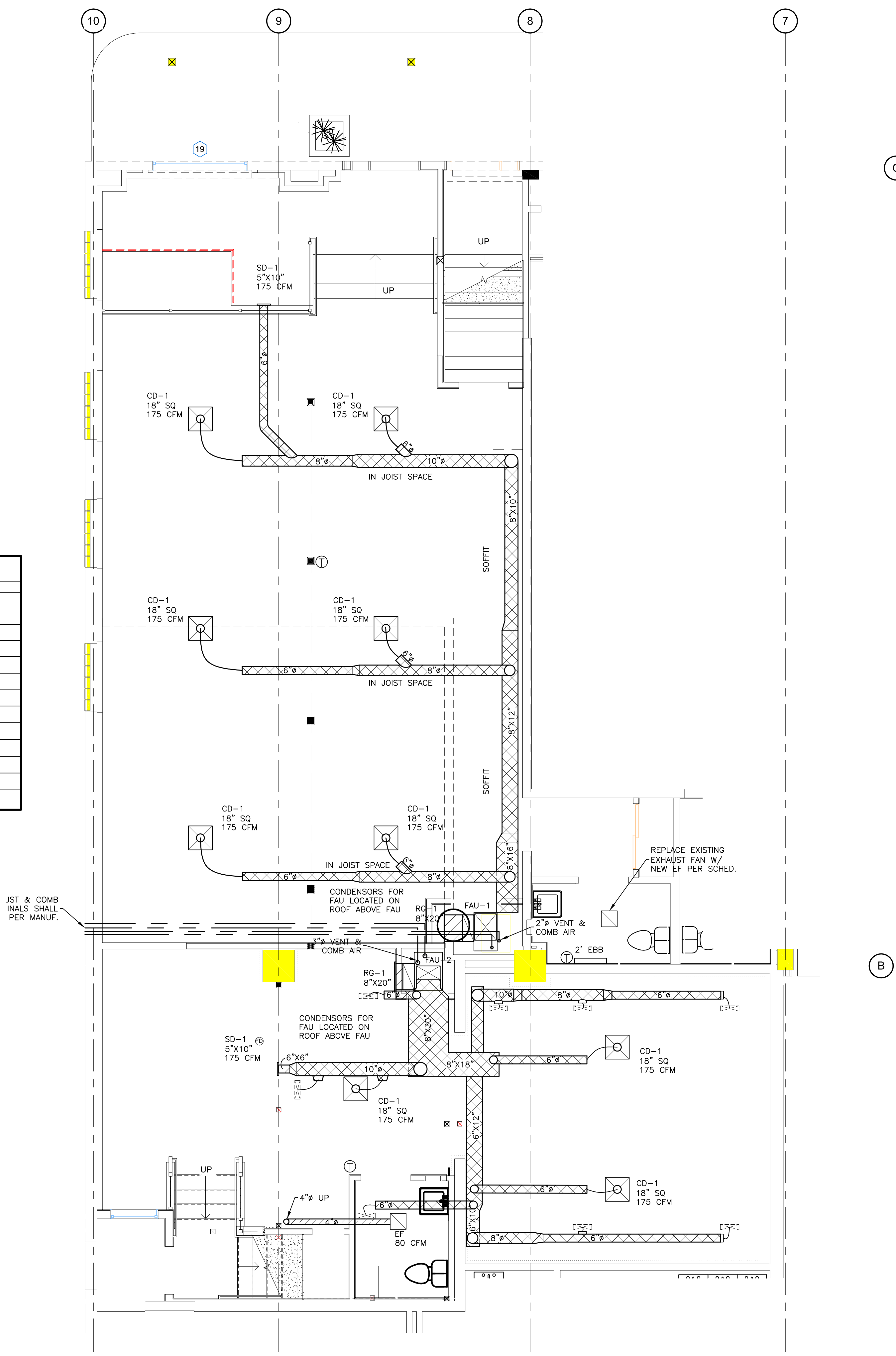


HVAC EQUIPMENT SCHEDULE										
MARK	DESCRIPTION	MANUFACTURE & MODEL	HEATING (MBH)		COOLING (MBU)	CFM @ 0.25 SP (UOM)	ELECTRICAL			REMARKS
			INPUT	OUTPUT			VAC	PHASE	AMPS	
FAU-1	GAS FURNACE	YORK TM9T060B12MP11	60	45	12	1200	120	1	10	
FAU-2	GAS FURNACE	YORK TM9T120D20MP11	120	88	36	2000	208/240	1	11.8	
FAU-3	GAS FURNACE	YORK TM9T060B12MP11	60	45	12	1200	120	1	10	
COND-1	CONDENSOR	YORK YCJF18S41S1	-	-	18.0	-	208/230	1	18.0	
COND-2	CONDENSOR	YORK YCJF30S41S1	-	-	30.0	-	208/230	1	22.0	
COND-3	CONDENSOR	YORK YCJF18S41S1	-	-	18.0	-	208/230	1	18.0	
COIL-1	COOLING COIL	YORK MC18A3XC1	-	-	18.0					
COIL-2	COOLING COIL	YORK MC18B3XC1	-	-	30.0					
COIL-3	COOLING COIL	YORK MC18A3XC1	-	-	18.0					
EF	BATH EXHAUST FAN	PANASONIC FV-05-11VKS1	-	-	-	80	115	1	1.0	
EBB	ELECTRIC BASEBOARD	KING K-2K1205BW	-	500W	-	80	120	1	4.2	



HVAC LEGEND	
	RETURN AIR DUCT
	SUPPLY AIR DUCT
	EXHAUST AIR DUCT
FAU	GAS FURNACE
COND	REMOTE CONDENSER
DF	SUPPLY DIFFUSER
CD	CEILING DIFFUSER
