

**MECHANICAL GENERAL NOTES:**

1. THESE DRAWINGS ARE DIAGRAMMATIC. ALL OFFSETS, FITTINGS, TRANSITIONS AND ACCESSORIES ARE NOT SHOWN. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL ITEMS REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM. DO NOT SCALE DRAWINGS FOR INSTALLATION.
2. ALL WORK SHALL BE PERFORMED IN A FIRST CLASS WORKMANLIKE MANNER BY LICENSED CONTRACTORS.
3. THE CONTRACTOR SHALL OBTAIN AT HIS EXPENSE ALL NECESSARY FEES PERMITS AND TESTS.
4. ALL WORK SHALL CONFORM TO ALL APPLICABLE LOCAL, STATE AND NATIONAL CODES. NO CONTRACTOR SHALL BID UNLESS FAMILIAR WITH THESE CODES.
5. CORRECTION OF DEFECTS TO THIS WORK SHALL BE MADE PROMPTLY WITHOUT CHARGE TO THE OWNER. REPAIR AND REPLACEMENT FOR DAMAGE CAUSED BY THIS CONTRACTOR SHALL BE MADE PROMPTLY WITHOUT CHARGE TO THE OWNER.
6. ALL WORK OF THIS TRADE SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID ANY INTERFERENCES THAT MAY DELAY PROGRESS OF CONSTRUCTION.
7. THE CONTRACTOR SHALL INCLUDE THE WORK OF ALL REQUIRED SUB-CONTRACTORS IN HIS BID. ALL WORK SHALL BE TESTED, BALANCED, ETC., AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
8. EQUIPMENT SHALL BEAR A U.L. OR OTHER RECOGNIZED LABEL, NAMEPLATES, WIRING DIAGRAMS, AND ENERGY RATINGS AS APPLICABLE.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND ACCESSORIES TO BE READILY ACCESSIBLE FOR SERVICING, TESTING, BALANCING, AND REPLACEMENT.
10. THE CONTRACTOR SHALL PROVIDE A WRITTEN GUARANTEE AGAINST DEFECTS IN ALL MATERIALS AND WORKMANSHIP FOR ONE YEAR FROM ACCEPTANCE WITH FOUR ADDITIONAL YEARS OF WARRANTY ON COMPRESSORS.
11. THE CONTRACTOR SHALL PROVIDE THREE COPIES OF SUBMITTAL DATA, SHOP DRAWINGS, AND AT COMPLETION OF THE PROJECT TWO SETS OF OPERATION AND MAINTENANCE MANUALS FOR ALL PROJECT ITEMS.
12. PROVIDE ALL CONTROLS, STARTERS, CONTROL WIRING, DISCONNECTS, AND OTHER ELECTRICAL EQUIPMENT AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
13. THE HVAC CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ON SITE A COMPLETE AND NEATLY DRAWN COMPREHENSIVE AS-BUILT SET OF PLANS UPON COMPLETION, WHICH ARE SUITABLE FOR SUBMISSION TO THE BUILDING DEPARTMENT AND TO THE OWNER.
14. PRIOR TO ACCEPTANCE BY THE OWNER THE SYSTEMS SHALL BE TESTED AND BALANCED BY THE CONTRACTOR. PROVIDE A TYPED WRITTEN REPORT.
15. SUPPLY AND INSTALL DUCT MOUNTED SMOKE DETECTORS AS REQUIRED.
16. COORDINATE LOCATION OF CEILING DEFUSERS, GRILLES AND REGISTERS IN THE FIELD WITH LIGHTS AND ARCHITECTURAL ELEMENTS.
17. ALL GRILLES TO BE TITUS OR METALLARE UNLESS OTHERWISE NOTED. SIZES AS SHOWN ON PLANS. ALUMINUM CONSTRUCTION.
18. ALL DUCT WORK SHALL BE BUILT AND INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS AND LOCAL BUILDING CODES.
19. ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS.
20. ALL OUTSIDE AIR DUCTWORK SHALL BE SHEATHED WITH EXTERIOR R-6 INSULATION. PROVIDE BLANKET TYPE INSULATION IN CONCEALED SPACES, AND BOARD TYPE IN EXPOSED AREAS.
21. ALL EXHAUST AIR DUCT SHALL BE GALVANIZED SHEET METAL CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH ASHRAE AND SMACNA STANDARDS.
22. FLEXIBLE DUCT, WHERE SHOWN, SHALL BE U.L. CLASS 1, R-6 INSULATION.
23. LOW PRESSURE SUPPLY AND RETURN RECTANGULAR DUCTWORK IS RIGID DUCTBOARD, 1 IN. THICK, R-4.2 INSULATION.
24. PROVIDE ELBOW TURNING VANES IN ALL RECTANGULAR DUCTS WHERE TURNS ARE GREATER THAN 45 DEGREES.
25. PROVIDE BACKDRAFT DAMPERS FOR ALL EXHAUST FANS.
26. VERIFY ALL THERMOSTAT LOCATIONS WITH THE LANDLORD.
27. CONDENSATE DRAIN PIPING SHALL BE ABOVE GRADE COPPER DRAIN, WASTE AND VENT FITTINGS. INSULATE ALL CONDENSATE PIPING W/3/4" MCOA. IMPOLOCK PIPE INSULATION.

