

MECHANICAL EQUIPMENT SCHEDULE:

F1
 TRANE #S9X1B060U4PSBB 96% AFUE HORIZONTAL CONDENSING GAS-FIRED FURNACE
 1200 CFM (ACTUAL) @ .50 ESP. 2" DIA. PVC FLUE CONNECTION
 GAS INPUT: 60 MBH INPUT / 58.3 MBH OUTPUT - 1/2" GAS LINE CONNECTION
 ELECTRICAL: 120V / 1PH / 60HZ MCA 12.8 / MOCIP 15 / 34HP
 EQUIPMENT SIZE: 17-1/2" W X 28-3/4" D X 34" HGT. - 114 LBS.
 ACCESS: #STXCR004ASHICA 3.0-TON HORIZONTAL CASED COIL W/PAN - 17-1/2" W X 21-1/2" D X 22-1/2" HGT.-50 LBS.
 #AY28X079 LOW TEMP FREEZE CONTROL
 #SET-051208500R 5/16" X 3/4" X 1/2" - 50/0" LONG
 #EB-STATE6P-01 ECOBEE SMART PRO "W-FI" 7-DAY PROGRAMMABLE T-STAT
 #AUX. DRAIN PAN & ACS-2 AUX. DRAIN PAN SWITCH
 NOTE: FILTER SIZE / LOCATED @ INDOOR UNIT - RETURN AIR EQUIPMENT PLENUM (1) 16" X 25" X 2"

F2 (A/B) & F3 (A/B)
 TRANE #S9MSPCC 95% AFUE UPFLOW CONDENSING GAS-FIRED FURNACE
 1990 CFM (ACTUAL) - .50 ESP. 3" DIA. PVC FLUE CONNECTION
 GAS INPUT: 100 MBH INPUT / 97.4 MBH OUTPUT - 1/2" GAS LINE CONNECTION
 ELECTRICAL: 120V / 1PH / 60HZ MCA 14.1 / MOCIP 15 / 1 HP
 EQUIPMENT SIZE: 21" W X 28-3/4" D X 34" HGT. - 145 LBS.
 ACCESS: #STXCC009ASHICA 5.0-TON UPFLOW CASED COIL W/PAN - 21" W X 21-1/2" D X 30-3/4" HGT.-70 LBS.
 #AY28X079 LOW TEMP FREEZE CONTROL
 #SET-051408500R 5/16" X 3/8" X 1/2" - 50/0" LONG
 #EB-STATE6P-01 ECOBEE SMART PRO "W-FI" 7-DAY PROGRAMMABLE T-STAT
 SYSTEM SENSOR #D4120 RETURN AIR SMOKE DETECTOR (1 PER RETURN AIR DROP)
 SYSTEM SENSOR #DST-1.5 18" LONG SAMPLING TUBE
 SYSTEM SENSOR #APA-151 AUD. / VISIBLE ALARM - (+ KEY REMOTE STATION)
 NOTE: FILTER SIZE / LOCATED @ INDOOR UNIT - RETURN AIR EQUIPMENT PLENUM (1) 20" X 25" X 2"

AC1
 TRANE #5TTA3036A3000A (13 SEER2) R-454B 3.0-TON OUTDOOR AIR CONDITIONER
 ELECTRICAL: 208-230V / 3PH / 60HZ - MCA 16.6 AMPS / MOCIP 25 AMPS.
 REFRIGERANT LINESIZES: 3/4" SUCTION & 5/16" LIQUID - TYPE ACR COPPER
 W/BRAZED JOINTS & INSULATED SUCTION LINE W-1/2" WALL ARMAFLEX INSULATION
 EQUIPMENT SIZE: 29-3/4" W X 32-5/8" D X 28-3/4" HGT. - 161 LBS.
 ACCESS: UNIVERSAL REFRIGERANT LOCKING CAPS.
 #EL3636-3 36" X 36" X 3" EQUIPMENT PAD