FD	FLOOR DIFFUSER
RG	RETURN AIR GRILL
EF	EXHAUST/SUPPLY FAN
EBB	ELECTRIC BASEBOARD

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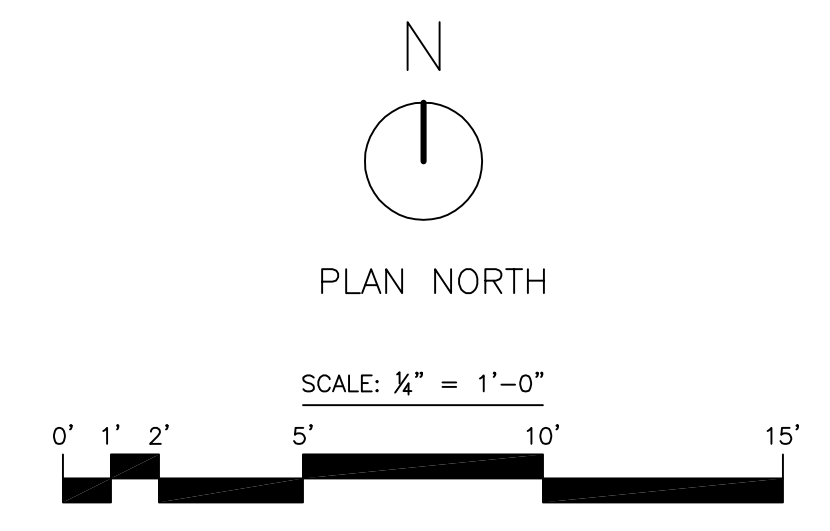
Old West Building  
Tenant Improvement  
1100 Lincoln Ave.  
Steamboat Springs, Colorado

JOB NO: 17-044  
DRAWN: JAS  
DATE: 7-31-17

REVISIONS		
NO.	DATE	DRAWN

SHEET NUMBER  
**M-1**

MAIN LEVEL HVAC PLAN  
SCALE: 1/4" = 1'-0"



**AIR DISTRIBUTION**

**DESCRIPTION OF WORK**

A. Mechanical contractor shall provide and install FAU, remote condenser, exhaust fans, ducts and grills, registers and diffusers as shown on the plans. Requirements for the air distribution system are as indicated herein.

**MATERIALS**

A. Sheet Metal: Except as otherwise indicated, fabricate ductwork from galvanized sheet steel complying with ASTM A 527, lockforming quality; with g 90 zinc coating in accordance with ASTM A 525; and mill phosphatized for exposed locations.  
 B. All duct dimensions shown are clear area dimensions.

