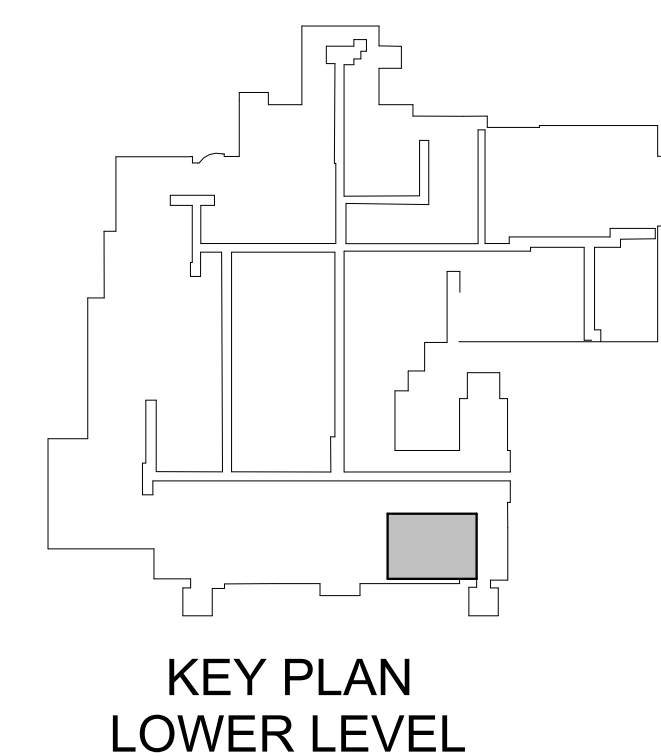


1 MECHANICAL LOWER LEVEL - HVAC DEMO PLAN
1/4" = 1'-0"

- ## MECHANICAL DEMOLITION NOTES
- 1 DEMO DUCTWORK, DIFFUSER, DAMPER, AND ALL ASSOCIATED HANGERS AS SHOWN. ALL DEMO MATERIAL IS TO BE DISPOSED OF LEGALLY.
 - 2 PATCH OPENING IN DUCTWORK IF IT IS NOT USED IN NEW DESIGN.
 - 3 REMOVE EXISTING DIFFUSERS AND PREPARE DUCTWORK FOR NEW DIFFUSERS IN PLACE OF EXISTING DIFFUSERS.

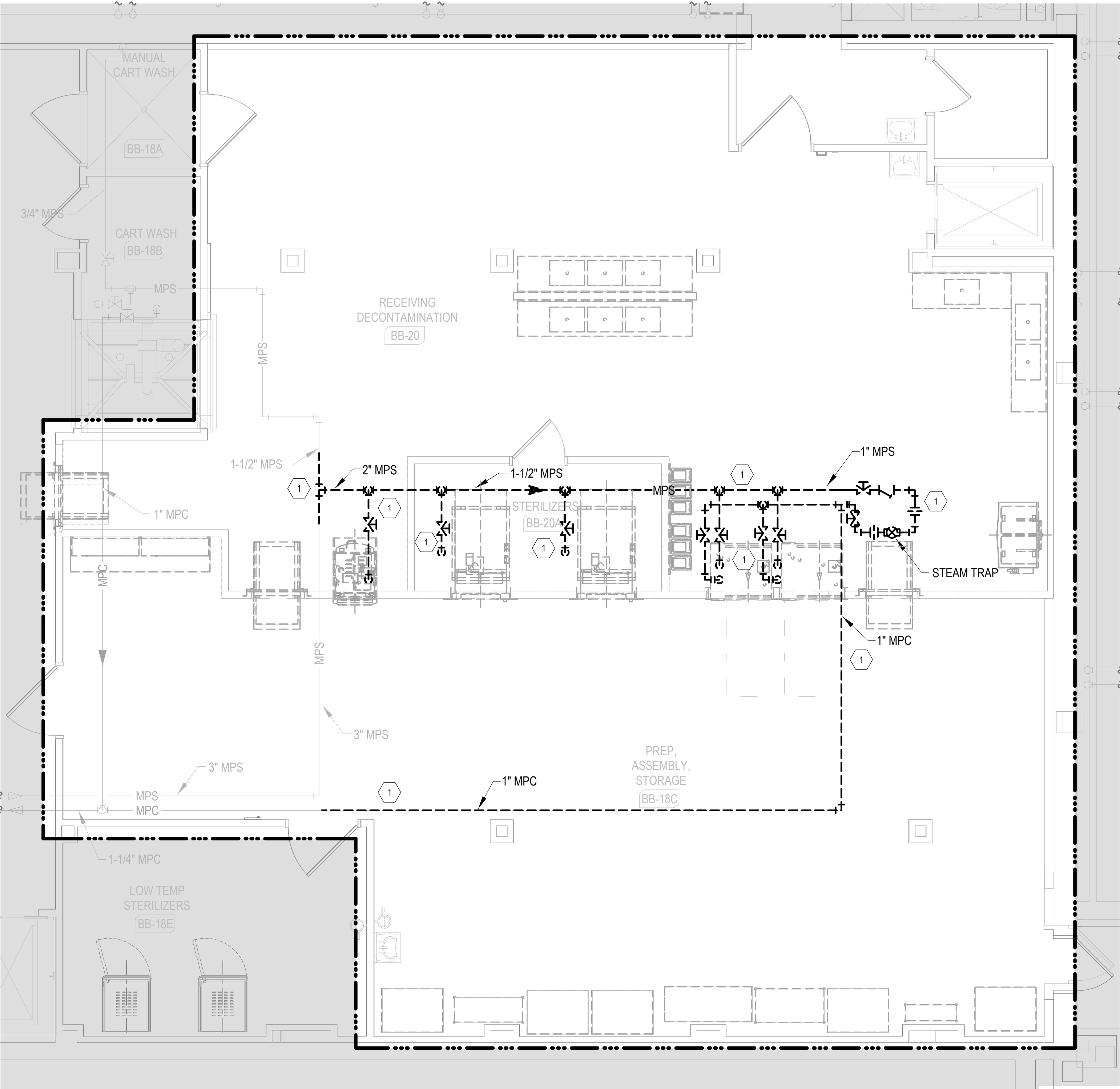


BID DOCUMENT SUBMISSION

[illegible]

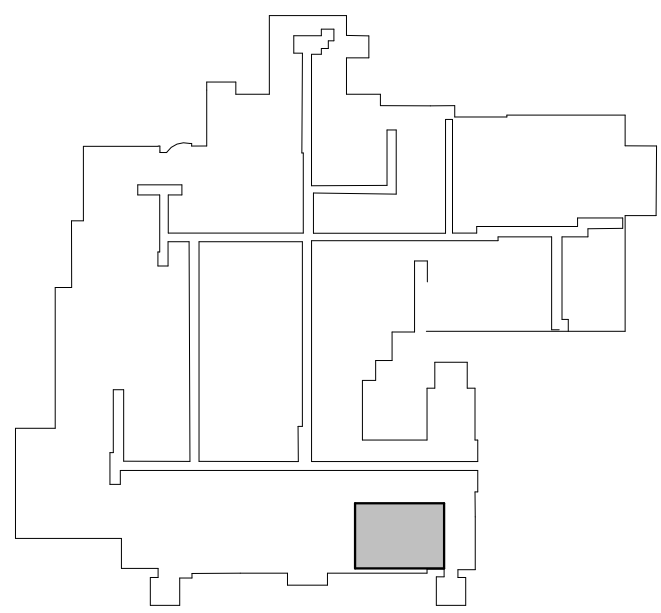
MECHANICAL DEMOLITION NOTES

1 DEMO EXISTING MEDIUM PRESSURE STEAM (MPS) AND MEDIUM PRESSURE CONDENSATE (MPC) AND CAP BOTH AS SHOWN. THIS INCLUDES ANY VALVES, STEAM TRAPS, HANGERS, OR OTHER EQUIPMENT ATTACHED TO THESE LINES.



1 LOWER LEVEL - STEAM DEMO PLAN

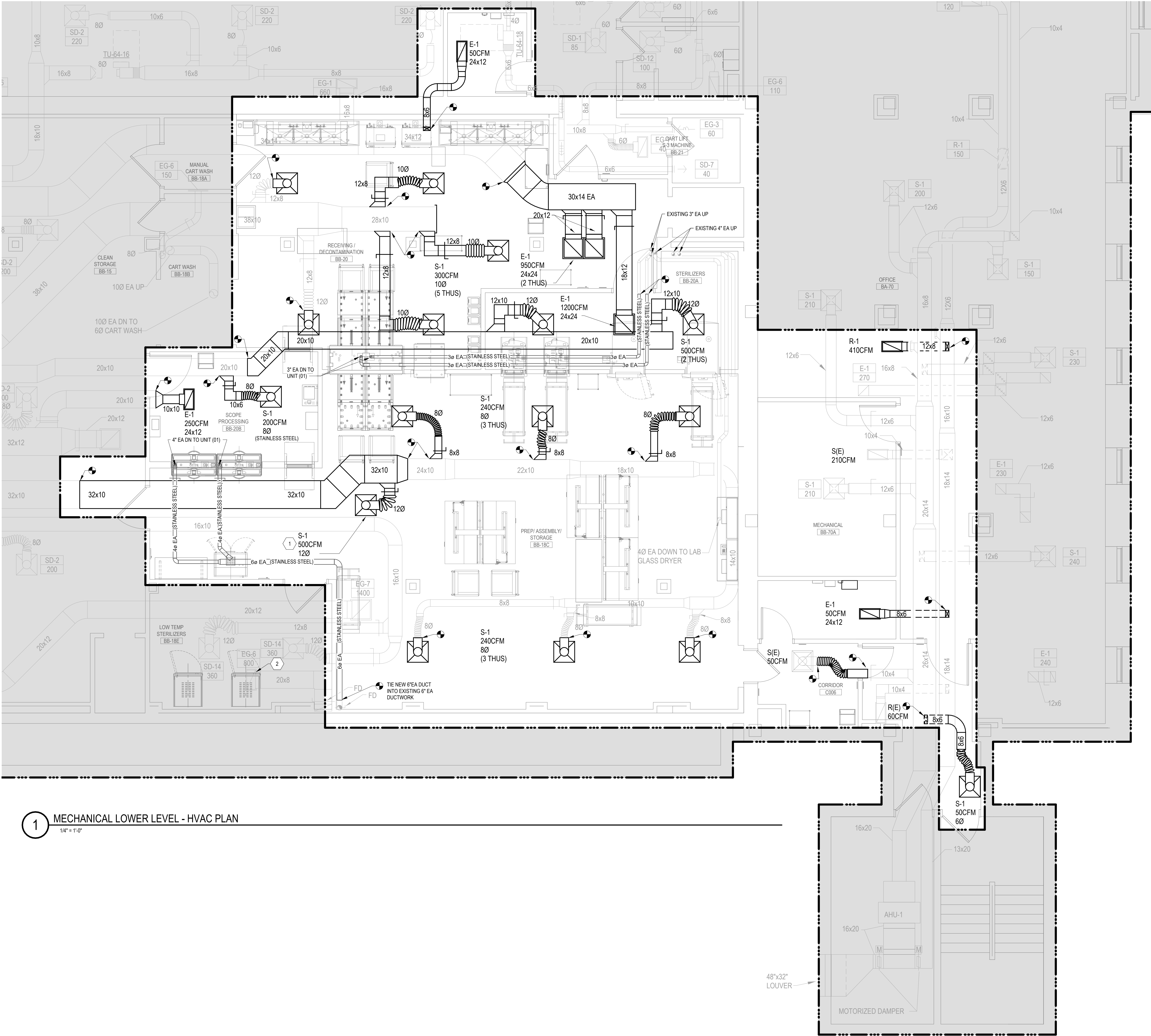
1/4" = 1'-0"



