

**GENERAL NOTES**

- SUPERVISING CONTRACTOR SHALL REFER TO AND COORDINATE WITH MECHANICAL, STRUCTURAL, ELECTRICAL AND ELEVATOR DRAWINGS AND INDIVIDUAL SCOPE OF WORK FOR EXACT DESCRIPTION OF EACH CONTRACTOR'S RESPONSIBILITIES.
- INDIVIDUAL CONTRACTORS SHALL REFER TO AND COORDINATE WITH ARCHITECTURAL, ELECTRICAL, ELEVATOR AND STRUCTURAL DRAWINGS, INCLUDING WORK FOR ALL CONCRETE PADS, WALL/ROOF PENETRATIONS, TRENCHING, PUMP PITS AND OTHER RELEVANT DETAILS.
- CONTRACTOR SHALL CHECK AND VERIFY THE EXACT LOCATION OF ALL PIPE PENETRATIONS, SUPPORTS AND ROUTING AND MAKE CERTAIN THERE ARE NO OBSTRUCTIONS AND INTERFERENCES. PRIOR TO INSTALLATION.
- CONTRACTOR SHALL FURNISH AND MOUNT ALL MOTORS, STARTERS AND CONTROL DEVICES FOR ALL EQUIPMENT SUPPLIED. REFER TO ELECTRICAL DRAWINGS FOR MOTORS AND CONTROL EQUIPMENT.
- CONTRACTOR SHALL REFER TO AND COORDINATE WITH ELECTRICAL DRAWING AND WORK ENSURING NO PIPE IS RUN DIRECTLY ABOVE NOR WITHIN THREE FEET OF ELECTRICAL PANELS.
- ALL PIPES PENETRATED THROUGH WALLS, FLOORS, AND UNDERGROUND FOUNDATION WALLS SHALL BE PROVIDED WITH REQUIRED OPENINGS, SLEEVES, SEALS AND FIRE STOP PACKINGS AS NECESSARY.
- ALL PIPE ROUTING DETAILED IN THE DESIGN DRAWINGS DEPICT SUGGESTED ROUTING AND LOCATIONS. CONTRACTOR SHALL FIELD VERIFY ALL ROUTING PRIOR TO DEMOLITION OR INSTALLATION. ALTERNATE PIPE ROUTING BASED ON FIELD CONDITIONS IS ACCEPTABLE BASED ON ENGINEER AND FACILITY APPROVALS.
- SEE ELECTRICAL DRAWINGS AND DETAILS FOR INSTALLATION AND FINAL CONNECTION FOR SPRINKLER FLOW SWITCHES. ALL SPRINKLER PIPING AND WORK SHALL BE DONE I.A.W. NFPA 13.
- MECHANICAL & ELECTRICAL CONTRACTORS TO COORDINATE WITH EACH OTHER THE QUANTITY, LOCATION AND SIZE OF ALL WALL, FLOOR & ROOF PENETRATIONS.
- MECHANICAL CONTRACTOR TO FIRESTOP AND WEATHERPROOF ALL PENETRATIONS.

**PIPE SUPPORTS**

- PROVIDE ADEQUATE SUPPORT FOR ALL PIPE AND IN-LINE COMPONENTS TO PREVENT VIBRATION OR SWAYING, AND TO ASSURE THAT EQUIPMENT IS NOT STRESSED BY PIPING WEIGHT OR EXPANSION, AS PER CODE.
- FOR COPPER PIPE AND TUBING, USE CLAMPS AND SUPPORTS, WITH ELECTROPLATED COPPER FINISH.
- MAXIMUM SUPPORT SPACING FOR HORIZONTAL PIPING:
  - A. STEEL: 6 FEET
  - B. COPPER/TUBING 2 INCH AND SMALLER: 6 FEET.
  - C. POLYPROPYLENE PIPE : 5 FEET
- PROVIDE ADDITIONAL SUPPORTS AT CHANGES IN DIRECTION, BRANCH PIPING AND RUN OUTS OVER 4 FEET AND CONCENTRATED LOADS DUE TO VALVES, AND OTHER SIMILAR ITEMS.
- PROVIDE SUITABLE AND SUBSTANTIAL SUPPORTS FOR ALL PIPING. DO NOT HANG PIPING FROM DUCTWORK OR OTHER PIPING. HANGERS OR AS APPROVED:
  - SWIVEL SPLIT RING, GRINNELL FIG. 104
  - WROUGHT & PIPE CLAMP, GRINNELL FIG. 216
  - ADJUSTABLE WROUGHT CLEVIS, GRINNELL FIG. 260
- CONNECTION TO STRUCTURE FOR PIPING SUPPORTS; USE BEAM CLAMPS OR SUITABLE EXPANDABLE ANCHOR BOLTS.
- CONTRACTOR TO SUBMIT FOR APPROVAL ALL PERTINENT DESIGN DATA RELATING TO SUPPORT OF PIPE.

