

PIPING LEGEND	
---	CW DOMESTIC COLD WATER
====	DOMESTIC COLD WATER BELOW SLAB
----	HW DOMESTIC HOT WATER
=====	S or W SOIL OR WASTE BELOW SLAB
-----	V VENT ABOVE GROUND
-----	V VENT BELOW SLAB
---NP---	NP CW NON POTABLE COLD WATER
---NP---	NP HW NON POTABLE HOT WATER
---TP---	TP TRAP PRIMER

ABBREVIATIONS	
ACT	ACOUSTICAL TILE
AF	ABOVE FINISH FLOOR
AP	ACCESS PANEL
ARCH	ARCHITECT
BT	BATH TUB
BLDG	BUILDING
CFH	CUBIC FEET PER HOUR
CI	CAST IRON
CL	CEILING
CLDI	CEMENT LINED DUCTILE IRON
CONC	CONCRETE
CONT	CONTINUATION
CONTR	CONTRACTOR
CP	CHROME PLATED
CTE	CONNECT TO EXISTING
CW	COLD WATER
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
EL/ELEV	ELEVATION
EWC	ELECTRIC WATER COOLER-FIXTURE IDENTIFICATION
EX	EXISTING
FCO	FLOOR CLEANOUT
FFE	FINISH FLOOR ELEVATION
F#	FIXTURE NUMBER
FLR	FLOOR
FP	FIRE PROTECTION
FS	FLOW SWITCH
FT	FOOT
FV	FLUSH VALVE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GI	GREASE INTERCEPTOR
GPF	GALLON PER FLUSH
GPM	GALLONS PER MINUTE
HC	HANDICAPPED
HW	HOT WATER
ID	HOT WATER CIRCULATING
ID	INSIDE DIAMETER
INV	INVERT
IW	INDIRECT WASTE
LPC	LIMIT OF PLUMBING CONTRACTOR
MECH	MECHANICAL
MSB	MOP SERVICE BASIN-FIXTURE IDENTIFICATION
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
NIC	NOT IN CONTRACT
OD	OUTSIDE DIAMETER
OED	OPEN END DRAIN
PC	PLUMBING CONTRACTOR
PLBG	PLUMBING
PSI	POUNDS PER SQUARE INCH
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
SA	SHOCK ABSORBER
SH	SHOWER-FIXTURE IDENTIFICATION
SK	SINK-FIXTURE IDENTIFICATION
SPEC	SPECIFICATION
SS	SOIL STACK
ST.ST.	STAINLESS STEEL
TW	TEMPERED WATER
TYP	TYPICAL
U	URINAL-FIXTURE IDENTIFICATION
V	VENT
VB	VACUUM BREAKER
VS	VENT STACK
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET-FIXTURE IDENTIFICATION

GENERAL NOTES	
1.	PLUMBING WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE PLUMBING AND GAS CODE INCLUDING ALL LOCAL AMENDMENTS.
2.	OBTAIN ALL PERMITS AND PAY ALL FEES ASSOCIATED WITH THIS WORK PRIOR TO COMMENCEMENT.
3.	PIPING AND EQUIPMENT IS SHOWN DIAGRAMMATICALLY. THE ACTUAL ROUTING OF PIPING AND EXACT LOCATION OF EQUIPMENT SHALL BE DETERMINED IN THE FIELD.
4.	IN ADDITION TO REVIEWING AND COORDINATING WITH THE OTHER TRADES (CIVIL, STRUCTURAL, ARCHITECTURAL, FIRE PROTECTION, HVAC, AND ELECTRICAL) THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH DETAILS OF CONSTRUCTION.
5.	FURNISH AND INSTALL ALL NECESSARY PIPING, EQUIPMENT SUPPORTS AND ANY EQUIPMENT NOT SHOWN ON DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS BUT NECESSARY TO PROVIDE A COMPLETE AND WORKABLE SYSTEM.
6.	PROVIDE ACCESSIBLE SHUTOFF VALVES ON ALL BRANCH PIPING AND ON ALL SUPPLY PIPING TO INDIVIDUAL FIXTURES AND EQUIPMENT.
7.	PROVIDE ACCESS TO ALL EQUIPMENT REQUIRING PERIODIC SERVICE AND MAINTENANCE.
8.	FURNISH ACCESS PANELS TO THE GENERAL CONTRACTOR FOR INSTALLATION UNDER THE RELATED TRADES.
9.	PITCH ALL WATER LINES TO DRAIN.
10.	INSTALL HORIZONTAL RUNS OF WATER PIPING AS HIGH AS POSSIBLE AND PROVIDE DRAIN-OFFS AT ALL LOW POINTS.
11.	HOT WATER TAKEOFFS SHALL HAVE NOT LESS THAN THREE ELBOW SWINGS.
12.	PIPING SHALL RUN CONCEALED IN ALL AREAS WITH THE EXCEPTION OF MECHANICAL ROOMS, AREAS WHERE NO CEILING EXISTS OR WHERE NOTED ON THE PLANS.
13.	INSTALL DIELECTRIC COUPLINGS BETWEEN DISSIMILAR MATERIALS.
14.	PROVIDE DANDY CLEANOUTS AT THE BASE OF ALL SANITARY AND RAINWATER STACKS.
15.	AN AIR GAP OF AT LEAST TWICE THE EFFECTIVE DIAMETER OF THE DRAIN SERVED SHALL BE PROVIDED ON ALL EQUIPMENT DRAINS PIPED TO FLOOR DRAINS.
16.	REQUIRED FIRE RESISTANCE RATING OF FLOORS, WALLS AND CEILINGS SHALL BE MAINTAINED WHEN PIPE PENETRATIONS ARE MADE.
17.	REFER TO DETAILS FOR PIPE AND EQUIPMENT SIZES NOT SHOWN ON THE PLANS.
18.	ALL WORK SHOWN ON DETAILS BUT NOT ON PLANS OR VICE VERSA SHALL BE INCLUDED IN SCOPE OF PROJECT.
19.	SEE SPECIFICATIONS FOR OTHER REQUIREMENTS.

GENERAL	
	FD FLOOR DRAIN
	FCO FLOOR CLEANOUT
	P-TRAP
	ELBOW UP OR RISE
	DN/DP ELBOW DOWN OR DROP
	CAP OR END OF PIPE
	HB HOSE BIBB
	TEE LOOKING UP
	TEE LOOKING DOWN
	UNION
	RPBP REDUCED PRESSURE ZONE BACKFLOW PREVENTER
	CTE CONNECT TO EXISTING
	ETR EXISTING TO REMAIN
	ETBR EXISTING TO BE REMOVED
	FLOW IN DIRECTION OF ARROW
	DIRECTION OF SLOPE
	CNR CONCENTRIC REDUCER
	PIPE GUIDE
	LIMIT OF WORK
	HC HANDICAPPED ACCESSIBLE
	KEY NOTE DESIGNATION
	TP TRAP PRIMER

