MECHANICAL (HVAC) ABBREVIATIONS & SYMBOLS

A	AMPERE(S)
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
APD	AIR PRESSURE DROP
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNITS PER HOUR
CA	COMBUSTION AIR
CAP	CAPACITY
CFM	CUBIC FEET PER MINUTE
CLG	COOLING
COM	COMMON
D	DRAIN
DB	DRY BULB TEMPERATURE
dBA	A-WEIGHTED DECIBLES
DCW	DOMESTIC COLD WATER
DIA	DIAMETER
DN	DOWN
DWG	DRAWING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
EQ	EQUAL
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EWT	ENTERING WATER TEMPERATURE
(E)	EXISTING
F	DEGREES FAHRENHEIT
FC	FAIL CLOSED
FV	FIELD VERIFY
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FO	FAIL OPEN
FPM	FEET PER MINUTE
FT	FOOT, FEET
GA	GAUGE
GAL	GALLON(S)
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HTG	HEATING
HX	HEAT EXCHANGER
HZ	HERTZ
IN	INCH
IPLV	INTEGRATED PART-LOAD VALUE
KW	KILOWATT(S)
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	ONE THOUSAND BTUH
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MFR	MANUFACTURER
MIN	MINIMUM
MOD	MOTOR-OPERATED DAMPER
MOP	MAXIMUM OVERCURRENT PROTECTION
NC	NORMALLY CLOSED (FOR PLANS, DETAILS)
NC	NOISE CRITERIA (FOR SCHEDULES)
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
OA	OUTSIDE AIR
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
PH	PHASE
PC	PLUMBING CONTRACTOR
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RD	REFRIGERANT DISCHARGE
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
SA	SUPPLY AIR
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SENS	SENSIBLE
TD	TRANSFER DUCT
TYP	TYPICAL
UNO	UNLESS NOTED (INDICATED) OTHERWISE
V	VOLTAGE, VOLTS
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE
W	WATT(S)
W/	WITH
W/O	WITHOUT
WB	WET BULB TEMPERATURE
WC	WATER COLUMN
WPD	WATER PRESSURE DROP
WWM	WELDED WIRE MESH

FLEX DUCTWORK

RS/RL — REFRIGERANT SUCTION AND LIQUID

COND — COOLING COIL/FURNACE CONDENSATE

CA — FURNACE COMBUSTION AIR

FLUE — FURNACE FLUE

PIPING RISE

PIPING DROP

PIPING BOTTOM TAKEOFF

FIRE DAMPER (2HR UNLESS NOTED)

U — 3/4" DOOR UNDERCUT

4-WAY BLOW SUPPLY DIFFUSER

BLANKED PORTION IS DIRECTION OF NO AIRFLOW — 1, 2, OR 3-WAY SUPPLY DIFFUSER

RETURN AIR GRILLE/REGISTER

EXHAUST AIR GRILLE/REGISTER

LINEAR SLOT DIFFUSER

SIDEWALL SUPPLY DIFFUSER

SIDEWALL RETURN DIFFUSER

AIRFLOW DIRECTION

X — KEYED NOTE SYMBOL

X — REVISION SYMBOL

CONNECT TO EXISTING

T — THERMOSTAT

H — HUMIDISTAT

C — CARBON DIOXIDE SENSOR

CM — CARBON MONOXIDE SENSOR

INTERLOCK TO EQUIPMENT

SUPPLY AIR DUCT UP

SUPPLY AIR DUCT DN

RETURN AIR DUCT UP

RETURN AIR DUCT DN

EXHAUST AIR DUCT UP

EXHAUST AIR DUCT UP

20X14 XA — 20X14 XA — DUCT WIDTH X DEPTH & SYSTEM

Ø — Ø — ROUND TO RECTANGULAR TRANSITION

90°ELBOW WITH TURNING VANES

90°RADIUS ELBOW (NO VANES)

45° ELBOW (NO VANES)

M — M — MOTOR OPERATED DAMPER

MANUAL VLOUME DAMPER

20" MAX — DUCT TRANSITION (DIVERGING FLOW)

30" MAX — DUCT TRANSITION (CONVERGING FLOW)

Ø — SPIRAL DUCTWORK

Ø — Ø — ROUND DUCTWORK

PIPING SPACING SUPPORT

PIPING MATERIAL	PIPING SIZE RANGE	MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)
COPPER	UP TO 1-1/4"	6	10
COPPER	1-1/2" AND LARGER	10	10
CPVC	UP TO 1"	3	10 (A)
CPVC	1-1/4" AND LARGER	4	10 (A)
STEEL	UP TO 2"	10	15
STEEL	2" AND LARGER	12	15
PVC	ALL	4	10 (A)
POLYETHYLENE (PEX)	ALL	2.67 (32")	4

(A) FOR SIZES 2 INCH AND SMALLER A MID-SUPPORT GUIDE IS REQUIRED TO PREVENT PIPE MOVEMENT.

HANGER ROD SUPPORT SIZING

PIPING SIZE RANGE	MAXIMUM HANGER ROD DIAMETER (INCHES)	MAXIMUM LOAD (POUNDS)
UP TO 2"	3/8	610
2-1/2" TO 3"	1/2	1130
4" TO 5"	5/8	1810
6" AND LARGER	3/4	2710
PARRELLEL PIPING TRAPEZE (A)	7/8	3770
	1	4960

(A) STEEL ANGLE, CHANNEL, OR BEAM SIZING AND WEIGHT CALCULATIONS ARE THE CONTRACTORS RESPONSIBILITY

DUCTWORK CONSTRUCTION SCHEDULE

DESIGNATION	AIR SYSTEM	MATERIAL	INSULATION	PRESSURE CLASS	SMACNA SEAL CLASS	NOTES
#X# SA	SUPPLY AIR DUCTWORK	GALVANIZED SHEET METAL	2" THICK, 3/4 LBS FIBERGLASS DUCT WRAP (OR EQUIVALENT R-6)	POSITIVE 2 INCHES WATER GAUGE	C	
#X# RA	RETURN AIR DUCTWORK	GALVANIZED SHEET METAL	2" THICK, 3/4 LBS FIBERGLASS DUCT WRAP (OR EQUIVALENT R-6)	NEGATIVE 2 INCHES WATER GAUGE	C	
#X# OA	OUTSIDE AIR DUCTWORK	GALVANIZED SHEET METAL	2" THICK, 3/4 LBS FIBERGLASS DUCT WRAP (OR EQUIVALENT R-6)	NEGATIVE 2 INCHES WATER GAUGE	C	
#X# EA	GENERAL EXHAUST DUCTWORK	GALVANIZED SHEET METAL	NONE	POSITIVE OR NEGATIVE 2 INCHES WATER GAUGE	B	

MECHANICAL (HVAC) GENERAL NOTES

1. ALL MECHANICAL EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE 2021 INTERNATIONAL MECHANICAL CODE, 2021 INTERNATIONAL BUILDING CODE, 2021 INTERNATIONAL ENERGY CONSERVATION CODE, 2021 INTERNATIONAL FUEL GAS CODE, NFPA 90A, UNDERWRITERS LABORATORIES, AND ALL APPLICABLE LOCAL CODES.
2. THESE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ARE INTENDED TO CONVEY THE SCOPE OF WORK AS WELL AS INDICATE GENERAL ARRANGEMENT OR EQUIPMENT, DUCTWORK, AND PIPING. THE CONTRACTOR SHALL ADHERE TO THESE DRAWINGS AS CLOSELY AS POSSIBLE. HOWEVER, THE RIGHT IS RESERVED TO VARY THE RUNS OF DUCTWORK AND PIPING TO MAKE OFFSETS, WHERE NECESSARY, TO ACCOMMODATE CONDITIONS ARISING AT THE JOB SITE. MECHANICAL LAYOUTS SHOWN ARE BASED ON THE AVAILABLE AS-BUILT DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED.
3. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC. TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL AND STRUCTURAL CONDITIONS. CUTTING OR ALTERING ANY STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT OR STRUCTURAL ENGINEER.
4. PRIOR TO PURCHASING ANY MATERIALS OR COMMENCING WORK, CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS CONSISTING OF BUT NOT LIMITED TO DUCTWORK, EQUIPMENTS, PIPING LOCATIONS AND SIZING. DEVIATIONS FROM SHOWN WORK SHOULD BE REPORTED TO THE ENGINEER
5. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT TO PROVIDE A COMPLETED FULLY OPERATIONAL SYSTEM.
6. ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS INCLUDING OPERATION AND MAINTENANCE INSTRUCTIONS.
7. LONG LINE REFRIGERANT APPLICATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE UNIT MANUFACTURER'S RECOMMENDATIONS.
8. DUCTWORK SIZES SHOWN ON DRAWING ARE CLEAR INSIDE DIMENSIONS. WHERE ACOUSTICALLY LINED DUCT IS SPECIFIED, DUCT DIMENSIONS SHALL BE INCREASED TO ACCOMMODATE LINING.
9. ALL PIPING AND DUCTWORK PENETRATIONS OR FIRE AND/OR SMOKE RATED ASSEMBLIES SHALL BE FIRE-STOPPED TO RESTORE ASSEMBLY TO ORIGINAL INTEGRITY. FIRE STOP PRODUCTS SHALL BE MANUFACTURED FOR SPECIFIC APPLICATION AND APPROVED BY LOCAL AUTHORITY HAVING JURISDICTION. ALL FIRE PENETRATIONS MUST BE PROTECTED.
10. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE COIL, CASING, OR HEAT EXCHANGER PRESSURE DROP.
11. THERMOSTAT SHALL BE MOUNTED NO MORE THAN 48 INCHES ABOVE FINISHED FLOOR. THERMOSTAT LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL DRAWINGS.
12. All PIPING OF DISSIMILAR MATERIALS SHALL HAVE DIELECTRIC FITTINGS.