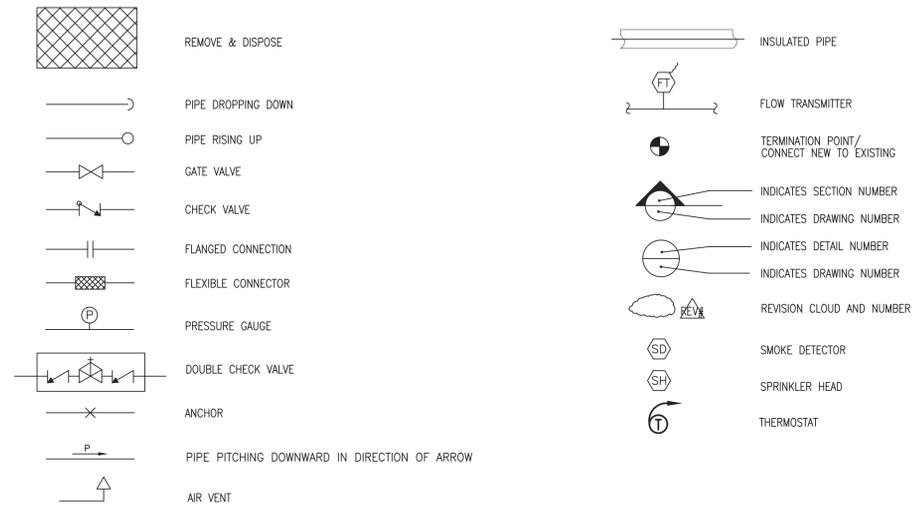
**PIPING**

- PROVIDE PIPES, PIPE FITTINGS, PIPE SPECIALTIES, AND PIPE SUPPORTS AS SPECIFIED HEREIN, AS SHOWN ON THE DRAWINGS AND AS NEEDED FOR A COMPLETE AND PROPER INSTALLATION.
- PIPE USED SHALL BE FREE FROM SCALE OR RUST. EACH LENGTH OF PIPE SHALL BE PROPERLY MARKED AT THE MILL FOR PROPER IDENTIFICATION WITH NAME OR SYMBOL OF MANUFACTURER. DIMENSIONS FOR STEEL PIPE SHALL BE IN ACCORDANCE WITH THE ANSI B.36.10. DIMENSIONS FOR RED BRASS PIPE SHALL BE IN ACCORDANCE WITH ASTM B251.
  - A) STEEL PIPE
    - 1) BLACK OR GALVANIZED; ASTM A106 GRADE B, SEAMLESS STANDARD WEIGHT; SCHEDULE 40
    - 2) STEEL PIPE SHALL BE MANUFACTURED BY: U.S. STEEL CO. SAWHILL TUBULAR CO. NORTH STAR STEEL CO. SHARON TUBE CO. KOPPEL STEEL CORP.
  - B) COPPER TUBING
    - 1) HARD TEMPER, WATER TUBE TYPE L; REFRIGERANT TUBE DRY SEALED, HARD ANNEALED; ASTM B88., MC1107.4
    - 2) COPPER TUBING AND FITTING SHALL BE MANUFACTURED BY: MUELLER INDUSTRIES PHELPS-DODGE COPPER PRODUCTS CORP. REVERE COPPER & BRASS, INC. NIBCO CO.