DESIGNATION INDICATOR	
	1 P-1
	DETAIL DESIGNATION NUMBER
	DETAIL DESIGNATION DRAWING

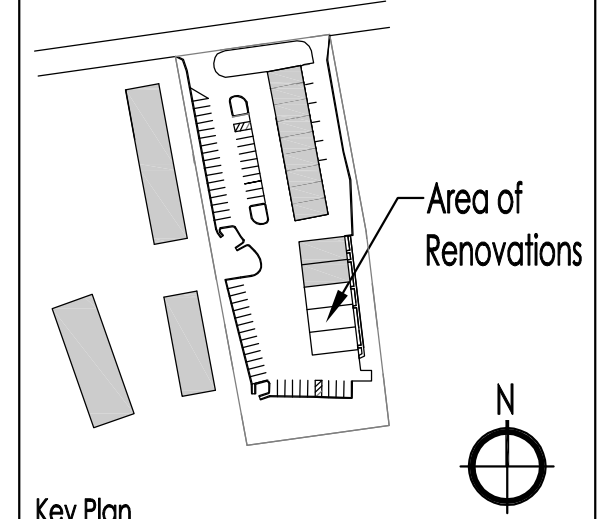
VALVE LEGEND	
	BALL VALVE

DEMOLITION NOTES	
1.	REFER TO THE ARCHITECTURAL DRAWINGS FOR THE EXTENT OF THE DEMOLITION SCOPE OF WORK AND AREA. THE DEMOLITION PLANS INDICATE THE GENERAL INTENT AND ARE NOT INTENDED TO SHOW ALL ITEMS TO BE REMOVED OR RETAINED.
2.	THE LOCATIONS OF EXISTING EQUIPMENT INCLUDING PIPING, DUCTWORK, EQUIPMENT, CONDUITS, ETC ARE SHOWN IN AN APPROXIMATE WAY ONLY. VISIT THE SITE PRIOR TO SUBMISSION OF THE BIDS AND COMMENCEMENT OF WORK TO BECOME FAMILIAR WITH THE ACTUAL CONDITIONS AND EXTENT OF THE WORK.
3.	TRACE AND LABEL ALL EXISTING SYSTEMS WITHIN THE DEMOLITION AREA AND BEYOND PRIOR TO DISCONNECTION AND REMOVAL TO ENSURE THAT NO AREA OUTSIDE THE DEMOLITION AREA IS AFFECTED. REVIEW IN DETAIL WITH THE GENERAL CONTRACTOR AND OWNER WHAT IS TO BE REMOVED AND REMAIN PRIOR TO WORK COMMENCING THE DEMOLITION. THERE SHALL BE NO INTERRUPTION OF SERVICES OUTSIDE THE DEMOLITION AREA WITHOUT APPROVAL FROM THE OWNER'S REPRESENTATIVE.
4.	COORDINATE EQUIPMENT REMOVAL WITH ALL PARTIES TO PROVIDE DISCONNECTION. REMOVE EQUIPMENT BY UNFASTENING AT THE SUPPORTS OR ATTACHMENTS. ALSO REMOVE THE ATTACHMENTS FROM THE BUILDING, LEAVING NO COMPONENT OF THE ORIGINAL INSTALLATION.
5.	EXERCISE CARE WITH EQUIPMENT THAT IS TO BE RELOCATED OR TURNED OVER TO THE OWNER. EXAMINE THE EQUIPMENT BEFORE REMOVAL IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE TO DETERMINE ITS CONDITION. DELIVER OWNER-RETAINED EQUIPMENT TO AN ON-SITE LOCATION DESIGNATED BY THE OWNER AND OBTAIN ACKNOWLEDGMENT OF RECEIPT IN ORIGINAL CONDITION.
6.	INSTALL RELOCATED EQUIPMENT IN ORIGINAL CONDITION ENSURING NO DAMAGE.
7.	PROMPTLY REPAIR ANY DAMAGE CAUSED DURING/BY THE EXECUTION OF WORK. DAMAGE INCLUDES BUT IS NOT LIMITED TO DESTRUCTION OF ITEMS INTENDED TO REMAIN OR TO BE SALVAGED.
8.	NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY UNANTICIPATED HIDDEN CONDITIONS ENCOUNTERED DURING THE DEMOLITION.
9.	ALL ITEMS REMOVED SHALL BE OFFERED TO THE OWNER FOR SALVAGE. IF THE OWNER DOES NOT TAKE POSSESSION, DISPOSE OF THE ITEMS IN A SAFE AND LEGAL MANNER. ALL ITEMS CLASSIFIED AS HAZARDOUS SHALL BE DISPOSED AS HAZARDOUS WASTES AND A UNIFORM HAZARDOUS WASTE MANIFEST SHALL BE PROVIDED TO THE OWNER.
10.	ENSURE THE SAFE PASSAGE OF PERSONS IN AND AROUND THE BUILDING DURING DEMOLITION. PREVENT INJURY TO PERSONS AND DAMAGE TO PROPERTY. PROVIDE ADEQUATE SHORING AND BRACING TO PREVENT COLLAPSE. IMMEDIATELY REPAIR DAMAGED PROPERTY TO THE CONDITION BEFORE BEING DAMAGED. TAKE EFFECTIVE MEASURES TO PREVENT WINDBLOWN DUST.
11.	DO NOT USE CUTTING TORCHES UNTIL WORK AREA IS CLEARED OF FLAMMABLE MATERIALS. AT CONCEALED SPACES, SUCH AS DUCT AND PIPE INTERIORS, VERIFY CONDITION AND CONTENTS OF HIDDEN SPACE BEFORE STARTING FLAME-CUTTING OPERATIONS. MAINTAIN FIRE WATCH AND PORTABLE FIRE-SUPPRESSION DEVICES DURING FLAME-CUTTING OPERATIONS. MAINTAIN ADEQUATE VENTILATION WHEN USING CUTTING TORCHES.
12.	DRAIN, PURGE, OR OTHERWISE REMOVE, COLLECT, AND PROPERLY DISPOSE OF CHEMICALS, LIQUIDS, GASES, EXPLOSIVES, ACIDS, FLAMMABLES, OR OTHER DANGEROUS MATERIALS BEFORE PROCEEDING WITH DEMOLITION OPERATIONS.
13.	PROPERLY LABEL ALL UNLABELED SERVICE PIPELINES AND VALVES TO REMAIN WITH COLOR PIPE MARKERS AND VALVE TAGS. MOUNT A VALVE AND SERVICE CHART IN THE AREA OF DEMOLITION THAT IDENTIFIES ALL LABELED SERVICES. URN ONE COPY OF SAME OVER TO THE GM OWNER.
14.	PRIOR TO DEMOLITION, MAKE SAFE ALL SERVICE PIPE TERMINATIONS TO THE AREA. PROVIDE VALVE AND CAPS ON PRESSURE SERVICES TO THE AREA THAT ARE TO REMAIN IN SERVICE.

Seal



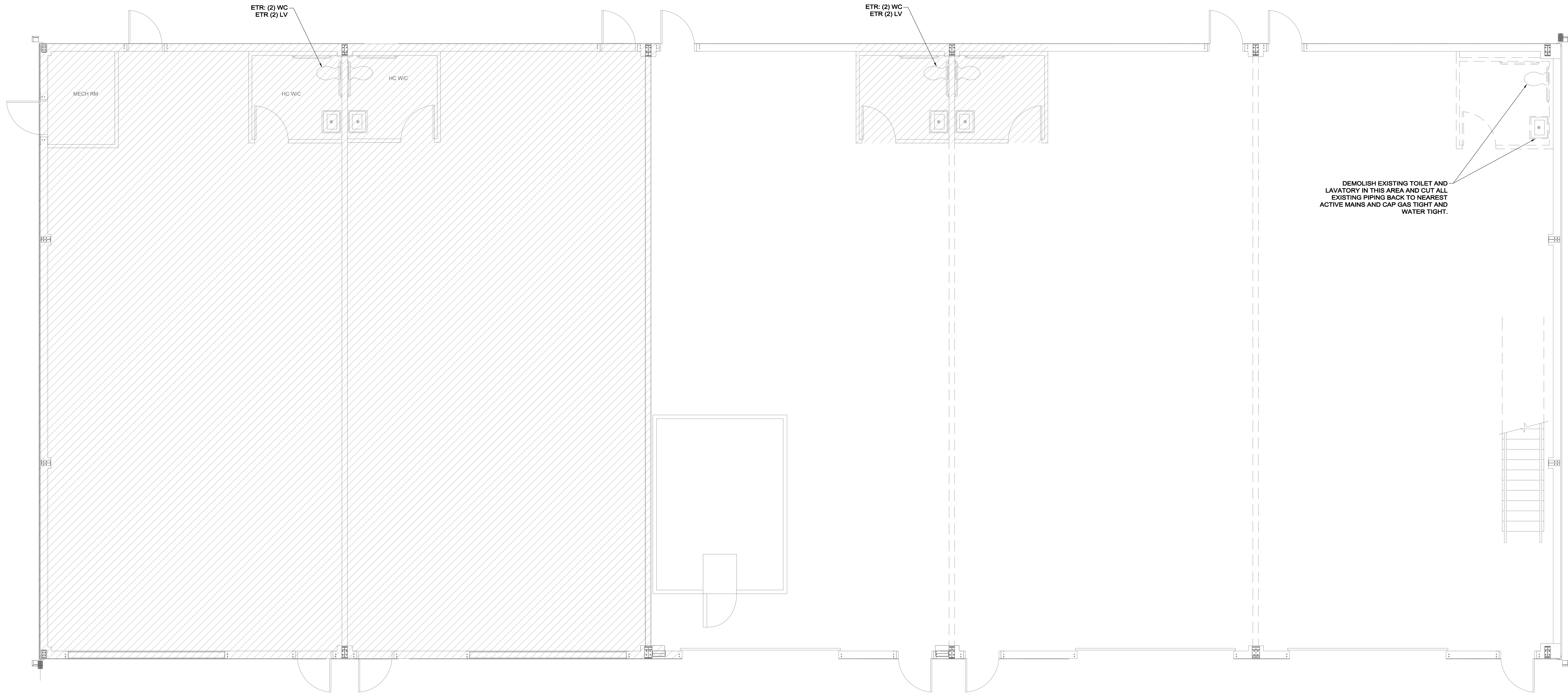
Project Info



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1	ISSUED FOR CONSTRUCTION	02-28-2022

Drawn By:	JP
Checked By:	MS
Approved By:	DW
Scale:	NONE
Project No.:	0220068.00
Drawing Title:	PLUMBING LEGEND, NOTES & ABBREVIATIONS

Drawing No.: **P-000**
Owner's Drawing No.:



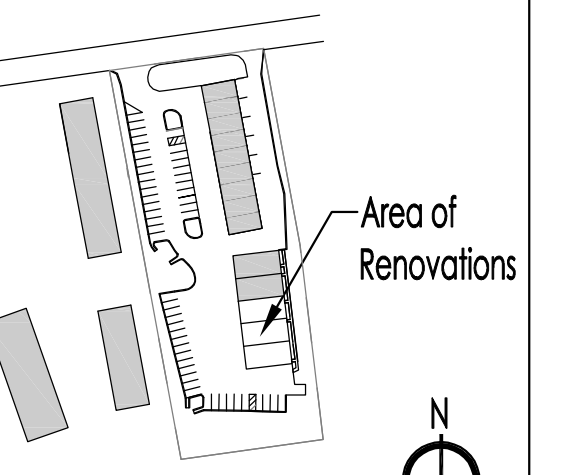
1 FIRST FLOOR PLAN - DEMOLITION
1/4" = 1'-0"