AC2 (A/B) & AC3 (A/B)
 TRANE #5TTA3060A3000A (13 SEER2) "R-454B" 5.0-TON OUTDOOR AIR CONDITIONER
 ELECTRICAL: 208-230V / 3PH / 60HZ - MCA 23.1 / MOCIP 35 AMPS.
 REFRIGERANT LINESIZES: 7/8" SUCTION & 5/16" LIQUID - TYPE ACR COPPER
 W/BRAZED JOINTS & INSULATED SUCTION LINE W-1/2" WALL ARMAFLEX INSULATION
 EQUIPMENT SIZE: 34-1/4" W X 37-1/4" D X 37-1/8" HGT. - 211 LBS.
 ACCESS: BAYLOAM103 LOW-AMBIENT PRESSURE SWITCH
 #UNIVERSAL REFRIGERANT LOCKING CAPS
 #EL3842-3 38" X 42" X 3" EQUIPMENT PAD

RTH1 & RTH2
 DETROIT RADIANT "RE-VERBER-RAY" #DX3L-40-75N SINGLE STAGE, LOW INTENSITY GAS-FIRED TUBE HEATER
 GAS INPUT: 75 MBH / 41-1" LENGTH - 190 LBS. (TYP. OR RCMD MOUNTING HEIGHTS 12" TO 20")
 ELECTRICAL: 120V / 1PH / 60HZ - 3 WIRES (60" GROUNDED POWER CORD) 4.8 IGNITION AMPS / 1.1 RUNNING CURRENT
 4" DIA. TYPE "B" VENT FLUE - THRU ROOF - COORDINATE WITH GC
 ACCESS: #THCS MOUNTING CHAINS - 60" LENGTH W (2) "S" HOOKS PER
 #24" SS FLEX GAS CONNECTOR
 #GC-50 GAS VALVE - SHUT OFF
 #TH-ETS BASIC, DIAL THERMOSTAT 24V
 #BK ANGLE BRACKETS FOR RTH2

EF1, EF2 & EF3
 BROAN #AE110 CEILING MOUNTED RESTROOM EXHAUST FANS
 110 CFM @ 0.10 SP. / 4" DIA. EXHAUST DISCHARGE W/BACK DRAFT DAMPER
 UNIT DIMENSIONS: ID 9-1/4" X 10" X 5-3/4" HGT - COVER 11-1/2" X 12"
 ELECTRICAL: 120V / 1PH / 60HZ - .03 AMPS
 NOTE: INTERLOCK W/LIGHT SWITCH BY ELECTRICAL CONTRACTOR

EF-4
 PANASONIC #FV30VQ3 CEILING MOUNTED RESTROOM EXHAUST FAN
 290 CFM @ 0.10 SP. / 6" DIA. EXHAUST DISCHARGE W/BACK DRAFT DAMPER
 UNIT DIMENSIONS: 12-3/16" X 12-9/32" X 9-9/32" HGT - COVER 15" X 15"
 ELECTRICAL: 120V / 1PH / 60HZ
 NOTE: INTERLOCK W/LIGHT SWITCH (BY ELECTRICAL CONTRACTOR)

NOTE: PROVIDE CHECK, TEST & START-UP PER MANUFACTURES INSTALLATION INSTRUCTIONS

MECHANICAL PLAN DRAWING NOTES:

ALL RECTANGULAR DUCTWORK "SUPPLY/RETURN" EQUIPMENT PLENUMS TO BE GALV. METAL W/1" DUCT LINER
 ALL RECT. DUCTWORK "SUPPLY" DISTRIBUTION "ABOVE CLG" TO BE OWENS CORNING R-6.0 1-1/2" THK FIBERGLASS BRD
 ALL RECT. DUCTWORK "RETURN" DISTRIBUTION "ABOVE CLG" TO BE OWENS CORNING R-6.0 1-1/2" THK FIBERGLASS BRD
 ALL INSULATION REQUIREMENTS TO MEET DUCTWORK INSULATION CONSTRUCTION STANDARDS
 ALL INSULATION MATERIALS TO BE (CLASS 1 25/50 SMOKE / FLAME DEV. RATINGS)
 ALL ROUND / FLEXIBLE DUCTWORK "SUPPLY/RETURN & OSA" ABOVE CEILING TO BE "R-6.0" (CLASS 1 AIR DUCT) (25/50)
 ALL ROUND / FLEXIBLE DUCTWORK "EXHAUST AIR" ABOVE CEILING TO BE "R-4.2" (CLASS 1 AIR DUCT) (25/50)
 ALL ROUND / FLEXIBLE DUCTWORK "SUPPLY/RETURN/OSA & EXHAUST" TO BE INSTALLED/SUPPORTED ON 60" CENTERS
 ALL ROUND / FLEXIBLE DUCTWORK "SUPPLY/RETURN/OSA & EXHAUST" TO BE UNLIMITED LENGTH
 ALL DUCTWORK TO BE INSTALLED / SUPPORTED PER SMACNA STANDARDS / PER OMC 603
 ALL RECTANGULAR / ROUND DUCTWORK TO BE SEALED / PER OMC 603.9
 ALL OUTSIDE AIR TO MEET CHAP 4/PER OMC SEC. 403 & PARA 403.2 "EXCEPT" & TABLE 403.3/ASHRAE 62.1
 ALL OUTSIDE AIR TO BE 10'-0" CLEAR FROM EXHAUST / FLUE VENTS (OR GREATER IN 36" OF HEIGHT)
 ALL OUTSIDE AIR TO BE EQUIPPED WITH MANUAL DAMPER AT THE INLET OF THE RETURN AIR DUCTWORK
 ALL FLUE VENTING TO BE OF C-VENT & TYPE "B" VENT, CONNECTING TO EXISTING VENTS
 ALL CONDENSATE DRAIN PIPING FROM INDOOR FURN./COIL TO DRAIN TO THE NEAREST INDOOR FLOOR /JUB DRAIN
 ALL REFRIG. PIPING / LINES TO RUN OVERHEAD & OUT HIGH ON EXTERIOR WALL TO THE OUTDOOR UNITS.
 ALL EXHAUST AIR TO BE VENTED TO THE OUTDOORS / PER OMC 501.2
 ALL T-STATS TO BE MOUNTED @ 60" AFF/USE OF 188 LOW-VOLTAGE CONTROL WIRING
 ALL LAY-IN MOUNTED "SUPPLY'S" - TO BE TITUS/OR EQUAL TO "TMS" 24"x 24" LAY-IN W/COLLAR & DAMPER
 ALL SURFACE MOUNTED "SUPPLY'S" - TO BE HART & COOLEY #661 W/DAMPER
 ALL LAY-IN MOUNTED "RETURNS" - TO BE TITUS/OR EQUAL TO #50F 24"x 24" / 24"x 12" PLUS TRANSITIONS.
 ALL SURFACE MOUNTED "RETURNS" - TO BE HART & COOLEY #650
 ALL LAY-IN / SURFACE MOUNTED AIR DEVICES TO BE INSTALLED & SIZED AS NOTED ON PLAN
 ALL AIR DEVICES TO BE BALANCED TO VOLUME AS INDICATED ON THE PLAN +/- 10%
 MECH. PLAN TO COMPLY W/OBC 106/106.1.1(3)-HVAC CONSTRUCTION DOCUMENT TO MATCH OHIO ARCH.PLAN

MECHANICAL PLAN - WORK BY OTHERS:

NECESSARY HIGH VOLTAGE WIRING / INCLUDING DISCONNECT SWITCHES (GFT'S)
 NECESSARY LINE VOLTAGE CONTROL WIRING / INTERLOCK WIRING OF RESTROOM FANS
 NECESSARY GAS PIPING & ETC.
 NECESSARY TERMINATION OF EXISTING ELECTRICAL & GAS PIPING - (NOT TO BE REUSED)
 NECESSARY DRAIN FOR AIR CONDITIONING CONDENSATE (FLOOR DRAIN / MOP SINK)
 NECESSARY STRUCTURAL FRAMING OF EXTERIOR / INTERIOR WALL OPENINGS
 NECESSARY ROOF FLASHING & RESEALING.