**3. FITTINGS:**

- A) STEEL:
  - 1) STEEL FITTINGS, EXCEPT COUPLINGS & UNIONS, 2 1/2" AND LESS; THREADED PATTERN, STANDARD WEIGHT, BLACK CAST IRON, SUITABLE FOR A WORKING STREAM PRESSURE OF 125 PSI, EXCEPT AS OTHERWISE SPECIFIED BELOW. THREADED FITTINGS SHALL CONFORM TO FEDERAL SPECIFICATION WW-P-501E, TYPE A, CLASS 1.
  - 2) MALLEABLE IRON, STEAM PATTERN THREADED FITTINGS SHALL CONFORM TO ANSI/ASME B16.3 FOR 300 LB CLASS.
  - 3) STEEL PIPE FITTINGS SHALL BE MANUFACTURED BY: GRINNELL CORP. CRANE CO. STOCKHAM VALVES & FITTINGS TUBE-LINE VICTAULIC CO. OF AMERICA
- B) UNIONS 3" SIZE AND UNDER SHALL BE STEEL, MALLEABLE IRON, 300 LB CLASS WITH BRASS TO IRON OR BRASS TO BRASS SEATS AND BRONZE TO BRONZE, BRONZE TO IRON OR BRASS TO IRON GROUND JOINT, EXCEPT AS OTHERWISE SPECIFIED. THE PRESSURE RATING SHALL BE INDICATED ON THE UNION.
  - 1) UNIONS SHALL BE MANUFACTURED BY: E.M. DART CO. S.G. FLAGG CO. GRINNELL CO. STOCKHAM VALVES & FITTINGS NIBCO CO.
- C) FITTINGS FOR TYPE "L" COPPER TUBING SHALL BE WROUGHT COPPER SOLDER JOINT FITTINGS SUITABLE FOR BRAZING AND SHALL BE IN ACCORDANCE WITH ANSI B.16.22-1973. TYPE "L" FITTINGS SHALL HAVE A MINIMUM WORKING WATER PRESSURE OF 150 PSI.
  - 1) FLUX FOR BRAZING SHALL BE EQUAL TO "HANDY FLUX" AND SHALL COMPLY WITH NAVY DEPARTMENT SPEC. 51F 4a.
  - 2) THE SILVER BRAZING ALLOY FOR BRAZED JOINTS SHALL BE SIMILAR TO HANDY & HARMON SIL-FOS BRAZING ALLOY HAVING A SILVER CONTENT OF NOT LESS THAN 15% AND A FLOW POINT OF 1300° FAHRENHEIT.
  - 3) TYPE "L" FITTINGS SHALL BE MANUFACTURED BY: NIBCO INC. STANLEY G. FLAGG & CO.

