



CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 018281
LAND SURVEYING: 017976
GEOLOGICAL: 018750

It is a violation of New York Education Law Art. 145 Sec. 7209 & Art. 147 Sec. 7307, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered; the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

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5795 LEWISTON ROAD
NIAGARA UNIVERSITY, NEW YORK 14109



EDA PROJECT No. 01-01-15369

HUB PROJECT No. B-23-CP-NY-1083



ESD PROJECT No. 135,035

**ACADEMIC INNOVATION
HUB - WORK FORCE
DEVELOPMENT TRAINING**

822 CLEVELAND AVENUE
NIAGARA FALLS, NEW YORK 14305

DRAWING SYMBOLS

---DCW---	DOMESTIC COLD WATER		BALL VALVE
DHW---	DOMESTIC HOT WATER SUPPLY		SHUT OFF VALVE (GATE, BALL, OR BUTTERFLY - REFER TO SPECS)
DHR---	DOMESTIC HOT WATER RECIRC		CHECK VALVE
---PD---	PUMPED DISCHARGE		BALANCE VALVE
---NG---	NATURAL GAS		EQUIPMENT TO BE REMOVED
---SAN---	SANITARY DRAIN		POINT OF DISCONNECTION
---ST---	STORM DRAIN		POINT OF CONNECTION
---SST---	SECONDARY STORM DRAIN		SECTION CALLOUT
---V---	VENT		DETAIL NUMBER
---	EXISTING PIPE, EQUIPMENT		DEMOLITION KEY NOTE
---	NEW PIPE, EQUIPMENT		KEY NOTE
---	PIPE, EQUIPMENT TO BE REMOVED		
	BRANCH OFF TOP OF PIPE		
	BRANCH OFF BOTTOM OF PIPE		
	PIPE TURNED UP		
	PIPE TURNED DOWN		
	REDUCER		
	PIPE BREAK		

APPLICABLE CODES

- BUILDING CODE OF NEW YORK STATE
- MECHANICAL CODE OF NEW YORK STATE
- FIRE CODE OF NEW YORK STATE
- PLUMBING CODE OF NEW YORK STATE
- ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE
- ACCESSIBLE AND USABLE BUILDING AND FACILITIES-CAD/ANSI A117.1
- NATIONAL ELECTRIC CODE
- NFPA 13. STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS

ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE
BTU	BRITISH THERMAL UNIT
CD	CONDENSATE CLEANOUT
DCW	DOMESTIC COLD WATER
DHR	DOMESTIC HOT RECIRCULATION
DHW	DOMESTIC HOT WATER
DP	DRAIN PUMP
DPCO	DECKPLATE CLEANOUT
DSN	DOWNSPOUT NOZZLE
DWH	DOMESTIC WATER HEATER
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FD	FLOOR DRAIN
FT HD	HEAD IN FEET
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HP	HEAT PUMP
IN WC	INCH WATER COLUMN
LAV	LAVATORY
MAU	MAKEUP AIR UNIT
MSB	MOP SERVICE BASIN
NG	NATURAL GAS
PD	PUMPED DISCHARGE
PH	PHASE
RD	ROOF DRAIN
RPZ	REDUCED PRESSURE ZONE
SAN	SANITARY
SK	SINK
SST	SECONDARY STORM
ST	STORM
TYP	TYPICAL
UR	URNAL
V	VENT
VTR	VENT THRU ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT

GENERAL NOTES

- THESE NOTES ARE APPLICABLE TO THE FULL SET OF CONTRACT DOCUMENTS.
- PROVIDE ALL WORK IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL CODES AND OBTAIN ALL REQUIRED PERMITS. THE PLUMBING SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL CONFORM TO THE MOST RECENT EDITION OF THE PLUMBING CODE, ALL CURRENT AMENDMENTS AND AUTHORITIES HAVING JURISDICTION. IN CASE OF CONFLICTS WITH CODES, DRAWINGS OR SPECIFICATIONS, THE MOST STERN CODE COMPLIANCE SHALL PREVAIL.
- PLUMBING SYSTEMS AND ALL COMPONENTS THAT ARE DESIGNED AND/OR INTENDED TO DELIVER POTABLE WATER FOR HUMAN CONSUMPTION SHALL BE THIRD PARTY TESTED AND CERTIFIED FOR NOT EXCEEDING THE MAXIMUM ALLOWABLE LEAD CONTENT PER THE NSF/ANSI 372 STANDARD.
- THESE DRAWINGS ARE FOR BIDDING PURPOSES ONLY. THEY ARE DIAGRAMMATIC IN INTENT TO THE EXTENT THAT MANY OFFSETS, BONDS, UNIONS, SPECIFIC FITTINGS AND EXACT LOCATIONS ARE NOT INDICATED.
- ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURERS RECOMMENDATIONS AND APPLICABLE CODES. PROVIDE FOR ALL FITTINGS, VALVES AND OTHER DEVICES FOR A COMPLETE WORKABLE INSTALLATION.
- MAINTAIN SERVICE CLEARANCES OF ALL EQUIPMENT AND ADVISE OTHER TRADES OF THE REQUIRED CLEARANCES
- PLUG HOLES IN EXISTING CONSTRUCTION LEFT BY THE REMOVAL OF PIPING OR EQUIPMENT. MAINTAIN FIRE/SMOKE RATING.
- PROVIDE CUTTING, CORING AND PATCHING OF ALL WALLS, SLABS AND DECKS AS REQUIRED FOR WORK SHOWN. COORDINATE ALL WORK WITH OWNER AND GENERAL CONTRACTOR. SEAL ALL PENETRATIONS WATER TIGHT WITH MECHANICAL SEAL.
- THIS CONTRACTOR SHALL COORDINATE ALL LOCATIONS, SIZES AND ELEVATIONS OF ALL SLEEVES THROUGH WALLS, BEAMS, SLABS AND FOOTINGS WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS. ALL PIPE SLEEVES SHALL HAVE A SLEEVE DIAMETER OF TWO PIPE SIZES OVER THE PIPE PASSING THRU.
- ALL CLEANOUTS, VALVES, UNIONS, STRAINERS, TRAP PRIMERS, SHOCK ABSORBERS OR OTHER PLUMBING APPURTENANCES SHOWN IN WALLS OR ABOVE A NON-ACCESSIBLE CEILING SHALL BE INSTALLED BEHIND AN ACCESS PANEL. COORDINATE SIZE AND LOCATION WITH ARCHITECT.
- EXACT LOCATIONS AND MOUNTING HEIGHTS OF PLUMBING FIXTURES SHALL BE OBTAINED FROM THE ARCHITECTURAL ELEVATIONS.
- INSULATE ALL EXPOSED HOT, COLD AND DRAIN PIPING BELOW HANDICAP LAVATORIES AND SINKS WITH INSULATING WRAP AND OFFSET P-TRAP AGAINST WALL. ALL FLUSH VALVES FOR HANDICAP FIXTURES SHALL BE LOCATED ON THE HANDICAP WHEELCHAIR ACCESS SIDE OF THE STALL.
- ALL PIPING SHALL BE SUPPORTED WITH HANGERS AND BRACKETS WHICH PROVIDE ISOLATION FROM FRAMING. DO NOT SUPPORT PIPING FROM OTHER PIPE SUPPORTS OR BY FORCING AND STRUNGING. CONTACT BETWEEN PIPE AND SUPPORT TO BE LINED WITH PLASTIC OR FELT.
- INSULATE ALL DOMESTIC WATER PIPING PER THE MOST RECENT VERSION OF THE ENERGY CONSERVATION CODE.
- PITCH ALL SANITARY PIPING AS FOLLOWS: PIPING 3" AND SMALLER, PITCH AT 2 PERCENT (1/4" PER FOOT) MINIMUM. PIPING 4" AND LARGER, PITCH AT 1 PERCENT (1/8" PER FOOT).
- ALL DRAINS SHALL BE INSTALLED AT THE LOW POINT OF THE FLOORS.
- COORDINATE WITH ELECTRICAL TRADE PRIOR TO ORDERING ELECTRICALLY OPERATED EQUIPMENT FOR AVAILABLE VOLTAGES AT EQUIPMENT LOCATIONS.
- DISPOSE OF ALL DEMOLITION AND/OR OTHER WASTE MATERIALS CAUSED BY WORK OF THIS CONTRACTOR. LEGALLY DISPOSE ALL MATERIALS TO A LOCATION OFF SITE.
- IF REQUIRED, PROVIDE SHUT DOWNS AND TIE-INS ON OFF HOURS TO AVOID DISRUPTION OF BUILDING SYSTEMS. COORDINATE AND SCHEDULE WORK AND SHUTDOWNS WITH THE OWNER AND OTHER TRADES PRIOR TO DEMOLITION (INCLUDE ALL WORK REQUIRED DURING OFF HOURS IN BID).
- WHEN EXISTING CONSTRUCTION IS DAMAGED DURING WORK BY THIS CONTRACTOR, REPAIR AND/OR REPLACE WITH SIMILAR MATERIALS AS MUCH AS POSSIBLE, SUBJECT TO ARCHITECTS APPROVAL.

NOTE:
NOT ALL SYMBOLS, ABBREVIATIONS AND EQUIPMENT DESIGNATIONS MAY APPLY TO THIS PARTICULAR PROJECT. ANY ADDITIONS OR OMISSIONS FROM THIS LEGEND SHEET DOES NOT IMPLY INCLUSION AND/OR EXCLUSIONS OF ANY PARTICULAR ITEM FROM THIS PROJECT.

NO.	DATE	DESCRIPTION
Revisions		

PROJECT NUMBER: 2221723

DRAWN BY: JLJ

REVIEWED BY: JSN

ISSUED FOR: BID

DATE: APRIL 11, 2024

DRAWING NAME:

PLUMBING LEGEND SHEET

DRAWING NUMBER:

P001



CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 018281
LAND SURVEYING: 017976
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NIAGARA UNIVERSITY, NEW YORK 14109



EDA PROJECT No. 01-01-15369 HUD PROJECT No. B-23-CP-NY-1083



ESD PROJECT No. 135,035

**ACADEMIC INNOVATION
HUB - WORK FORCE
DEVELOPMENT TRAINING**

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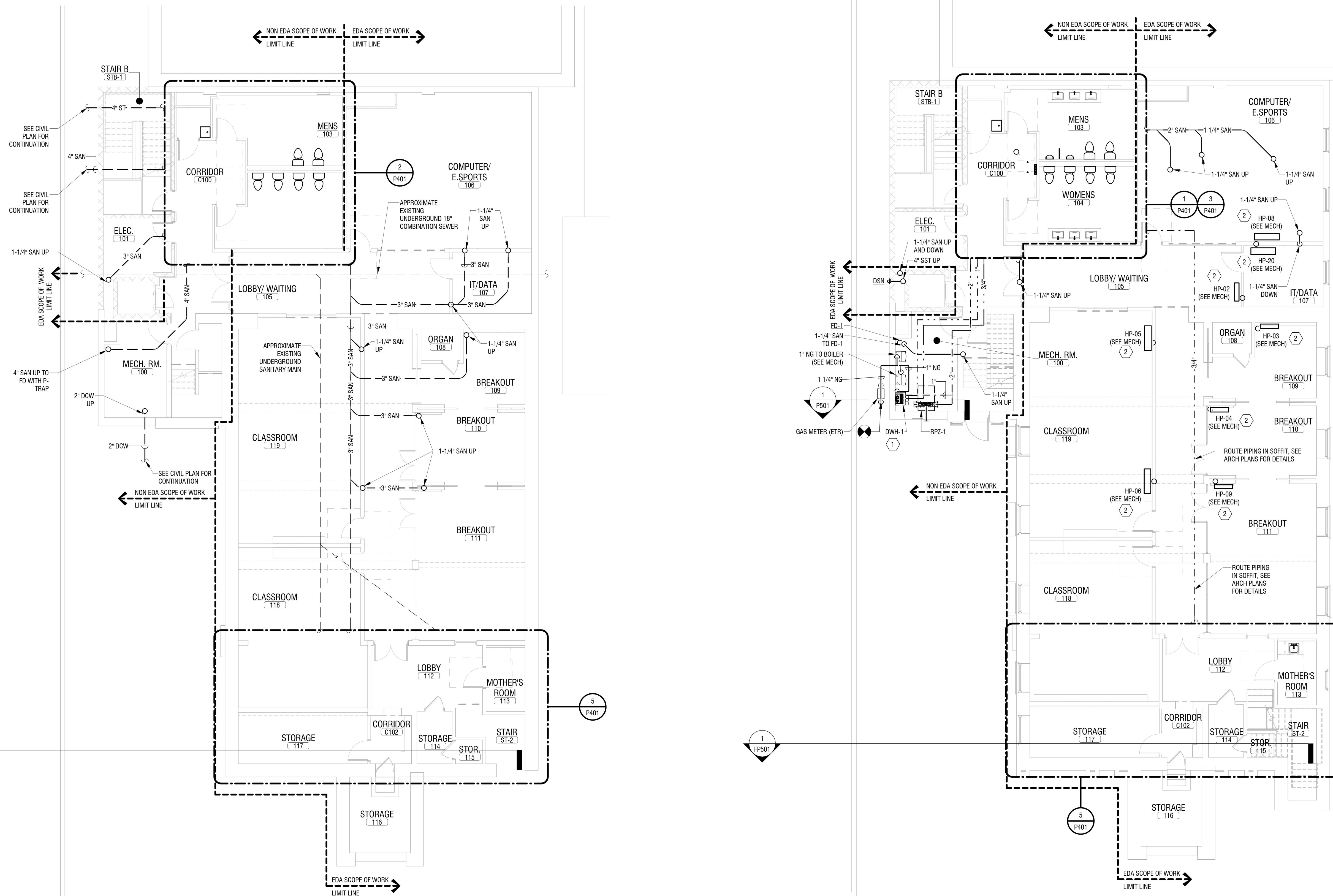
**UNDERGROUND AND
BASEMENT PLUMBING
PLAN**

DRAWING NUMBER:

P101

KEY NOTES:

1. PROVIDE WATER HEATER AND ALL ASSOCIATED ACCESSORIES. PROVIDE 1" DCW, 1" DHW, 3/4" DHR, AND 1" NG TO WATER HEATER PER DETAIL ON P501. SEE MECH PLANS FOR VENTING DETAIL.
2. 3/4" CD FROM HP TO INDIRECT DRAIN, BY MECHANICAL. PER DETAIL ON P501. PROVIDE 1-1/4" SAN UP TO INDIRECT DRAIN BOX PER DETAIL ON P501.



