, SHALL BE PROPERLY CONNECTED TO THE GROUNDING SYSTEM, REGARDLESS OF WHETHER OR NOT THESE CONNECTIONS ARE SHOWN ON THE DRAWINGS.

- B. THE GROUNDING INSTALLATION SHALL HAVE PROVISIONS FOR BOTH SYSTEM AND EQUIPMENT GROUNDS AS DEFINED BY THE NEC. THESE GROUNDING SYSTEMS ARE TO BE EFFECTIVELY INSULATED FROM EACH OTHER EXCEPT AT THE SERVICE CONNECTION.
- C. GROUNDING SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF NEC AND THE NESC. LOCAL REQUIREMENTS OF THE INSPECTION AUTHORITY HAVING JURISDICTION SHALL GOVERN IN ALL MATTERS OF INTERPRETATION.
- D. WHEN WATER SERVICE IS USED FOR GROUNDING POINT, IT SHALL BE ASCERTAINED THAT THE WATER PIPING IS ELECTRICALLY CONTINUOUS AT JOINTS AND IS OF CONDUCTING MATERIAL. WATER SERVICE WITH SWELL JOINTS IN ELECTRICAL PATH SHALL HAVE SUCH JOINTS BONDED.

A. FURNISH AND INSTALL ALL LIGHTING FIXTURES AS SHOWN AND SPECIFIED ON ELECTRICAL DRAWINGS AND SCHEDULES.

- B. SCOPE SHALL BE BASED UPON FURNISHING AND INSTALLING NEW LIGHTING FIXTURES AS INDICATED ON FPA DRAWINGS.
- C. FIXTURES SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED. ALL LAMP TYPES SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
- D. WHERE BEAMS, PIPES AND/OR DUCTS OR OTHER CONSTRUCTION DETAILS PREVENT THE USE OF STANDARD RECESSED FIXTURES, MATCHING SHALLOW RECESSED FLUORESCENT FIXTURES SHALL BE USED.
- E. AFTER TESTS HAVE BEEN COMPLETED, CLEAN ALL LIGHTING FIXTURES AND EQUIPMENT LEAVING EVERYTHING IN WORKING ORDER AT THE COMPLETION OF THE ELECTRICAL WORK.
- F. ALL RECESSED FIXTURES SHALL BE SET FLUSH INTO CEILINGS.
- G. SUBMIT CATALOG CUTS OF ALL FIXTURES.

- H. COORDINATE ALL ELECTRICAL LIGHTING INSTALLATION WITH OTHER TRADES AS REQUIRED.
- I. ACCESSIBILITY OF SWITCHES, CONTROLS, ACCESS DOORS ON ELECTRICAL EQUIPMENT, ETC. SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING. THOSE WHICH ARE INSTALLED IN UNSUITABLE LOCATIONS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY FPA OR OWNER AT THE ELECTRICAL CONTRACTOR'S EXPENSE.
- J. ALL LIGHTING FIXTURES AND LENSES SHALL BE CLEANED UPON COMPLETION OF INSTALLATION.
- K. ALL LIGHTING FIXTURES SHALL BE UL LISTED AND SHALL HAVE MANUFACTURER'S NAME ON EACH FIXTURE.
- L. SWITCHES SHALL BE SPECIFICATION GRADE, AC RATED, 20 AMP, 120/277 VOLT, QUIET TYPE, EQUAL TO HUBBELL-1221.
- M. LIGHTING SWITCHES SHALL BE LOCATED ON THE "STRIKE" SIDE OF SINGLE DOORS, AND ON THE ADJACENT WALL OF THE ACTIVE DOOR AND DOUBLE DOORS. ALL LESS SPECIFICALLY DIRECTED OTHERWISE, ALL SWITCHES SHALL BE ACCESSIBLE WITH ACTIVE DOOR IN FULLY OPEN POSITION.
- N. CONTROL AND LIGHTING CIRCUITS SHALL BE CHECKED FOR PROPER FUNCTION AND FAI-SAFE OPERATION.

- A. DUPLEX CONVENIENCE RECEPTACLES SHALL BE SPECIFICATION GRADE, 20 AMPERE, 125 VOLT PARALLEL SLOT, GROUNDING TYPE, EQUAL TO HUBBELL-5362.
- B. PROVIDE MATCHING RECEPTACLES FOR ALL EQUIPMENT FURNISHED WITH CORD AND PLUG.
- C. OUTLETS FOR SWITCHES AND RECEPTACLES IN FINISHED SPACES SHALL BE RECESSED.
- D. PROVIDE MATCHING RECEPTACLES FOR ALL EQUIPMENT FURNISHED WITH CORD AND PLUG.
- E. COLOR OF DEVICES AND FINISH PLATES SHALL BE COORDINATED WITH ARCHITECT PRIOR TO PURCHASE AND INSTALLATION. GENERALLY, IVORY DEVICES WITH STAINLESS STEEL PLATES, UNLESS OTHERWISE NOTED

- A. FURNISH AND INSTALL ALL DISCONNECT SWITCHES AND MOTOR STARTERS INDICATED ON THE DRAWINGS, UNLESS OTHERWISE NOTED
- B. ALL SAFETY SWITCHES SHALL BE QUICK MAKE, QUICK BREAK TYPE.
- C. ALL SAFETY SWITCHES, STARTERS, PUSH BUTTONS, AND ENCLOSURES SHALL BE UL LISTED AND SHALL BE NEMA 1 FOR INDOOR AND NEMA 3R FOR OUTDOOR, UNLESS OTHERWISE NOTED.
- D. ALL SAFETY SWITCHES SHALL BE HORSEPOWER RATED AND HAVE PROVISIONS FOR LOCKOUT.
- E. ALL SAFETY SWITCHES SHALL BE AS MANUFACTURED BY SQUARE 'D', CUTLER-HAMMER OR APPROVED EQUAL. CONTRACTOR SHALL COORDINATE SHORT CIRCUIT RATINGS OF ALL SWITCHES WITH THE HARDWARE OR UTILITY COMPANY SHORT CIRCUIT RATING PRIOR TO ORDERING.

- A. FURNISH AND INSTALL CIRCUIT BREAKER TYPE PANEL BOARDS AS INDICATED IN THE PANEL BOARD SCHEDULES WITH BREAKERS OF FRAME AND TRIP RATINGS AS SHOWN ON THE SCHEDULES. WHERE PANEL BOARDS ARE SURFACE MOUNTED, INCLUDE SKIRT AND CAP TO MAKE CONTINUOUS FROM FLOOR TO CEILING.
- B. CIRCUIT BREAKERS SHALL BE QUICK-MAKE, THERMAL-MAGNETIC, TRIP INDICATING, AND HAVE A TRIP UNIT WITH MULTIPLE BREAKERS. TRIP INDICATION SHALL BE CLEARLY SHOWN BY THE BREAKER HANDLE TAKING POSITION BETWEEN "ON" AND "OFF" WHEN THE BREAKER IS TRIPPED AND BY INDICATION. THE INDICATION SHALL CONSIST OF A HIGHLY VISIBLE RED TRIPPED CIRCUIT INDICATOR. CONNECTION TO THE BUS SHALL BE BOLT-ON TYPE.
- C. BUS BAR CONNECTIONS TO THE BRANCH CIRCUIT SHALL BE "PHASE SEPARATE" TYPE. THE CONNECTION SHALL BE SUCH THAT ANY THREE(3) ADJACENT SINGLE POLE BREAKERS ARE INDIVIDUALLY CONNECTED TO EACH OF THE THREE(3) DIFFERENT PHASES IN SUCH A MANNER THAT TWO(2) OR THREE(3) POLE BREAKERS CAN BE INSTALLED AT ANY LOCATION. ALL CURRENT CARRYING PARTS OF THE CONNECTION SHALL BE COPPER. MAINS RATINGS SHALL BE AS SHOWN IN THE PANEL BOARD SCHEDULE OR ON THE PLANS.
- D. ALL ELECTRICAL PANELBOARDS SHALL BE OF THE RECESSED OR SURFACE MOUNTED TYPE, AS PER THE DRAWINGS. IF FLUSH

MOUNTED, IT SHALL BE SET INTO WALL AND ALL CONDUIT OUTLETS, ETC. SHALL BE FINISHED FLUSH INTO WALL. IN GENERAL, ALL EXISTING PIPING, WIRING, ETC. WHICH ARE NOT SCHEDULED FOR REUSE, SHALL BE REMOVED, CAPPED AND FINISHED OFF IN A WORKMANLIKE MANNER TO PROVIDE ACCEPTABLE APPEARANCE. COORDINATE ROUGH-IN WORK WITH OTHER TRADES, IF PANEL BOARD IS RECESSED MOUNTED.

- THE PANELBOARD BUS ASSEMBLY SHALL BE ENCLOSED IN A STEEL CABINET. THE SIZE OF THE WIRING GUTTERS AND GAUGE OF STEEL SHALL BE IN ACCORDANCE WITH NEMA STANDARDS AND UL STANDARD FOR PANEL BOARDS. THE BOX SHALL BE FABRICATED FROM GALVANIZED STEEL OR EQUIVALENT RUST RESISTANT STEEL. FRONTS SHALL INCLUDE DOORS AND HAVE FLUSH, CYLINDER TUMBLER-TYPE LOCKS WITH CATCHES AND SPRING LOADED LATCHES. THE LATCHES SHALL BE OF THE PULL-TO-LOCK TYPE. THE DOORS SHALL NOT PROTRUDE BEYOND THE FRONT OF THE DOOR. FRONT SHALL HAVE ADJUSTABLE INDICATING TRIM CLAMPS WHICH SHALL BE COMPLETELY CONCEALED WHEN THE DOORS ARE CLOSED. DOORS SHALL BE MOUNTED WITH COMPLETELY CONCEALED STEEL HINGES. FRONTS SHALL NOT BE REMOVABLE WITH DOOR IN THE LOCKED POSITION. A CIRCUIT DIRECTORY FRAME AND CARD WITH A CLEAR PLASTIC COVERING SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. THE DIRECTORY CARD SHALL BE TYPE WRITTEN TO IDENTIFY ALL EQUIPMENT INSTALLED IN THE PANEL. THE IDENTIFICATION OF JOB, PANEL DIRECTORIES SHALL INCLUDE MONTH AND YEAR IN LOWER RIGHT CORNER TO INDICATE WHEN MODIFICATIONS WERE MADE. FRONTS SHALL BE OF CODE GAUGE STEEL.

- F. PANEL BOARDS SHALL HAVE A SHORT CIRCUIT CURRENT RATING EQUAL TO OR GREATER THAN THE INTEGRATED EQUIPMENT RATING AND SHALL BE FULLY RATED.

- H. PANEL BOARDS SHALL BE LISTED BY UNDERWRITER'S LABORATORIES AND BEAR THE UL LABEL. PANEL BOARDS SHALL BE SQUARE D BOLT ON TYPE OR APPROVED EQUAL.

1. PANELBOARDS AND METER SOCKET ENCLOSURES THAT ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT SERVICING OR MAINTENANCE WHILE ENERGIZED SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT.

JOB NAME: ESTELL MANOR BATH HOUSE											JOB NO: 3581 027		
RATING: 240/120V, 1 PH, 3W, DELTA, 100A											LOCATION: BATH HOUSE EXTERIOR		
(A)													
(NEW)													
CKT	CIRCUIT	POLE	LOAD KVA	BKR	BRANCH CIRCUIT		BRANCH CIRCUIT		BKR	LOAD KVA	POLE	CIRCUIT DESCRIPTION	CKT NO
					A	B							
3	GF1 RECEPTALS - MENS, JC	1	0.6	20	2W12 & 1W12E IN 3/4"	0.8		2W12 & 1W12E IN 3/4"	20	0.2	1	GF1 RECEPTAL - MENS SINK	2
3	GF1 RECEPTALS - WOMENS	1	0.4	20	2W12 & 1W12E IN 3/4"	0.6		2W12 & 1W12E IN 3/4"	20	0.2	1	GF1 RECEPTAL - WOMENS SINK	4
6	LTG - INTERIOR	1	1.2	20	2W12 & 1W12E IN 3/4"	2.0		2W12 & 1W12E IN 3/4"	20	0.8	1	MENS HAND DRYER	6
6	LTG - EXTERIOR	1	0.1	20	2W12 & 1W12E IN 3/4"			2W12 & 1W12E IN 3/4"	20	0.8	1	WOMENS HAND DRYER	10
9			2.0			4.0				2.0			
11	EUH-1	2	2.0	25	3W12 & 1W10E IN 3/4"		4.0	3W12 & 1W10E IN 3/4"	25	2.0	2	EUH-2	12
13			0.8		3W12 & 1W12E IN 3/4"	1.2		2W12 & 1W12E IN 3/4"	15	0.4	1	EF-1	14
15	EUH-3	2	0.8	20	3W12 & 1W12E IN 3/4"		3.1	3W12 & 1W12E IN 3/4"	25	2.3	2	ELECTRIC WATER HEATER	16
17	MOTORIZED DAMPER	1	0.1	20	2W12 & 1W12E IN 3/4"	2.4		2W12 & 1W12E IN 3/4"	20	0.2	1	FLUSHOMETERS - MENS	20
19	TOUCHLESS FAUCETS	1	0.4	20	2W12 & 1W12E IN 3/4"		0.6	2W12 & 1W12E IN 3/4"	20	0.2	1	FLUSHOMETERS - WOMENS	22
21	RECEPTAL - GAZEBO	1	0.2	20	2W12 & 1W12E IN 3/4"	0.4		2W12 & 1W12E IN 3/4"	20	0.2	1	SPARE	24
23	SPARE	1		20		0.0			20		1	SPARE	26
25	SPARE	1		20		0.0			20		1	SPARE	28
27	SPACE	1		20		0.0			20		1	SPACE	28
29	SPACE	1		20		0.0			20		1	SPACE	30
PANEL TYPE: NEMA 3R					TOTAL (PHASE):		10.6	9.2					
MOUNTING: SURFACE													
MAIN CIRCUIT BREAKER: 100A					TOTAL CONNECTED LOAD:		20.0	KVA					
INTERUPTING RATING: 22KA SYM							83.3		AMPS				
FED FROM: EXISTING UTILITY TRANSFORMER													
NOTES													
1. ALL BUSING TO BE COPPER													
2. BOLT ON BREAKERS ONLY													
3. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE SHORT CIRCUIT RATING PRIOR TO PURCHASING ANY EQUIPMENT.													
4. ALL WIRE SIZES ARE BASED ON 75 DEGREE WIRE													
5. SHORT CIRCUIT RATING: PANEL SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS.													

TYPE	SYMBOL	DESCRIPTION	MANUFACTURER	CATALOG NO.	LAMPS	DRIVER		VOLTS	TOTAL WATTAGE	MOUNTING
						TYPE	QTY			
A		VANDAL RESISTANT LINEAR SURFACE MOUNT	LAMAR	VANL-W48-M-30-COLOR-NLS-R24	INCLUDED	LD	1	UNV	56	SURFACE
C		LINEAR SURFACE MOUNT TO T-GRID	QTL	VERS-05-5W-USA-6.0HE-35 DMP 50D N/A XX XX XX CLS XXLGR CL2P TBL-XX COLOR XX' 0 R24 QZPRO-XXXW	INCLUDED	LD	1	UNV	6/ft	SURFACE
D		VANDAL RESISTANT ROUND DOWNLIGHT	DELTA	5911 1DAT 26C 8035 W DMU 55 R24	INCLUDED	LD	1	UNV	26	RECESSED
SH		EM LIGHT TWO FULLY ADJUSTABLE, SEMI-RECESSED	BEGHELLI	BBX SE HO COLOR AT R24	INCLUDED	LD	1	UNV	10.8	SEMI- RECESSED
SH		REMOTE 2 HEAD ALL CONDITION	BEGHELLI	PR2 WP	INCLUDED	LD	1	UNV	2.34	SEMI- RECESSED
X		EXIT SIGN	BEGHELLI	EVH HT LR MOUNTING AT TP R24	INCLUDED	LD	1	UNV	2	WALL
NOTES:				DRIVER TYPES		EMERGENCY FIXTURES				
1.	VERIFY ALL CEILING TYPES PRIOR TO ORDERING FIXTURES			CW L LD	COLD WEATHER LED DRIVER LED DIMMING DRIVER	 	FIXTURES DESIGNATED WITH A "1/2 SHADE" OR "FULL SHADE" AND ALL EXIT SIGNS SHALL HAVE AN EMERGENCY BATTERY PACK, UNLESS SPECIFICALLY NOTED OTHERWISE. BATTERY SHALL BE SUITABLE TO OPERATE THE ENTIRE LED LIGHTING FIXTURE, OR MINIMUM 1300 LUMENS OF LED FIXTURES FOR MINIMUM 90 MINUTES.			
2.	VERIFY ALL OPERATING VOLTAGES PRIOR TO ORDERING FIXTURES									
3.	COORDINATE THE HEIGHT OF ALL SUSPENDED FIXTURES WITH THE OWNER, ARCHITECT, AND ENGINEER PRIOR TO INSTALLATION									

SENSOR SCHEDULE					
SYMBOL	DESCRIPTION	MANUFACTURER	MODEL NO.	MOUNTING	NOTES
	DIGITAL WALL SWITCH	LUMOS	PSC-DM-WS-100-BLE-WS	WALL	1-BUTTON BLUETOOTH MESH WALL CONTROLLER
	WALL SWITCH OCCUPANCY SENSOR	STEINEL	DT WLS 1	WALL	LINE VOLTAGE, SINGLE RELAY, DUAL TECH
	OCCUPANCY SENSOR	LUMOS	PSC-BL-D-CM-DC-BLE-WS	CEILING	WIRELESS DUAL TECH CEILING MOUNT MOTION SENSOR
	DIGITAL ON/OFF/0-10V DIMMING ROOM CONTROLLER	LUMOS	PSC-WCM-450-BLE-WS	WALL/CEILING	SINGLE CHANNEL AC ROOM CONTROLLER

NOTES:

- REFER TO ELECTRICAL SPECIFICATIONS AND ADDITIONAL REQUIREMENTS WHICH MAY NOT NECESSARILY BE REFLECTED IN CATALOG NUMBER AND/OR DESCRIPTION IN THE SCHEDULE.
- CONTRACTOR SHALL PROVIDE THE APPROPRIATE NUMBER OF ROOM CONTROLLERS FOR THE PROJECT. COORDINATE WITH THE MANUFACTURER FOR THE CORRECT QUANTITY.
- CONTRACTOR SHALL PROVIDE 4"X4" JUNCTION BOX AS REQUIRED.

[illegible]



1. REFER TO SITE/CIVIL PLANS FOR SITE ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES WITH THE SITE/CIVIL PLANS PRIOR TO COMMENCING HIS/HER WORK AND CALL "CALL BEFORE YOU DIG": CALL NEW JERSEY ONE CALL AT 811 OR 800-272-1000.
3. CONTRACTOR SHALL COORDINATE THE ELECTRICAL SERVICE INSTALLATION WITH UTILITY COMPANY.
4. REFER TO DETAILS, PANEL SCHEDULE, AND ONE LINE DIAGRAM FOR ALL CONDUIT AND FEEDER SIZES AND ADDITIONAL INFORMATION.

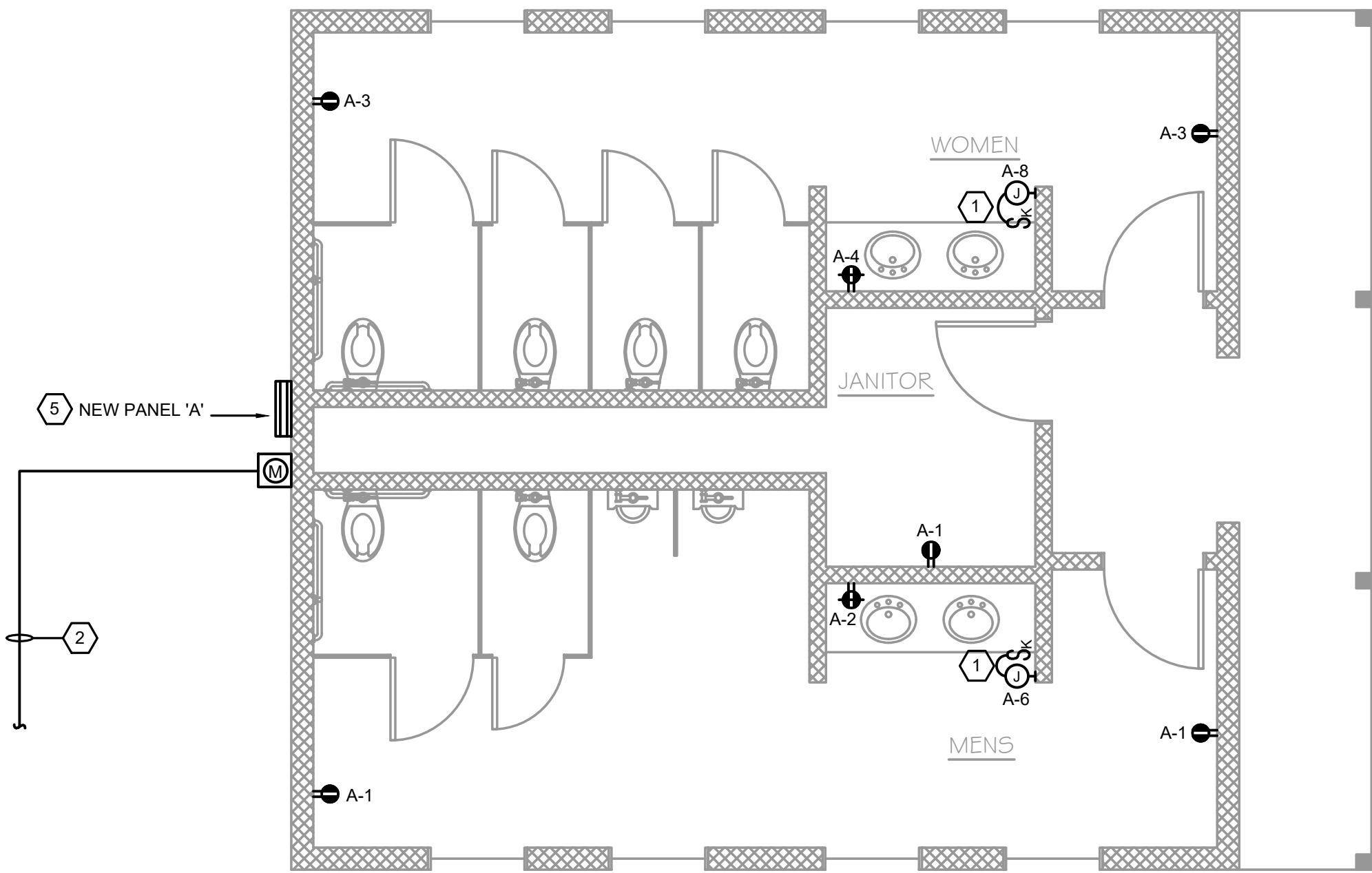
- ① EXISTING UTILITY TRANSFORMER. CONTRACTOR TO PROVIDE (1) NEW 1-1/2" UNDERGROUND PVC CONDUIT FROM EXISTING UTILITY TRANSFORMER TO SELF CONTAINED METER. COORDINATE EXACT REQUIREMENTS WITH UTILITY COMPANY.
- ② PROVIDE NEW SELF CONTAINED UTILITY COMPANY METER PAN ON NEW BATHROOM BUILDING. COORDINATE EXACT REQUIREMENTS WITH UTILITY COMPANY. REFER TO ONE LINE DIAGRAM FOR MORE INFORMATION.
- ③ PROVIDE NEW PANELBOARD 'A' REFER TO ONE LINE DIAGRAM AND PANEL SCHEDULE FOR MORE INFORMATION.
- ④ PROVIDE POWER AND WIRING TO GAZEBO GFCI RECEPTACLE. REFER TO PANEL SCHEDULE FOR WIRING INFORMATION. COORDINATE FINAL GAZEBO RECEPTACLE IN FIELD AND WITH OWNER.

SCALE IN FEET

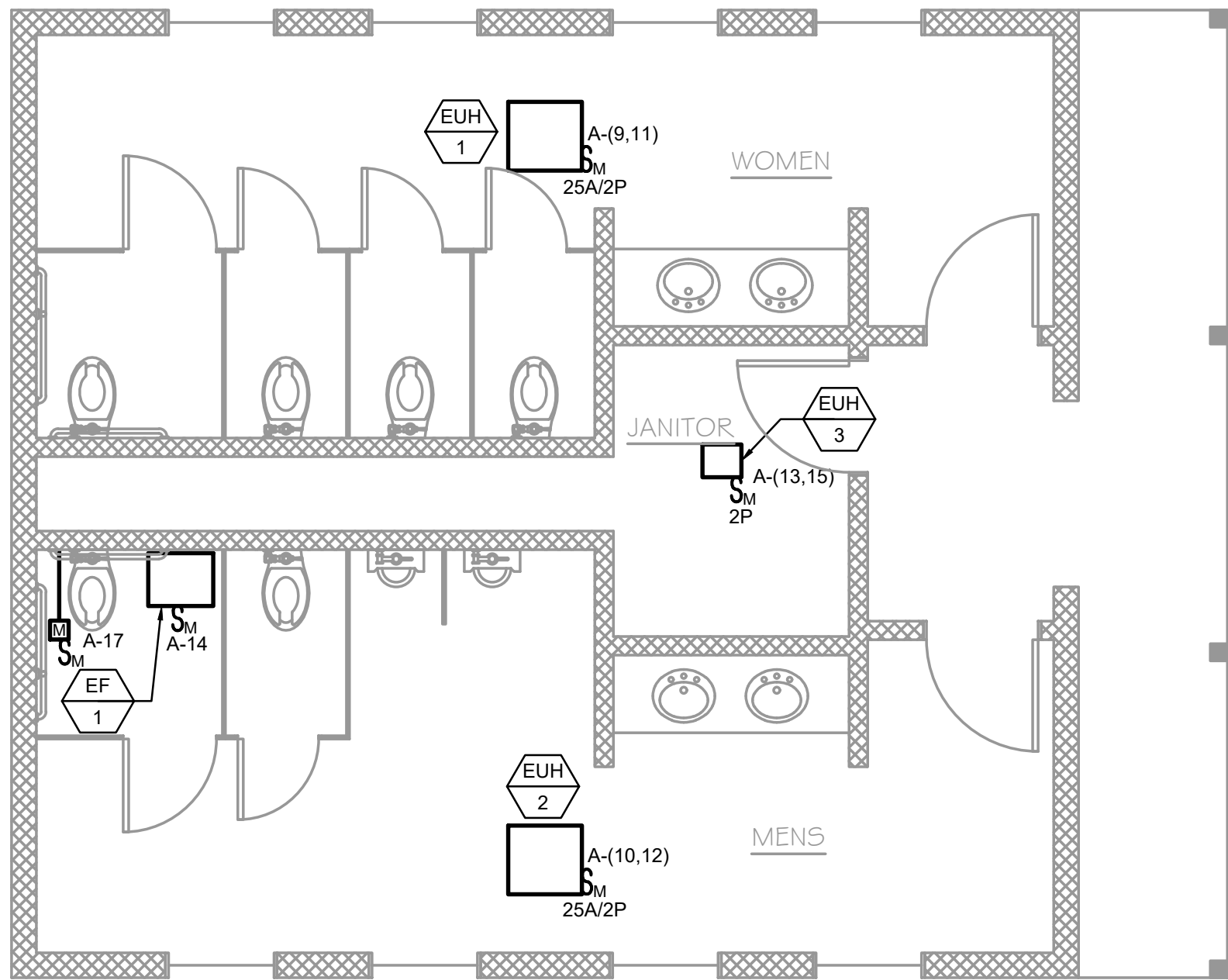


ESTELL MANOR
ATLANTIC COUNTY NEW JERSEY

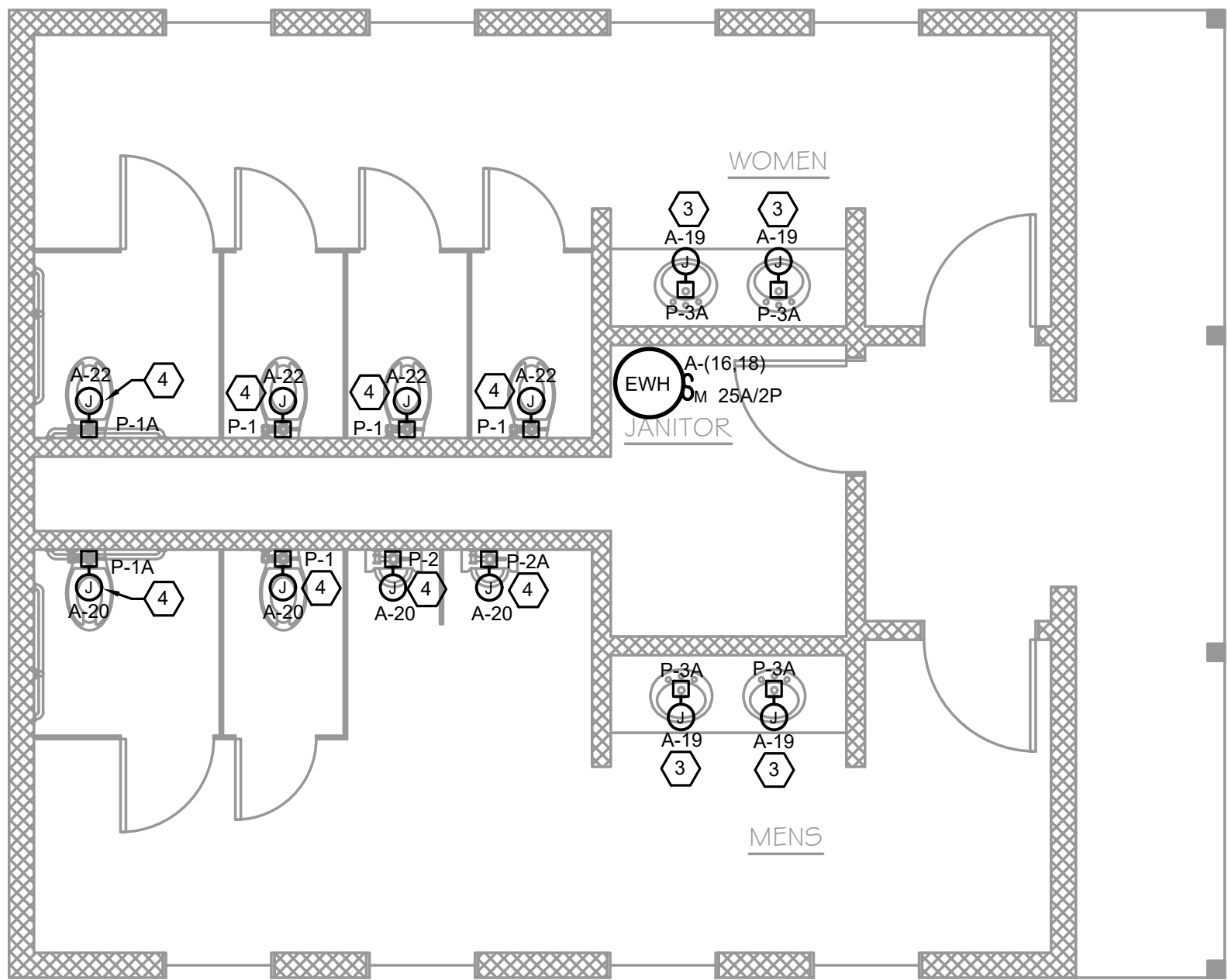
DATE: 09/04/2026	DESIGNED BY: DJ	SCALE: 1/4" = 1'-0"	PROJECT NUMBER: 3581.027
DRAWN BY: DJ	CHECKED BY: DP	FIELD BOOK	SHEET: E1.2



