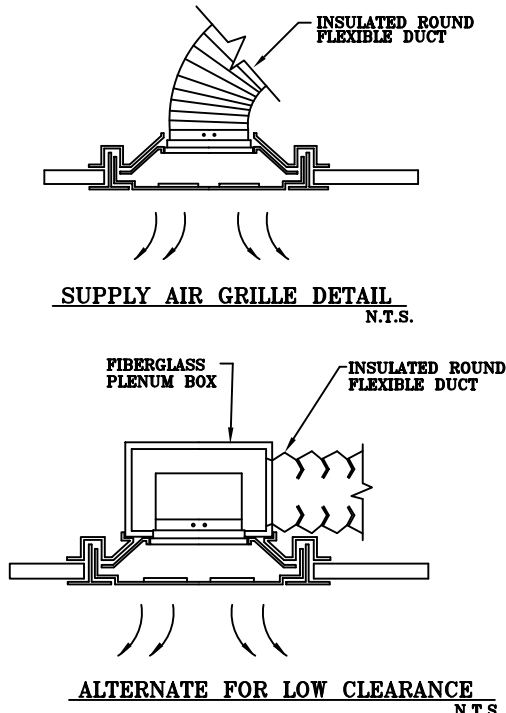
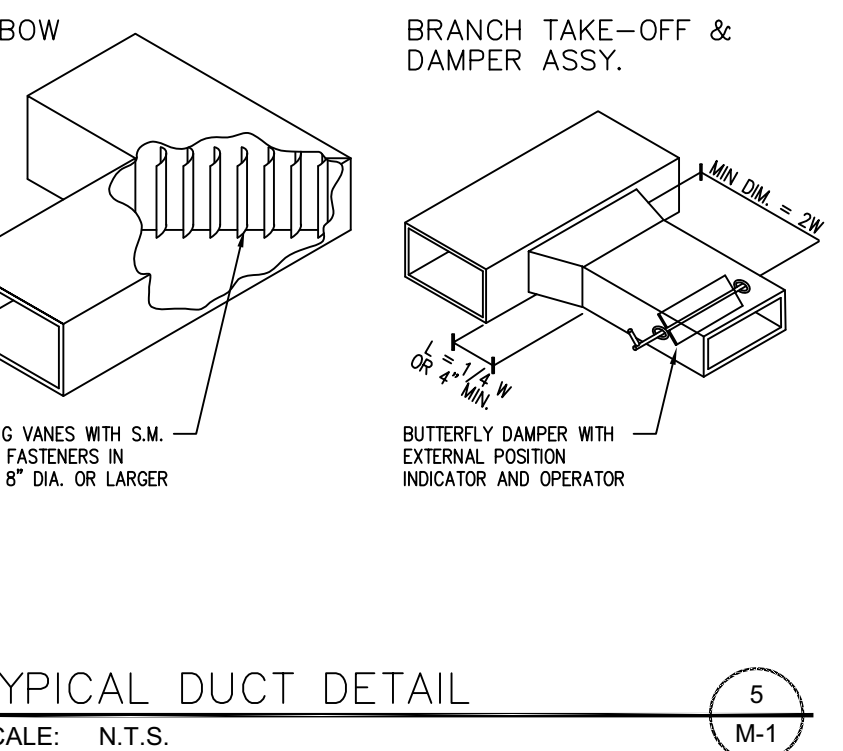