MECHANICAL/ELECTRICAL COORDINATION:

1. CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL DRAWINGS AND ELECTRICAL CONTRACTOR PRIOR TO ORDERING OR INSTALLING EQUIPMENT. CONTRACTOR SHALL FURNISH EQUIPMENT COMPATIBLE FOR THE VOLTAGES SHOWN ON THE ELECTRICAL DRAWINGS.
2. ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE SWITCH TYPE (FUSED OR NON-FUSED) WITH EQUIPMENT CHARACTERISTIC, MANUFACTURER'S RECOMMENDATIONS, AND ELECTRICAL DRAWINGS.
3. INDOOR AND OUTDOOR EQUIPMENT DISCONNECTS SHALL BE PROVIDED BY THE E.C.
4. ALL REQUIRED CONTROL WIRING (INCLUDING WIRING FOR TEMPERATURE CONTROLS PANELS, DEVICES, ETC.) NOT SHOWN ON THE DRAWINGS SHALL BE INCLUDED AS PART OF THE MECHANICAL WORK.
5. SMOKE DETECTORS PROVIDED AND WIRED BY ELECTRICAL CONTRACTOR AND MOUNTED BY MECHANICAL CONTRACTOR.

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HVAC NOTES, SYMBOLS, AND ABBREVIATIONS

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ADAM SHAMENEK — ENGINEER — PE075884

ENGINEER: ADAM SHAMENEK PE075884

PROJECT NUMBER:	26083
SCALE:	AS NOTED
DATE:	7/18/2026
DRAWN BY:	BCS
CHECKED BY:	ALS
DATE CHECKED:	7/18/2026

REVISIONS

DATE:	DESCRIPTION:
07/18/2026	CONTRACT DRAWINGS
10/19/2026	ISSUED FOR CONSTRUCTION

M001

AIR HANDLING UNIT EQUIPMENT SCHEDULE

TAG	MANUFACTURER	MODEL	INTERLOCK	SUPPLY FAN CFM		OUTSIDE AIR CFM	TONNAGE	TOTAL COOLING	TOTAL HEATING	REFRIGERANT		ELECTRICAL INFORMATION						ASSEMBLED WEIGHT (LBS)	FIELD INSTALLED ACCESSORIES
												AIR HANDLER W/SINGLE POINT POWER				BACKUP HEATER			
				CFM	ESP					LIQUID LINE SIZE (IN)	SUCTION LINE SIZE (IN)	VOLTAGE/PHASE	MCA	MOCP	HP	KW	MODEL		
AHU-1	RHEEM	RH2TY3621STANNJ	HP-1	1200	0.5	150	3	36	36	REFER TO MANUFACTURER'S RECOMMENDATION		208-240V	68/78	70/80	1/2	10.8/14.4	RXBH-1724A15J-1	150	WIFI ENABLED THERMOSTAT, DISCONNECT BY E.C., SECONDARY DRAIN PAN WITH UL508 SHUTOFF DEVICE, THERMAL EXPANSION VALVE
AHU-2	RHEEM	RH2TY3621STANNJ	HP-2	1200	0.5	150	3	36	36	REFER TO MANUFACTURER'S RECOMMENDATION		208-240V	68/78	70/80	1/2	10.8/14.4	RXBH-1724A15J-1	150	WIFI ENABLED THERMOSTAT, DISCONNECT BY E.C., SECONDARY DRAIN PAN WITH UL508 SHUTOFF DEVICE, THERMAL EXPANSION VALVE

SPLIT SYSTEM HEAT PUMP OUTDOOR UNIT SCHEDULE

EQUIPMENT TAG	MANUFACTURER*	MODEL*	NOMINAL TONNAGE	COOLING CAPACITY (MBH)	EFFICIENCY	HEATING CAPACITY (MBH)	EFFICIENCY	ELECTRICAL INFORMATION			UNIT WEIGHT	LIQUID LINE SIZE (IN)	SUCTION LINE SIZE (IN)	FACTORY INSTALLED ACCESSORIES	FIELD INSTALLED ACCESSORIES	NOTES
								VOLTAGE/PHASE	MCA	MOCP						
HP-1	RHEEM	RP14AY36A2NA	3	36	14.3 SEER2	33.6	7.5 HSPF2	208-230/1	20	30	209	REFER TO MANUFACTURER		TWO STAGE SCROLL COMPRESSOR	CONDENSER PAD	
HP-2	RHEEM	RP14AY36A2NA	3	36	14.3 SEER2	33.6	7.5 HSPF2	208-230/1	20	30	209	REFER TO MANUFACTURER		TWO STAGE SCROLL COMPRESSOR	CONDENSER PAD	

GLOBAL PLASMA AIR DUCT TUBE SCHEDULE

TAG	MANUFACTURER	MODEL	TYPE	SERVING	ELECTRICAL VOLTAGE	UNIT WEIGHT	NOTES
GP-1	GLOBAL PLASMA SOLUTIONS	DM-48	DUCT MOUNTED	AHU-1	24V	4	PROVIDE 120 V POWER TO JUNCTION BOX AND TRANSFORMER
GP-2	GLOBAL PLASMA SOLUTIONS	DM-48	DUCT MOUNTED	AHU-2	24V	4	PROVIDE 120 V POWER TO JUNCTION BOX AND TRANSFORMER
GP-3	GLOBAL PLASMA SOLUTIONS	DM-48	DUCT MOUNTED	AHU-E	24V	4	PROVIDE 120 V POWER TO JUNCTION BOX AND TRANSFORMER
GP-4	GLOBAL PLASMA SOLUTIONS	DM-48	DUCT MOUNTED	AHU-E	24V	4	PROVIDE 120 V POWER TO JUNCTION BOX AND TRANSFORMER

FAN EQUIPMENT SCHEDULE

TAG	MANUFACTURER	MODEL	TYPE	CFM	ESP (IN WG)	ELECTRICAL INFORMATION		DRIVE	CONTROLS	UNIT WEIGHT	ACCESSORIES
						VOLTAGE/PHASE	FAN POWER				
EF-1	GREENHECK	SP-L-0511	CEILING	75	0.375	115/1	18 WATTS	DIRECT	WALL SWITCH BY E.C	24	WALL CAP
EF-2	GREENHECK	SP-L-0511	CEILING	50	0.375	115/1	18 WATTS	DIRECT	CONTINUOUS	24	WALL CAP
EF-3	GREENHECK	SP-L-0511	CEILING	75	0.375	115/1	18 WATTS	DIRECT	WALL SWITCH BY E.C	24	WALL CAP
EF-4	GREENHECK	SP-L-0511	CEILING	75	0.375	115/1	18 WATTS	DIRECT	WALL SWITCH BY E.C	24	WALL CAP
EF-5	GREENHECK	SP-L-0511	CEILING	75	0.375	115/1	18 WATTS	DIRECT	WALL SWITCH BY E.C	24	WALL CAP

ELECTRICAL HEATING EQUIPMENT SCHEDULE

TAG	MANUFACTURER	MODEL #	MOUNTING	CONTROL	ELECTRIC INFORMATION			NOTES
					WATTS	AMPS	VOLTAGE/PHASE	
EWH-1	QMARK	AWH4408F	RECESSED	INTEGRAL THERMOSTAT	2000	9.6	208/1	COORDINATE INSTALLATION WITH G.C. AND E.C., INCLUDE MOUNTING ACCESSORIES, INTEGRAL DISCONNECT
EWH-2	QMARK	AWH4408F	RECESSED	INTEGRAL THERMOSTAT	2000	9.6	208/1	COORDINATE INSTALLATION WITH G.C. AND E.C., INCLUDE MOUNTING ACCESSORIES, INTEGRAL DISCONNECT

MINI SPLIT SYSTEM OUTDOOR HEAT PUMP UNIT SCHEDULE

EQUIPMENT TAG	MANUFACTURER	MODEL	NOMINAL TONNAGE	COOLING CAPACITY (MBH)	EFFICIENCY	HEATING CAPACITY (MBH)	EFFICIENCY	ELECTRICAL INFORMATION			UNIT WEIGHT	LIQUID LINE SIZE (IN)	SUCTION LINE SIZE (IN)	FACTORY INSTALLED ACCESSORIES	FIELD INSTALLED ACCESSORIES	NOTES
								VOLTAGE/PHASE	MCA	MOCP						
DSSO-1	FUJITSU	AOUH18KUAS1	1.5	18	21.9 SEER2	21.6	11.3 HSPF2	208-230/1	14.8	20	142	REFER TO MANUFACTURER		EXTRA LOW TEMP HEATING	CONDENSER PAD	
DSSO-2	FUJITSU	AOUH18KUAS1	1.5	18	21.9 SEER2	21.6	11.3 HSPF2	208-230/1	14.8	20	142	REFER TO MANUFACTURER		EXTRA LOW TEMP HEATING	CONDENSER PAD	

MINI-SPLIT AIR HANDLING UNIT EQUIPMENT SCHEDULE

TAG	MANUFACTURER	MODEL	STYLE	INTERLOCK	SUPPLY FAN CFM		OUTSIDE AIR CFM	TONNAGE	TOTAL COOLING	TOTAL HEATING	REFRIGERANT		ELECTRICAL INFORMATION AIR HANDLER			ASSEMBLED WEIGHT (LBS)	FIELD INSTALLED ACCESSORIES
					CFM	ESP					LIQUID LINE SIZE (IN)	SUCTION LINE SIZE (IN)	VOLTAGE/PHASE	MCA	MOCP		
DSSI-1	FUJITSU	ACUH18KUAS	4-WAY CEILING CASSETTE	DSSO-1	442	-	-	1.5	18	21.6	REFER TO MANUFACTURER'S RECOMMENDATION		POWERED FROM DSSO-1				
DSSI-2	FUJITSU	ACUH18KUAS	4-WAY CEILING CASSETTE	DSSO-2	442	-	-	1.5	18	21.6	REFER TO MANUFACTURER'S RECOMMENDATION		POWERED FROM DSSO-2				