**MISCELLANEOUS DUCTWORK MATERIALS**

A. General: Provide miscellaneous material and products of types and sizes indicated and, where not otherwise indicated, provide type and size required to comply with ductwork system requirements including proper connection of ductwork and equipment.

B. Fittings: Provide radius type fitting fabricated of multiple sections with maximum 15-degree change of direction per section. Use 45-degree laterals and elbows for branch takeoff connections.

C. Low Pressure Flexible Ducts: Duct shall be factory pre-insulated with a solid inner liner formed by a reinforced aluminum laminate material mechanically locked or bonded together by a corrosive resistant galvanized steel helix covered with a minimum 1-1/2" thick fiberglass blanket and sheathed in a polyethylene vapor barrier.

D. Exterior Metal Duct Work: Duct runs on the exterior of the building shall be lined as indicated above but shall be clad with Flex-Clad 400 jacket system.

**FABRICATION**

A. Shop fabricates ductwork in 4, 8, 10 or 12-Ft. lengths.

B. Shop fabricates ductwork of gages and reinforcement complying with SMACNA HVAC Duct Construction Standards.

C. Fabricate duct fittings to match adjoining ducts, and to comply with duct requirements and applicable to fittings. Except as otherwise indicated, fabricate to include turning vanes in elbows where shorter radius is necessary. Limit angular tapers to 30 degrees for contracting tapers and 20 degrees to expanding tapers.

**FACTORY-FABRICATED LOW PRESSURE DUCTWORK**

A. General: At installer's option, provide factory-fabricated duct and fittings, in lieu of shop-fabricated duct and fittings.

B. Material: Galvanized sheet steel complying with ASTM A 527, lock forming quality, with ASTM A 525, G90 zinc coating, mill phosphatized.

C. Gage: 28-gage minimum for round and oval ducts and fittings, 4" through 24" diameter.

D. Elbows: One piece construction for 90 degree and 45 degree elbows 14" and smaller. Provide multiple gore construction for larger diameters with standing seam circumferential joint.

**TURNING VANES**

A. Manufactured Turning Vanes: Provide turning vanes constructed of 1-1/2" wide curved blades set at 3/4" O.C. supported with bars perpendicular to blades set at 2" O.C. and set into side strips suitable for mounting in ductwork.

**INSULATION**

A. All supply or make-up rectangular air duct shall be lined with 1" duct liner insulation.  
 B. All supply or make-up round air duct shall be insulated with 2" foil faced insulation.  
 C. Duct sizes shown are clear opening sizes.

**GRILLS, REGISTERS AND DIFFUSERS**

A. Provide grills, registers and diffusers of manufactures standard air device where shown on the mechanical plans as require for complete installation.

B. Ceiling Compatibility: Provide air devices with border styles that are compatible with adjacent ceiling finish. Owner shall have approval prior to installation.

C. Types: Provide air device of type, capacity and with accessories and finishes as listed on grilles, register and diffuser schedule.

**D. Acceptable Manufacturers:**

- Krueler Mfg. Co.
- Metal Aire Co.
- Tituse Products Div.
- Tuttle and Bailey.

Substitutions are allowed if configuration and free area remains the same and the substitution is agreed to by architect and owner.

**INSTALLATION OF METAL DUCTWORK**

A. Assemble and install ductwork in accordance with recognized industry practices that will achieve airtight and noiseless systems, capable of performing each indicated service. Align ductwork accurately, supporting ducts rigidly and support vertical ducts at every floor.

B. Routing: Locate ductwork runs, vertically and horizontally and avoid diagonal runs whenever possible. Locate runs as indicated by diagrams, detail and notations or, if not otherwise indicated, run ductwork in shortest route, which does not obstruct usable space, or block access for servicing building and its equipment. Coordinate layout with suspended ceiling and lighting layout and similar finished work.

