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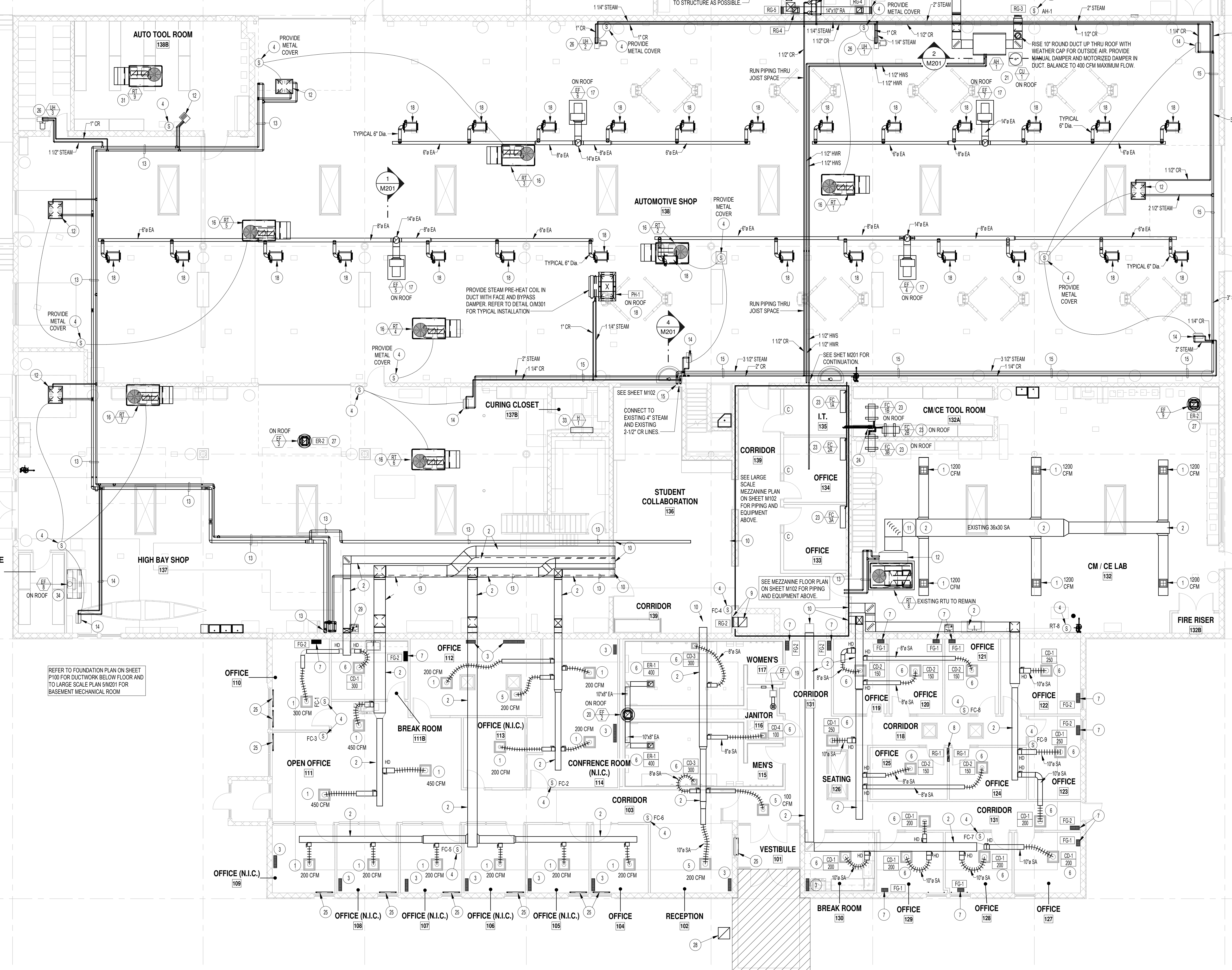
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REFER TO FOUNDATION PLAN ON SHEET P100 FOR DUCTWORK BELOW FLOOR AND TO LARGE SCALE PLAN SHEET P101 FOR BASEMENT MECHANICAL ROOM

1 MECHANICAL FLOOR PLAN
M101 1/16" = 1'-0"

SNOW MELT AREA 537 SQ. FT.
80,550 BTU WITH 4 LOOPS AT
200 FT LENGTH EACH. (8 GPM)

EXTEND SNOW
MELT PIPING 4'-0"
BEYOND STAIRS.

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PLAN NOTES:

- 1 EXISTING DIFFUSER OR RETURN GRILLE AND ASSOCIATED BRANCH DUCT TO REMAIN. PROTECT DURING CONSTRUCTION AND MAINTAIN CONNECT TO EXISTING DUCTWORK AND EXISTING FAN COIL UNIT LOCATED IN MEZZANINE MECHANICAL ROOM. RE-BALANCE EXISTING DIFFUSER TO MAXIMUM CFM WHERE INDICATED.
- 2 EXISTING MAIN SUPPLY AIR TRUNK DUCTWORK IN CEILING SPACE TO REMAIN. PROTECT DURING CONSTRUCTION AND MAINTAIN EXACT SIZES AND LOCATION OF EXISTING DUCTWORK. CONNECT NEW DUCTWORK TO EXISTING TRUNK DUCT AS SHOWN. FIELD VERIFY EXACT LOCATIONS OF EXISTING DUCTWORK.
- 3 EXISTING FLOOR GRILLE AND BOOT TO REMAIN. PROTECT DURING CONSTRUCTION. KEEP GRILLE AND BOOT CLEAN OF ANY DEBRIS.
- 4 PROVIDE AND INSTALL NEW WALL MOUNTED ROOM SENSOR AS SPECIFIED. SENSOR TO BE COMPATIBLE WITH JCI MEDVIS, VERSION 18. CONNECT NEW SENSOR TO EXISTING CORRESPONDING FAN COIL IN MEZZANINE MECHANICAL ROOM OR ROOF MOUNTED EQUIPMENT AS INDICATED. AND TO BUILDING (CAMPUS) CONTROL SYSTEM.
- 5 RELOCATE EXISTING CEILING DIFFUSER TO NEW CEILING GRID AS REQUIRED. PROVIDE NEW BRANCH DUCT AS REQUIRED TO CONNECT TO EXISTING MAIN TRUNK DUCT. BALANCE EXISTING DIFFUSER TO CFM AS INDICATED.
- 6 PROVIDE AND INSTALL NEW CEILING DIFFUSER OR EXHAUST GRILLE AS SPECIFIED. PROVIDE NEW BRANCH DUCT AS REQUIRED TO CONNECT TO EXISTING MAIN TRUNK DUCT AS SHOWN. FIELD VERIFY EXACT LOCATIONS OF EXISTING DUCTWORK.
- 7 PROVIDE AND INSTALL NEW FLOOR GRILLE AS SPECIFIED. COORDINATE CUTTING AND PATCHING OF EXISTING CONCRETE FLOOR WITH GENERAL CONTRACTOR. (REFER TO ARCHITECTURAL SHEETS) LOCATE NEW FLOOR GRILLES OVER EXISTING AIR TUNNEL BELOW FLOOR. SEE DETAIL GMS01 FOR TRIPIC INSTALLATION. (SEE FOUNDATION PLAN ON SHEET P100).
- 8 PROVIDE AND INSTALL WALL MOUNTED RETURN GRILLE AT 6" ABOVE FLOOR. DROP 12x12 RETURN DUCT DOWN IN WALL TO BELOW FLOOR AND CONNECT TO EXISTING RETURN DUCT. REFER TO PLUMBING FOUNDATION PLAN ON SHEET P100 FOR EXISTING DUCT LOCATION AND TO DETAIL HMS01 FOR DUCT CONNECTION.
- 9 INSTALL RETURN GRILLE AT 12" ABOVE FLOOR AND EXTEND DUCTWORK THRU CHASE WALL AS SHOWN AND TURN UP WITH 90 DEGREE ELBOW.
- 10 REFER TO MEZZANINE PLAN ON SHEET M102 FOR CONTINUATION OF DUCTWORK AND PIPING.
- 11 PROVIDE NEW SECTION(S) OF DUCTWORK AS REQUIRED WHERE HUMIDIFIER COLS WERE REMOVED. (SEE SHEET M100 AND P101). NEW DUCTWORK TO MATCH EXISTING SIZE, SHAPE AND ELEVATION. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.
- 12 EXISTING STEAM UNIT HEATER OR STEAM DUCT TO REMAIN. ALL ASSOCIATED STEAM AND CONDENSATE RETURN PIPING TO REMAIN. CONNECT EXISTING UNIT HEATER OR DUCT COIL TO NEW WALL MOUNTED CONTROL AS SHOWN.
- 13 EXISTING STEAM AND CONDENSATE RETURN PIPING RISING UP FROM BELOW FLOOR AND PIPING NEAR ROOF TO REMAIN. FIELD VERIFY EXACT SIZES AND LOCATIONS OF PIPING AND PROTECT DURING CONSTRUCTION. PROVIDE NEW FITTINGS AS REQUIRED IN EXISTING PIPING FOR RELOCATED UNIT HEATERS.
- 14 EXISTING UNIT HEATER TO BE RELOCATED. (REFER TO SHEET M100 FOR ORIGINAL LOCATIONS OF EXISTING UNIT HEATERS). CONNECT NEW STEAM AND CONDENSATE LINES TO EXISTING UNIT AS SHOWN AND CONNECT TO EXISTING AND/OR NEW MAIN STEAM AND CONDENSATE RETURN LINES. PROVIDE NEW SHUT-OFF VALVE ON STEAM LINE AND NEW 1" TRAP ON CONDENSATE RETURN LINES. KEEP ALL PIPING AS HIGH AS POSSIBLE. VALVE AND TRAP TO MATCH SIZE OF EXISTING EQUIPMENT PIPE CONNECTIONS. (FIELD VERIFY)
- 15 CONNECT NEW STEAM SUPPLY AND CONDENSATE RETURN PIPING TO EXISTING MAIN LINES. EXTEND NEW PIPING THRU NEW AUTOMOTIVE SHOP AS SHOWN AND CONNECT TO RELOCATED UNIT HEATERS. KEEP ALL PIPING AS HIGH AS POSSIBLE AND SUPPORT FROM ROOF STRUCTURE.
- 16 EXISTING ROOF TOP COOLING UNIT AND ROOF CURB TO REMAIN. EXISTING DUCT THRU ROOF AND CONCENTRIC DIFFUSER TO REMAIN. PROTECT EQUIPMENT AND DUCTWORK DURING PROJECT.
- 17 PROVIDE AND INSTALL NEW ROOF MOUNTED (VENT SET) EXHAUST FAN AS SPECIFIED. MOUNT FAN ON ROOF CURB AND DROP 14" ROUND DUCT DOWN THRU ROOF. CONNECT (2) 8" ROUND DUCTS FROM CAR EXHAUST SYSTEM TO 14" ROUND DUCT. PROVIDE VFD ON EXHAUST FAN MOTOR AND CONTROL WITH MANUAL CHECK-RSE SWITCH ON WALL AND WITH AIR FLOW SENSOR IN DUCT. SEE SECTION 11M01.
- 18 PROVIDE AND INSTALL SPRING LOADED VEHICLE EXHAUST HOSE REEL WITH 25'-4" DIA HOSE COMPLETE WITH EXHAUST ADAPTER, HOSE STOP, AND PULL KIT WITH CLAMP. REFER TO DETAIL LM301.
- 19 PROVIDE AND INSTALL NEW CEILING MOUNTED EXHAUST FAN AS SPECIFIED. RISE 8" ROUND DUCT UP THRU EXISTING ROOF WITH ROOF CAP. REFER TO DETAIL AMS01 FOR TYPICAL FAN INSTALLATION.
- 20 PROVIDE AND INSTALL NEW ROOF MOUNTED EXHAUST FAN AS SPECIFIED. MOUNT FAN ON ROOF CURB AND DROP 14x14 ROUND DUCT THRU ROOF AND CONNECT TO 20" DIA DUCTS AS SHOWN. REFER TO DETAIL BM301 FOR TYPICAL FAN INSTALLATION.
- 21 PROVIDE AND INSTALL NEW HVAC UNIT WITH HOT WATER COIL AS SPECIFIED. SUPPORT NEW UNIT FROM ROOF STRUCTURE. DROP 18x18 SUPPLY AND RETURN DUCTS DOWN AND EXTEND THRU WALL BELOW LOWER ROOF LEVEL.
- 22 PROVIDE AND INSTALL NEW ROOF MOUNTED HVAC UNIT AS SPECIFIED. EXTEND 18" ROUND SUPPLY DUCT AS SHOWN WITH SUPPLY GRILLES MOUNTED IN SIDE OF DUCT AT 45 DEGREE DOWN FROM HORIZONTAL. REFER TO DETAIL FMS01 FOR TYPICAL GRILLE INSTALLATION.
- 23 PROVIDE AND INSTALL NEW MINI-SPLIT SYSTEM AS SPECIFIED. MOUNT INDOOR UNIT ON WALL AS HIGH AS POSSIBLE. LOCATE CONTROLLER ON WALL NEAR DOORWAY. EXTEND REFRIGERANT PIPING THRU EXISTING WALL AND RISE UP IN CEILING TOOL ROOM TO ROOF LEVEL. MOUNT OUTDOOR UNIT ON ROOF WITH FRAMED TYPE SUPPORTS. KEEP UNIT AT LEAST 6" ABOVE ROOF LEVEL. CONNECT REFRIGERANT LINES TO OUTDOORS UNIT. REFER TO PIPING DIAGRAM HMB01 FOR TYPICAL CONNECTIONS.
- 24 RISE REFRIGERANT PIPING UP THRU ROOF WITH 4" DIAMETER GOOSENECK PIPE. CONNECT REFRIGERANT LINES TO OUTDOOR UNIT OF MINI-SPLIT SYSTEM. REFER TO DETAIL NMB01 FOR TYPICAL REFRIGERANT PIPE PENETRATION THRU ROOF. RUN 3/4" DRAIN LINE THRU WALL AND DROP DOWN TO EXISTING FLOOR DRAIN.
- 25 EXISTING FINTURE HEATERS TO REMAIN. LEAVE ZONE PIPING SHUT-OFF. NO WORK REQUIRED.
- 26 PROVIDE AND INSTALL NEW STEAM FIRED UNIT HEATER MOUNT AS HIGH AS POSSIBLE AND CONNECT TO NEW STEAM SYSTEM PIPING. REFER TO DETAIL NMB01 FOR TYPICAL STEAM AND CONDENSATE PIPING CONNECTIONS.
- 27 DROP 14x14 EXHAUST AIR DUCT THRU ROOF AND TRANSITION AS REQUIRED TO CONNECT TO 18x18 GRILLE. MOUNT GRILLE AT 6" BELOW ROOF DECK.
- 28 PROVIDE 24" x 24" x 24" CONCRETE VAULT IN GROUND FOR SNOWMELT MANIFOLDS AND/OR ZONE VALVES. REFER TO DETAILS ON SHEET M302 FOR TYPICAL MANIFOLD AND VALVE.
- 29 EXTEND EXISTING 12x6 SUPPLY AIR DUCT THRU WALL AS HIGH AS POSSIBLE. CONNECT TO EXISTING DIFFUSERS AS SHOWN. REFER TO ARCHITECTURAL PLANS FOR CUTTING AND PATCHING EXISTING WALLS.
- 30 PROVIDE AND INSTALL NEW CONDENSATE RETURN PUMP AS SPECIFIED. RISE DISCHARGE LINE UP INTO JOIST SPACE OF AUTO SHOP AND RUN BACK TO MEZZANINE MECHANICAL ROOM AS SHOWN. REFER TO DETAIL GMS02 FOR TYPICAL CONDENSATE PUMP PIPING.
- 31 PROVIDE AND INSTALL NEW ROOF MOUNTED COOLING UNIT. MOUNT ON NEW ROOF CURB. UNIT TO BE COMPLETE WITH ECONOMIZER INLET HOOD AND STEP-DOWN CONCENTRIC DIFFUSER BELOW CEILING. CONNECT DIFFUSER WITH 18" DIAMETER SUPPLY AND RETURN DUCTS AS RECOMMENDED BY MANUFACTURER.
- 32 PROVIDE AND INSTALL 36"x60"x12" FENESTRAE ON ROOF. MOUNT ON NEW ROOF CURB. PROVIDE MOTORIZED DAMPER IN DUCT AT BOTTOM OF ROOF AND INTERLOCK WITH EF-5, EF-6, AND EF-7 TO OPEN WHEN ANY FAN IS IN OPERATION.
- 33 PROVIDE AND INSTALL NEW HUMIDIFIER ON WALL COMPLETE WITH MIST SPRAY HEADS. SYSTEM TO MAINTAIN 95% HUMIDITY IN ROOM.
- 34 FUME HOOD PROVIDED AND INSTALLED BY PLUMBING CONTRACTOR. MECHANICAL CONTRACTOR CONNECT 10" ROUND DUCT TO HOOD AND RISE UP TO CONNECT TO ROOF MOUNTED EXHAUST FAN.

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