

# MECHANICAL LEGEND (not all may apply)

## GENERAL ABBREVIATIONS

AAD	AUTOMATIC AIR DAMPER	DET	DETAIL	HX	HEAT EXCHANGER	REQD	REQUIRED
AAV	AUTOMATIC AIR VENT	DIA	DIAMETER	IA	INSTRUMENT AIR	REV	REVISED
AB	AIR BLENDER	DN	DOWN	IE	INVERT ELEVATION	RG	RETURN GRILLE
AC*	AIR CONDITIONING UNIT	DMR	DAMPER	NG	NATURAL GAS	RH	RELATIVE HUMIDITY/ROOF
ACC	AIR COOLED CONDENSER	DPT	DEW POINT TEMPERATURE	INV	INVERT	RV	RELIEF VENT
ACCU	AIR COOLED CONDENSING UNIT	DR	DRAIN	KEC	KITCHEN EQUIPMENT CONTRACTOR	RM	ROOM
AD	ACCESS DOOR	DTA	DUAL TEMPERATURE SUPPLY	KH	KITCHEN HOOD	RPM	REVOLUTIONS PER MINUTE
ADDL	ADDITIONAL	DTR	DUAL TEMPERATURE RETURN	KV	KITCHEN VENT	RR	RETURN REGISTER
ADJ	ADJUSTABLE	DWG	DRAWING	LA	LEAVING AIR TEMPERATURE	SA	SCHEDULE
AF	AFTER FILTER	EA	EXHAUST AIR	LD	LINEAR DIFFUSER	SCHD	SCHEDULE
AFF	ABOVE FINISHED FLOOR	EAH	EXHAUST AIR HOOD	LDT	LEAVING WATER TEMPERATURE	SCHWP	SECONDARY CHILLED WATER PUMP
ALT	ALTERNATE	EAL	EXHAUST AIR LOUVER	LWT	LEAVING WATER TEMPERATURE	SECT	SECTION
ALUM	ALUMINUM	EAT	ENTERING AIR TEMPERATURE	MATL	MATERIAL	SG	SUPPLY GRILLE
AP	ACCESS PANEL	EC	ELECTRICAL CONTRACTOR	MAV	MANUAL AIR VENT	SHWP	SECONDARY HOT WATER PUMP
APPROX	APPROXIMATE	EF	EXHAUST FAN	MAX	MAXIMUM	SHT	SHEET
ARCH	ARCHITECTURAL	EG	EXHAUST GRILLE	MBH	MBTU PER HOUR, THOUSAND	SL	SOUND LINING
AUTO	AUTOMATIC	EL	ELEVATION	MC	MECHANICAL CONTRACTOR	SM	SURFACE MOUNT
AVG	AVERAGE	ELEC	ELECTRICAL/ELECTRICAL	MCW	MECHANICAL CITY WATER	SPEC	SPECIFICATIONS
BAS	BUILDING AUTOMATION SYSTEM	EQ	EQUAL	MFG	MECHANICAL	STP	STATIC PRESSURE TRANSMITTER
BBD	BALANCED BACKDRAFT DAMPER	EQUIP	EQUIPMENT	MFGMGR	MANUFACTURER	SQ	SQUARE
BE	BOTTOM ELEVATION	EQUIVALENT	EQUIVALENT	MN	MINIMUM	SQ FT/SF	SQUARE FOOT (FEET)
BF	BUTTERFLY	EQV	EQUIVALENT	MISC	MISCELLANEOUS	SQ INCH	SQUARE INCHES
BE	BOTTOM ELEVATION	ESP	EXTERNAL STATIC PRESSURE	MSW	MECHANICAL SOFT WATER	NA	NOT APPLICABLE
BLDG	BUILDING	ET	EXPANSION TANK	NA	NATURAL GAS	NR	NORMALLY CLOSED/NOISE CRITERIA
BLR	BOILER	EUH	ELECTRIC UNIT HEATER	NC	NATURAL GAS	NS	NORMALLY OPEN
BOD	BOTTOM OF DUCT	EWH	ELECTRIC WATER HEATER	NG	NATURAL GAS	NTS	NOT TO SCALE
BOP	BOTTOM OF PUMP	EWT	ENTERING WATER TEMPERATURE	NIC	NORMALLY CLOSED	OC	ON CENTER
BOT	BOTTOM	EXCL	EXCLUDING	NO	NORMALLY OPEN	OCG	OCCUPANCY SENSOR
BP	BOOSTER PUMP	EXIST	EXISTING	NOM	NOMINAL	OPG	OPENING
BTU	BRITISH THERMAL UNIT	EXP	EXPANSION	NTC	NOT TO SCALE	OTV	OUTSIDE AIR
BTUH	BTUS PER HOUR	*F	DEGREE FAHRENHEIT	OA	OUTSIDE AIR	TE	TOP ELEVATION
BY	BY	FL	FLAT DRAIN	OAH	OUTSIDE AIR HOOD	TI	TEMPERATURE INDICATOR
CA	COMPRESSED AIR	FF	FINISHED FLOOR	OAL	OUTSIDE AIR LOUVER	TMV	THERMOSTATIC MIXING VALVE
CAF	COMBUSTION AIR FAN	FH	FIRE HYDRANT	OC	ON CENTER	TSP	TOTAL STATIC PRESSURE
CDW	COUNTER DRAIN	FL	FLOOR	OCG	OCCUPANCY SENSOR	TSTAT	THERMOSTAT
CD	CEILING DIFFUSER	FOB	FLAT ON BOTTOM	OPG	OPENING	TVV	THERMAL EXPANSION VALVE
CFM	CUBIC FEET PER MINUTE	FOR	FUEL OIL RETURN	OSY	OUTSIDE SCREW AND YOKE	TYP	TYPICAL
CH	CHECK VALVE	FUEL	FUEL OIL SUPPLY	OW	UNDERGROUND	UG	UNDERGROUND
CH	CHILLER	FOT	FLAT ON TOP	PH	PRIMARY CHILLED WATER PUMP	UH	UNIT HEATER
CHWP	CHILLED WATER PUMP	FPC	FIRE PROTECTION CONTRACTOR	PHWP	PRIMARY HOT WATER PUMP	UNO	UNLESS OTHERWISE NOTED
CHLDR	CHILLED WATER RETURN	FCM	FAN PER MINUTE	PI	PLUMBING CONTRACTOR	UNO	UNLESS OTHERWISE NOTED
CHWS	CHILLED WATER SUPPLY	FPVAV	FAN POWERED VAV	PH	PHASE	VAC	VACUUM
CI	CAST IRON	FS	FLOOR SINK	PHWP	PRIMARY HOT WATER PUMP	VA	VALVE
COL	COLUMBIUM	GA	GALVANIZED	PI	PLUMBING CONTRACTOR	VAV	VARIABLE AIR VOLUME
CONN	CONNECTION	GALV	GALVANIZED	PLBG	PLUMBING	VD	VOLUME DAMPER
CT	COOLING TOWER	GC	GENERAL CONTRACTOR	PRSS	PRESSURE	VFD	VARIABLE FREQUENCY DRIVE
CU	COPPER	GPH	GALLONS PER HOUR	PRV	PRESSURE REDUCING VALVE	VOL	VOLUME
CUH	CABINET UNIT HEATER	GM	GALLONS PER MINUTE	PS	PRESSURE SWITCH	W	WITH
CU FT	CUBIC FEET	HEX	HEAT EXCHANGER	PSD	PLENUM SLOT DIFFUSER	W/O	WITHOUT
CU IN	CUBIC INCH	HORIZ	HORIZONTAL	PS	POUND PER SQUARE INCH	WB	WET BULB TEMPERATURE
CW	CLOCKWISE	HR	HOUR	PSA	POUND PER SQUARE INCH ABSOLUTE	WG	WEATHER GAUGE
CWP	CONDENSING WATER PUMP	HT	HEAT TRACE	PSB	POUND PER SQUARE INCH BACKSIDE	WP	WEATHER PROOF
CHS	CONDENSING WATER SUPPLY	HIAC	HEATING, VENTILATING AND AIR CONDITIONING	PVC	POLYVINYL CHLORIDE	XP	EXPLOSION PROOF
CWR	CONDENSING WATER RETURN	HWP	HOT WATER PUMP	RCF	RECIRCULATION PUMP		
DB	DRY BULB TEMPERATURE	HWR	HOT WATER RETURN	REF	REFERENCE		
DDC	DIRECT DIGITAL CONTROL	HWS	HOT WATER SUPPLY				