KEY PLAN
LOWER LEVEL

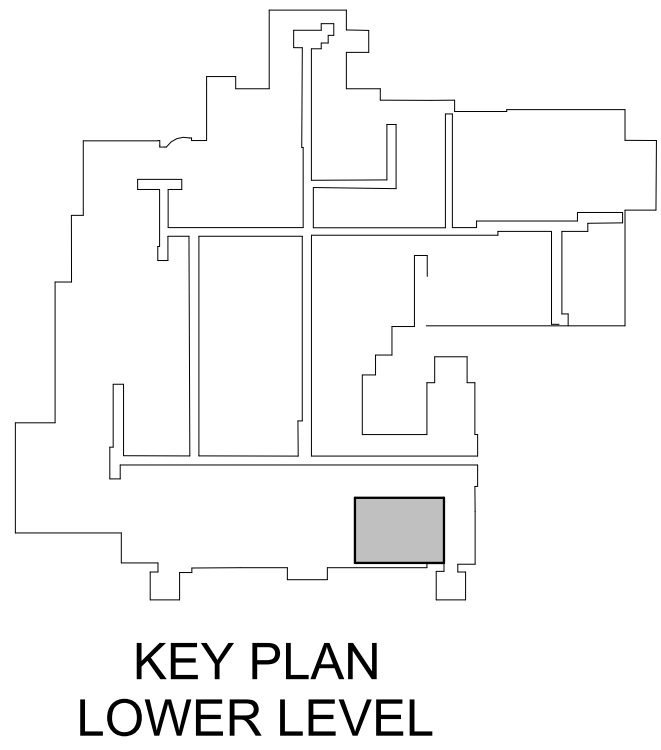
BID DOCUMENT SUBMISSION

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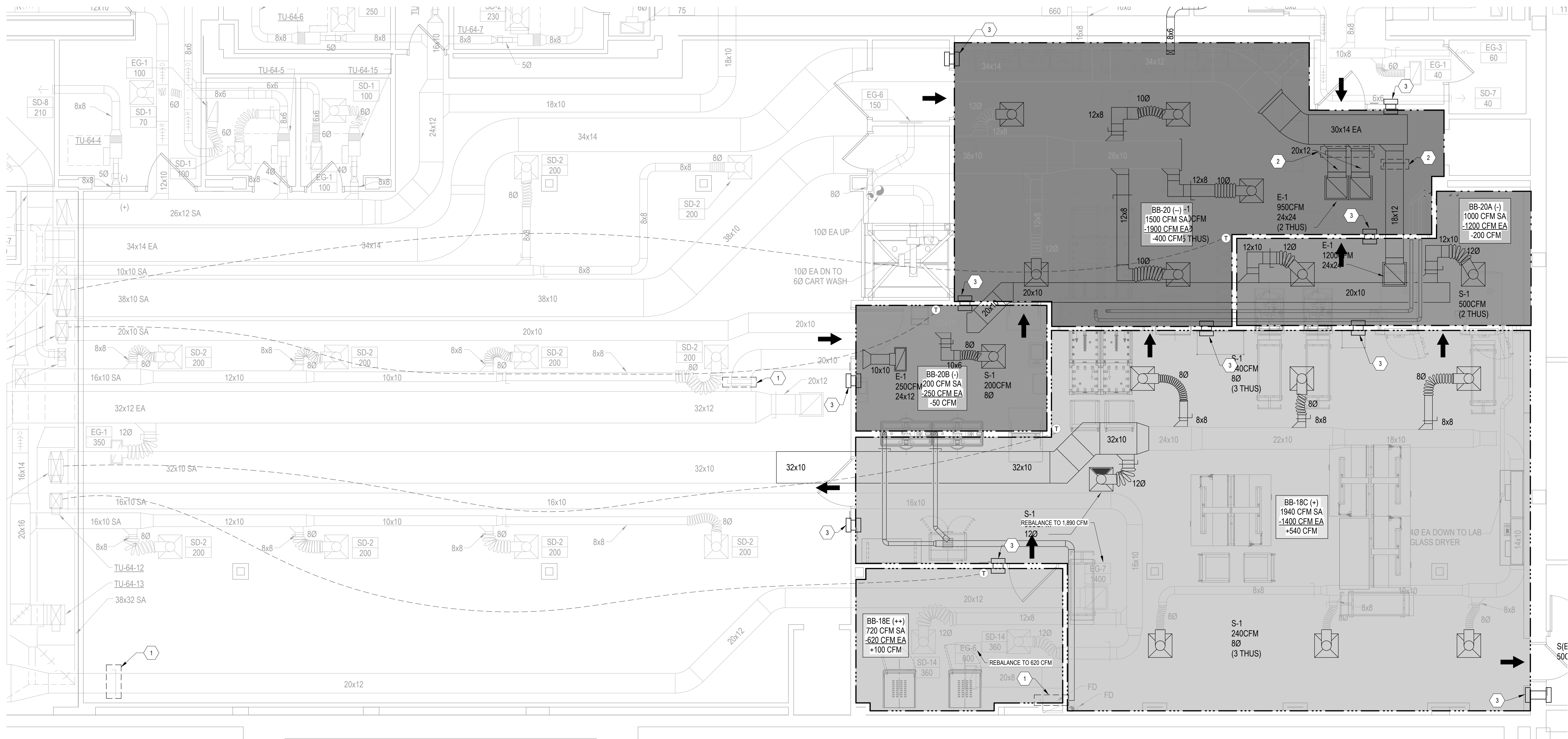
- HVAC NOTES
- 1 BLANK OFF SUPPLY DIFFUSER AS SHOWN.
 - 2 RE-BALANCE EXISTING EG-6 EXHAUST GRILLE FROM 800 CFM TO 620 CFM

1 MECHANICAL LOWER LEVEL - HVAC PLAN
1/4" = 1'-0"



BID DOCUMENT SUBMISSION

	CONSULTANT IMEG 2882 106TH STREET DES MOINES IA 50322	DESIGNER OF RECORD ANDERSON 13605 1st Ave. N. #100 Plymouth, MN 55441 P 763.412.4000 F 763.412.4090 ae-mn.com Anderson Engineering of Minnesota, LLC Proj # 17639	STAMP I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Print Name: Kirby J Quamen Signature: <i>Kirby J Quamen</i> Date: 01/22/2025 License #: S2555	Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs	Drawing Title MECHANICAL LOWER LEVEL - HVAC PLAN	Phase BID DOCUMENTS	Project Title PERFORM SITE PREP FOR SPS EQUIPMENT	Project Number 437-CSI-241
					Approved:	FULLY SPRINKLERED	Location FARGO, ND	Building Number 9
							Issue Date 01/22/2025	Checked KAH
							Drawn SEF	Drawing Number MH-101



1 MECHANICAL LOWER LEVEL - HVAC PRESSURE PLAN
1/4" = 1'-0"

MECHANICAL NOTES:

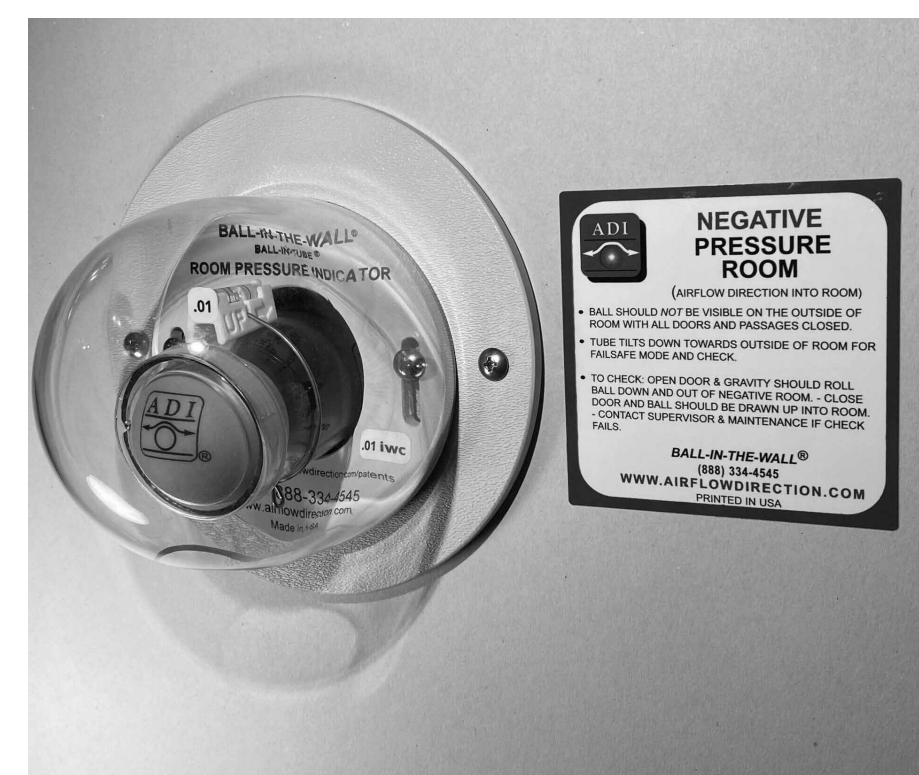
- 1 THESE **EXISTING** DAMPERS WILL BE USED TO MANAGE THE PRESSURE OF THEIR RESPECTIVE ROOMS IN THE NEW SANITATION PROCESSING DESIGN.
- 2 THESE **NEW** DAMPERS WILL BE USED TO MANAGE THE PRESSURE OF THEIR RESPECTIVE ROOMS IN THE NEW SANITATION PROCESSING DESIGN.
- 3 IN ALL AREAS INDICATED, INSTALL BALL IN THE WALL ADI-69-V-P (POSITIVE PRESSURE ROOM) 1 FOOT BELOW FINISHED CEILING. ALSO INSTALL A SETRA LITE ELECTRONIC PRESSURE INDICATOR 5' AFF JUST BELOW THE BALL IN THE WALL, ON BOTH SIDES OF THE WALL.

ROOM NUMBER	ROOM NAME	PRESSURE RATING	RELATIVE PRESSURE (MIN.)	CFM DIFFERENTIAL
BB-18C	PREP / ASSEMBLY / STORAGE	+	+0.01" WC	+540 CFM
BB-18E	LOW TEMP STERILIZERS	++	+0.02" WC	+100 CFM
BB-20	RECEIVING / DECONTAMINATION	--	-0.02" WC	-400 CFM
BB-20A	STERILIZERS	-	-0.01" WC	-200 CFM
BB-20B	SCOPE PROCESSING	-	-0.01" WC	-50 CFM

Assembly Code

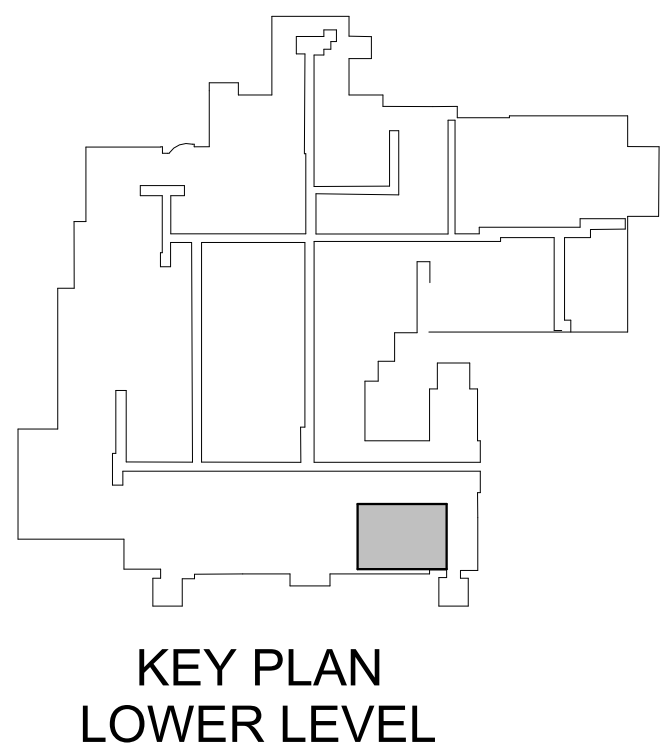


2 SETRA LITE PRESSURE SENSORS
NOT TO SCALE



NOTE: UNIT SHOWN IN THIS DETAIL IS ADI-69-V-N (NEGATIVE). CONTRACTOR IS TO INSTALL THE ADI-69-V-P (POSITIVE).