**MECHANICAL LEGENDS AND SYMBOLS**



**AIR COOLED CONDENSER INSTALLATION NOTES:**

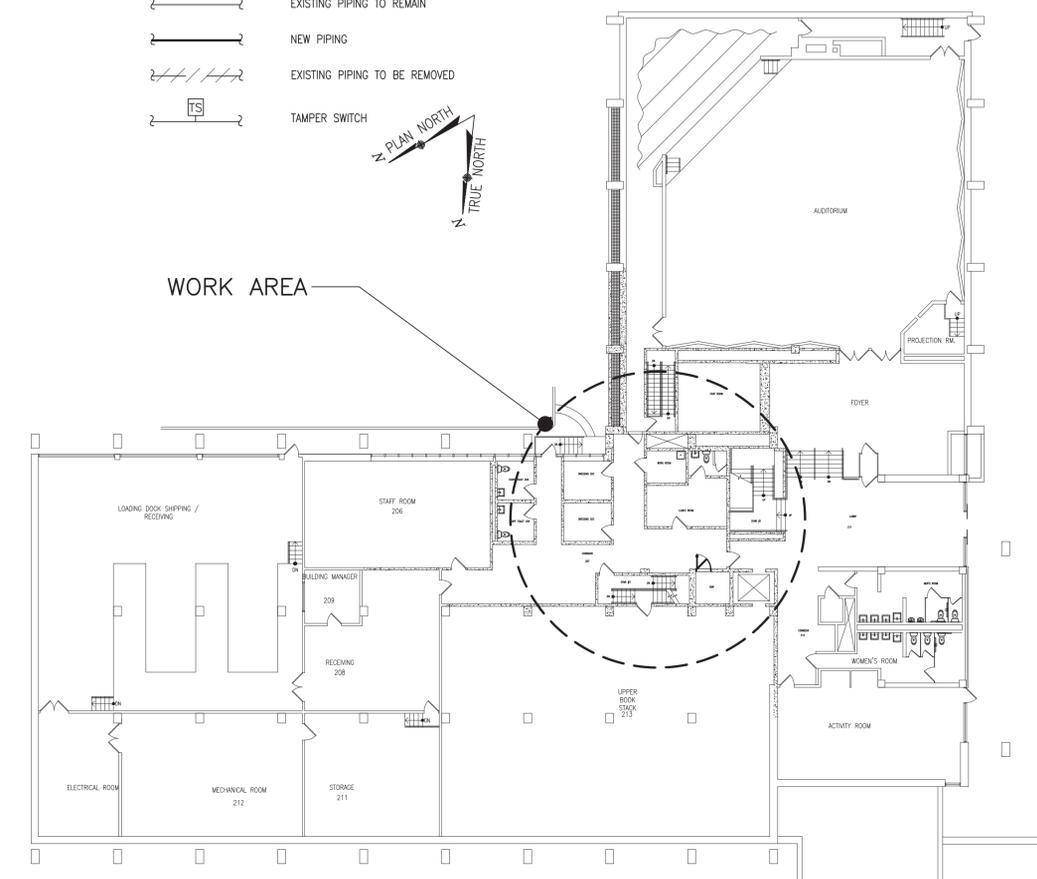
- FOLLOW ALL MANUFACTURERS INSTALLATION GUIDLINES FOR UNIT CLEARANCES AND MOUNTING RECOMMENDATIONS / HARDWARE. FINAL UNIT LOCATIONS TO BE DETERMINED AND VERIFIED IN FIELD WITH FACILITIES APPROVAL.
- REFRIGERANT LINES SHOULD NOT BE BURIED IN THE GROUND.
- THE VAPOR LINE MUST BE INSULATED. USE MINIMUM OF 1/2" THICK INSULATION. CLOSED CELL INSULATION IS RECOMMENDED IN ALL LONG LINE APPLICATIONS.
- LIQUID LINES SHOULD BE 3/8" ONLY. DO NOT RESIZE LINES FOR ADDITIONAL LENGTH.
- FOR LINE LENGTHS OVER 50FT, A CRANKCASE HEATER SHOULD BE ADDED TO THE SCROLL COMPRESSOR (ALL NON-SCROLL COMPRESSOR UNITS HAVE STANDARD CRANKCASE HEATERS). CRANKCASE HEATERS PREVENT REFRIGERANT MIGRATION BACK TO THE COMPRESSOR DURING THE OFF CYCLE.
- ANYTIME THE EQUIVALENT LENGTH IS OVER 100FT, A LIQUID LINE SOLENOID MUST BE USED AND INSTALLED WITHIN 2FT OF THE FAN COIL. THE SOLENOID MUST ALSO BE USED ANYTIME THERE IS A VERTICAL LIFT OVER 25FT.
- CONDENSER PISTON SIZE AND REFRIGERANT PIPE SIZE ARE SPECIFIED BASED ON ELEVATION AND PIPE ROUTING AS SHOWN ON DESIGN DRAWINGS. FIELD CHANGES TO PIPE ROUTING MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION AND/OR PURCHASE OF THE CONDENSING UNIT.
- MAX. ELEVATION DIFFERENCE BETWEEN FAN COIL UNIT AND CONDENSER IS 150FT
- SEE ELECTRICAL AND STRUCTURAL DRAWINGS FOR FINAL ELECTRICAL CONNECTIONS AND SPECIFIC MOUNTING DETAILS.
- ANYWHERE WHERE REFRIGERANT LINES ARE VISABLE AND CAN BE POTENTIALLY DAMAGED, LINES SHOULD BE ENCASED IN A SECURED SHEET METAL "BOXED" ENCLOSURE WITH PIPING ACCESS FOR PROTECTION.

**WALL MOUNTED FAN COIL UNIT INSTALLATION NOTES:**

- FOLLOW ALL MANUFACTURERS INSTALLATION & MOUNTING INSTRUCTIONS, GUIDELINES AND STARTUP PROCEDURES.
- INSTALL "SLIM-LINE" THERMOSTAT WHERE INDICATED ON DESIGN DRAWINGS OR AS DIRECTED BY THE OWNER. FIELD ROUTE THERMOSTAT CONTROL WIRING AS PER ELECTRICAL WIRING SPECIFICATIONS & MANUFACTURERS INSTRUCTIONS.
- INSTALL FAN COIL UNIT CONDENSATE DRAIN LINE AND DRIP PAN AS PER MANUFACTURERS INSTRUCTIONS. ROUTE DRAIN PIPING ALONG WALL TO J.C. SLOP SINK, PITCH TO DRAIN IN SINK
- FOLLOW ALL MANUFACTURERS INSTALLATION GUIDLINES FOR UNIT CLEARANCES AND MOUNTING RECOMMENDATIONS / HARDWARE. FINAL UNIT LOCATIONS TO BE DETERMINED AND VERIFIED IN FIELD WITH FACILITIES APPROVAL. ADJUST THREADED ROD ELEVATION AND LOCATION TO SUIT INDIVIDUAL ELEVATOR MACHINE ROOM CEILING.

**ELECTRICAL WIRING AND CONTROL:**

- MECHANICAL CONTRACTOR SHALL PROVIDE TRANSFORMERS AND MAKE ALL CONNECTIONS TO MOTORIZED DAMPERS, DIFFUSERS AND REMOTE TEMPERATURE ADJUST UNITS.
- ALL CONTROL WIRING SHALL BE DONE ACCORDING TO SEQUENCE OF OPERATION, AS SPECIFIED, AND IN ACCORDANCE WITH MANUFACTURER CONTROL DATA.