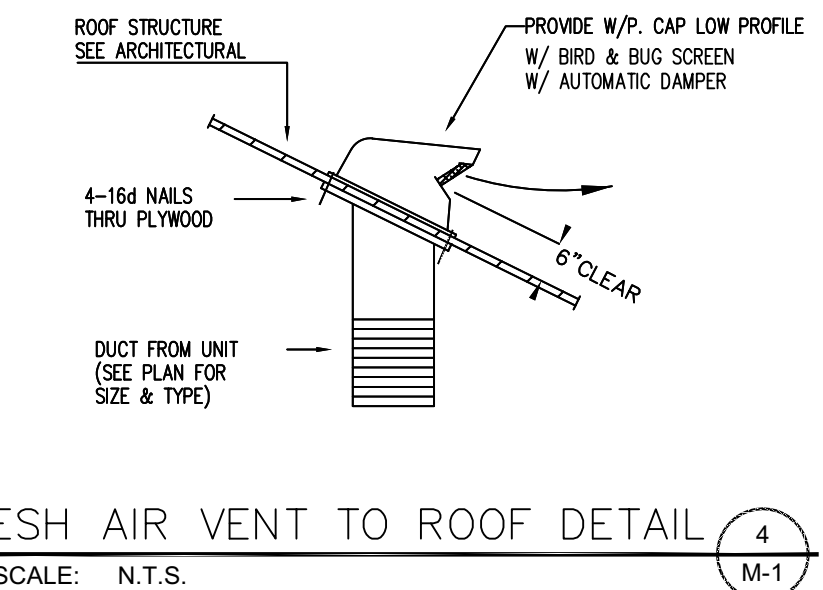
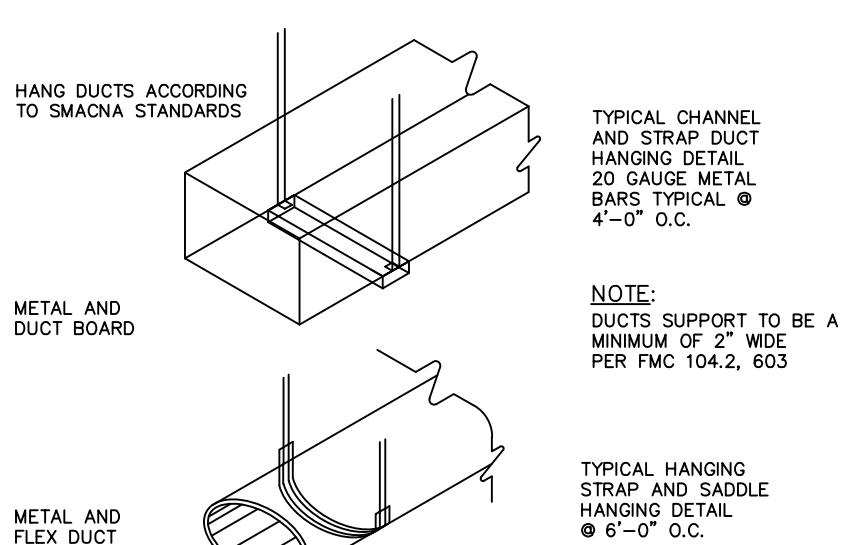