## MECHANICAL SYMBOLS

	COMBINATION BALANCE AND STOP VALVE		PRESSURE TEMPERATURE TEST STATION (PTTS)		DUCT TURN DOWN
	GATE VALVE		THERMOMETER		DUCT TURN UP
	BUTTERFLY VALVE		MANUAL AIR VENT (A-AUTOMATIC)		INTERNALLY LINED DUCTWORK (DIMENSIONS INDICATED ARE OUTSIDE SHEET METAL DIMENSIONS)
	GLOBE VALVE		WATER FLOW TRANSMITTER		MANUFACTURED DOUBLE WALL DUCTWORK (DIMENSIONS INDICATED ARE INSIDE SHEET METAL DIMENSIONS)
	BALL VALVE		SUPPLY DIFFUSER		HOT WATER SUPPLY
	CHECK VALVE		RETURN DIFFUSER		HOT WATER RETURN
	GAS COCK		EXHAUST DIFFUSER		ARGON
	TEMPERATURE REGULATING VALVE		PLENUM SLOT DIFFUSER		ACYLENE
	PRESSURE RELIEF VALVE		AIR FLOW DIRECTION		CARBON DIOXIDE
	RELIEF VALVE		OPPOSED BLADE DAMPER		NITROGEN
	STRAINER		PARALLEL BLADE DAMPER		COMPRESSED AIR
	3-WAY VALVE		FIRE DAMPER (HORIZONTAL OR VERTICAL)		SANITARY
	VALVE AND END CAP		SMOKE DAMPER (HORIZONTAL OR VERTICAL)		VENT
	UNION		COMBINATION SMOKE FIRE DAMPER		DOMESTIC HOT WATER
	FLANGED CONNECTION		TEMPERATURE TRANSMITTER		DOMESTIC COLD WATER
	REDUCER				NEW DUCT OR PIPING
	ELBOW UP				EXISTING DUCT OR PIPING
	PIPE TEE DOWN				EXISTING DUCT OR PIPING TO BE REMOVED
	ELBOW DOWN				
	INSERTION TYPE FLOW METER				
	STRAP-ON TYPE FLOW METER				