**1 LOWER FLOOR PLAN-WORK AREA**  
M-001 SCALE: 3/32" = 1'-0"

AIR HANDLING UNIT SCHEDULE																
UNIT	LOCATION & SERVICE	TYPE	TONS COOLING	SIZE (IN) (LxWxD)	MAX CFM	BLOWER MOTOR DATA					VAPOR/ LIQUID LINE	WEIGHT	SOUND PRESS	MAKE/ MODEL	REMARKS/ OPTIONS	
						FUSE	MCA	PHASE	CYCLE	VOLTS						BTU/H
AHU-1	ELEVATOR MACHINE ROOM	SPLIT SYSTEM AIR HANDLER WALL MOUNTED	1.5	36"x12"x10"	425	15	1	1	60	208/230	18,000	1/2" / 1/4"	29	43	MITSUBISHI / PKA-A18NHA7	MINI CONDENSATE PUMP, L-CONNECTOR PIPE, WIND BAFFLE, WIRED WALL MOUNT CONTROLLER, LOW AMBIENT KIT, PROVIDE SECURITY CAGE FOR OUTDOOR UNIT WITH A 16 GA POWER-COATED FRAME, EXPANDED METAL SIDES & TOP, & TWO PADLOCKS. SECURE TO THE CONCRETE PAD WITH 3/8" SS CENTER-PIN TORX SCREWS USING SS DROP-IN ANCHORS. (AC-GUARD MODEL #ACMS OR EQUAL).
ACC-1	EXTERIOR ELEVATOR MACHINE ROOM	CONDENSER EXTERIOR MOUNTED		32"x12"x24"	20	13	1	60	208/230	89					48	

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1500 CENTRAL PARK AVE., YONKERS, NY