Seal



Charles River Microbial Solutions
Processing Facility Renovations
Harwich, MA

Project Info



Key Plan

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No.	Description	Date
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Approved By:

Scale: AS NOTED

Project No.: 02200600

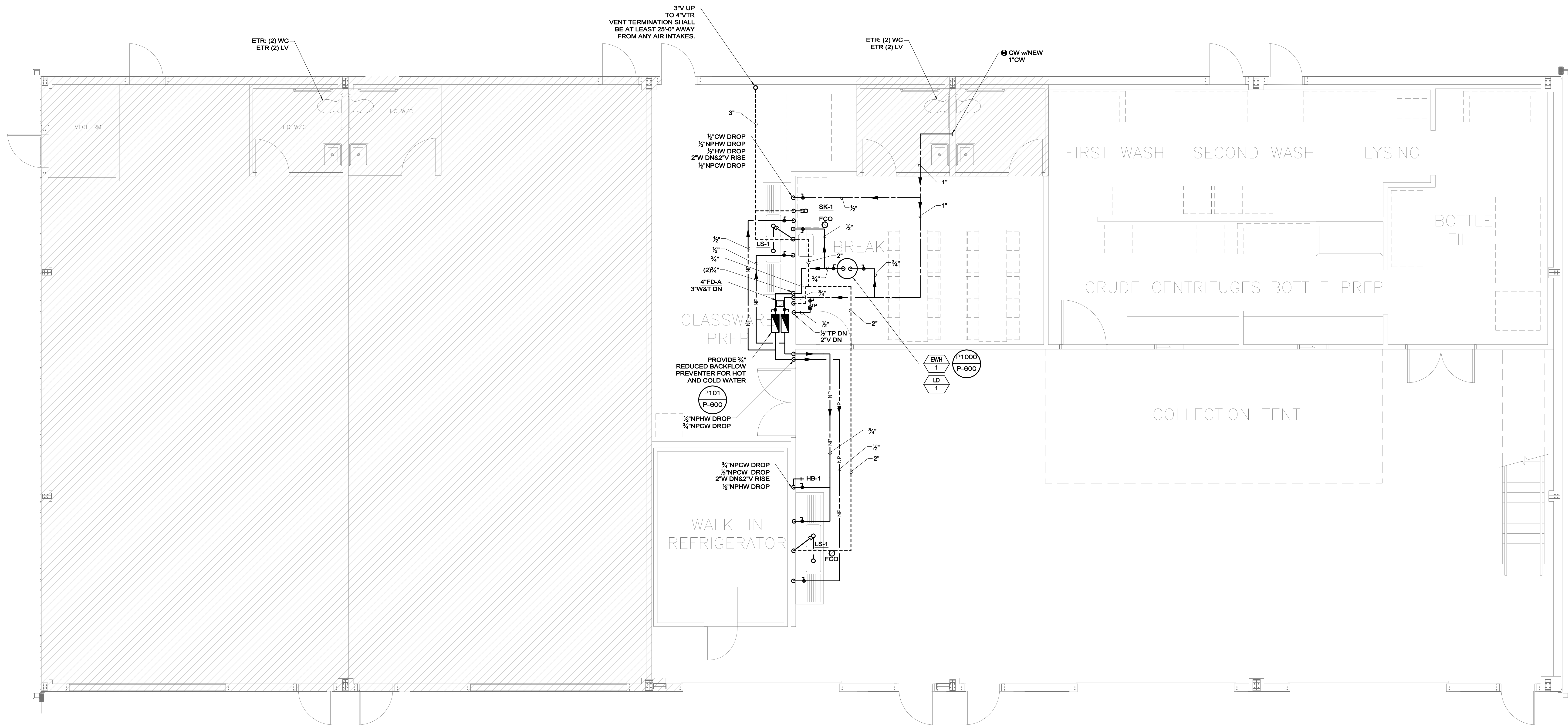
Drawing Title:
PLUMBING FIRST FLOOR DEMOLITION PLAN

Drawing No.:

PD-210

Owner's Drawing No.:

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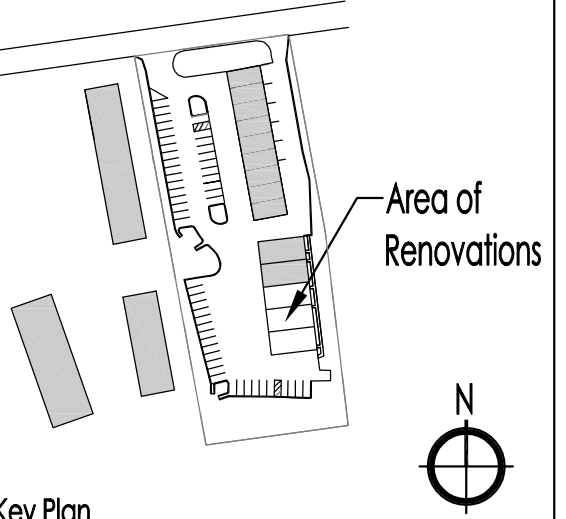


1 FIRST FLOOR PLAN - NEW WORK
1/4" = 1'-0"

Seal



Project Info



Key Plan

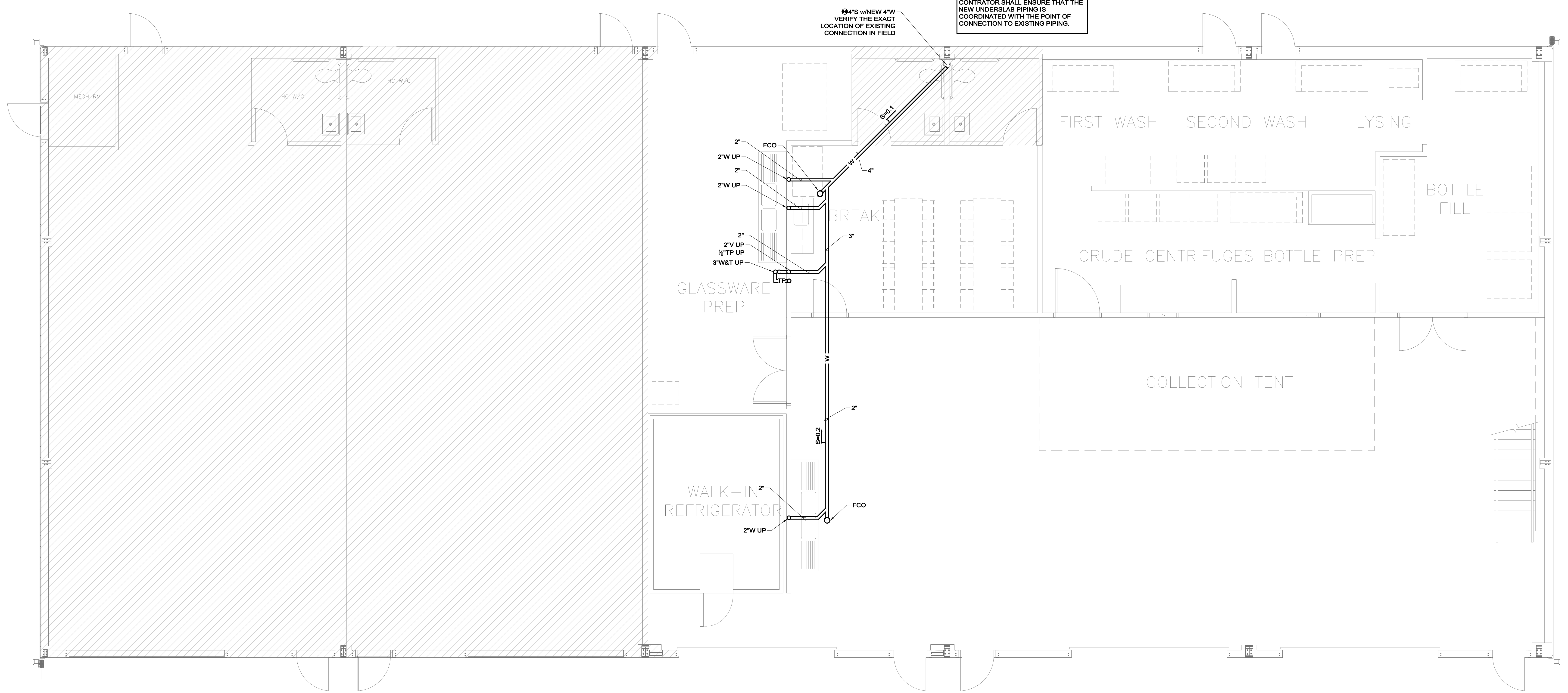
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Checked By: MS
Approved By: DW
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Project No.: 0220068.00
Drawing Title:
PLUMBING FIRST FLOOR NEW WORK PLAN

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PLUMBING NOTE
THIS CONTRACTOR SHALL INCLUDE IN THEIR BID A GROUND PENETRATING RADAR AND/OR VIDEO INSPECTION OF EXISTING UNDER SLAB PIPING AS REQUIRED TO VERIFY THE LOCATIONS OF ALL UNDER SLAB PIPING IN THE AREA OF WORK PRIOR TO THE START OF ANY DEMOLITION OR SLAB CUTTING WORK. UNDERSLAB PIPING IS SHOWN DIAGRAMATICALLY AND SHALL BE CLOSELY FIELD COORDINATED BY THE CONTRACTOR. CONTRACTOR SHALL PROVIDE DETAILED UNDERSLAB COORDINATION DRAWING PRIOR TO START OF INSTALLATION. CONTRACTOR SHALL ENSURE THAT THE UNDERSLAB PIPING SLOPE IS IN ACCORDANCE WITH THE MA STATE PLUMBING CODE. CONTRACTOR SHALL ENSURE THAT THE NEW UNDERSLAB PIPING IS COORDINATED WITH THE POINT OF CONNECTION TO EXISTING PIPING.