## FIRE PROTECTION NOTES:

- ALL FIRE PROTECTION CONTRACT WORK IS TO COMPLY WITH THE APPLICABLE NFPA STANDARDS REFERENCED IN THE BUILDING CODE (OBC) AS ADMINISTERED BY THE LOCAL REVIEWING/INSPECTION/PROVISION AUTHORITY. THE INSURANCE UNDERWRITERS GUIDELINES, THE LOCAL FIRE PREVENTION AUTHORITY (FIRE MARSHAL'S OFFICE/FIRE DEPT.), AND ANY OTHER AUTHORITIES HAVING JURISDICTION, AS CONFIRMED AND VERIFIED IN ADVANCE BY THE LICENSED F.P. CONTRACTOR.
- NOTE THAT EXISTING WORK SHOWN ON PLANS IS FROM PREVIOUS ENGINEERING DOCUMENTS AND FIELD OBSERVATION. ACTUAL CONDITIONS MAY VARY, AND THIS CONTRACTOR MUST FIELD VERIFY EXISTING WORK (WHETHER INDICATED ON DRAWINGS OR NOT) AND MAKE MINOR ADJUSTMENTS NECESSARY TO COMPLETE NEW WORK. IF EXISTING CONDITIONS PROHIBIT NEW WORK, NOTIFY THE ARCHITECT FOR REDIRECTION AS REQUIRED.
- UNLESS DIRECTED OTHERWISE, WHERE EXISTING STRUCTURE IS BEING REMOVED/RELOCATED/REMODELED OR OTHERWISE REVISED, THE FIRE PROTECTION CONTRACTOR SHALL REUSE THE EXISTING SPRINKLER/STANDPIPE INSTALLATION AND PROVIDE NEW FIRE PROTECTION ITEMS/ELEMENTS AS REQUIRED TO PROVIDE/MANTAIN THE COVERAGE SPECIFIED HEREIN. THIS INCLUDES SPACING AND LOCATION REQUIREMENTS (MINIMUM/MAXIMUM) BETWEEN SPRINKLER HEADS/PIPING, AND RELATIVE TO WALLS, SOFFITS, PARTITIONS AND ANY OTHER OBSTRUCTIONS TO SPRINKLER DISCHARGE, AS WELL AS OBSTRUCTIONS TO STANDPIPE HOSE LAY LENGTH/COVERGE AREA.
- ANY NEW FIRE PROTECTION ITEMS/ELEMENTS REQUIRED ARE TO MATCH EXISTING ADJACENT ITEMS/ELEMENTS BY TYPE, KIND AND MANUFACTURER AS VERIFIED BY THE FIRE PROTECTION CONTRACTOR UNLESS OTHERWISE SPECIFIED.
- NOTE THAT THE EXISTING BUILDING IS FULLY SPRINKLERED, AND WORK IN THIS CONTRACT INCLUDES ALL ITEMS NECESSARY TO MAINTAIN THE APPROPRIATE SPRINKLER PROTECTION IN THE REMODELED/REVISED PORTION OF THE STRUCTURE, AS WELL AS OBSTRUCTIONS TO SPRINKLER DISCHARGE WITH THIS PROJECT IS BEING MAINTAINED. THE WORK AREAS ARE AS DEFINED BY THESE PLANS AS WELL AS THE ARCHITECTURAL DOCUMENTATION FOR THIS PROJECT INCLUDED WITH CONSTRUCTION DOCUMENTS.
- ONLY NEW SPRINKLER HEADS SHALL BE INSTALLED. THE REUSE OF EXISTING OR RECONDITIONED SPRINKLER HEADS SHALL NOT BE PERMITTED.
- PROVIDE NEW SPRINKLER HEADS IN ADDITION TO EXISTING HEADS AS REQD. BY INSTALLATION OF NEW LIGHT FIXTURES, DIFFUSERS, ETC. (PROVIDED AS PART OF WORK IN OTHER CONTRACTS INCLUDED IN THIS PROJECT). TO MAINTAIN THE SPEC'D SPRINKLER PROTECTION, VERIFY LOCATION OF ALL ITEMS FROM APPROPRIATE AREAS AS FOLLOWS:
  - LIGHT HAZARD OCCUPANCY = 0.10 GPM PER SQUARE FOOT OF FLOOR AREA WHEN ALL SPRINKLERS WITHIN THE MOST REMOTE 1600 SQUARE FEET OF FLOOR AREA ARE OPERATING. MAXIMUM SPACING OF SPRINKLER HEADS SHALL BE 225 SQUARE FEET PER HEAD.
  - ORDINARY HAZARD GROUP 1 OCCUPANCY = 0.15 GPM PER SQUARE FOOT OF FLOOR AREA WHEN ALL SPRINKLERS WITHIN THE MOST REMOTE 1600 SQUARE FEET OF FLOOR AREA ARE OPERATING. MAXIMUM SPACING OF SPRINKLER HEADS SHALL BE 130 SQUARE FEET PER HEAD.
  - IN AREAS DESIGNATED AS REQUIRING "LIGHT HAZARD" OCCUPANCY SPRINKLER PROTECTION, THE FIRE PROTECTION CONTRACTOR HAS THE OPTION TO PROVIDE APPROVED "EXTENDED COVERAGE" SPRINKLER HEADS AS SPECIFIED. EXTENDED COVERAGE HEADS SHALL BE INSTALLED ONLY AT APPROPRIATE AREAS AS DEFINED BY NFPA PAMPHLET NO. 13. MAXIMUM PROTECTION AREA PER HEAD NOT TO EXCEED 225 SQUARE FEET.
  - ADD PROPER ALLOWANCE FOR SIMULTANEOUS USE OF INSIDE (IF ANY) AND OUTSIDE HOSE STREAMS AT THE APPROPRIATE CONNECTIONS TO THE SUPPLY PIPE SYSTEM.
- UNLESS DIRECTED OTHERWISE, EXISTING FIRE PROTECTION ITEMS/ELEMENTS THAT ARE IN USE/SERVICE/OPERATION PRIOR TO START OF WORK IN THIS CONTRACT ARE TO REMAIN IN USE/SERVICE/OPERATION UPON COMPLETION OF PROJECT. WHETHER THESE ITEMS/ELEMENTS ARE SHOWN ON DRAWINGS OR NOT, WHERE THESE ITEMS/ELEMENTS OBSTRUCT NEW WORK AND/OR ARE IN EXPOSED LOCATIONS WHERE NEW CONCEALING/FINISH STRUCTURE IS BEING PROVIDED UNDER SEPARATE CONTRACT, THEY SHALL BE RELOCATED AND ASSOCIATED WORK REVISED TO BE OUTSIDE OF THE EXPOSED LOCATION, OR WITHIN NEW CONCEALING STRUCTURE PROVIDED.
- UNLESS DIRECTED OTHERWISE, EXISTING FIRE PROTECTION ITEMS/ELEMENTS THAT ARE NOT IN USE/SERVICE/OPERATION PRIOR TO START OF WORK IN THIS CONTRACT THAT OBSTRUCT NEW WORK AND/OR ARE IN EXPOSED LOCATIONS WHERE NEW CONCEALING/FINISH STRUCTURE IS BEING PROVIDED UNDER SEPARATE CONTRACT SHALL BE REMOVED, INCLUDING ALL ASSOCIATED WORK, WHETHER INDICATED ON DRAWINGS OR NOT. PIPING (IF ANY) ASSOCIATED WITH THESE ITEMS/ELEMENTS TO BE REMOVED BACK TO NEAREST ACTIVE MAIN OUTSIDE OF THE EXPOSED LOCATION, OR WITHIN NEW CONCEALING STRUCTURE PROVIDED, AND CAPPED AT THAT POINT.
- UNLESS DIRECTED OTHERWISE, WHERE CONCEALING/FINISH STRUCTURE IS PROVIDED UNDER SEPARATE CONTRACT, ALL WORK IN THE FIRE PROTECTION CONTRACT NOT SPECIFICALLY INTENDED FOR EXPOSED/VISIBLE INSTALLATION SHALL BE INSTALLED WITHIN THE CONCEALING STRUCTURE.
- ALL EXISTING SPRINKLER HEAD LOCATIONS ARE TO BE FIELD VERIFIED BY THE FIRE PROTECTION CONTRACTOR IN ADVANCE.
- FIRE PROTECTION CONTRACTOR SHALL SIZE ALL SPRINKLER SYSTEM PIPING, WITH THE EXCEPTION OF PIPING SIZES INDICATED ON THESE PLANS AT SPECIFIC LOCATIONS.
- FIRE PROTECTION CONTR. SHALL PROVIDE ALL ADDITIONAL PIPING, EQUIP. AND ACCESSORIES WHETHER SHOWN ON DWGS. OR NOT, WHICH ARE REQD. TO PROVIDE COMPLETE SPRINKLER AND OTHER FIRE PROTECTION SYSTEMS FOR THE BLDG.
- COORD. ALL SPRINKLER DROPS FOR HEAD LOCATION WITH CLG. GRIDS, STRUCTURE AND WORK IN OTHER CONTRACTS IN SAME AREA. VERIFY LOCATION OF ALL ITEMS FROM ARCHITECTURAL AND OTHER CONTRACTS PLANS INCLUDED WITH COMPLETE CONSTRUCTION DOCUMENTS.
- FIRE PROTECTION CONTR. TO SECURE AND VERIFY ALL MEASUREMENTS AND CONDITIONS AT JOB BEFORE PROCEEDING WITH FABRICATION OF WORK.
- UNLESS SPECIFICALLY INDICATED OTHERWISE, DRAINS ASSOCIATED WITH WORK/EQUIPMENT INCLUDED IN THE FIRE PROTECTION CONTRACT ARE TO BE EXTENDED FULL SIZE TO LOCATIONS SUBJECT TO APPROVAL DURING REVIEW OF REQUIRED LAYOUT PLANS. APPROPRIATE DRAIN DISCHARGE POINTS ARE AS FOLLOWS, LISTED IN ORDER OF PREFERENCE:
  - BUILDING EXTERIOR, WITH CHROME FINISHED AS DEGREE OUTLET A WALL FLANGE, AND SPLASH/BLOCK AT GRADE/SURFACE IN RESTRICTED ACCESS AREAS (DISCHARGE NOT PERMITTED IN PEDESTRIAN OR PUBLIC ACCESS AREAS, INCLUDING ADJACENT SPACES/AREAS THAT COULD RECEIVE OVERSPRAY/OVERFLOW FROM SUCH DRAINS)