LOUVER SCHEDULE

TAG	MANUFACTURER	MODEL	SIZE	DESIGN CFM	USAGE	BLADE TYPE	BLADE ANGLE	ACTUATOR VOLTAGE	ACCESSORIES
LV-1	GREENHECK	ESD-435	12x12	146	INTAKE	DRAINABLE	FIXED	-	

GRILLES, REGISTERS, & DIFFUSER SCHEDULE

TAG	CFM RANGE	NECK SIZE (INCHES)	DIFFUSER DESCRIPTION/STYLE	BASIS OF DESIGN*	ACCESSORIES	NOTE
CD-6	0-100	6DIA	FIXED CORE CEILING DIFFUSER, 2FTX2FT LAY-IN	TITUS TDC		
CD-6A	0-100	10X10X6DIA	FIXED CORE CEILING DIFFUSER,DRYWALL SURFACE MOUNTED	H&C A504	PLENUM BOX TO ROUND	
CD-8	101-219	8DIA	FIXED CORE CEILING DIFFUSER, 2FTX2FT LAY-IN	TITUS TDC		
CD-8A	101-219	12X12X8DIA	FIXED CORE CEILING DIFFUSER,DRYWALL SURFACE MOUNTED	H&C A504	PLENUM BOX TO ROUND	
CD-10	220-380	10DIA	FIXED CORE CEILING DIFFUSER, 2FTX2FT LAY-IN	TITUS TDC		
CD-10A	220-380	14X14X10DIA	FIXED CORE CEILING DIFFUSER,DRYWALL SURFACE MOUNTED	H&C A504	PLENUM BOX TO ROUND	
RA-10	220-380	10DIA	PERFORATED CEILING RETURN, 2FTX2FT LAY-IN	TITUS PAR		
RA-10A	220-380	16X16 TO 10 DIA	DRYWALL MOUNTED SINGLE DEFLECTION RETURN GRILLE	H&C RH45	PLENUM BOX TO ROUND	
RA-12	381-500	12DIA	PERFORATED CEILING RETURN, 2FTX2FT LAY-IN	TITUS PAR		
RA-12A	381-500	18X18 TO 12 DIA	DRYWALL MOUNTED SINGLE DEFLECTION RETURN GRILLE	H&C RH45	PLENUM BOX TO ROUND	
RA-14	501-700	14DIA	PERFORATED CEILING RETURN, 2FTX2FT LAY-IN	TITUS PAR		
RA-14A	501-700	20X20 TO 14 DIA	DRYWALL MOUNTED SINGLE DEFLECTION RETURN GRILLE	H&C RH45	PLENUM BOX TO ROUND	
RA-16	800	16DIA	PERFORATED CEILING RETURN, 2FTX2FT LAY-IN	TITUS PAR		

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HVAC SCHEDULES

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ADAM SHAMENEK
ENGINEER
PE075884

ENGINEER: ADAM SHAMENEK PE075884
PROJECT NUMBER: 26083
SCALE: AS NOTED
DATE: 7/18/2026
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DATE CHECKED: 7/18/2026

REVISIONS

DATE:	DESCRIPTION:
07/18/2026	CONTRACT DRAWINGS
10/19/2026	ISSUED FOR CONSTRUCTION

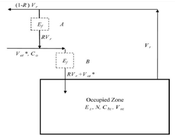
M002

GPS Air, Inc. NPBI™ IAQP Calculator

3101 Yorkmont Rd
Suite 400
Charlotte, NC 28208
www.gpsair.com
VERSION 2.5 running ASHRAE 62.1-2019

Zone Tag	Facility Type	Zone Use	Zone Floor Area (sq ft) Az	Zone Max Occupancy Pz	Table 6.1 OA per Occupant Rp	Table 6.1 cfm/ft2 Ra	Pz * Rp	Az * Ra	Table 6.2 Ventilation Effectiveness Ez	Outdoor Air to Zone (CFM) with Ez correction (Vbz/Ez)
MEETING ROOM 102 & EXEC 101	Public Assembly Spaces	Conference/meeting	1,920	80	5.0	0.06	400	115		644
										OA required per VRP

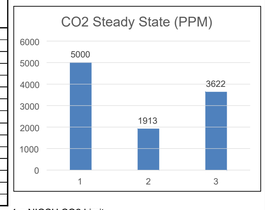
Zone Height (feet)	
Desired Outside Air (Vo) IAQP (CFM)	
Supply Air (Vs) (CFM)	
Return Air (Vr)	1100
Recirc. Flow Factor (R)	0.79
Ventilation Effectiveness (Ez)	0.8
Level of Physical Activity	
Filter Location	B
HVAC Flow Type	Constant
Outdoor Air Flow Type	Constant



Air Changes Per Hour	4.4		
Outside Air Per VRP	644	CFM	
Outside Air Per IAQ	300	CFM	
Outside Air Savings	344	CFM	
OA Summer Drybulb			
OA Summer Wetbulb			
Coil Leaving Air Drybulb (F)			
Coil Leaving Air Wetbulb (F)			
OA MBH Saved Summer*	25.1		
OA Tons Saved Summer*	2.1		

VRP OA CFM per person	8.1
IAQ OA CFM per person	3.8
Winter Heating Savings	
OA Winter Design DB (F)	
Supply Air DB Setpoint (F)	
MBH Saved Winter	28.0
KW Saved Winter	8.2

Design Compounds (DC)	Design Limit (µg/m³)	Steady State (µg/m³) VRP* (Prescribed OA) Ionization Off	Steady State (µg/m³) IAQP (Reduced OA) Ionization On	IAQP Steady State Below Design Limit?	Contaminant Generation Rate µg/person/min	Filtration Effectiveness Ef	Cognizant Authority***
Acetaldehyde	140	11.1	8.2	Yes	96.2	50%	Cal EPA CREL
Acetone	1,200	35.4	16.4	Yes	148.1	50%	AgBB LCI
Benzene	3	1.6	0.4	Yes	0.8	50%	Cal EPA CREL
Dichloromethane	400	2.2	2.7	Yes	4.6	N/A	Cal EPA CREL
Formaldehyde	33	10.9	19.9	Yes	86.0	N/A	Cal EPA 8-hour CREL
Naphthalene	9	0.1	0.3	Yes	1.5	N/A	Cal EPA CREL
Phenol	10	2.2	4.8	Yes	24.6	N/A	AgBB LCI
Tetrachloroethylene	35	2.6	0.6	Yes	0.5	50%	Cal EPA CREL
Toluene	300	3.9	1.7	Yes	15.1	50%	Cal EPA CREL
Trichloroethane	1,000	0.0	0.0	Yes	0.5	50%	Cal EPA CREL
Xylene, total	500	3.1	1.4	Yes	12.3	50%	AgBB LCI
PM2.5	12	8.0	8.0	Yes	0.0	N/A	US EPA NAAQS
Carbon Monoxide	10,310	375.0	375.0	Yes	0.0	N/A	US EPA NAAQS
Ozone	137	26.6	15.7	Yes	0.0	N/A	US EPA NAAQS
Ammonia	200	1.2	0.2	Yes	0.0	50%	Cal EPA CREL



1 = NIOSH CO2 Limit
2 = CO2 Level at Ventilation Rate OA Flow Rate
3 = CO2 Level at IAQ Procedure OA Flow Rate

DC mixtures acceptable under IAQP?	Yes
Steady State DCs acceptable under IAQP?	Yes

*OA = Outside Air
**Carbon dioxide is for reference only & demand control ventilation setpoints
***OSHA, NIOSH & WHO most conservative values used

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Date	5/1/2026
Job Name	
Representative	
Engineer	
Contractor	

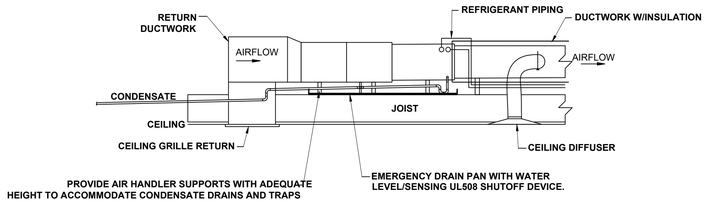
IMC 2006 & later allows for ASHRAE 62 IAQP through the engineered exception found in Section 403.2

NATURAL VENTILATION SUMMARY SCHEDULE

ZONE INFORMATION		2021 INTERNATIONAL MECHANICAL CODE - SECTION 402.2: THE MINIMUM OPEN-ABLE AREA TO THE OUTDOORS SHALL BE 4 PERCENT OF THE FLOOR AREA VENTILATED.				
ZONE NAME	AREA (FT2)	OPENING TYPE	OVERALL AREA (FT2)	OPERABLE PERCENTAGE	OPENING AREA (FT^2)	PERCENT OF ZONE SQFT (%)
VESTIBULE 103	220	DOOR	21.0	100%	21.0	**9.5%**
BREAK ROOM 114	214	WINDOW CASEMENT	15.0	100%	15.0	**7.0%**
FILE ROOM 116	286	WINDOW CASEMENT	15.0	100%	15.0	**5.2%**
HALL 111	284	DOOR	21.0	100%	21.0	**7.4%**
SHARED OFFICE 109	126	WINDOW CASEMENT	30.0	100%	30.0	**23.8%**
TWP TREASURER 108	122	WINDOW CASEMENT	15.0	100%	15.0	**12.3%**
TWP SECRETARY 107	152	WINDOW CASEMENT	15.0	100%	15.0	**9.9%**