Drawing Title  
**GENERAL NOTES, LEGEND, SYMBOLS & SCHEDULE**

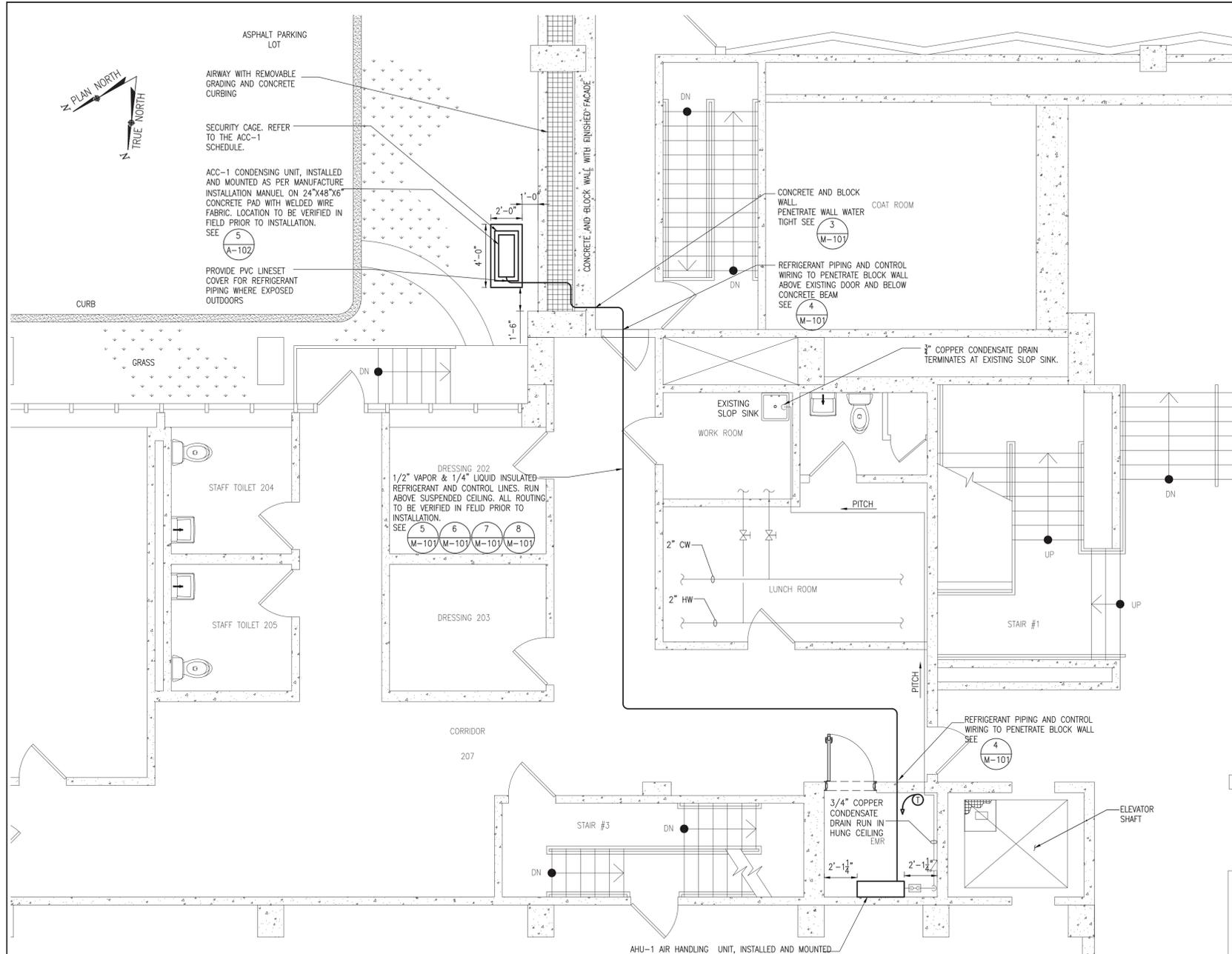
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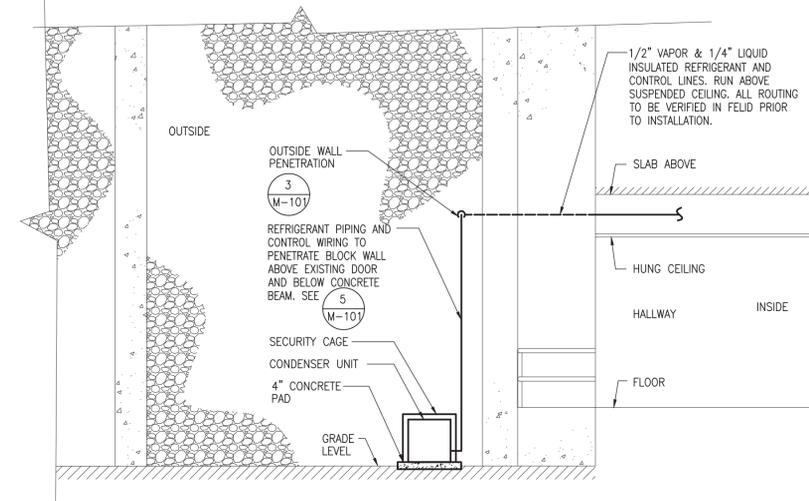
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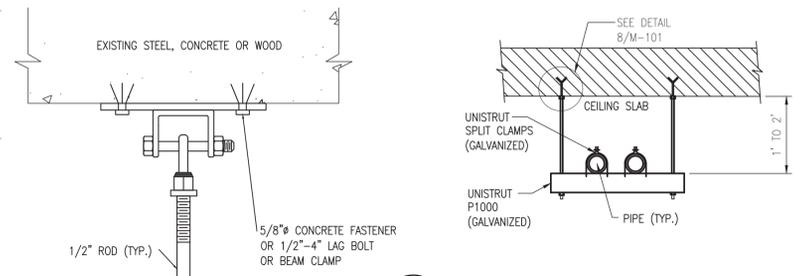