LEGEND

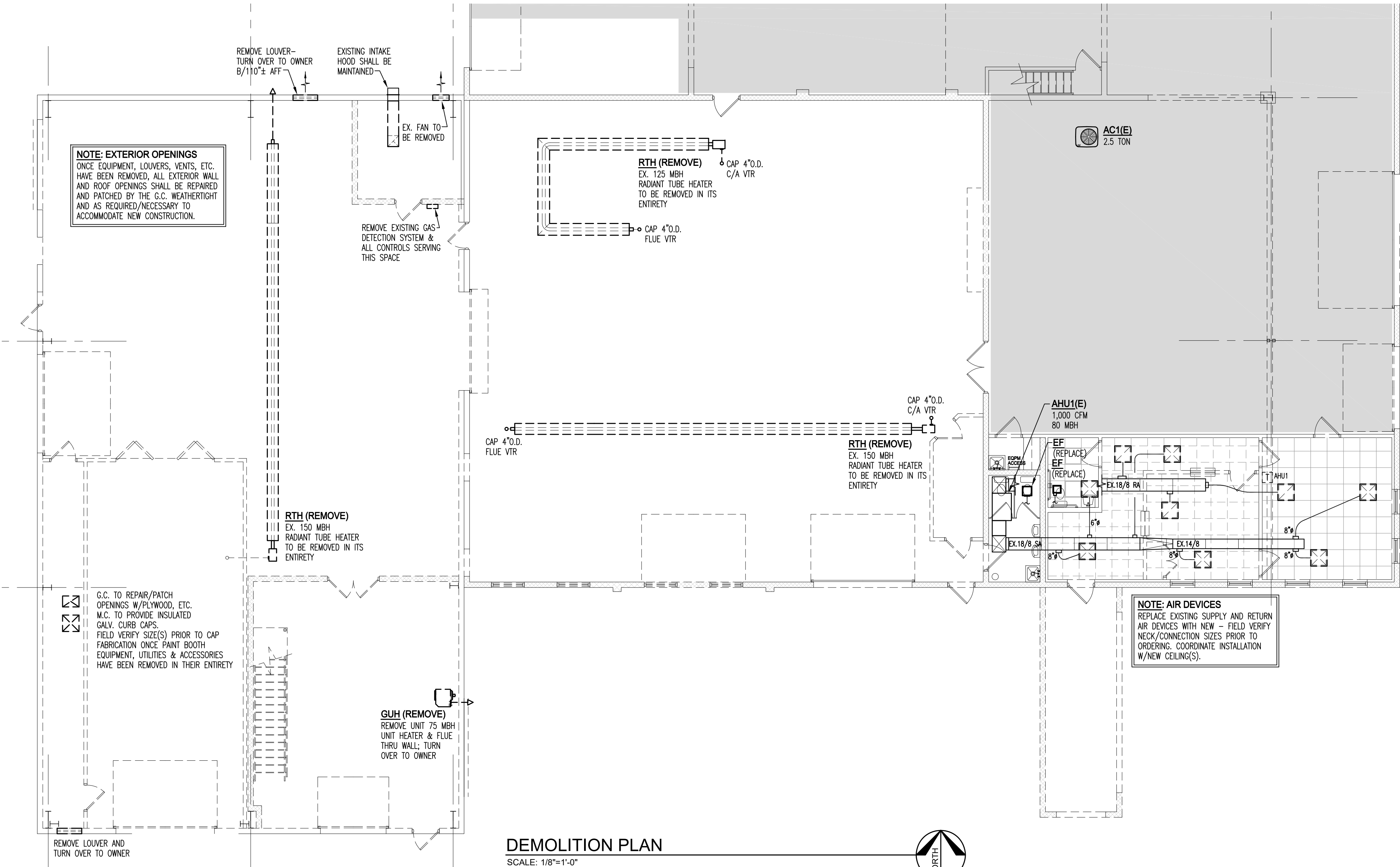
- SA — SUPPLY AIR DUCTWORK
- RA — RETURN AIR DUCTWORK
- EA — EXHAUST AIR DUCTWORK
- OA — OUTSIDE AIR DUCTWORK
- ☐ SUPPLY AIR DEVICE
- ☐ RETURN AIR DEVICE
- ☐ EXHAUST AIR DEVICE
- AD AP ACCESS DOOR (AD) OR PANEL (AP)
- MBL MAN. BALANCE DAMPER W/LOCKING QUAD
- WV DOUBLE WALL TURNING VANES
- RE RADIUS ELBOW
- RT RECTANGULAR TO ROUND TRANSITION
- SUPPLY AIRFLOW SYMBOL
- RETURN/EXHAUST AIRFLOW SYMBOL
- T F1 THERMOSTAT (PROGRAMMABLE)
- K F1 REMOTE R/A SMOKE DETECTOR KEY TEST STATION KEY ACCESS; LABEL FOR UNIT(S) SERVED
- EXISTING TO REMAIN
- EXISTING TO BE REMOVED OR RELOCATED