VENTILATION SUMMARY SCHEDULE

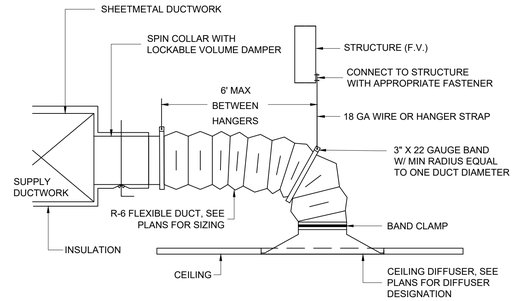
Zone Info			2021 INTERNATIONAL MECHANICAL CODE - SECTION 403.3												
Zone Name	Occupancy Category	Area (sf) - Az	People Oair Rate (cfm/person) - Rp	Area Oair Rate (cfm/sf) - Ra	Occupancy - Pz	Breathing Zone Oair Flow - Vbz (cfm)	Zone Air Distribution Effectiveness - Ez (Table 6.2)	Zone Oair Flow - Voz (cfm)	Type of Zone: (S)ingle; (M)ulti; (100%)Oair	Zone Primary Air Flow - Vpz (cfm)	Primary Oair Fraction - Zp=Voz/Vpz	System Ventilation Efficiency - Ev	Multi-Zone Oair Intake Flow (cfm) - Vou	Oair Intake Flow - Vot (cfm)	Design Oair Intake (cfm)
AHU E															
BREAK ROOM 114	OFFICE	214	5.0	0.06	4	33	0.8	41	M	245	0.17	0.9	46	-	-
FILE ROOM 116	STORAGE	186	0.0	0.12	1	22	0.8	28	M	250	0.11	1.0	28	-	-
								69		495		0.9	74		74
AHU E															
SHARED OFFICE 109	OFFICE	126	5.0	0.06	1	13	0.8	16	M	230	0.07	1.0	16	-	-
HALL 111	CORRIDOR	285	0.0	0.06	0	17	0.8	21	M	125	0.17	0.9	24	-	-
TREASURER	OFFICE	122	5.0	0.06	1	12	0.8	15	M	130	0.12	1.0	15	-	-
SECRETARY 107	OFFICE	152	5.0	0.06	1	14	0.8	18	M	230	0.08	1.0	18	-	-
								70		715		0.9	73		73



NOTE: REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS

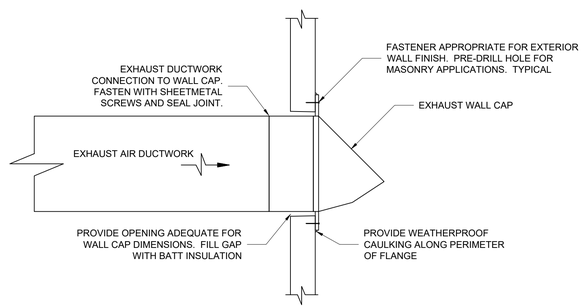
HORIZONTAL AIR HANDLING DETAIL - MEZZANINE OR ATTIC

NOT TO SCALE



FLEXIBLE DUCTWORK DETAIL

NOT TO SCALE



EXHAUST WALL CAP DETAIL

NOT TO SCALE

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HVAC VENTILATION
SUMMARIES AND DETAILS

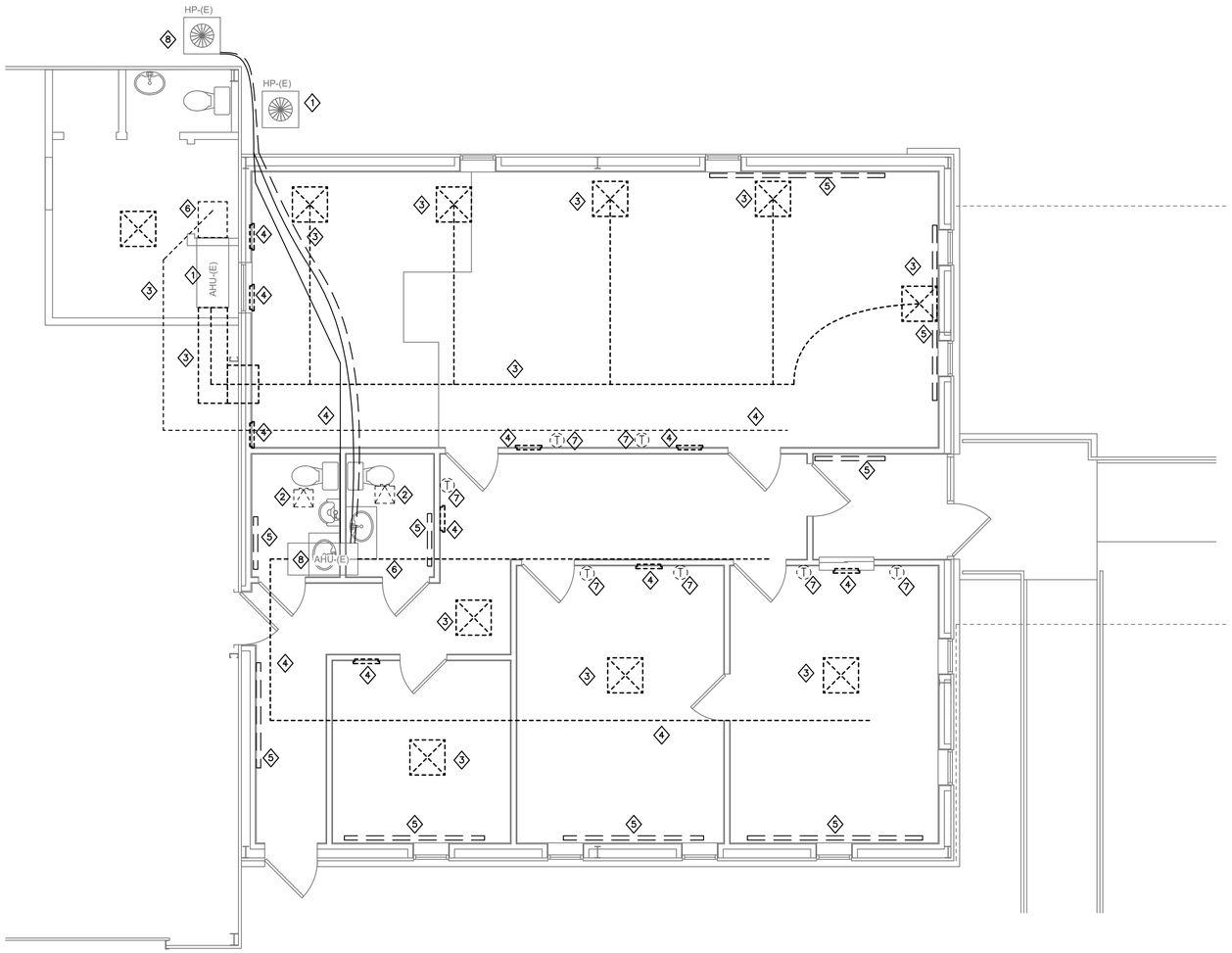
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ADAM SHAMENEK
ENGINEER
PE075884

ENGINEER: ADAM SHAMENEK PE075884
PROJECT NUMBER: 26083
SCALE: AS NOTED
DATE: 7/18/2026
DRAWN BY: BCS
CHECKED BY: ALS
DATE CHECKED: 7/18/2026

REVISIONS

DATE:	DESCRIPTION:
07/18/2026	CONTRACT DRAWINGS
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M003



FIRST FLOOR HVAC DEMOLITION LAYOUT

SCALE: 1/4" = 1'-0"

KEYED HVAC DEMO NOTES

1. EXISTING AIR HANDLING UNIT, HEAT PUMP, REFRIGERANT PIPING, AND CONDENSATE PIPING TO REMAIN AND BE REUSED.
2. DEMOLISH EXISTING EXHAUST FANS AND ASSOCIATED DUCTWORK.
3. DEMOLISH ALL SUPPLY DUCTWORK AND DIFFUSER BACK TO AIR HANDLING UNITS.
4. DEMOLISH ALL REUTURN DUCTWORK AND GRILLES BACK TO AIR HANDLING UNITS.
5. DEMOLISH ALL EXISTING ELECTRIC BASE BOARD.
6. DEMOLISH AIR CLEANING/ULTRAVIOLET LIGHT DEVICES IN DUCTWORK.
7. DEMOLISH ALL THERMOSTATS FOR EBB AND SPLIT SYSTEMS.
8. REMOVE EXISTING AIR HANDLING UNIT FOR REUSE. DEMOLISH CONDENSATE AND REFRIGERANT. PROTECT REFRIGERANT CIRCUIT FOR AHU AND HEAT PUMP FOR REUSE.

HVAC GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXACT EXISTING CONDITIONS PRIOR TO PERFORMING ANY WORK.
2. PROVIDE NECESSARY CONTROL WIRING FOR FULLY OPERATIONAL SYSTEM.