  - BUILDING INTERIOR, TO JANITORS RECEPTOR OR SERVICE SINK IN RESTRICTED ACCESS AREAS, WITH 3" AIR GAP ABOVE FIXTURE FLOOR RIM AT DISCH. POINT
  - BUILDING INTERIOR, TO FLOOR SINK, HUB DRAIN OR FLOOR DRAIN IN RESTRICTED ACCESS AREAS (DISCHARGE NOT PERMITTED IN PEDESTRIAN OR PUBLIC ACCESS AREAS, INCLUDING ADJACENT SPACES/AREAS THAT COULD RECEIVE OVERSPRAY/OVERFLOW FROM SUCH DRAINS)
  - IF DRIP PANS ARE REQUIRED AT FIRE PROTECTION INSTALLATIONS, AND DRAIN DISCHARGE POINTS INDICATED ABOVE ARE NOT AVAILABLE/ACCESSIBLE, DRAIN(S) FROM DRIP PANS MAY EXTEND TO DISCHARGE 3" ABOVE FLOOR IN NON-CRITICAL RESTRICTED ACCESS AREAS OUTSIDE THE ENCLOSED AREA AS A FIRST PRIORITY, OR INSIDE THE ENCLOSURE AS SECOND PRIORITY.
- ALL DRAINS THAT DISCHARGE TO GRADE ARE TO BE FURNISHED WITH A SPLASH BLOCK OF APPROPRIATE SIZE AND CONFIGURATION, LOCATED TO RECEIVE ALL FLOW FROM OUTLETS(S), UNLESS OTHERWISE NOTED.
- FIRE PROTECTION CONTR. TO PROVIDE ALL ADDITIONAL STEEL, HANGER MATERIALS, RODS AND CLAMPS AS REQD. FOR COORD. AND APPROVED INSTALLATION.
- PROVIDE INSPECTOR'S TEST CONNECTION ASSEMBLIES AS SHOWN ON DRAWINGS AND ANY ADDITIONAL TEST ASSEMBLIES AS REQUIRED BY INSPECTION/PROVISION AUTHORITY ASSEMBLIES TO COMPLY WITH THE REQUIREMENTS OF NFPA PAMPHLET NO. 13 AND THE BUILDING CODE. COORDINATE LOCATION AND INSTALLATION WITH THE ARCHITECT, AND WORK OF OTHER TRADES.
- FIRE PROTECTION CONTRACTOR TO PROVIDE ADDITIONAL SPRINKLER HEADS BELOW DUCTS OR EQUIPMENT IN EXCESS OF 4 FEET WIDE, OR WHERE MULTIPLE DUCTS AND/OR EQUIPMENT INSTALLATIONS OBSTRUCT AN AREA IN EXCESS OF 4 FEET WIDE IN MECHANICAL ROOMS OR OTHER AREAS WITH EXPOSED STRUCTURE AND UPRIGHT HEADS.
- NO FIRE PROTECTION PIPING IS TO BE RUN THRU OR ABOVE ELECTRICAL SWITCHGEAR ROOMS, ELECTRICAL UTILITY CLOSETS/ROOMS, ELEVATOR SHAFTS AND/OR MACHINE ROOMS, TELEPHONE/COMMUNICATIONS CLOSETS/ROOMS, AND/OR DATA PROCESSING/STORAGE ROOMS EXCEPT PIPING SUPPLYING PROTECTION FOR THAT SPECIFIC AREA. SPRINKLERS FOR ELEVATOR SHAFTS AND MACHINE ROOMS ARE TO BE HIGH TEMPERATURE TYPE ON DEAD END BRANCHES. LOCATION OF THESE SPACES TO BE CONFIRMED FROM ARCHITECTURAL DOCUMENTATION PRIOR TO LAYOUT OF F.P. WORK.
- ALL VALVES CAPABLE OF INTERRUPTING FIRE PROTECTION SYSTEM FLOWS SHALL BE PROVIDED WITH A TAMPER SWITCH.
- RUN ALL PIPING IN FINISHED AREAS CONCEALED WHEREVER POSSIBLE.
- ALL PIPING SHOWN IS ABOVE CEILING IN AREAS WITH DROPPED CEILINGS, OR AT BOTTOM OF SUPPORT STRUCTURE FOR FLOOR OR ROOF ABOVE IN EXPOSED STRUCTURE AREAS, UNLESS INDICATED OTHERWISE.
- PROVIDE SPRINKLERS AS REQUIRED AT SOFFITS, SKYLIGHTS, PARTIAL-HEIGHT PARTITIONS, AND ANY OTHER SPECIFIC ARCHITECTURAL/STRUCTURAL CONDITIONS AND/OR FEATURES AFFECTING SPRINKLER COVERAGE. VERIFY CONDITIONS FROM ARCHITECTURAL DRAWINGS.
- THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR FIRESTOPPING AT ALL FIRE PROTECTION RELATED PENETRATIONS OF FIRE AND SMOKE RATED FLOORS, WALLS AND PARTITIONS. REFER TO ARCHITECTURAL FLOOR PLANS FOR LOCATIONS OF ALL RATED STRUCTURES.
- WHENEVER POSSIBLE, PIPING IS NOT TO BE RUN DIRECTLY ABOVE ELECTRICAL EQUIPMENT SUCH AS SWITCHGEAR, MOTOR CONTROL CENTERS, BATTERY STORAGE ASSEMBLIES, BATTERY CHARGING EQUIPMENT, ELEVATOR EQUIPMENT, UPS EQUIPMENT, DATA PROCESSING/STORAGE EQUIPMENT, ETC. WHEN PIPING ABOVE ELECTRICAL EQUIPMENT IS UNAVOIDABLE, A DRIP PAN SHALL BE PROVIDED A MAXIMUM OF 12" BELOW ALL PIPING, EXTENDING TO A POINT 3" BEYOND THE ENTIRE EQUIP. PERIMETER OUTLINE BELOW. DRIP PANS TO BE FABRICATED FROM GALVANIZED SHT. METAL WITH A MINIMUM 1" HIGH LIP AT ENTIRE PERIMETER, SEALED WATER/TIGHT, SLOPE TO 1" DIAMETER OUTLET(S), WITH FULL SIZE DRAIN PIPING EXTENDED TO APPROVED DRAIN POINTS AS SPECIFIED HEREIN. DRIP PANS MAY BE SUPPORTED FROM BUILDING STRUCTURE OVERHEAD, OR ASSOCIATED F.P. PIPING SUPPORTS, PROVIDED ADEQUATE ABILITY TO DO SO IS CONFIRMED BY THE FIRE PROTECTION CONTRACTOR. SUPPORT FROM WORK OR ITEMS IN OTHER CONTRACTS IS NOT PERMITTED. EXACT LAYOUT OF ELECTRICAL EQUIPMENT/ITEMS AS INDICATED BY ELECTRICAL DRAWINGS SHALL BE CONFIRMED WITH ELECTRICAL CONTRACTOR FOR ACTUAL FIELD INSTALLATION PRIOR TO LAYOUT OF FIRE PROTECTION WORK FOR THESE AREAS.
- FIRE PROTECTION PIPING IS NOT PERMITTED TO RUN ABOVE ANY ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES. PANEL LOCATIONS TO BE VERIFIED FROM ELECTRICAL DRAWINGS AND INSTALLATION COORDINATED WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLATION OF F.P. CONTRACT WORK.
- THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR REVIEWING ARCHITECTURAL PROJECT DOCUMENTATION FOR ITEMS AFFECTING FIRE PROTECTION WORK, INCLUDING SPECIFICATIONS AND ITEMS OF A GENERAL NATURE, WHICH MAY NOT BE REFERRED TO BY THE FIRE PROTECTION DOCUMENTATION. THIS MAY INCLUDE, BUT IS NOT LIMITED TO, SPRINKLER REQUIREMENTS TO MAINTAIN RATED SEPARATION STRUCTURES (WALLS, WINDOWS, GLASS PARTITIONS/DOORS, ETC.), OR AT PROTECTION FEATURES SUCH AS DRAFTSTOPS AND OTHER STRUCTURAL ELEMENTS. THE ARCHITECTURAL DOCUMENTATION MAY ALSO INCLUDE LOCATION/DIMENSION INFORMATION FOR SPECIFIC ITEMS SUCH AS STANDPIPES IN STAIR ENCLOSURES, OR FIRE PROTECTION EQUIPMENT CABINETS IN WALLS OR OTHER STRUCTURES, WHERE THERE IS A DISCREPANCY IN LOCATIONS INDICATED BETWEEN THE TWO SETS OF DOCUMENTATION, THE LOCATION INDICATED BY THE ARCHITECT SHALL TAKE PRECEDENCE. ARCHITECTURAL REVIEW SHALL INCLUDE COMPLETE DOCUMENTATION, INCLUDING SPECIFICATIONS AND DRAWING ELEVATIONS.
- THE FIRE PROTECTION CONTRACTOR SHALL CONFIRM AND COMPLY WITH SPECIFIC REQUIREMENTS FOR SPRINKLER SYSTEM INSTALLATION AT ALL ELEVATOR SHAFTS AND MACHINE ROOMS PER THE REVIEWING/INSPECTION/PROVISION AUTHORITY. THIS MAY INCLUDE PROVISION OF ISOLATION VALVES, TAMPER SWITCHES, FLOW SWITCHES, AND OTHER ITEMS AS DIRECTED.
- CUTTING/REMOVAL AND REPAIR/REPLACEMENT OF EXISTING STRUCTURES AND/OR SURFACES REQUIRED FOR REMOVAL OF EXISTING AND/OR INSTALLATION OF NEW WORK IS BY THIS CONTRACTOR, UNLESS INDICATED OTHERWISE. REPAIR/REPLACEMENT TO BE TO ORIGINAL CONDITION, TO MATCH ADJACENT STRUCTURES AND SURFACES IN TYPE & KIND. THIS INCLUDES GELCOSE, PARTITIONS, FLOORS, SOFFITS, ETC. BOTH WITHIN & OUTSIDE THE REVISED/REMODELED AREAS THAT ARE AFFECTED BY WORK REQUIRED FOR COMPLETION OF THIS PROJECT. NOT APPLICABLE IF EXISTING STRUCTURES AND/OR SURFACES ARE BEING REVISED/REMODELED/REPLACED UNDER SEPARATE CONTRACT.