2 UNDERGROUND PLUMBING PLAN
P101 1/8" = 1'-0"

1 BASEMENT PLUMBING PLAN
P101 1/8" = 1'-0"



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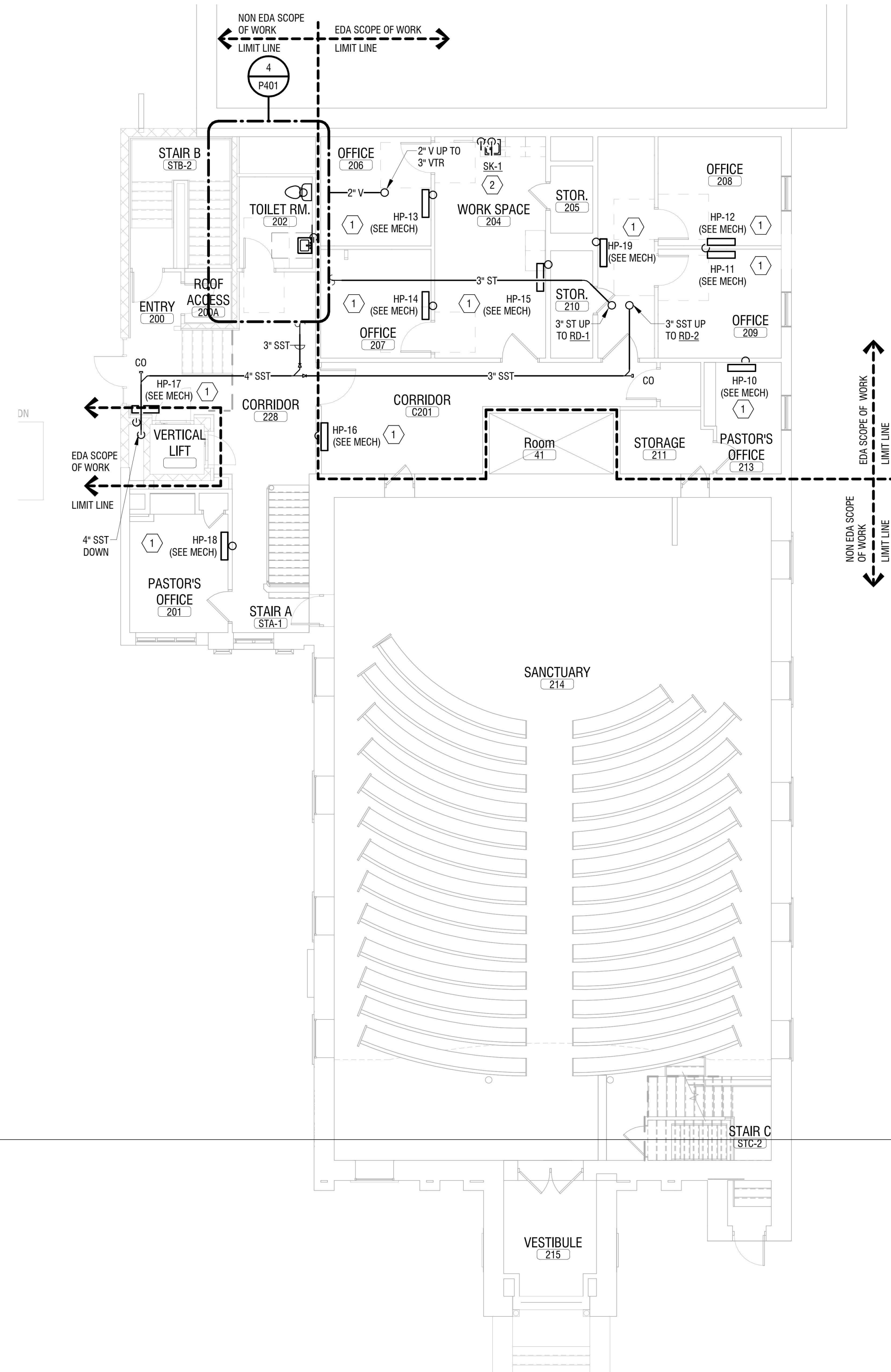
**FIRST FLOOR AND ROOF
PLUMBING PLAN**

DRAWING NUMBER:

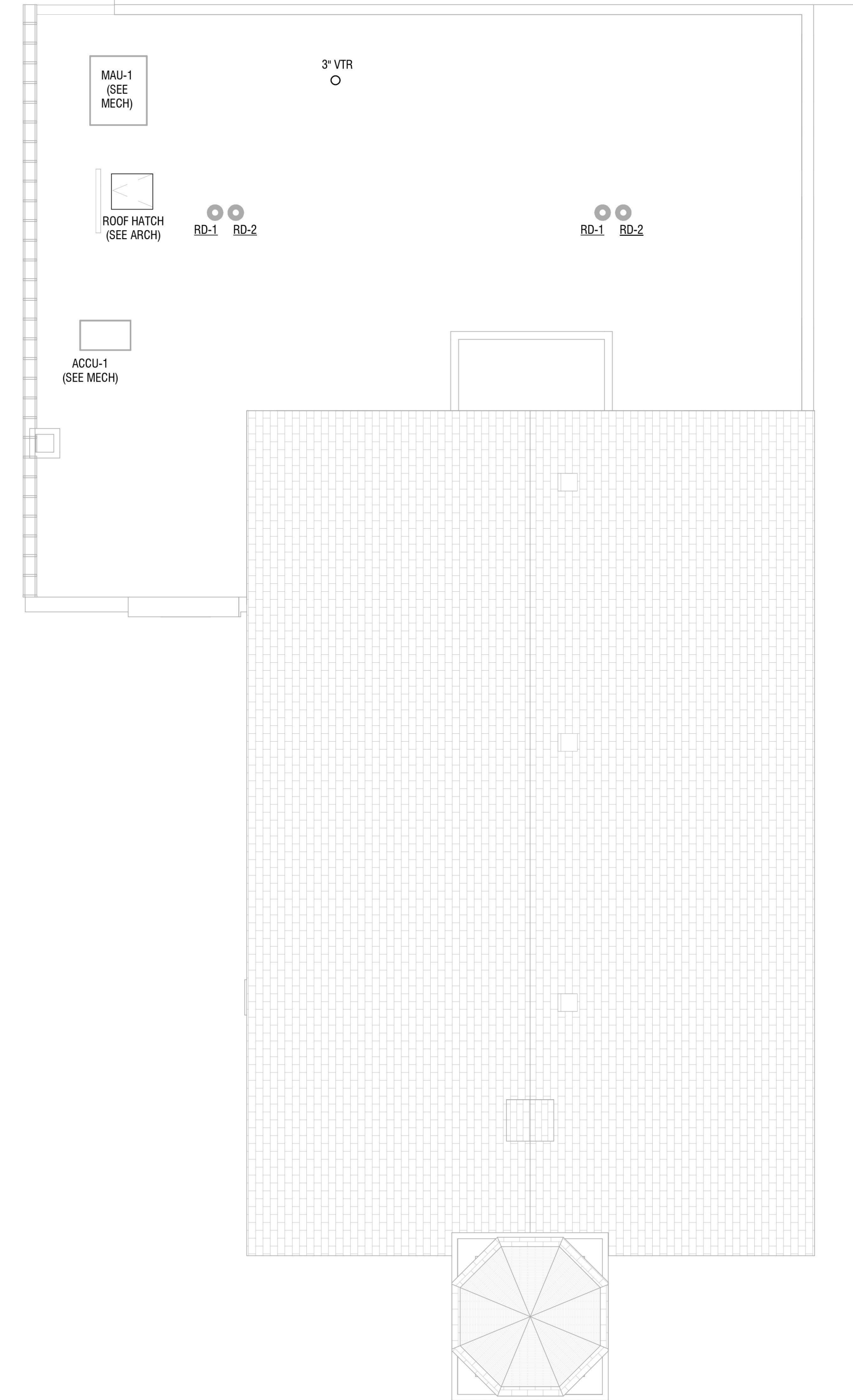
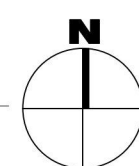
P102

KEY NOTES:

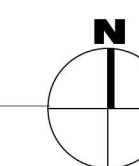
- 3/4" CD FROM HP TO INDIRECT DRAIN, BY MECHANICAL, PER DETAIL ON P501. PROVIDE 1-1/4" SAN UP TO INDIRECT DRAIN BOX PER DETAIL ON P501.
- PROVIDE SK-1 AND ALL ASSOCIATED ACCESSORIES. PROVIDE 1/2" DCW, 1/2" DHW, AND 1-1/2" SAN UP TO FIXTURE. PROVIDE AAV UNDER SINK.



3 FIRST FLOOR PLUMBING PLAN
1/8" = 1'-0"



2 ROOF PLUMBING PLAN
1/8" = 1'-0"





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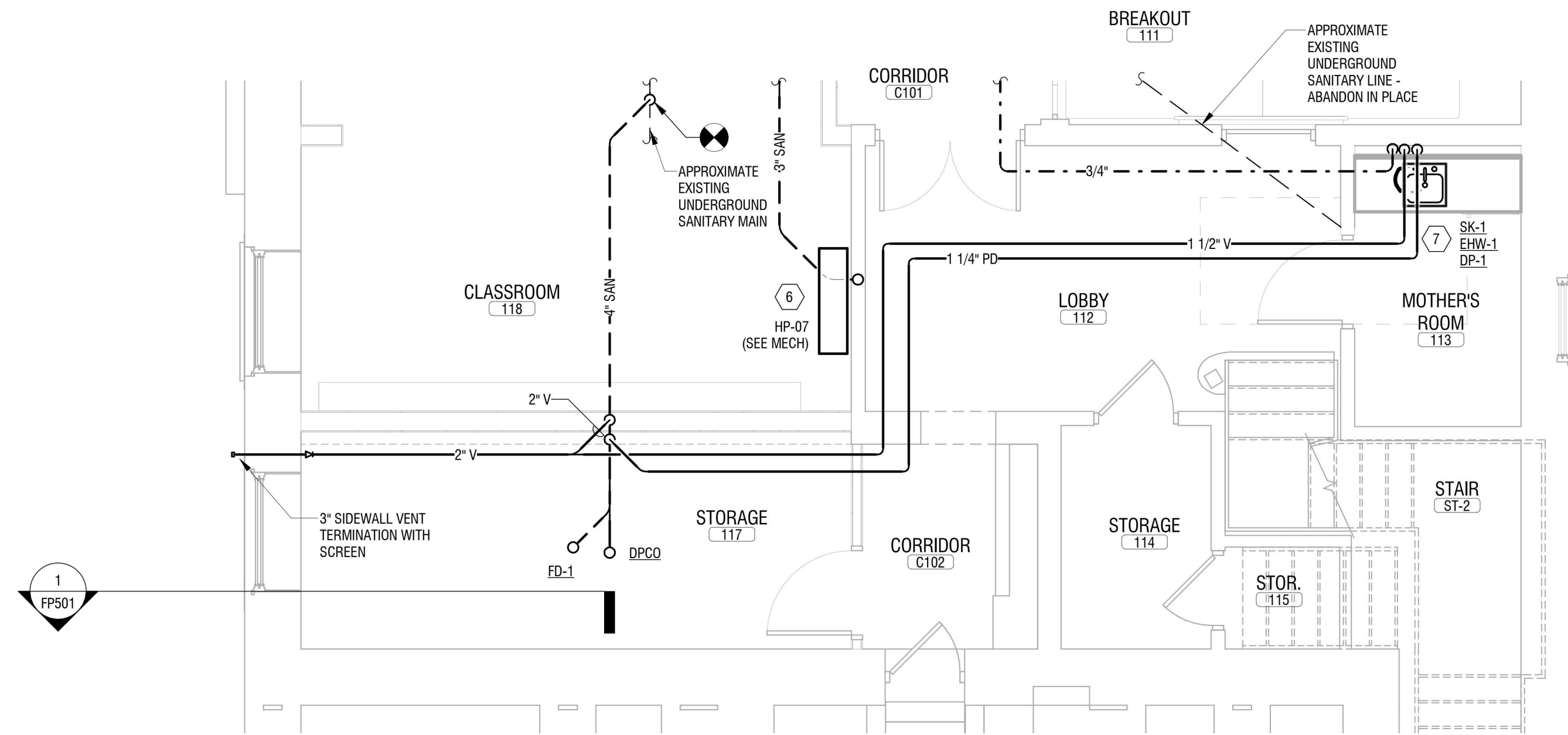
**PLUMBING ENLARGED
PLANS**