POWER PLAN
SCALE: 1/4" = 1'-0"



MECHANICAL POWER PLAN
SCALE: 1/4" = 1'-0"



PLUMBING POWER PLAN
SCALE: 1/4" = 1'-0"

SHEET NOTES

1. REFER TO SITE/CIVIL PLANS FOR SITE ADDITIONAL INFORMATION.
2. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES WITH THE SITE/CIVIL PLANS PRIOR TO COMMENCING HIS/HER WORK AND CONTACT "CALL BEFORE YOU DIG." CALL NEW JERSEY ONE CALL AT 811 OR 800-272-1000.
3. CONTRACTOR SHALL COORDINATE THE ELECTRICAL SERVICE INSTALLATION WITH UTILITY COMPANY.
4. REFER TO DETAILS, PANEL SCHEDULE, AND ONE LINE DIAGRAM FOR ALL CONDUIT AND FEEDER SIZES AND ADDITIONAL INFORMATION.

KEY NOTES

1. PROVIDE JUNCTION BOX FOR POWER TO HAND DRYER. COORDINATE FINAL HAND DRYER LOCATION AND REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND MANUFACTURER'S RECOMMENDATIONS PRIOR TO ROUGH-IN. REFER TO PANEL SCHEDULES FOR WIRING INFORMATION.
2. PROVIDE NEW ELECTRICAL SERVICE FROM EXISTING UTILITY TRANSFORMER. REFER TO PARTIAL SITE PLAN ON SHEET E1.2 AND SITE/CIVIL PLANS FOR FEEDER SIZE AND EXACT LOCATION OF TRANSFORMER.
3. PROVIDE A JUNCTION BOX FOR THE TOUCHLESS FAUCET. REFER TO THE MANUFACTURER FOR SPECIFICATIONS. REFER TO THE PANEL SCHEDULES FOR WIRING INFORMATION.
4. PROVIDE JUNCTION BOX FOR HANDS FREE FLUSHOMETERS. REFER TO THE MANUFACTURER FOR SPECIFICATIONS. REFER TO THE PANEL SCHEDULES FOR WIRE INFORMATION.
5. PROVIDE NEW PANELBOARD 'A'. COORDINATE FINAL MOUNTING LOCATION AND HEIGHT IN FIELD.

08/28/26	ISSUE FOR BID			
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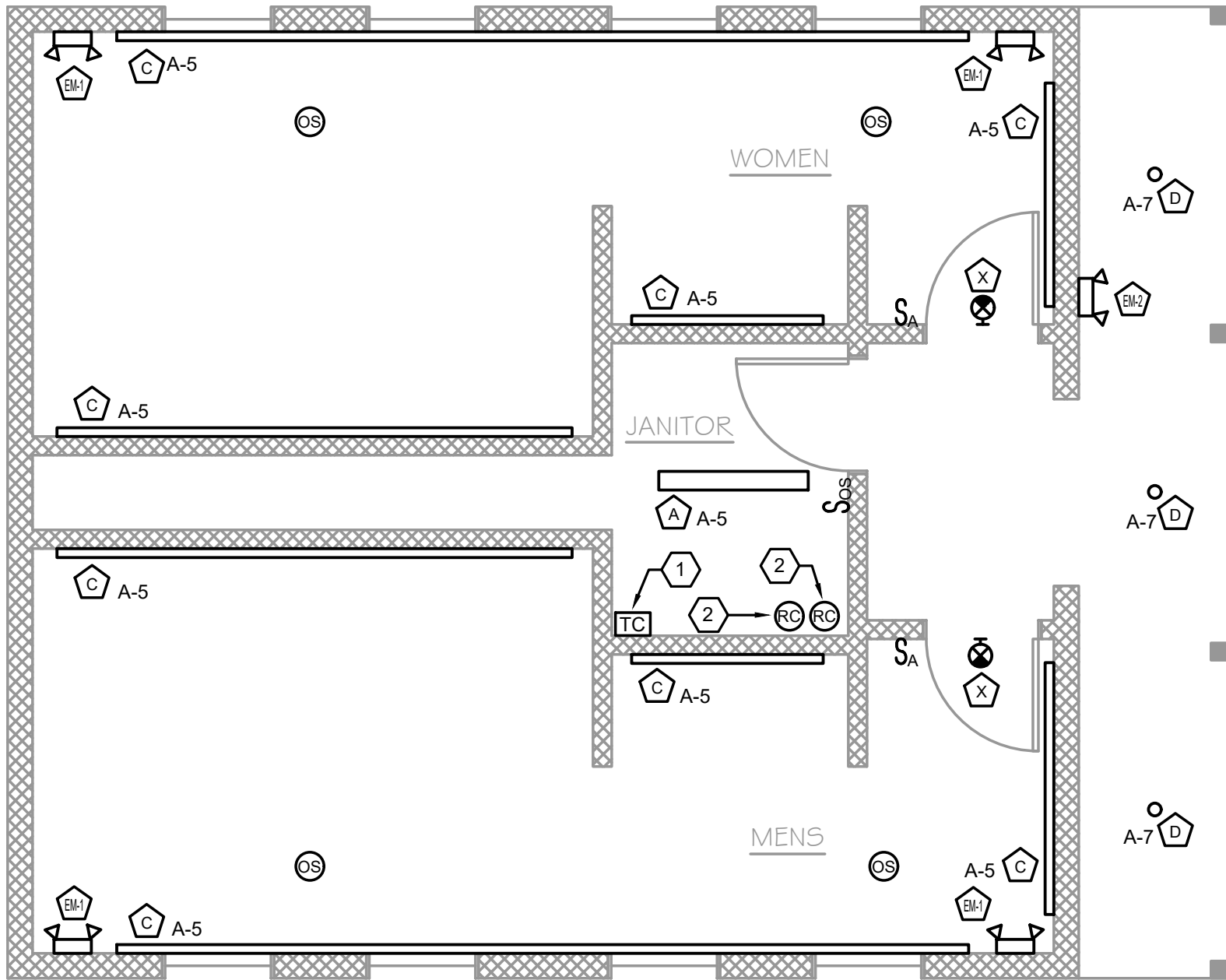
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**ELECTRICAL
POWER PLAN
FOR
ESTELL MANOR PARK
BATH HOUSE REPLACEMENT AND
SITE IMPROVEMENTS**

ESTELL MANOR
ATLANTIC COUNTY NEW JERSEY

DATE: 09/04/2026	DESIGNED BY: DJ	SCALE: 1/4" = 1'-0"	PROJECT NUMBER: 3581.027
DRAWN BY: DJ	CHECKED BY: DP	FIELD BOOK	SHEET: E2.0

P:\JK\3500\3481 - Atlantic County Facilities Engineering Pool\3581.027 - Estell Manor Park Bath House\CADD\DWG\MEP\3581.027 - E3.0.dwg E3.0



LIGHTING PLAN
SCALE: 1/4" = 1'-0"

SHEET NOTES

- REFER TO E1.0 FOR SYMBOLS, ABBREVIATIONS, AND GENERAL INFORMATION.
- FIELD COORDINATE AND REPORT ANY DISCREPANCIES WITH THE ARCHITECT OR ENGINEER.
- PROTECT THE AREA OF WORK FROM ANY DAMAGE, DUST AND DEBRIS.
- CONTRACTOR SHALL COORDINATE SCHEDULING WITH THE OWNER AND GENERAL CONTRACTOR TO COMPLY WITH THE OWNERS USAGE OF THE BUILDING.
- CONTRACTOR SHALL CONFIRM THE COMPATIBILITY OF THE LIGHTING CONTROLS WITH THE NEW LIGHTS.
- EMERGENCY WALL PACKS ARE TO BE WIRED TO THE LIGHTING CIRCUIT SERVING THAT AREA AHEAD OF SWITCH OR CONTROL DEVICE.

KEY NOTES

- PROVIDE TIME CLOCK FOR CONTROL OF EXTERIOR LIGHTING FIXTURES. COORDINATE FINAL SCHEDULING WITH OWNER PRIOR TO FINAL PROGRAMMING.
- PROVIDE ROOM CONTROLLER IN ACCESSIBLE AREA.

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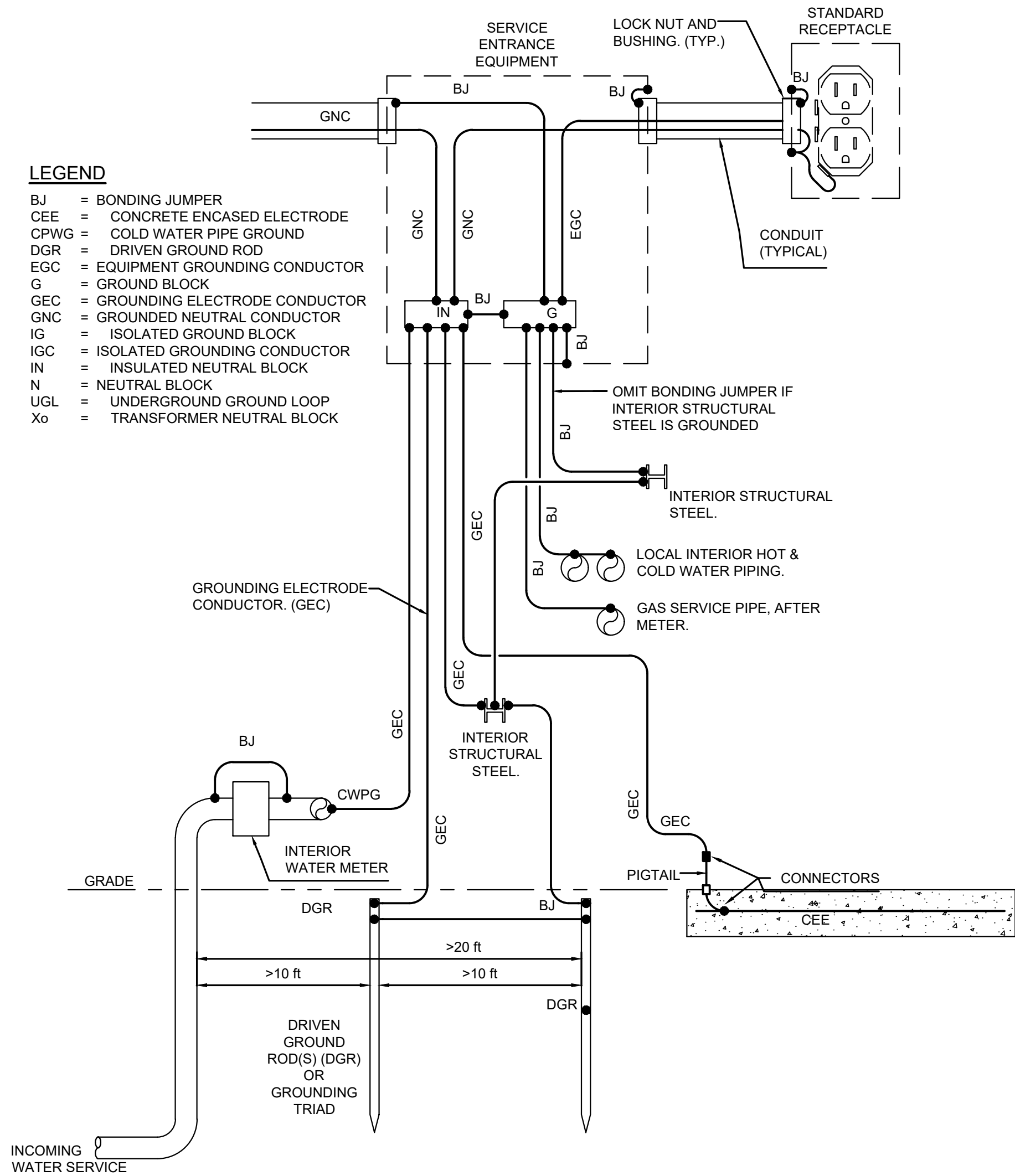
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**ELECTRICAL
LIGHTING PLAN
FOR
ESTELL MANOR PARK
BATH HOUSE REPLACEMENT AND
SITE IMPROVEMENTS**

ESTELL MANOR
ATLANTIC COUNTY NEW JERSEY

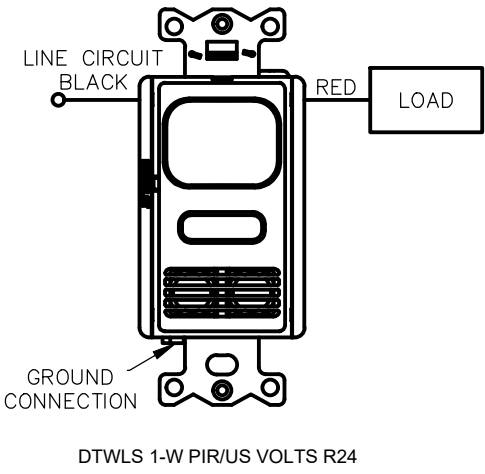
DATE: 09/04/2026	DESIGNED BY: DJ	SCALE: 1/4" = 1'-0"	PROJECT NUMBER: 3581.027
DRAWN BY: DJ	CHECKED BY: DP	FIELD BOOK	SHEET: E3.0



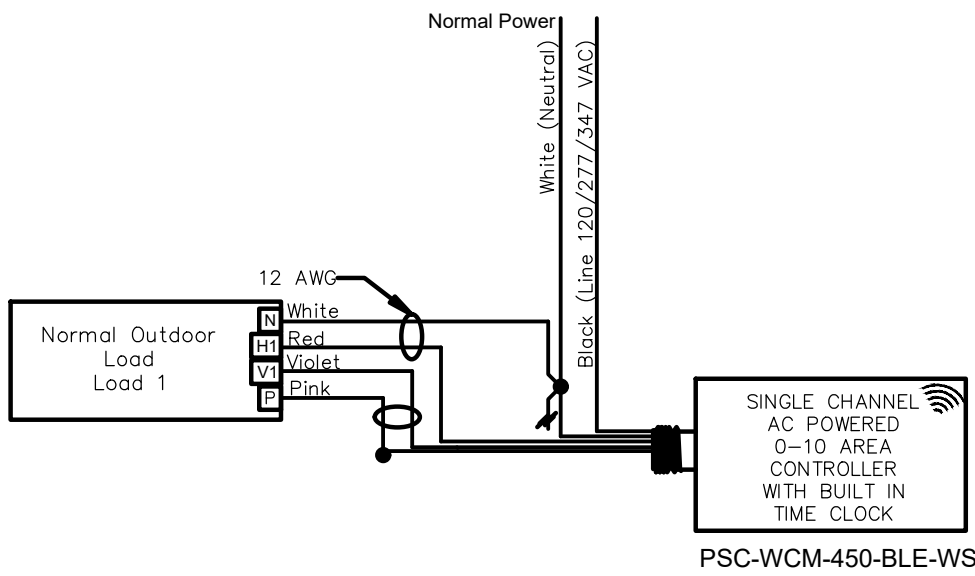
TYPICAL GROUNDING AND BONDING DETAIL
NOT TO SCALE

NOTES:

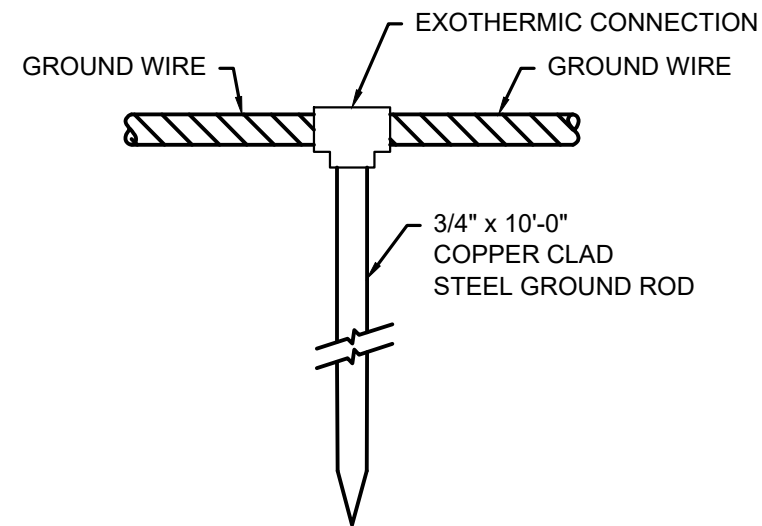
- DETAIL IS TYPICAL AND IS INTENDED TO ILLUSTRATE METHODS OF GROUNDING AND BONDING OF ELECTRICAL DISTRIBUTION SYSTEM COMPONENTS.
- METHODS OF ESTABLISHING THE GROUNDING ELECTRODE SHALL BE BY MEANS OF ONE OF THE COMBINATIONS OF GROUNDING ELECTRODE CONDUCTORS AND GROUNDING ELECTRODES INDICATED IN THE DETAIL.
- BONDING JUMPERS (BJ), GROUNDING ELECTRODE CONDUCTORS (GEC), GROUNDED NEUTRAL CONDUCTORS (GNC), AND EQUIPMENT GROUNDING CONDUCTORS (EGC) SHALL ALL BE INSULATED. BONDING JUMPERS (BJ) MAY BE BARE WHEN WITHIN AN ENCLOSURE OR LESS THAN 6'-0" IN LENGTH. INSULATION COLORS SHALL BE AS FOLLOWS:
 - a. BJ: GREEN
 - b. GEC: GREEN
 - c. GNC: WHITE
 - d. EGC: GREEN
- REFER TO NATIONAL ELECTRICAL CODE "GROUNDING ELECTRODE CONDUCTORS" TABLE (2020 NEC 250.66) AND "EQUIPMENT GROUNDING CONDUCTORS" TABLE (2020 NEC 250.122) FOR SIZING OF GROUNDING AND BONDING CONDUCTORS INDICATED ABOVE.
- BONDING JUMPER IS NOT REQUIRED FOR RECEPTACLES IF U.L. LISTED AUTO-GROUND WIRING DEVICES ARE USED.
- BONDING JUMPER IS NOT REQUIRED IF U.L. LISTED AND APPROVED BONDING LOCKNUTS OR BUSHINGS AND NONMETALLIC RACEWAYS AND/OR BOXES ARE USED
- ELECTRICALLY CONTINUOUS METAL BAR JOISTS IN MASONRY CONSTRUCTION SHALL BE BONDED TO THE SERVICE ENTRANCE EQUIPMENT ENCLOSURE OR TO INTERIOR, GROUNDED, STRUCTURAL STEEL IN OTHER PORTIONS OF THE BUILDING.
- CONCRETE ENCASED ELECTRODE SHALL BE ELECTRICALLY CONDUCTIVE ALONG ITS ENTIRE LENGTH. PIGTAIL SHALL BE SAME SIZE AND MATERIAL AS GROUNDING ELECTRODE CONDUCTOR. COORDINATE INSPECTION OF PIGTAIL, SLEEVE AND CONNECTION TO ELECTRODE WITH AUTHORITY HAVING JURISDICTION.



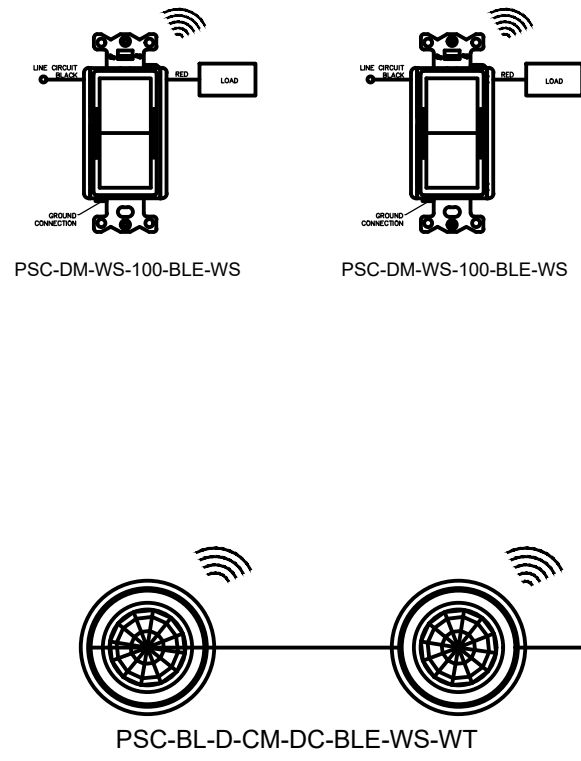
OCCUPANCY SENSOR SWITCH
NOT TO SCALE



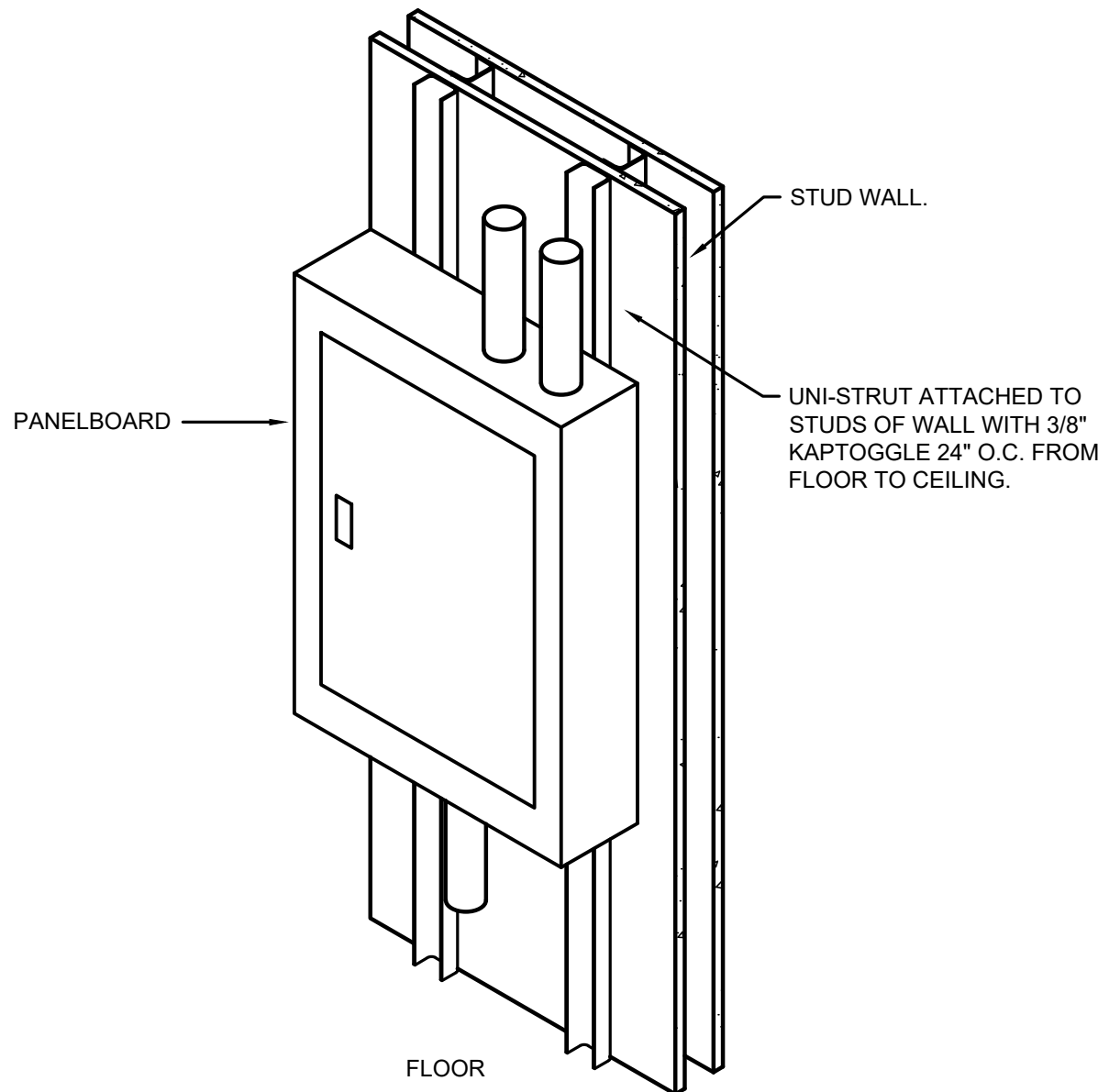
SINGLE ZONE OUTDOOR CONTROL
NOT TO SCALE