## MECHANICAL NOTES:

- NOTE THAT EXISTING WORK SHOWN ON PLANS IS FROM PREVIOUS ENGINEERING DOCUMENTS AND FIELD OBSERVATION. ACTUAL CONDITIONS MAY VARY, AND THIS CONTRACTOR MUST FIELD VERIFY EXISTING WORK (WHETHER INDICATED ON DRAWINGS OR NOT) AND MAKE MINOR ADJUSTMENTS NECESSARY TO COMPLETE NEW WORK. IF EXISTING CONDITIONS PROHIBIT NEW WORK, NOTIFY THE ARCHITECT FOR REDIRECTION AS REQUIRED.
- REFER TO ARCHITECTURAL DOCUMENTATION FOR ADDITIONAL INFORMATION REGARDING DEMOLITION/REMOVAL WORK.
- UNLESS DIRECTED OTHERWISE, EXISTING ITEMS THAT OBSTRUCT NEW WORK SHALL BE REVISED AS REQUIRED.
- UNLESS DIRECTED OTHERWISE, WHEN EXISTING MECH ITEMS THAT ARE NOT TO REMAIN IN USE AFTER COMPLETION OF THIS PROJECT SHALL BE REMOVED. PIPING TO BE REMOVED BACK TO NEAREST ACTIVE MAIN BRANCH AND CAPPED.
- ALL PIPING SHOWN IS AB. CLG. IN AREAS WITH DROPPED CEILINGS, OR AT BTM OF SUPPORT STRUCT. FOR FLR. OR ROOF AB. IN EXPOSED STRUCT. AREAS. UNLESS NOTED OTHERWISE, CONCEAL PIPING WHENEVER POSSIBLE UNLESS NOTED OTHERWISE.
- THE MECH CONTR. IS TO SECURE AND VERIFY ALL MEASUREMENTS AND CONDITIONS AT JOB BEFORE PROCEEDING WITH FABRICATION OF WORK.
- THE MECH CONTR. IS TO PROVIDE ALL ADDITIONAL STEEL, HANGER MATERIALS, RODS AND CLAMPS AS REQD. FOR COORDINATION WITH WORK OF OTHER TRADES.
- THE MECH CONTR. IS RESPONSIBLE FOR FIRESTOPPING AT ALL MECH RELATED PENETRATIONS OF FIRE AND SMOKE RATED FLOORS, WALLS AND PARTITIONS. REFER TO ARCHITECTURAL FLOOR PLANS FOR LOCATIONS OF ALL RATED STRUCTURES.
- PIPING AND DUCT LAYOUT IS ONLY SCHEMATIC. EXACT LOCATION OF PIPES AND DUCTS TO BE COORD. ON JOB BLDG. STRUCTURE, AND WORK OF OTHER CONTRS.
- SUPPORT ALL PIPE AT INTERVALS PER SPECIFICATION.
- RUN ALL WATER SUPPLY AND RETURN MAINS LEVEL UNLESS OTHERWISE NOTED.
- RUN ALL WATER AND GAS LINES LEVEL.
- RUN/PUTS TO UNITS BELOW MAINS TO BE TAKEN FROM BTM. OF MAINS AT 45° PITCH/DN TO UNITS. RUN/PUTS TO UNITS AS MAINS TO BE TAKEN FROM TOP OF MAINS AT 45°, PITCH UP TO UNITS. PITCH -1" IN 10'-0".
- RUN ALL DRAIN LINES IN DIRECT TO NEAREST F.D.
- INSTALL MANUAL AIR VENTS AT HIGH POINTS OF SYSTEM, AS SHOWN ON DRAWINGS AND AS REQD. FOR PROPER AIR VENTING OF SYSTEMS.
- INSTALL WATER BALANCING DEVICES ON ALL WATER HEATING UNITS.
- SUPPORT CAST IRON SANITARY AND STORM PIPING NOT IN EARTH, ON 5'-0" CENTERS. ALL STEEL AND COPPER PIPING TO BE SUPPORTED PER THE SPECIFICATIONS.
- WORK SHALL BE INSTALLED IN ACCORDANCE W/ THE STATE OF OHIO PLUMBING CODE.
- PROVIDE CLEANOUTS AT BASE OF ALL STORM DOWNSPOUTS AND SAN STAKES.
- PROVIDE CLEANOUTS AT NOT MORE THAN 100 FT. APART IN HORIZONTAL STORM & SANITARY DRAINAGE LINES.
- PROVIDE CLEANOUTS AT EACH CHANGE OF DIRECTION GREATER THAN 45° IN THE BLDG. DRAIN (SAN. PIPING BELOW FLR. SLAB).
- INSTALL TEST CLEANOUTS AT CORNS. TO EXIST. STORM AND SAN. SYSTEMS.
- ALL FIXTURES TO BE EQUIPPED WITH STOP VALVES IN ACCESSIBLE LOCATION.
- SANITARY AND VENT SIZES INDICATED ON DRAWINGS ARE MINIMUM NOMINAL PIPE SIZE. IF PIPING MATERIAL IS NOT READILY AVAILABLE IN SIZE INDICATED, THE CONTRACTOR MAY, AT THEIR OPTION, PROVIDE PIPING AT THE NEXT NOMINAL SIZE LARGER. UNDER NO CIRCUMSTANCES SHOULD SIZES BE REDUCED FROM THOSE INDICATED ON DWGS.
- CAULK SPACE BETWEEN SLEEVES, DUCTS AND PIPES WHERE DUCTS AND PIPES PASS THROUGH WALL OF R.A. SHAFTS. CAULKING TO BE AIRTIGHT.
- ALL DUCTS AND PIPES AB. CLG. UNLESS OTHERWISE NOTED.
- OFFSET DUCTS INTO JOIST SPACE FOR CLEARANCE WHERE SPACE AB. CLG. IS NOT SUFFICIENT FOR DUCTS TO CROSS OTHER DUCTS OR WORK OF OTHER CONTRS.
- NOTIFY GEN. CONTR. OF SIZE AND LOCATION OF ALL RECESSES AND OPNGS. REQD. FOR MECH WORK.
- INSTALL BALANCING DPRS. AS SHOWN AND AS REQD. FOR PROPER BALANCING OF AIR HANDLING SYSTEMS.
- CROSS-HATCHED DUCT TO BE LINED INSIDE WITH 1/2" THICK COATED GLASS FIBER INSUL. DUCT DIMENSION GIVEN IS ACTUAL INSIDE OPNG. AFTER INSUL. IS APPLIED AND SHALL NOT BE SMALLER.
- PROVIDE AIRTIGHT A.D. IN DUCTS ADJACENT TO ALL AUTOMATIC DPRS. AND F. DPRS.
- REFER TO ARCH. REFLECTED CLG. PLAN FOR EXACT LOCATION OF DIFFUSERS, GRILLES, ETC.
- "AUTO-CONTROL" DPRS. ARE TO BE PROVIDED BY TEMP. CONTROL CONTR. ALL OTHER DPRS. INCLUDING "MOTORIZED DPRS." ARE TO BE PROVIDED BY MECH CONTR.
- NO DUCTS OR PIPING IS TO RUN THRU OR AB. ELEC. SWITCHGEAR OR PANELS. MAKE ADJUSTMENTS NECESSARY TO REROUT FOR ACTUAL INSTALLATION OF ELEC. EQUIP.
- NO DUCTS OR PIPING IS TO RUN THRU OR AB. ELEC. UTILITY, TELE. EQUIP. OR ELEVATOR MACHINE ROOMS, OR CLOSETS (INCLUDING ELEVATOR SHAFTS), EXCEPT FOR PIPING SERVING EQUIP. OR DEVICES FOR THAT SPECIFIC AREA. PROVIDE DRIP PANS BELOW ANY LIQUID TRANSMISSION PIPING THAT IS REQD. IN THESE AREAS.
- PROVIDE BALANCING REPORT.
- PROVIDE SIEMENS CONTROLS FOR VAV BOXES & GRAPHICS UPDATES FOR BAS SYSTEM.
- PROVIDE REGULATOR AT EACH GAS DROP.
- PROVIDE 72 HOUR NOTICE PRIOR TO ALL SHUTDOWNS.