3 BALL IN WALL ADI-69-V-P
NOT TO SCALE



KEY PLAN
LOWER LEVEL

BID DOCUMENT SUBMISSION

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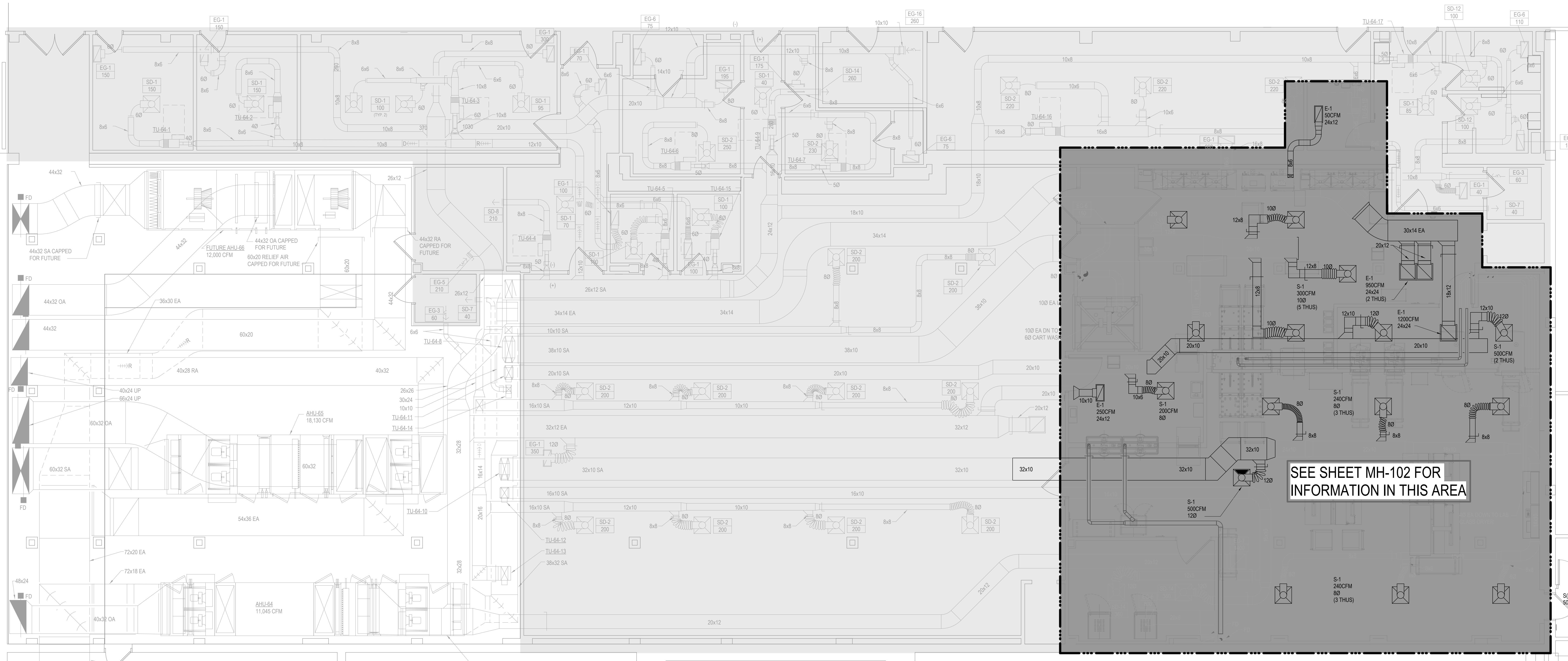
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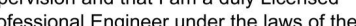
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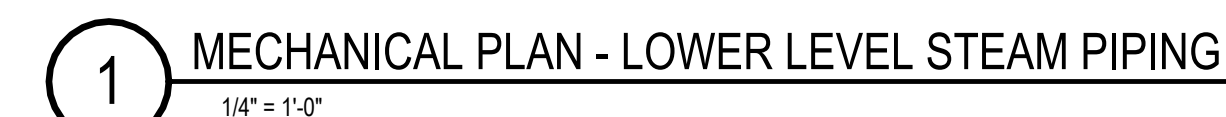


1 MECHANICAL LOWER LEVEL - HVAC - SURROUNDING TAB
3/16" = 1'-0"











NOTE
AFTER DEMOLITION OF REMODELED SPS SPACE, VERIFY CURRENT CFMS IN THE NEARBY SPACES, BOTH SUPPLY AND EXHAUST CFM, ARE CLOSE TO THE CFMS INDICATED ON THE PLANS. THIS AREA IS THE LIGHT SHADED AREA. IF NEEDED PLEASE REBALANCE SYSTEM TO BE WITHIN 10% OF INDICATED CFMS. AFTER REMODEL IS COMPLETE INCLUDE THIS AREA WITH FINAL TEST AND BALANCE OF SYSTEM.

BID DOCUMENT SUBMISSION

Revisions:	Date:	CONSULTANT	DESIGNER OF RECORD	STAMP	Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs	Drawing Title	Phase	Project Title	Project Number		
		 2882 106TH STREET DES MOINES IA 50322	 13605 1st Ave. N. #100 Plymouth, MN 55441 P 763.412.4000 F 763.412.4090 ae-mn.com Anderson Engineering of Minnesota, LLC Proj # 17639	I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota Print Name: Kirby J Quamen Signature:  Date: 01/22/2025 License # 52555		MECHANICAL LOWER LEVEL - HVAC - SUROUNDING TAB	BID DOCUMENTS	PERFORM SITE PREP FOR SPS EQUIPMENT	437-CSI-241		
						Approved:	FULLY SPRINKLERED	Location	Building Number		
								FARGO, ND	9		
								Issue Date	Checked	Drawn	Drawing Number
								01/22/2025	KAH	SEF	

VA FORM 08-6231

Project Number 437-CSI-241
Building Number 9
Drawing Number M-601

VIEW KEY		
	NAME 10' - 0'	LEVEL NAME HEIGHT ABOVE PROJECT 0' - 0'
	VIEW NAME 1/8" = 1'-0"	
	INDICATES DIRECTION OF TRUE NORTH	
	PLAN OR DETAIL NUMBER	
	PLAN OR DETAIL NAME	
	PLAN OR DETAIL SCALE	
	INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS	
	DETAIL REFERRED TO BY SECTION CUT	
	SHEET DETAIL IS LOCATED ON	
LINE TYPE AND TAG KEY:		
NEW WORK BY THIS CONTRACTOR (WIDE LINE)		
EXISTING TO BE REMOVED (SHORT DASHED PATTERN)		
NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)		
EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)		
EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)		
EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)		
HALFTONING DOES NOT MODIFY SCOPE.		
'TAG'-E TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING		
TAG-1 UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST		
	INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL	

PLUMBING SYMBOL LIST	
NOT ALL SYMBOLS MAY APPLY.	
SYMBOL:	DESCRIPTION:
	ACID VENT
	ACID WASTE
	COMPRESSED AIR
	COLD WATER - POTABLE
	DRAIN
	DEIONIZED WATER
	DRAIN TILE
	NATURAL GAS
	GAS REGULATOR VENT
	SANITARY DRAINAGE (GREASE SANITARY DRAINAGE)
	GREASE VENT
	HOT WATER - POTABLE
	HOT WATER CIRCULATING - POTABLE
	HOT WATER - POTABLE NUMBER INDICATES TEMP
	HOT WATER CIRC. - POTABLE NUMBER INDICATES TEMP
	INSTRUMENT AIR
	MEDICAL AIR
	MEDIUM STEAM CONDENSATE
	MEDIUM PRESSURE GAS
	MEDIUM PRESSURE STEAM
	MEDICAL VACUUM
	NITROGEN
	NON-POTABLE COLD WATER
	NON-POTABLE HOT WATER
	NITROUS OXIDE
	OIL RETURN
	OIL SUPPLY
	OXYGEN
	PROPANE GAS
	PUMPED DISCHARGE
	PURE WATER
	REVERSE OSMOSIS WATER
	SANITARY DRAINAGE
	SOFT COLD WATER
	SOFT HOT WATER
	STORM DRAINAGE (ROOF SQUARE FOOTAGE)
	STORM DRAINAGE (SECONDARY)
	SOFT TEMPERED WATER
	TEMPERED WATER
	VENT
	LAB VACUUM
	SERVICE WATER - POTABLE
	WASTE ANESTHESIA GAS DISPOSAL
	PIPE CONTINUATION
	PIPE CAP
	PIPE DOWN
	PIPE UP
	PIPE SERVING FIXTURE ON FLOOR ABOVE (EXAMPLE: FD = FLOOR DRAIN)
	PITCH PIPE IN DIRECTION
	DIRECTION OF FLOW IN PIPE
	ROUTE TO DRAIN
	ROOF DRAIN PROPERTIES (SYMBOL SIZE (ROOF SQ. FT.))
	DIELECTRIC CONNECTION
	UNION/FLANGE
	SHUTOFF VALVE NORMALLY OPEN
	SHUTOFF VALVE NORMALLY CLOSED
	BALANCING VALVE (NUMBER INDICATES GPM)
	CHECK VALVE
	BACKFLOW PREVENTER
	SOLENOID VALVE
	MIXING VALVE
	SAFETY/RELIEF VALVE
	VACUUM BREAKER
	PRESSURE GAUGE (FURNISHED WITH BALL VALVE)
	PRESSURE SENSOR (FURNISHED WITH BALL VALVE)
	TEMPERATURE SENSOR WITH WELL
	THERMOMETER WITH WELL (DIAL TYPE)
	THERMOMETER WITH WELL (FILLED TYPE)
	REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB
	PRESSURE REDUCING VALVE (LIQUID/GAS)
	PUMP
	METER
	ALIGNMENT GUIDE
	PIPE ANCHOR
	EXPANSION JOINT