ABBREVIATIONS

- A AMP
- AC AIR CONDITIONER
- ACH AIR CHANGES PER HOUR
- AD ACCESS DOOR
- AFF ABOVE FINISH FLOOR
- AFUE ANNUAL FUEL UTILIZATION EFFICIENCY
- AH AIR HANDLER
- AP ACCESS PANEL
- ARI AIR CONDITIONING & REFRIGERATION INSTITUTE
- ASHRAE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.
- AS AVERAGING SENSOR
- BTU/BH BRITISH THERMAL UNIT PER HOUR
- CFH CUBIC FEET PER HOUR
- CFM CUBIC FEET PER MINUTE
- CLG CEILING
- DA DAMPER
- E.C. ELECTRICAL CONTRACTOR
- E.S.P. EXTERNAL STATIC PRESSURE
- EER ENERGY EFFICIENCY RATIO
- EF, IEF EXHAUST FAN, INLINE EXHAUST FAN
- EXST., ETR EXIST., EXISTING TO REMAIN
- FLA FULL LOAD AMPS
- FLTR FILTER GRILLE
- G.C. GENERAL CONTRACTOR
- GFI GROUND FAULT INTERRUPTER
- HP HIRSPERMER
- HVAC HEATING, VENTILATING & AIR CONDITIONING
- I.D. INSIDE DIAMETER
- M.C. MECHANICAL CONTRACTOR
- MCA MAXIMUM OVERCURRENT PROTECTION
- MOCIP NATIONAL ELECTRIC CODE
- NEC ON CENTER
- O.C. OUTSIDE DIAMETER
- O.D. OHIO BUILDING CODE
- OBC OHIO MECHANICAL CODE
- OMC PLUMBING CONTRACTOR
- P.C. PLUMBING CONTRACTOR
- S.P. STATIC PRESSURE
- SCH SCHEDULE
- SF SQUARE FEET
- SMACNA SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION
- TYP TYPICAL
- UL UNDERWRITER'S LABORATORY
- UNO UNLESS NOTED OTHERWISE