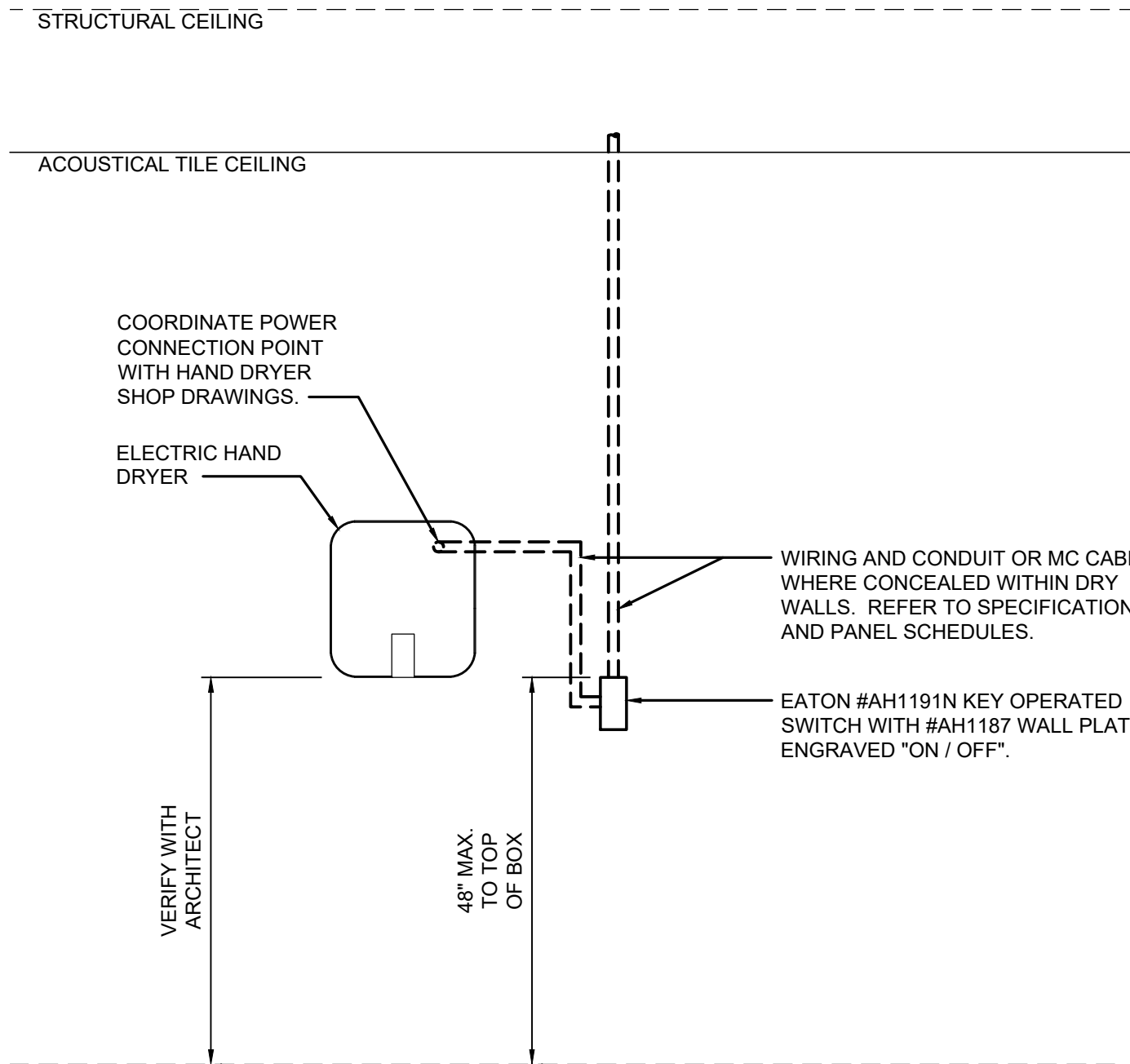
GROUND ROD CONNECTION DETAIL
NOT TO SCALE



TYPICAL 1 ZONE INDOOR CONTROLLER
NOT TO SCALE



WALL MOUNTED PANELBOARD DETAIL
NOT TO SCALE



TYPICAL ELECTRIC HAND DRYER DISCONNECT SWITCH DETAIL
NOT TO SCALE

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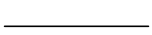
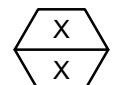
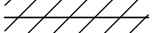
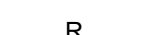
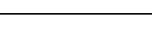
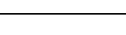
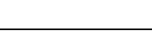
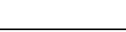
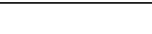
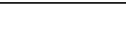
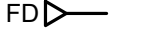
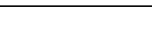
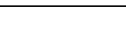
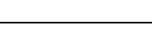
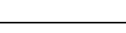
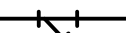
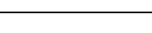
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AMIN H. GOMAA, PE
PROFESSIONAL ENGINEER, NJ LIC. No. 24GE04842100

ELECTRICAL DETAILS FOR ESTELL MANOR PARK BATH HOUSE REPLACEMENT AND SITE IMPROVEMENTS			
ESTELL MANOR ATLANTIC COUNTY NEW JERSEY			
DATE: 09/04/2026	DESIGNED BY: DJ	SCALE: 1:1	PROJECT NUMBER: 3581.027
DRAWN BY: DJ	CHECKED BY: DP	FIELD BOOK	SHEET: E4.0

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MECHANICAL LEGEND			
SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION
	NEW DUCT OR PIPE		KEY NOTE DESIGNATION
	EXISTING DUCT OR PIPE		TOP: EQUIPMENT DESIGNATION BOTTOM: UNIT NUMBER (E-SIGNIFIES EXISTING)
	TO BE REMOVED		COLD WATER PIPING
	FLEX TO DIFFUSER (5'-0" MAXIMUM)		HOT WATER SUPPLY PIPING
	RISE IN DUCT		HOT WATER RETURN PIPING
	DROP IN DUCT		LOW PRESSURE STEAM PIPING
	FLEXIBLE DUCT CONNECTION		LOW PRESSURE CONDENSATE PIPING
	CEILING DIFFUSER 4 WAY BLOW		REFRIGERANT SUCTION PIPING
	CEILING DIFFUSER 3 WAY BLOW		REFRIGERANT LIQUID PIPING
	CEILING DIFFUSER 2 WAY BLOW		PUMPED CONDENSATE PIPING
	CEILING DIFFUSER 1 WAY BLOW		CONDENSATE DRAIN PIPING
	RETURN OR EXHAUST REGISTER		SHUT-OFF VALVE
	VOLUME DAMPER		BALANCE VALVE
	FIRE DAMPER AND ACCESS DOOR		THROTTLING VALVE
	MOTOR OPERATED DAMPER		MOTOR OPERATED VALVE, THREE WAY
	UNDERCUT DOOR		MOTOR OPERATED VALVE, TWO WAY
	LOUVERED DOOR		CHECK VALVE
	THERMOSTAT		GAS COCK
	SENSOR		UNION
	HUMIDISTAT		STRAINER WITH BLOWDOWN
	DUCT SMOKE DETECTOR		RELIEF VALVE
	CO2 DETECTOR		PRESSURE GAUGE
	CONNECT TO EXISTING		THERMOMETER
	NATURAL GAS DETECTOR		AUTOMATIC FLOW CONTROL VALVE - B&G CIRCUIT SETTER OR EQUAL
	CO / NOX COMBINATION DETECTOR		HVAC UNIT (SEE PLANS AND SCHEDULES) HVAC UNIT CLEARANCE
	POINT OF DISCONNECTION		

MECHANICAL ABBREVIATIONS			
AFF	ABOVE FINISHED FLOOR	MC	MECHANICAL CONTRACTOR
AD	ACCESS DOOR	MOD	MOTOR OPERATED DAMPER
ATC	AUTOMATIC TEMPERATURE CONTROLS	OA	OUTDOOR AIR
BDD	BACKDRAFT DAMPER	OAI	OUTDOOR AIR INTAKE
BMS	BUILDING MANAGEMENT SYSTEM	OC	ON CENTER
BOD	BOTTOM OF DUCT	OED	OPEN ENDED DUCT
BOP	BOTTOM OF PIPE	PC	PLUMBING CONTRACTOR
CD	CEILING DIFFUSER	RA	RETURN AIR
CO	CLEANOUT	RP	RADIANT PANEL
CFM	CUBIC FEET PER MINUTE	RR	RETURN GRILLE
D	DIAMETER	RR	RETURN REGISTER
E	EXISTING	SA	SUPPLY AIR
EA	EXHAUST AIR	SG	SUPPLY GRILLE
EC	ELECTRICAL CONTRACTOR	SR	SUPPLY REGISTER
EG	EXHAUST GRILLE	TD	TRANSFER DUCT
EO	EXHAUST REGISTER	TG	TRANSFER GRILLE
FO	FLAT OVAL	WMS	WIRE MESH SCREEN
IOM	INSTALLATION AND OPERATION MANUAL	WR	WALL REGISTER

APPLICABLE CODES:

- ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST CODES AND SUBCODES AS ADOPTED BY THE STATE OF NEW JERSEY:
- NEW JERSEY UNIFORM CONSTRUCTION CODE (NJUCC)
 - REHABILITATION SUBCODE 5:23-6
 - 2021 INTERNATIONAL BUILDING CODE - NJ EDITION
 - 2020 NATIONAL ELECTRICAL CODE
 - 2021 NATIONAL STANDARD PLUMBING CODE
 - 2021 INTERNATIONAL MECHANICAL CODE
 - 2021 INTERNATIONAL FUEL GAS CODE
 - 2019 ASHRAE 90.1 ENERGY CONSERVATION CODE
 - 2019 NFPA 13
 - REQUIREMENTS OF LOCAL AUTHORITY HAVING JURISDICTION

MECHANICAL GENERAL NOTES:

- DO NOT SCALE FROM THESE DRAWINGS.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE AND ADOPTED REGULATIONS INCLUDING BUT NOT LIMITED TO NATIONAL, CITY, STATE, LOCAL CODES AND ORDINANCES WHICH MAY BE IN EFFECT. ALL MECHANICAL MATERIALS, INSTALLATION PROCEDURES AND SYSTEM LAYOUTS SHALL BE APPROVED BY ALL APPLICABLE CODE ENFORCEMENT AUTHORITIES HAVING JURISDICTION. THE MECHANICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FOR THIS INSTALLATION.
- THE DRAWINGS HAVE BEEN PRODUCED ENTIRELY ON FPA CADD SYSTEM. ANY OTHER LETTERING, LINES OR SYMBOLS, OTHER THAN PROFESSIONAL STAMPS AND SIGNATURES, HAVE BEEN MADE WITHOUT THE AUTHORIZATION OF FPA AND ARE INVALID.
- REPRODUCTION OF ANY PORTION OF THE CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
- UPON CONTRACT AWARD, CONTRACTOR SHALL CONTACT LOCAL UTILITY COMPANY TO SCHEDULE ANY UTILITY UPGRADES. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL UTILITY UPGRADES, SECURE ALL PERMITS AND INSPECTIONS.
- ALL CONNECTIONS TO EXISTING BUILDING SERVICES SHALL BE CAREFULLY COORDINATED WITH THE UTILITY CO AND THE OWNER'S SCHEDULE. SERVICE WORK OF THIS NATURE TO OCCUR DURING UNOCCUPIED BUILDING HOURS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL EXISTING EQUIPMENT IS OPERATIONAL AFTER ANY SHUTDOWN OCCURS.
- CHANCES OR SUBSTITUTIONS OF EQUIPMENT WILL NOT BE ALLOWED WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER. ALL COSTS RESULTING FROM THE SELECTION OF OTHER THAN SPECIFIED EQUIPMENT SHALL BE BORNE BY THE CONTRACTOR, INCLUDING, BUT NOT LIMITED TO WORK AFFECTING OTHER CONTRACTORS, THE OWNER, OR RE-DESIGN ISSUES.
- ALL INDICATED WORK SHALL BE PERFORMED BY THE MECHANICAL CONTRACTOR UNLESS OTHERWISE NOTED.
- DO NOT USE ANY PART OF THE OWNER'S BUILDING AS A SHOP, EXCEPT PARTS DESIGNATED FOR SUCH PURPOSES BY THE OWNER.
- ALL CONTRACT WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL REQUIREMENTS OF THE WRITTEN SPECIFICATIONS FOR THIS PROJECT WHICH ARE CONSIDERED TO BE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. ALL CONTRACTORS AND SUBCONTRACTORS SHALL MAINTAIN (AT THE JOB SITE) AND REFER TO COPIES OF THE WRITTEN SPECIFICATIONS AS PART OF THESE DRAWINGS. REFER TO THE WRITTEN SPECIFICATIONS IN CONJUNCTION WITH THE PLANS FOR FULL PROJECT SCOPE. IN ALL CASES OF DISCREPANCY BETWEEN PLANS AND SPECIFICATIONS, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN AND WHERE IT IS UNCLEAR, SUCH CASES SHALL BE REFERRED TO THE ENGINEER FOR ADJUDICATION.
- ANY DISCREPANCIES OR INADEQUACIES WITHIN THESE BID DOCUMENTS OR BETWEEN THESE BID DOCUMENTS AND RELATED PLUMBING, ELECTRICAL, FIRE PROTECTION, ARCHITECTURAL, INTERIOR DECOR AND FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER PRIOR TO BID SUBMISSION.
- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS BID FOR THE PROPOSED WORK. HE SHALL BE RESPONSIBLE TO VERIFY FIELD CONDITIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO SUBMISSION OF BIDS IN WRITING.
- THE MECHANICAL CONTRACTOR SHALL REVIEW THESE PLANS AND SPECIFICATIONS, AS WELL AS THE RELATED PLUMBING, ELECTRICAL, ARCHITECTURAL, INTERIOR DECOR AND SITE ENGINEERING DRAWINGS TO BECOME FAMILIAR WITH THE FULL PROJECT SCOPE. DURING THE COURSE OF CONSTRUCTION COORDINATION AND ACTUAL CONSTRUCTION, THE MECHANICAL CONTRACTOR SHALL COOPERATE WITH ALL OTHER CONTRACTORS AND TRADES ON THIS PROJECT TO ENSURE A SMOOTH RUNNING AND CAREFULLY COORDINATED INSTALLATION.
- THE MECHANICAL CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND AS-BUILT CONDITIONS PERTAINING TO THE HVAC SYSTEMS. MECHANICAL CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIAL, PARTS, SUPPLIES AND LABOR TO BALANCE ALL HVAC EQUIPMENT TO OWNER'S SATISFACTION.
- CONTRACTOR SHALL COORDINATE HIS SCHEDULING WITH THE OWNER AND GENERAL CONTRACTOR TO COMPLY WITH THE OWNERS USAGE OF THE BUILDING.
- IF ANY UNEXPECTED DISCOVERY OF SUSPECTED HAZARDOUS MATERIALS IS MADE DURING THE COURSE OF WORK, THE CONTRACTOR SHALL REPORT THE DISCOVERY IMMEDIATELY TO THE OWNER. THE CONTRACTOR SHALL STOP ANY WORK THAT MAY DISTURB THE SUSPECTED HAZARDOUS MATERIAL. CONTRACTOR SHALL RESUME WORK AFTER ALL HAZARDOUS MATERIAL HAS BEEN REMEDIATED.
- CONTRACTOR RESPONSIBLE FOR THE PROPER CARE OF ALL OWNER'S EQUIPMENT AND/OR FURNISHINGS WHICH ARE REQUIRED TO BE TEMPORARILY REMOVED, STORED OR RELOCATED. CONTRACTOR SHALL REPLACE, REPAIR OR REIMBURSE OWNER FOR ALL DAMAGES TO SUCH PROPERTIES AT FULL REPLACEMENT VALUE AND EQUIVALENCY. CONTRACTOR SHALL ADVISE OWNER FOR DISPOSITION OF REMOVED EQUIPMENT AND/OR MATERIALS.
- CONTRACTOR'S WORK MAY BE REQUIRED OUTSIDE OF DESIGNATED SPACE. ALL SYSTEMS BEING DEMOLISHED AND REMOVED, MODIFIED, AND/OR TERMINATED SHALL BE FIELD VERIFIED TO INSURE NO WORK PERFORMED, INSIDE OR OUTSIDE OF THE DESIGNATED SPACE, SHALL DISRUPT ANY SERVICE OR SYSTEMS OF ANY OTHER AREAS. IF ANY CONDITIONS ARISE THAT ARE NOT IDENTIFIED ON DRAWINGS, IMMEDIATE NOTIFICATION SHALL BE PROVIDED TO THE ENGINEER OR OWNER. NO WORK SHALL PROCEED WITHOUT APPROVALS FROM ENGINEER OR OWNER.
- DRAWINGS ARE DIAGRAMMATIC IN NATURE AND MAY HAVE TO BE ADAPTED TO COMPLY WITH EXISTING BUILDING CONDITIONS. CONTRACTOR SHALL SUBMIT HVAC SHOP DRAWINGS, INDICATING LOCATIONS, AND ROUTING OF DUCTS, PIPING, AND WIRING.
- DUCTING AND PIPING SHOWN ON DRAWINGS SHOW THE GENERAL RUN AND CONNECTIONS AND MAY OR MAY NOT IN ALL PARTS BE SHOWN IN ITS EXACT POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTING THE DUCTING/PIPING SUITABLE IN EVERY RESPECT FOR THE WORK. DUCTWORK/PIPING SHALL BE INSTALLED SO THAT ACCESS, CLEARANCE, HEADROOM AND PITCH ARE MAINTAINED. CONTRACTORS OF THE VARIOUS TRADES SHALL COORDINATE THE INSTALLATION. MECHANICAL CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS FOR CHASE AND SOFFIT LOCATIONS TO COORDINATE ALL EXPOSED DUCTWORK & PIPE ROUTING.
- ALL CONTRACTORS SHALL PROVIDE CUTTING AND PATCHING FOR THEIR RESPECTIVE TRADES.
- REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
- ALL MECHANICAL EQUIPMENT AND APPLIANCES SHALL BEAR THE LABEL OF AN APPROVING AGENCY. LISTING AND LABELING AGENCY QUALIFICATIONS: A "NATIONALLY RECOGNIZED TESTING LABORATORY" AS DEFINED IN THE INTERNATIONAL MECHANICAL CODE, LATEST ADOPTED EDITION.
- ALL PENETRATIONS THRU FIRE RATED WALLS, FLOORS, AND CEILINGS SHALL BE SEALED WITH A UL APPROVED FIRESTOP MATERIAL SUITABLE FOR CONSTRUCTION MATERIAL TO MAINTAIN FIRE, SMOKE, AND DRAFT INTEGRITY OF STRUCTURE. FIRE RESISTANT SEALER SHALL BE TESTED IN ACCORDANCE WITH ASTM E84. INSTALL SEALANT, INCLUDING FOAMING, PACKING AND OTHER ACCESSORY MATERIALS TO FILL OPENINGS WHERE FIRE-RATED WALL PENETRATIONS OCCUR. COMPLY WITH INSTALLATION REQUIREMENTS ESTABLISHED BY TESTERS AND INSPECTION AGENCY.
- ALL CONTRACTORS REMOVING OR RELOCATING ANY EQUIPMENT, PIPES, DUCTS, CONDUITS, ETC SHALL PATCH ALL SURFACES DISTURBED BY THIS WORK TO MATCH ADJACENT SURFACES.
- MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER HANDLING, DISPOSAL & ASSOCIATED COSTS OF ALL REFRIGERANT MATERIAL, DURING THIS CONTRACT, IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL CODES AND/OR REGULATIONS.
- FURNISH TO THE ELECTRICAL CONTRACTOR ALL MOTOR STARTERS AND CONTROL DEVICES FOR MECHANICAL EQUIPMENT. ELECTRICAL CONTRACTOR SHALL INSTALL AND WIRE STARTER AND CONTROL EQUIPMENT FOR ALL MOTORS. CONTRACTOR SHALL ENGAGE CONTROL VENDOR AND EQUIPMENT MANUFACTURERS CONTROLS TECHNICIAN TO PROVIDE ACCESS AND INTEGRATION OF ALL AVAILABLE CONTROLS POINTS INTO THE BUILDING MANAGEMENT SYSTEM.
- ALL SPACE SENSORS; IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE LOCATION OF THERMOSTAT WITH OTHER TRADE.

PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE T6500 SERIES VENTED GUARD, CLEAR; OR ENGINEER APPROVED EQUAL, ON ALL TEMPERATURE SENSORS. AVAILABLE FROM WWW.KELE.COM, 888-397-5353.

PROVIDE WIRE GUARD COVERS ON ALL SPACE SENSORS. BASIS-OF-DESIGN AMERICAN TIME INTEGRATED SOLUTIONS; OR ENGINEERED APPROVED EQUAL. AVAILABLE FROM WWW.AMERICAN-TIME.COM, 800-328-8996.
- ALL EXPOSED HORIZONTAL AND VERTICAL PIPING SHALL BE INSTALLED IN A NEAT ARRANGEMENT IN LOCATIONS WHICH ARE THE MOST INCONSPICUOUS. VERTICAL DROPS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND THEIR FINAL LOCATIONS SHALL BE COORDINATED AND RUN WITHIN CHASES, WALLS OR SOFFITS WITH OTHER PLUMBING/ ELECTRICAL FEEDS. MECHANICAL CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS FOR CHASE & SOFFIT LOCATIONS TO COORDINATE ALL EXPOSED PIPING ROUTING. PROVIDE PIPE ENCLOSURE FOR ALL EXPOSED PIPING LOCATED OUTSIDE THE MECHANICAL ROOM. ALL SUCH LOCATIONS SHALL BE REVIEWED WITH ARCHITECT/ENGINEER PRIOR TO INSTALLATION. PROVIDE MINIMUM 2 COATS MARINE GRADE EPOXY PRIMER AND 2 COATS OF INTERIOR/EXTERIOR GRADE PAINT. COORDINATE WITH ARCHITECT FOR COLOR SELECTION. SEE SPECIFICATION FOR ADDITIONAL INFORMATION.
- ALL PIPING SHALL BE ORGANIZED NEATLY AND KEPT TIGHT TO WALLS AND CEILINGS.
- FURNISH AND INSTALL PIPE SLEEVES OR SLEEVE SEAL SYSTEMS AS REQUIRED. SEE SPECIFICATION FOR DETAILS.
- ALL DUCTWORK SHALL BE CONNECTED TO MOTORIZED EQUIPMENT WITH FLEXIBLE DUCT CONNECTORS.
- ALL RIGID DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET STEEL. FABRICATION OF DUCTWORK AND INSTALLATION SHALL BE IN ACCORDANCE WITH SMACNA STANDARDS AND RECOMMENDATIONS.
- ALL DUCTWORK SIZES SHOWN ON DRAWINGS ARE CLEAR INTERNAL DIMENSIONS.
- ALL INTERIOR DUCTWORK SHALL HAVE DUCT LINER. SEE SPECIFICATION FOR DETAILS.
- DURING THE INSTALLATION OF MECHANICAL EQUIPMENT AND ASSOCIATED SYSTEMS, THE CONTRACTOR SHALL IDENTIFY ANY DAMAGE TO FIREPROOFING MATERIAL CAUSED BY WORK OF THE TRADE. THE CONTRACTOR SHALL PROVIDE WRITTEN REPORT DESIGNATION LOCATIONS, TO GENERAL CONTRACTOR, BEFORE FIREPROOFING IS COVERED BY SUBSEQUENT CONSTRUCTION.
- THE MECHANICAL CONTRACTOR SHALL PROVIDE A COMPLETE SET OF "AS-BUILT" DRAWINGS INDICATING THE PRECISE LOCATION OF ALL SYSTEMS, EQUIPMENT, DUCTWORK, PIPING AND ACCESS DOORS. THESE PLANS SHALL ALSO INCLUDE ALL CHANGES AND DEVIATIONS FROM BID DOCUMENTS.
- AFTER COMPLETING SYSTEM INSTALLATION, TESTING, ADJUSTING, AND BALANCING UNIT AND AIR-DISTRIBUTION SYSTEMS, CLEAN FILTER HOUSINGS AND PROVIDE NEW FILTERS FOR ALL HVAC EQUIPMENT. EQUIPMENT THAT REQUIRE FILTER CHANGE INCLUDE BUT NOT LIMITED TO: PACKAGED ROOF TOP UNITS, ENERGY RECOVERY UNITS, ENERGY RECOVERY VENTILATORS, DUCTED INDOOR HEAT PUMPS, FAN COIL UNITS, CASSETTE TYPE HEAT PUMPS, AIR HANDLING UNITS, UNIT VENTILATORS AND FAN POWERED VARIABLE AIR VOLUME TERMINAL UNITS.

08/28/26	ISSUE FOR BID			
09/04/26	ADDENDUM #1			
No.	Date	Revision	Revised By	Checked By
SCALE IN FEET				



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MECHANICAL LEGEND, ABBREVIATIONS & GENERAL NOTES FOR ESTELL MANOR PARK BATH HOUSE REPLACEMENT AND SITE IMPROVEMENTS			
ESTELL MANOR ATLANTIC COUNTY NEW JERSEY			
DATE: 09/04/2026	DESIGNED BY: ST	SCALE:	PROJECT NUMBER: 3581.027
DRAWN BY: ST	CHECKED BY: TK	FIELD BOOK	SHEET: M1.0

MECHANICAL SPECIFICATIONS

1. GENERAL
- A. DRAWINGS AND GENERAL & SUPPLEMENTARY CONDITIONS SHALL APPLY TO WORK OF THIS SECTION.

B. ALL MATERIALS SHALL BE NEW AND THE BEST OF THEIR RESPECTIVE KINDS, SUITABLE FOR THE CONDITIONS AND DUTIES IMPOSED UPON SAME AT THE BUILDING. MATERIALS SHALL MATCH EXISTING FOR SIMILAR SERVICE EXCEPT AS OTHERWISE NOTED HEREIN. THEY SHALL GENERALLY BE OF REPRESENTATIVE MANUFACTURER. BRAND NAMES ARE SPECIFIED TO INDICATE A STANDARD OF QUALITY ONLY. INSTALLATION OF THE WORK SHALL BE PERFORMED BY SKILLED TRADESMEN.

C. CODE COMPLIANCE: ALL WORK SHALL BE INSTALLED IN CONFORMANCE TO BUILDING CODES HAVING JURISDICTION INCLUDING BUT NOT LIMITED TO THE LATEST ADOPTED EDITION OF IBC, NATIONAL ELECTRICAL CODE, NATIONAL FIRE CODE, INTERNATIONAL MECHANICAL CODE AND INTERNATIONAL FUEL GAS CODE.

D. IF ANY UNEXPECTED DISCOVERY OF SUSPECTED HAZARDOUS MATERIALS IS MADE DURING THE COURSE OF WORK, THE CONTRACTOR SHALL REPORT THE DISCOVERY IMMEDIATELY TO THE OWNER. THE CONTRACTOR SHALL STOP ANY WORK THAT MAY DISTURB THE SUSPECTED HAZARDOUS MATERIAL. CONTRACTOR SHALL RESUME WORK AFTER ALL HAZARDOUS MATERIAL HAS BEEN REMEDIATED.
2. SUBSTITUTIONS
- A. IF CONTRACTOR IS CONSIDERING SUBSTITUTION OF BASE SPECIFICATION, SUCH EQUIPMENT SHALL MEET OR EXCEED ALL LISTED CAPACITIES, OPERATIONAL EFFICIENCIES AND POWER/CONTROL REQUIREMENTS OF BASE SPECIFIED EQUIPMENT. COSTS FOR ANY REVISIONS TO STRUCTURAL DESIGN OR MECHANICAL/ELECTRICAL REQUIREMENTS DUE TO EQUIPMENT SUBSTITUTIONS SHALL BE PAID BY CONTRACTOR.
3. VERIFYING EXISTING CONDITIONS, REMOVALS AND ALTERATIONS
- A. THE CONTRACTOR SHALL VISIT THE PREMISES TO DETERMINE EXISTING CONDITIONS AND COMPARE SAME WITH DRAWINGS AND SPECIFICATIONS AND SATISFY HIMSELF OF ALL CONDITIONS PRIOR TO THE SUBMISSION OF A BID PROPOSAL. NO ALLOWANCE WILL BE MADE FOR FAILURE TO COMPLY WITH THESE REQUIREMENTS AND A BID PROPOSAL SHALL BE CONSTRUED AS EVIDENCE HE HAS DONE SO.

B. THE CONTRACTOR SHALL REMOVE, RELOCATE, REPLACE, ADJUST, ADAPT AND MODIFY EXISTING EQUIPMENT AND/OR SYSTEMS AS REQUIRED BY THE DRAWINGS OR SPECIFICATIONS AND AS MAY BE REQUIRED WHEN SUCH WORK IS UNCOVERED AND FOUND TO INTERFERE WITH THE COMPLETION OF WORK IN THIS CONTRACT OR OTHER CONTRACT WORK.