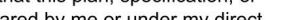

MECHANICAL RENOVATION NOTES:	
THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.	
<ol style="list-style-type: none">EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF HIS/HER WORK AND SHALL NOTIFY THE GENERAL CONTRACTOR PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO HIS/HER AREA OF WORK.THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS, WALLS, AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS. CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS PRIOR TO BIDDING.THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.PROVIDE TEMPORARY CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. MAINTAIN ACCESS TO EXISTING MECHANICAL INSTALLATIONS THAT REMAIN ACTIVE. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.MAINTAIN EXISTING SYSTEMS IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR THE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGE/VER TO NEW SYSTEMS WITH MINIMUM OUTAGE.DISCONNECT AND REMOVE MECHANICAL DEVICES AND EQUIPMENT SERVING EQUIPMENT THAT HAS BEEN REMOVED.	
PLUMBING ABBREVIATION KEY	
NOT ALL SYMBOLS MAY APPLY.	
ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BT	BATHTUB
CB	CATCH BASIN
CI	CAST IRON
CO	CLEANOUT
CS	CLINICAL SINK
DB	DIALYSIS BOX
DF	DRINKING FOUNTAIN
DI	DUCTILE IRON
E	EXISTING
EE	EMERGENCY EYEWASH
ES	EMERGENCY SHOWER
ESE	EMERGENCY SHOWER/EYEWASH
EWIC	ELECTRIC WATER COOLER
FCD	FLOOR CLEANOUT
FD	FLOOR DRAIN
FM	FLOW METER
FS	FLOOR SINK
GD	GARBAGE DISPOSER
GI	GREASE INTERCEPTOR
HB	HOSE BIBB
I.E.	INVERT ELEVATION (FOR REFERENCE ONLY)
LAV	LAVATORY
MB	MOP BASIN
MH	MANHOLE
MV	MIXING VALVE
NC	NOT IN CONTRACT
NT	NEUTRALIZATION TANK
OS	OIL SEPARATOR
RD	ROOF DRAIN
SCCR	SHORT CIRCUIT CURRENT RATING
SH	SHOWER
SK	SINK
SS	SERVICE SINK
TD	TRENCH DRAIN
TP	TRAP PRIMER
TYP	TYPICAL
UR	URINAL
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WH	WATER HEATER
WMF	WASHING MACHINE FIXTURE
WP	WASTE PIPING
WM	WATER METER
WS	WATER SOFTENER
UB	UTILITY BOX
UON	UNLESS OTHERWISE NOTES
YCO	YARD CLEANOUT

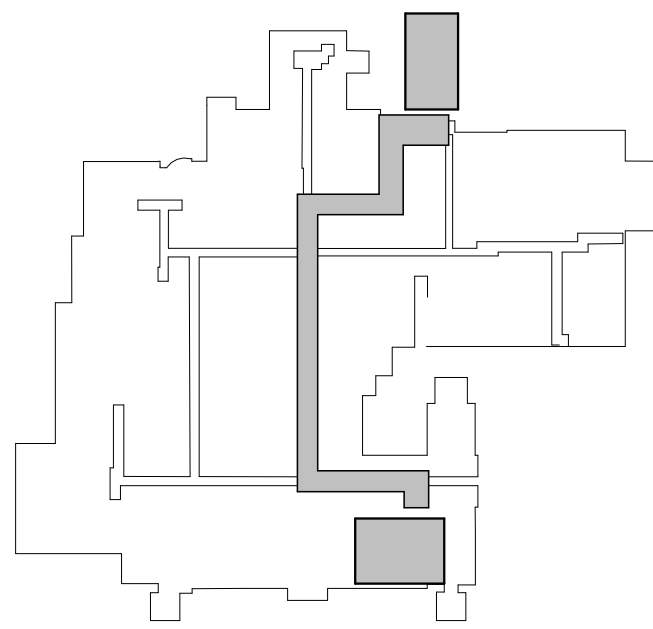
PLUMBING GENERAL NOTES:	
<ol style="list-style-type: none">THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.CONTRACTOR SHALL VERIFY THAT FIXTURES SUPPLIED ARE APPROVED PER ALL APPLICABLE STATE, LOCAL AND GOVERNING AUTHORITIES.ALL FIXTURES SHALL CONFORM TO FEDERAL ACT 53874INVERT ELEVATIONS ARE FROM EXISTING DRAWINGS AND MAY NOT BE ACCURATE. VERIFY ALL ELEVATIONS BEFORE BEGINNING WORK.VERIFY UNDERGROUND PIPE SIZES, INVERT ELEVATIONS, AND LOCATIONS PRIOR TO BEGINNING ANY WORK.REFER TO THE PLUMBING ROUGH-IN SCHEDULE FOR THE SIZES OF BRANCH PIPES TO PLUMBING FIXTURES.FOR CLARITY, NOT ALL VALVES HAVE BEEN SHOWN. PROVIDE SHUTOFF VALVES IN DOMESTIC WATER PIPING SERVING EACH ROOM WITH FIXTURES. ANGLE STOPS SHALL NOT BE CONSIDERED SHUTOFF VALVES.EXISTING CONDITIONS ON DEMOLITION PLANS ARE PROVIDED TO INDICATE THE GENERAL SCOPE OF ITEMS TO BE REMOVED. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL DEMOLITION INFORMATION.P.C. SHALL CUT AND PATCH EXISTING AS REQUIRED FOR NEW OR DEMOLITION WORK UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION SECTION 22 05 05 FOR ADDITIONAL INFORMATION.	

MECHANICAL GENERAL NOTES:	
THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.	
<ol style="list-style-type: none">DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC. AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL, TECHNOLOGY AUDIO/VISUAL, AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.CAULK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RAISED ABOVE FLOOR SURFACE IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.MAINTAIN MINIMUM 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS, MOTOR STARTERS, SWITCHES, AND DISCONNECTS.PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.	

PLUMBING SHEET INDEX	
P-001	PLUMBING SYMBOLS, ABBREVIATIONS, GENERAL NOTES
P-002	PLUMBING RO PHASING PLAN
PD-101	PLUMBING UNDERGROUND - SANITARY DEMOLITION PLAN
PD-102	PLUMBING LOWER LEVEL - RO AND DOMESTIC WATER DEMO PLANS
PD-103	PLUMBING LOWER LEVEL - VENT AND AIR DEMO PLAN
PL-101	PLUMBING LOWER LEVEL - UNDERGROUND SANITARY PLAN
PL-102	PLUMBING LOWER LEVEL - DOMESTIC WATER PLANS
PL-103	PLUMBING LOWER LEVEL - VENT AND AIR PLAN
PP-101	PLUMBING PLANS - PROCESS PIPING - LOWER LEVEL RO - SPS
PP-102	PLUMBING PLAN - PROCESS PIPING - LOWER LEVEL RO CORRIDOR
PP-103	PLUMBING PLAN - PROCESS PIPING - LOWER LEVEL RO TEMPORARY TRAILER
P-301	PLUMBING RO FLOW DIAGRAM
P-301	PLUMBING DETAILS
P-702	DOMESTIC WATER RISER DIAGRAMS
P-701	SANITARY WASTE AND VENT RISER DIAGRAMS
GRAND TOTAL: 15	

BID DOCUMENT SUBMISSION

		<div>CONSULTANT</div> <div></div> <div>2882 106TH STREET DES MOINES IA 50322</div>		<div>DESIGNER OF RECORD</div> <div></div> <div>13605 1st Ave. N. #100 Plymouth, MN 55441 P 763.412.4000 F 763.412.4090 ae-mn.com Anderson Engineering of Minnesota, LLC Proj # 17639</div>		<div>STAMP</div> <div>I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota</div> <div>Print Name: Kirby J Quamen</div> <div>Signature: </div> <div>Date: 01/22/2025 License #: 52555</div>		<div>Office of Construction and Facilities Management</div> <div> U.S. Department of Veterans Affairs</div>		<div>Drawing Title</div> <div>PLUMBING SYMBOLS, ABBREVIATIONS, GENERAL NOTES</div> <div>Approved:</div>		<div>Phase</div> <div>BID DOCUMENTS</div> <div>FULLY SPRINKLERED</div>		<div>Project Title</div> <div>PERFORM SITE PREP FOR SPS EQUIPMENT</div> <div>Location FARGO, ND</div> <div>Issue Date 01/22/2025</div> <div>Checked KAH</div> <div>Drawn SEF</div>			<div>Project Number 437-CSI-241</div> <div>Building Number 9</div> <div>Drawing Number P-001</div>	
Revisions:		Date:																



1 PLUMBING RO PHASING PLAN
3/64" = 1'-0"

THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.

INSTALL A NEW RO-RUN IN BA-70. THIS ROOM WILL HOUSE RO-1 AND RO-2.

• BUILD NEW RO UNITS (CAPACIT) OF MEETING THE SPSS ROOM REQUIREMENTS. INSTALL A SUPPLY AND RETURN LINE VALVE THAT WILL BE USED TO TIE IN THE SPSS ROOM AFTER CONSTRUCTION. ENSURE VALVES MEET T-108 DEAD LEG REQUIREMENTS.

• INSTALL A 400 GALLON RO STORAGE TANK IN B-69. BOOSTER PUMPS WITH VFD AND PRESSURE CONTROLLER ON ELECTRIC CHARGE. CAPACITY OF SUPPLYING 200 GPM (PEAK) AT 40 PSI.

• AUTOMATED FLOW VALVES BASED ON TANK LEVEL WILL CONTROL THE FLOW COMING INTO THE 400 GALLON TANK. THE NEW AND EXISTING RO SYSTEMS WILL OPERATE IN PARALLEL BASED ON PRESSURE. WHEN THE FLOW IS OPENED THE PRESSURE WILL INCREASE. WHEN THE VALVE IS CLOSED THE RO SYSTEM PUMPS WILL DEAD HEAD AND SHUT OFF.

• DOMESTIC COLD WATER WILL BE FED INTO THE 400 GALLON TANK THROUGH A BLEND VALVE AND CONTROLLED BASED ON LEVEL. THE BLEND VALVE SETTING WILL NEED TO BE FOUND THROUGH TRAIL AND ERROR AS WELL AS WATER TESTING TO ENSURE IT MEETS THE STERIS THERMAL REQUIREMENTS.

• THE HOT AND COLD LINES WILL BE RAN TO THE STERIS THERMAL THROUGH BEES, BD-43, CORRIDOR 58A, BD-50 AND OUT THE WINDOW IN BD-50 THEN IT IS TERMINATED TO TRAVELER WATER CONTROL. THE FLOW WILL BE CONTROLLED BY THE TRAVELER WATER CONTROL WITH FIBERGLASS AND PVC JACKET. BOTH THE HOT AND COLD WATER LINE WILL BE INSULATED WITH FIBERGLASS AND PVC JACKET AS WELL AS HEAT TRACED FROM 10 FEET INSIDE THE BUILDING TO THE TRAILER TERMINATION POINTS.