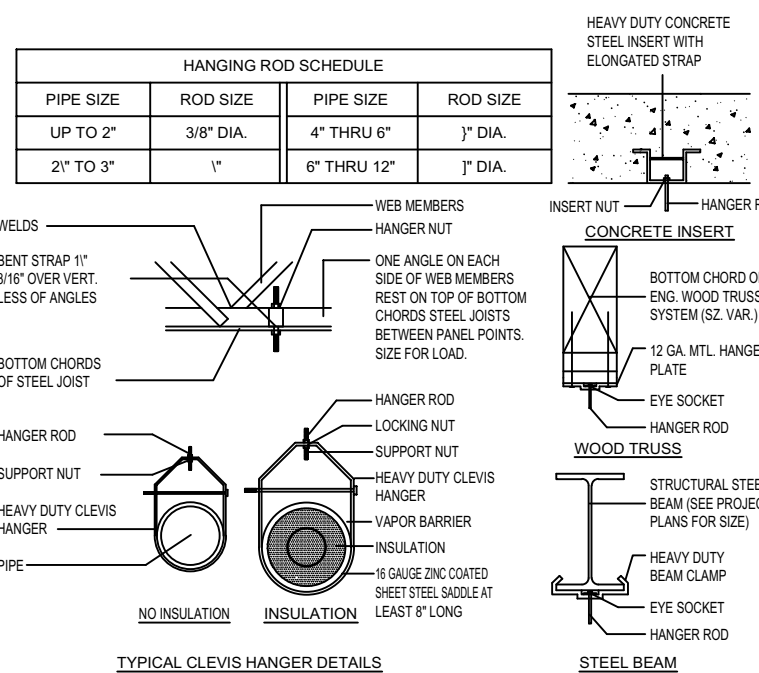
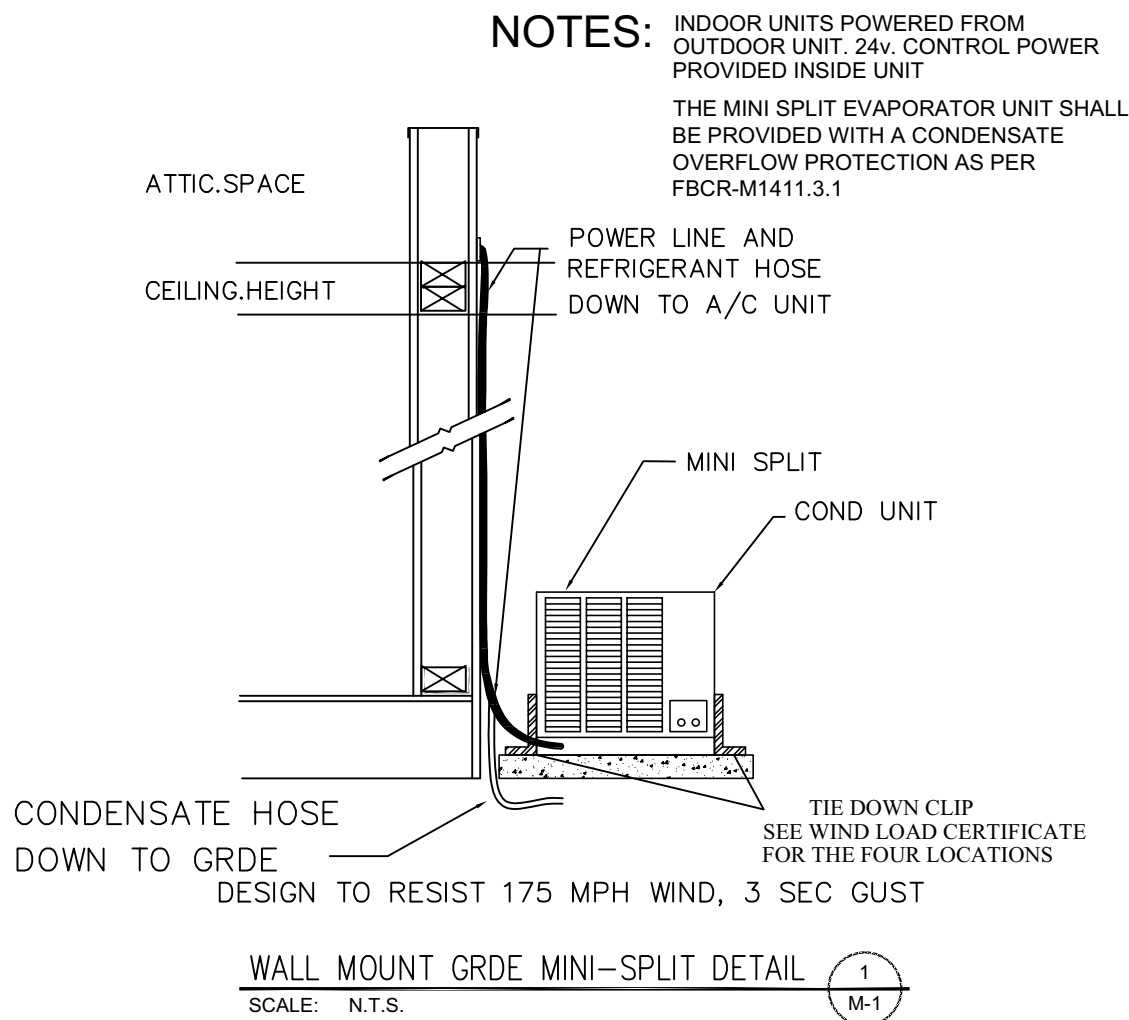