C. ALL REMOVED EQUIPMENT AND MATERIAL SHALL BE REMOVED FROM THE PROJECT SITE. PRIOR TO REMOVAL, COORDINATE DISPOSITION WITH OWNER.

D. PROVIDE SHUTDOWNS, DRAINING AND REFILLING, RECONNECTIONS AND STARTUPS OF EXISTING SYSTEMS NECESSARY IN CONNECTION WITH THE NEW WORK. COORDINATE SHUTDOWNS WITH THE OWNERS REPRESENTATIVE.

E. TEMPORARY SERVICES: PROVIDE TEMPORARY SERVICES DURING THE INTERRUPTION IN SERVICE CREATED BY THE DEMOLITION OF THE EXISTING FACILITY AND UNTIL THE NEW FACILITY BECOMES OPERATIONAL. PROCURE RENTAL EQUIPMENT OF ADEQUATE CAPACITIES AND ASSUME ALL COSTS RELATED TO THIS INSTALLATION AND OPERATION OF SAME.
4. COORDINATION
- A. MECHANICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADE.

B. COORDINATE REFRIGERANT PIPING SIZES, ROUTING & SUPPORTS.

C. COORDINATE LOCATION OF ROOF CURBS, EQUIPMENT SUPPORTS, AND ROOF PENETRATIONS.

D. COORDINATE LOCATION OF MECHANICAL EQUIPMENT, PIPING AND DUCTWORK WITH THE WORK OF OTHER TRADES, PROVIDING CLEARANCES FOR INSULATION, SERVICING, REMOVAL OF COMPONENTS AND EQUIPMENT DISASSEMBLY.

E. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENT.

F. SEQUENCE PHASES OF MECHANICAL WORK WITH THE WORK OF OTHER TRADES.
5. SHOP DRAWINGS
- A. SUBMIT A MINIMUM FIVE (5) COPIES OF MANUFACTURER'S EQUIPMENT DRAWINGS CONSISTING OF: DIMENSIONAL PLANS, PRODUCT, AND PERFORMANCE DATA; WIRING DIAGRAMS; AND OPERATING AND MAINTENANCE INSTRUCTIONS INCLUDING TROUBLE SHOOTING PROCEDURES.

B. WORK SHALL NOT PROCEED PRIOR TO SHOP DRAWING RELEASE BY THE ENGINEER WITH STAMPED NOTATION "NO EXCEPTIONS TAKEN" APPLIED.
6. RECORD DRAWINGS
- A. REPRODUCIBLE RECORD DRAWINGS SHALL BE SUPPLIED UPON WHICH CORRECTIONS SHALL BE MADE TO PROVIDE AN ACCURATE AND COMPLETE RECORD OF THE WORK AS INSTALLED.

B. AS-BUILT INFORMATION SHALL BE SUBMITTED AS FOLLOWS: WORK SHALL NOT PROCEED PRIOR TO SHOP DRAWING RELEASE BY THE ENGINEER WITH STAMPED NOTATION "NO EXCEPTIONS TAKEN" APPLIED.

a. ONE (1) SET OF REPRODUCIBLE DRAWINGS.

b. TWO (2) SETS OF PRINTS.
7. DELIVERY AND STORAGE: DELIVER FACTORY FURNISHED MATERIALS AND EQUIPMENT IN PROPER CONTAINERS AND STORE IN AREA PROTECTED FROM WEATHER, FUMES AND VANDALISM.
8. REMOVALS: REMOVE EXISTING MATERIALS AND EQUIPMENT INDICATED AND REPLACE WITH NEW MATERIALS AS INDICATED.
9. CUTTING AND PATCHING
- A. PERFORM CUTTING AND PATCHING IN A COMPETENT AND WORKMANLIKE MANNER WITHOUT DAMAGE TO WORK OR STRUCTURES TO REMAIN.

B. CUT REMOVE AND LEGALLY DISPOSE OF DESIGNATED MATERIALS, EQUIPMENT AND COMPONENTS, INCLUDING BUT NOT LIMITED TO GYPSUM BOARD, CONCRETE, CEILING TILE, DUCTS, PIPING AND OTHER MATERIALS REQUIRING REMOVAL TO INSTALL THE NEW WORK.

C. PROTECT THE STRUCTURE, FURNISHINGS, FINISHES AND ADJACENT MATERIALS NOT INDICATED OR SCHEDULED TO BE REMOVED.

D. PROVIDE AND MAINTAIN TEMPORARY PARTITIONS OR DUST BARRIERS ADEQUATE TO PREVENT THE SPREAD OF DUST AND DIRT TO ADJACENT AREAS.

E. PATCH EXISTING FINISHED SURFACES AND BUILDING COMPONENTS USING NEW MATERIALS MATCHING EXISTING MATERIALS. USE EXPERIENCED INSTALLERS TO RESTORE SURFACE OF MATERIALS BEING PATCHED.
10. GUARANTEE: THE CONTRACTOR SHALL GUARANTEE, IN WRITING, FOR A PERIOD OF ONE YEAR, COMMENCING FROM THE DATE OF ACCEPTANCE BY THE OWNER, ALL MATERIALS AND WORKMANSHIP PROVIDED AS PART OF THIS PROJECT.
11. INSPECTION
- A. UNLESS OTHERWISE INDICATED, THE ARRANGEMENT, POSITION, CONNECTIONS, ETC., SHOWN ON THE DRAWINGS SHALL BE TAKEN AS DIAGRAMMATIC.

B. THE RIGHT IS RESERVED BY THE ENGINEER TO MAKE MINOR CHANGES IN LOCATIONS AND ARRANGEMENTS WHEN REQUIRED BY JOB DEVELOPMENT WITHOUT ADDITIONAL COMPENSATION TO THIS CONTRACTOR.
12. SHEET METAL WORK AND ACCESSORIES
- A. ALL INTERIOR DUCTWORK SHALL BE CONSTRUCTED OF PRIME QUALITY GALVANIZED SHEET STEEL, ASTM A527, G-90 GALVANIZED.

B. ALL EXTERIOR DUCTWORK SHALL BE CONSTRUCTED OF PRIME QUALITY GALVANIZED SHEET STEEL, ASTM A527, G-90 GALVANIZED.

C. MATERIAL GAUGES AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS FOR 2" W.G. POSITIVE PRESSURE SUPPLY AND 1" W.G. NEGATIVE PRESSURE DUCT.

D. PROVIDE 3/8"- 1'-0" SCALE SHEET METAL SHOP DRAWINGS OF DUCT LAYOUT INDICATING GAUGES, PRESSURES, FITTINGS, REINFORCING DETAILS, SPACING, SEAM AND JOINT CONSTRUCTION DETAILS.

E. ALL SHEET METAL DUCTWORK SEAMS, JOINTS AND FLANGES SHALL BE COATED WITH A WATER BASED LOW VOC MASTIC SEALANT APPROVED FOR SUCH USE.
13. DUCT LINER
- A. COMPLY WITH NFPA STANDARD 90A ASTM STANDARD AHC-101. ASTM C 1071, TYPE 2, WITH COATED SURFACE EXPOSED TO AIR STREAM TO PREVENT EROSION OF GLASS FIBERS.

B. LINER SHALL BE BY JOHNS MANVILLE CO LINACOUSTIC RC OR APPROVED EQUAL.

C. INTERIOR DUCTWORK

a. THICKNESS 1 INCH, DENSITY 1 1/2 POUNDS. THERMAL PERFORMANCE: "K-FACTOR" EQUAL TO 0.28 OR BETTER, AT A MEAN TEMPERATURE OF 75 DEG. F. FLAME SPREAD RATING NOT MORE THAN 25, SMOKE DEVELOPED RATING NO HIGHER THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM TEST E-84. MINIMUM R-6 VALUE.

D. EXTERIOR DUCTWORK

a. THICKNESS 1 1/2 INCH, DENSITY 1 1/2 POUNDS. THERMAL PERFORMANCE: "K-FACTOR" EQUAL TO 0.28 OR BETTER, AT A MEAN TEMPERATURE OF 75 DEG. F. FLAME SPREAD RATING NOT MORE THAN 50, SMOKE DEVELOPED RATING NO HIGHER THAN 100 WHEN TESTED IN ACCORDANCE WITH ASTM TEST E-84. MINIMUM R-6 VALUE.

b. THE INSULATED DUCT ASSEMBLY SHALL BE WRAPPED WITH A SHEET TYPE PROTECTIVE MEMBRANE THAT IS UV AND OZONE RESISTANT ALUMINUM CLAD SURFACE WITH HIGH DENSITY CROSS-LINKED POLYETHYLENE WITH MULTIPLE LAYERS WITH A MINIMUM 10 YEAR WARRANTY. PRODUCT SHALL BE VENTURE CLAD #1577CW WITH WHITE FINISH AS MANUFACTURED BY VENTURE TAPE OR ENGINEER APPROVED EQUAL.

E. LINER ADHESIVE SHALL COMPLY WITH NFPA STANDARD 90A AND ASTM C 916. LINER TO BE AFFIXED TO DUCT WITH LOW VOC ADHESIVE AND WELD PINS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. INCREASE DUCT SIZE TO COMPENSATE FOR LINER THICKNESS.

14. DUCT INSULATION

A. PROVIDE 2" THICK, 1 1/2 PCF DENSITY FIBERGLASS BLANKET INSULATION, ASTM C 533 WITH FOIL FACED VAPOR BARRIER JACKET WITH SELF SEALING LAP ON ALL UNLINED SUPPLY AND RETURN AIR DUCT WORK. MINIMUM R-6 VALUE.

B. UL LISTED WITH FLAME SPREAD RATING OF 25 OR LESS AND SMOKE DEVELOPED RATING 50 OR LESS. PROVIDE TIGHT CLOSURE AT POINT OF CONNECTION TO EXISTING INSULATION.

15. FLEXIBLE DUCT

A. PROVIDE FLEXIBLE AIR DUCT WHERE INDICATED ON PLANS ONLY.

B. DUCT SHALL BE LISTED BY UNDERWRITERS LABORATORIES UNDER UL STANDARD 181 AS A CLASS 1 FLEXIBLE AIR DUCT AND COMPLYING WITH NFPA STANDARDS 90A AND 90B.

C. DUCT SHALL BE FACTORY FABRICATED, INSULATED, ROUND DUCT, WITH OUTER JACKET ENCLOSING 1" THICK, GLASS FIBER INSULATED AROUND A CONTINUOUS INNER LINER. REINFORCEMENT SHALL BE STEEL WIRE HELIX ENCAPSULATED IN THE INNER LINER. OUTER JACKET SHALL BE GLASS-REINFORCED SILVER MYLAR WITH CONTINUOUS HANGING TAB, INTEGRAL FIBERGLASS TAPE, AND NYLON HANGING CORD. INNER LINER SHALL BE POLYETHYLENE FILM. FLEXIBLE DUCT CLAMPS SHALL BE STAINLESS STEEL WITH CADMIUM PLATED HEX SCREWS. MINIMUM INSULATION R-4.2 VALUE.

16. FLEXIBLE CONNECTORS

A. FLAME-RETARDED OR NON COMBUSTIBLE FABRICS, COATINGS AND ADHESIVES COMPLYING WITH UL STANDARD 181, CLASS 1. GLASS FABRIC DOUBLE COATED WITH POLYCHLOROPRENE. MINIMUM WEIGHT 26 OZ. PER SQ. YD.

B. JOINTS AT FLEXIBLE CONNECTIONS SHALL BE SEALED WITH GASKET MATERIAL IN ACCORDANCE WITH SMACNA DETAIL FIGURE 2-19. FLEXIBLE CONNECTIONS SHALL BE CONSTRUCTED FROM NEOPRENE FLAME RETARDANT FABRIC.

17. AIR OUTLETS

A. FURNISH & INSTALL SUPPLY AIR CEILING DIFFUSERS & REGISTERS, RETURN/EXHAUST AIR CEILING REGISTERS & GRILLES WITH ALL ALUMINIUM OR STEEL CONSTRUCTION. THE FINISH SHALL BE BAKED ENAMEL WITH COLORS TO BE SELECTED BY THE ARCHITECT. MANUFACTURED BY TITUS OR APPROVED EQUAL.

B. CONFIGURATION: VOLUME-DAMPER ASSEMBLY AND CONTROL COMPONENTS INSIDE UNIT CASING.

C. CASINGS: STEEL OR ALUMINUM SHEET METAL OF THE FOLLOWING MINIMUM THICKNESSES: UPSTREAM PRESSURE SIDE:0.0239-INCH STEEL. DOWNSTREAM PRESSURE SIDE: 0.0179-INCH STEEL.

D. ACCESS: REMOVABLE PANELS TO PERMIT ACCESS TO DAMPERS AND OTHER PARTS REQUIRING SERVICE, ADJUSTMENT, OR MAINTENANCE; WITH AIRTIGHT GASKET AND QUARTER TURN LATCHES.

E. VOLUME DAMPER: CONSTRUCT OF GALVANIZED STEEL WITH PERIPHERAL GASKET AND SELF-LUBRICATING BEARINGS. MAXIMUM DAMPER LEAKAGE: 2 PERCENT OF NOMINAL AIRFLOW AT 1-INCH WG INLET STATIC PRESSURE. DAMPER POSITION: NORMALLY CLOSED.

F. REGULATOR ASSEMBLY: EXTRUDED-ALUMINUM OR 20-GAGE GALVANIZED-STEEL COMPONENTS; KEY DAMPER BLADES INTO SHAFT WITH NYLON-FITTED PIVOT POINTS LOCATED INSIDE UNIT CASING.

18. CONTROLS: DAMPER OPERATOR, THERMOSTAT, AND OTHER DEVICES SHALL BE COMPATIBLE WITH THE EXISTING TEMPERATURE CONTROLS & BUILDING MANAGEMENT SYSTEM (BMS).

19. TESTING AND BALANCING

A. INDEPENDENT TESTING AND BALANCING AGENCY SHALL BE RETAINED BY THE CONTRACTOR TO BALANCE THE AIR AND WATER SYSTEMS. THE TEST AND BALANCE AGENCY SHALL HAVE A PROFESSIONAL ENGINEER ON STAFF OR RETAINED AS A CONSULTANT.

B. THE BALANCER SHALL PERFORM WORK IN ACCORDANCE WITH THE AABC NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE AND THE LATEST EDITION OF THE ASHRAE HANDBOOK.

C. MECHANICAL CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS AND AS-BUILT CONDITIONS PERTAINING TO THE HVAC SYSTEMS. MECHANICAL CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, MATERIAL, PARTS, SUPPLIES AND LABOR TO BALANCE ALL HVAC EQUIPMENT TO OWNER'S SATISFACTION.

D. SUBMIT CERTIFIED REPORTS CONTAINING SEAL AND SIGNATURE OF THE TEST AND AIR BALANCE ENGINEER CERTIFYING THAT THE SYSTEM WAS TESTED AND BALANCED WITHIN TEN PERCENT (10%) IN ACCORDANCE WITH REFERENCED STANDARDS, AND IS OPERATING ACCORDING TO THE CONTRACT DOCUMENTS.

E. REPORTS SHALL INCLUDE A SINGLE LINE DIAGRAM OF AIR SYSTEMS WITH AIR OUTLETS IDENTIFIED NUMERICALLY. AIR OUTLETS WILL BE TABULATE/KAGE: 2 PERCENT OF NOMINAL AIRFLOW AT 1-INCH WG INLET STATIC PRESSURE. DAMPER POSITION: NORMALLY CLOSED.

c. REGISTER SIZE

d. DIFFUSER SIZE

e. FREE AREA IN SQUARE FEET, AIR VELOCITY, REGISTER CONSTANT, CFM.

f. FOR EACH FAN SUBMIT DESIGN AND RECORDED CFM, STATIC PRESSURE, FAN RPM AND MOTOR AMPERAGE IN SEPARATE VERTICAL COLUMNS.

20. ELECTRIC CONTROLS: 24-V DAMPER ACTUATOR WITH WALL MOUNTED ELECTRIC THERMOSTAT AND APPROPRIATE MOUNTING HARDWARE.

21. HANGERS AND SUPPORTS

AA. PIPING:

a. PROVIDE PIPE HANGERS AND SUPPORTS IN ACCORDANCE WITH PIPE SIZE AND SPAN SCHEDULES IN THE LATEST ADOPTED EDITION OF IMC.

b. ALL PIPING SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE. ALL HANGERS, RODS AND SUPPORTS SHALL BE SPECIFICALLY APPROVED FOR USE INTENDED. HANGERS AND SUPPORTS SHALL BE INSTALLED IN STRICT CONFORMITY WITH ALL APPLICABLE CODE REQUIREMENTS.

c. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENINGS OF HANGER RODS, INSERTS, ETC. IN REQUIRED LOCATIONS, THE CONTRACTOR SHALL PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND APPROVED.

d. EXPANSION SHIELDS SHALL BE PROVIDED TO SUPPORT HANGER RODS AT REQUIRED INTERVALS. EXPANSION SHIELDS SHALL BE "PHILLIPS" ANCHORS, HILTI CO., OR APPROVED EQUAL.

B. DUCTWORK

a. PROVIDE HANGERS AND SUPPORTS FOR ALL RIGID DUCTWORK OF COMPATIBLE MATERIAL AS REQUIRED IN ACCORDANCE WITH SMACNA AND ASHRAE RECOMMENDATIONS.

b. DUCTWORK SHALL BE SUPPORTED WHERE REQUIRED WITH RESTRAINING CABLES OR STRAPS.

c. ROUND FLEXIBLE DUCTWORK TO BE SUPPORTED AS RECOMMENDED BY DUCT MANUFACTURER.
22. VIBRATION ISOLATION SYSTEMS
- A. ALL ROTATING, REVOLVING OR RECIPROCATING EQUIPMENT, SHALL BE FURNISHED WITH SEISMICALLY DESIGNED VIBRATION ISOLATORS, TO PREVENT THE TRANSMISSION OF OBJECTIONABLE NOISES, SOUND OR VIBRATIONS TO THE OCCUPIED SPACES AND TO THE BUILDING STRUCTURES.

B. VIBRATION ISOLATORS FOR CEILING SUPPORTED EQUIPMENT SHALL BE SUPPORTED FROM STRUCTURE ABOVE AND HAVE A MAXIMUM LATERAL MOTION UNDER EQUIPMENT STARTUP OR SHUTDOWN CONDITIONS OF 1/4". MOTIONS IN EXCESS SHALL BE RESTRAINED BY SPRING TYPE MOUNTINGS.

C. VIBRATION ISOLATOR SHALL BE PROVIDED BY ONE OF THE FOLLOWING MANUFACTURERS:

a. MASON INDUSTRIES

b. VIBRATION ELIMINATOR CO.

c. CONSOLIDATED KINETICS CO.

d. OR APPROVED EQUAL.
23. MOTOR STARTERS & CONTROL DEVICES
- A. FURNISH TO THE ELECTRICAL CONTRACTOR WHO SHALL INSTALL AND WIRE STARTER AND CONTROL EQUIPMENT FOR ALL MOTORS.

B. MOTOR STARTERS SHALL BE CUTLER HAMMER, WESTINGHOUSE OR ALLEN-BRADLEY MANUFACTURE, SUITABLE FOR WALL OR ANGLE IRON FRAME MOUNTING

C. GENERAL NOTES:

a. ALL STARTERS FOR MOTOR 1/2 HP AND ABOVE SHALL BE MAGNETIC ACROSS-THE-LINE TYPE WITH HOA SWITCH. SUCH STARTERS SHALL BE 208 OR 460 VOLTS, 3 PHASE, 60 CYCLE.

b. ALL MAGNETIC STARTERS SUBJECT TO MANUAL START AND IN DIRECT VIEW OF THE MOTORS THEY CONTROL SHALL HAVE MOMENTARY CONTACT START AND STOP BUTTONS AND PILOT LIGHT BUILT INTO COVER. ALL SELECTOR SWITCHES IN STARTERS SHALL BE OF THE MAINTAIN CONTACT TYPE.

c. WHERE STARTERS ARE NOT IN SIGHT OF MOTORS THEY CONTROL, A LOCAL DISCONNECT SWITCH WILL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

d. ALL MAGNETIC STARTERS SHALL HAVE THERMAL OVERLOAD IN EACH PHASE LEG AND LOW VOLTAGE PROTECTION.

e. ALL COILS, CORES, RESISTANCE, INSULATION CONTACTS, TRIPPERS, ETC. OF STARTERS AND RELAYS SHALL BE OF THE APPROVED TYPE IN ACCORDANCE WITH MOTOR NAMEPLATE DATA. ALL PARTS SUBJECT TO WEAR, ARCING, ETC., SHALL BE RENEWABLE.

f. ALL WIRING, STARTERS, SWITCHES, ETC., SHALL BE IN FULL ACCORDANCE WITH ALL LOCAL AND INSURANCE UNDERWRITERS' CODE REQUIREMENTS.

g. FURNISH DETAILED COMPOSITE WIRING DIAGRAMS FOR THOSE INSTALLING THE ELECTRICAL WORK, AND FURNISH SUCH OTHER INFORMATION NECESSARY TO ASSURE THE PROPER CONNECTION AND GROUNDING REQUIREMENTS. OPERATION AND CONTROL OF MOTORIZED EQUIPMENT, INCLUDING INTERLOCKS, AUTOMATIC OR SAFETY CONTROLS AND AUXILIARY CIRCUITS.

h. PROVIDE LAMACOID NAMEPLATE ATTACHED TO EACH STARTER IDENTIFYING THE SYSTEM IT SERVES.

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MECHANICAL SPECIFICATIONS
FOR
ESTELL MANOR PARK
BATH HOUSE REPLACEMENT AND
SITE IMPROVEMENTS

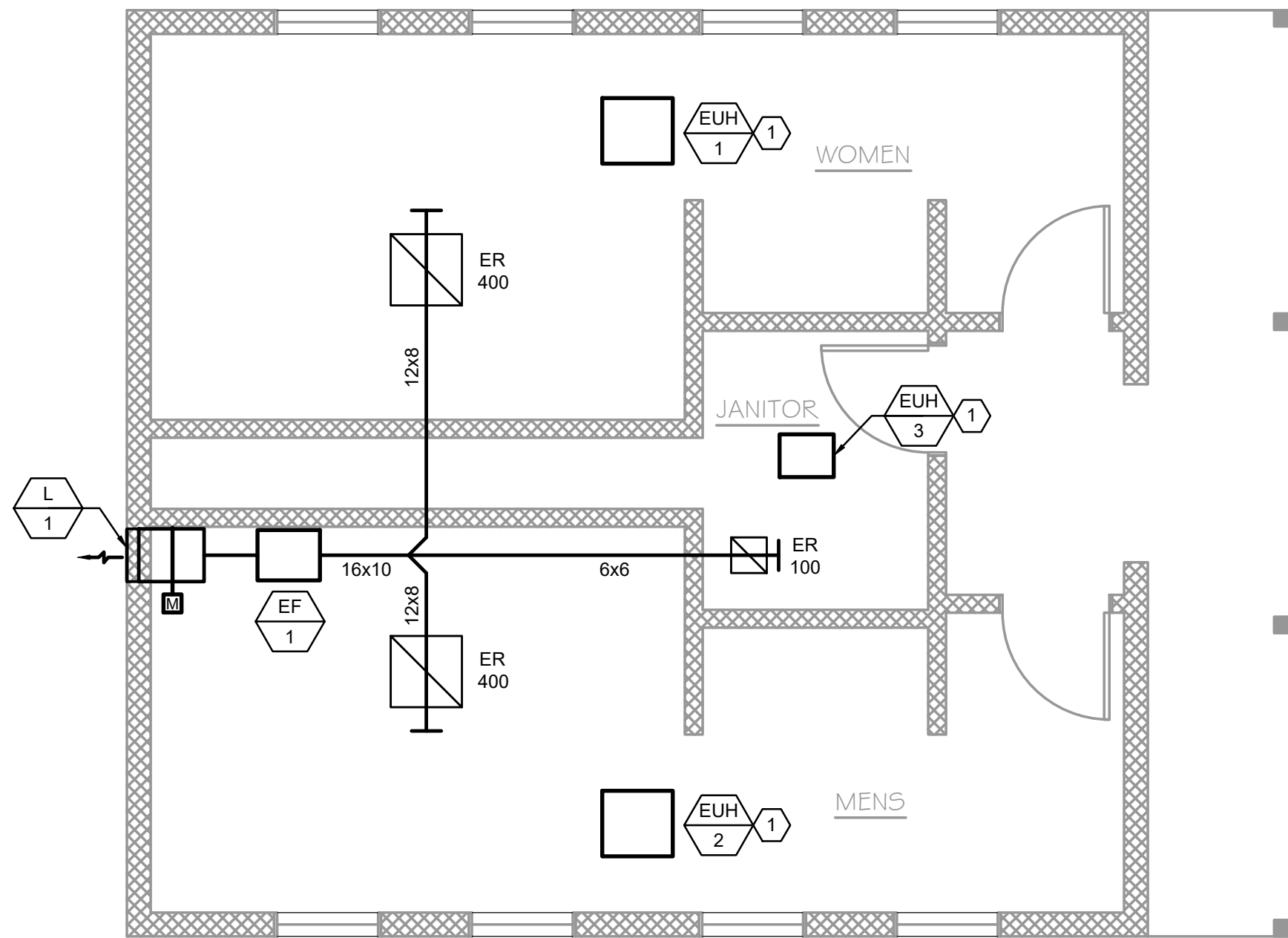
ESTELL MANOR
ATLANTIC COUNTY NEW JERSEY

DATE: 09/04/2026	DESIGNED BY: ST	SCALE:	PROJECT NUMBER: 3581.027
DRAWN BY: ST	CHECKED BY: TK	FIELD BOOK	SHEET: M1.1

AMIN H. GOMAA, PE

PROFESSIONAL ENGINEER, NJ LIC. No. 24GE04842100

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NEW WORK PLAN

SCALE: 1/4" = 1'-0"

SHEET NOTES

- REFER TO ARCHITECTURAL DRAWINGS FOR NOTES AND DETAILS PERTAINING TO ROOFING, STRUCTURAL, GENERAL CONSTRUCTION, ETC.
- CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES . AVOID CONFLICTS WITH OTHER TRADES AND EXISTING CONDITIONS. CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES AND MARK OUT THEIR LOCATIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL CONTRACT THE SERVICES OF A PRIVATE UTILITY LOCATOR COMPANY TO MARK OUT ALL EXISTING UNDERGROUND UTILITIES IN THE PROJECT AREA PRIOR TO COMMENCING ANY WORK AND PROVIDE EXISTING CONDITIONS PLAN TO THE OWNER AND ENGINEER.
- REMOVE AND REINSTALL CEILING SYSTEM AS REQUIRED FOR THE INSTALLATION OF MECHANICAL WORK AND REPLACE IN KIND ANY COMPONENTS DAMAGED BY PERSONNEL OR EQUIPMENT DURING PERFORMANCE OF THE WORK. PATCH AND REPAIR ALL DAMAGE CAUSED BY REMOVAL, MATCH EXISTING ADJACENT SURFACES.
- PROVIDE AND INSTALL METAL PIPE ENCLOSURE SYSTEM ON ALL EXPOSED PIPING. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- ALL SPACE SENSORS, IE. TEMPERATURE, CARBON DIOXIDE, HUMIDITY, ETC., SHALL BE MOUNTED AT 48" AFF TO MEET ADA REQUIREMENTS. COORDINATE THE FINAL LOCATION OF ALL SPACE SENSORS WITH OTHER TRADE. PROVIDE TAMPER PROOF COVERS FOR ALL TEMPERATURE SENSORS. PROVIDE TG500 SERIES VENTED GUARD, CLEAR, OR ENGINEER APPROVED EQUAL, ON ALL SPACE SENSORS.
- CONTRACTOR SHALL MEASURE AND DOCUMENT EXISTING SUPPLY AND RETURN AIRFLOW, STATIC PRESSURE AND TEMPERATURE BEFORE DEMOLITION. PROVIDE REPORT TO ENGINEER/ARCHITECT PRIOR TO DEMOLITION. PATCH ALL SURFACES DISTURBED OR LEFT UNFINISHED BY THIS WORK TO MATCH ADJACENT SURFACES.

KEY NOTES

- 1 INTEGRATE NEW UNIT INTO AUTOMATIC TEMPERATURE CONTROL SYSTEM (ATC) TO PROVIDE FUNCTION AND DISPLAY. REFER TO ATC DIAGRAMS AND SPECIFICATIONS FOR SCOPE.