11/02/2021

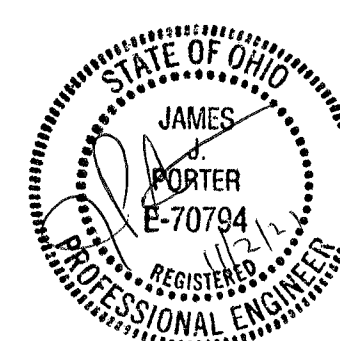
Issue/Revision/Submission

1. ISSUE FOR BID AND PERMIT

BHDP ARCHITECTURE  
COLUMBUS  
CHARLOTTE  
PHOTO: JEFFREY W. BROWN

BHDP

VPC NORTH LAB METAL ADDITIVE PRINTING LAB



Project Manager  
J.J. PORTER, P.E.

Drawn  
HAWAMOTZ

Checked  
HAWAMOTZ

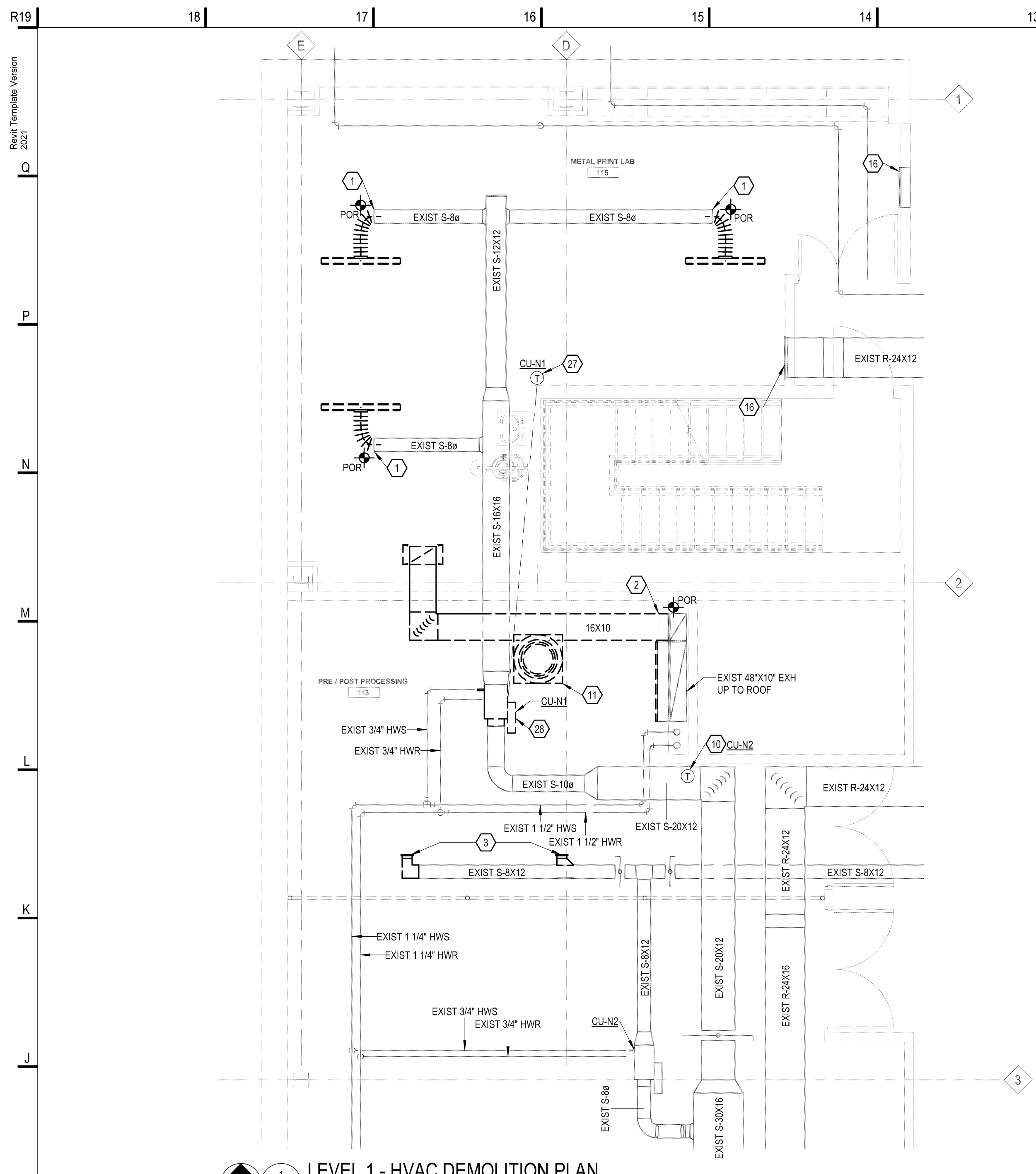
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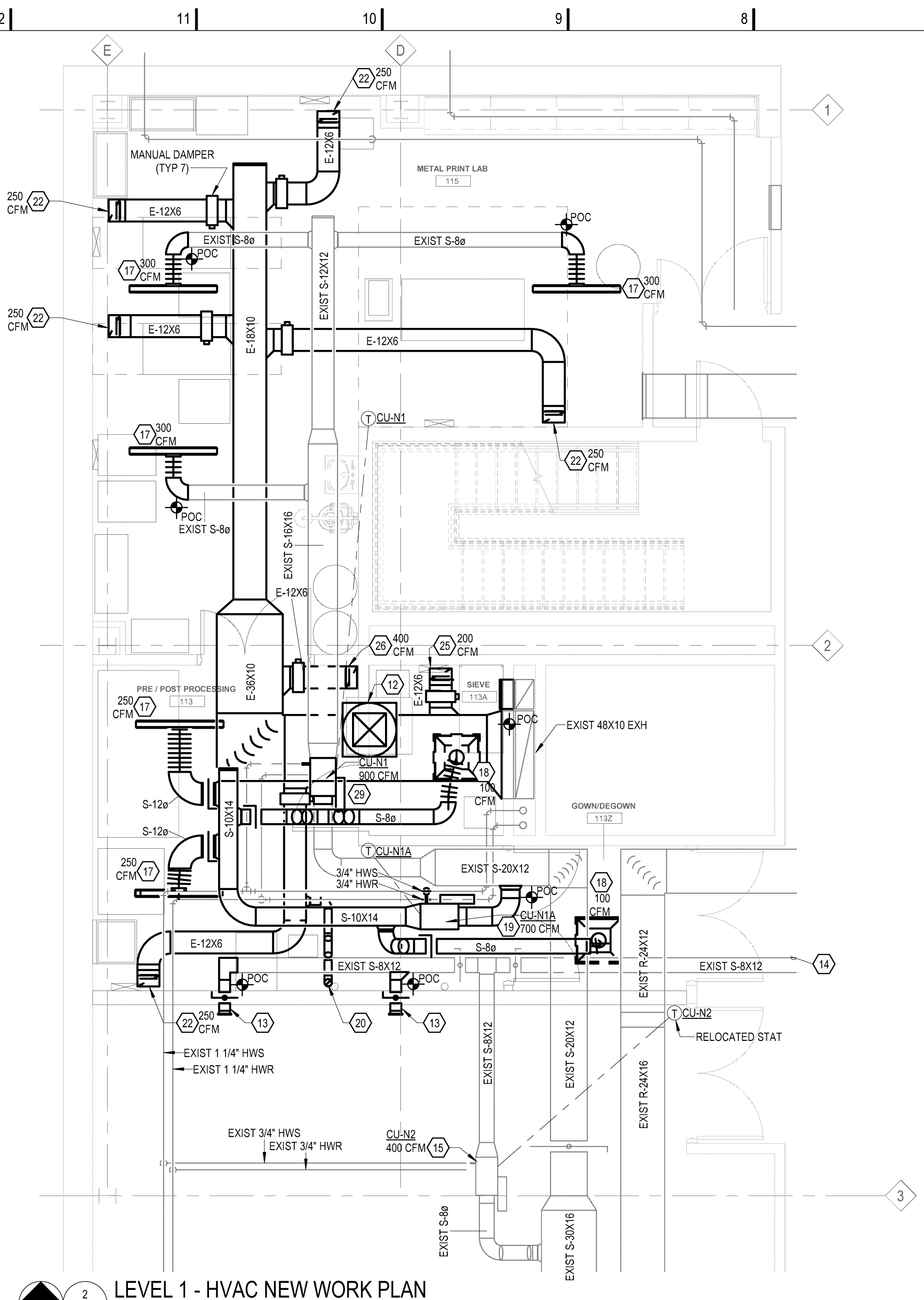
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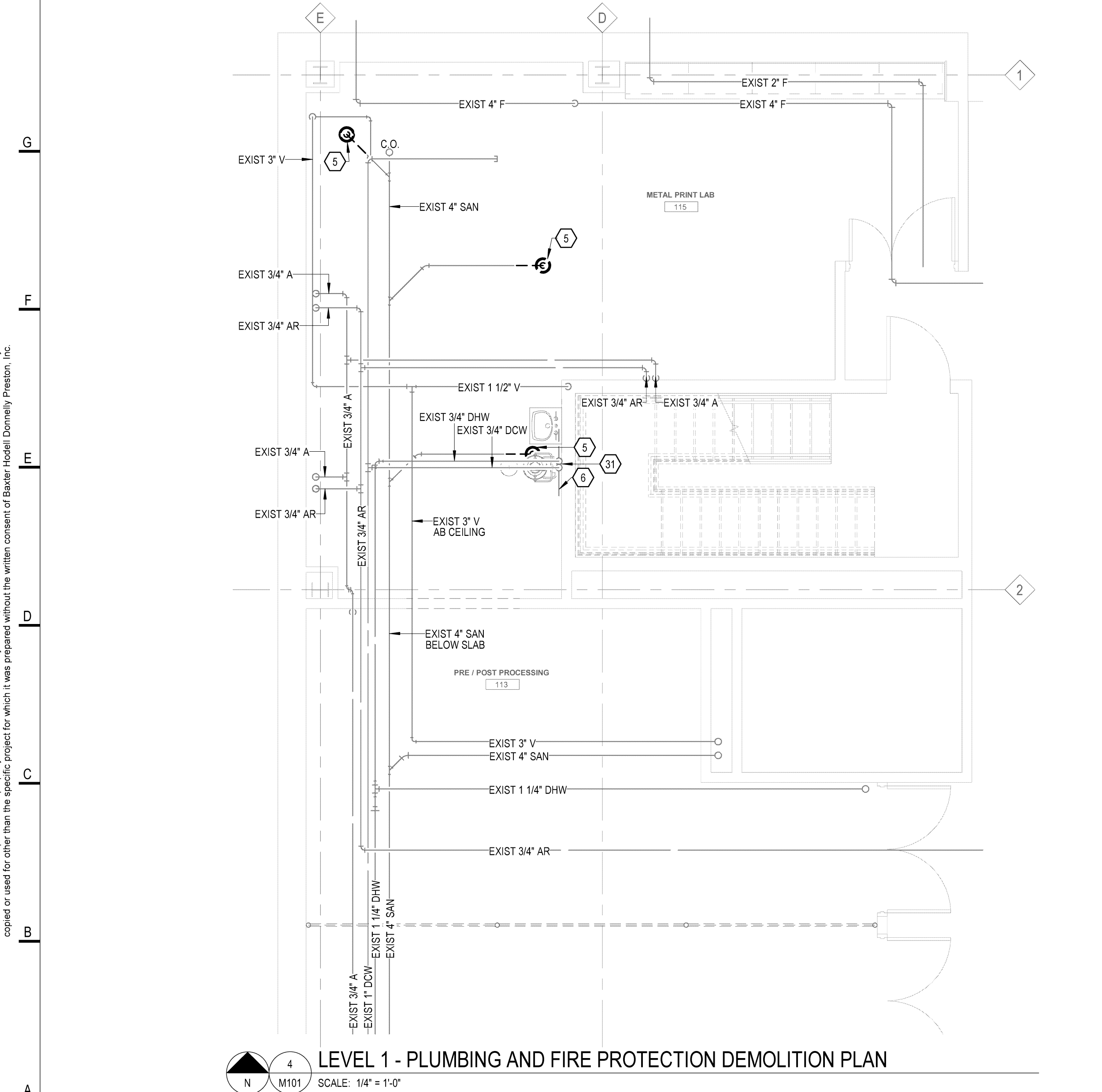
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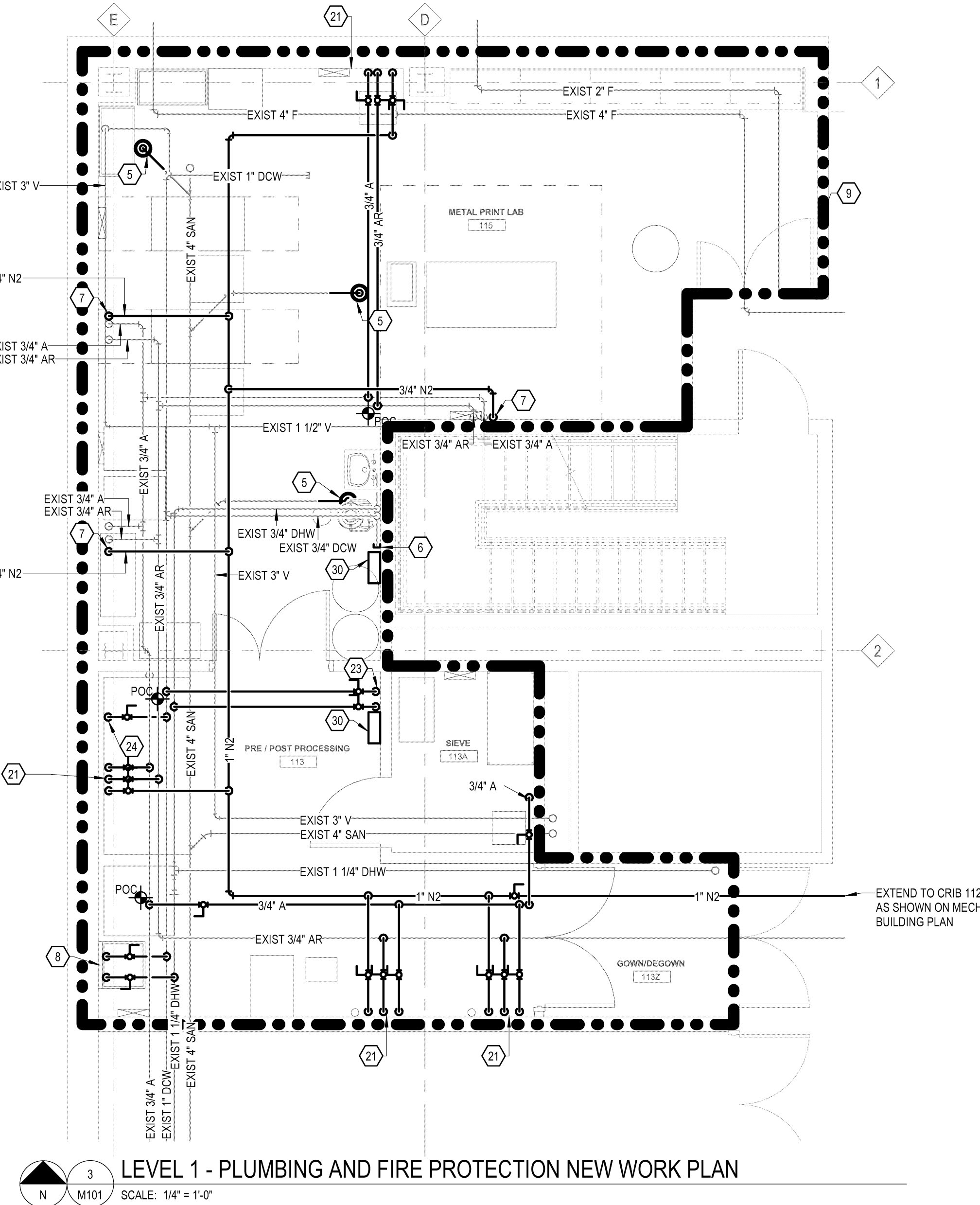
1 LEVEL 1 - HVAC DEMOLITION PLAN  
SCALE: 1/4" = 1'-0"