DRAWING NUMBER:

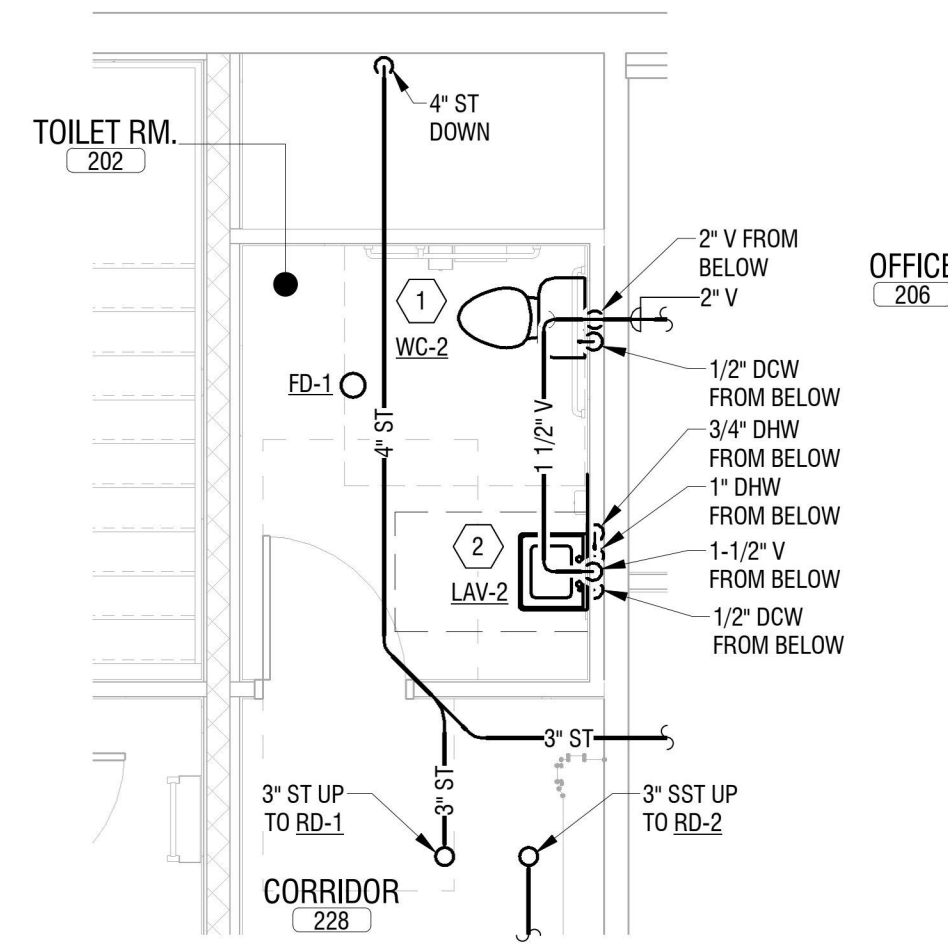
P401

KEY NOTES:

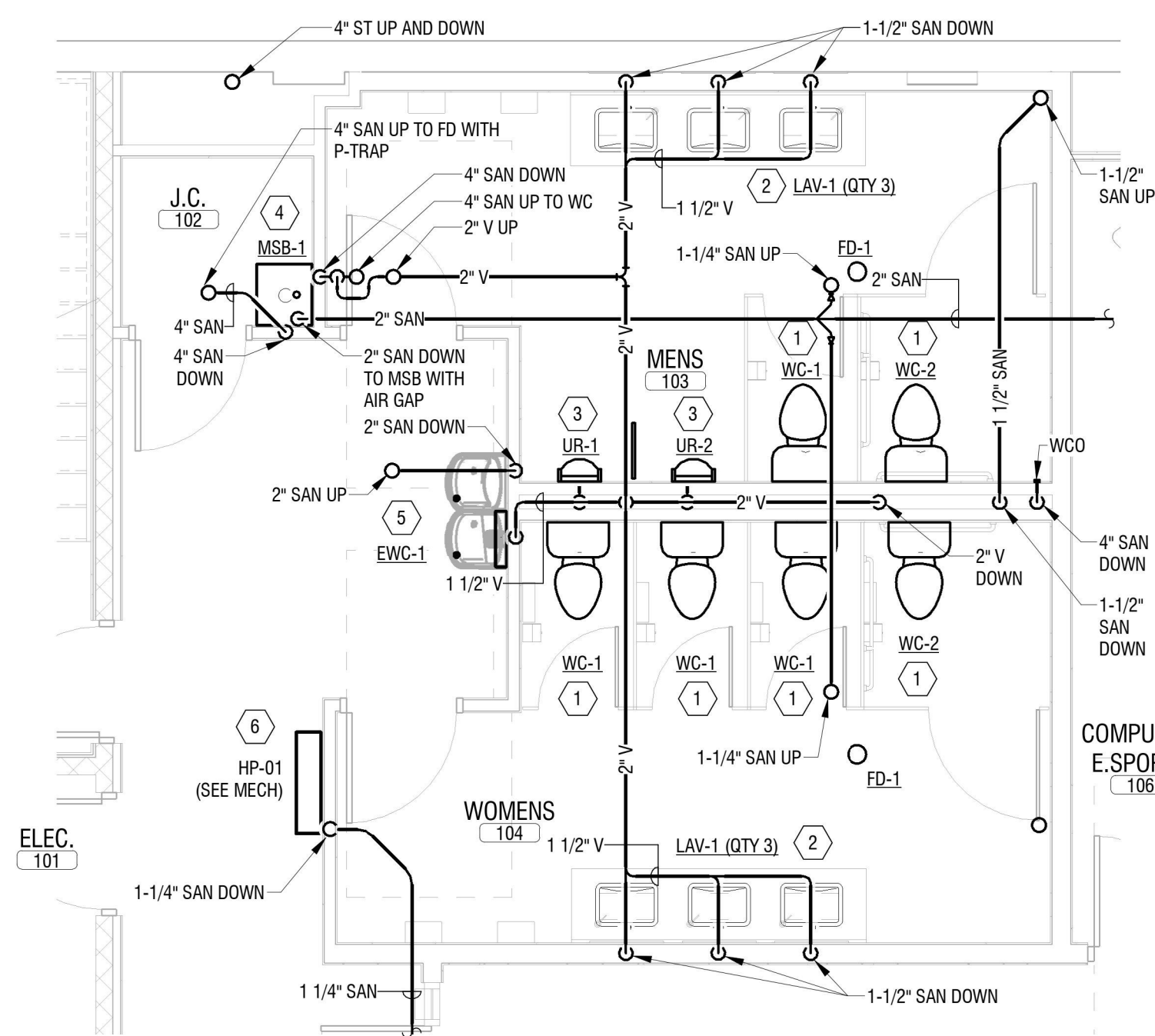
1. PROVIDE WC AND ALL ASSOCIATED ACCESSORIES. PROVIDE 1/2" DCW, 2" V, AND 4" SAN TO FIXTURE.
2. PROVIDE LAV AND ALL ASSOCIATED ACCESSORIES. PROVIDE 1/2" DCW, 1/2" DHW, 1/2" DHR, 1-1/2" SAN, AND 1-1/2" V TO FIXTURE.
3. PROVIDE UR, CARRIER, AND ALL ASSOCIATED ACCESSORIES. PROVIDE 3/4" DCW, 1-1/2" V, AND 2" SAN TO FIXTURE.
4. PROVIDE MSB AND ALL ASSOCIATED ACCESSORIES. PROVIDE 3/4" DCW, 3/4" DHW, AND 2" SAN TO FIXTURE.
5. PROVIDE EWC, CARRIER, AND ALL ASSOCIATED ACCESSORIES. PROVIDE 1/2" DCW, 1-1/2" V, AND 1-1/2" SAN TO FIXTURE.
6. 3/4" CD FROM HP TO INDIRECT DRAIN, BY MECHANICAL, PER DETAIL ON P501.
7. PROVIDE 1-1/4" SAN UP TO INDIRECT DRAIN BOX PER DETAIL ON P501. PROVIDE SK-1 AND ALL ASSOCIATED ACCESSORIES. PROVIDE EWH-1, DP-1, AND ALL ASSOCIATED ACCESSORIES BELOW SINK IN CABINET. PROVIDE 3/4" DCW FROM ABOVE. PROVIDE 1/2" DCW TO EWH. PROVIDE 1/2" DCW AND DHW TO SK. PROVIDE 1-1/2" SAN FROM SK TO DP-1 INLET. PROVIDE 1-1/4" PD AND 1-1/2" V UP FROM DP-1.



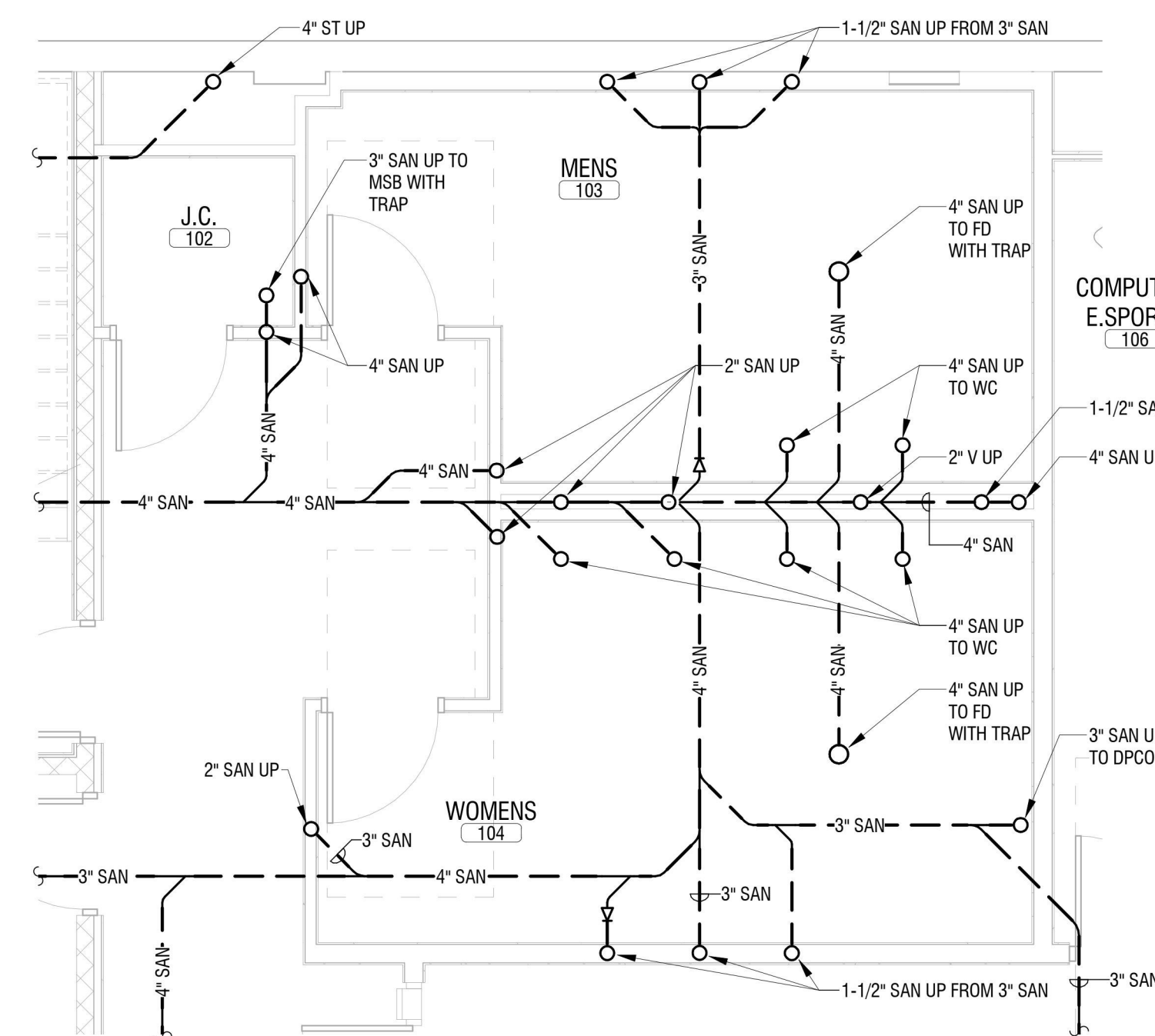
5 BASEMENT ENLARGED PLUMBING PLAN
P401 1/4" = 1'-0"