08/28/26	ISSUE FOR BID		
09/04/26	ADDENDUM #1		
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MECHANICAL NEW WORK PLAN FOR ESTELL MANOR PARK BATH HOUSE REPLACEMENT AND SITE IMPROVEMENTS

ESTELL MANOR
ATLANTIC COUNTY NEW JERSEY

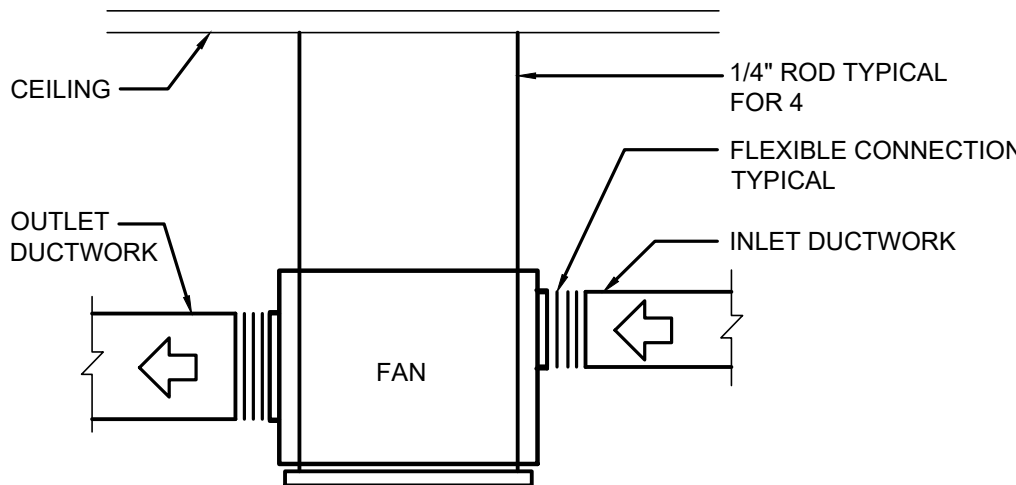
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AIR DEVICES SCHEDULE					BASED ON TITUS CO
PLAN NO.	CFM RANGE	NECK SIZE	OVERALL SIZE	MANUFACTURER MODEL	REMARKS
RR/ER	0-200	-	12x12	355RL	SEE NOTES
RR/ER	0-1000	-	24x24	355RL	SEE NOTES
NOTES: 1. PROVIDE WITH 35° DEFLECTION AT 1/2" BLADE SPACING WITH FRONT BLADE PARALLEL TO LONG DIMENSION. PROVIDE FRAME WITH ACCESSORIES FOR T-BAR LAY-IN CEILING GRID OR SURFACE MOUNTED BORDER FOR GYPSUM CEILING APPLICATION. SEE DRAWINGS FOR MOUNTING LOCATION. PROVIDE SQUARE TO ROUND TRANSITION AS REQUIRED. PROVIDE OPTIONAL OPPOSED BLADE DAMPER. 2. PROVIDE STANDARD FINISH - #26 WHITE. 3. PROVIDE REMOTE CABLE OPERATED VOLUME DAMPERS LOCATED IN INACCESSIBLE CONSTRUCTION.					

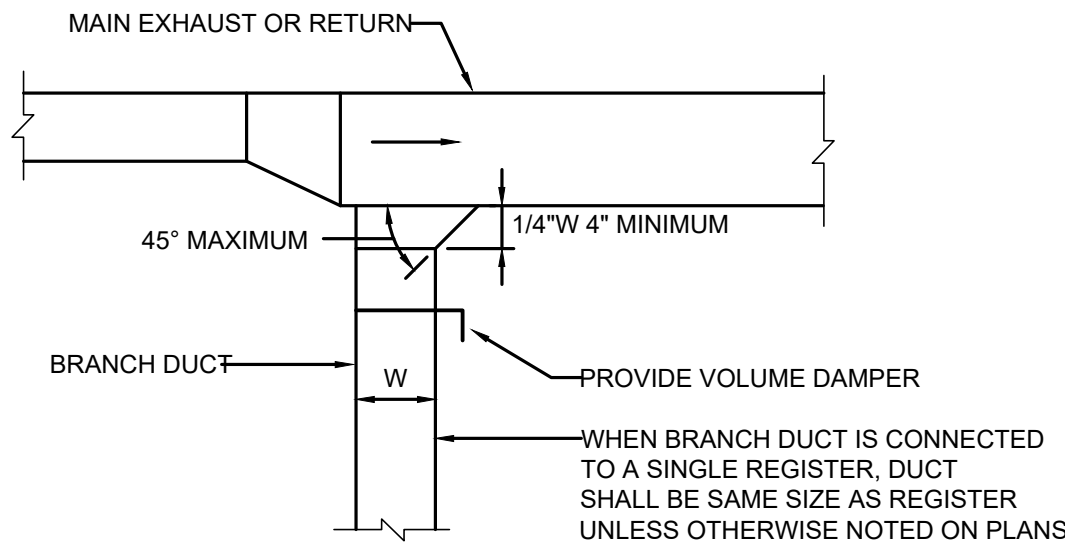
LOUVER SCHEDULE											LX
PLAN NO	MANUFACTURER MODEL	TYPE	SERVICE	AIRFLOW CFM	FREE AREA SF	VELOCITY FPM	AIR PRESS DROP IN WG	DIMENSIONS			REMARKS
								DEPTH IN	WIDTH IN	HEIGHT IN	
L-1	GREENHECK ESD-403-18x26	DRAINABLE	EXHAUST	900	1.3	673	0.07	4	18	26	SEE NOTES
NOTES: 1. PROVIDE 2-COAT 70% KYNAR 500 FINISH. ARCHITECT TO SELECT COLOR. 2. PROVIDE BIRDSCREEN. 3. PROVIDE LINTEL. 4. THE BEGINNING POINT OF WATER PENETRATION IS 1007 FPM. 5. LOUVERS ARE ACMA CERTIFIED.											

FAN SCHEDULE															EF X	
PLAN NO	MANUFACTURER MODEL	LOCATION	AREA SERVED	FAN TYPE	FAN PERFORMANCE			ELECTRICAL DATA				dBA	WEIGHT LBS	REMARKS		
					CFM	TOTAL SP	FAN RPM	HP/ WATTS	RPM	VOLTS/Ø	DRIVE					
EF-1	GREENHECK SQ-100-VG	MENS	BATHROOMS	CENTRIFUGAL	900	0.75	1591	1/4 HP	1800	115/1	DIRECT	58	55	SEE NOTES		
NOTES: 1. PROVIDE SOLID STATE SPEED CONTROL, NEMA-1 TOGGLE SWITCH, BIRDSCREEN & BACKDRAFT DAMPER. 2. PROVIDE ELECTRICAL DISCONNECT, VIBRATION ISOLATION SUPPORT RODS WITH MOUNTING BRACKETS, SPEED CONTROLLER AND ROUND DUCT CONNECTION. 3. UNIT SHALL BE CONTROLLED THROUGH TIME CLOCK TO BE ENABLED DURING PARK OCCUPIED HOURS.																

ELECTRIC UNIT HEATER SCHEDULE												EUH X
PLAN NO	MANUFACTURER MODEL	LOCATION	HEATING CAP MBH	KW	ELECTRICAL			DIMENSIONS (IN.)			WEIGHT LBS	REMARKS
					VOLTS/Ø	AMPS	WATTS	LENGTH	WIDTH	HEIGHT		
EUH-1	INDEECO CDIRE-937I	MENS	13.7	4	240/1	16.7	-	23-3/4	22-1/8	7	37	SEE NOTES
EUH-2	INDEECO CDIRE-937I	WOMENS	13.7	4	240/1	16.7	-	23-3/4	22-1/8	7	37	SEE NOTES
EUH-3	INDEECO CCI-931I	JANITORS	5.1	-	240/1	12.5	1500	18-1/4	14-3/8	3-3/4	23	SEE NOTES
NOTES: 1. MOUNT THE UNIT HEATER WITH THE CEILING BRACKET FOR HORIZONTAL DISCHARGE AS PER MANUFACTURER'S RECOMMENDATION WITH ASSOCIATED HARDWARE AND SUPPORTS. 2. PROVIDE UNIT WITH WALL MOUNTED THERMOSTAT WITH VANDAL RESISTANT COVER. 3. MOUNT THE UNIT AT LEAST 8 FEET ABOVE THE FINISHED FLOOR AND AT LEAST 12 INCHES FROM WALL AS PER MANUFACTURER'S RECOMMENDATION.												



IN-LINE FAN DETAIL
NOT TO SCALE



PLAN VIEW

EXHAUST AND/OR RETURN BRANCH DUCT DETAIL
NOT TO SCALE

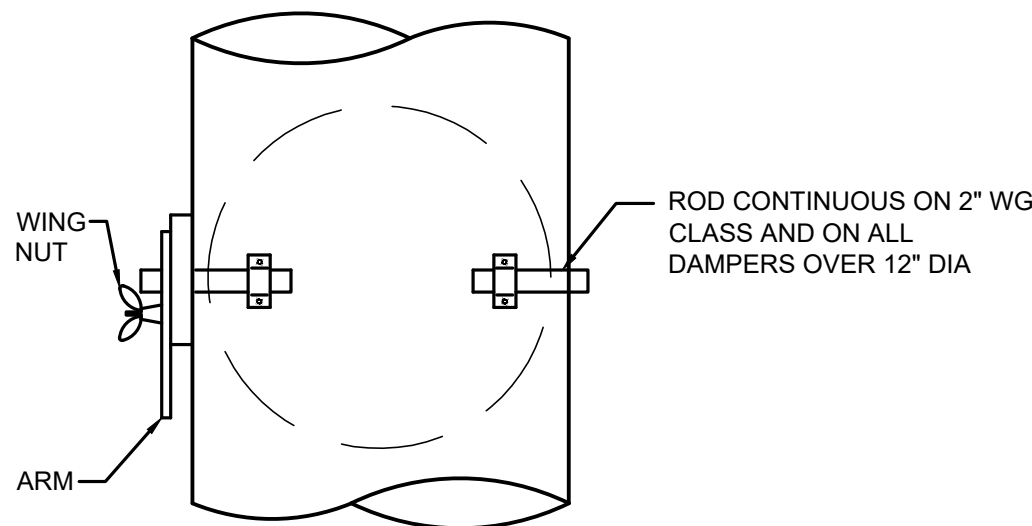


FIG. B
ROUND DAMPER

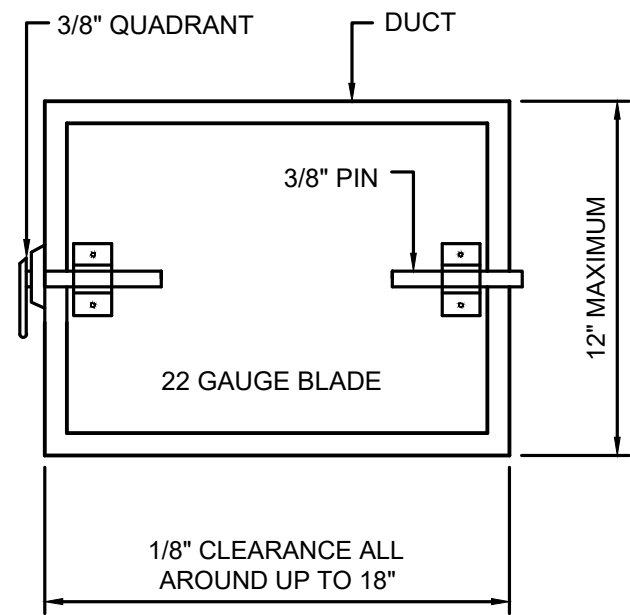
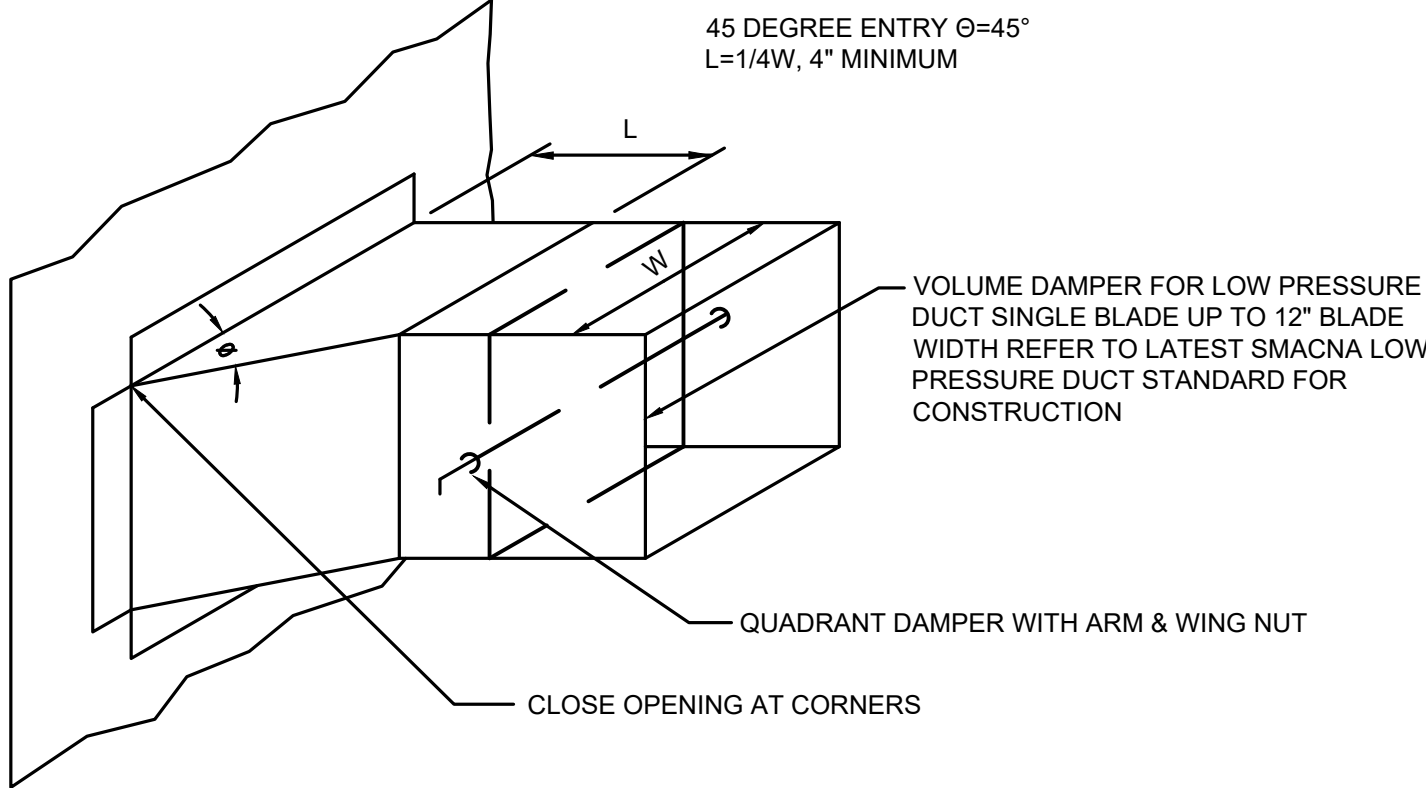


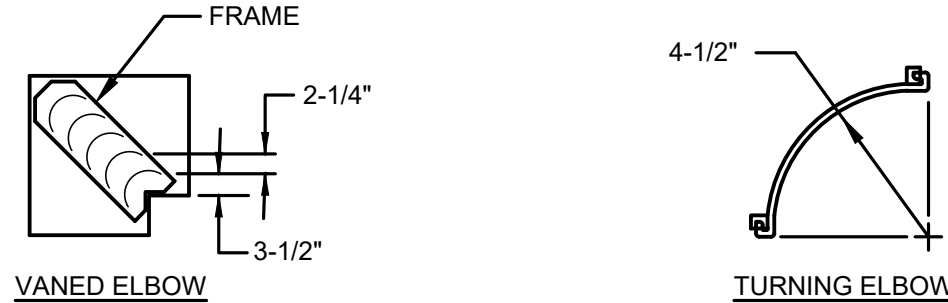
FIG. A
RECTANGULAR DAMPER

RECTANGULAR VOLUME DAMPERS EXCEEDING 1.5 SF SHALL BE OPPOSED BLADE DAMPER TYPE

VOLUME DAMPERS - SINGLE BLADE TYPE
NOT TO SCALE

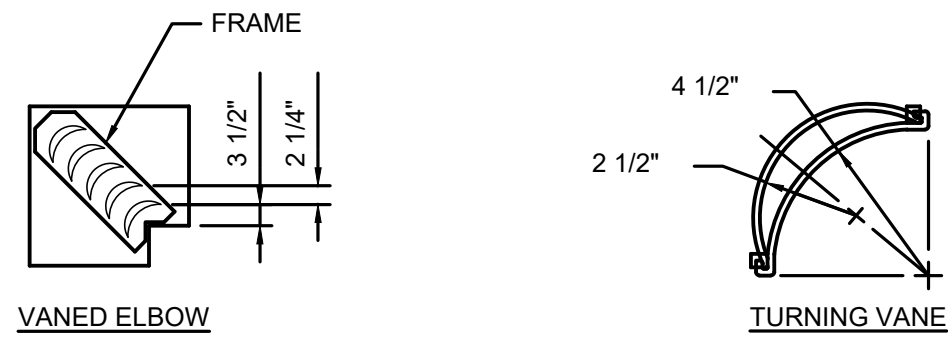


BRANCH CONNECTION DETAIL
NOT TO SCALE



- NOTES:
1. LOCKING LUGS INTEGRAL WITH VANE.
2. MAXIMUM UNSUPPORTED VANE LENGTH 36\"/>

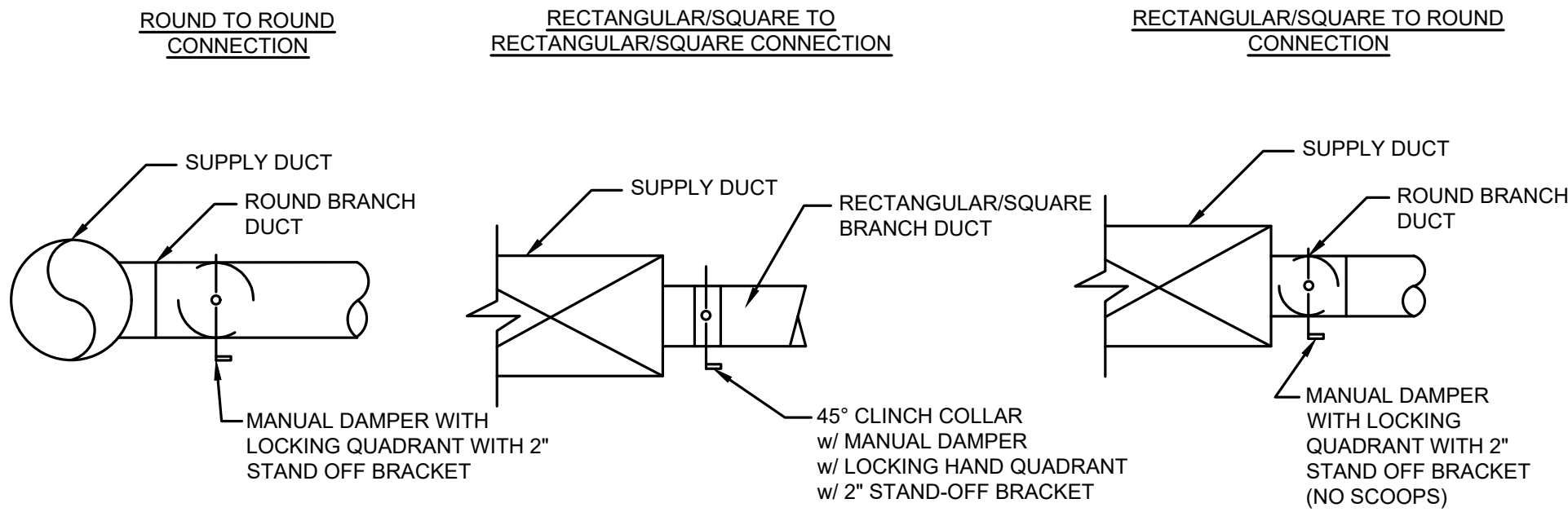
SINGLE THICKNESS
DUCTWORK UNDER 1200 FPM



DOUBLE THICKNESS
DUCTWORK OVER 1200 FPM

- NOTES:
1. LOCKING LUGS INTEGRAL WITH VANE.
2. MAXIMUM UNSUPPORTED VANE LENGTH 48\"/>

TURNING VANES FOR SQUARE ELBOWS
NOT TO SCALE



BRANCH DUCT CONNECTION DETAIL
NOT TO SCALE

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MECHANICAL SCHEDULES
FOR
ESTELL MANOR PARK
BATH HOUSE REPLACEMENT AND
SITE IMPROVEMENTS

ESTELL MANOR
ATLANTIC COUNTY NEW JERSEY

DATE: 09/04/2026	DESIGNED BY: ST	SCALE:	PROJECT NUMBER: 3581.027
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PLUMBING SPECIFICATION

1. GENERAL

- A. ALL WORK AND MATERIALS SHALL COMPLY WITH APPLICABLE REVISIONS OF THE 2015 NATIONAL STANDARD PLUMBING CODE.
- B. IF ANY UNEXPECTED DISCOVERY OF SUSPECTED HAZARDOUS MATERIALS IS MADE DURING THE COURSE OF WORK, THE CONTRACTOR SHALL REPORT THE DISCOVERY IMMEDIATELY TO THE OWNER. THE CONTRACTOR SHALL STOP ANY WORK THAT MAY DISTURB THE SUSPECTED HAZARDOUS MATERIAL. CONTRACTOR SHALL RESUME WORK AFTER ALL HAZARDOUS MATERIAL HAS BEEN REMEDIATED.
- C. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTION CERTIFICATES AND MAKE AVAILABLE AT THE COMPLETION OF THE WORK.
2. WORK
- A. IT IS THE INTENT OF THESE SPECIFICATIONS TO HAVE THE CONTRACTOR PROVIDE FOR THE FURNISHING OF ALL LABOR, MATERIALS, PROTECTION AND SUPERVISION NECESSARY AND REQUIRED TO COMPLETE THE PLUMBING WORK AS INDICATED ON THE DRAWINGS AND DESCRIBED OR REFERRED TO IN THESE SPECIFICATIONS.
- B. ALL PLUMBING AND DRAINAGE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE PERTINENT REQUIREMENTS OF THE 2015 NATIONAL PLUMBING CODE, HEALTH DEPARTMENT AND OTHER AGENCIES OR DEPARTMENTS HAVING JURISDICTION.
- C. ALL WORK SHOWN ON THE DRAWINGS IS DIAGRAMMATIC AND SHALL BE INSTALLED TO FIT ACTUAL BUILDING CONDITIONS, ALL SUBJECT TO APPROVAL. THE CONTRACTOR SHALL AS PART OF THIS CONTRACT, FURNISH ALL INCIDENTALS SUCH AS PIPES, FITTINGS, VALVES, PIPE HANGERS AND SUPPORTS, ETC, AND ALL REMOVALS, TESTING, CLEANING AND MISCELLANEOUS ITEMS NECESSARY TO LEAVE EACH SYSTEM COMPLETE IN EVERY DETAIL AND READY FOR OPERATION.
- D. IF MENTION HAS BEEN OMITTED IN THE SPECIFICATIONS OF ANY WORK SHOWN ON THE DRAWINGS OR IF WORK NOT SHOWN ON THE DRAWINGS IS CALLED FOR IN THE SPECIFICATIONS, SAME SHALL BE INCLUDED AS PART OF THE WORK OF THE CONTRACTOR.
- E. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND NEW MATERIALS REQUIRED, AS INDICATED ON THE DRAWINGS, AND IN SPECIFICATIONS.
- F. CONTRACTOR TO COORDINATE WITH OTHER TRADES AND EXISTING CONDITIONS OF THE JOB SITE AND MAINTAIN REQUIRED CEILING HEIGHTS AND SPACE CONDITIONS.

3. RELATED WORK ON OTHER DRAWINGS

- A. ARCHITECTURAL AND INTERIOR DESIGN
- B. ELECTRICAL CONDUITS, POWER WIRING, ETC, FOR EQUIPMENT
- C. HEATING, VENTILATING AND AIR CONDITIONING

4. OPENINGS AND CHASES

- A. THE CONTRACTOR SHALL PROVIDE ALL OPENINGS, CHASES AND RECESSES THAT ARE REQUIRED FOR THE INSTALLATION OF THE WORK. THE CONTRACTOR SHALL DETERMINE IN AMPLE TIME, PRIOR TO THE INSTALLATION OF HIS WORK, ALL REQUIRED OPENINGS FOR ADMISSION OF FLOOR DRAINS, ETC.
- B. THE CONTRACTOR SHALL INSPECT THE GENERAL PLANS FOR PIPE SPACES AND SHALL PERFORM ALL NECESSARY CUTTING, IF SUCH IS REQUIRED, TO ALLOW FOR THE INSTALLATION OF THE WORK. THE CONTRACTOR SHALL REMOVE ALL SURPLUS MATERIALS AND DISPOSE OF SAME, AS AND WHERE DIRECTED BY THE OWNER.
- C. CUTTING SHALL BE DONE WITH HAND TOOLS. NO CUTTING BY JACKHAMMER SHALL BE PERMITTED.

5. CONSTRUCTION NOTES

- A. IT IS INTENDED THAT EACH PART OF THE SYSTEM SHALL BE COMPLETE IN ALL DETAILS AND WATER LINES PROVIDED WITH ALL CONTROL AND OR INSTALLATION VALVES NECESSARY FOR SATISFACTORY OPERATION AND MAINTENANCE.
- B. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE PLANS OF OTHER TRADES IN DETAIL AND ALL CONDITIONS RELATIVE TO THE INSTALLATION OF PIPING, PRIOR TO COMMENCING WORK.
- C. IN NO CASE SHALL PIPING BE EXPOSED BEYOND FINISHED LINES UNLESS SPECIFICALLY SHOWN OTHERWISE ON DRAWINGS. THE CONTRACTOR SHALL CONSULT WITH THE OTHER TRADES IN THE BUILDING AND INSTALL PIPING IN SUCH A WAY AS TO MINIMIZE ANY INTERFERENCE WITH THE WORK OF OTHER TRADES.
- D. ALL WATER PIPING SHALL BE CONTINUOUSLY SLOPED SO AS TO DRAIN WITHOUT POCKETING BY GRAVITY. ALL BRANCHES SHALL BE CONTINUOUSLY SLOPED WITHOUT POCKETING AND SHALL NOT BE TRAPPED.
- E. ALL PIPING SHALL BE INSTALLED SO AS TO AVOID DUCTS AND ELECTRICAL OUTLETS. PRIOR TO THE INSTALLATION OF ANY PLUMBING, THE CONTRACTOR SHALL CONSULT WITH ALL OTHER AFFECTED TRADES, SO AS TO FACILITATE THE ERECTION OF THE EQUIPMENT.
- F. AFTER CUTTING, ALL PIPES SHALL BE REAMED OUT TO FULL BORE AND BEFORE ERECTION THE INSIDE OF ALL PIPES SHALL BE THOROUGHLY CLEANED.
- G. CONNECT NEW TO EXISTING IN A NEAT AND APPROVED MANNER. RESTORE EXISTING WORK DISTURBED TO ORIGINAL CONDITION.
- H. PROVIDE ALL CAPS, VALVES AND OUTLETS AS REQUIRED ON EXISTING PIPING.
- I. THE EXISTING PLUMBING SYSTEM SHALL BE LEFT IN PERFECT WORKING ORDER UPON COMPLETION OF THIS PROJECT.