2 LEVEL 1 - HVAC NEW WORK PLAN  
SCALE: 1/4" = 1'-0"

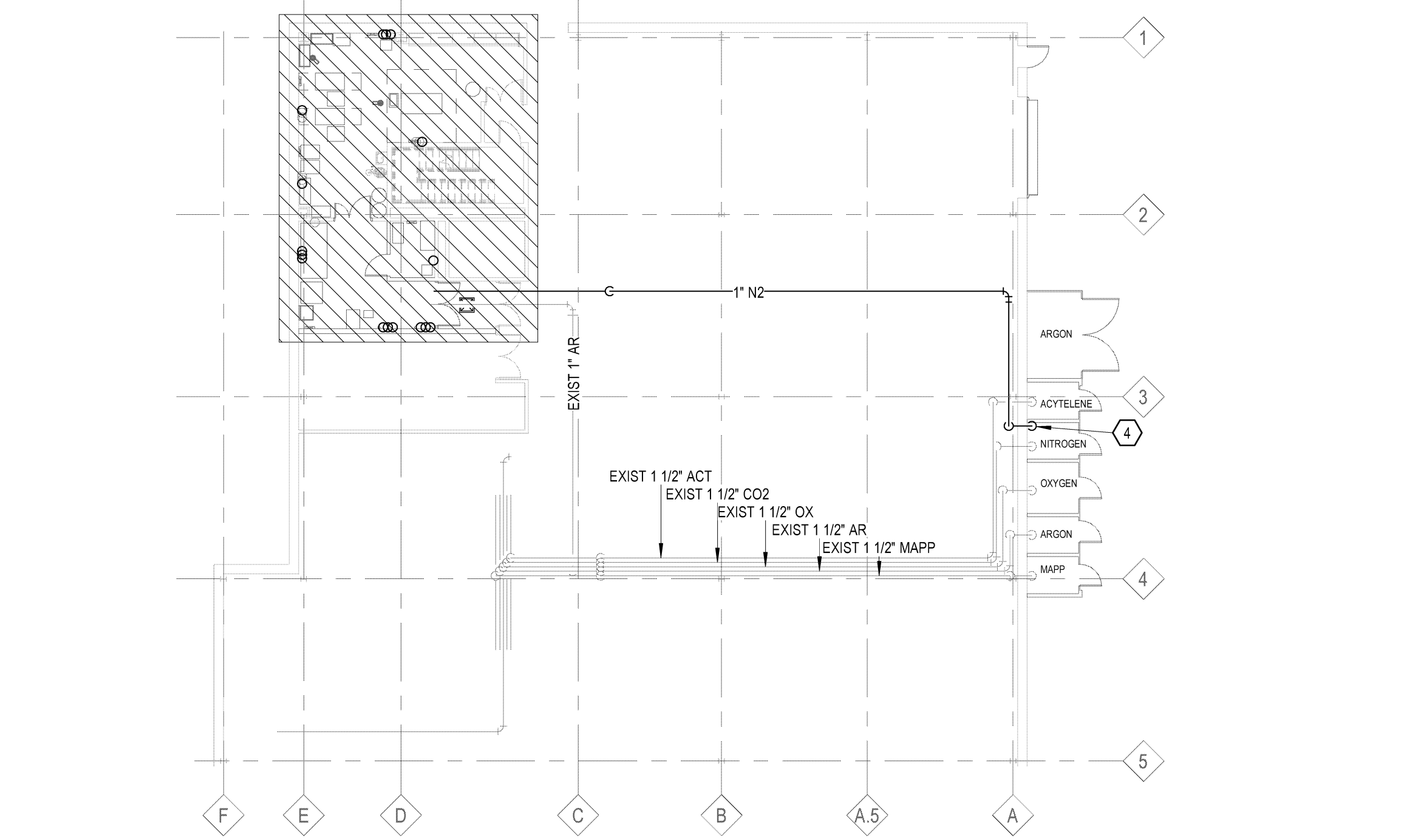


4 LEVEL 1 - PLUMBING AND FIRE PROTECTION DEMOLITION PLAN  
SCALE: 1/4" = 1'-0"

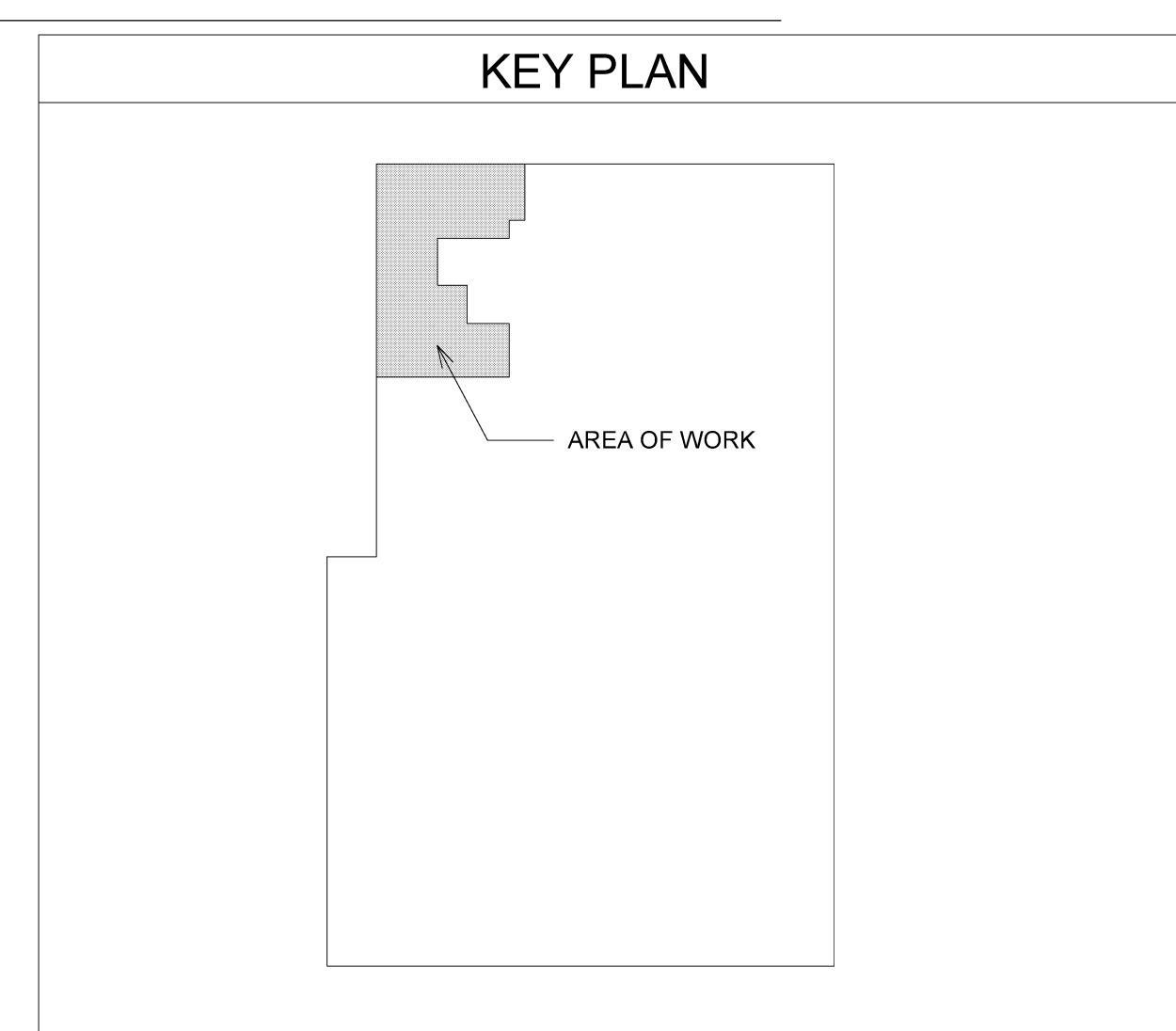


3 LEVEL 1 - PLUMBING AND FIRE PROTECTION NEW WORK PLAN  
SCALE: 1/4" = 1'-0"

- DRAWING NOTES:**
- REFER TO SHEET M100 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.
  - PORTIONS OF THE EXISTING DOMESTIC HOT WATER AND COLD WATER PIPING IN THE RENOVATED AREAS ARE MISSING INSULATION. MECH CONTRACTOR TO RE-INSULATE ALL EXIST PIPING THAT IS NOT INSULATED. APPROXIMATELY 50 FT OF 3/4" PIPING TO BE INSULATED.
  - ALTERNATE 02: INSTALL NITROGEN MANIFOLD AND PIPING SYSTEM. PROVIDE NITROGEN DROPS IN THE METAL PRINT LAB AND THE PREPOST-PROCESSING LAB.
- KEYNOTES:**
- EXIST AIR DEVICE AND DUCTWORK TO BE REMOVED TO THIS POINT.
  - EXIST EXHAUST AIR DEVICE, DUCTWORK, AND APPURTENANCES TO BE REMOVED TO SHAFT PENETRATION AND CAPPED. EXIST EXH FAN, EF-N2, ON ROOF TO BE REMOVED. CAP CURB OPENING W/ INSULATED CURB CAP.
  - EXIST SUPPLY AIR REGISTER TO BE REMOVED AND CAPPED AT DUCT. INSULATE CAP.
  - NEW NITROGEN CHANGEOVER MANIFOLD TO BE INSTALLED IN CRIB 112B. NITROGEN CYLINDERS AND MANIFOLDS BY OWNER.
  - EXIST FLOOR DRAIN TO BE PLUGGED. REPLACE GRID DRAIN WITH SOLID COVER. CAULK COVER TO MAKE WATER TIGHT.
  - EXIST DCW CONNECTION TO WET DOWN DRAFT TABLE TO BE REMOVED TO VALVE AND CAPPED.
  - EXTEND 1/2" NITROGEN DOWN TO EXIST AIR AND ARGON DROPS. PROVIDE SHUT OFF VALVE AND CAP.
  - NEW NSF8-124-1212 SINK. EXTEND 1/2" DHW AND 1/2" DCW AS SHOWN. FIXTURE TO DRAIN INTO BUCKET.
  - MODIFY EXISTING WET PIPE SPRINKLER PROTECTION IN THIS AREA PER NFPA PAMPHLET NO. 13 ORDINARY HAZARD GROUP 1 REQUIREMENTS. SEE FIRE PROTECTION NOTES ON SHEET M100 FOR FLOWS, DENSITIES, SPACINGS, AND OTHER REQUIREMENTS. SEE ARCH PLANS FOR ROOM TYPES AND LOCATIONS OF RATED WALLS. SPRINKLER HEADS TO BE CONCEALED TYPE.
  - EXIST THERMOSTAT TO BE RELOCATED AS SHOWN ON NEW WORK PLAN.
  - EXIST EXHAUST FAN, EF-N3, LOCATED ON ROOF OF THIRD FLOOR TO BE REMOVED AND REPLACED AS SHOWN ON NEW WORK PLAN.
  - NEW EXHAUST FAN. MOUNT ON EXIST CURB WITH CURB ADAPTER. FAN TO RUN CONTINUOUSLY. EF-N3, GREENHECK MODEL, CUBE-160, CLASS B SPARK RESISTENT CONSTRUCTION, 2000 CFM, 1" SP, 1155 FAN RPM, 13.2 SONES, 0.8 BHP, 1 HP MOTOR, 400V, 3 PHASE. ACROSS THE LINE STARTER. PROVIDE WITH FACTORY MOUNTED DISCONNECT.
  - EXTEND 12" X6" DUCT TO NEW WALL MOUNTED SUPPLY REGISTER. BALANCE TO 100 CFM. 12" X6" SUPPLY REGISTER TO BE TITUS TYPE 300 RL, STEEL, WITH OPPOSED BLADE DAMPER.
  - EXIST SUPPLY AIR DIFFUSER IN HALL TO BE BALANCED TO 200 CFM.
  - EXIST AIR TERMINAL BOX TO BE BALANCED TO AIR FLOW INDICATED.
  - EXIST CAPPED RETURN AIR DUCT TO REMAIN CAPPED.
  - NEW LINEAR DIFFUSER MOUNTED IN CEILING. BALANCE TO AIR FLOW INDICATED ON PLAN. LINEAR DIFFUSER TO BE TITUS, ML-19, 4-1" SLOTS, 4 FT LONG, 12" INLET.
  - NEW 24" X24" CEILING DIFFUSER. BALANCE TO AIR FLOW INDICATED ON PLAN. DIFFUSER TO BE TITUS, TMSA, STEEL, 8" INLET.