C. Install metal ductwork in accordance with SMACNA HVAC Duct Construction Standards.

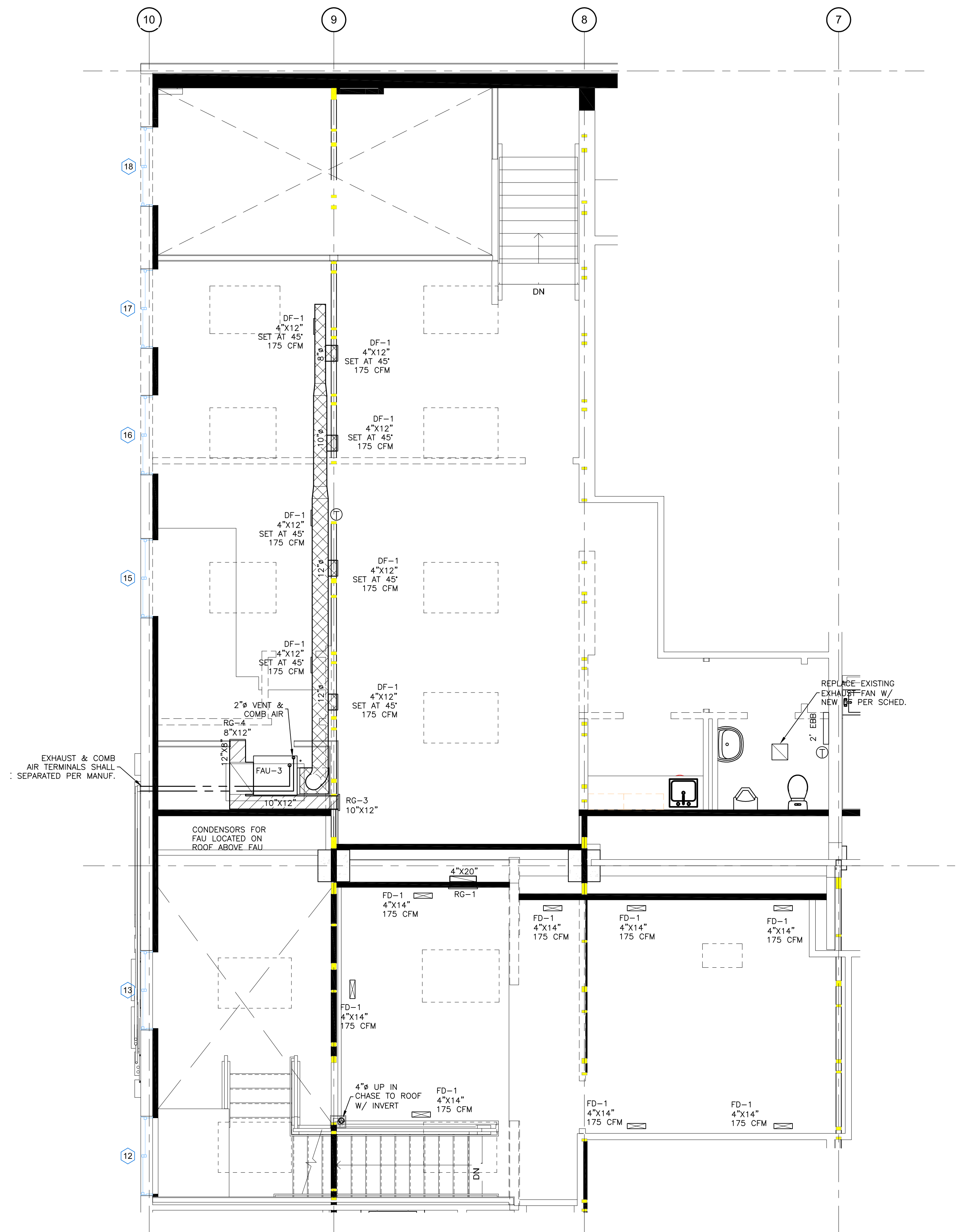
D. Turning vanes shall be located in all 90 degree turns and tees.

E. Use 45 degree laterals and elbows for branch takeoff connections.

**ADJUSTING AND CLEANING**

Clean duct work internally, of dust and contractor. A balance report shall be furnished to the Project Manager and the Designer.