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HVAC DEMOLITION PLAN
AND VENTILATION SUMMARIES

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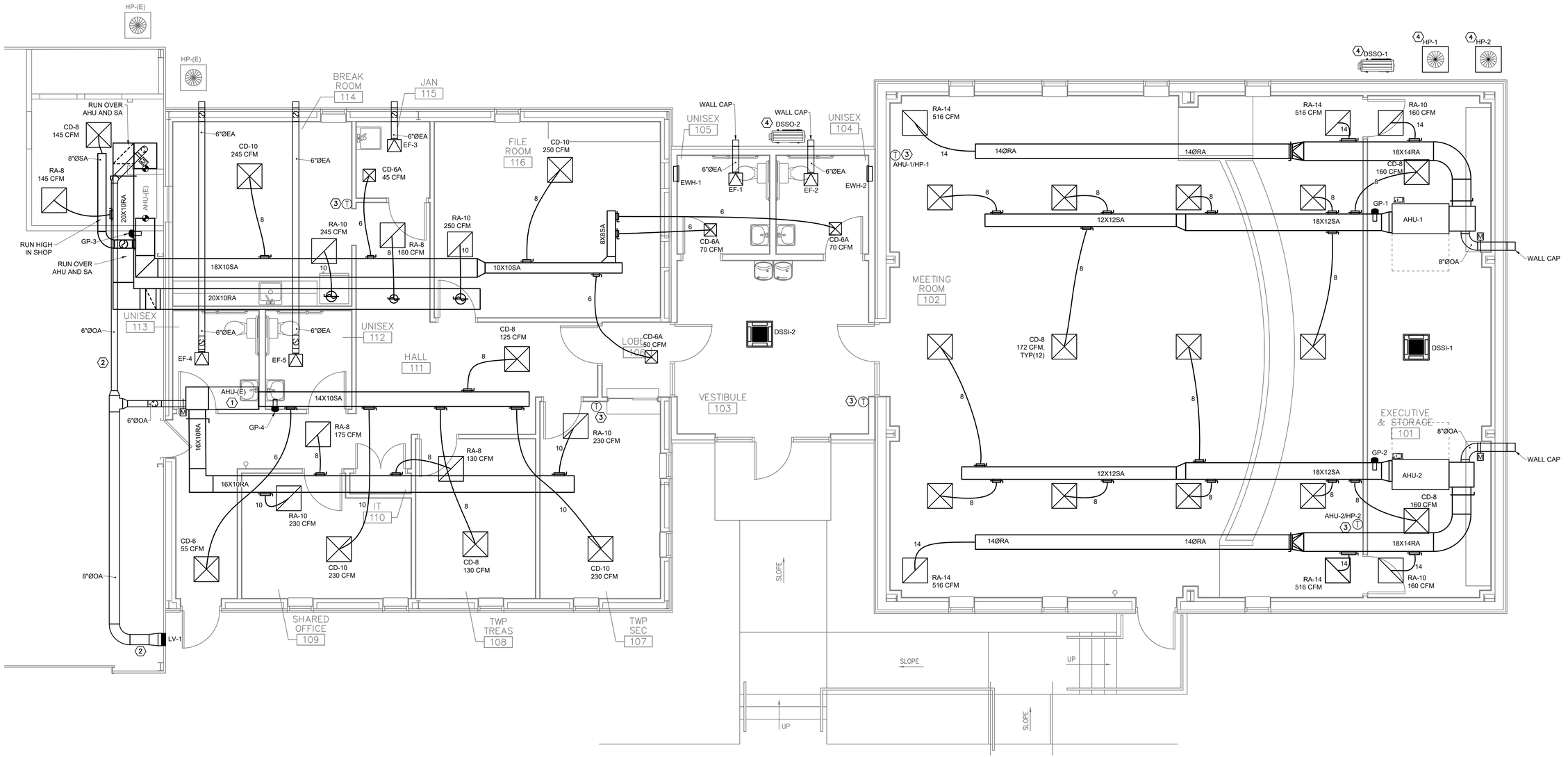
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MD101



FIRST FLOOR HVAC DUCTWORK LAYOUT

SCALE: 1/4" = 1'-0"

KEYED HVAC NOTES

1. REINSTALL EXISTING AIR HANDLER. CONNECT REFRIGERANT PIPING AND CONTROL WIRING TO EXISTING HEAT PUMP.
2. ROUTE OUTDOOR AIR DUCTWORK AS HIGH AS POSSIBLE IN EXISTING WAREHOUSE.
3. PROVIDE WIFI THERMOSTAT AND NECESSARY CONTROL WIRING FOR UNIT OPERATION.
4. COORDINATE CONCRETE PAD WITH GENERAL CONTRACTOR.

HVAC GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXACT EXISTING CONDITIONS PRIOR TO PERFORMING ANY WORK.
2. PROVIDE NECESSARY CONTROL WIRING FOR FULLY OPERATIONAL SYSTEM.

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HVAC FIRST FLOOR
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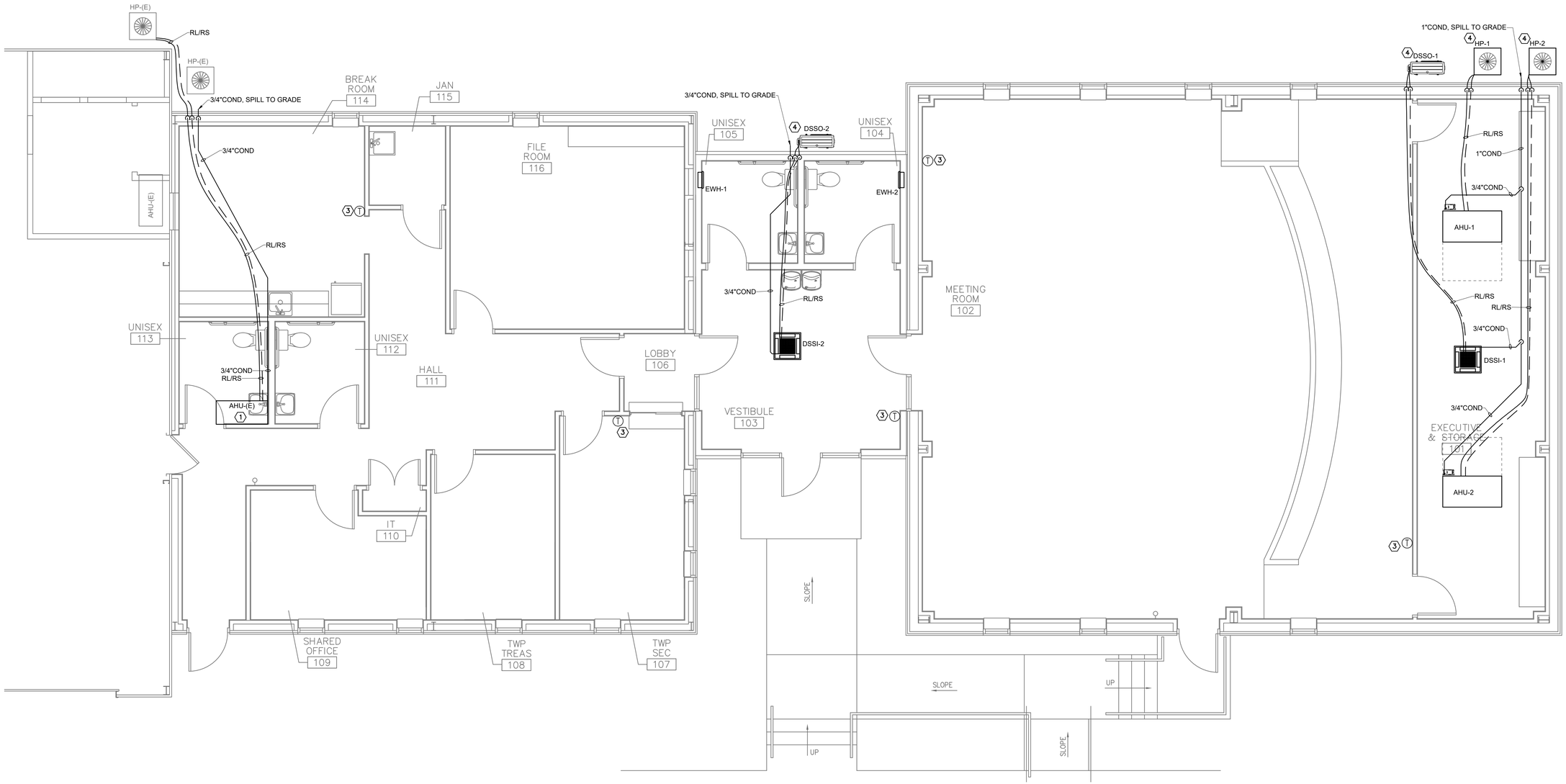
ENGINEER: ADAM SHAMENEK PE075884

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M101



FIRST FLOOR HVAC PIPING LAYOUT

SCALE: 1/4" = 1'-0"

KEYED HVAC NOTES

1. REINSTALL EXISTING AIR HANDLER. CONNECT REFRIGERANT PIPING AND CONTROL WIRING TO EXISTING HEAT PUMP.
2. ROUTE OUTDOOR AIR DUCTWORK AS HIGH AS POSSIBLE IN EXISTING WAREHOUSE.
3. PROVIDE WIFI THERMOSTAT AND NECESSARY CONTROL WIRING FOR UNIT OPERATION.
4. COORDINATE CONCRETE PAD WITH GENERAL CONTRACTOR.

HVAC GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXACT EXISTING CONDITIONS PRIOR TO PERFORMING ANY WORK.
2. PROVIDE NECESSARY CONTROL WIRING FOR FULLY OPERATIONAL SYSTEM.