APPLICABLE CODES

APPLICABLE CODES AND EDITION YEAR SHOWN BELOW FOR THIS PROJECT INCLUDE:
 2024 OHIO BUILDING CODE (OBC)
 2024 OHIO MECHANICAL CODE (OMC)
 2024 OHIO PLUMBING CODE (OPC)
 2021 INTERNATIONAL FUEL GAS CODE (IFGC)
 2019 ANS/ASHRAE/IES STANDARD 90.1
 "ENERGY STANDARD FOR BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS"
 2019 ANS/ASHRAE STANDARD 62.1
 "VENTILATION FOR ACCEPTABLE INDOOR AIR QUALITY"

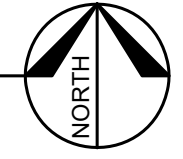


NOTE: EXTERIOR OPENINGS
 ONCE EQUIPMENT, LOUVERS, VENTS, ETC. HAVE BEEN REMOVED, ALL EXTERIOR WALL AND ROOF OPENINGS SHALL BE REPAIRED AND PATCHED BY THE GC WEATHERTIGHT AND AS REQUIRED/NECESSARY TO ACCOMMODATE NEW CONSTRUCTION.

NOTE: AIR DEVICES
 REPLACE EXISTING SUPPLY AND RETURN AIR DEVICES WITH NEW - FIELD VERIFY NECK/CONNECTION SIZES PRIOR TO ORDERING. COORDINATE INSTALLATION W/NEW CEILING(S).

G.C. TO REPAIR/PATCH OPENINGS W/PLYWOOD, ETC. M.C. TO PROVIDE INSULATED GALV. CURB CAPS. FIELD VERIFY SIZE(S) PRIOR TO CAP FABRICATION ONCE PAINT BOOTH EQUIPMENT, UTILITIES & ACCESSORIES HAVE BEEN REMOVED IN THEIR ENTIRETY

DEMOLITION PLAN
 SCALE: 1/8"=1'-0"



DATE	NO.	REVISIONS	ISSUED FOR PERMIT
11-6-25			



Proposed HVAC Modifications for:
Beau Townsend Lincoln
 55 Foley Dr.
 Vandalia, Ohio 45377

Project No.: 191869212
 Date: 11-6-25 (Permit)
 Scale: AS NOTED

Sheet Title:
MECHANICAL DEMOLITION PLAN, SCHEDULES & SPECS

Sheet No.:
M1

Project Information

Energy Code: 90.1 (2019) Standard
 Project Title: Beau Townsend Lincoln Vandalia
 Location: Vandalia, Ohio
 Climate Zone: 5a
 Project Type: Alteration

Construction Site: 55 Foley Dr, Vandalia, Ohio 45377
 Owner/Agent: [Blank]
 Designer/Contractor: Detmer Mechanical Services, 9181 N. Dixie Dr, Dayton, Ohio 45414, 937-709-3877

Mechanical Systems List

- Quantity System Type & Description**
- 1 F1/AC1
 Heating: 1 each - Central Furnace, Gas, Capacity = 60 kBtu/h
 Proposed Efficiency = 96.00% Et, Required Efficiency: 80.00 % Et (or 80% AFUE)
 Cooling: 1 each - Split System, Capacity = 36 kBtu/h, Air-Cooled Condenser
 Proposed efficiency = 13.40 SEER2, Required Efficiency = 13.40 SEER2
 Proposed Part Load Efficiency = 0.00, Required Part Load Efficiency = 0.00
 Fan System: FAN SYSTEM 1 | 3 ton furnace blower -- Compliance (Motor nameplate HP and fan efficiency method) : Passes
- Fans:
 FAN 1 Supply, Constant Volume, 1200 CFM, 0.8 motor nameplate hp, 1.00 fan energy index
- SYSTEM VERIFICATION REQUIRED.
- 4 F2(a,b)/AC2(a,b) & F3(a,b)/AC3(a,b)
 Heating: 1 each - Central Furnace, Gas, Capacity = 100 kBtu/h
 Proposed Efficiency = 95.00% Et, Required Efficiency: 80.00 % Et (or 80% AFUE)
 Cooling: 1 each - Split System, Capacity = 60 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: None
 Proposed Efficiency = 13.40 SEER2, Required Efficiency = 13.40 SEER2
 Proposed Part Load Efficiency = 0.00, Required Part Load Efficiency = 0.00
 Fan System: FAN SYSTEM 2 | 5 ton furnace blower -- Compliance (Motor nameplate HP and fan efficiency method) : Passes
- Fans:
 FAN 2 Supply, Constant Volume, 1990 CFM, 1.0 motor nameplate hp, 1.00 fan energy index
- SYSTEM COMPLIANCE FAILS: Economizer requirements have not been met.