Start-up: Operate installed system to demonstrate compliance with requirements. Check for leakage while system is operating and adjust or repair as necessary.



**HVAC LEGEND**

	RETURN AIR DUCT
	SUPPLY AIR DUCT
	EXHAUST AIR DUCT
FAU	GAS FURNACE
COND	REMOTE CONDENSER
DF	SUPPLY DIFFUSER
CD	CEILING DIFFUSER
FD	FLOOR DIFFUSER
RG	RETURN AIR GRILL
EF	EXHAUST/SUPPLY FAN
EBB	ELECTRIC BASEBOARD

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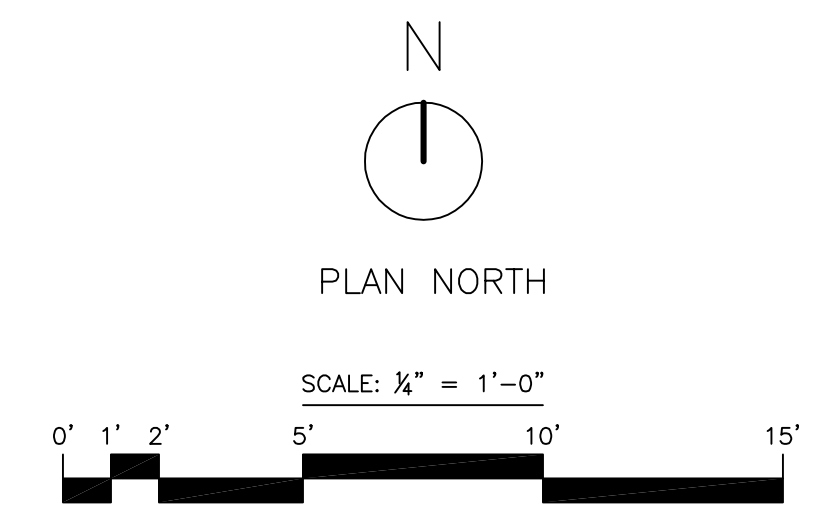
**Old West Building  
 Tenant Improvement**

1100 Lincoln Ave.  
 Steamboat Springs, Colorado

JOB NO: 17-044  
 DRAWN: JAS  
 DATE: 7-31-17

REVISIONS		
NO.	DATE	DRAWN

SHEET NUMBER  
**M-2**



**UPPER LEVEL HVAC PLAN**  
 SCALE: 1/4" = 1'-0"

**Plumbing System**  
 A. Plumbing contractor shall provide all labor, materials and equipment to install water, sewer piping and gas piping where indicated. All work shall be in accordance with the current IBC, IPC and all state and local codes and regulations. Only licensed plumbing contractors shall install water, sewer or gas piping.

B. All appropriate plumbing permits shall be issued prior to work commencing in those areas.

D. Coordinate work with other trades to eliminate conflicts. Verify dimensions and sizes and report errors, conflicts and inconsistencies to the Designer before starting work. Execute work in accordance with best current standard practices to contribute to the efficiency of operation, accessibility, slightness and minimal maintenance. Conform and accommodate systems to building structure, equipment and usage so that they do not interfere with the operation of other systems or operational parts of the building.

**PIPE AND FITTINGS**

A. Domestic Water: All above slab DW piping shall be Type M copper or approved poly piping. All piping products shall comply with ASTM B42-87 and ASTM B 88-86. Joints shall be up of 95-5 tin-antimony solder metal per ASTM B 32-70, alloy Grade 95TA.

B. Drain and Waste Piping - Above and Underground  
 Sewer pipe shall be PVC. PVC pipe and fittings shall comply with ASTM D2665-85. PVC fittings shall correspond to pipe in material, class and ASTM designation

Joints: Solvent cement shall be as specified in ASTM D2564-80 and primer shall be as specified in ASTM F656-80.

**MISCELLANEOUS PIPING MATERIALS/PRODUCTS**

A. Soldering Materials: Provide soldering materials as determined by installer to comply with installation requirements.

B. Piping Connectors for Dissimilar Non-Pressure Pipe: Elastomeric annular ring insert or elastomeric flexible coupling minimizes flexible duct lengths and sharp bends.