  - NEW CONSTANT VOLUME AIR TERMINAL BOX WITH REHEAT COIL. TITUS, DESV, 10" INLET, 2 ROW REHEAT COIL, 3.5 GPM, 35.0 MBH, 45 DEG F ATR, 20 DEG F WTD, 1.0 WPD. CAPACITIES BASED ON 140 DEG F EWT AND 65 DEG F EAT. BOX TO BE CONTROLLED BY NEW DDC SENSOR. BALANCE TO 700 CFM. PIPE REHEAT COIL AS INDICATED ON M801.
  - 4" Ø EXH DN TO ABOVE COUNTER. PROVIDE BLAST GATE DAMPER 12" BELOW CEILING. RUN 4" Ø EXH HORIZONTAL OVER COUNTER, APPROXIMATELY 5 FT AFF. PROVIDE 4-1" CONNECTIONS TO DUCT WITH SHUT OFF VALVE FOR CONNECTION TO GLOVE BOXES. COORDINATE LOCATION AND ELEVATION PRIOR TO INSTALLATION. BALANCE TO 50 CFM.
  - 1/2" A, 1/2" AR, 1/2" N2 DOWN ON WALL. PROVIDE WITH DIRT LEG, SHUT-OFF VALVE, HOSE END CONNECTION AND CAP AT TERMINATION. ELEVATION TO MATCH EXISTING.
  - 12" X6" EXH DROP DN TO 8" AFF. PROVIDE 2-12" X10" EXH REGISTERS, 1 MOUNTED AT 12" AFF AND 1 MOUNTED AT 48" AFF. BALANCE EACH TO 125 CFM. REGISTER TO BE TITUS 350RL, STEEL, WITH OPPOSED BLADE DAMPER. DUCT BELOW CEILING TO BE 14 GAUGE.
  - 1/2" DHW AND 1/2" DCW DOWN TO THERMOSTATIC MIXING VALVE AND EYEWASH. MOUNT MIXING VALVE ON WALL ADJACENT TO EYEWASH. EXTEND 1/2" TEPID WATER FROM MIXING VALVE TO EYEWASH. MIXING VALVE: LEONARD MODEL TA-300LF, WITH OUTLET DIAL THERMOMETER AND UNION ANGLE CHECKSTOPS ON INLETS, 1/2" INLETS AND OUTLET, 3.5 GPM CAPACITY AT 15 PSI DROP, MINIMUM 2 GPM FLOW, SET TEMP AT 85 DEG F. EYEWASH: FLOOR MOUNTED, HAWS MODEL 7361-7461, 11" STAINLESS STEEL BOWL, EYE/FACE WASH HEAD WITH DUST COVERS, BRASS STAY OPEN VALVE, AND UNIVERSAL SIGN.
  - 1/2" DCW DN TO DOWN DRAFT TABLE. PROVIDE WITH SHUT-OFF VALVE, AND CAP.
  - 12" X6" EXH DROP DN TO 8" AFF. PROVIDE 2-12" X10" EXH REGISTERS, 1 MOUNTED AT 12" AFF AND 1 MOUNTED AT 12" BELOW CEILING. BALANCE EACH TO 100 CFM. REGISTER TO BE TITUS 350RL, STEEL, WITH OPPOSED BLADE DAMPER. DUCT BELOW CEILING TO BE 14 GAUGE.
  - 12" X6" EXH DROP DN TO 8" AFF. PROVIDE 2-12" X10" EXH REGISTERS, 1 MOUNTED AT 12" AFF AND 1 MOUNTED AT 48" AFF. BALANCE EACH TO 200 CFM. REGISTER TO BE TITUS 350RL, STEEL, WITH OPPOSED BLADE DAMPER. DUCT BELOW CEILING TO BE 14 GAUGE.
  - EXIST PNEUMATIC THERMOSTAT TO BE REMOVED AND REPLACED WITH NEW DDC SENSOR.
  - EXIST AIR TERMINAL BOX TO BE REMOVED AND REPLACED WITH NEW.
  - NEW CONSTANT VOLUME AIR TERMINAL BOX WITH REHEAT COIL. TITUS, DESV, 12" INLET, 2 ROW REHEAT COIL, 4.4 GPM, 44.0 MBH, 45 DEG F ATR, 20 DEG F WTD, 1.0 WPD. CAPACITIES BASED ON 140 DEG F EWT AND 65 DEG F EAT. BOX TO BE CONTROLLED BY NEW DDC SENSOR. BALANCE TO 900 CFM. PIPE REHEAT COIL AS INDICATED ON M801.
  - WALL MOUNTED DEHUMIDIFIER. EBAC A880E. INTEGRAL CONDENSATE PUMP, 87 PINT CAPACITY, 7.9 AMP, 115V, 1 PHASE. PUMP DRAIN TO SINK IN ROOM 115.
  - ALTERNATE 01: RELOCATED DOMESTIC WATER PIPING AND MIXING VALVE AS REQUIRED FOR ALTERNATE LOCATION OF NEW WALL BETWEEN ROOM 115 AND 113.



5 Level 1 - MECHANICAL BUILDING PLAN  
SCALE: 1/16" = 1'-0"



KEY PLAN

UNIVERSITY OF Cincinnati

11/02/2021 Date

1 ISSUE FOR BID AND PERMIT Issue/Revision/Submission No.

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11.02.2021  
Project No.  
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M101

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