1 FIRST FLOOR PLAN - NEW WORK UNDERSLAB PLAN
1/4" = 1'-0"

Seal

Charles River Microbial Solutions
Processing Facility Renovations
Harwich, MA

Project Info

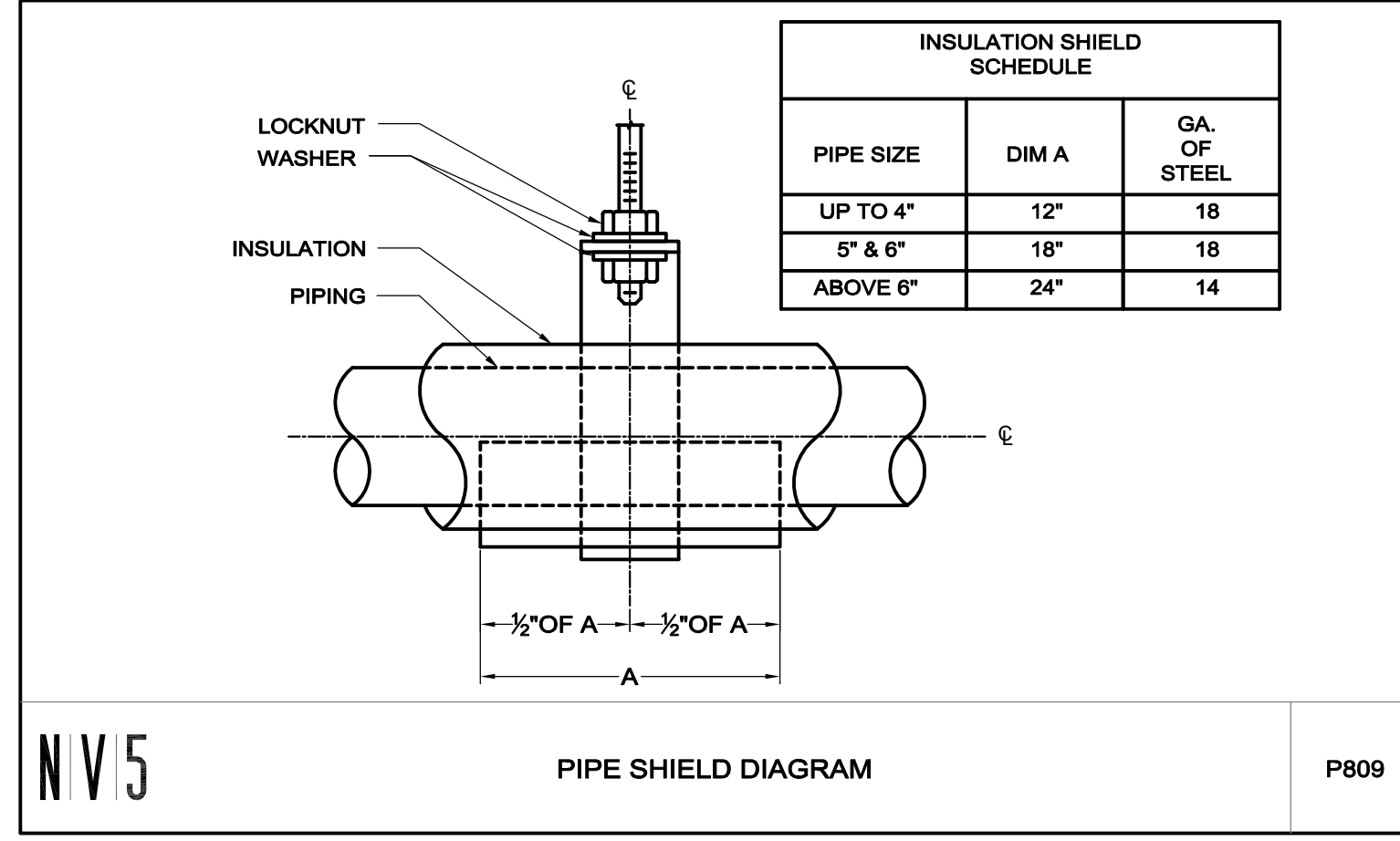
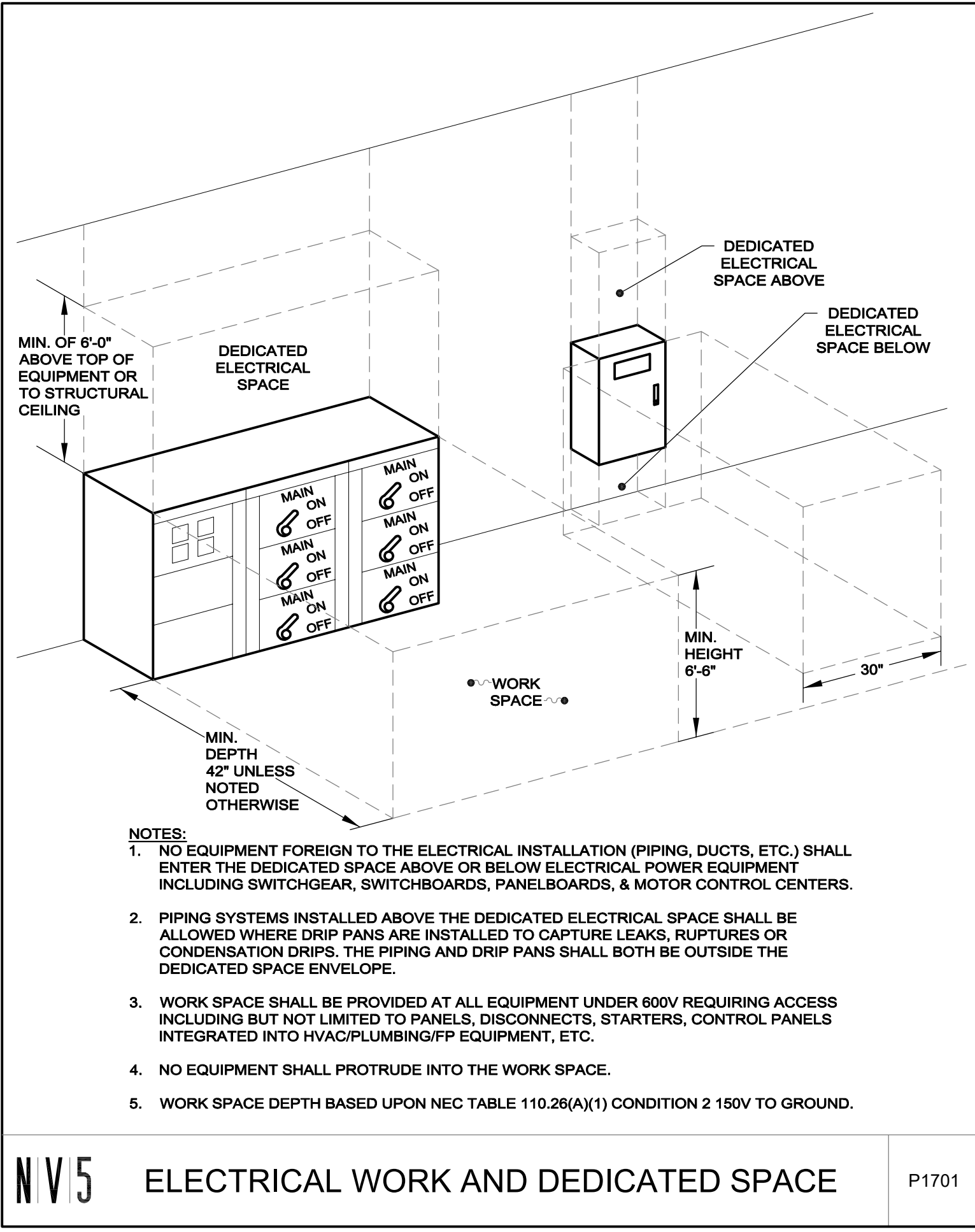
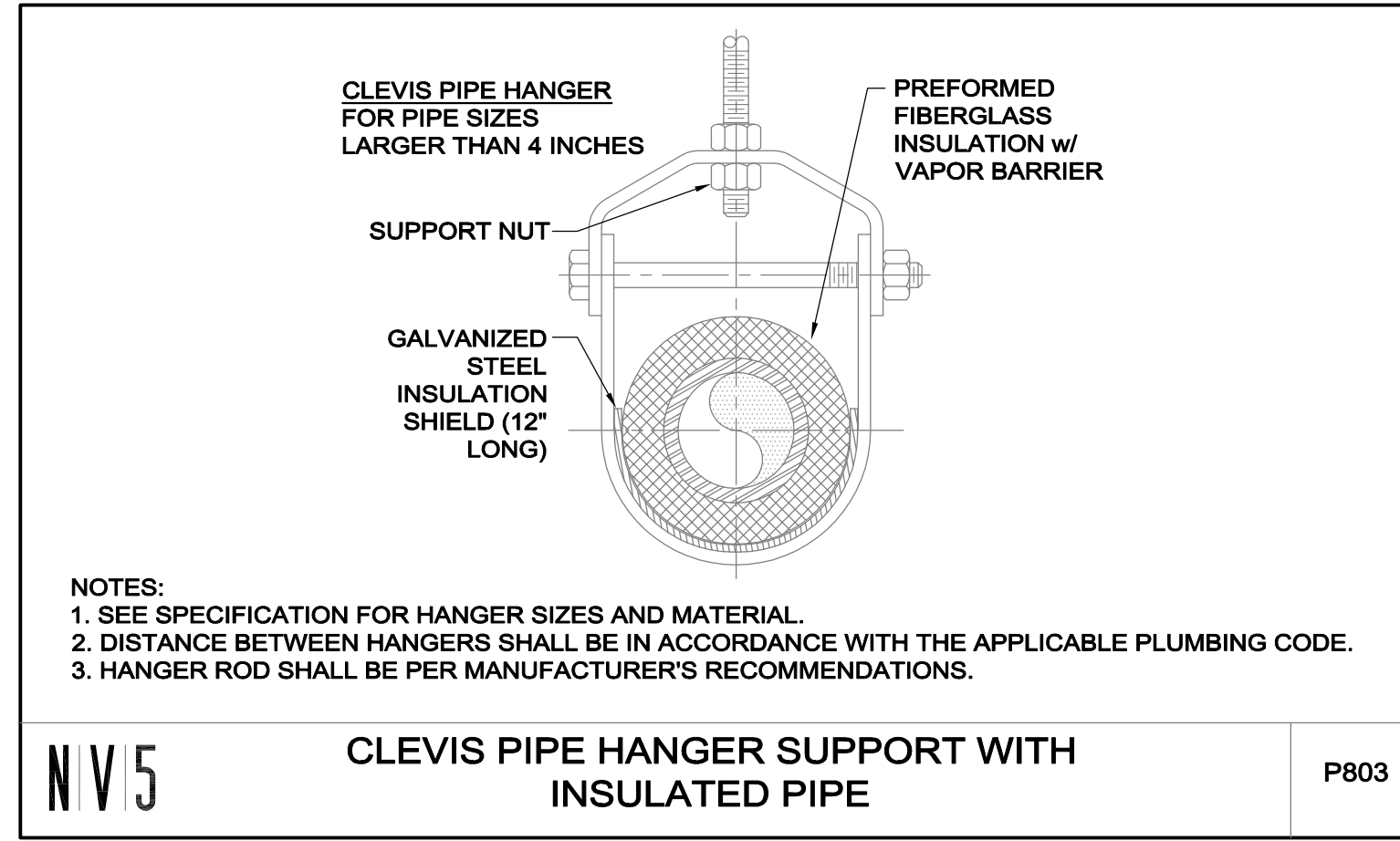