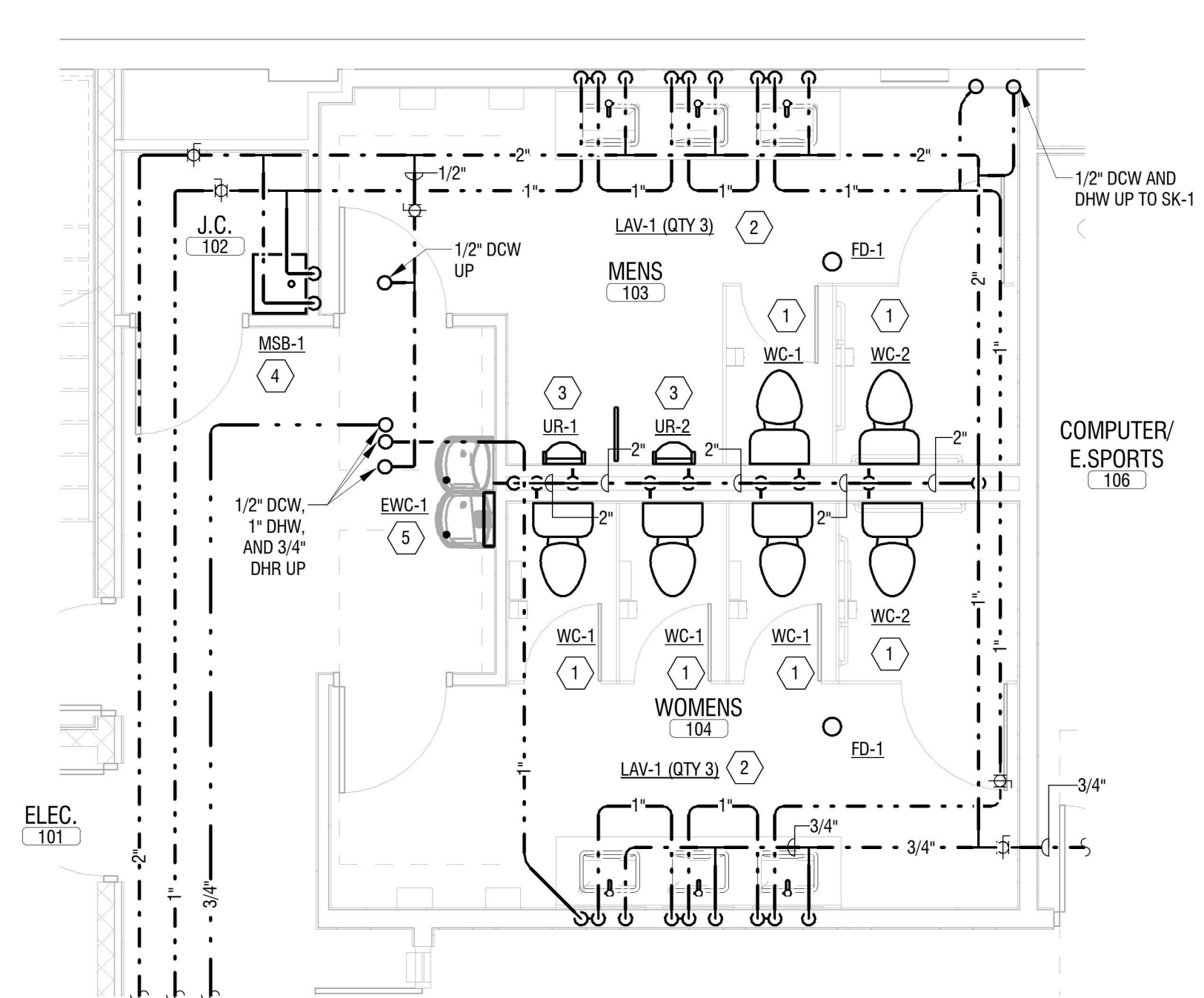
4 FIRST FLOOR ENLARGED PLUMBING PLAN
P401 1/4" = 1'-0"



3 BASEMENT ENLARGED SANITARY PLUMBING PLAN
P401 1/4" = 1'-0"



2 UNDERGROUND ENLARGED SANITARY PLUMBING PLAN
P401 1/4" = 1'-0"



1 BASEMENT ENLARGED DOMESTIC PLUMBING PLAN
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EDA PROJECT No. 01-01-15369 HUD PROJECT No. 8-23-CP-NY-1083



ESD PROJECT No. 135.035

ACADEMIC INNOVATION HUB - WORK FORCE DEVELOPMENT TRAINING
822 CLEVELAND AVENUE
NIAGARA FALLS, NEW YORK 14305

NO.	DATE	DESCRIPTION
Revisions		

PROJECT NUMBER: 2221723

DRAWN BY: JLJ

REVIEWED BY: JSN

ISSUED FOR: BID

DATE: APRIL 11, 2024

DRAWING NAME:

PLUMBING DETAILS AND SCHEDULES

DRAWING NUMBER:

P501

FIXTURE CONNECTION SCHEDULE

NOTES:
1. PROVIDE WITH MECHANICAL TRAP SEAL.
2. REFER TO SPECIFICATIONS FOR FIXTURE MANUFACTURERS.

FIXTURE	SYMBOL	MIN SANITARY	MIN VENT	MIN COLD WATER	MIN HOT WATER	NOTE
WATER CLOSET	WC-1/2	4"	2"	1"	--	2
URINAL	UR-1/2	2"	1-1/2"	3/4"	--	2
LAVATORY	LAV-1/2	1-1/2"	1-1/2"	1/2"	1/2"	2
SINK	SK-1	1-1/2"	1-1/2"	1/2"	1/2"	2
MOP SERVICE SINK	MSB-1	3"	2"	3/4"	3/4"	2
ELECTRIC WATER COOLER	EW-1	1-1/2"	1-1/2"	1/2"	--	2
FLOOR DRAIN	FD-1	3 - 4"	2"	--	--	1, 2
ROOF DRAIN	RD-1/2	3"	--	--	--	2

DOMESTIC GAS WATER HEATER SCHEDULE

TAG	LOCATION	STORAGE (GALLONS)	GAS INPUT (BTU)	INPUT GAS PRESSURE RANGE (in W.C.)	GPM DELIVERED @ DEG F RISE	ELECTRICAL (VOLTS/PH)	MANUFACTURER	MODEL	NOTES
DWH-1	MECH 100	1.2	199,900	3.5-10.5	5.6 @ 67	120/1	NAVIAN	NPE-240A2	1, 2, 3, 4

NOTES:
1. INSTALL AND MOUNT IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND REQUIRED CLEARANCES.
2. COORDINATE ELECTRICAL CONNECTION WITH DIVISION 26 CONTRACTOR.
3. PROVIDE WITH ET-1; AMTROL THERM-X-TROL ST-5, 2.1 GAL MAX ACCEP. FACTOR 43.
4. PROVIDE ACID NEUTRALIZATION KIT.

ELECTRIC WATER HEATER SCHEDULE

TAG	LOCATION	STORAGE (GALLONS)	GPM DELIVERED @ 48 DEG F RISE	ELECTRICAL (VOLTS/PH)	MAX WATTAGE (W)	MANUFACTURER	MODEL	NOTES
EWH-1	MOTHER'S ROOM 113	--	0.5	120/1	3500	EEMAX	AM004120T	1, 2, 3

NOTES:
1. INSTALL AND MOUNT IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND REQUIRED CLEARANCES.
2. COORDINATE ELECTRICAL CONNECTION WITH DIVISION 26 CONTRACTOR.
3. PROVIDE WITH INTEGRATED ASSE 1070 MIXING VALVE AND INSTALL BELOW PLUMBING FIXTURE.