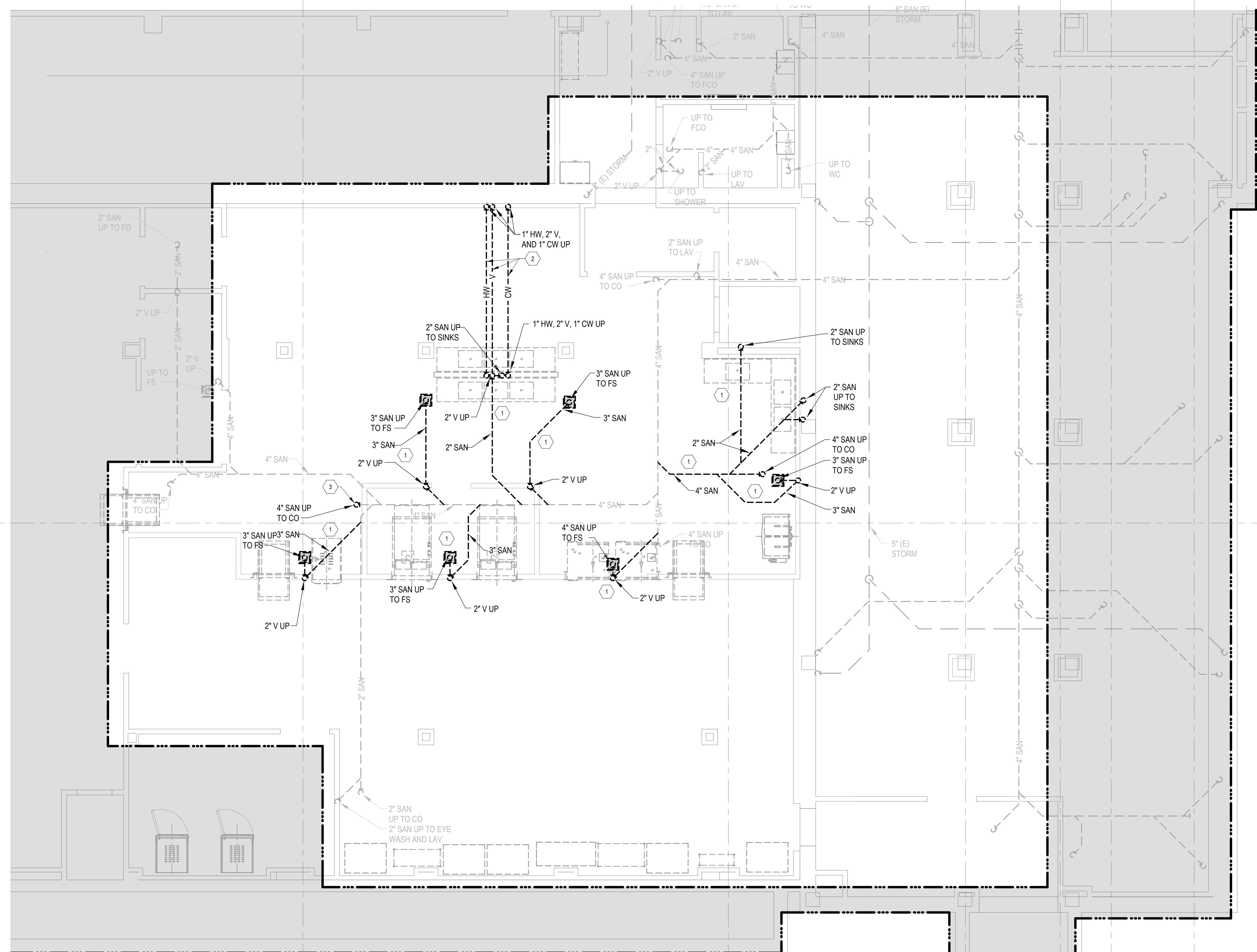
• THE SECOND FLOOR GLASS WASHLINE WILL CONTINUE TO OPERATE ON THE QLO TO UNIT.

- SET UP TEMPORARY TRAILER AND BUILD THE WALKING RAMP WITH ALL ITS ASSOCIATED EQUIPMENT.
- ONCE THE STERIS TRAILER IS FUNCTIONAL AND CONSTRUCTION ON THE SPS ROOM BEGINS, A NEW ST-108 COMPLIANT RO LOOP WILL BE INSTALLED ABOVE THE CEILING AND TIED INTO THE NEW RO SYSTEM.
- INSTALL A SMALLER RO SYSTEM (RO-2) THAT WILL FEED THE EXISTING SECOND FLOOR BRANCH LOCATED ABOVE THE CEILING IN ROOM BA-44. ISOLATION VALVE WILL NEED TO BE UTILIZED TO TRANSFER THE SYSTEMS AT START UP.

- COMPLETE ALL WORK IN THE SPS ROOMS AND MECHANICAL ROOMS.
- AT SPS ROOM START-UP, ALL RO LOOPS AND RUNS WILL NEED TO BE SANITIZED AND FLUSHED ACCORDING TO ST-108.
- ONCE THE NEW SPS RO LOOP IS RUNNING, ALL PIPING IN THE CORRIDORS GOING TO THE TEMPORARY SPS TRAILER WILL BE ISOLATED, BLOWN DOWN, AND THEN ABANDONED IN PLACE. THE OLD RO SYSTEM AND NEW EQUIPMENT LOCATED IN ROOM BE-69 WILL BE BLOWN DOWN AND DE-COMMISSIONED. CONSULT THE OWNER ON WHETHER THEY WOULD LIKE THE EQUIPMENT TO REMAIN IN PLACE OR MOVED TO A NEW LOCATION.

MECHANICAL DEMOLITION NOTES

- 1 SAW CUT FLOOR AND DEMO SANITARY SEWER AND VENT LINES AS SHOWN ALONG WITH ANY ASSOCIATED FLOOR SINK OR CLEAN OUTS. CAP OR PATCH ANY OPENINGS UNLESS THEY ARE TO BE USED IN NEW DESIGN. SEE STRUCTURAL DRAWINGS FOR MORE INFORMATION.
- 2 DEMO UNDERFLOOR VENT, DOMESTIC HOT WATER AND DOMESTIC COLD WATER PIPING BACK TO MAIN AND CAP.
- 3 DEMOLISH EXISTING FLOOR CLEAN OUT. PREPARE EXISTING PIPING FOR NEW CONNECTION.



KEY PLAN
LOWER LEVEL

1 PLUMBING UNDERGROUND - SANITARY DEMOLITION PLAN

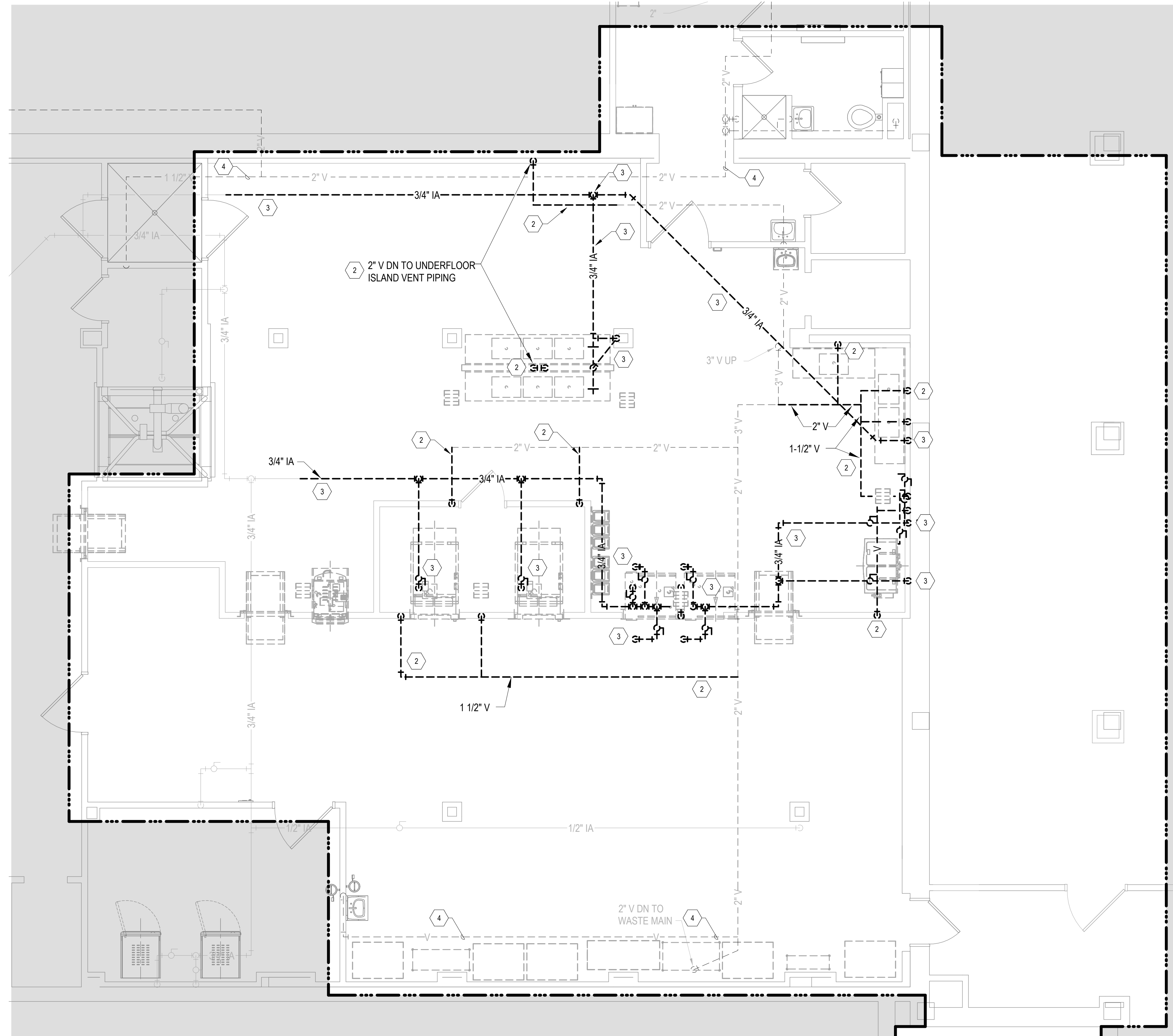
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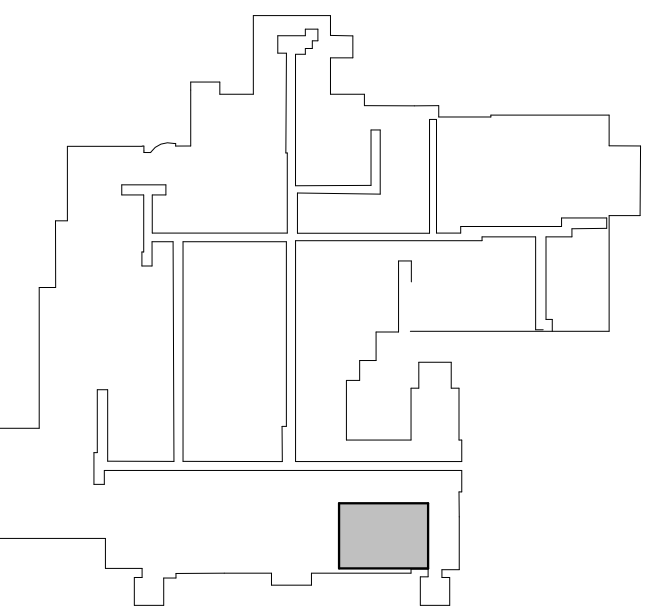
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MECHANICAL DEMOLITION NOTES

- 1 DEMO EXISTING MEDIUM PRESSURE STEAM (MPS) AND MEDIUM PRESSURE CONDENSATE (MPC) AS SHOWN. THIS INCLUDES ANY VALVES, STEAM TRAPS, HANGERS, OR OTHER EQUIPMENT ATTACHED TO THESE LINES. VENT TO REMAIN OR DASHED BUT NOT BOLD!
- 2 DEMO VENT (V) PIPING ALONG WITH HANGERS AS SHOWN. CAP ANY OPENINGS UNTIL USED IN NEW DESIGN.
- 3 DEMO COMPRESSED AIR (CA) PIPING ALONG WITH HANGERS AS SHOWN. CAP ANY OPENINGS UNTIL USED IN NEW DESIGN.
- 4 EXISTING VENT PIPING TO REMAIN. FIELD VERIFY SIZE(S) AND ROUTING.