SCOPE OF WORK
1. INSTALL NEW DUCTED CONCEALED MINI-SPLIT HEAT PUMP FOR OFFICE ADDITION.
2. INSTALL REFRIGERANT AND DRAIN LINES.
3. PROVIDE COMPLETE HEAT LOAD AND ENERGY CALC FOR ADDITION
4. INSTALL NEW R-8 DUCTWORK FOR NEW HEAT PUMP

GENERAL MECHANICAL NOTES
1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE APPLICABLE BUILDING CODE AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST ADDITION OF THE FOLLOWING PUBLICATIONS; SMACNA, ASHRAE, NFPA 90A, 90B, 91 & ANSI B-9.1 MECHANICAL REFRIGERATION.
2. THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.
3. THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES TO INSURE AN ORDERLY PROGRESS OF THIS WORK.
4. THE CONTRACTOR SHALL SUPPLY THE ARCHITECT WITH "AS-BUILT" DRAWINGS UPON COMPLETION OF THIS PROJECT.
5. CONTRACTOR SHALL SUBMIT, FOR APPROVAL FIVE (2) COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT.
6. ALL MATERIAL SHALL BE NEW OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED WORKMAN.
7. ALL AIR CONDITIONING DUCTWORK SHALL BE OF 1-1/2" STANDARD DUTY FOIL REINFORCED FIBERGLASS WITH MANUFACTURER'S LOGO PRINTED ON VAPOR BARRIER ALL DUCTWORK INSULATION SHALL HAVE A MINIMUM R-8 VALUE.
8. ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS.
9. DUCT SIZES SHOWN ARE INSIDE DIMENSIONS.
10. ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE.
11. THERMOSTATS SHALL BE A HEAT/COOL W/FAN ON/OFF/AUTO SWITCH.
12. ALL BRANCH TAKE-OFFS TO BE PROVIDED W/MANUAL VOLUME DAMPERS. ALL ELBOWS AND TEE'S MUST BE FURNISHED W/TURNING VANES. PROVIDE 45° BRANCH TAKE-OFF AS PER BRANCH DUCT TAKE-OFF DETAIL.
13. PROVIDE (2) SETS OF 1" THICK RETURN AIR FILTERS - (1) FILTER DURING CONSTRUCTION AND (1) AFTER INITIAL START-UP AND ACCEPTANCE BY OWNER.
14. HVAC CONTRACTOR SHALL PROVIDE AN INDEPENDENT TEST AND BALANCE REPORT FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AHU'S AND FANS. THE T & B SHALL BE IN ACCORDANCE WITH THE AIR BALANCE COUNCIL STANDARDS, AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLS, RETURN GRILLS, AND EXHAUST GRILLS, AND THE LEAVING AND ENTERING AIR TEMPERATURE (°F) FROM SUPPLY GRILLS AND EVAPORATORS.
15. THERMOSTATS SHALL BE A PROGRAMMABLE THERMOSTAT CAPABLE OF AUTOMATIC SETBACKS.
* CONTRACTOR SHALL PROVIDE OWNER THE INSTRUCTION MANUAL FOR PROGRAMMING INSTALLED THERMOSTATS.
16. ALL INSULATION WILL HAVE FIRE/SMOKE RATING LESS THAN 25/50.
17. MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCH. PLUMBING, ELECTRICAL AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE.