SHOCK ABSORBER SCHEDULE

PLAN DESIGNATION	FIXTURE UNIT RATING	SIZE	PDI SYMBOL
SA-A	1-11	3/4"	A
SA-B	12-32	1"	B
SA-C	33-60	1"	C

BACKFLOW PREVENTER SCHEDULE

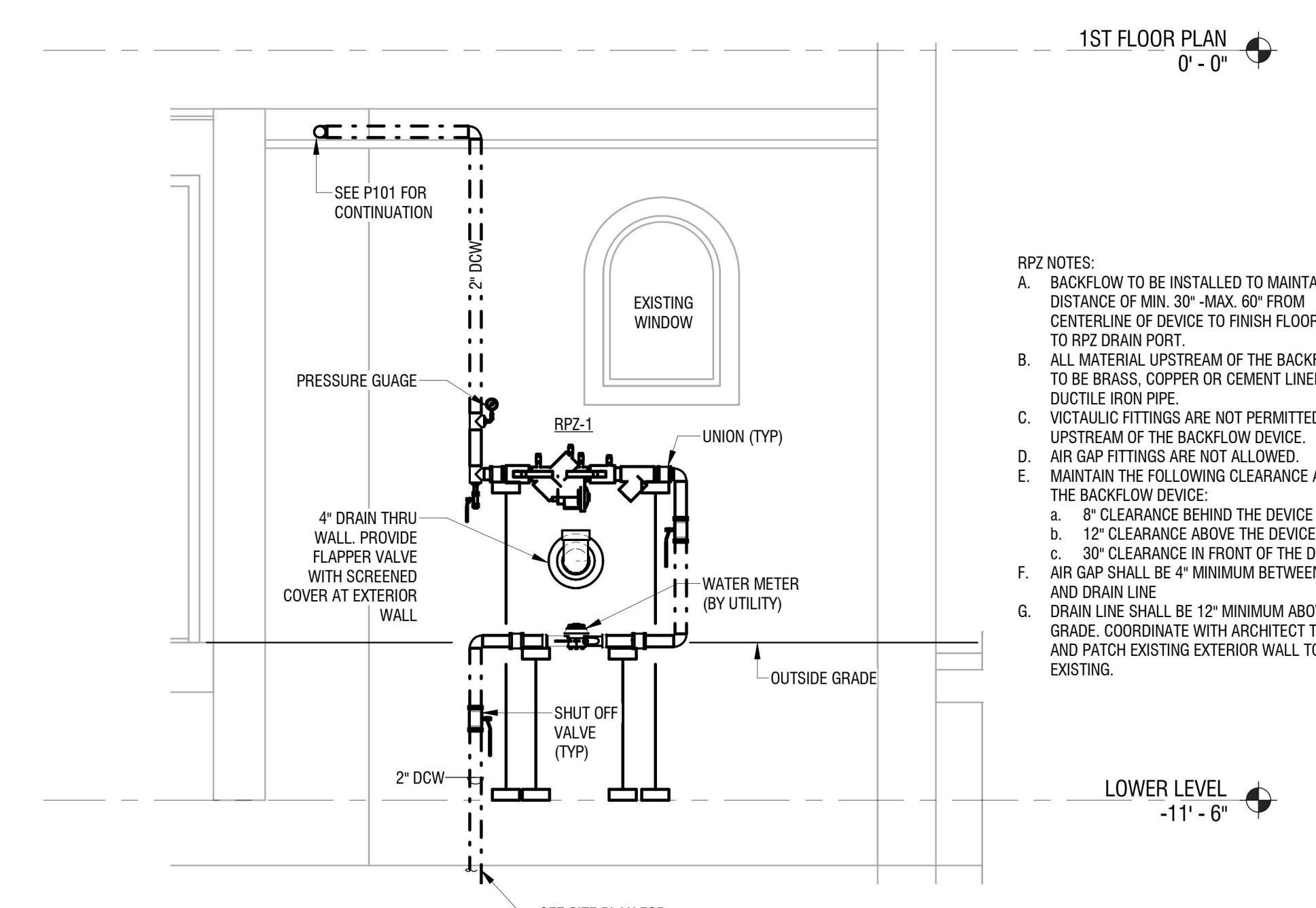
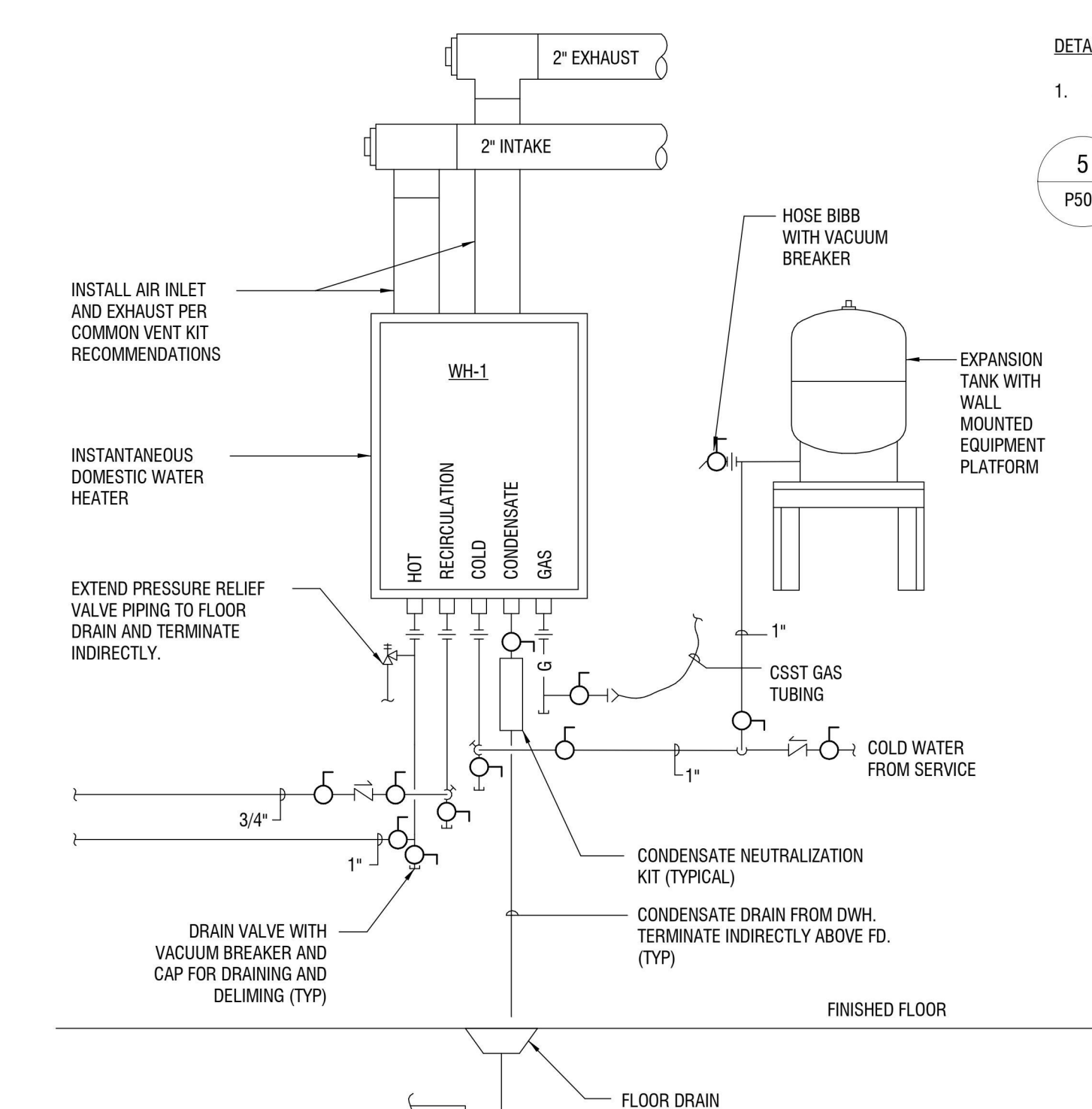
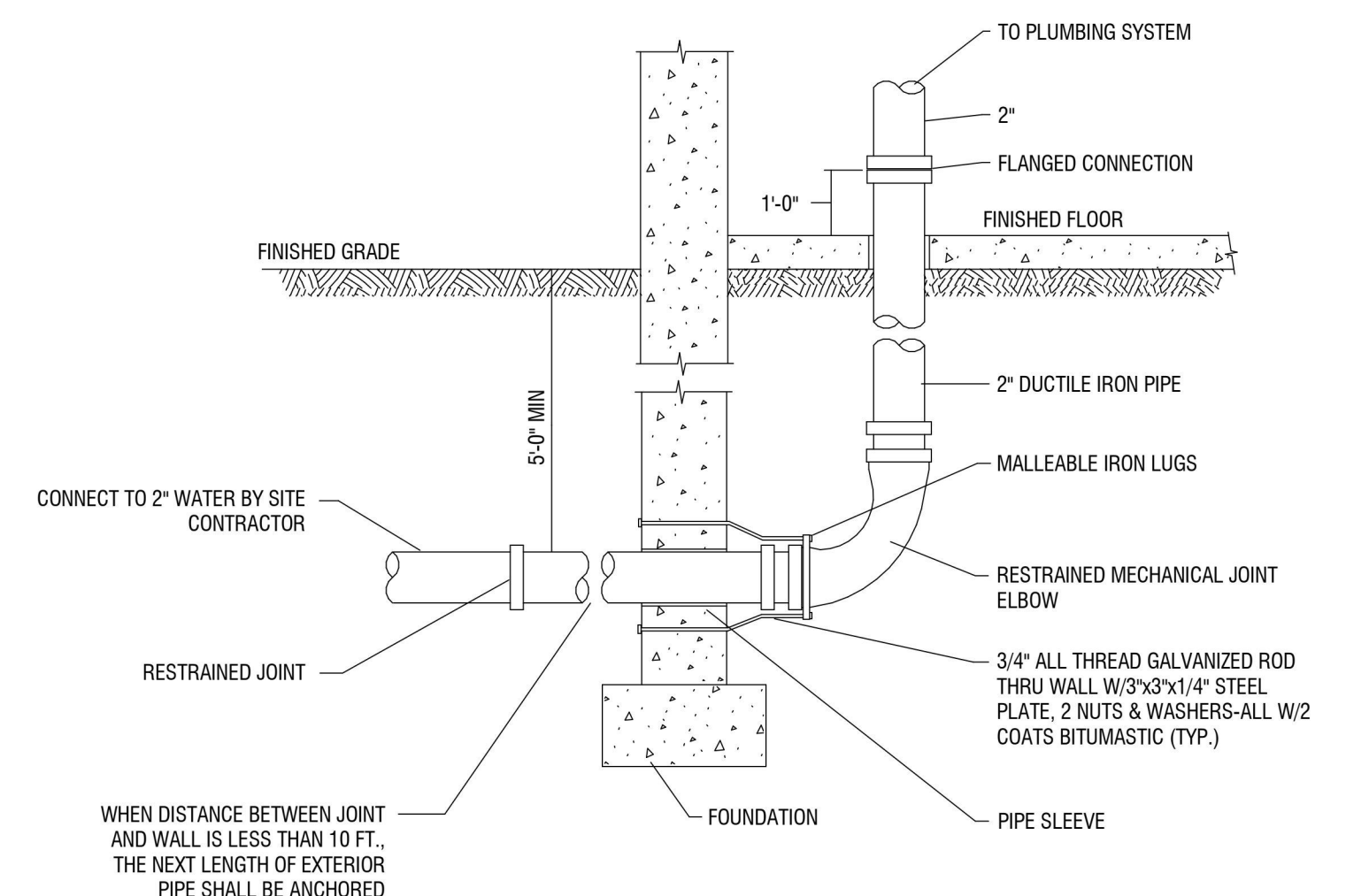
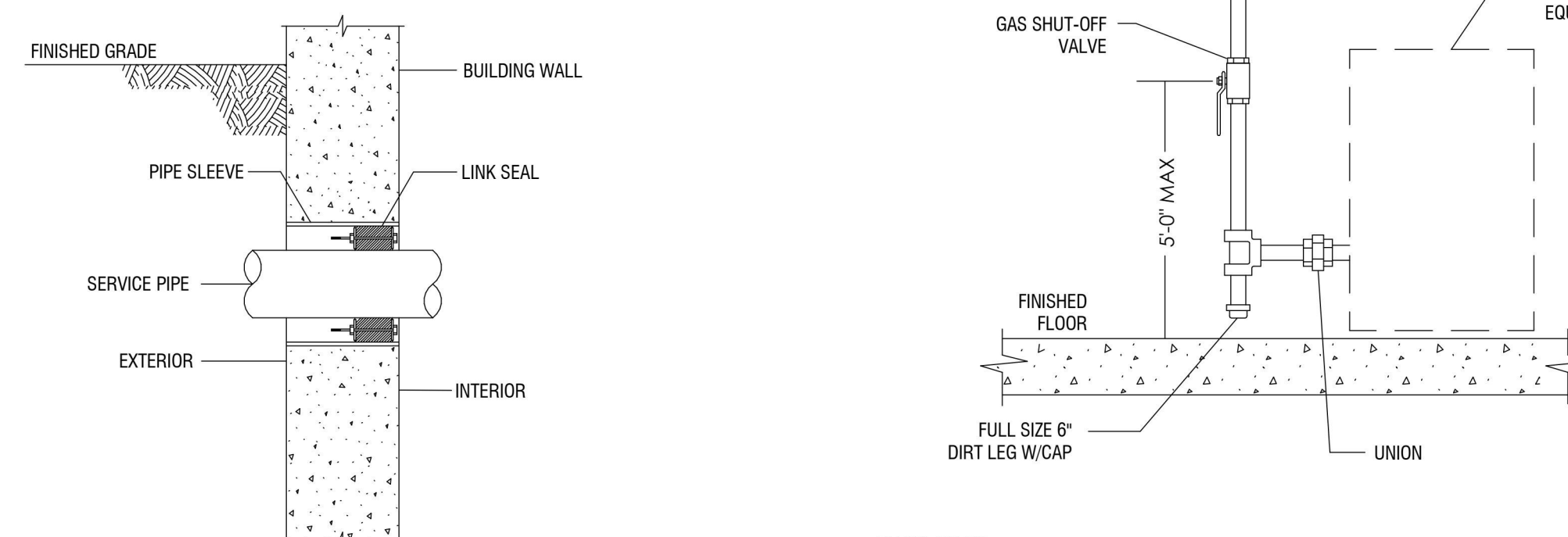
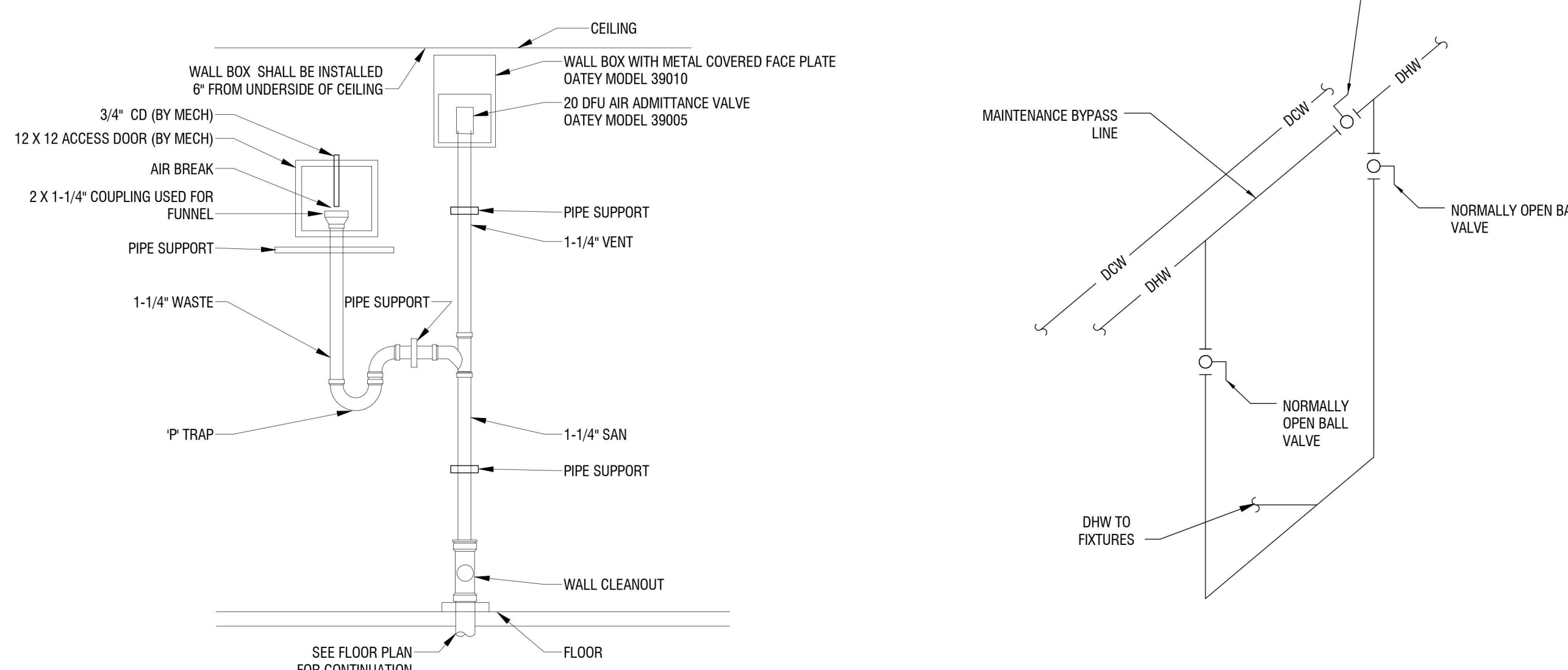
TAG	LOCATION	SERVICE	QTY.	TYPE	CONN. SIZE (NPS)	DESIGN FLOW (GPM)	MAXIMUM PRESS. DROP (PSI)	MANUFACTURER	MODEL	NOTES
RPZ-1	MECH 102	DOMESTIC WATER	1	RPZ	2"	68	9	WATTS	LF9090T-S	1

NOTES:
1. PROVIDE WITH STRAINER AND QUARTER TURN BALL VALVES.

PUMP SCHEDULE

TAG	SERVICE	LOCATION	GPM@FT. HD.	MOTOR			MANUFACTURER	MODEL	NOTES
				HP	AMPS	VOLT/PH			
DP-1	FLOOR MOUNTED DRAIN PUMP	MOTHER'S ROOM 113	5 GPM @ 25 FT. HD.	1/6	1.7	115/1	LIBERTY PUMPS	406	1

NOTES:
1. COORDINATE POWER REQUIREMENTS WITH E.C.