1 LOWER LEVEL - VENT & COMPRESSED AIR DEMO PLAN
1/4" = 1'-0"



KEY PLAN
LOWER LEVEL

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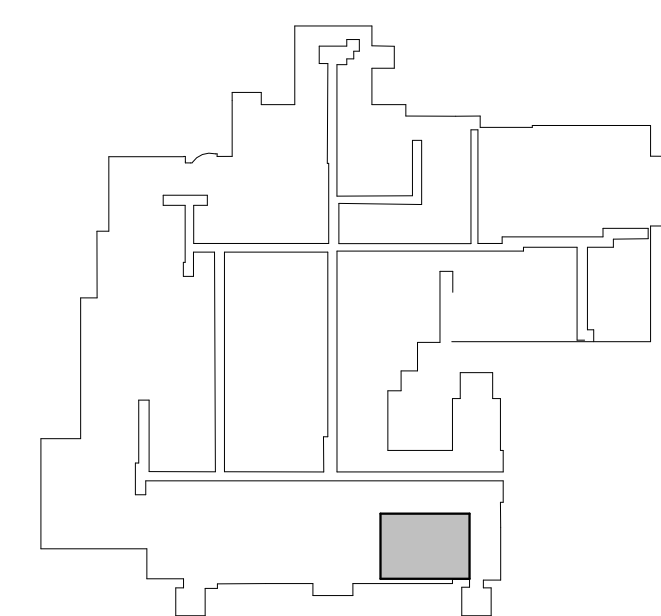
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EQUIPMENT BY OTHERS:

- | | |
|-------|---|
| 01 | ADVANTAGE PLUS PASS-THRU ENDOSCOPE REPROCESSING |
| 02 | AMSCO 400 MEDIUM STEAM STERILIZER |
| 03 | AMSCO 400 SMALL STEAM STERILIZER |
| 05 | STERIS AUTOMATIC PASS-THROUGH WINDOW |
| 06 | WASHER/DISINFECTOR - LOAD UNLOAD CONVEYOR |
| 08 | RACK RETURN |
| 09 | AMSCO 50 REPROCESSING SINK - 3 BAY, LEFT TO RIGHT |
| 10 | INNOVAVE PCF SCOMIC IRRIGATOR 20 LUMEN CAPACITY |
| 11 | AMSCO 50 REPROCESSING SINK - 3 BAY, RIGHT TO LEFT |
| 12 | ASTRA TEE PROBE |
| S2615 | TROPHON |

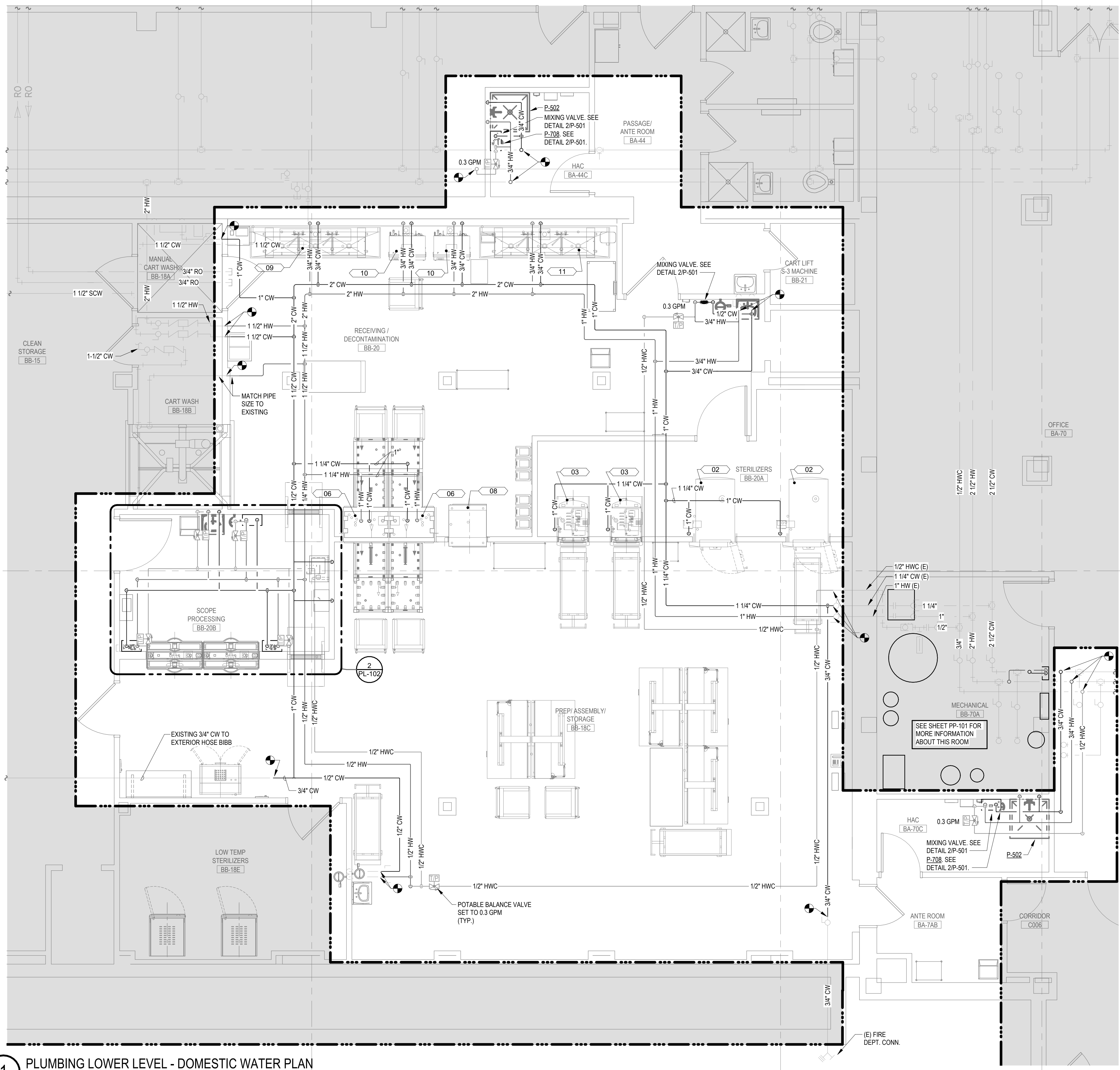
THESE LIST APPLIES TO ALL MECHANICAL SHEETS, INCLUDING BUT NOT LIMITED TO, FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.

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| 52615 | TROPHON |

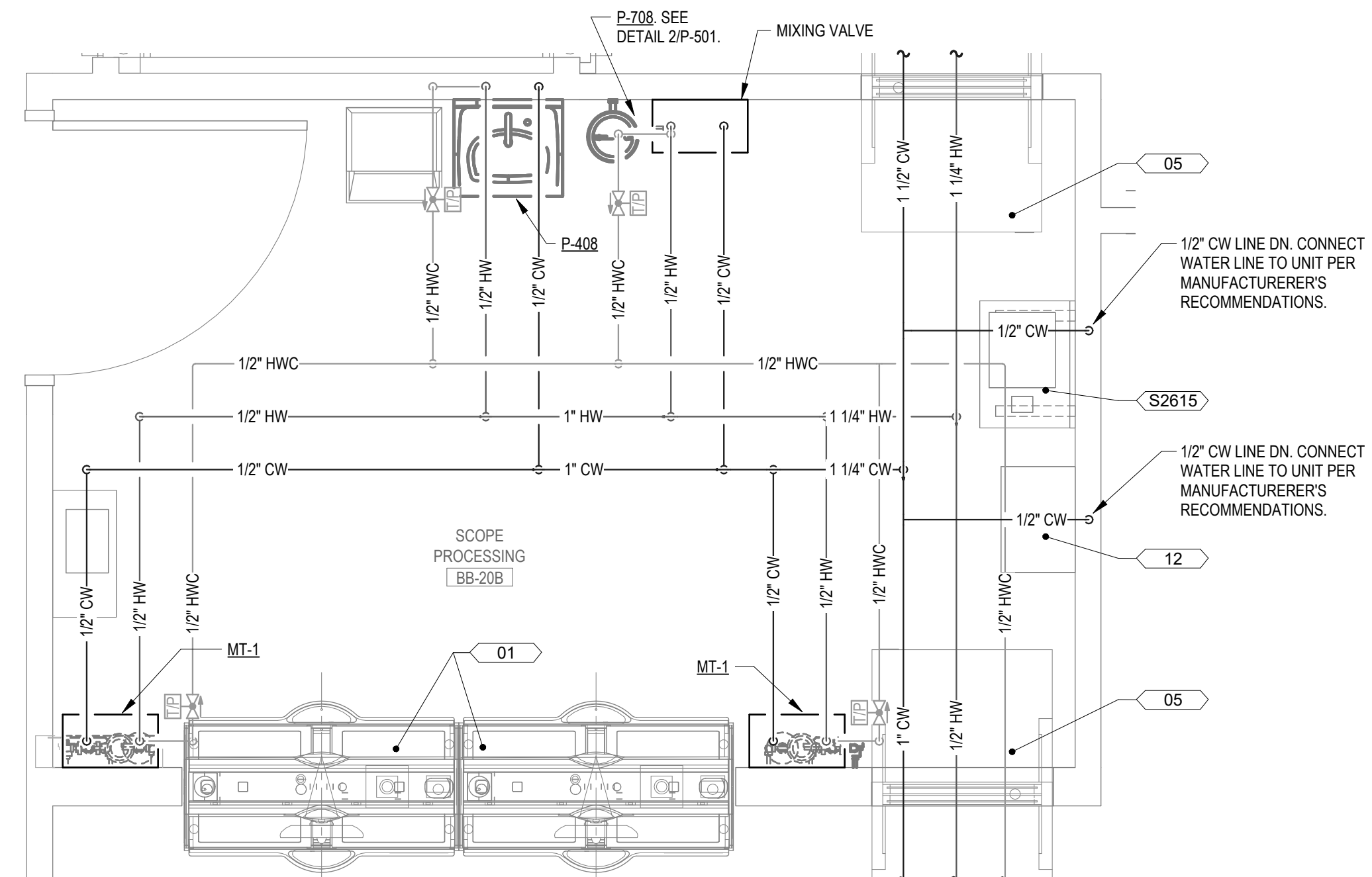


1 PLUMBING LOWER LEVEL - UNDERGROUND SANITARY PLAN
1/4" = 1'-0"

BID DOCUMENT SUBMISSION



1 PLUMBING LOWER LEVEL - DOMESTIC WATER PLAN
1/4" = 1'-0"

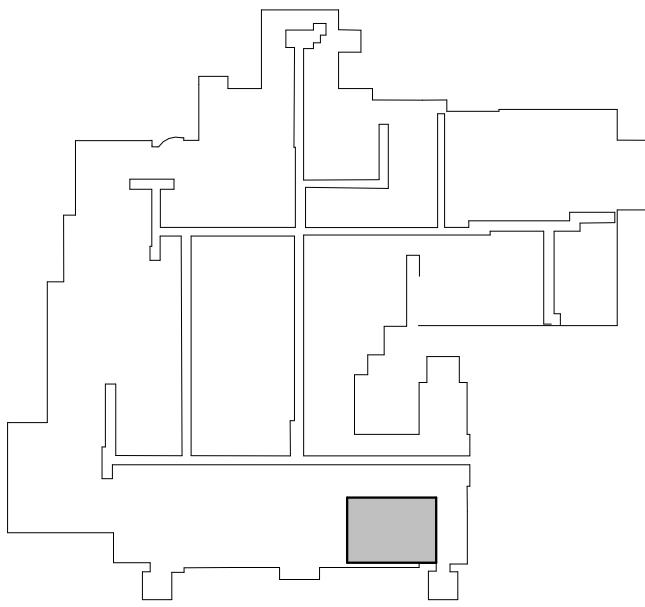


2 ENLARGED PLUMBING LOWER LEVEL - DOMESTIC WATER PLAN
1/2" = 1'-0"

EQUIPMENT BY OTHERS:

THESE LIST APPLIES TO ALL MECHANICAL SHEETS, INCLUDING BUT NOT LIMITED TO: FIRE PROTECTION, PLUMBING, MEDICAL GAS, VENTILATION, PIPING AND TEMPERATURE CONTROL.