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 90.1 (2019) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Theresa A. Root, P.E. - Mechanical Engineer Theresa A. Root, P.E. 11/04/25
 Name - Title Signature Date

OUTDOOR AIR SCHEDULE											
NUMBER	ROOM DESIGNATION	ROOM AREA (SQ. FT.)	NO. OF PEOPLE	NO. OF FIXTURES	ASHRAE 62.1-2019/2013 HEALTH CARE GUIDELINE REQ.			AIR DISTRIBUTION			
					EST. MAX. OCCUPANCY (P/1000 SQ. FT.)	O/A CFM / PERSON	O/A CFM / SQ. FT.	O/A CFM - CODE MINIMUM	O/A CFM - DESIGN	SUPPLY AIRFLOW (CFM)	RETURN AIRFLOW (CFM)
NEW F1/AC1											
O/A Damper @ 15%											
111	SERVICE OFFICE	129	2	5	5	.06	18	26	175	175	
112	SERVICE OFFICE	129	2	5	5	.06	18	26	175	175	
113	ADMIN	214	4	5	5	.06	33	60	400	400	
114	CORRIDOR	70				.06	4	15	100	100	
115	RESTROOM	68	1						11	75	
116	RESTROOM	68	1						11	75	
117	JANITOR	19				.12	2				
SYSTEM TOTALS =							75	150	1,000	850	220
SYSTEM SUMMARY:											
CONDITIONED AREA: 697 SF			MIN. O/A REQ'D: 75 CFM			MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1-2019, TABLE 6-1 IS 17.0 CFM PER PERSON FOR OFFICES					
DESIGN AIRFLOW: 1,000 CFM			DESIGN O/A: 150 CFM								
DESIGN CFM/SF: 1.43 CFM/SF			DESIGN O/A/PERSON: 18.8 CFM/PERSON								
EST. OCCUPANCY: 8 PEOPLE			DESIGN O/A/SF: 0.21 CFM/SF								
NEW F2a,b/AC2 a,b & F3a,b/AC3a,b											
O/A Damper @ 15% (EA)											
105	NEW CAR DELIVERY	358	2	15	7.5	.12	539	982	6,350	6,350	
106	DELIVERY SUITE	149	4	25	5	.06	29	38	250	250	
107	STORAGE/MECHANICAL	159				.12	19				
108	SALES OFFICE	126	3	5	5	.06	23	26	175	175	
109	SALES OFFICE	126	3	5	5	.06	23	26	175	175	
110	BLACK LABEL STUDIO	116	3	5	5	.06	25	37	250	250	
SYSTEM TOTALS =							716	1,200	8,000	8,000	
SYSTEM SUMMARY:											
CONDITIONED AREA: 4,339 SF			MIN. O/A REQ'D: 716 CFM			MINIMUM COMBINED OUTDOOR AIR RATE PER ASHRAE 62.1-2019, TABLE 6-1 IS 16.0 CFM PER PERSON FOR RETAIL & 17.0 CFM PER PERSON FOR OFFICES					
DESIGN AIRFLOW: 8,000 CFM			DESIGN O/A: 1,200 CFM								
DESIGN CFM/SF: 1.84 CFM/SF			DESIGN O/A/PERSON: 34.3 CFM/PERSON								
EST. OCCUPANCY: 35 PEOPLE			DESIGN O/A/SF: 0.27 CFM/SF								