**OUTSIDE AIR VENTILATION CALCULATIONS**

MARK	AHU-2	AHU-3
AREA TYPE	RECEPTION	BREAK OFFICE
SQUARE FEET OF AREA	184	80
CFM/50.FT. REQUIRED	0.06	0.06
TOTAL OCCUPANTS	2	2
CFM/PERSON REQUIRED	5	5
AREA CFM REQUIRED	21	15
TOTAL ZONE REQUIREMENT - You	168	80
HIGHEST ZONE - You	0.11	0.20
EFFICIENCY - Ev	0.95	0.16
TOTAL SYSTEM REQUIREMENT	177	142

ABOVE PER ASHRAE 62.1, 2007  
RECEPTION AREA OCCUPANCY AVERAGED PER 62.1.6.2.6.2

**SYMBOL LEGEND**

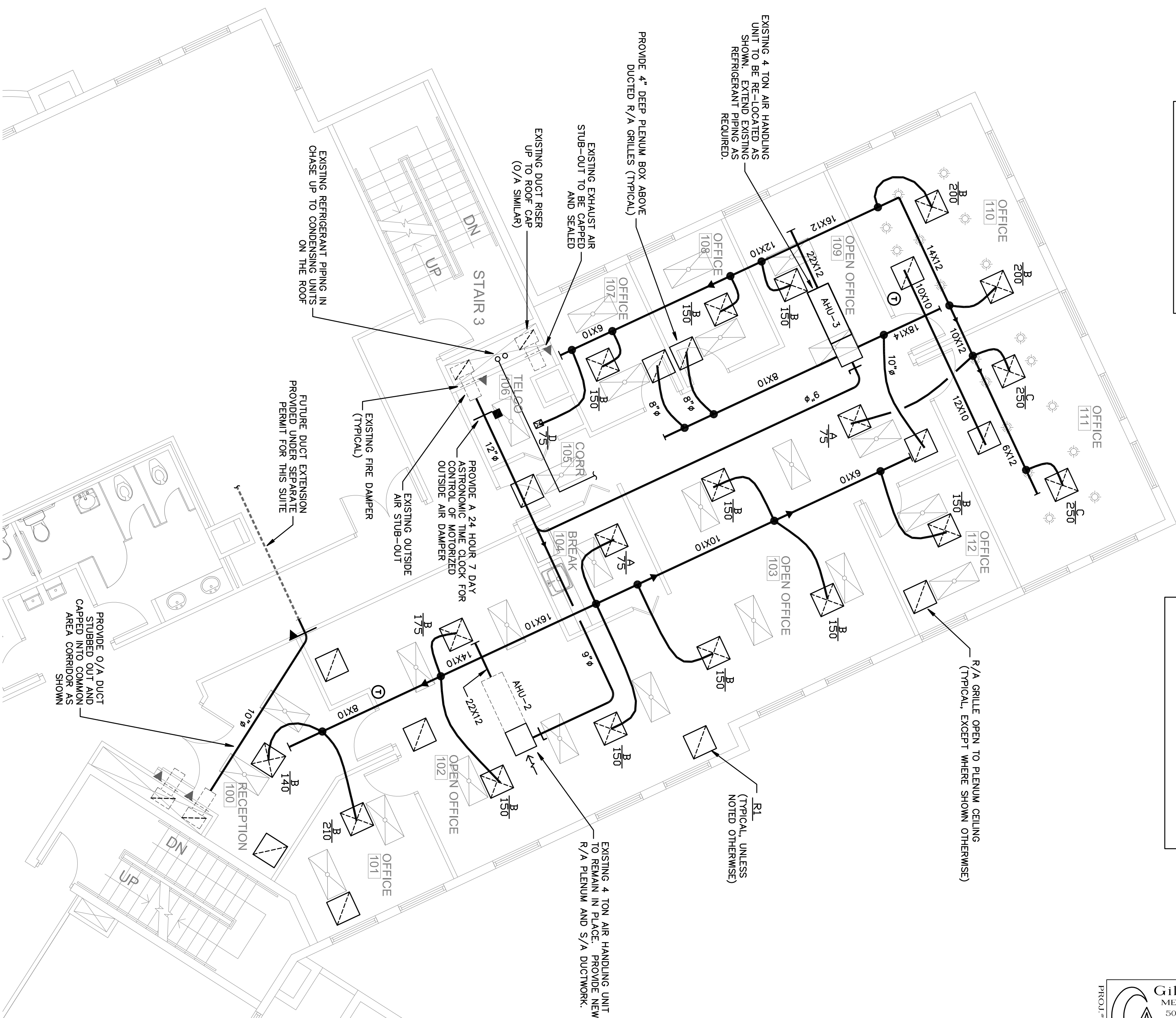
- EQUIPMENT AS NOTED
- SUPPLY AIR DIFFUSER AS NOTED
- RETURN/TRANSFER GRILLE AS NOTED
- DUCTWORK AS NOTED
- DUCT TRANSITION
- FLEXIBLE DUCT TAKE-OFF WITH VOLUME DAMPER
- FLEXIBLE DUCT, U.L. CLASS 1
- GRANTY BACKDRAFT DAMPER
- GREENHECK VDR33 MOTORIZED BACKDRAFT & BALANCING DAMPER
- MANUAL VOLUME DAMPER
- THERMOSTAT AS NOTED
- DUCT SMOKE DETECTOR
- REMOTE TEST SWITCH WITH AUDIBLE & VISUAL ALARMS
- CONNECTION TO EXISTING EQUIPMENT
- AIR DEVICE TYPE / CFM

**ABBREVIATIONS**

AHU	AIR HANDLING UNIT