NEW 1.5-TON AIRCON HEAT PUMP	
UNIT DESIGNATION	NEW AC-2
AREA SERVED	SEE PLANS
MANUFACTURER	AIRCON
WALL HUNG AHU-2 MOD #	ASLEK4H4S18
CU MODEL #	ASLCI4H4S18
CU BREAKER	20/20
TOTAL CAP BTUH	18,000
SENSIBLE CAP BTUH	12,600
COIL ENTERING COND	80/67
AMBIENT AIR TEMP	95°
TON	1.50
HEAT PUMP BTUH/HSPF2	17,500/9.5
CONDENSING UNIT RLA	11.7
VOLTAGE FOR SYSTEM	1-60-208/230
CFM	300-600
FAN COIL UNIT LOCATION	ATTIC
COND UNIT LOCATION	GRDE
REFRIGERANT LINES SIZES	OUTSIDE
SUCTION (INCH)	1/2"
LIQUID (INCH)	1/4"
SEER2/EER2	19.0/11.4

OUTDOOR AIR CALCS				
NEW (AC-2) HEAT PUMP				
OCCUPANCY CLASSIFICATION	SF SERVED	OCCUPANT LOAD (Pz)	ESTIMATED OUTSIDE AIR REQUIRED (CFM) $Vbz = RpPz + RaAz$	
OFFICES	312	$5 \times 312 / 1000 = 2$ (USE 3, 1/OFFICE)	$= 3 \times 5 + .06 \times 312$	$= 34$ CFM
THE FOLLOWING IS BASED ON FBC 7TH ED 2020 MECHANICAL CODE, TABLE 403.3			TOTAL = 34 CFM	



LEGEND:

C.U. ON PAD @ GRDE MIN 1' ABOVE B.F.E
DRAIN LINES
INSULATED WITH 1/2" NON-SLIT INSULATION.

DISCONNECT BOX'S TO HAVE
110 GRND FAULT OUTLET.

DRAIN LINE FROM AHU TO TERMINATE @ GRDE MIN 12" FROM
EXTERIOR WALL.

ALL MEASUREMENTS ARE CLEAR INSIDE
DIMENSIONS

ALL DUCTS TO HAVE MANUAL DAMPER
INSTALLED AT TAKEOFF FROM PLENUM.

LIQUID AND SUCTION LINES SIZE AS PER
MANUFACTURER SPECIFICATIONS

CONDENSATE DRAIN LINE
TO EMPTY INTO CONDENSATE WELL.

THERMOSTAT

BATHROOM EXHAUST FAN

MANUAL VOLUME DAMPER

TOTAL AC AREA
312 SQ. FT.

Through Penetrants – One metallic pipe, conduit, tubing or flexible metal pipe installed concentrically or eccentrically within opening. Annular space between penetrant and periphery of opening to be min 0 in. (0 mm point contact) to max 2 in. (51 mm). Penetrant to be rigidly supported on both sides of wall. The following types and sizes of penetrants may be used*.

Fill, Void or Cavity Material* – Caulk or Sealant – Min 5/8 in. (16 mm) thickness of caulk applied within annulus, flush with both surfaces of wall or roof. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrate interface at point contact location on both sides of wall or roof.
(15WB+, CP 25WB+ caulk or FB-3000 WT sealant*Bearing the UL Classification Mark. This Material was extracted and drawn by 3M Fire Protection Products from the 2008 edition of the UL Fire Resistance Directory.)

PROPOSED MECHANICAL FLOOR PLAN

1/4" = 1'

REVISIONS	BY

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by Ghasem
Khavanin
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DAVIE, FL 33330
(954) 224-1380

MECHANICAL PLANS FOR: Pompano Beach Credit Union
420 NE 19th Ave.
Pompano Beach, FL 33060

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ENGINEERED & DESIGNED BY: M.J.A.
CHECKED BY: G.K.
MIKAH ABBOTT
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POMPANO BEACH FL
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EMAIL: energycalc@hotmail.com
DATE: 02/02/2023
SCALE: 1/4" = 1'
PROJECT: CREDIT UNION

SHEET
M-1
OF 1 PAGES