6. MATERIALS - GENERAL REQUIREMENTS

- A. ALL MATERIALS SHALL BE NEW AND THE BEST OF THEIR RESPECTIVE KINDS, SUITABLE FOR THE CONDITIONS AND DUTIES IMPOSED UPON SAME AT THE BUILDING. MATERIALS SHALL MATCH EXISTING FOR SIMILAR SERVICE EXCEPT AS OTHERWISE NOTED HEREIN. THEY SHALL GENERALLY BE OF REPRESENTATIVE MANUFACTURER. BRAND NAMES ARE SPECIFIED TO INDICATE A STANDARD OF QUALITY ONLY.
- B. MISCELLANEOUS
- a. PROVIDE THE FOLLOWING:
- SCAFFOLDING, RIGGING HOISTING
 - CUTTING AND PATCHING, AS REQUIRED FOR PLUMBING WORK
 - RUBBISH REMOVAL
 - SLEEVES AND OPENINGS (WATERPROOF SLEEVES AND FLASHING THRU WATERPROOF CONSTRUCTION)
 - CAULKING, PACKING AND FILLING OF SLEEVES AND OPENINGS
 - OPERATING AND MAINTENANCE INSTRUCTIONS
 - ACCESS DOORS FOR VALVES
 - SPARE PARTS AND TOOLS
 - PROTECTION OF WORK DURING CONSTRUCTION
 - ADJUSTING AND BALANCING
 - IDENTIFICATION: VALVE TAGS, VALVE TAG SCHEDULES
 - HANGER AND SUPPORTS FOR PIPING AND EQUIPMENT
 - CORE DRILLING EXISTING SLABS

7. DRAINAGE SYSTEM

- A. SOIL, WASTE AND VENT PIPING SHALL BE CAST IRON "HUB & SPIGOT" ASTM A74 AND ANSI A401.1. NO-HUB CAST IRON PIPE SHALL BE PERMITTED ON ABOVE GROUND APPLICATIONS.
- B. ALL CAST IRON SOIL PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE (CISPI) AND BE LISTED BY NSF INTERNATIONAL.
- C. PIPING SUPPORTS SHALL BE SPACED AT FIVE FOOT INTERVALS AND AT EVERY HORIZONTAL CHANGE IN DIRECTION.
- D. FOR DRAINAGE PIPING, SCREW PLUG CLEANOUTS SHALL BE PROVIDED AT EACH CHANGE OF DIRECTION.
- E. FIXTURE TRAPS AND WASTE PIPING EXPOSED TO VIEW SHALL BE CHROME-PLATED BRASS.
- F. INDIRECT WASTE PIPING SHALL BE COPPER TYPE "L".

8. WATER PIPING

- A. THE CONTRACTOR SHALL INSTALL NEW DOMESTIC HOT AND COLD WATER PIPING CONNECTING TO FIXTURES REQUIRING SAME AS INDICATED ON THE DRAWINGS.
- B. PIPING CONCEALED ABOVE SUSPENDED CEILINGS, OR WITHIN PARTITIONS, SHALL BE COPPER, TYPE "L" ASTM B88, WITH MATCHING FITTINGS AND CONFORMING TO THE REQUIREMENTS OF ANSI B16.18. JOINTS SHALL BE LEAD FREE SOLIDS OR MECHANICAL COMPRESSION TYPE.
9. HANGERS AND SUPPORTS
- A. ALL PIPING SHALL BE SUBSTANTIALLY SUPPORTED FROM THE BUILDING STRUCTURE. ALL HANGERS, RODS AND SUPPORTS SHALL BE SPECIFICALLY APPROVED FOR USE INTENDED. HANGERS AND SUPPORTS SHALL BE INSTALLED IN STRICT CONFORMITY WITH ALL APPLICABLE CODE REQUIREMENTS.
- B. WHERE OVERHEAD CONSTRUCTION DOES NOT PERMIT FASTENING OF HANGER RODS, INSERTS, ETC IN REQUIRED LOCATIONS, THE CONTRACTOR SHALL PROVIDE ADDITIONAL STEEL FRAMING AS REQUIRED AND APPROVED.
- C. EXPANSION SHIELDS SHALL BE PROVIDED TO SUPPORT HANGER RODS AT REQUIRED INTERVALS. EXPANSION SHIELDS SHALL BE "PHILLIPS" ANCHORS, HILTI CO OR APPROVED EQUAL.
- D. CHAINS, STRAPS, PERFORATED BARS OR WIRE HANGERS SHALL NOT BE PERMITTED.

10. VALVES

- A. THE CONTRACTOR SHALL FURNISH ALL VALVES, AS INDICATED ON THE DRAWINGS, OR AS MAY BE REQUIRED FOR THE PROPER CONTROL OF THE PIPE LINES INSTALLED UNDER THESE SPECIFICATIONS, SO THAT ANY FIXTURE, LINE OR PIECE OF APPARATUS MAY BE ISOLATE FOR REPAIR WITHOUT INTERRUPTION OF SERVICE TO THE REST OF THE BUILDING. ALL VALVES SHALL BE OF ONE MANUFACTURER.
- B. VALVES SHALL BE AS MANUFACTURED BY MILWAUKEE VALVE MFG COMPANY, NIBCO INC, CRANE, JENKINS OR APPROVED EQUAL.
- C. VALVE PRESSURE AND TEMPERATURE RATINGS: NOT LESS THAN INDICATED AND AS REQUIRED FOR SYSTEM PRESSURES AND TEMPERATURES.
- D. VALVE SIZES: SAME AS UPSTREAM PIPING UNLESS OTHERWISE INDICATED.
- E. ALL GATE VALVES WITHIN THE BUILDING SHALL BE WEDGE GATE VALVES WITH PAINTED IRON WHEEL HANDLES. SHALL HAVE GLAND FOLLOWERS IN STIFFING BOXES AND SHALL HAVE BACKSEATS. SO THAT THEY MAY BE REPAKED WHILE OPEN AND UNDER PRESSURE. ALL VALVES SHALL HAVE THE NAME OF THE MANUFACTURER AND WORKING PRESSURE CAST OR STAMPED THEREON.
- F. THE CONTRACTOR SHALL PROVIDE SOLDERED-TO-SCREWED ADAPTERS AS REQUIRED.
- G. BRASS BALL VALVES: TWO-PIECE, FULL PORT, BRASS BALL VALVES WITH BRASS TRIM, STANDARD: MSS SP-110, SWP RATING: 150 PSIG, CWP RATING: 600 PSIG, THREADED WITH PTFE OR TFE SEATS.
- H. BRONZE BALL VALVES: FULL-PORT, BRONZE BALL VALVE WITH BRONZE TRIM: STANDARD: MSS SP-110, SWP RATING: 150 PSI, CWP RATING: 600 PSI, THREADED WITH PTFE OR TFE SEATS.
- I. IRON BALL VALVES: FULL-PORT, CLASS 125, SPLIT BODY, ASTM A126 GRAY IRON WITH STAINLESS STEEL STEM & BALL, STANDARD: MSS SP-72, CWP RATING: 200 PSIG, FLANGED WITH PTFE OR TFE SEATS.
- J. BRONZE SWING CHECK VALVE: CLASS 125, BRONZE SWING WITH BRONZE DISC, ASTM B62 BRONZE, STANDARD MSS SP-80, TYPE 3, CWP RATING: 200 PSIG, HORIZONTAL FLOW, THREADED.
- K. IRON SWING CHECK VALVES: CLASS 125, WITH METAL SEATS, ASTM A126 GRAY IRON WITH BOLTED BONNET: STANDARD MSS SP-71, TYPE I, CWP RATING: 200 PSIG, CLEAR OR FULL WATERWAY BODY DESIGN, FLANGED WITH BRONZE TRIM.
- L. BRONZE GATE VALVE: CLASS 125, NRS BRONZE GATE VALVE, ASTM B62 BRONZE WITH INTEGRAL SEAT AND SCREW-IN BONNET, STANDARD MSS SP-80, TYPE I, CWP RATING: 200 PSIG, THREADED OR SOLDER JOINT, BRONZE STEM, SOLID WEDGE BRONZE DISC, MALLEABLE IRON HANDWHEEL.
- M. IRON GATE VALVES: CLASS 125, NRS, ASTM A126 GRAY IRON WITH BOLTED BONNET, STANDARD MSS SP-70, TYPE I, CWP RATING: 200 PSIG, FLANGED, BRONZE TRIM, SOLID WEDGE DISC.
- N. LUBRICATED PLUG VALVES: CLASS 125, REGULAR GLAND WITH THREADED ENDS, ASTM A48/A48M OR ASTM A126, CAST IRON WITH LUBRICATION SEALING SYSTEM: STANDARD MSS SP-78 TYPE II, CWP RATING: 200 PSIG, REGULAR OR SHORT PATTERN, PLUG: CAST IRON OR BRONZE WITH SEALANT GROOVE.

11. AIR CHAMBERS

- A. THE CONTRACTOR SHALL PROVIDE AIR CHAMBERS FOR ALL ISOLATED FIXTURES AT LEAST 12" HIGH AND OF SAME SIZE AS CONNECTING PIPING BUT NOT LESS THAN 1/2".

12. INSULATION

- A. ALL NEW COLD AND HOT WATER PIPING, INCLUDING MAINS, AND BRANCHES SHALL BE INSULATED WITH MINERAL-FIBER COVERING WITH FACTORY-APPLIED ALL-SERVICE JACKET "ASJ" WITH SELF-SEALING LAPS, MOLDED FITTINGS, SECURELY WIRED ON WITH COPPER WIRE IN THICKNESS SHOWN BELOW.
- B. INSULATION JACKETS SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS, AND A SMOKE DEVELOPED RATING OF 50 OR LESS.
- C. INSULATION SHALL BE AS MANUFACTURED BY CERTAINTEED, JOHNS-MANVILLE, OR APPROVED EQUAL.
- D. ALL INSULATED FITTINGS, SUCH AS, VALVES, FLANGES, ETC, SHALL BE COVERED IN A MANNER SIMILAR TO INSULATED PIPING. VALVE HANDLES SHALL NOT BE COVERED.

E. INSULATION COVERING SHALL BE CONTINUOUS THROUGH WALLS AND FLOORS.

- F. CONTRACTOR SHALL FURNISH AND INSTALL "INSUL-SHIELD MULTI-PURPOSE PIPE SADDLE" AS MANUFACTURED BY INSUL-ACOUSTIC CORP. INSUL-SHIELD SHALL BE INSTALLED AT EACH SUPPORT POINT WHEN THE PIPE IS ERECTED. THE THICKNESS OF PRESS-GLASS SUPPORT SEGMENTS SHALL BE EQUAL TO THE THICKNESS OF THE ADJOINING INSULATION WHEN LOAD IS APPLIED.
- G. PROVIDE "TRUEBRO" PROTECTION SHIELDS OVER ALL EXPOSED LAVATORY TRAPS, DRAIN PIPING AND SHUT-OFF VALVES.
- H. INSULATION THICKNESS:
- a. DOMESTIC HOT AND RECIRCULATION HOT WATER:
- 1 1/4" AND SMALLER: MINERAL-FIBER, PREFORMED PIPE INSULATION, TYPE I, 1" THICK. MINIMUM CONDUCTIVITY: 0.21-0.28, BTU"IN/(H"FT2"°F).
 - 1 1/2" AND LARGER: MINERAL-FIBER, PREFORMED PIPE INSULATION, TYPE I, 1 1/2" THICK. MINIMUM CONDUCTIVITY: 0.21-0.28, BTU"IN/(H"FT2"°F).
- b. DOMESTIC COLD WATER:
- 1" AND SMALLER: MINERAL-FIBER, PREFORMED PIPE INSULATION, TYPE I, 1/2" THICK WITH VAPOR BARRIER. MINIMUM CONDUCTIVITY: 0.21-0.27, BTU"IN/(H"FT2"°F).
 - 1 1/4" AND LARGER: MINERAL-FIBER, PREFORMED PIPE INSULATION, TYPE I, 1" THICK WITH VAPOR BARRIER. MINIMUM CONDUCTIVITY: 0.21-0.27, BTU"IN/(H"FT2"°F).
- c. STORM WATER AND OVERFLOW:
- ALL SIZES: FLEXIBLE ELASTOMERIC, 1" THICK WITH VAPOR BARRIER.
 - ALL SIZES: MINERAL-FIBER, PREFORMED PIPE INSULATION, TYPE I, 1" THICK WITH VAPOR BARRIER.
- d. ROOF DRAIN AND OVERFLOW DRAIN BOIES:
- FLEXIBLE ELASTOMERIC: 1" THICK WITH VAPOR BARRIER.
 - MINERAL-FIBER, PREFORMED PIPE INSULATION, TYPE I, 1" THICK WITH VAPOR BARRIER.

13. PLUMBING FIXTURES

- I. ALL FITTINGS, ESCUTCHEONS, FAUCETS, TRAPS, EXPOSED PIPING, ETC SHALL BE BRASS CHROME PLATED OVER NICKEL PLATE WITH POLISHED FINISH. ANY HANGER NUTS VISIBLE SHALL ALSO BE CHROME PLATED OVER NICKEL PLATE.
- J. BEFORE ROUGHING WORK IS STARTED, SUBMIT TO THE ARCHITECT COMPLETE FIGURED DRAWINGS AND CUTS OF EACH AND ALL OF THE PLUMBING FIXTURES, FITTINGS, TRIMMINGS, ETC AND SECURE APPROVAL BEFORE PROCEEDING WITH INSTALLATION. THESE DRAWINGS SHALL SHOW ACCURATELY THE LOCATIONS AND INDICATED IF AND WHERE DIMENSIONS ON ARCHITECTURAL DRAWINGS CONFLICT.
- K. PROVIDE ALL HANGERS, SUPPORTS, BRACKETS, ETC FOR THE PROPER INSTALLATION OF THE SINK, ETC REQUIRING SUPPORT. SUPPORTS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATION OF THE MANUFACTURER.

14. ALL PLUMBING FIXTURES AND TRIM SHALL COMPLY WITH THE LATEST EDITION OF THE NJ UNIFORM CONSTRUCTION CODE AND NSPC, LATEST EDITION.

15. PLUMBING SPECIALITIES

- A. SLEEVES
- a. THE CONTRACTOR SHALL PROVIDE 22 GAUGE, MINIMUM GALVANIZED IRON-SCHEDULE 40 THROUGHOUT, FOR INTERIOR WALLS, CEILINGS AND PARTITIONS.
- b. CAST IRON OR STEEL PIPING EXTENDED 2 INCHES ABOVE FINISHED FLOOR, BEAMS INTERIOR MACHINE ROOM FLOORS, SPRINKLERED AREA FLOORS, CONTINUOUSLY WELDED CENTER FLANGE THROUGH EXTERIOR FOUNDATION WALLS. SEAL PIPE WATERTIGHT IN THE SLEEVE.
- c. PROJECTING FLASHING TYPE
- THROUGH INTERIOR MEMBRANE WATERPROOFED FLOORS, EXCEPT AS NOTED, CAST IRON WITH INTEGRAL FLASHING FLANGE AND CLAMPING RING, JAY R. SMITH NO. 1760, OR APPROVED EQUAL.
 - ADJUST TO FLOOR CONSTRUCTION WITH GALVANIZED STEEL PIPE NIPPLE AND BOTTOM EXTENDING TWO INCHES ABOVE FINISHED FLOORS.
 - SEAL PIPE WATERTIGHT IN SLEEVE WITH ASPHALT OR MASTIC SEALANT.
- B. ESCUTCHEONS:
- a. CAST IRON OR CAST BRASS, DEEP TYPE, TO COVER SLEEVE HUBS OR FITTING PROJECTIONS. PROVIDE FOR EXPOSED PIPING THROUGH FLOORS, CEILINGS, WALLS AND PARTITIONS. CHROMIUM PLATED FINISH AT TILE WALLS.
- C. CLEANOUTS:
- a. PROVIDE CAST BRASS PLUGS, SIZED TO MATCH THE SIZE OF THE PIPE.
- b. FOR PIPING IN OR BACK OF WALLS AND PARTITIONS, PROVIDE CAST BRASS PLUGS WITH STAINLESS STEEL ACCESS COVER, JAY R. SMITH, SERIES 4400, OR AN APPROVED EQUAL.
- c. PROVIDE UNDERGROUND PIPING DUCT CAST IRON CLEAN-OUT WITH ROUND ADJUSTABLE SCORIATED NICKEL BRONZE TOP, JAY R. SMITH SERIES 4000.
- D. SHOCK ABSORBER DEVICES:
- a. PROVIDE SHOCK ABSORBING DEVICES TO PROTECT WATER SUPPLY PIPING FROM WATER HAMMER.
- b. SHOCK ABSORBERS SHALL BE SIOUX CHIEF SERIES 650 "HYDRA-RESTER AS INDICATED ON DRAWINGS. WHERE NOT SHOWN, LOCATE AND SIZE IN ACCORDANCE WITH STANDARDS ESTABLISHED BY THE PLUMBING AND DRAINAGE INSTITUTE, STANDARD PDI-WH 201, AND AS RECOMMENDED BY MANUFACTURER.
- c. PROVIDE ADEQUATE SUPPORT FOR SHOCK ABSORBING DEVICES AS APPROVED, TO PREVENT STRAIN ON PIPING.
- d. PROVIDE ACCESS DOOR OR LOCATE WHA IN ACCESSIBLE LOCATION.

16. TESTS

- A. UPON COMPLETE INSTALLATION OF ALL FIXTURES, EQUIPMENT, WATER AND WASTE PIPING, ETC UNDER THIS CONTRACT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER OF READINESS FOR INSPECTION AND MAKE ALL TESTS REQUIRED BY AUTHORITIES HAVING JURISDICTION. ALL TESTS SHALL BE COMPLETED BEFORE AN APPLICATION FOR FINAL ACCEPTANCE OF THE WORK WILL BE CONSIDERED.

17. DISSIMILAR METALS

- A. CONNECTIONS BETWEEN DISSIMILAR METALS, SUCH AS FERROUS AND NON-FERROUS, SHALL BE ISOLATED BY MEANS OF A DIELECTRIC MATERIAL SUCH AS TEFLON MICARTA OR SCREWED INSULATING UNIONS MANUFACTURED BY EPSCO SALES, INC. TO PREVENT GALVANIC CORROSION.

18. SHOP DRAWINGS

- A. SUBMIT TO THE ENGINEER FOR APPROVAL SIX (6) COPIES OF SHOP DRAWINGS AND MANUFACTURER'S MANUALS AND TECHNICAL DATA FOR THE FOLLOWING: ALL FIXTURES, EQUIPMENT, PIPING, INSULATION, VALVES, ETC.
- B. SHOP DRAWINGS SHALL INCLUDE DIMENSIONS, MATERIALS AND AUXILIARY EQUIPMENT.

19. SPECIFYING CONDITIONS

- A. IT SHALL BE MANDATORY FOR ALL BIDDERS TO VISIT THE SITE AND INSPECT ALL EXISTING

CONDITIONS FIRSTHAND. ARRANGEMENTS FOR INSPECTION SHALL BE FIRST CONFIRMED WITH THE OWNER.

- B. BEFORE STARTING ANY WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR EXAMINING ALL EXISTING CONDITIONS, AND THOROUGHLY CHECK DRAWINGS, SPECIFICATIONS, ADJOINING OR UNDERLYING CONDITIONS IN WHICH THE WORK OF THESE SPECIFICATIONS IS TO BE PERFORMED, AND ALL DIMENSIONS. EXECUTION OF WORK OF THESE DRAWINGS AND SPECIFICATIONS CONSTITUTES ACCEPTANCE BY THE CONTRACTOR OF THE BASE OF ADJOINING WORK AND OTHER CONDITIONS INCLUDING BUT NOT LIMITED TO THOSE ENUMERATED HEREIN AS SATISFACTORY IN EVERY RESPECT. LATER CLAIMS RESULTING FROM DEFECTS THAT WERE UNFORESEEN BECAUSE SUCH EXAMINATION WAS NOT MADE, SHALL NOT BE ALLOWED.

- C. THE CONTRACTOR SHALL REPORT IN WRITING, TO THE OWNER WITH A COPY TO THE ENGINEER, ANY AND ALL CONDITIONS WHICH MAY INTERFERE WITH OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK OF THESE SPECIFICATIONS.

- D. THE CONTRACTOR SHALL NOT COMMENCE ANY WORK UNTIL ANY AND ALL SUCH ABOVE-MENTIONED CONDITIONS HAVE BEEN CORRECTED.

- E. THE CONTRACTOR'S FAILURE TO NOTIFY THE OWNER AND/OR THE ENGINEER OF UNSATISFACTORY CONDITIONS WILL BE CONSTRUED AS AN ACCEPTANCE BY THE CONTRACTOR OF ALL CONDITIONS.

20. CLEANING

- A. THE CONTRACTOR SHALL NEATLY PILE, STORE AND PROTECT ALL MASTERS IN LOCATIONS ON THE PREMISES WHERE APPROVED AND DIRECTED BY THE OWNER. THE CONTRACTOR SHALL MAINTAIN A NEAT AND CLEAN WORKPLACE AT ALL TIMES DURING WORK OPERATIONS ON THE INTERIOR OF THE BUILDINGS, AND SHALL REMOVE ALL REFUSE AND DEBRIS FROM ALL AREAS, AND LEAVE ALL AREAS IN BROOM-CLEAN CONDITION UPON COMPLETION OF THE WORK.

21. DISINFECTION

- A. AT COMPLETION OF CONSTRUCTION, FLUSH AND CLEAN POTABLE WATER LINES IN CONFORMATION WITH AWWA C601-68, "DISINFECTING WATER MAINS". AFTER FINAL FLUSHING, MAKE A TEST OF THE RESIDUAL CHLORINE CONTENT OF THE WATER AND SUBMIT RESULTS TO THE ENGINEER AND AUTHORITIES HAVING JURISDICTION FOR APPROVAL.

22. GUARANTEES

- A. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM LEAKS OR DEFECTS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP SHALL BE REPLACED OR REPAIRED AS DIRECTED FOR THE DURATION OF GUARANTEED PERIOD (ONE YEAR). ANY DAMAGE TO THE WORK OF ALL TRADES RESULTING FROM SAME SHALL BE REPLACED OR REPAIRED AS DIRECTED BY ARCHITECT/OWNER.

08/28/26	ISSUE FOR BID				
09/04/26	ADDENDUM #1				
No.	Date	Revision	Revised By	Checked By	
SCALE IN FEET					

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PLUMBING SPECIFICATION FOR ESTELL MANOR PARK BATH HOUSE REPLACEMENT AND SITE IMPROVEMENTS