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HVAC FIRST FLOOR
PIPING PLAN

COMMONWEALTH OF PENNSYLVANIA
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PLUMBING ABBREVIATIONS & SYMBOLS

AAV	AIR ADMITTANCE VALVE
ABV	ABOVE
AC	ABOVE CEILING
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
AP	ACCESS PANEL
AVG	AVERAGE
BFF	BELOW FINISHED FLOOR
BOT	BOTTOM
CA	COMPRESSED AIR
CI	CAST IRON
CLG	CEILING
CO	CLEAN-OUT
COND	CONDENSATE
CP	CIRCULATING PUMP
DCW	DOMESTIC COLD WATER
DEMO	DEMOLISH OR DEMOLITION
DF	DRINKING FOUNTAIN
DHR	DOMESTIC HOT WATER RETURN
DHW	DOMESTIC HOT WATER
DIA	DIAMETER
DN	DOWN
DS	DOWNSPOUT
DWG	DRAWING
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
ELEC	ELECTRICAL
ETR	EXISTING TO REMAIN
EWC	ELECTRICAL WATER COOLER
EXP	EXPANSION
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FDN	FOUNDATION DRAIN
FF	FINISHED FLOOR
FG	FINISHED GRADE
FS	FLOOR SINK
G	NATURAL GAS
GCO	GRADE CLEANOUT
HB	HOSE BIBB
HP	HORSEPOWER
HTG	HEATING
HW	HOT WATER
ID	INSIDE DIAMETER
IN	INCH
INSUL	INSULATE OR INSULATION
INV	INVERT
JAN	JANITOR
LAB	LABORATORY
LAV	LAVATORY
LP	PROPANE
MC	MECHANICAL CONTRACTOR
MH	MANHOLE
N/A	NOT APPLICABLE/AVAILABLE
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN

OD	OUTSIDE DIAMETER
IBC	INTERNATIONAL BUILDING CODE
IECC	INTERNATIONAL ENERGY CONSERVATION CODE
IFGC	INTERNATIONAL FUEL GAS CODE
IMC	INTERNATIONAL MECHANICAL CODE
IPC	INTERNATIONAL PLUMBING CODE
PC	PLUMBING CONTRACTOR
PLUMB	PLUMBING
PVC	POLYVINYL CHLORIDE
RD	ROOF DRAIN
RL	RAIN LEADER
RO	ROUGH OPENING
SAN	SANITARY
SCH	SCHEDULE
SD	STORM DRAIN
SDN	STORM DRAIN NOZZLE
SP	SUMP PUMP
SPR	SPRINKLER
SRD	SECONDARY ROOF DRAIN
SS	SANITARY SEWER
TYP	TYPICAL
UG	UNDERGROUND
V	VENT
VAC	VACUUM
VB	VACUUM BREAKER
VTR	VENT THROUGH ROOF
W/	WITH
W/O	WITHOUT
WB	WASHER BOX
WC	WATER CLOSET
WCO	WALL CLEAN-OUT
WH	WATER HEATER
WHA	WATER HAMMER ARRESTER WITH SIZE

- DOMESTIC COLD WATER (DCW)
- DOMESTIC HOT WATER (DHW)
- DOMESTIC HOT WATER RETURN (DHR)
- SANITARY SEWER (SS)
- VENT (V)
- NG — NATURAL GAS (NG)
- KEYED NOTE SYMBOL
- REVISION SYMBOL
- KEYED DEMOLITION NOTE SYMBOL
- CONNECT TO EXISTING
- DEMOLISH TO POINT INDICATED

- X" XXX — PIPE WITH SIZE AND SERVICE
- FLOW IN DIRECTION OF ARROW
- PIPE CAP
- PIPE TURNED DOWN
- PIPE TURNED UP
- PIPE TEE UP
- PIPE TEE DOWN
- UNION
- PIPE REDUCTION
- CO — END OF LINE CLEANOUT PLUG
- CO — FLOOR CLEANOUT
- WCO — WALL CLEANOUT
- FD-# — FLOOR DRAIN WITH TAG
- FS-# — FLOOR SINK WITH TAG
- TRAP W/O TAG
- PRESSURE GAUGE WITH GAUGE COCK
- THERMOMETER
- WHA-# — WATER HAMMER ARRESTOR (PLUMBING & DRAINAGE INSTITUTE SIZE INDICATED)
- FS — FLOW SWITCH
- TEMPERATURE/PRESSURE PLUG
- BALL VALVE
- VALVE IN RISER
- GAS COCK
- VENTURI FLOW METER
- MANUAL BALANCING VALVE
- CHECK VALVE
- T&P — TEMPERATURE AND PRESSURE RELIEF VALVE
- HOSE BIBB (HB)
- PUMP

PIPING SPACING SUPPORT

PIPING MATERIAL	PIPING SIZE RANGE	MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)
CAST IRON	ALL	5 (A)	15
COPPER	UP TO 1-1/4"	6	10
COPPER	1-1/2" AND LARGER	10	10
CPVC	UP TO 1"	3	10 (B)
CPVC	1-1/4" AND LARGER	4	10 (B)
STEEL	UP TO 2"	10	15
STEEL	2" AND LARGER	12	15
PVC	ALL	4	10 (B)
POLYETHYLENE (PEX)	ALL	2.67 (32")	4

(A) THE MAXIMUM HORIZONTAL SPACING OF CAST IRON PIP HANGERS SHALL BE INCREASED TO 10 FT WHERE 10-FOOT LENGTHS OF PIPE ARE INSTALLED
(B) FOR SIZES 2 INCH AND SMALLER A MID-SUPPORT GUIDE IS REQUIRED TO PREVENT PIPE MOVEMENT.

HANGER ROD SUPPORT SIZING

PIPING SIZE RANGE	MAXIMUM HANGER ROD DIAMETER (INCHES)	MAXIMUM LOAD (POUNDS)
UP TO 2"	3/8	610
2-1/2" TO 3"	1/2	1130
4" TO 5"	5/8	1810
6" AND LARGER	3/4	2710
PARALLEL PIPING TRAPEZE (A)	7/8	3770
	1	4960

(A) STEEL ANGLE, CHANNEL, OR BEAM SIZING AND WEIGHT CALCULATIONS ARE THE CONTRACTORS RESPONSIBILITY

PLUMBING GENERAL NOTES

1. ALL PLUMBING EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE 2021 INTERNATIONAL PLUMBING CODE (IPC), 2021 INTERNATIONAL BUILDING CODE (IBC), 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2021 INTERNATIONAL FUEL GAS CODE (IFGC), NFPA 90A, UNDERWRITERS LABORATORIES, AND ALL APPLICABLE LOCAL CODES.
2. THESE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND ARE INTENDED TO CONVEY THE SCOPE OF WORK AS WELL AS INDICATE GENERAL ARRANGEMENT OR EQUIPMENT, DUCTWORK, AND PIPING. THE CONTRACTOR SHALL ADHERE TO THESE DRAWINGS AS CLOSELY AS POSSIBLE. HOWEVER, THE RIGHT IS RESERVED TO VARY THE RUNS OF DUCTWORK AND PIPING TO MAKE OFFSETS, WHERE NECESSARY, TO ACCOMMODATE CONDITIONS ARISING AT THE JOB SITE. MECHANICAL LAYOUTS SHOWN ARE BASED ON THE AVAILABLE AS-BUILT DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED.
3. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL PLUMBING EQUIPMENT, PIPING, ETC. TO FIT WITHIN THE SPACE ALLOWED BY THE ARCHITECTURAL AND STRUCTURAL CONDITIONS. CUTTING OR ALTERING ANY STRUCTURAL MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE ARCHITECT OR STRUCTURAL ENGINEER.
4. PRIOR TO PURCHASING ANY MATERIALS OR COMMENCING WORK, CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS CONSISTING OF BUT NOT LIMITED TO EQUIPMENTS, PIPING LOCATIONS AND SIZING. DEVIATIONS FROM SHOWN WORK SHOULD BE REPORTED TO THE ENGINEER
5. PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT TO PROVIDE A COMPLETED FULLY OPERATIONAL SYSTEM.
6. ALL PLUMBING FIXTURES AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS INCLUDING OPERATION AND MAINTENANCE INSTRUCTIONS.
7. ALL PIPING PENETRATIONS OR FIRE AND/OR SMOKE RATED ASSEMBLIES SHALL BE FIRE-STOPPED TO RESTORE ASSEMBLY TO ORIGINAL INTEGRITY. FIRE STOP PRODUCTS SHALL BE MANUFACTURED FOR SPECIFIC APPLICATION AND APPROVED BY LOCAL AUTHORITY HAVING JURISDICTION. ALL FIRE PENETRATIONS MUST BE PROTECTED.
8. All PIPING OF DISSIMILAR MATERIALS SHALL HAVE DIELECTRIC FITTINGS.
9. PROVIDE WATER HAMMER ARRESTORS ON ALL PIPING SERVING QUICK CLOSING VALVES.
10. ALL MATERIAL, FIXTURES AND EQUIPMENT TO COMPLY WITH NSF LOW LEAD REQUIREMENTS.
11. WHERE PLUMBING FIXTURE OR EQUIPMENT CONNECTIONS DIFFER FROM STATED PIPE SIZE THE CONTRACTOR IS RESPONSIBLE FOR PIPE REDUCERS/EXPANDERS TO MAKE FINAL CONNECTIONS.
12. ALL DRAINAGE PIPING SHALL FOLLOW THE 2021 IPC TABLE 704.1 FOR SLOPE OF HORIZONTAL DRAINAGE PIPE.
13. ALL PIPING BELOW EXPOSED ADA FIXTURES TO HAVE ADA APPROVED PIPE COVERS.
14. CLEANOUTS 6 INCHES AND SMALLER SHALL HAVE AN 18" RADIUS OR UNOBSTRUCTED CLEARANCE. CLEANOUTS 8 INCHES AND LARGER SHALL HAVE A 36" RADIUS CLEARANCE TO OBSTRUCTIONS.
15. ALL SANITARY, VENT, AND STORM PIPING TO BE TESTED PER 2021 IPC SECTION 312.2. ALL PLASTIC PIPING AND JOINTS TO BE TESTED AT 10 FT HEAD OF WATER FOR NOT LESS THAN 15 MINUTES. OR PER SECTION 312.3 WHICH ALLOWS FOR AIR PRESSURE TESTING AT 5 PSI FOR NOT LESS THAN 15 MINUTES.
16. ALL POTABLE WATER PIPING TO BE TESTED PER 2021 IPC SECTION 312.5. SYSTEM SHALL BE TESTED, WITH AIR PRESSURE TESTING AT 50 PSI FOR A DURATION OF TESTING, AT A MINIMUM OF 15 MINUTES
17. ALL POTABLE PIPING WILL BE PURGED AND DISINFECTED PER IPC 2021 SECTION 610.
18. ALL PIPING THROUGH EXTERIOR WALLS WILL HAVE A RELIEVING ARCH OR SLEEVE.
19. ALL NEW EQUIPMENT REQUIRING GAS SHALL BE PROVIDED WITH PRESSURE REGULATOR AND SHUT-OFF VALVE. COORDINATE EXACT LOCATION OF GAS CONNECTION WITH MANUFACTURER'S RECOMMENDATIONS.
20. ALL GAS PIPING TO BE TESTED PER 2021 IFGC SECTION 406. SYSTEM SHALL BE TESTED AT 10PSI OR 1.5 TIMES OPERATING PRESSURE (WHICH EVER IS GREATER) FOR 1/2 HOURS PER 500 CUBIC FEET OF PIPE VOLUME.