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**FIRE PROTECTION LEGEND
SHEET**

DRAWING NUMBER:

FP001

GENERAL NOTES

- BY EXECUTING THE CONSTRUCTION AGREEMENT, THE CONTRACTOR REPRESENTS THAT THEY HAVE VISITED THE SITE, FAMILIARIZED THEMSELVES WITH THE LOCAL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, CORRELATED THEIR OBSERVATIONS WITH ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, AND IS AWARE OF THE OWNER'S INTENDED USE OF THE PROJECT AREA. ANY AREAS WHERE ADDITIONAL INFORMATION ARE TO BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER, IN WRITING.
- THE CONTRACTOR SHALL INSTALL WORK SUBSTANTIALLY AS INDICATED ON THE DRAWINGS. VERIFY EXACT LOCATION AND ELEVATIONS AT THE SITE. DO NOT SCALE THE DRAWINGS. MAKE NECESSARY CHANGES IN ELEVATION, FITTINGS, OR OFFSETS TO ACCOMMODATE OBSTACLES OR INTERFERENCES. ALL DIMENSIONS ARE TO BE FIELD VERIFIED BEFORE START OF WORK.
- THE CONTRACTOR IS TO PROTECT FURNISHINGS, EQUIPMENT, ETC. AND PROPERLY STORE MATERIAL REQUIRED UNTIL COMPLETION OF THE PROJECT.
- CONTRACTOR TO VERIFY ALL MEASUREMENTS BEFORE ORDERING MATERIALS OR DOING ANY WORK. NO EXTRA COMPENSATION OR CHANGE ORDERS WILL BE ISSUED DUE TO DIFFERENCES BETWEEN ACTUAL MEASUREMENT AND DIMENSIONS ON THE DRAWINGS. CONTRACTOR SHALL LAY OUT ALL EQUIPMENT PRIOR TO FABRICATION OR INSTALLATION TO ASSURE PROPER FIT AND AVOIDANCE OF OBSTRUCTIONS, AND SHALL THOROUGHLY COORDINATE WORK WITH ALL TRADES AND DETERMINE EXACT ROUTE AND LOCATION OF EACH ELEMENT AND PIECE OF EQUIPMENT BEFORE FABRICATION AND INSTALLATION.
- CONTRACTOR IS TO BE RESPONSIBLE FOR KEEPING THE GENERAL WORK AREA CLEAN AND FREE FROM DIRT AND CONSTRUCTION MATERIALS, AND CLEANING THE AREA THE END OF EACH DAY. ANY AND ALL DAMAGE TO THE EXISTING WALLS, CEILINGS, FLOOR, ETC. THAT OCCURS DURING THE WORK, SHALL BE REPAIRED AND PATCHED. IF THE SPECIFIC METHOD OF REPAIR IS IN QUESTION, THE CONTRACTOR IS TO CONFER WITH THE OWNER'S REPRESENTATIVE BEFORE COMMENCING THE REPAIR.
- THE CONTRACTOR SHALL MAINTAIN ON THE SITE FOR THE OWNER A COMPLETE SET OF CONTRACT DOCUMENTS AND ALL COPIES OF APPROVED SHOP DRAWINGS, ALL CHANGE ORDERS, FIELD ORDERS, AND BULLETINS, PROGRESSIVELY FILED AND UPDATED TO REFLECT THE LATEST CHANGES.
- THE CONTRACTOR IS TO PROVIDE AS-BUILT DRAWINGS AT THE COMPLETION OF THE PROJECT.
- CONTRACTOR ACKNOWLEDGES THEY HAVE VERIFIED WITH THE OWNER'S REPRESENTATIVE ALL OF THE DETAILS OF THE WORK PERFORMED INCLUDING THE ACCURACY OF ALL CONTRACT DRAWINGS AND SPECIFICATIONS. ALL MATERIALS AND EQUIPMENT ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS, UNLESS NOTED OTHERWISE.
- ALL DEFECTS IN EQUIPMENT OR MATERIALS, OR ERRORS IN THE DRAWINGS DISCOVERED DURING THE PERFORMANCE OF THE WORK SHALL BE REPORTED PROMPTLY TO THE OWNER'S REPRESENTATIVE. IN NO EVENT SHALL THE WORK PROCEED UNTIL DEFECTS AND/OR ERRORS HAVE BEEN RESOLVED.

CODES AND REGULATIONS:

- THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, RULES, REGULATIONS, AND ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK, BOTH ON AND OFF SITE. IF ANY OF THE CONTRACT DOCUMENTS ARE AT VARIANCE THEREWITH IN ANY RESPECT, CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING.
- CONTRACTOR REPRESENTS AND WARRANTS COMPLIANCE WITH FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES AND REGULATIONS APPLICABLE TO THIS ORDER, INCLUDING THE NEW YORK STATE BUILDING CODE, AND LOCAL GOVERNING BODY.

FINAL COMPLETION:

- PERFORM ALL OF THE WORK REQUIRED TO COMPLETE THE PROJECT, INCLUDING THE SATISFACTORY OPERATION OF ALL EQUIPMENT, AND THE CORRECTION OF ALL UNACCEPTABLE OR INCOMPLETE PORTIONS OF THE PROJECT TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. SETTLE ALL CLAIMS AND SECURE RELEASE OF ALL MECHANICS LIEN OR LEINS OF A LIKE NATURE, AND SECURE THE ISSUANCE BY AN APPROPRIATE GOVERNMENT AUTHORITY OF A CERTIFICATE OF OCCUPANCY. REMOVE ALL RUBBISH, SURPLUS MATERIALS, SCAFFOLDING, AND EQUIPMENT FROM THE SITE WHETHER OR NOT LEFT BY OR BELONGING TO THE CONTRACTOR.

FIRE PROTECTION NOTES

- THE DESIGN PRELIMINARY SHOWN ON THESE CONTRACT DOCUMENTS IS TO PROVIDE GUIDANCE FOR BIDDING AND TO OBTAIN APPROVAL OF THE AUTHORITIES HAVING JURISDICTION. SUBMIT COMPLETE FIRE SPRINKLER SHOP DRAWINGS AS REQUIRED BY CONTRACT DOCUMENTS TO THE OWNER'S DESIGNATED REVIEWER. BASE DESIGN UPON THESE DRAWINGS AND AS REQUIRED BY THE SPECIFICATIONS. SHOP DRAWINGS SHALL INCLUDE ELEVATIONS, HANGER LOCATIONS, PIPE LENGTHS, DIMENSIONS, FABRICATION METHODS, MATERIAL DATA, AND ADDITIONAL INFORMATION NECESSARY TO CLARIFY THE INTENT OF INSTALLATION. CONTRACTOR SHALL PROVIDE PIPE SIZE, SPRINKLER SPACING, AND SYSTEM CONFIGURATION AS SHOWN. ALTERNATES MUST BE APPROVED IN WRITING BY FIRE PROTECTION ENGINEER OF RECORD DOCUMENTS PRIOR TO BID.
- NOTE CAREFULLY THAT THE FIRE PROTECTION DRAWING ARE INTENDED TO INDICATE, ONLY DIAGRAMMATICALLY, TO THE EXTENT AND GENERAL CHARACTER AND LOCATIONS OF THE WORK INCLUDED. PROVIDE ALL WORK OBVIOUSLY INTENDED, BUT HAVING MINOR DETAILS OMITTED OR NOT SHOWN. COMPLETE AS REQUIRED TO PERFORM THE FUNCTIONS INTENDED. FOLLOW THE CONTRACT DOCUMENTS FOR BUILDING DETAILS AND FIT THE WORK OF THE FIRE PROTECTION DRAWINGS AND SPECIFICATIONS THERETO.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING CURRENT HYDRANT TEST DATA (PERFORMED WITHIN LAST 6 MONTHS) AND PERFORMING HYDRAULIC CALCULATIONS. THE CONTRACTOR MAY RESIZE SPRINKLER PIPING IN ACCORDANCE TO HYDRAULIC CALCULATIONS.
- COORDINATE LOCATIONS OF FIRE PROTECTION COMPONENTS, INCLUDING PIPING, ALARMS, RAINS, TEST POINTS, ETC. WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS. OBSTRUCTION TO SPRINKLER DISCHARGE MUST BE CONSIDERED DURING SHOP DRAWING PRODUCTION AND INSTALLATION. ADDITIONAL SPRINKLERS MAY BE REQUIRED AT NO ADDITIONAL COST TO OWNER. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- SUBMIT A REQUEST FOR INFORMATION FOR QUESTIONS REGARDING THE FIRE PROTECTION DOCUMENTS.
- CONTRACTOR MUST REVIEW ALL CONSTRUCTION DOCUMENTS PRIOR RO BID. SHOULD MODIFICATIONS TO THESE PLANS BECOME NECESSARY TO PROPERLY COORDINATE THE SYSTEM WITH ALL OTHER TRADES, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN APPROVAL OF THE CHANGES FROM BOTH THE AUTHORITY HAVING JURISDICTION AND THE OWNER'S DESIGNATED REVIEW CONSULTANT IN ADDITION TO OBTAINING THE NECESSARY APPROVALS. THE CONTRACTOR MUST MAKE NOTE OF ANY FIELD OR COORDINATION CHANGES ON THE INSTALLATIONS DRAWINGS, AND PROVIDE A SET OF AS-BUILT DRAWINGS ONCE COMPLETE.
- CONTRACTOR SHALL ROUTE PIPING AROUND ALL OBSTRUCTIONS AND PROVIDE SPRINKLER PROTECTION UNDER OBSTRUCTIONS AS DETAILED IN NFPA 13 AS PART OF THE FIELD COORDINATION AT NO ADDITIONAL COST TO OWNER.
- ALL SPRINKLER DEFLECTOR DISTANCE REQUIREMENTS SHALL BE IN ACCORDANCE WITH NFPA 13.
- PENETRATIONS OF RATED ASSEMBLIES SHALL BE FIRE STOPPED WITH APPROVED MATERIALS PER METHODS DESCRIBED BY THE UL FIRE RESISTANCE DIRECTORY.
- PROVIDE FLUSHING CONNECTIONS IN ACCORDANCE WITH NFPA 13.
- PROVIDE ALL NECESSARY OFFSETS, RAISES, OR DROPS IN PIPING AND AUXILIARY DRAINS REQUIRED BY BUILDING CONDITIONS. PIPE ELEVATION CHANGES ARE APPROXIMATE DIMENSIONS ONLY.
- ALL MATERIALS SHALL BE UL LISTED OR FM APPROVED. SPRINKLER PIPE SHALL BE MANUFACTURED TO STANDARDS RECOGNIZED BY NFPA 13. THREADED PIPE SHALL HAVE A CORROSION RESISTANCE RATING OF 1.0 OR GREATER. CRIMP-TYPE COUPLERS SHALL NOT BE USED.
- HYDROSTATICALLY TEST NEW ABOVE GROUND SPRINKLER PIPING FOR LEAKAGE IN PRESENCE OF AUTHORITY HAVING JURISDICTION.
- ROUTE SPRINKLER MAINS ABOVE BOTTOM CHORD OF JOISTS AND FOLLOW PITCH/SLOPE OF ALL CEILING PLANES WHERE PIPING IS EXPOSED.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL CEILING AND WALL ELEVATIONS.

NOTE:
NOT ALL SYMBOLS, ABBREVIATIONS AND EQUIPMENT DESIGNATIONS MAY APPLY TO THIS PARTICULAR PROJECT. ANY ADDITIONS OR OMISSIONS FROM THIS LEGEND SHEET DOES NOT IMPLY INCLUSION AND/ OR EXCLUSIONS OF ANY PARTICULAR ITEM FROM THIS PROJECT.

DRAWING SYMBOLS

- FIRE PRETECTION
- FIRE PROTECTION DRY
- PIPE TURNED UP
- PIPE TURNED DOWN
- PIPE BREAK
- SECTION CALLOUT
- DETAIL NUMBER
- KEYNOTE

**BUILDING CODE
JURISDICTION: CITY OF NIAGARA FALLS, NY**

- BUILDING CODE OF NEW YORK STATE.
- ENERGY CODE OF NEW YORK STATE.
- PLUMBING CODE OF NEW YORK STATE.
- MECHANICAL CODE OF NEW YORK STATE.
- FIRE CODE OF NEW YORK STATE.
- ENERGY CONSERVATION CODE OF NEW YORK STATE.
- ACCESSIBLE AND USABLE BUILDING AND FACILITIES - CABO/ANSI A117.1 - 2009
- NATIONAL ELECTRIC CODE 2005.
- NATIONAL FIRE CODE: NFPA 13.
- CODE OF THE CITY OF NIAGARA FALLS, NY.

ABBREVIATIONS

- DCDA DOUBLE CHECK DETECTOR ASSEMBLY
- DEG DEGREE
- FDC FIRE DEPARTMENT CONNECTION
- FP FIRE PROTECTION
- FPD FIRE PROTECTION DRY
- FS FLOW SWITCH
- GPM GALLONS PER MINUTE
- NFPA NATIONAL FIRE PROTECTION ASSOCIATION
- PSI POUNDS PER SQUARE INCH
- SF SQUARE FOOT
- TS TAMPER SWITCH

SPRINKLER HEAD TYPES

ROOM	TYPE	FINISH	SPRINKLER HEAD TEMP. RATING	MANUFACTURER	MODEL
ROOMS WITH SUSPENDED CEILINGS	SEMI-RECESSED	CHROME	165 F	VIKING	HORIZON 06697B
ROOMS WITH NO CEILINGS	UPRIGHT	BRASS	165 F	VIKING	MICROMATIC 10138
2'-0" ABOVE BOTTOM OF ELEVATOR SHAFT	SIDEWALL	CHROME	165 F	VIKING	MICROMATIC HP

EXP: 07/31/2024

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 018281
LAND SURVEYING: 017976
GEOLOGICAL: 018750

It is a violation of New York Education Law Art. 145 Sec. 7209 & Art. 147 Sec. 7307, for any person, unless acting under the direction of a licensed architect, professional engineer, or land surveyor, to alter an item in any way. If an item bearing the seal of an architect, engineer, or land surveyor is altered, the altering architect, engineer, or land surveyor shall affix to the item their seal and notation "altered by" followed by their signature and date of such alteration, and a specific description of the alteration.