**VALVES**

A. General: Provide valves of types and pressure ratings indicated by application and comply with all state and local codes.

**PIPING SYSTEM JOINTS**

A. Thread natural gas pipe in accordance with ANSI B2.1. Cut threads full and clean using sharp dies. Ream threaded ends to remove burrs and restore full inside diameter. Apply pipe joint or pipe tape where recommended by pipe/fitting manufacturer.

B. Solder copper tube-and-fitting joints where indicated, in accordance with recognized industry practice. Cut tube ends squarely, ream to full inside diameter, and clean outside of tube ends and inside of fittings. Use only flux with no lead content.

C. DWV pipe and fittings shall be cleaned using approved primer and glued with approved glue. If outside temperatures are 30 degrees or below, cold weather glues shall be used.

**INSTALLATION OF HANGERS AND SUPPORTS**

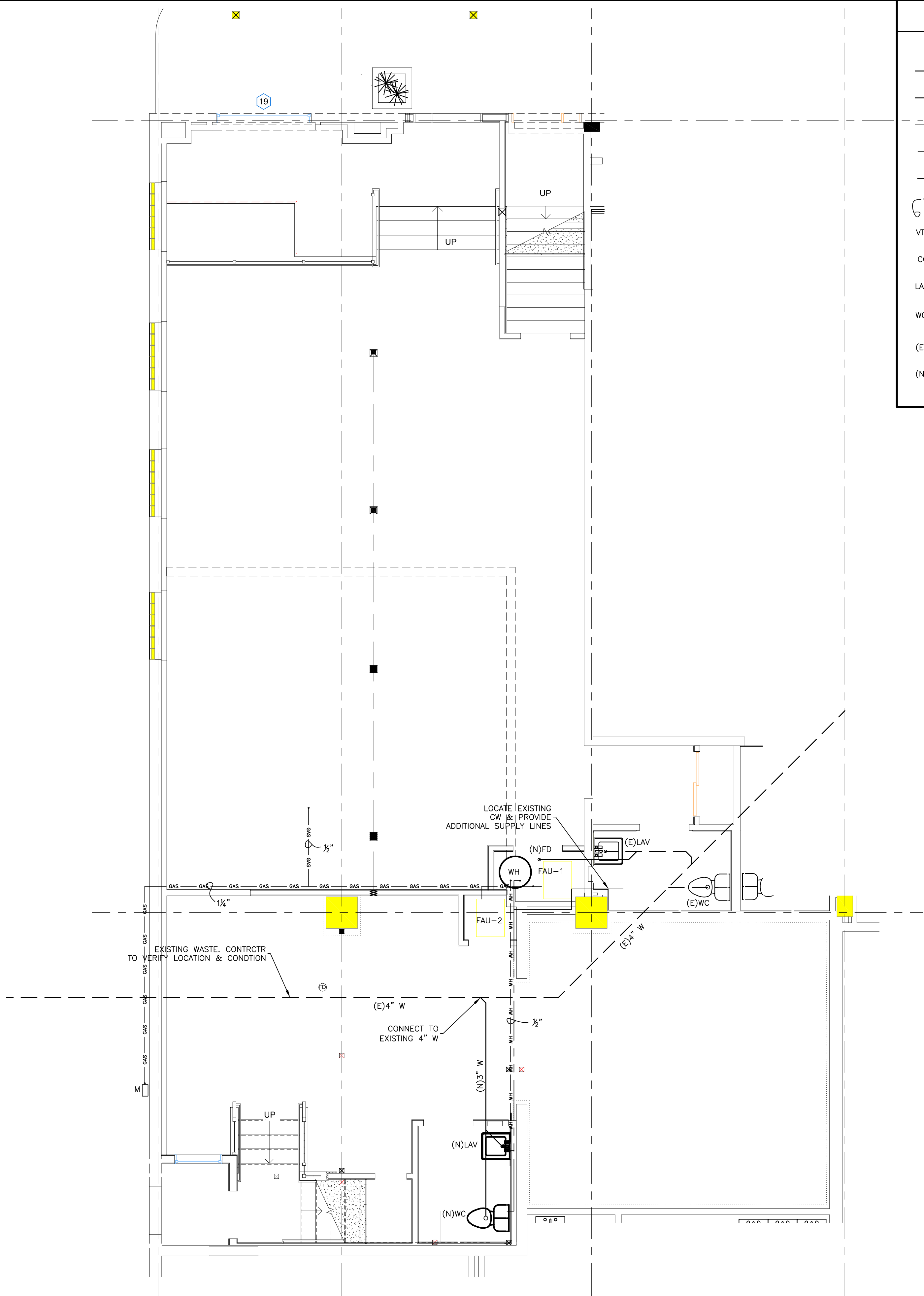
A. All suspended domestic pipe shall be suitable braced to prevent horizontal movement.