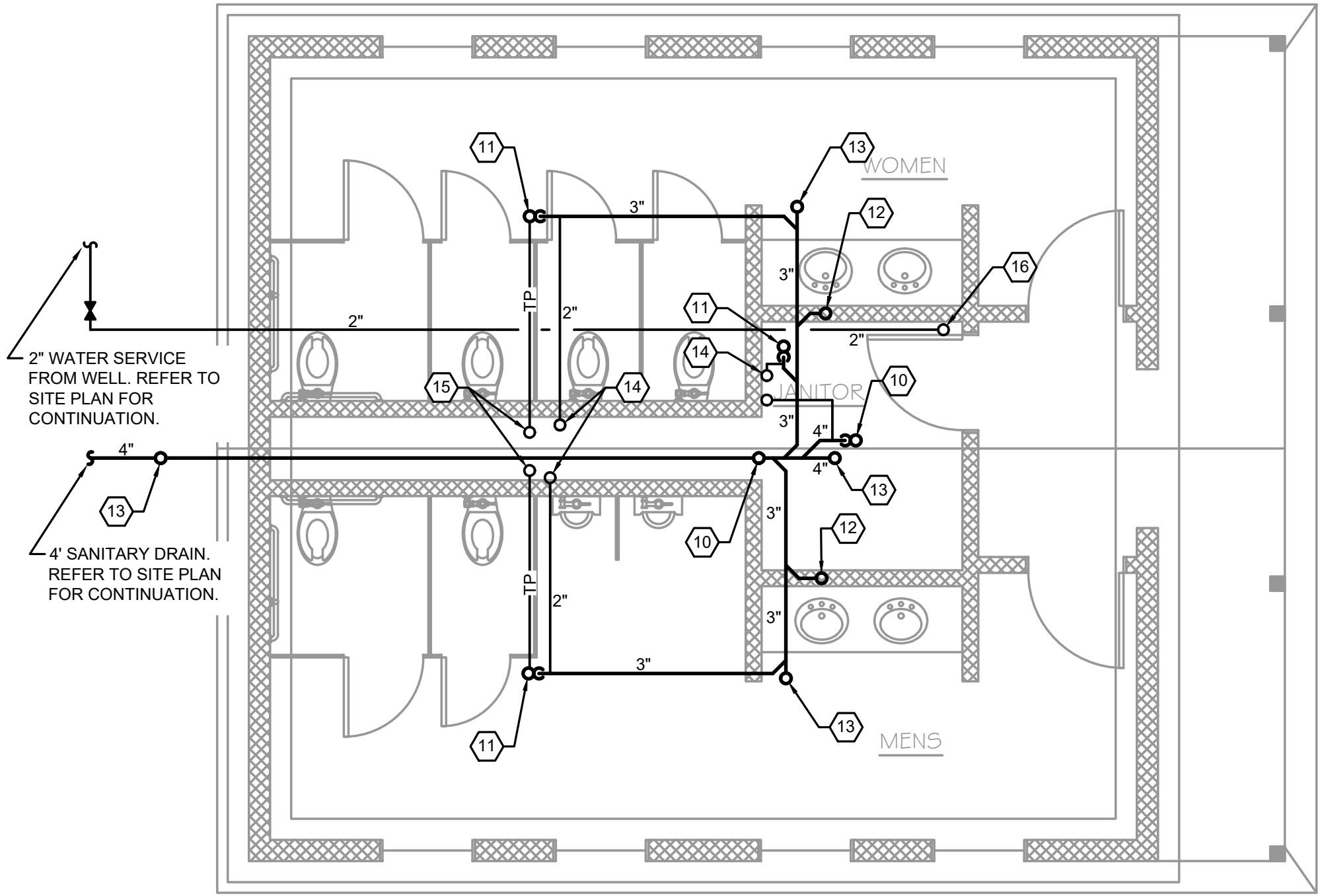
ESTELL MANOR ATLANTIC COUNTY NEW JERSEY

DATE: 09/04/2026
DESIGNED BY: IV
DRAWN BY: IV

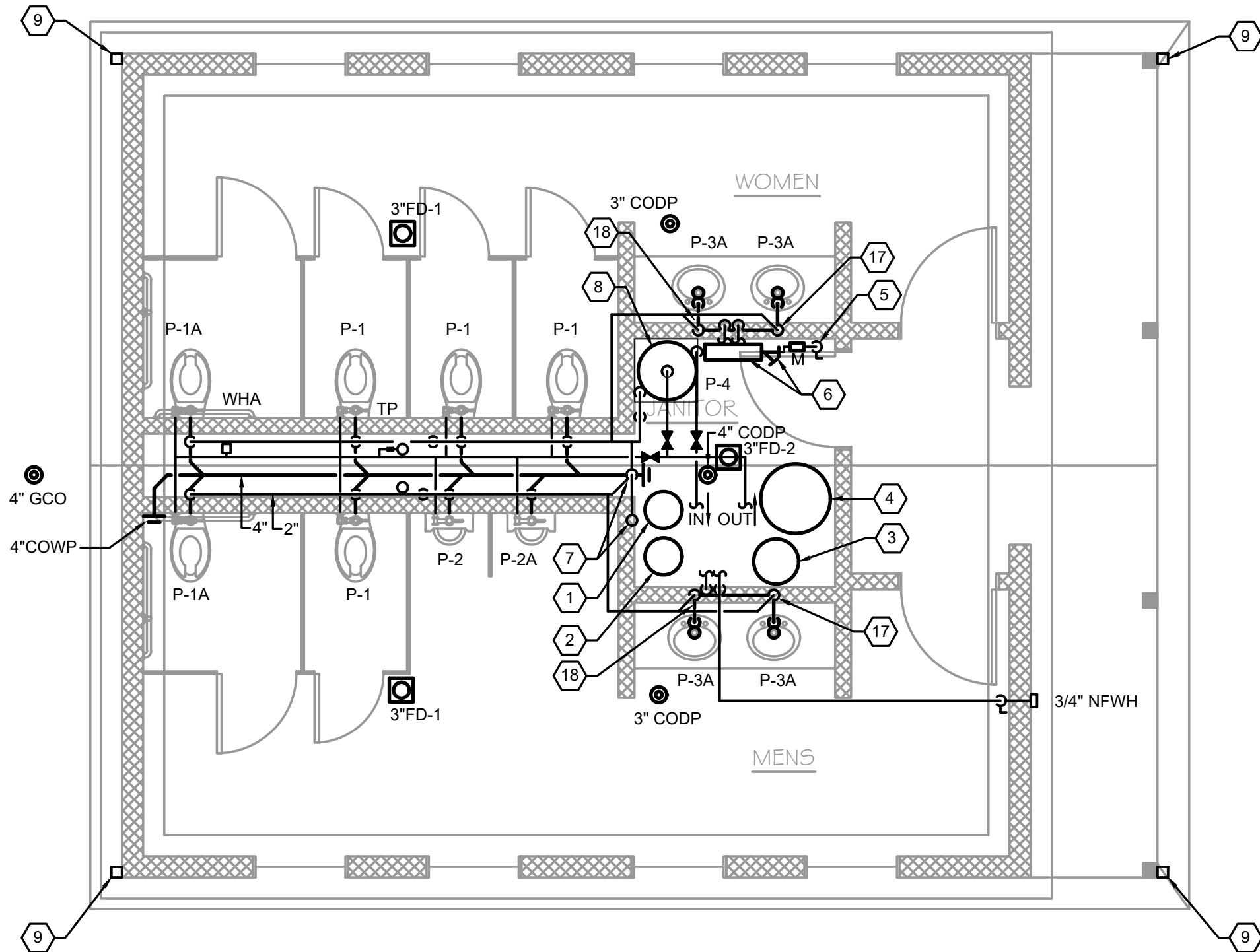
SCALE: IV
CHECKED BY: AHG
FIELD BOOK

PROJECT NUMBER: 3581.027
SHEET: P1.1

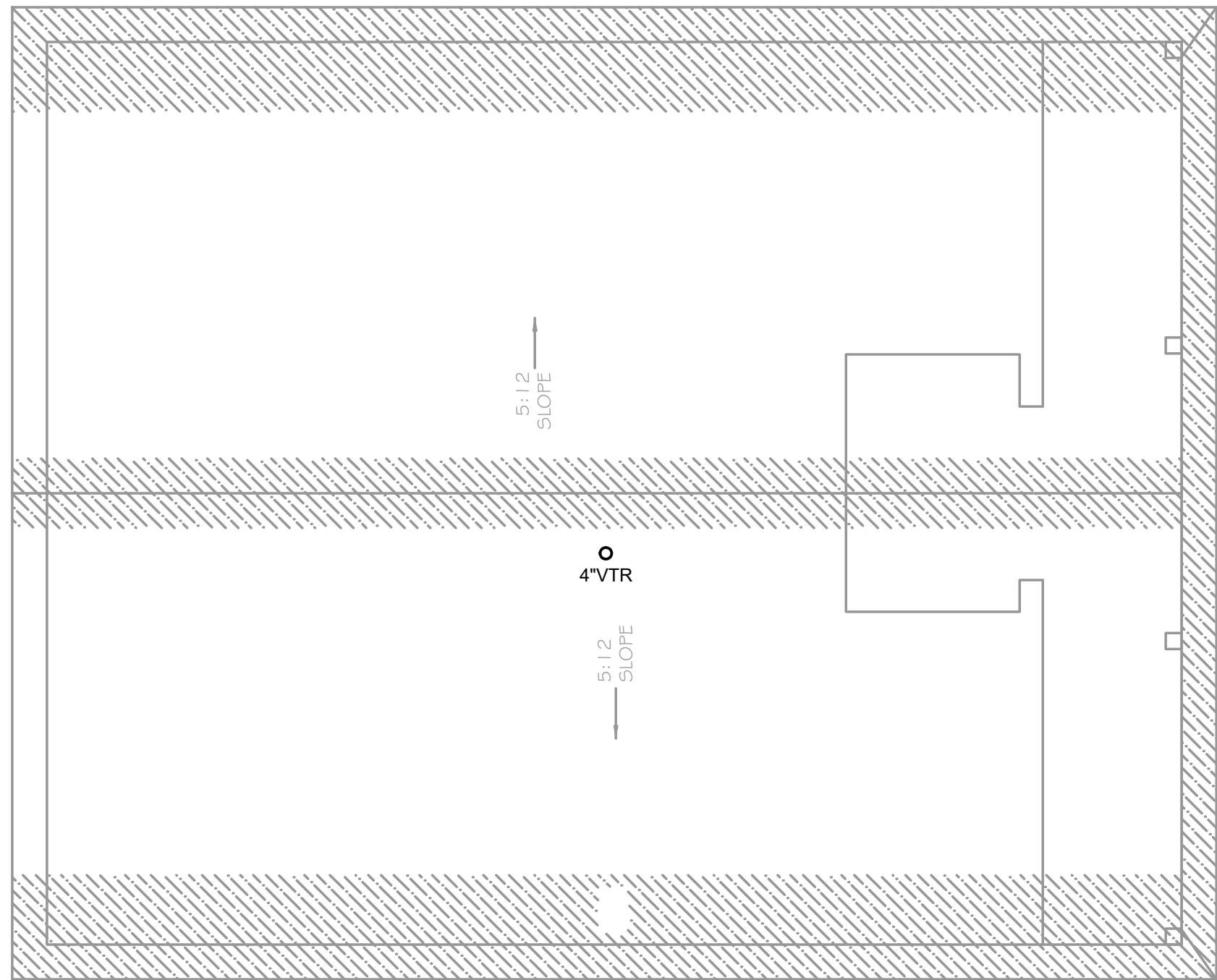
AMIN H. GOMAA, PE
PROFESSIONAL ENGINEER, NJ LIC. No. 24GE04842100



NEW WORK UNDERSLAB PIPING PLAN
SCALE: 1/4" = 1'-0"



NEW WORK ABOVE SLAB PLAN
SCALE: 1/4" = 1'-0"



NEW WORK ROOF PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES

- 1 NEUTRALIZER TANK #1, 14" DIA x 63". BY-PASS WITH TANK #2.
- 2 NEUTRALIZER TANK #2, 14" DIA x 63".
- 3 SOFTENER TANK, 17" DIA x 70.5" H.
- 4 BRINE TANK, 24" DIA x 50" H.
- 5 2" WATER SERVICE DN
- 6 2" RPZ & STRAINER
- 7 4" SAN DN & 4" V UP TO VTR
- 8 ELECTRIC WATER HEATER, SHELF MOUNTED.
- 9 DOWNSPOUT DISCHARGE OVER THE SPLASH BLOCK
- 10 4" SAN UP
- 11 3" SAN UP
- 12 2" SAN UP
- 13 SAN UP TO CLEANOUT. SIZE PER PLAN
- 14 2" VENT UP
- 15 1/2" TP UP
- 16 2" DOMESTIC WATER SERVICE UP
- 17 1 1/2" SAN DROP & 1 1/2" VENT RISE
- 18 2" SAN DN & 1 1/2" VENT RISE

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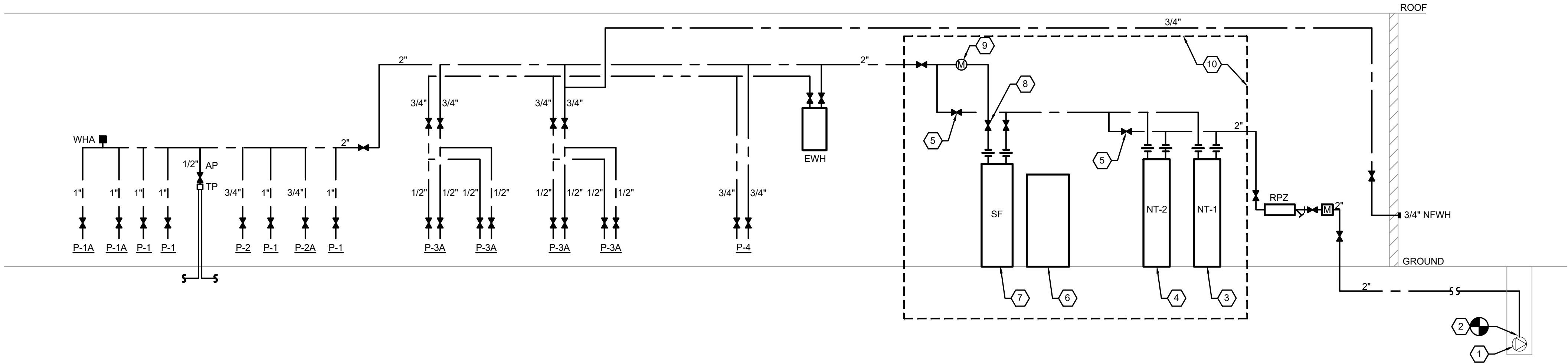
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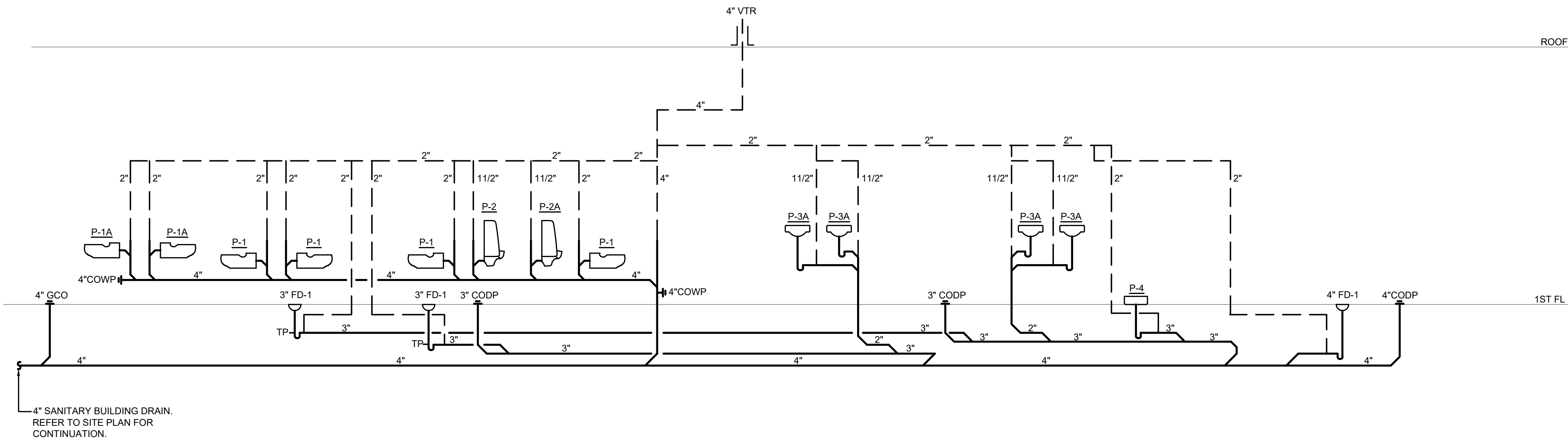
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PLUMBING NEW WORK PLAN FOR ESTELL MANOR PARK BATH HOUSE REPLACEMENT AND SITE IMPROVEMENTS			
ESTELL MANOR ATLANTIC COUNTY NEW JERSEY			
DATE: 09/04/2026	DESIGNED BY: IV	SCALE:	PROJECT NUMBER: 3581.027
DRAWN BY: IV	CHECKED BY: AHG	FIELD BOOK	SHEET: P2.0

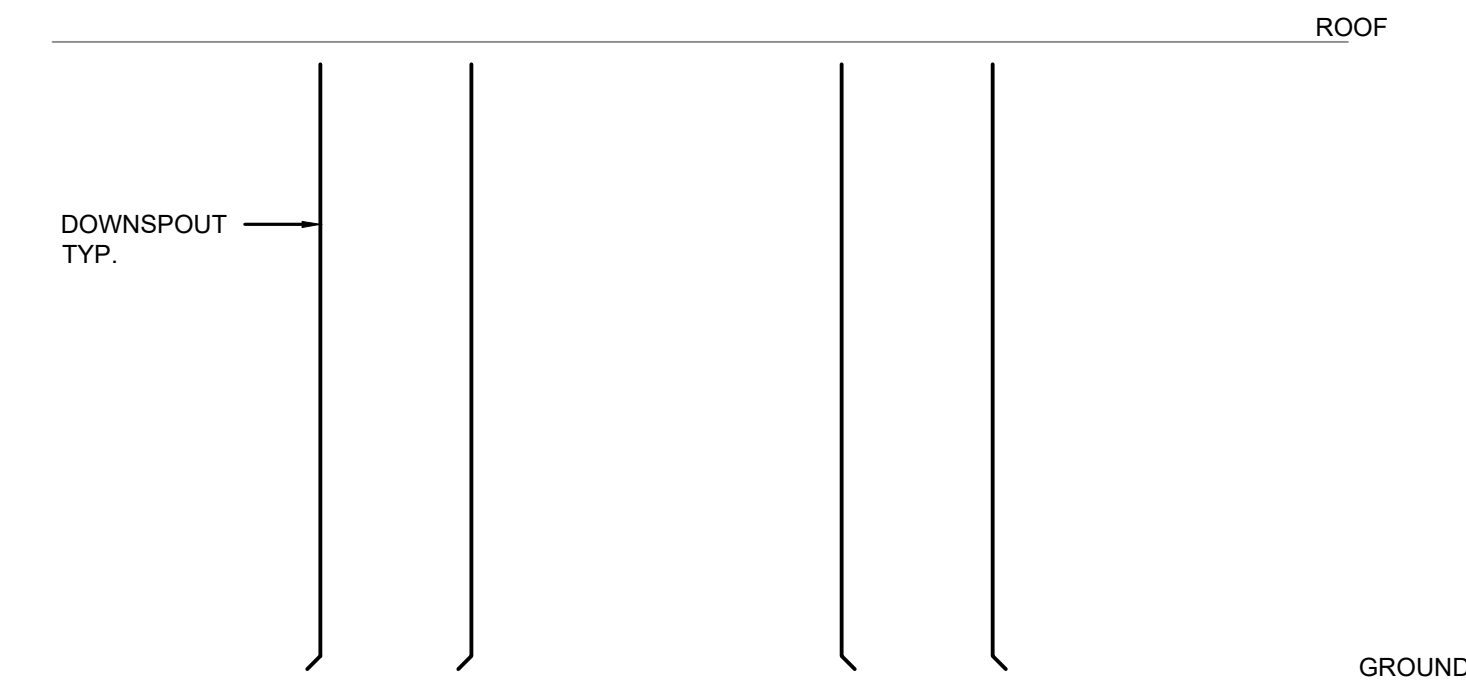
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DOMESTIC WATER RISER DIAGRAM
NOT TO SCALE



SANITARY RISER DIAGRAM
NOT TO SCALE

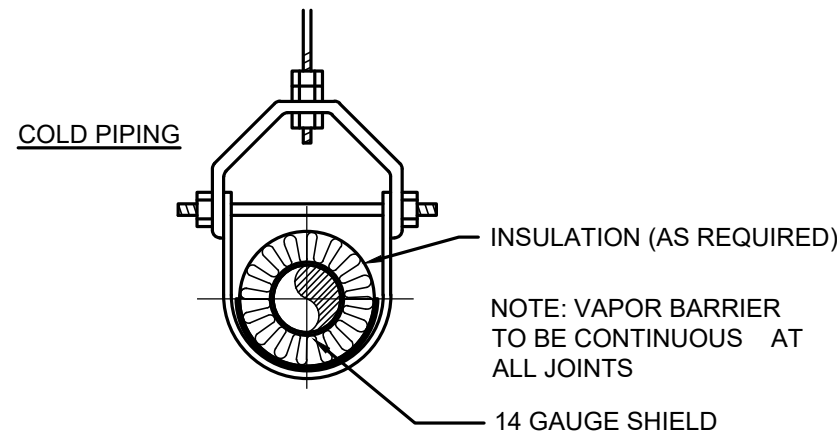
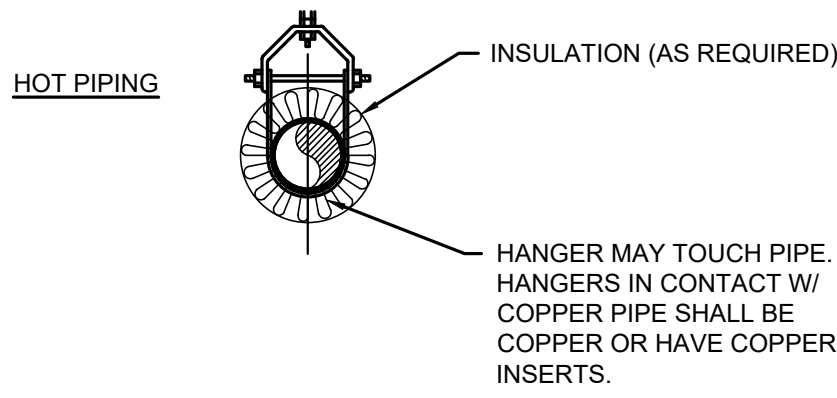


STORM WATER RISER DIAGRAM
NOT TO SCALE

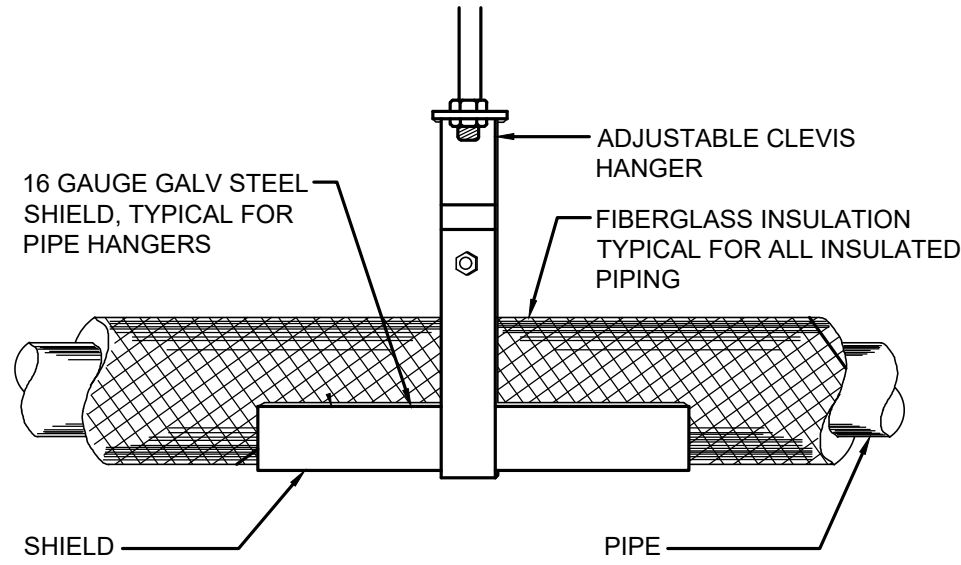
KEY NOTES

- EXISTING PUMP IN WELL. REFER TO SITE PLAN FOR EXACT LOCATION. PUMP CAPACITY TO BE EVALUATED.
- NEW 2" PIPE CONNECT TO EXISTING PUMP
- NT - NEUTRALIZING TANK STEP 1
- NT - NEUTRALIZING TANK STEP 2
- 2" BY-PASS WITH VALVE NC
- BRINE TANK
- SF - SOFTENER
- DIAPHRAGM VALVE
- FLOW METER
- REFER TO MANUFACTURER REQUIREMENTS FOR DETAILS. ALL PIPING, FITTINGS, AND OTHER COMPONENTS FOR THE WATER TREATMENT SYSTEM ARE TO BE PROVIDED BY PLUMBING CONTRACTOR.

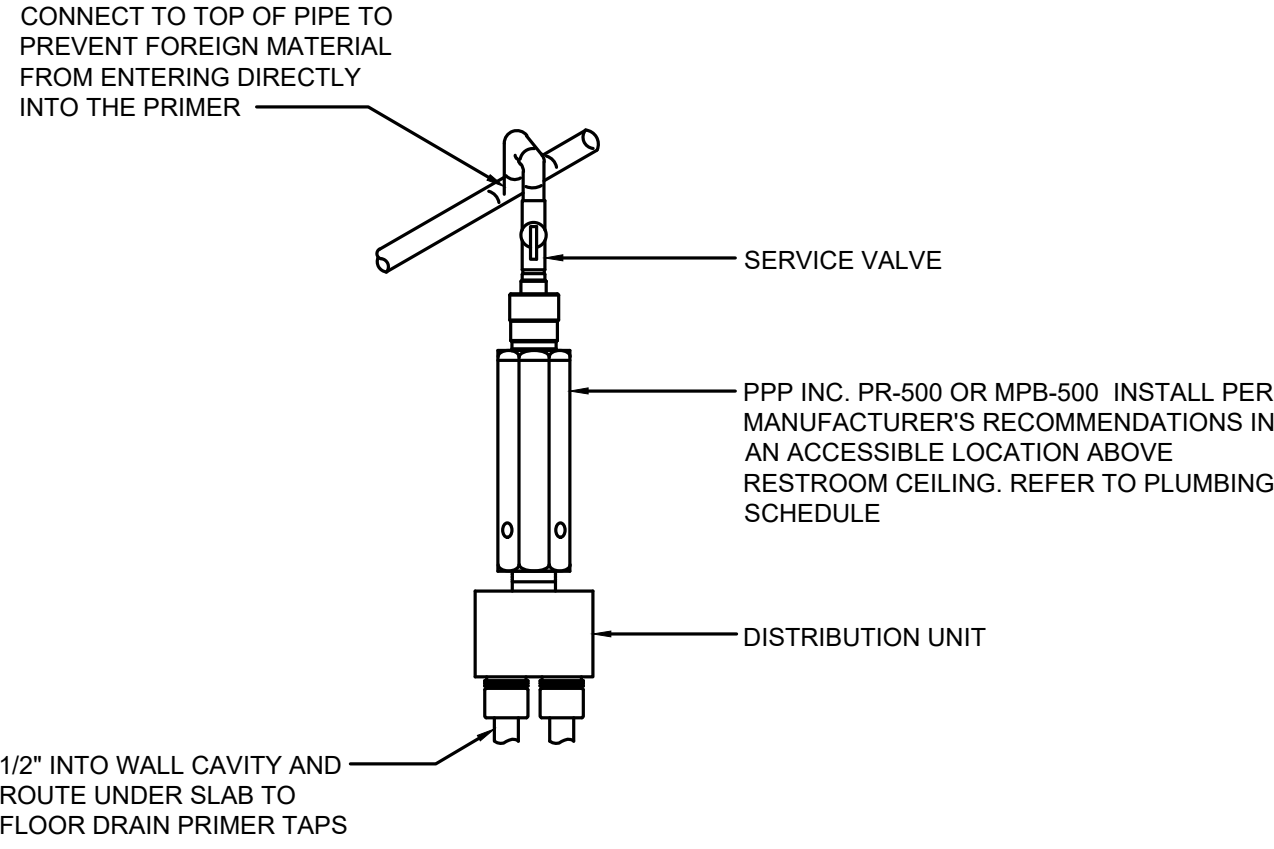
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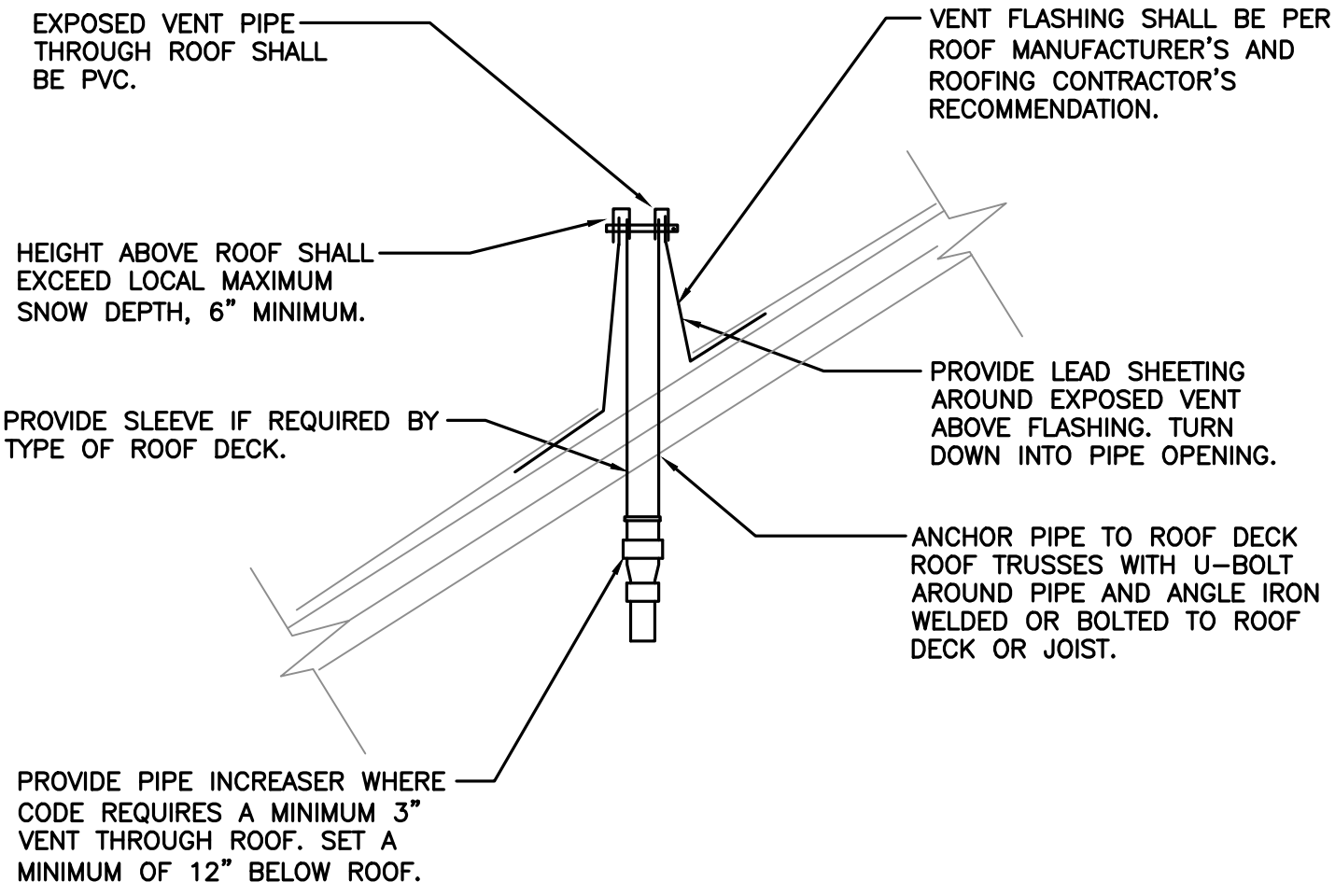
INSULATED PIPING PROTECTION DETAIL
NOT TO SCALE