PLUMBING FIXTURE SCHEDULE

TAG	QTY	FIXTURE DESCRIPTION	MANUFACTURER	MODEL	PIPE SIZES DHW	DCW	SS	V	ACCESSORIES/NOTES
L-1	4	WALL HUNG LAVATORY ADA COMPLIANT	KOHLER	K-2005	1/2"	1/2"	1-1/2"	1-1/2"	SINGLE LEVER ADA FAUCET,PVC P-TRAP GRID DRAIN, COMPRESSION SUPPLIES AND STOP, ADA INSULATION KIT, ASSE 1070 MIXING VALVE
WC-1A	2	FLOOR MOUNT, TANK TYPE, ELONGATED BOWL WATER CLOSET, ADA COMPLIANT, LEFT HAND FLUSH	KOHLER	K-3979-0	_	1/2"	4"	2"	WAX RING, CLOSET BOLTS, COMPRESSION SUPPLY AND STOP, FLUSH LEVER, OPEN FRONT SEAT
WC-2A	2	FLOOR MOUNT, TANK TYPE, ELONGATED BOWL WATER CLOSET, ADA COMPLIANT, RIGHT HAND FLUSH	KOHLER	K-3979-RH-0	_	1/2"	4"	2"	WAX RING, CLOSET BOLTS, COMPRESSION SUPPLY AND STOP, FLUSH LEVER, OPEN FRONT SEAT
KS-1	1	UNDERMOUNT SINGLE BOWL, STAINLESS STEEL KITCHEN SINK, [21.5"X18.5"X5.375"]	ELKAY	ELUHAD191655	1/2"	1/2"	1-1/2"	1-1/2"	PULL DOWN KITCHEN FAUCET, PVC P-TRAP, COMPRESSION SUPPLIES & STOP, DISHWASHER DRAIN, STRAINER
FD-1	2	2" BODY FLOOR DRAIN	SIOUX CHIEF	SERIES 832	_	_	2"	_	NICKEL BRONZE STRAINER, TRAP GUARD (EVAPORATION GUARD), F - FUNNEL DRAIN
US-1	1	UTILITY SINK	MUSTEE	14CP	1/2"	1/2"	1-12"	1-12"	FAUCET, FAUCET, PVC P-TRAP, COMPRESSION SUPPLIES & STOP, GRID DRAIN
ET-1	1	EXPANSION TANK	AMTROL	ST-60V	-	1-1/4"	-	-	
HB-1	1	FROST PROOF WALL HYDRANT	WOODFORD	65C	-	1/2"	-	-	KEY
CP-1	1	HOT WATER RE-CIRCULATING PUMP	TACO	007-SF5	3/4"	_	_	_	115/1PHASE 1/25 HP, CHECK VALVE
IMB-1	1	ICE MAKER BOX	SIOUX CHIEF	696 SERIES	-	1/2"	-	-	1/4" COMPRESSION FITTING, VALVE, WATER HAMMER ARRESTOR
EWC-1	1	ELECTRIC WATER COOLER	ELKAY	LZSTL8WSLK	-	1/2"	1-1/2"	1-1/2"	115V OUTLET BY E.C., BOTTLE FILLER, FILTERED, REFRIGERATED

WATER HEATER SCHEDULE

TAG	TYPE	MANUFACTURER	MODEL	CAPACITY/DESCRIPTION	ELECTRICAL VOLTS/PHASE	FLA	WATTS	MOCP	DISCONNECT	THERMAL EFF.	PIPE SIZES (INCHES) DHW	DCW	CA	VENT	NOTES
WH-1	ELECTRIC STROAGE WATER HEATER	RHEEM	XE28S06STB38U1	28GALLONS, 25GPH @100F RISE, 4.5KW	208-240/1	18.8	4500.0	30	E.C.	100%	3/4"	3/4"	-	-	WATER HEATER PLATFORM, T & P VALVES, BALL VALVES

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FRANKLIN TOWNSHIP MUNICIPAL

150 CENTURY LANE,
DILLSBURG, PA 17019

PLUMBING NOTES, SYMBOLS, AND ABBREVIATIONS

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ADAM SHAMENEK
ENGINEER
PE075884

ENGINEER: ADAM SHAMENEK PE075884
PROJECT NUMBER: 26083
SCALE: AS NOTED
DATE: 7/18/2026
DRAWN BY: BCS
CHECKED BY: ALS
DATE CHECKED: 7/18/2026

REVISIONS

DATE:	DESCRIPTION:
07/18/2026	CONTRACT DRAWINGS
10/19/2026	ISSUED FOR CONSTRUCTION

P001



FIRST FLOOR HVAC DEMOLITION LAYOUT

SCALE: 1/4" = 1'-0"

PLUMBING DEMOLITION NOTES

1. MAINTAIN EXISTING SHOP RESTROOM, WATER HEATER AND WELL TANK/CONTROL THROUGH OUT CONSTRUCTION.
2. EXISTING WATER PIPING FROM WELL TO CLOSET IS ROUTED UNDERGROUND BELOW EXISTING OFFICES. LOCATION SHOWN ON ORIGINAL PLANS INDICATES CLOSE PROXIMITY TO THE SEWER PIPING. EXCAVATION FOR RESTROOM AND BREAK ROOM SHOULD BE DONE WITH CARE TO MAINTAIN WATER SERVICE.
3. ACTUAL SEWER LINE LOCATION IS ESTIMATED BASED ON ORIGINAL CONSTRUCTION PLANS.
4. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXACT EXISTING CONDITIONS PRIOR TO PERFORMING ANY WORK.

KEYED PLUMBING DEMO NOTES

1. DEMOLISH EXISTING FIXTURE AND PREPARE PIPING FOR NEW LAYOUT.
2. EXISTING WATER HEATER TO REMAIN TO SERVE SHOP RESTROOM.
3. EXISTING WELL SERVICE AND PRESSURE TANK TO REMAIN.
4. DEMOLISH SANITARY PIPING BACK TO POINT INDICATED.
5. DEMOLISH DOMESTIC HOT AND COLD BACK TO WATER HEATER. MAINTAIN PIPING FOR EXISTING SHOP RESTROOM PIPING.
6. PROVIDE A PRE-DEMOLITION SEWER PIPING SCOPE TO DETERMINE PIPING LOCATION AND PIPING INTEGRITY

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PLUMBING DEMOLITION PLAN

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
ADAM SHAMENEK
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PE075884