1 PARTIAL LOWER FLOOR AC - PLAN  
M-101 SCALE: 1/4" = 1'-0"

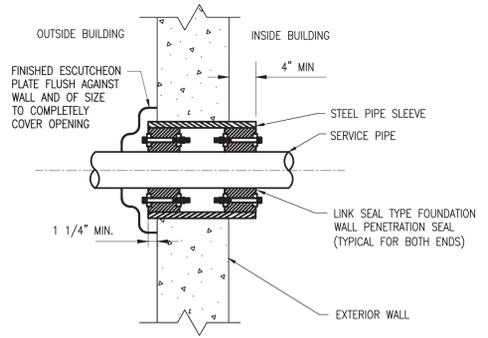


2 PARTIAL-ELEVATION  
M-101 SCALE: 1/8" = 1'-0"

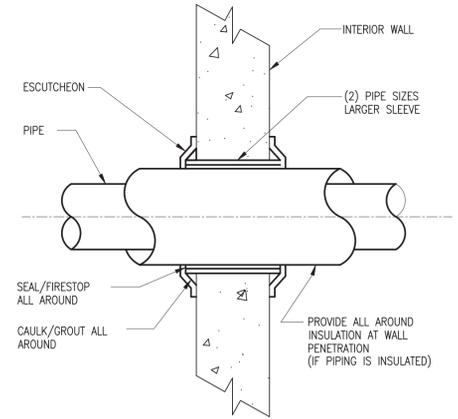
- NOTES:
1. ALL PIPE ROUTING TO BE FIELD VERIFIED PRIOR TO INSTALLATION.
  2. ALL WALL PENETRATIONS SHALL BE FIRESTOPPED AND/OR WATERTIGHT WITH STEEL SLEEVES.
  3. INSULATE REFRIGERANT LINES WITH 1/2" MIN CLOSED CELL INSULATION.
  4. ANYWHERE WHERE REFRIGERANT LINES ARE VISIBLE AND CAN BE POTENTIALLY DAMAGED, LINES SHOULD BE ENCASED IN A REMOVABLE SHEET METAL "BOXED" ENCLOSURE FOR PROTECTION.



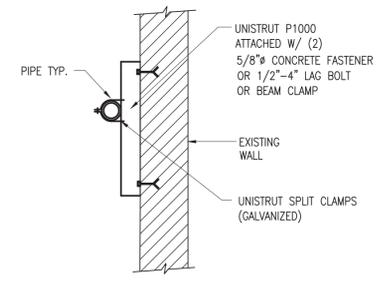
7 PIPING-CEILING SUPPORT DETAIL  
M-101 SCALE: NONE



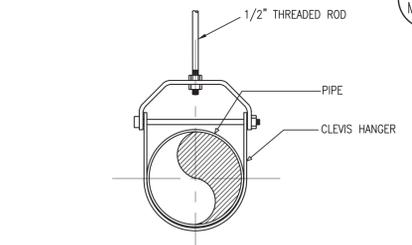
3 EXTERIOR WALL WEATHER TIGHT PIPE PENETRATION DETAIL  
M-101 SCALE: NONE



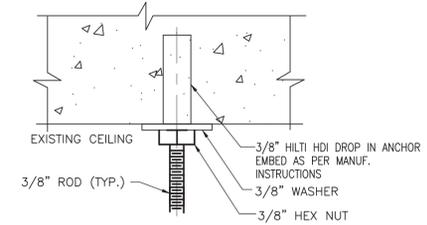
4 TYPICAL WALL PENETRATION  
M-101 SCALE: NONE



5 WALL SUPPORT  
M-101 SCALE: NONE



6 CLEVISES HANGER  
M-101 SCALE: NONE



8 HANGER DETAIL  
M-101 SCALE: NONE

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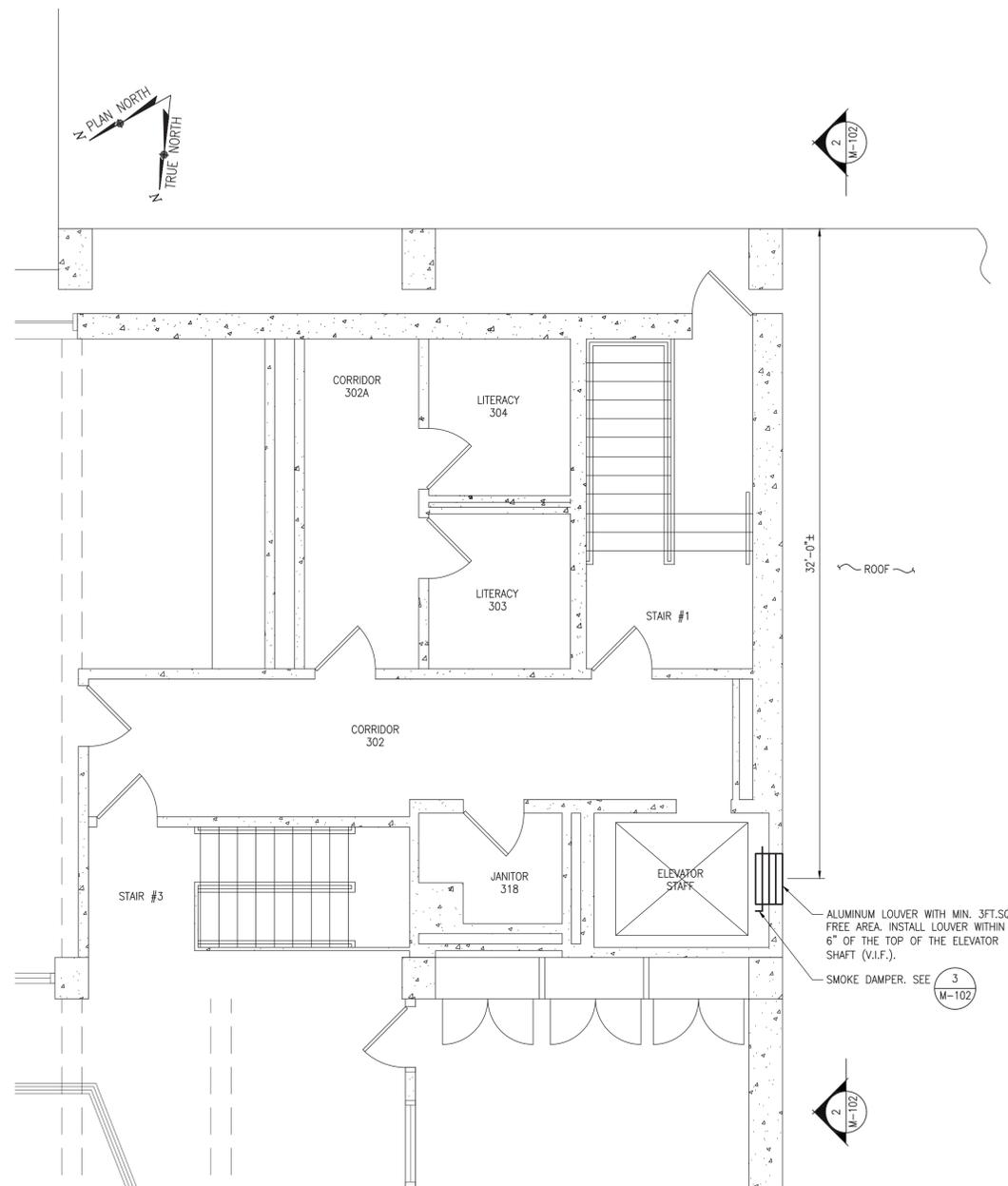
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Drawing Title  
**PARTIAL LOWER FLOOR PLAN & DETAILS**