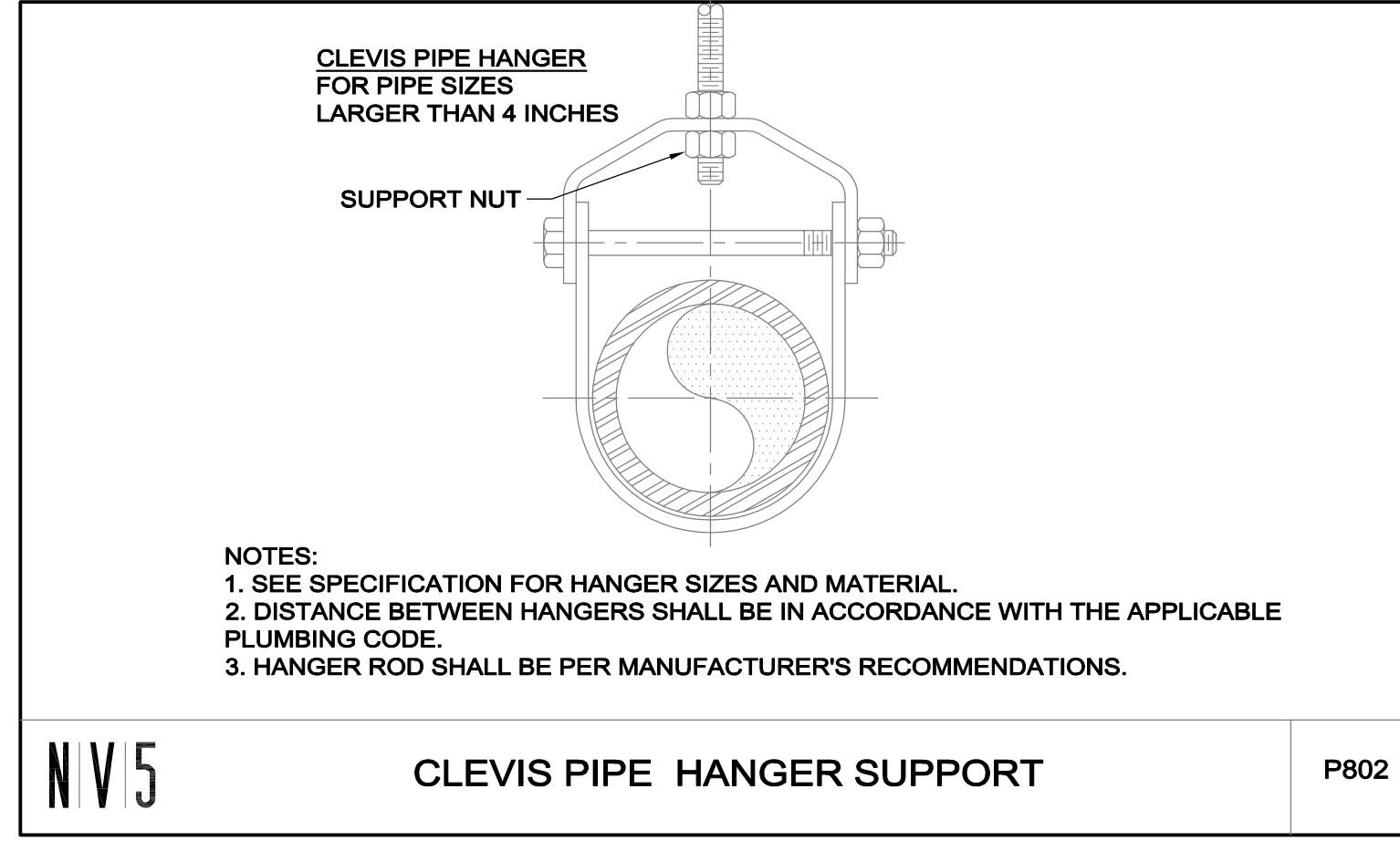
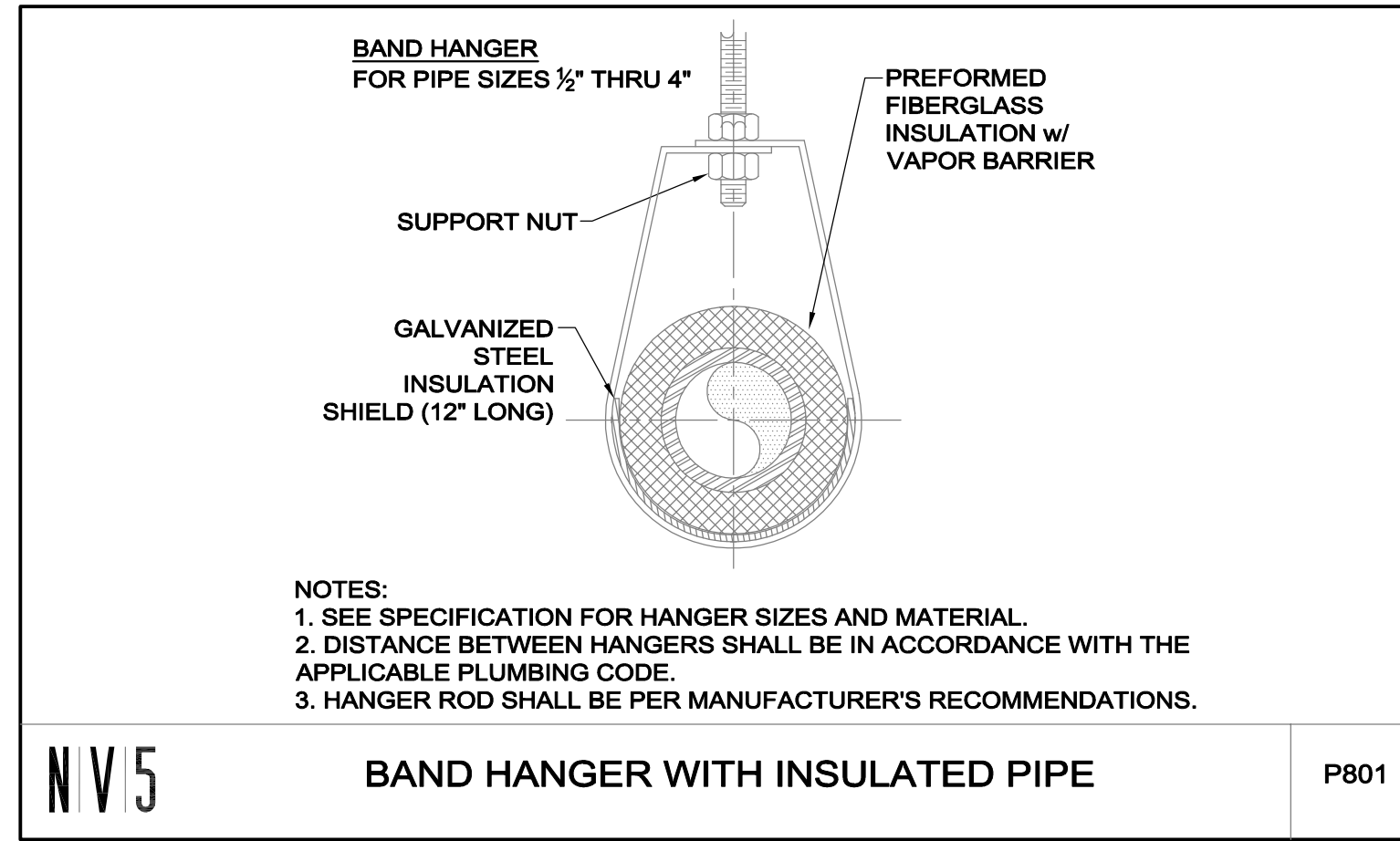
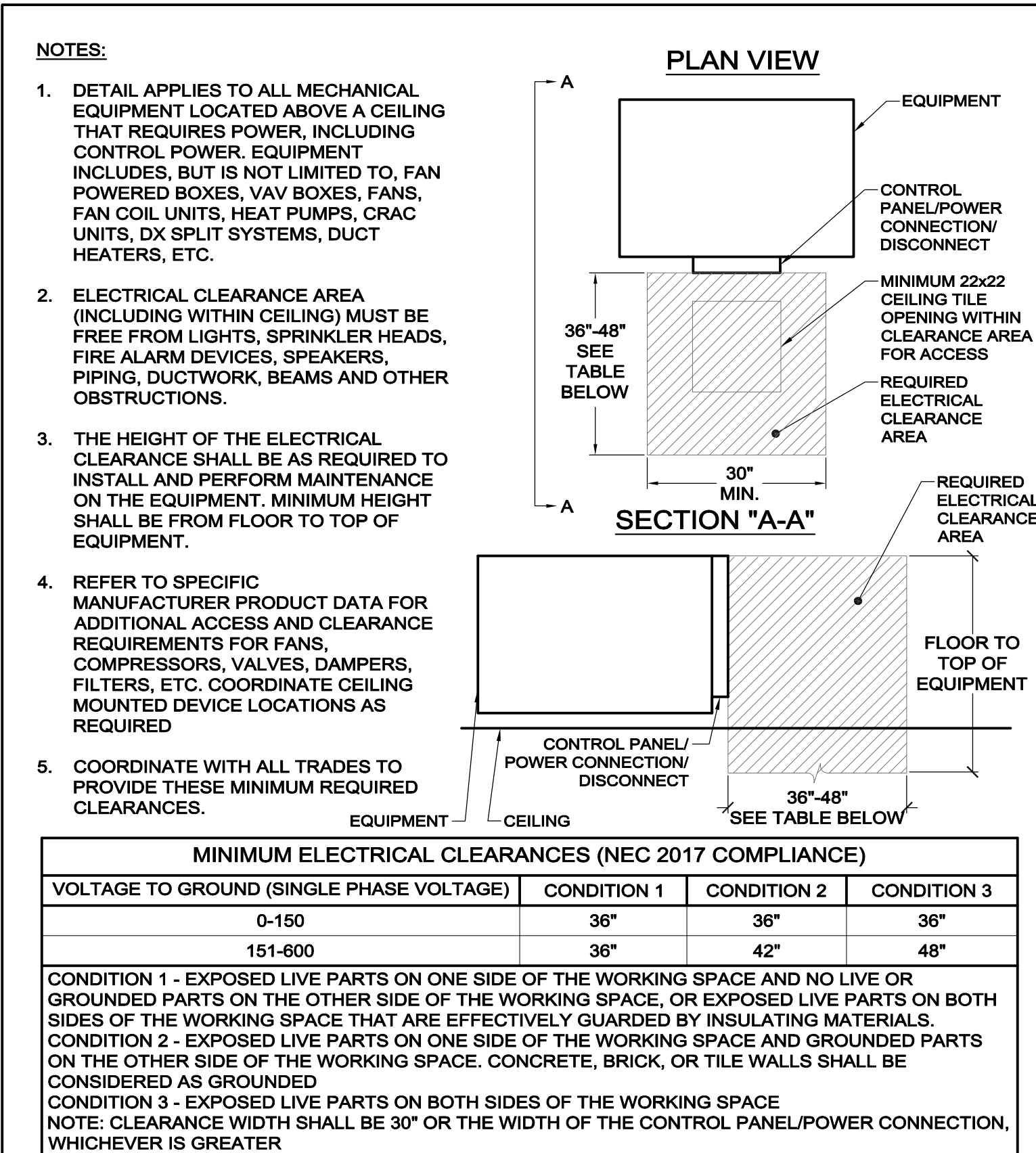