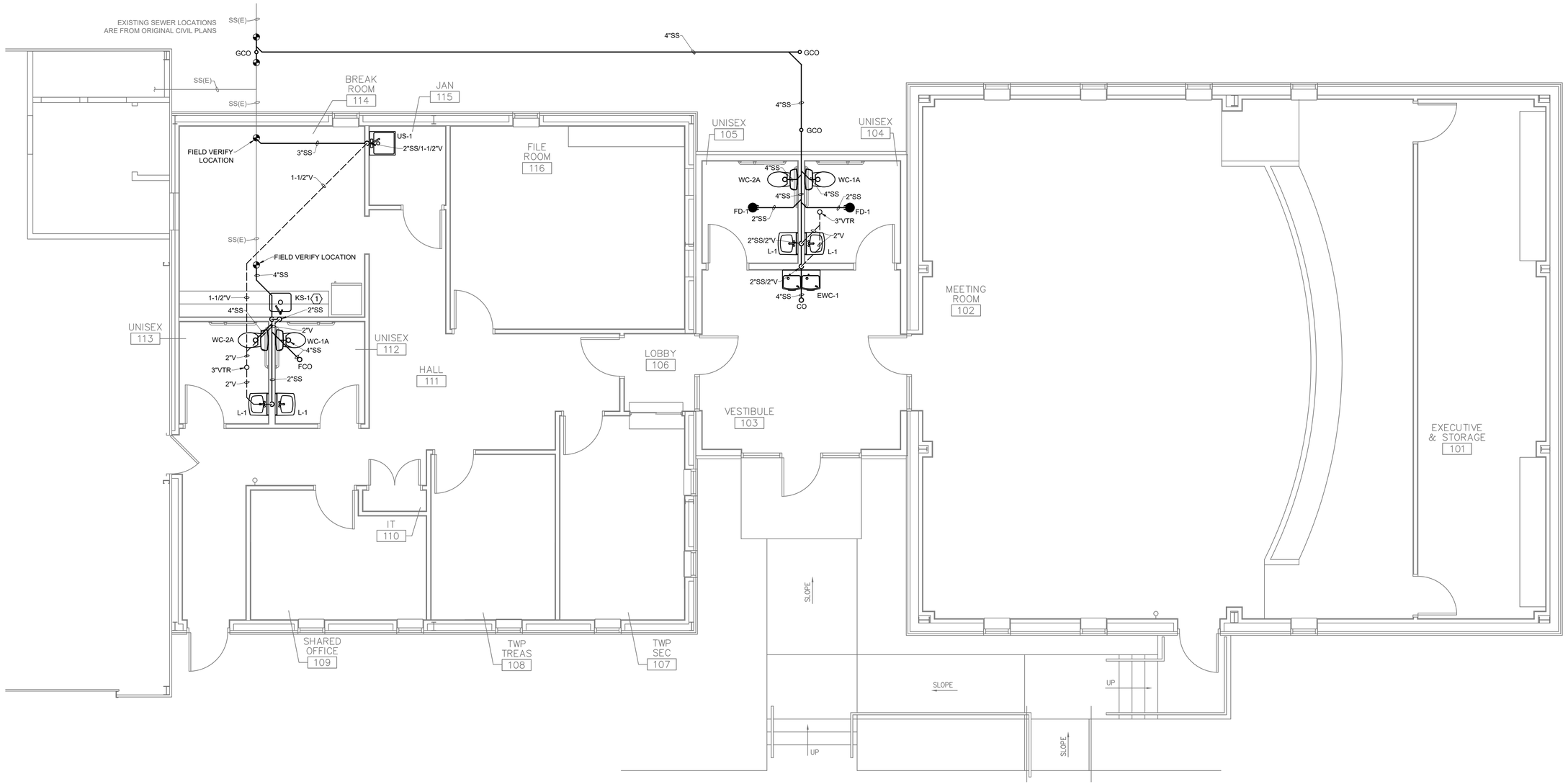
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PD101



FIRST FLOOR PLUMBING SANITARY AND VENT PIPING LAYOUT

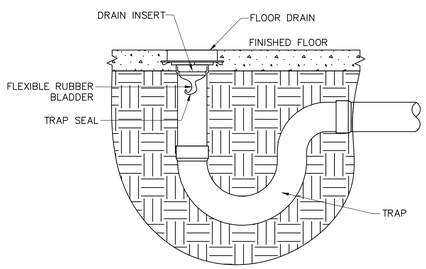
SCALE: 1/4" = 1'-0"

PLUMBING GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXACT EXISTING CONDITIONS PRIOR TO PERFORMING ANY WORK.

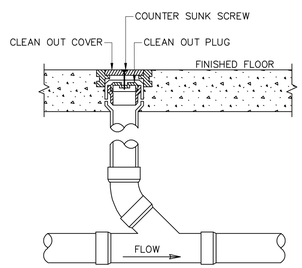
KEYED HVAC NOTES

1. PROVIDE PROVISIONS FOR OWNER SUPPLIED REVERSE OSMOSIS SYSTEM.



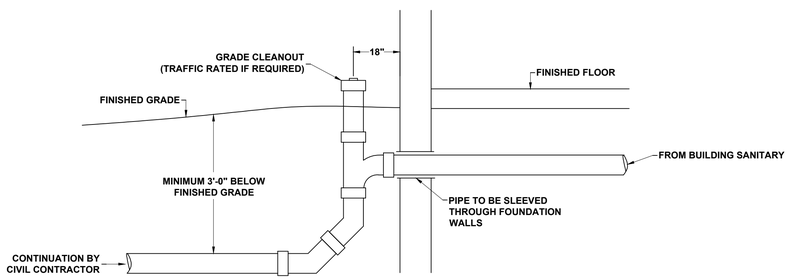
FLOOR DRAIN DETAIL

NOT TO SCALE



FLOOR CLEANOUT DETAIL

NOT TO SCALE



BUILDING SANITARY CONNECTION DETAIL

NOT TO SCALE

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PLUMBING FIRST FLOOR SANITARY & VENT PIPING PLAN AND DETAILS

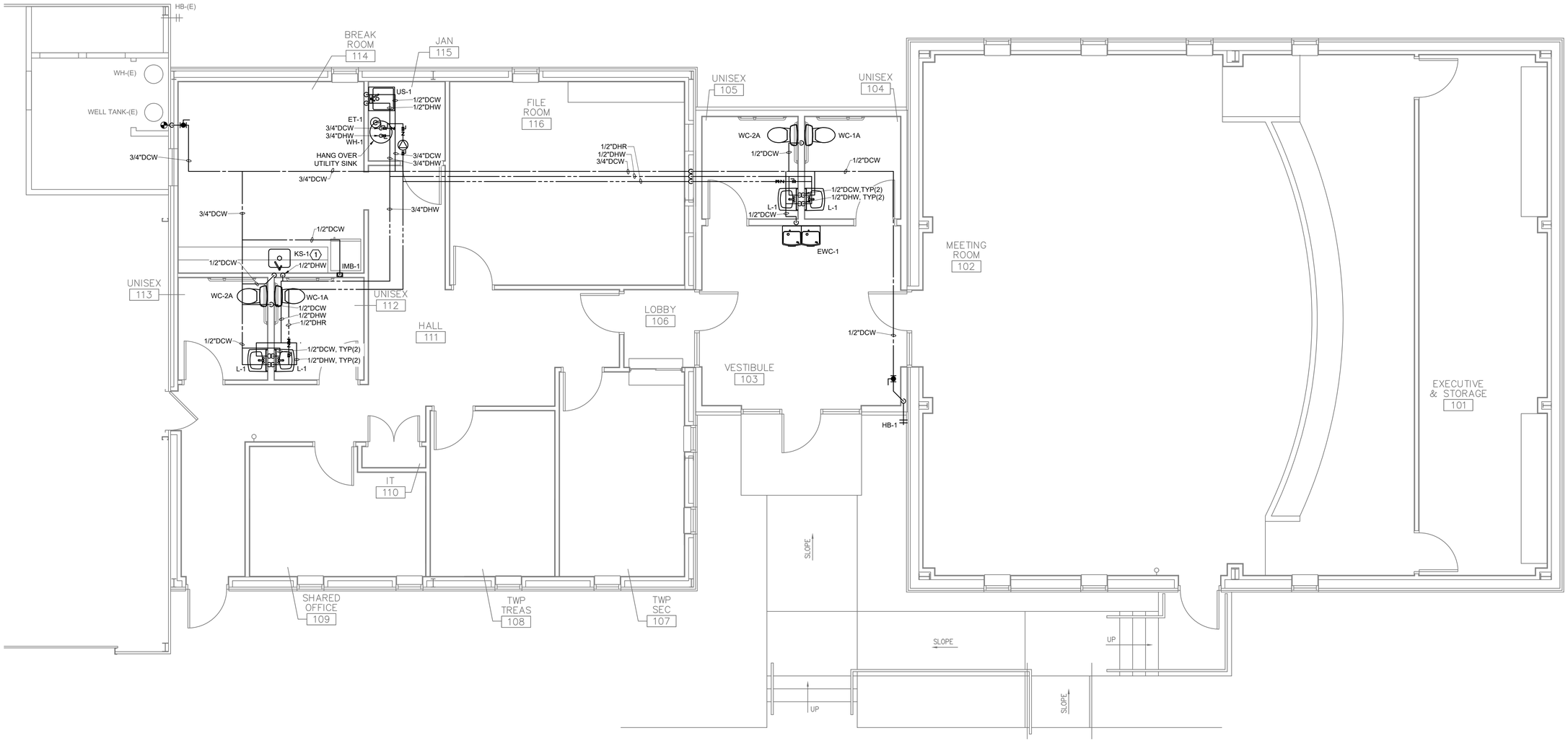
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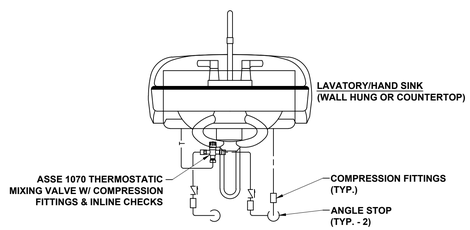


FIRST FLOOR PLUMBING DOMESTIC PIPING LAYOUT

SCALE: 1/4" = 1'-0"

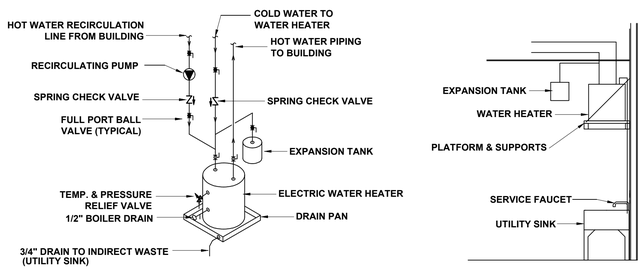
PLUMBING GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXACT EXISTING CONDITIONS PRIOR TO PERFORMING ANY WORK.



MIXING VALVE DETAIL

NOT TO SCALE



NOTES:
- SEE FIXTURE SCHEDULE FOR WATER HEATER, RECIRC PUMP, AND EXPANSION TANK
- PROVIDE INLET AND OUTLET HEAT TRAP NIPPLES.
- 30"X30" CLEAR AREA MUST BE PROVIDED IN FRONT OF CONTROL SIDE.
- SIZE PLATFORM AND SUPPORTS FOR TOTAL WEIGHT OF FULL WATER HEATER

WATER HEATER ON PLATFORM DETAIL

NOT TO SCALE

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PLUMBING FIRST FLOOR DOMESTIC PIPING PLAN AND DETAILS

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