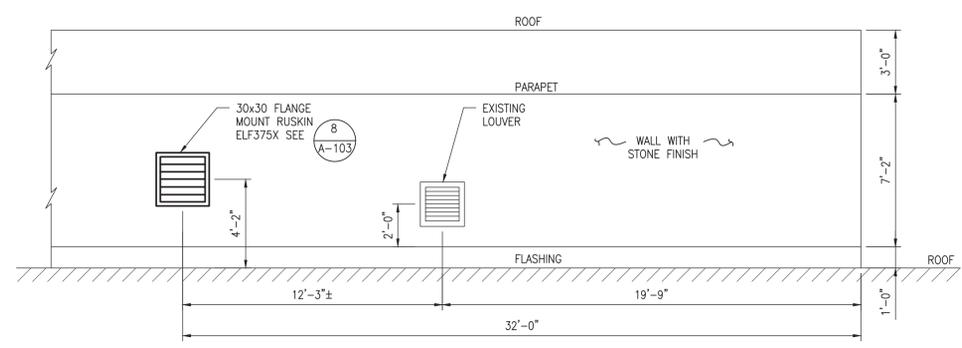
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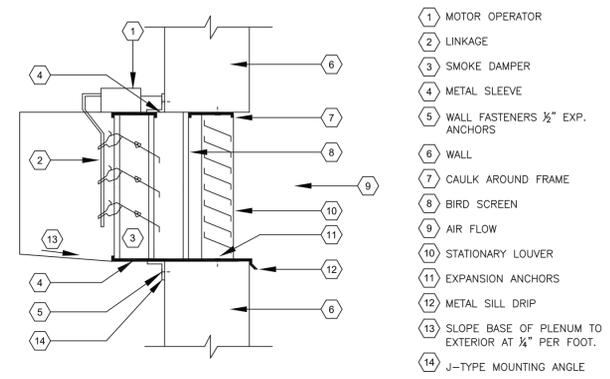
Drawing No. M-101



1 PART MEZZANINE & ROOF PLAN  
M-102 SCALE: 1/4" = 1'-0"



2 PART ROOF ELEVATION  
M-102 SCALE: 1/4" = 1'-0"



NOTES:  
1. PRIOR TO INSTALLATION OF LOUVER AND DAMPER, CONTRACTOR IS TO REVIEW INSTALLATION WITH THE OWNER.  
2. IN ALL CASES, WALL SLEEVES SHALL BE CONTINUOUS FROM INSIDE TO OUTSIDE AND SEALED WATER TIGHT.

3 HOISTWAY VENT DETAIL  
M-102 SCALE: N.T.S.

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Drawing Title MEZZANINE &  
ROOF FLOOR PLAN

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