CU	CONDENSING UNIT
S/A	SUPPLY AIR
R/A	RETURN AIR
O/A	OUTSIDE AIR
E/A	EXHAUST AIR
CFM	CUBIC FEET PER MINUTE
MVD	MANUAL VOLUME DAMPER (OPPOSED BLADE TYPE)
CD	CONDENSATE DRAIN

ALL EXISTING HVAC EQUIPMENT OTHER THAN AHU-2 IS TO BE REMOVED AND RETURNED TO THE OWNER FOR FUTURE USE. REMOVE ALL ASSOCIATED DUCTWORK. UN-USED REFRIGERANT DUCTING IS TO BE REMOVED AND EXTENDED INTO THE REAR STAIRS. ALL REFRIGERANT CONNECTIONS UNDER SEPARATE PERMIT.

THE CONTRACTOR IS TO INSPECT TEST AND REPAIR ALL EXISTING EQUIPMENT. ALL EXISTING AIR HANDLING UNIT OPERATION, DEFECTS ARE TO BE REPAIRED PRIOR TO PERMITTING WORK. REPORT ANY NON-OPERATIONAL OR DEFICIENT EQUIPMENT TO THE LANDLORD. DO NOT REMOVE, ALTER OR DISCONNECT ANY EQUIPMENT PRIOR TO TESTING OR WITHOUT LANDLORDS APPROVAL.



**HVAC FLOOR PLAN**

SCALE: 3/16" = 1'-0"

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**REVISIONS**

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DRAWN BY GDR  
CD  
12/17/12

**M-1**