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- 11 AMSCO 50 REPROCESSING SINK - 3 BAY, RIGHT TO LEFT
- 12 ASTRA TEE PROBE
- S2615 TROPHON



KEY PLAN
LOWER LEVEL

BID DOCUMENT SUBMISSION

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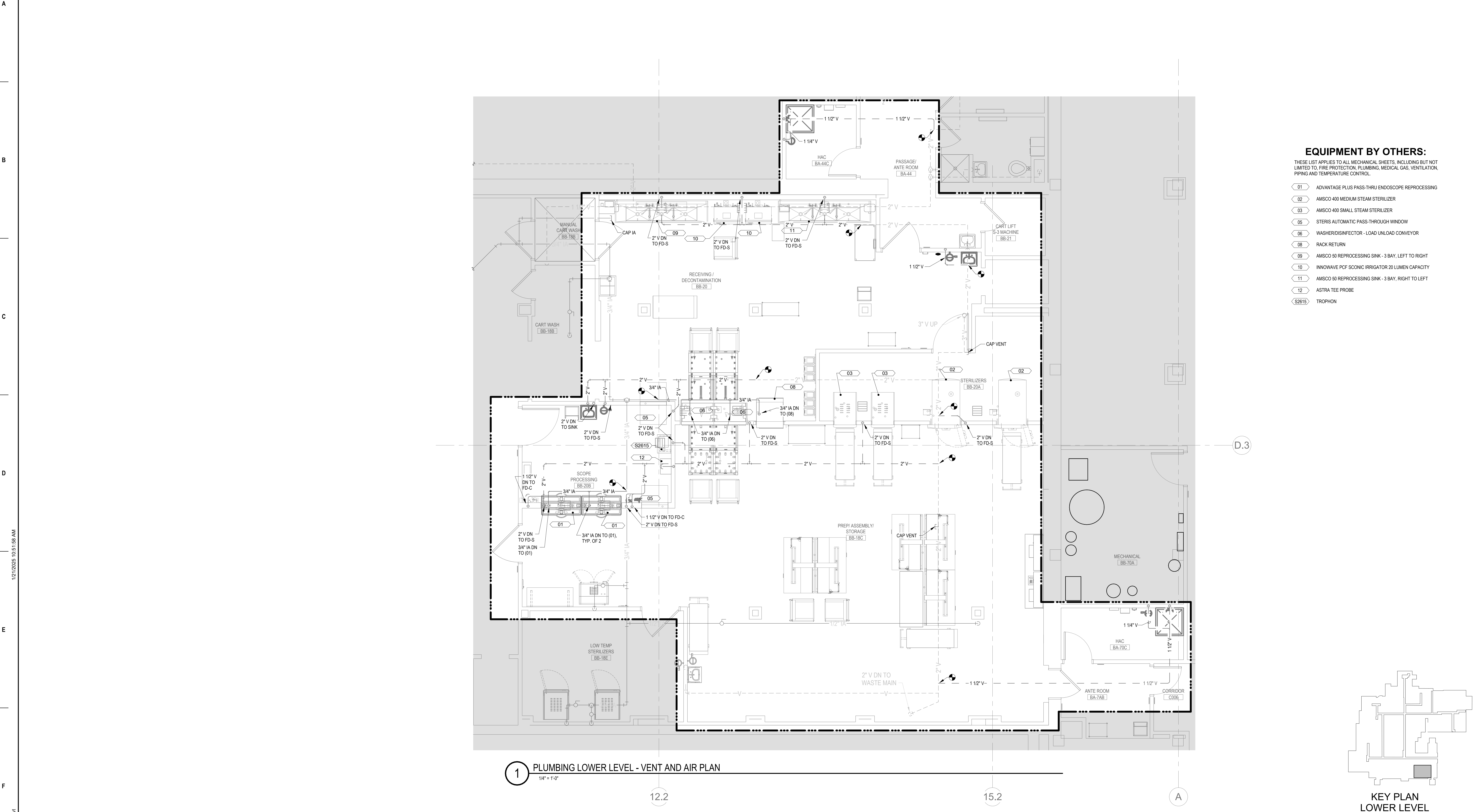
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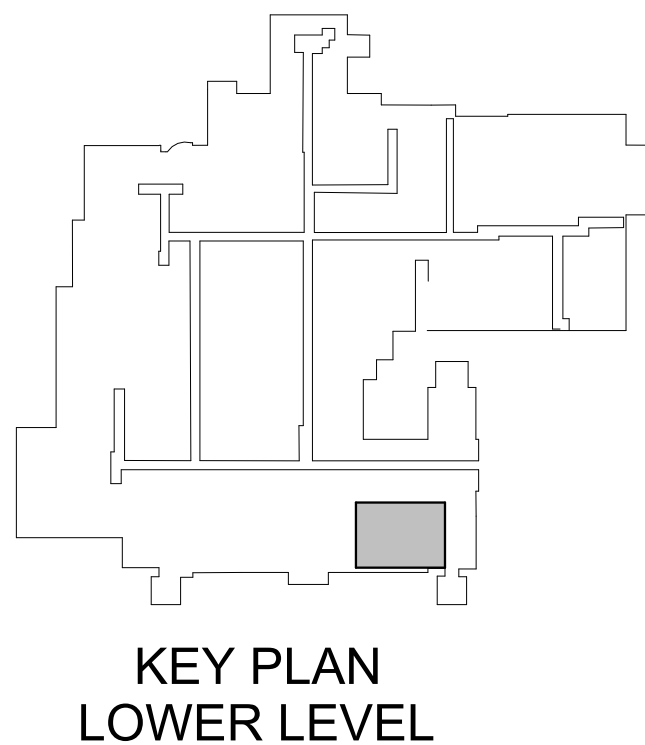


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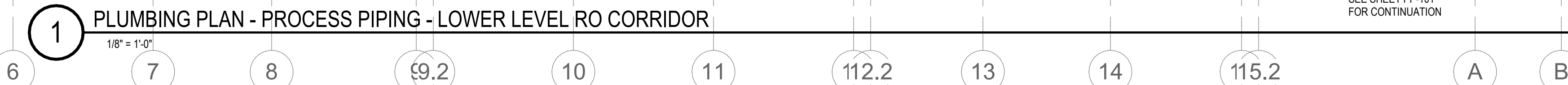
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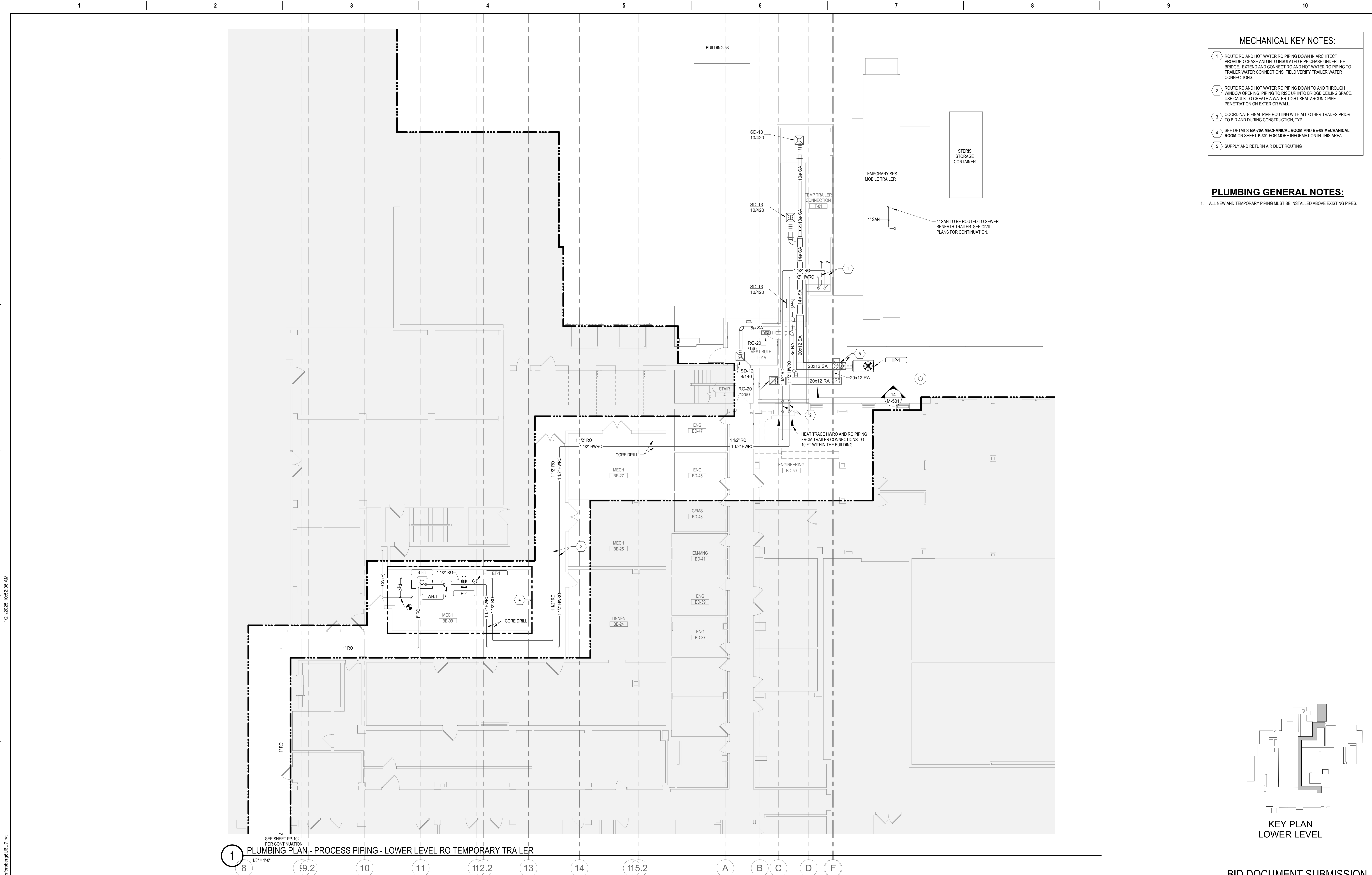
	CONSULTANT IMEG 2882 106TH STREET DES MOINES IA 50322	DESIGNER OF RECORD ANDERSON 13605 1st Ave. N. #100 Plymouth, MN 55441 P 763.412.4000 F 763.412.4090 ae-mn.com Anderson Engineering of Minnesota, LLC Proj # 17639	STAMP I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Print Name: Kirby J Quamen Signature: <i>Kirby J Quamen</i> Date: 01/22/2025 License #: S2555	Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs	Drawing Title PLUMBING LOWER LEVEL - VENT AND AIR PLAN	Phase BID DOCUMENTS	Project Title PERFORM SITE PREP FOR SPS EQUIPMENT	Project Number 437-CSI-241
					Approved:	FULLY SPRINKLERED	Location FARGO, ND	Building Number 9
							Issue Date 01/22/2025	Checked KAH
							Drawn SEF	Drawing Number PL-103