B. Prevent electrolysis in support of copper tubing by use of hangers and supports that are copper plated, or by other recognized industry methods or by plastic coated hangers.

**PLUMBING FIXTURES**

A. Provide factory fabricated fixtures of type, style and material indicated. Where more than one is indicated, selection is installer's option when approved by owner. All fixtures of the type specified on the mechanical plans, unless approved by the engineer and/or owner.

B. All fixtures, inlet and outlet shall have easy disconnects so interceptor may be move for ease of cleaning.



**PLUMBING LEGEND**

---	EXISTING SEWER PIPING
---	SEWER PIPING
---	VENT PIPING
---	DOMESTIC WATER PIPING
HW	DOM HOT WATER PIPING
4"	PIPE SIZES
VTR	VENT TO ROOF
CO	DRAIN CLEAN-OUT
LAV	LAVATORY
WC	WATER CLOSET
(E)	EXISTING
(N)	NEW

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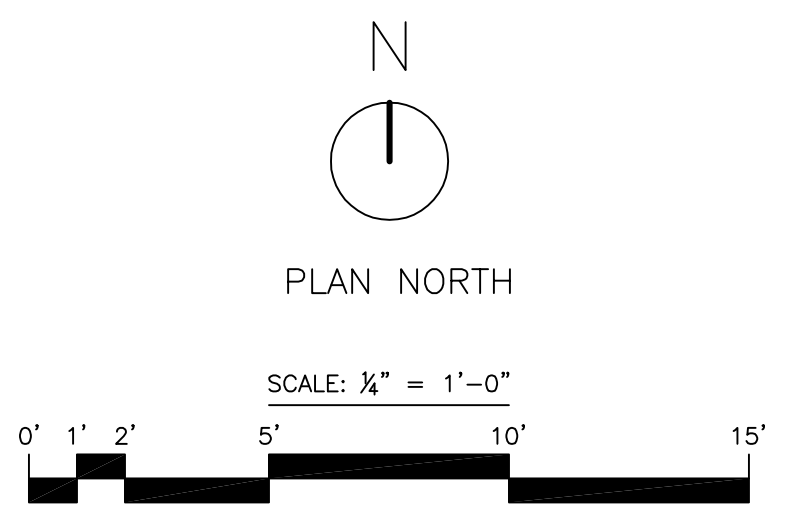
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**REVISIONS**