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5795 LEWISTON ROAD
NIAGARA UNIVERSITY, NEW YORK 14109



EDA PROJECT No. 01-01-15369 HUB PROJECT No. B-23-CP-NY-1083



ESD PROJECT No. 135,035

**ACADEMIC INNOVATION
HUB - WORK FORCE
DEVELOPMENT TRAINING**

822 CLEVELAND AVENUE
NIAGARA FALLS, NEW YORK 14305

NO.	DATE	DESCRIPTION:
Revisions		

PROJECT NUMBER: 2221723

DRAWN BY: JLJ

REVIEWED BY: JSN

ISSUED FOR: BID

DATE: APRIL 11, 2024

DRAWING NAME:

FIRE PROTECTION PLAN

DRAWING NUMBER:

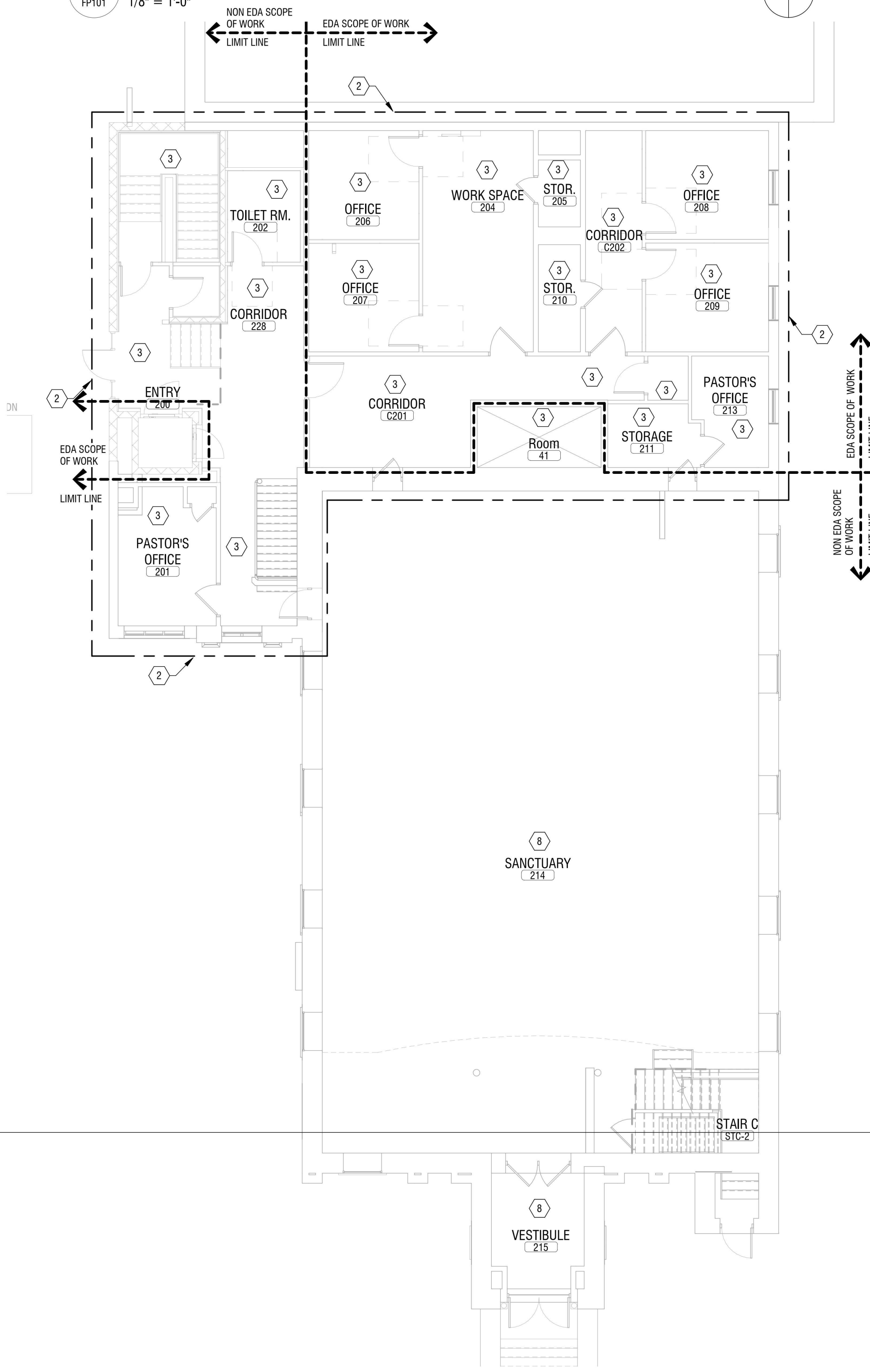
FP101

KEY NOTES:

1. PROVIDE 4" FIRE DEPARTMENT CONNECTION, CHECK VALVE AND 3/4" BALL DRIP VALVE.
2. PROVIDE SPRINKLER SYSTEM INCLUDING, SPRINKLER HEADS, BRANCH PIPING AND DISTRIBUTION MAINS AS REQUIRED TO SERVE THE SPACE WITHIN THE DOTTED BOX. PROVIDE 100% SPRINKLER COVERAGE THROUGHOUT BUILDING, UNLESS OTHERWISE NOTED. HYDRAULICALLY SIZE ALL PIPING. COORDINATE HEAD LOCATIONS WITH ALL LIGHTS, DIFFUSERS, GRILLES AND OTHER EQUIPMENT WITHIN SPACES AND CEILINGS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST RECENT EDITION OF NFPA 13.
3. PROVIDE FIRE SPRINKLER PROTECTION IN THIS AREA FOR LIGHT HAZARD WITH A DENSITY OF 0.1 GPM/SF, 225 SF MAXIMUM PER HEAD COVERAGE AS PER NFPA 13.
4. PROVIDE FIRE SPRINKLER PROTECTION IN THIS AREA FOR ORDINARY HAZARD GROUP 1 WITH A DENSITY OF 0.15 GPM/SF, 130 SF MAXIMUM PER HEAD COVERAGE AS PER NFPA 13.
5. PROVIDE INSPECTORS TEST CONNECTION. TERMINATE THRU WALL WITH 45 DEG ELBOW TURNED DN.
6. PROVIDE SPRINKLER HEAD 2'-0" ABOVE BOTTOM OF ELEVATOR SHAFT.
7. FUTURE DRY AGENT CHEMICAL SYSTEM COVERAGE FOR BELL TOWER IS NOT IN CONTRACT.
8. FUTURE SPRINKLER COVERAGE OF SANCTUARY 214 (INCLUDING GALLERY), VESTIBULE 215, DRY FIRE SPRINKLER PROTECTION IN THE ATTIC ABOVE SANCTUARY SPACE FOR LIGHT HAZARD WITH A DENSITY OF 0.1 GPM/SF, 225 SF MAXIMUM PER HEAD COVERAGE AS PER NFPA 13 IS NOT IN CONTRACT.

3 GALLERY FIRE PROTECTION PLAN

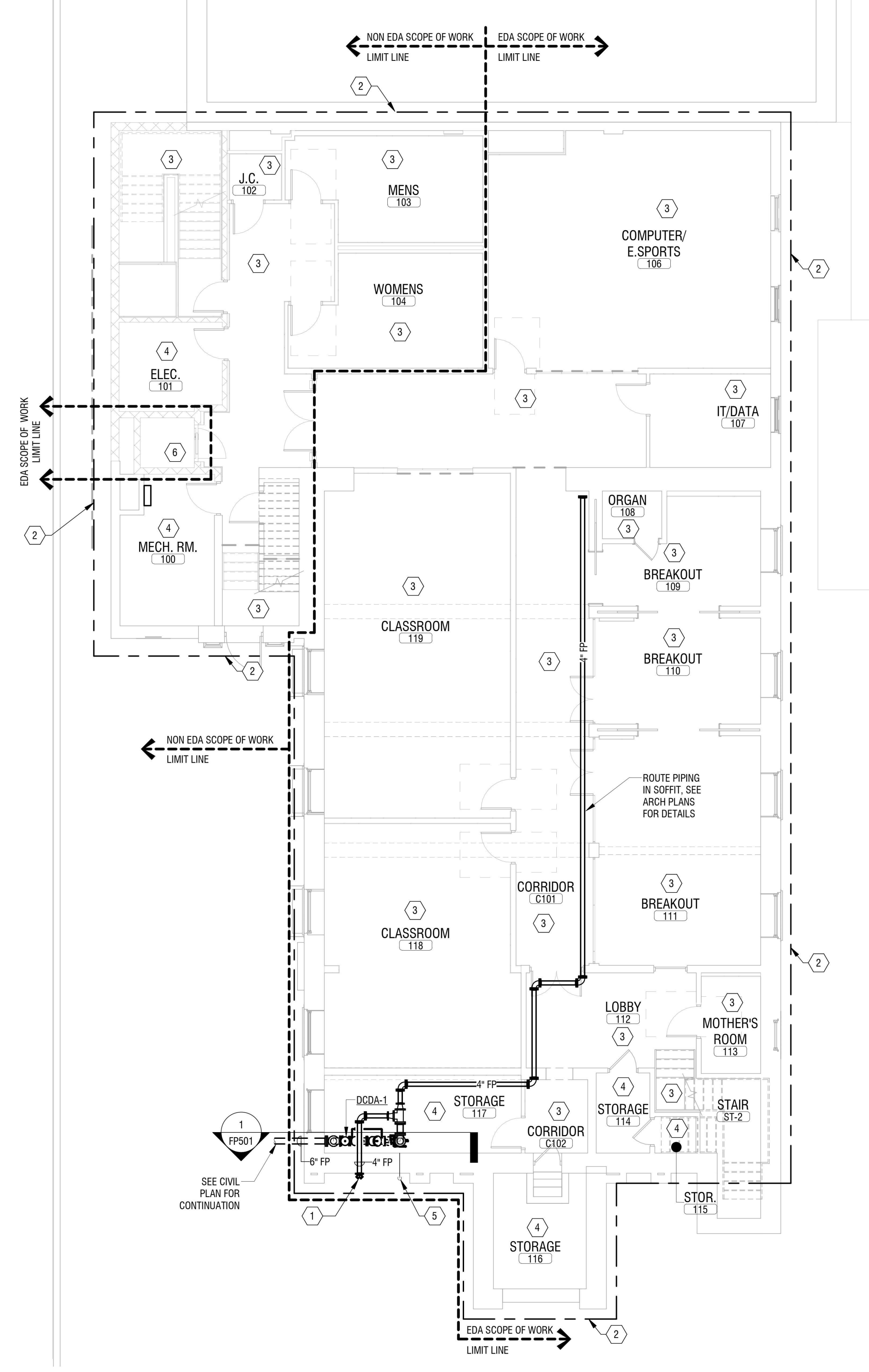
FP101 1/8" = 1'-0"



2 FIRST FLOOR FIRE PROTECTION PLAN

FP101 1/8" = 1'-0"

1 FP501



1 BASEMENT FIRE PROTECTION PLAN

FP101 1/8" = 1'-0"