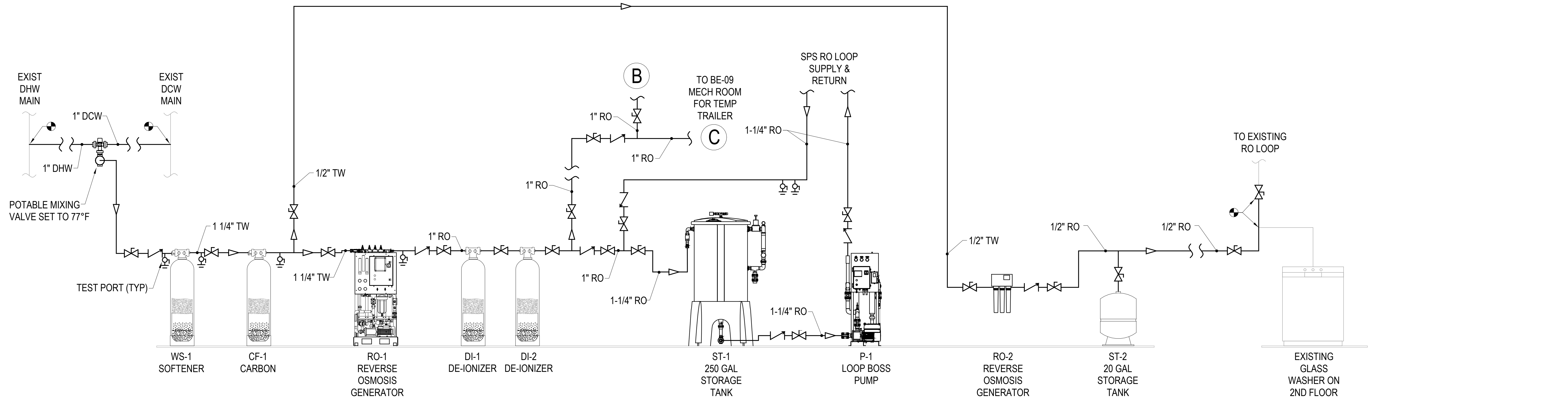
- KEY PLAN
LOWER LEVEL

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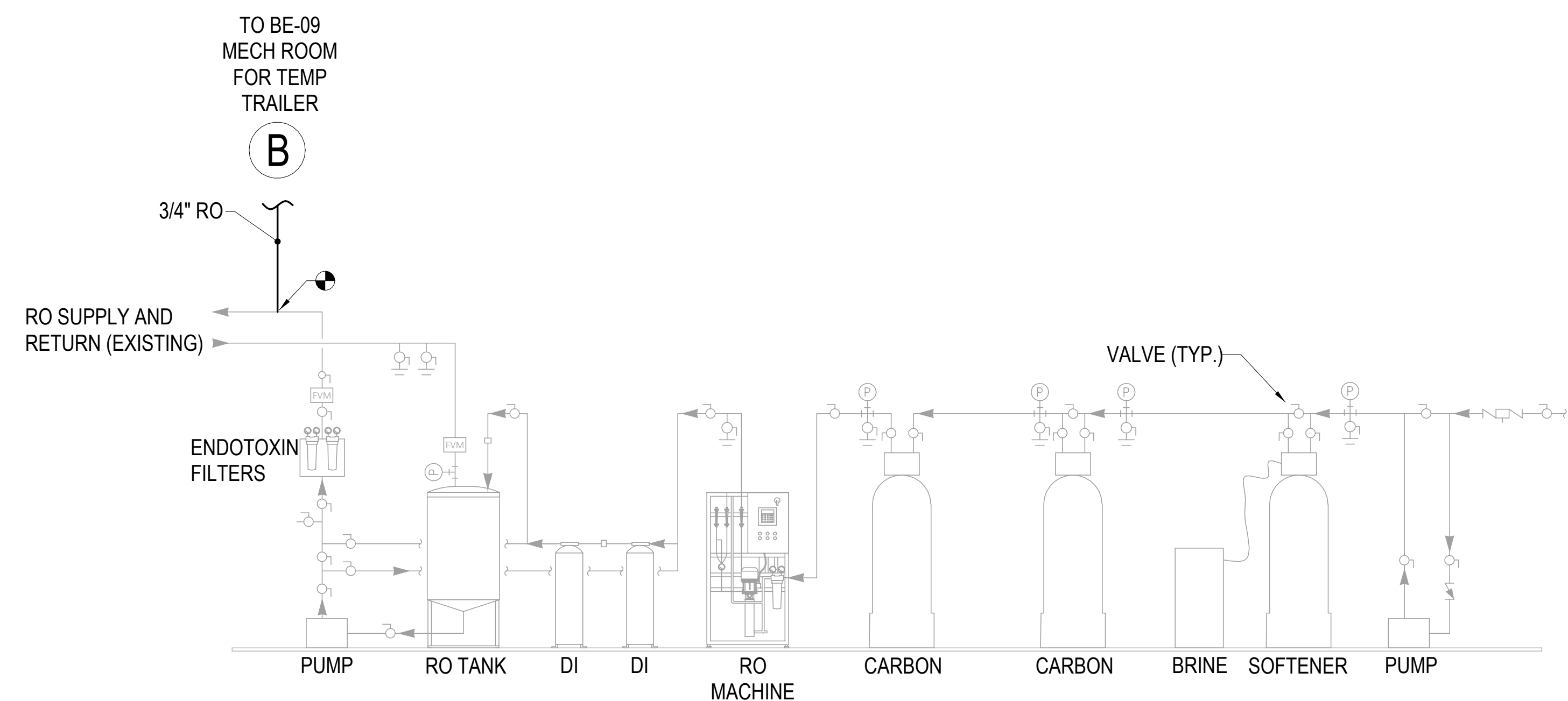
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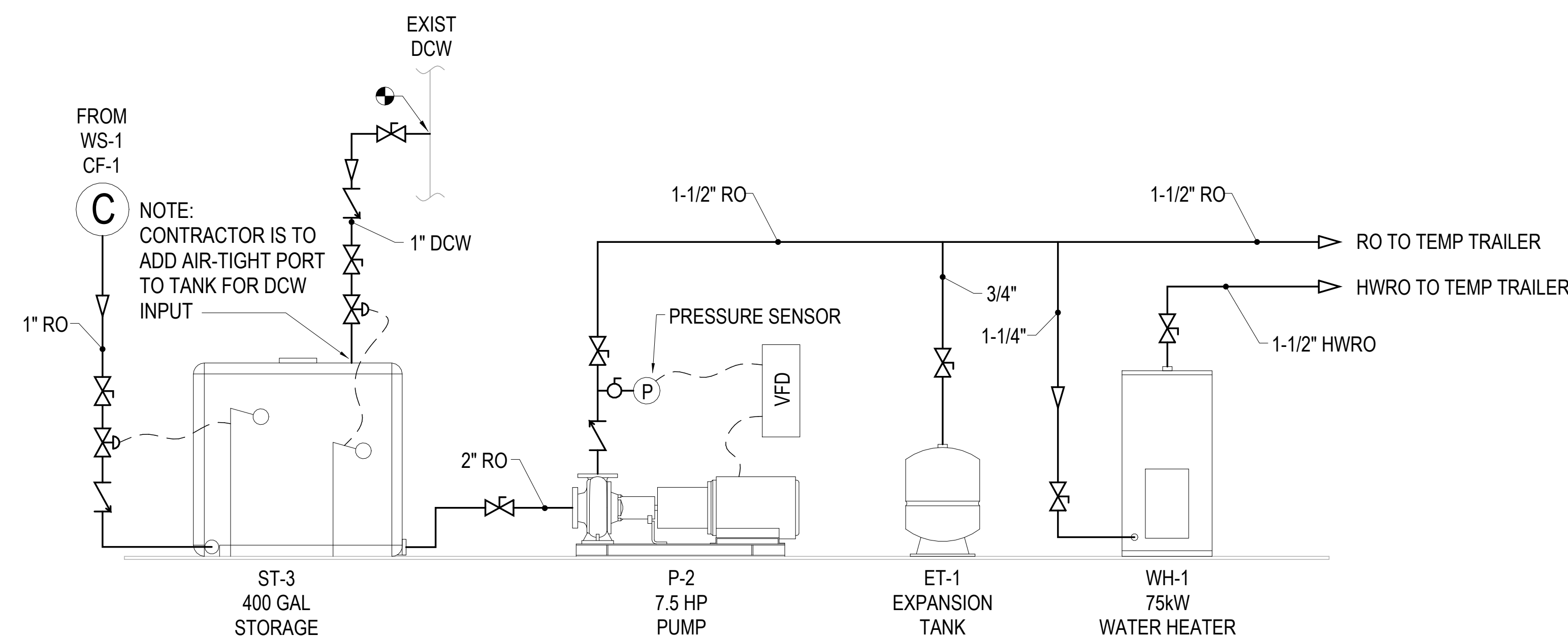
Revisions:		Date:		CONSULTANT		DESIGNER OF RECORD		STAMP		Office of Construction and Facilities Management		Drawing Title		Phase		Project Title		Project Number	
				IMEG		ANDERSON		I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.		U.S. Department of Veterans Affairs		PLUMBING PLAN - PROCESS PIPING - LOWER LEVEL RO TEMPORARY TRAILER		BID DOCUMENTS		PERFORM SITE PREP FOR SPS EQUIPMENT		437-CSI-241	
				2882 106TH STREET DES MOINES IA 50322		13605 1st Ave. N. #100 Plymouth, MN 55441 P 763.412.4000 F 763.412.4090 ae-mn.com Anderson Engineering of Minnesota, LLC Proj # 17639		Print Name: Kirby J Quamen Signature: [Signature] Date: 01/22/2025 License # S2555						FULLY SPRINKLERED		Location FARGO, ND		Building Number 9	
																Issue Date 01/22/2025		Checked KAH	
																		Drawing Number PP-103	



BA-70A MECHANICAL ROOM



(EXISTING) BB-09 TANK ROOM



BE-09 MECHANICAL ROOM

1 PLUMBING RO FLOW DIAGRAM
NOT TO SCALE

BID DOCUMENT SUBMISSION

<div>Revisions:</div> <div>Date:</div>	<div>CONSULTANT</div> <div> </div> <div>2882 106TH STREET DES MOINES IA 50322</div>		<div>DESIGNER OF RECORD</div> <div> </div> <div>13605 1st Ave. N. #100 Plymouth, MN 55441 P 763.412.4000 F 763.412.4090 ae-mn.com Anderson Engineering of Minnesota, LLC Proj # 17639</div>		<div>STAMP</div> <div> <p>I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.</p> <p>Print Name: Kirby J Quamen Signature: Date: 01/22/2025 License #: 52555</p> </div>	<div>Office of Construction and Facilities Management</div> <div> U.S. Department of Veterans Affairs </div>	<div>Drawing Title</div> <div>PLUMBING RO FLOW DIAGRAM</div> <div>Approved:</div>	<div>Phase</div> <div>BID DOCUMENTS</div> <div>FULLY SPRINKLERED</div>	<div>Project Title</div> <div>PERFORM SITE PREP FOR SPS EQUIPMENT</div> <div>Location</div> <div>FARGO, ND</div> <div>Issue Date</div> <div>01/22/2025</div> <div>Checked</div> <div>KAH</div> <div>Drawn</div> <div>SEF</div>	<div>Project Number</div> <div>437-CSI-241</div> <div>Building Number</div> <div>9</div> <div>Drawing Number</div> <div>P-301</div>