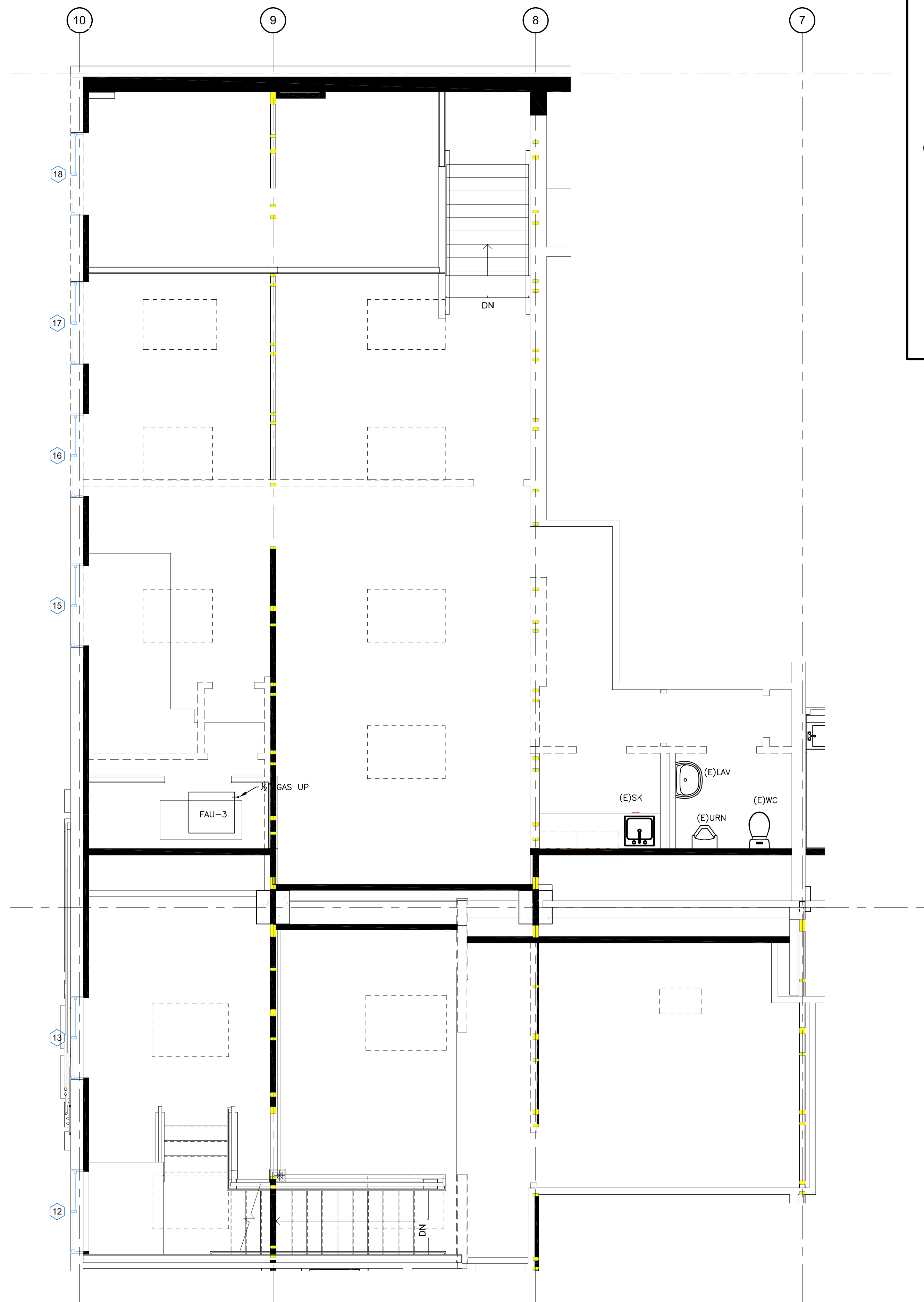
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SHEET NUMBER  
**P-1**

**MAIN LEVEL PLUMBING PLAN**  
 SCALE: 1/4" = 1'-0"



PLUMBING EQUIPMENT SCHEDULE					
MARK	DESCRIPTION	MANUFACTURE & MODEL	FAUCET & ACCESSORIES	FINISH	REMARKS
WC	WATER CLOSET	KOHLER HIGHLINE K-3519	-	WHITE	-
LAV	LAVATORY	KOHLER CHESAPEAKE K-1722	KOHLER CORALAIS 15592	WHITE CP	REQUIRES WALL CARRIER
WH	ELECT WATER HEATER	BRADFORD WHITE LE140L3-3 5000W	-	-	480 V 10.4A



PLUMBING LEGEND	
---	EXISTING SEWER PIPING
—	SEWER PIPING
---	VENT PIPING
---	DOMESTIC WATER PIPING
— HW —	DOM HOT WATER PIPING
4"	PIPE SIZES
VTR	VENT TO ROOF
CO	DRAIN CLEAN-OUT
LAV	LAVATORY
WC	WATER CLOSET
(E)	EXISTING
(N)	NEW

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**P-2**

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