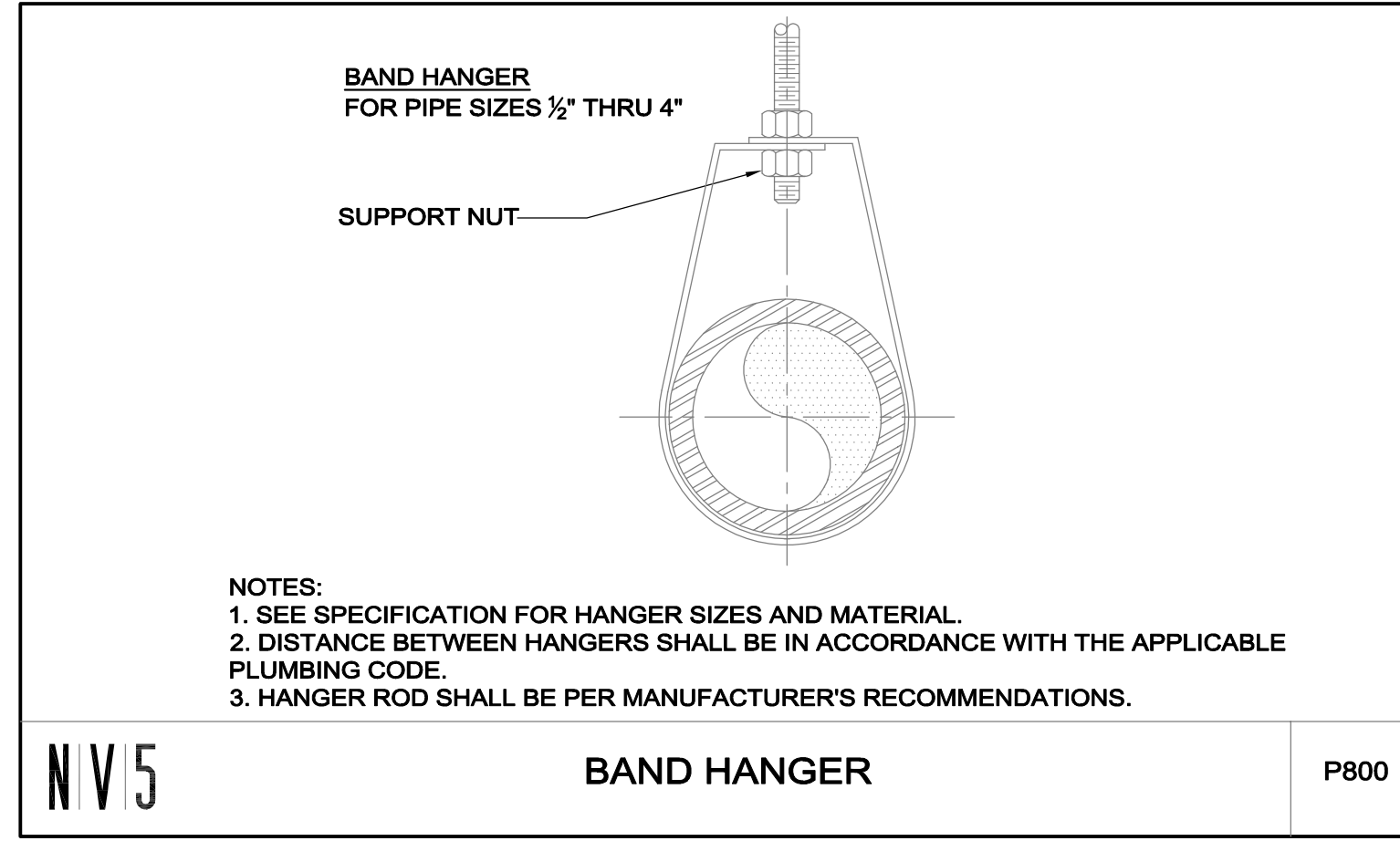
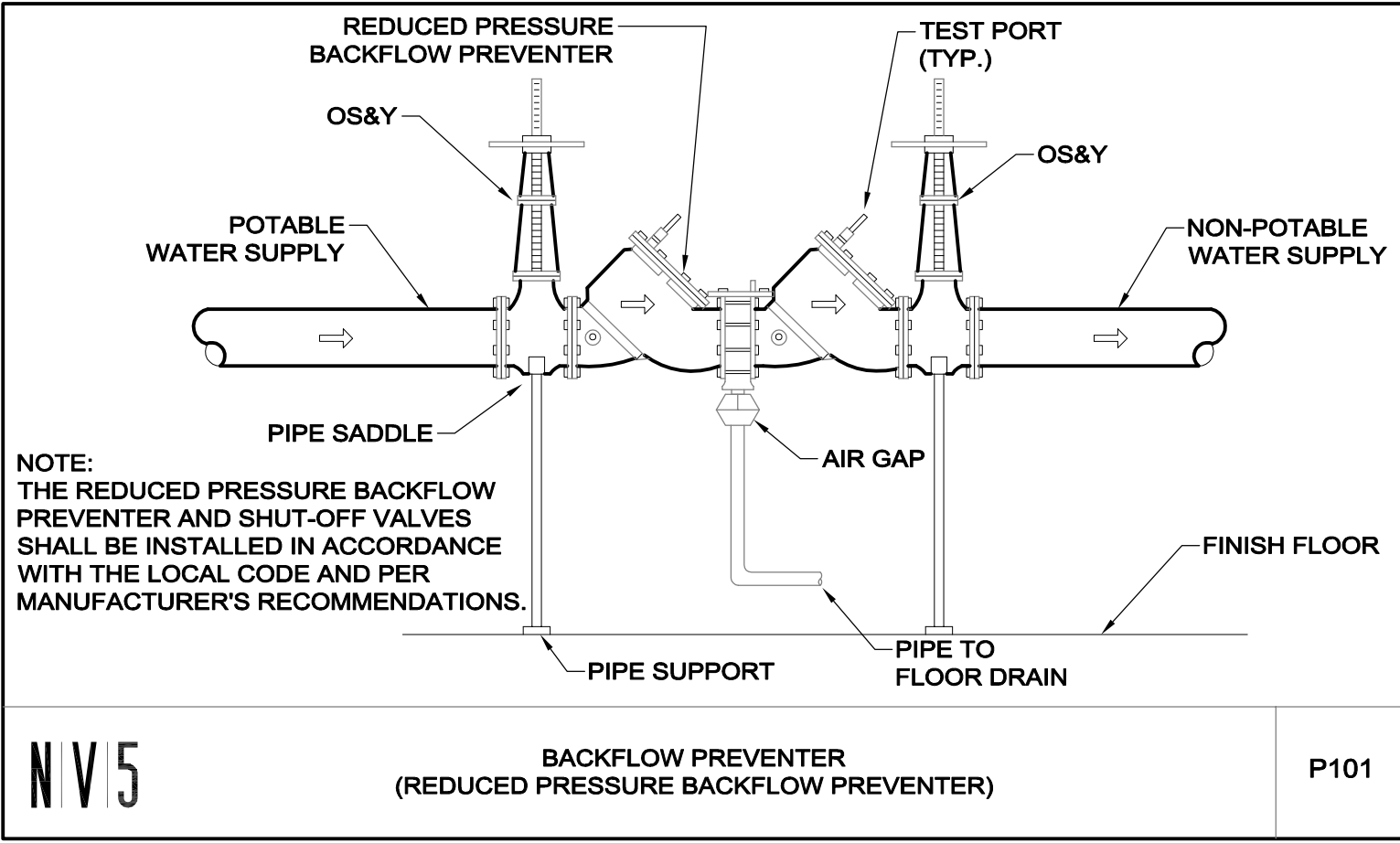
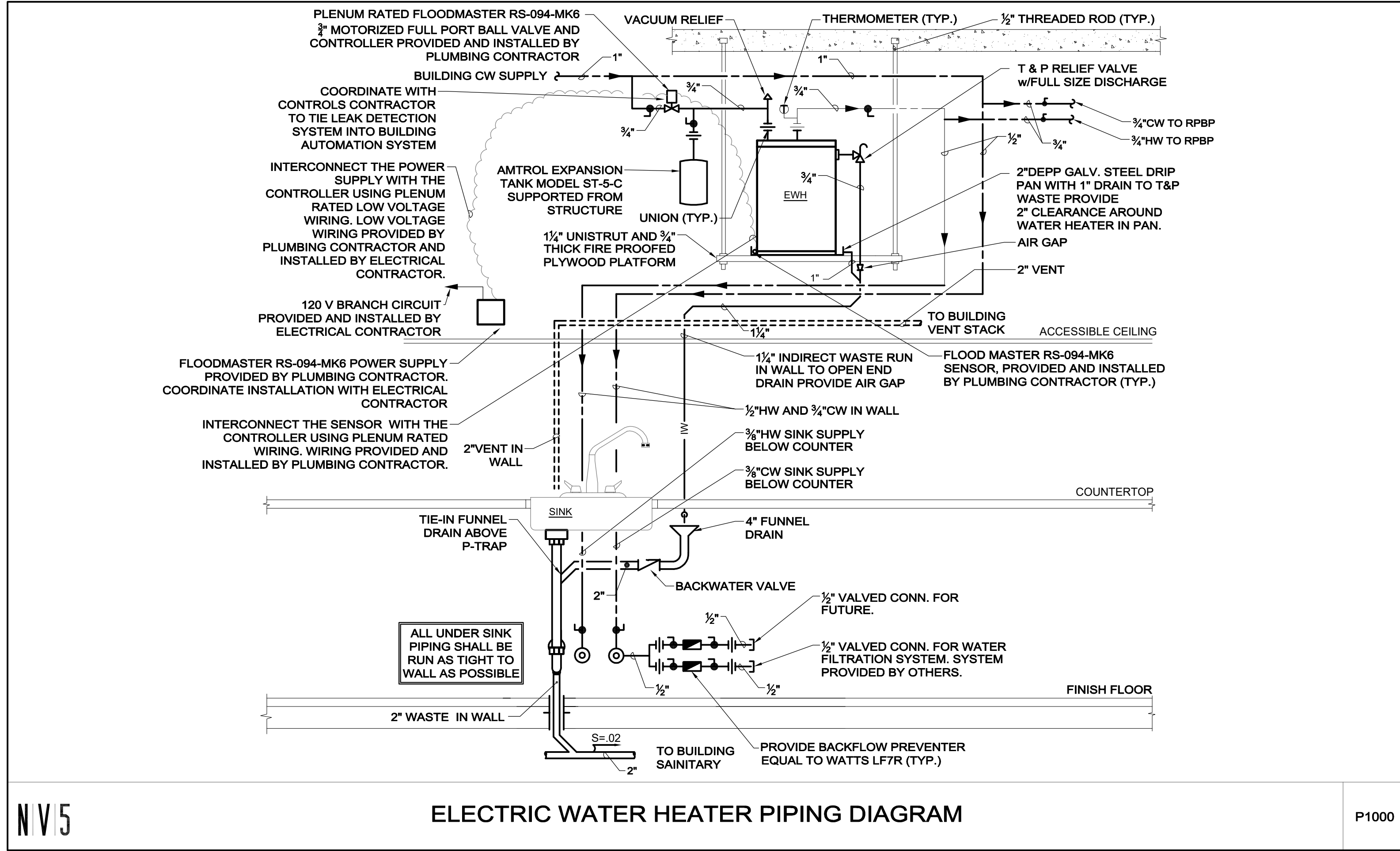
Key Plan