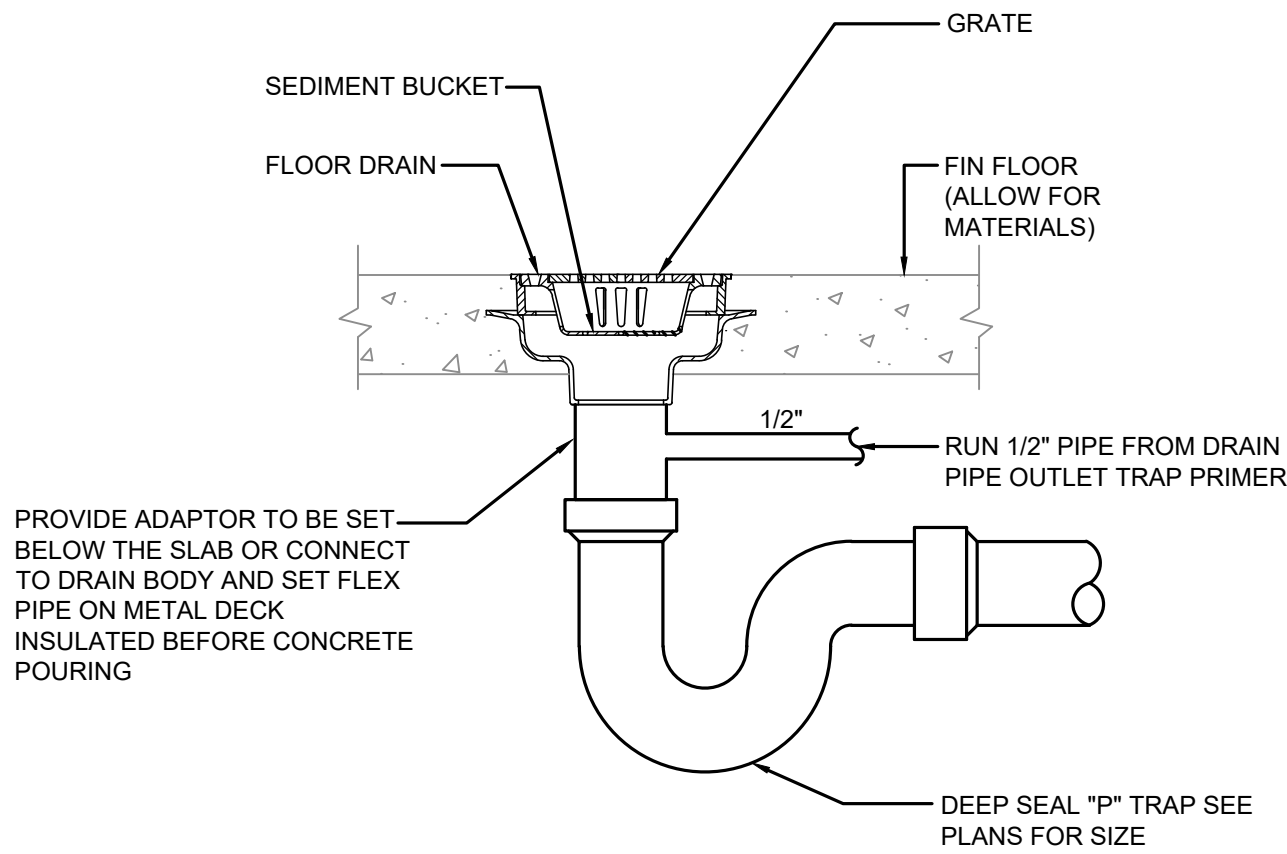
TYPICAL PIPE HANGER DETAIL
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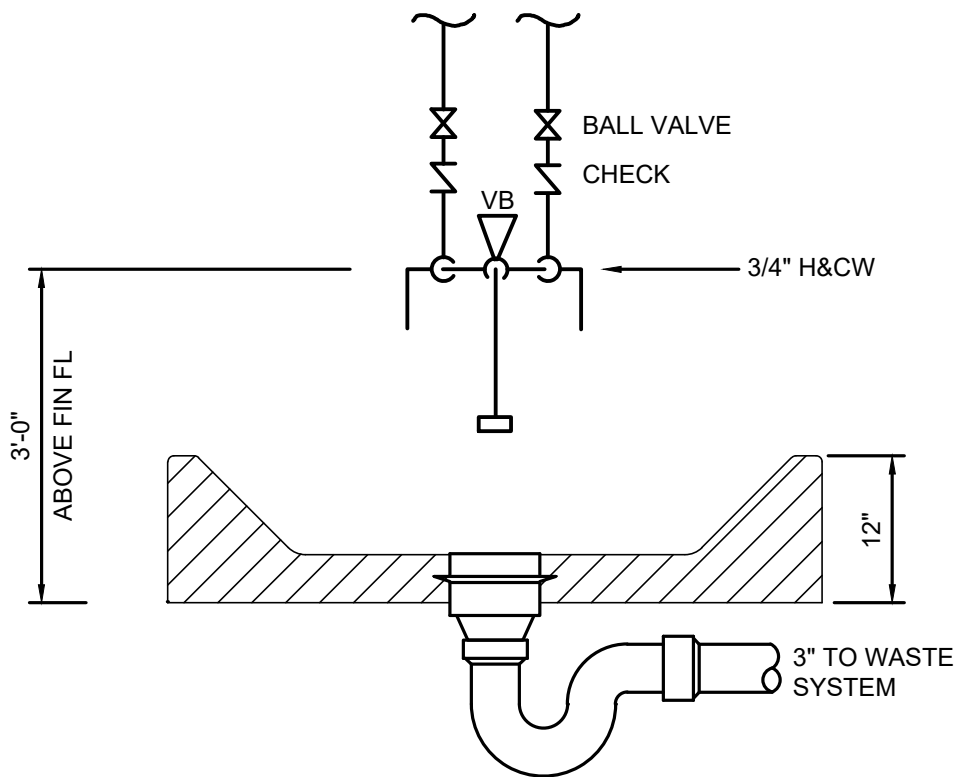
FLOOR DRAIN TRAP PRIMER DETAIL
NOT TO SCALE



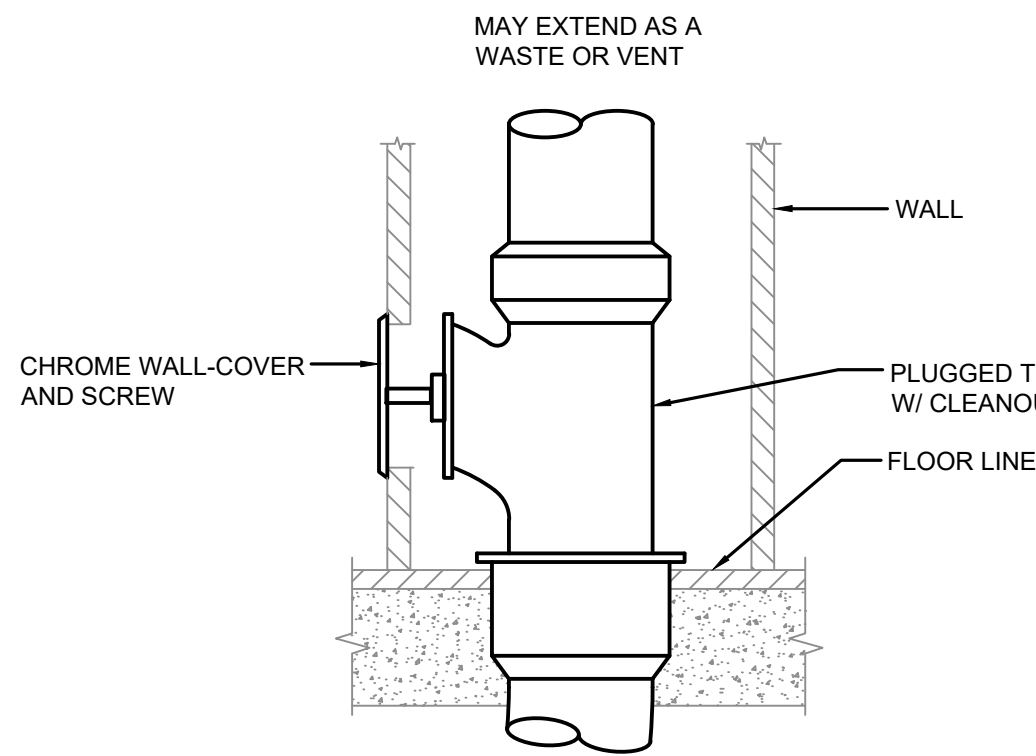
VENT THRU SLOPED ROOF
NOT TO SCALE



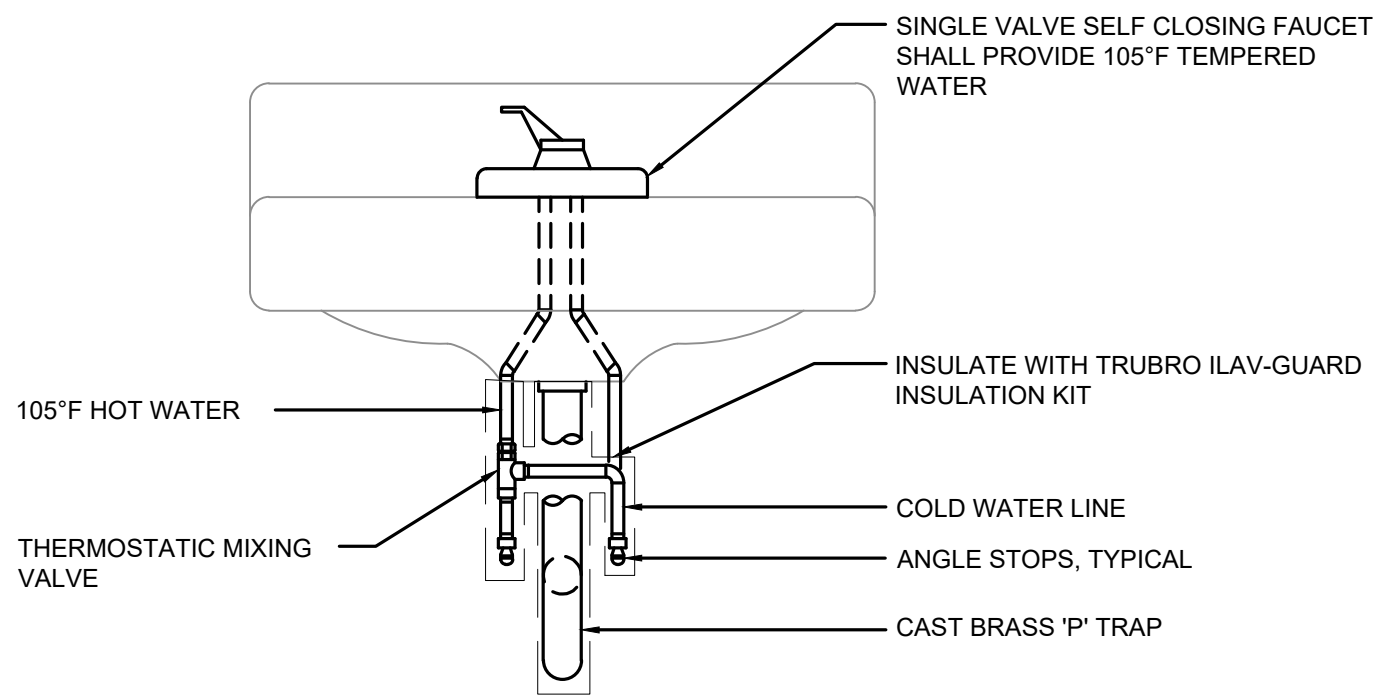
TYPICAL FLOOR DRAIN DETAIL
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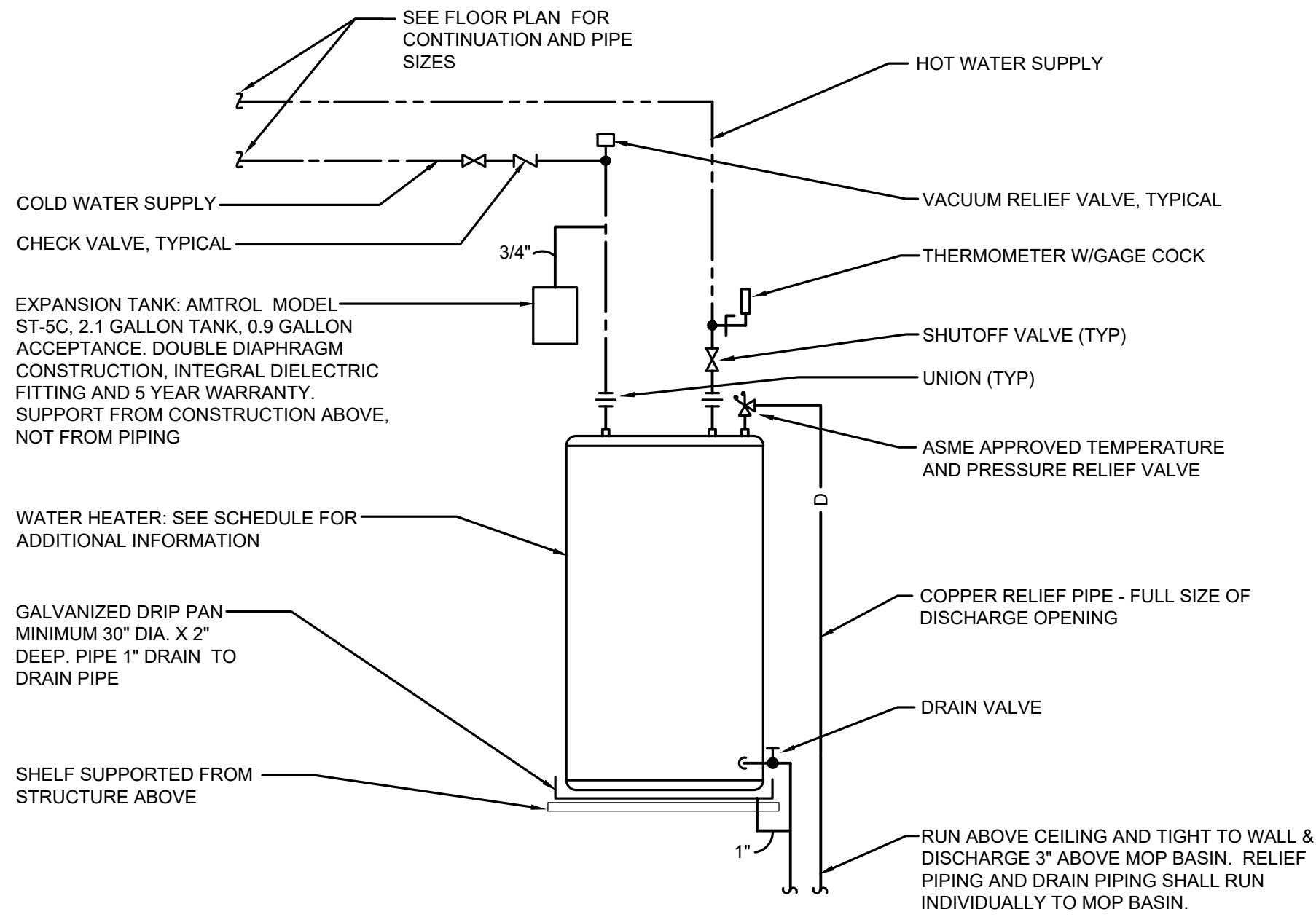
MOP BASIN DETAIL
NOT TO SCALE



WALL CLEAN OUT DETAIL
NOT TO SCALE



TYPICAL LAVATORY PIPING DETAIL
NOT TO SCALE



NOTE: ANCHOR OR SUPPORT WATER HEATER AS REQUIRED

SHELF MOUNTED ELECTRIC WATER HEATER DETAIL
NOT TO SCALE

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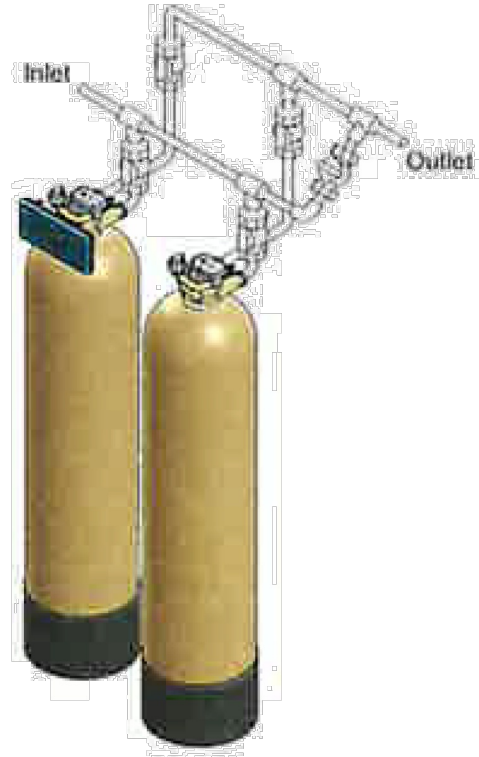
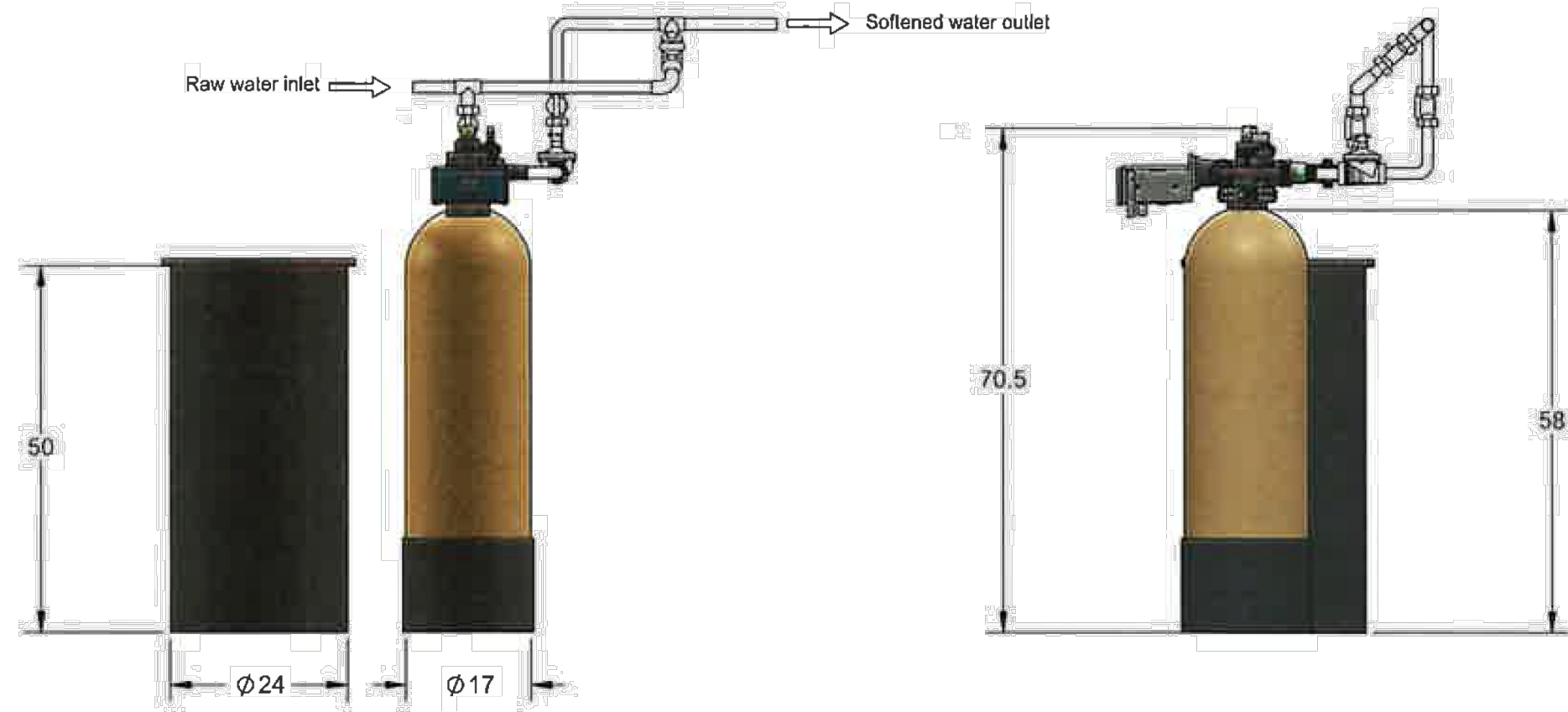
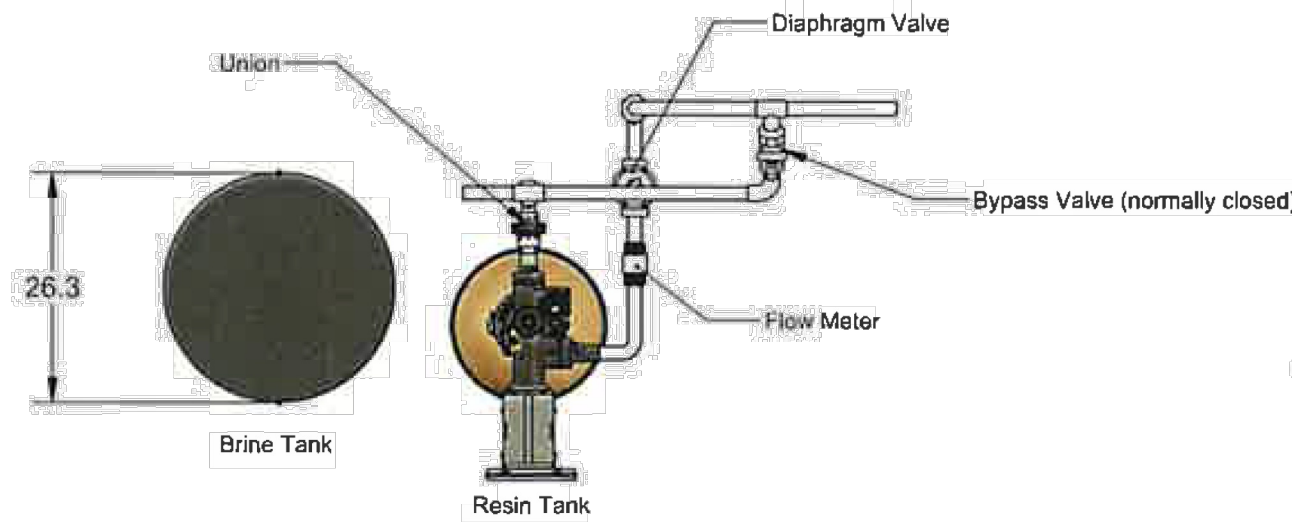
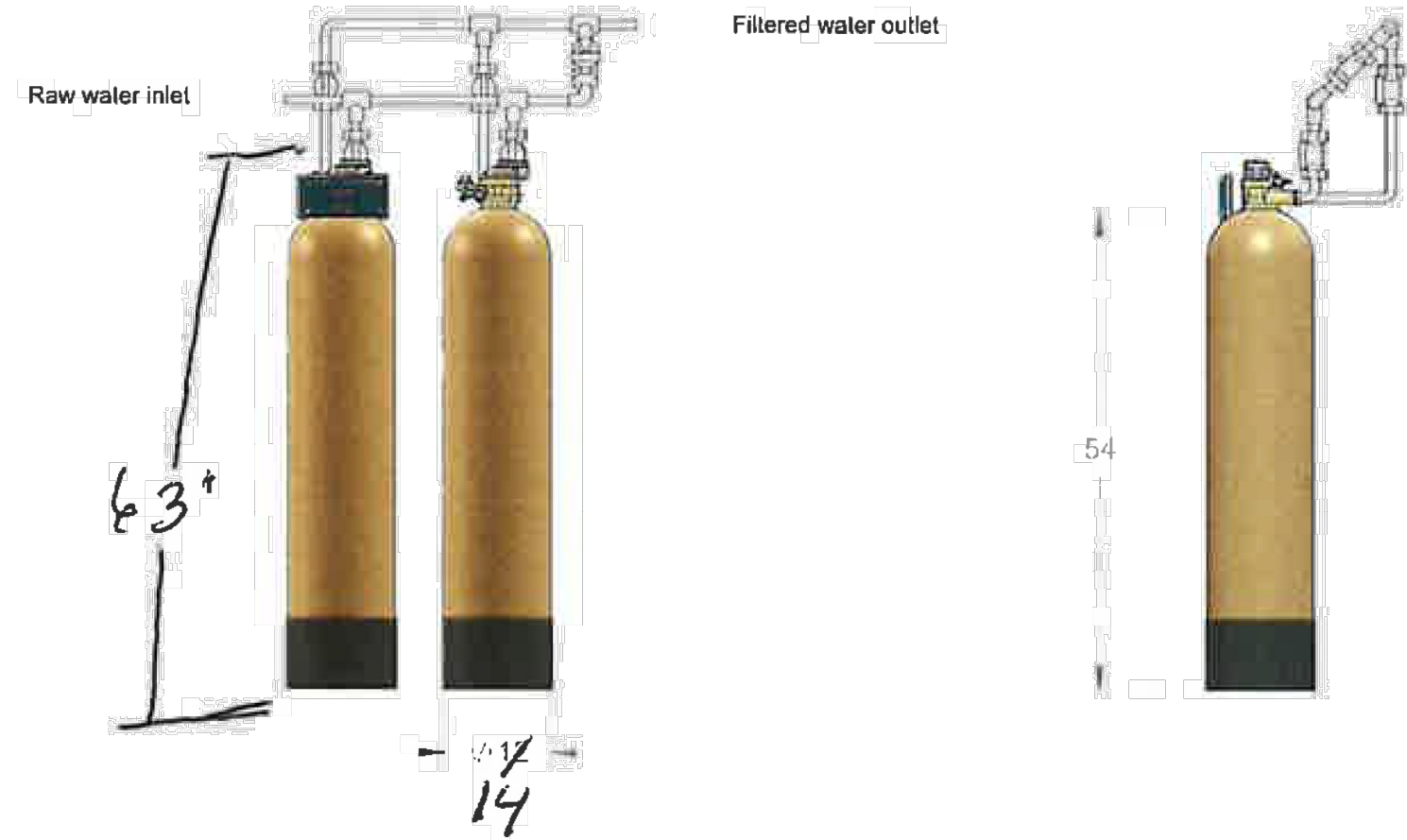
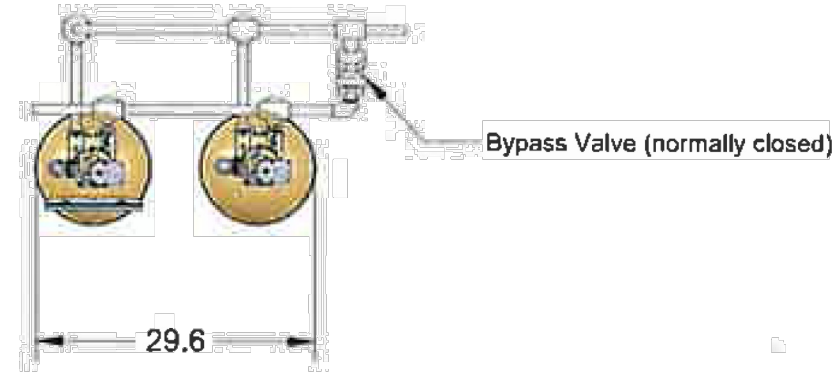
AMIN H. GOMAA, PE
PROFESSIONAL ENGINEER, NJ LIC. No. 24GE04842100

PLUMBING DETAILS
FOR
**ESTELL MANOR PARK
BATH HOUSE REPLACEMENT AND
SITE IMPROVEMENTS**

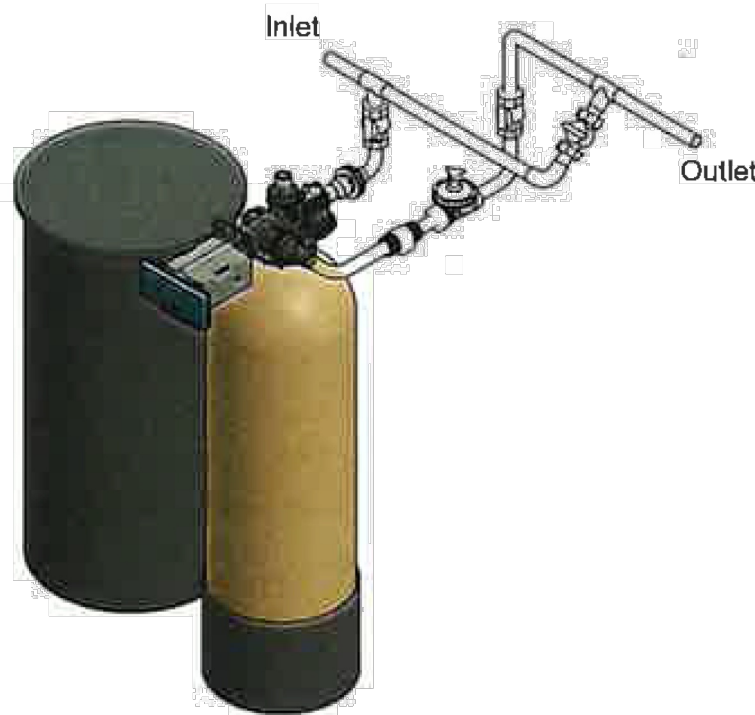
ESTELL MANOR
ATLANTIC COUNTY NEW JERSEY

DATE: 09/04/2026	DESIGNED BY: IV	SCALE:	PROJECT NUMBER: 3581.027
DRAWN BY: IV	CHECKED BY: AHG	FIELD BOOK	SHEET: P4.0

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Notes:
All piping, fittings etc are provided by others
General plumbing connections are shown for clarity



Notes:
All piping, fittings etc are provided by others
General plumbing connections are shown for clarity only
Brine Tank location can vary
Mounting for electronic control will vary

WATER SOFTENER DETAILS

NOT TO SCALE

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PLUMBING DETAILS FOR ESTELL MANOR PARK BATH HOUSE REPLACEMENT AND SITE IMPROVEMENTS			
ESTELL MANOR ATLANTIC COUNTY NEW JERSEY			
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