EXP: 07/31/2024

CERTIFICATE OF AUTHORIZATION NUMBER:
PROFESSIONAL ENGINEERING: 018281
LAND SURVEYING: 017976
GEOLOGICAL: 018750

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ACADEMIC INNOVATION HUB - WORK FORCE DEVELOPMENT TRAINING

822 CLEVELAND AVENUE
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NO.	DATE	DESCRIPTION
Revisions		

PROJECT NUMBER: 2221723

DRAWN BY: JLJ

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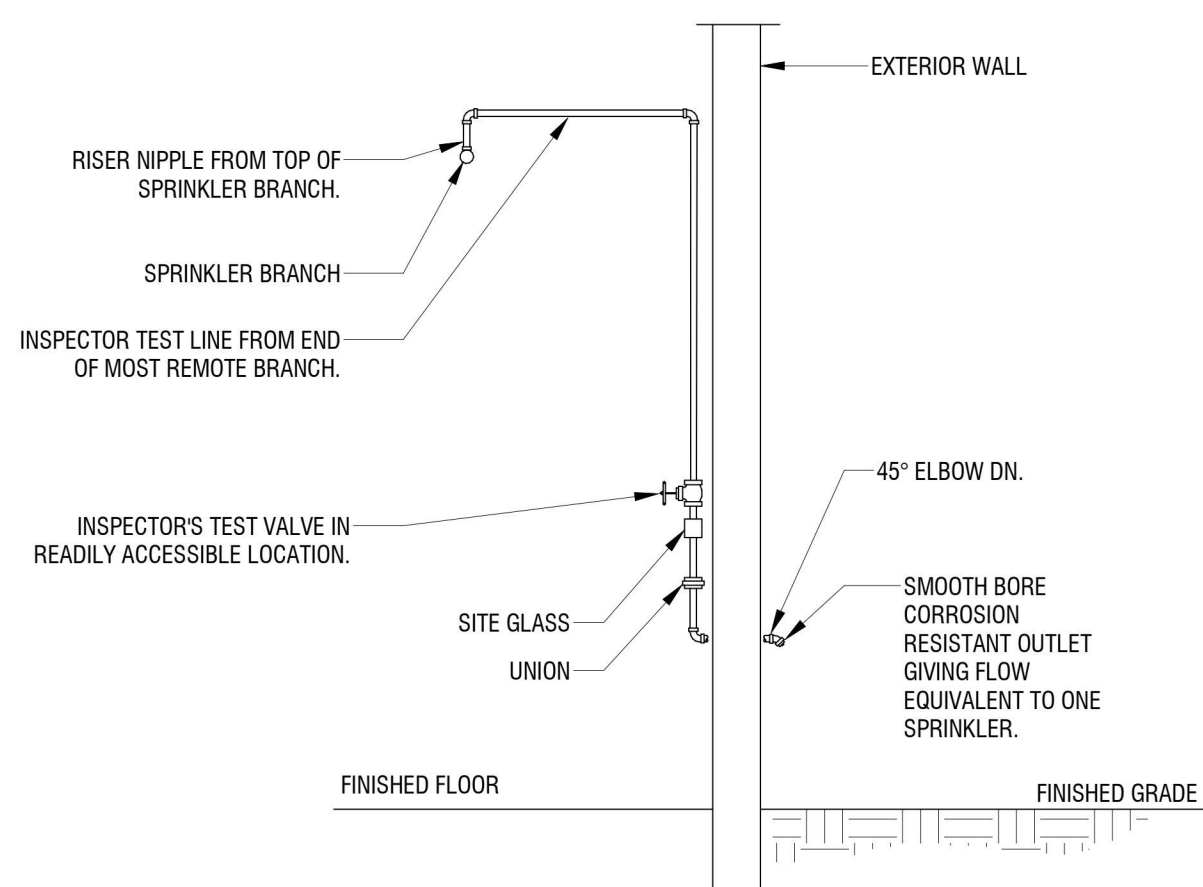
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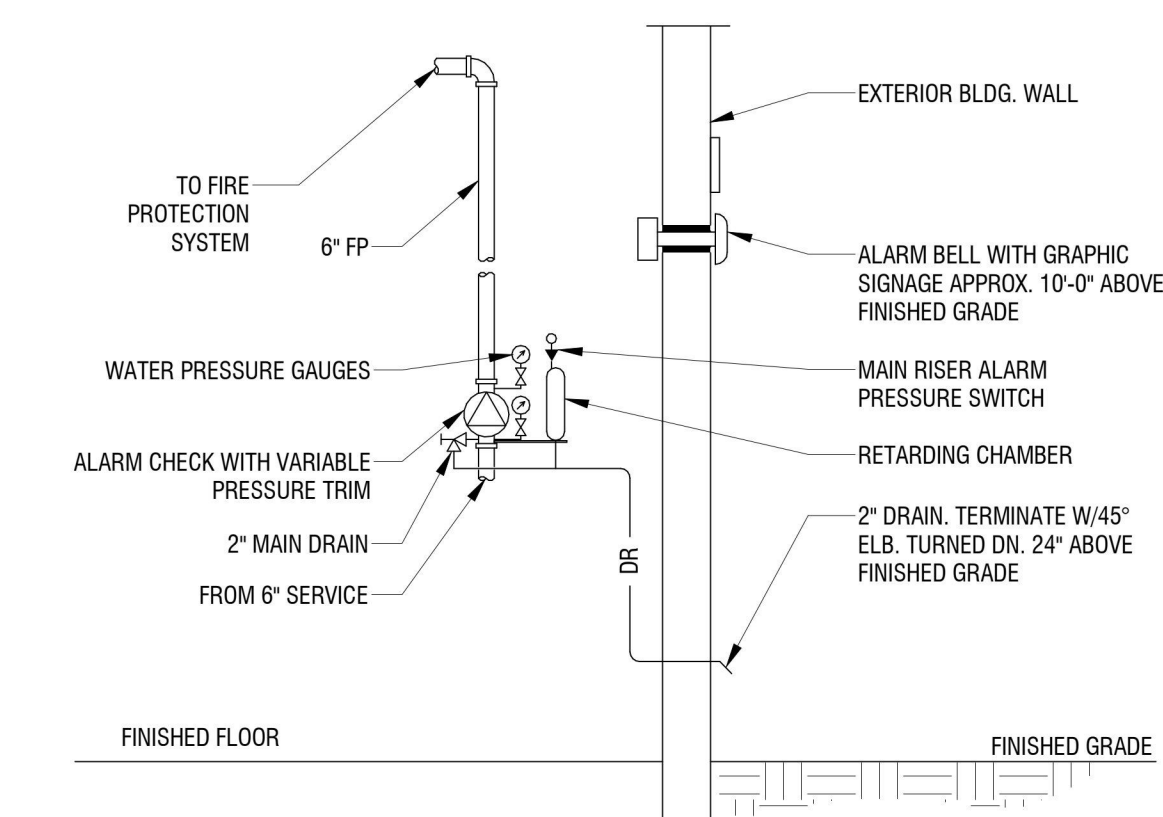
FIRE PROTECTION DETAILS AND SCHEDULES

DRAWING NUMBER:

FP501

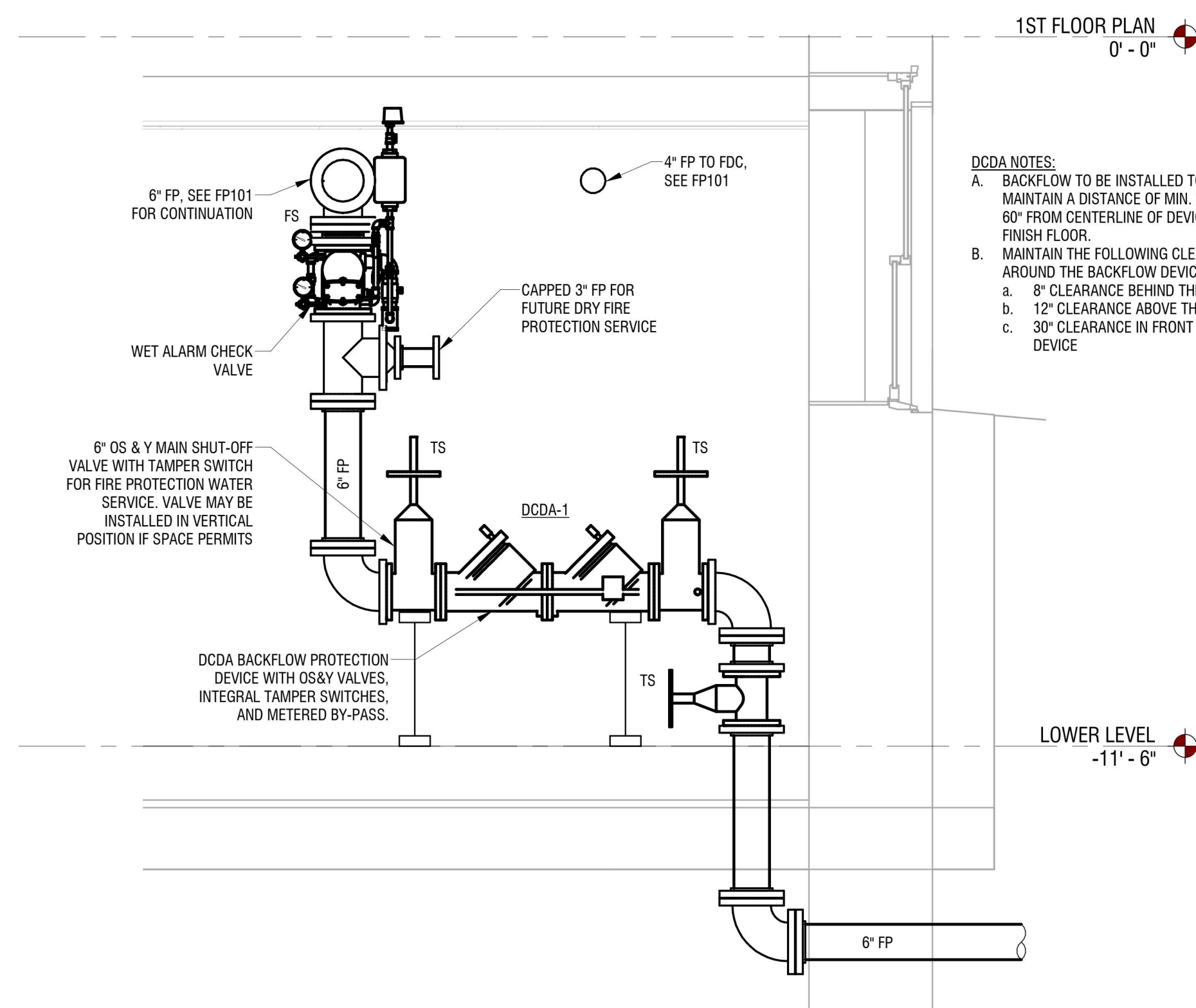


4
INSPECTORS TEST CONNECTION DETAIL
FP501 NOT TO SCALE

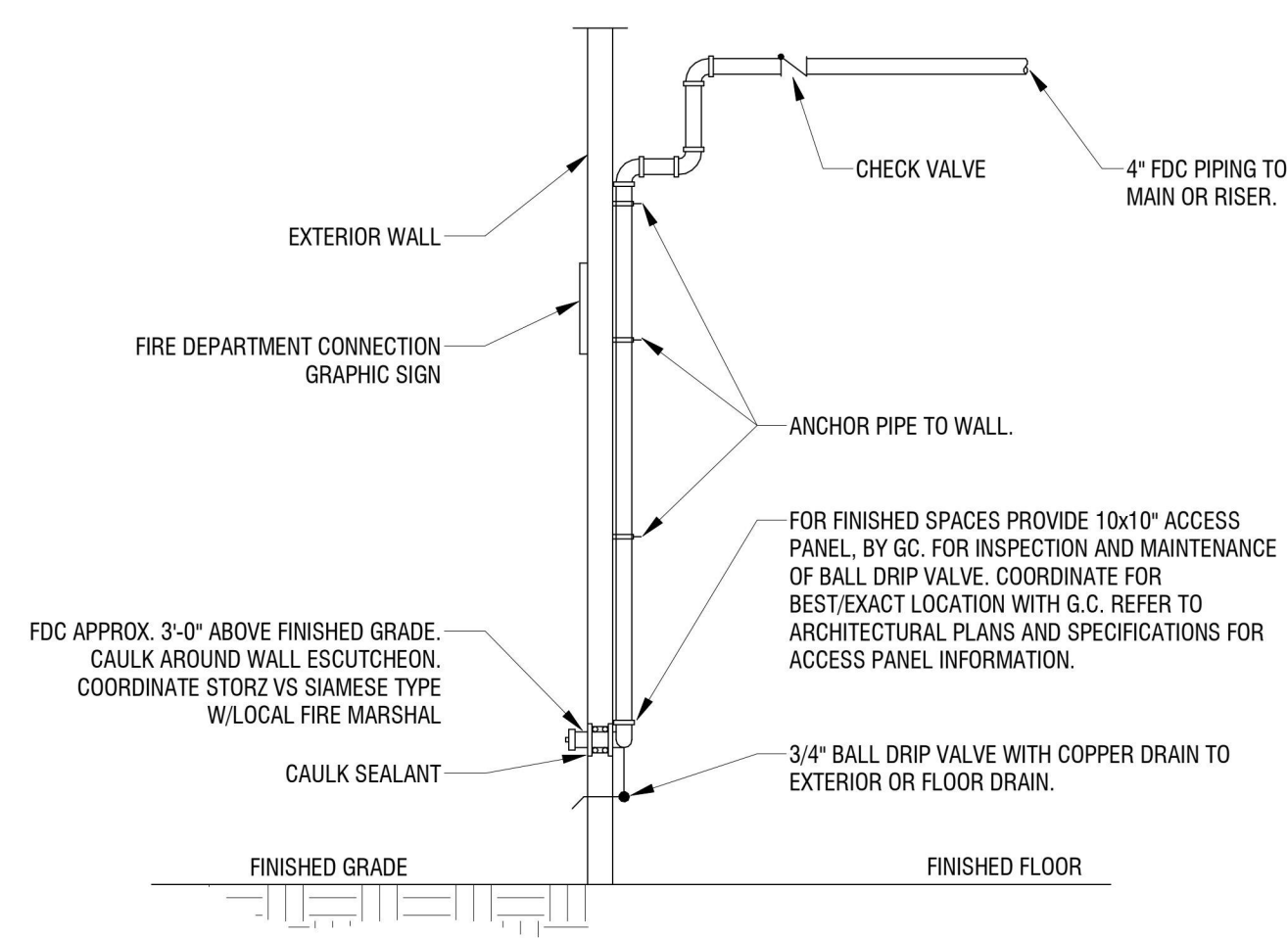


2
ALARM CHECK VALVE DETAIL
FP501 NOT TO SCALE

BACKFLOW PREVENTER SCHEDULE										
TAG	LOCATION	SERVICE	QTY.	TYPE	CONN. SIZE (NPS)	DESIGN FLOW (GPM)	MAXIMUM PRESS. DROP (PSI)	MANUFACTURER	MODEL	NOTES
DCDA-1	STORAGE 117	FIRE PROTECTION	1	DCDA	6"	500	3	WATTS	757DCDA	--



1
FIRE PROTECTION DETAIL
FP501 NOT TO SCALE



3
FIRE DEPARTMENT CONNECTION DETAIL
FP501 NOT TO SCALE