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Drawn By:		J.P.
Checked By:		MS
Approved By:		DW
Scale:		AS NOTED
Project No.:		0220068.00
Drawing Title:	PLUMBING FIRST FLOOR NEW WORK UNDERSLAB PLAN	

Drawing No.: **P-210U**
Owner's Drawing No.:

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Seal

charles river
Charles River Microbial Solutions
Processing Facility Renovations
Harwich, MA

Project Info

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Drawn By: JP
Checked By: MS
Approved By: DW
Scale: NONE
Project No.: 0220068.00
Drawing Title:
PLUMBING DETAILS

Drawing No.:
P-600
Owner's Drawing No.:

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PLUMBING FIXTURE SCHEDULE																		
TAG NO.	FIXTURE				FITTING										TRAP	REMARKS		
	TYPE	MANUFACTURER	MODEL	SIZE	TYPE	MANUFACTURER	MODEL	SUPPLY	CW	HW	SW	V	NPCW	NPHW			TW	
SK-1	BREAK ROOM SINK	REFER TO ARCHITECTURAL DRAWINGS			-	REFER TO ARCHITECTURAL DRAWINGS			1/2" SWEAT X 3/8" COMP. LEAD FREE MCGUIRE LF170LK	1/2"	1/2"	2"	2"	-	-	-	1 1/2" X 1 1/2" 17 GA. CAST BRASS CHROME PLATED P-TRAP w/CO PLUG EQUAL TO MCGUIRE MCT150090B	SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION
LS-1	LAB SINK	REFER TO ARCHITECTURAL DRAWINGS			-	REFER TO ARCHITECTURAL DRAWINGS			1/2" SWEAT X 3/8" COMP. LEAD FREE MCGUIRE LF170LK	-	-	2"	2"	1/2"	1/2"	-	1 1/2" X 1 1/2" 17 GA. CAST BRASS CHROME PLATED P-TRAP w/CO PLUG EQUAL TO MCGUIRE MCT150090B	SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION
HB-1	HOSE-BIBB	-	-	-	-	CHICAGO	952-CP	3/4" CW	-	-	-	-	3/4"	-	-	INTEGRAL	-	

SERVICE	MAXIMUM SERVICE OPERATING LIMITS			PIPE CLASS	PIPE SIZE RANGE							
	LEGEND	PRESS. (PSIG)	TEMP (°F)		1/2" TO 3"				4" AND LARGER			
					PIPE	FITTINGS	JOINTS	MECHANICAL JOINTS	PIPE	FITTINGS	JOINTS	
DOMESTIC COLD WATER	CW	100	250	A10	Seamless copper water tube, drawn temper, Type L or K. ASTM B-88.	Wrought copper, solder-joint. ASME B16.22	ASTM B-32 solder filler material, Alloy S65 "955." ASTM B-813 liquid or paste flux. Soldering procedures shall comply with ASTM B-828.	Cast copper alloy unions, hexagonal stock with ball-and-socket joint, solder joint ends. ASME B16.18.	Cement Lined Ductile Iron Class 52 Seamless copper water tube, drawn temper, Type L or K. ASTM B-36.	Cement Lined Ductile Iron. Ductile iron coupling with copper alkylid enamel paint coating, ASTM A-536, Grade "E" EPDM elastomer gasket, ASTM D-2000. Equal to Victaulic Style 606 coupling. ASTM B-584 grooved end cast bronze fittings for 6" pipe size.	Mechanical joints with retainer glands. Rolled grooves prepared and assembled in accordance with manufacturer instructions.	
DOMESTIC HOT WATER	HW	100	250	A10								
NON-POTABLE WATER SYSTEM	NPW	100	250	A10								

Notes:
1. Below grade water piping 3" and smaller shall be Type K copper with bituminous coating and copper brazed joints, BcuP filler alloy. ANSI/AWS A5.8. procedures shall be per ANSI/AWS B2.2.
2. Contact between dissimilar metals shall be made with di-electric couplings or di-electric flanges. Contact between ferrous and stud bolts and bronze flanges shall be electrically insulated with non-metallic washers.
3. Provide mechanical joint connections to all equipment such as water heaters, pumps, compressors, etc.

SERVICE	MAXIMUM SERVICE OPERATING LIMITS			PIPE CLASS	ABOVE GRADE			BELOW GRADE		
	LEGEND	PRESS. (PSIG)	TEMP (°F)		PIPE	FITTINGS	JOINTS	PIPE	FITTINGS	JOINTS
SANITARY WASTE & VENT	S, W, V	GRAVITY	120	D10	3" And Larger: Hubless Cast Iron Soil Pipe, Service Weight. ASTM-A-888, CISPI 301. 2 1/2" And Smaller: Hubless Cast Iron Soil Pipe, Service Weight. ASTM A-888, CISPI 301 Or Type L Copper Tubing. ASTM B887Z.	3" And Larger: Hubless Cast Iron Fittings, Service Weight. ASTM-A-888, CISPI 301. 2 1/2" And Smaller: Hubless Cast Iron Fittings, Service Weight. ASTM A-888, CISPI 301 Or Wrought Copper DWV Fittings.	Hubless Cast Iron: Heavy Duty Stainless Steel Four Band Coupling With Neoprene Gasket, Bank Torque Of 80 In.-Pounds. Husky SD 4000 Or Clamp-All Hi-Tong 80 ASTM C1540 Copper. 95/5 Solder.	2" And Larger: Hub And Spigot Cast Iron Soil Pipe, Extra Heavy. ASTM A-74 Or Service Weight II Code Approved. Piping Shall Be Asphalt Or Coal Tar Pitch Coated.	2" And Larger: Hub And Spigot Cast Iron Fittings, Extra Heavy. ASTM A-74, Asphalt Or Coal Tar Pitch Coated. DWV Pattern.	Neoprene Compression Gaskets Conforming To ASTM C-564.

Notes:
1. Copper Tube And Fittings Shall Not Be Used On Urinal Wastes.
2. 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 the NSF International.
3. CISPI 310 No-Hub Couplings Will Not Be Accepted As Equal To Manufacturers Listed.
4. Piping through electric rooms: sanitary, storm, and vent piping through electric rooms shall be sleeved through a sufficiently sized schedule 10 galvanized sleeve piping with Grooved style fittings and couplings. Extend dual wall piping to a distance of 1 foot beyond the exterior on each side of the electric room. Terminate with a closure method comprised of a caulked joint at each end with a closed 1/2" ball valve available to monitor the containment area of the piping system

ELECTRIC WATER HEATER SCHEDULE												
TAG NO.	STORAGE CAPACITY (gal.)	RECOVERY		ELECTRICAL DATA					TEMP. SETTING (°F)	MANUFACTURER	MODEL NO.	REMARKS
		RATE (GPH)	DEG. RISE (°F)	NO. OF ELEMENTS	TOTAL KW	VOLTS	PHASE	HZ				
EW-H-1	20	30	80	2	6	208	3	60	120	HUBBELL	E20-3-3SLR	PROVIDE DRIP PAN AND LEAK DETECTION. SEE DETAIL P1000 ON SHEET P-600 FOR MORE INFORMATION.

DRAIN SCHEDULE					
TAG NO.	TYPE	MANUFACTURER	MODEL NO.	STRAINER	REMARKS
FD-A	FLOOR DRAIN	WATTS	FD-340Y-SET	12" DI TOP WITH BUCKET	PIPE INDIRECT WASTE FROM BACKFLOW PREVENTERS FULL SIZE TO THIS FLOOR DRAIN. PROVIDE WITH AIR-GAP.

EXPANSION TANK SCHEDULE							
TAG NO.	TANK VOL. (GAL.)	TANK ACCEPTANCE (GAL.)	MANUFACTURER	MODEL NO.	HEIGHT (IN.)	DIAMETER (IN.)	CONNECTION SIZE (IN.)
ET-1	0.6	0.3	AMTROL	ST-5-C	10.5"	10"	3/4"

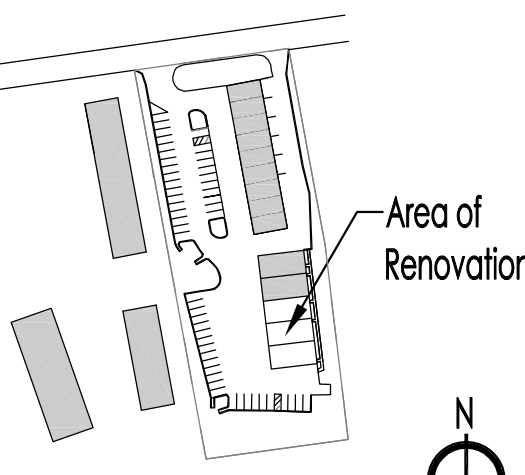
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3 Logan Square
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Philadelphia, PA 19103
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NV5
NATIONAL VERIFICATION SYSTEM
A COMMITMENT TO EXCELLENCE
100% COMPLIANCE
100% SATISFACTION
100% RELIABILITY

Seal

charles river
Charles River Microbial Solutions
Processing Facility Renovations
Haverhill, MA

Project Info



Key Plan

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1	ISSUED FOR CONSTRUCTION	02-28-2022
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Checked By: MS
Approved By: DW
Scale: NONE
Project No.: 0220068.00

Drawing Title:
PLUMBING SCHEDULES

Drawing No.:

P-700

Owner's Drawing No.: