

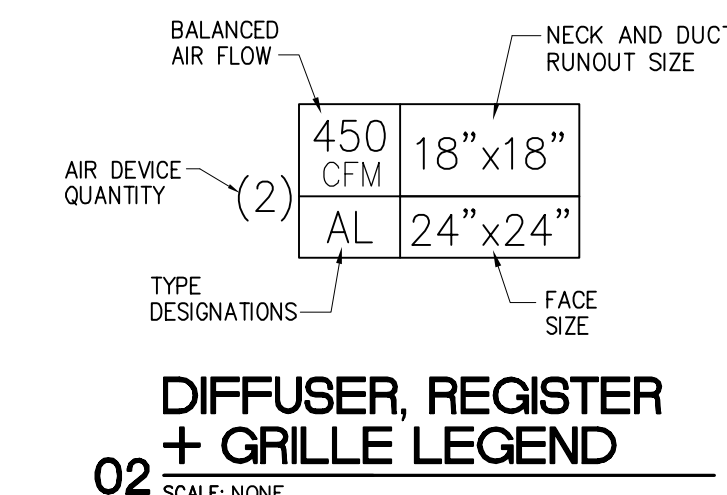
02 LOWER LEVEL FLOOR PLAN - PART B - MECHANICAL
SCALE: 3/32" = 1'-0"

NOTES BY SYMBOL

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| <p>(1) 3" MINIMUM DISTANCE BETWEEN DUCT TAPS OR DUCT TAP AND TRANSITION.</p> <p>(2) 10" MINIMUM DISTANCE BETWEEN END OF RADIUS ELBOW AND FIRST DUCT TAP.</p> <p>(3) USE SHOE (45° DUCT) TAP (NO BALANCE, DAMPER) IN ALL AUDITORIUMS. REFER TO DETAIL FOR MORE INFORMATION.</p> <p>(4) SA & RA DRIPS FROM ROOFTOP UNITS TO BE FULL SIZE, TRANSITIONING IN THE VERTICAL DROP TO THE SIZE SHOWN. PROVIDE RADIUS ELBOW AT THE BOTTOM OF THE DROP.</p> <p>(5) LINED PLENUM ABOVE ALL TYPE A DIFFUSERS. REFER TO DETAIL. RUNOUT CONNECTION TO THE SIDE OF THE PLENUM.</p> <p>(6) BAROMETRIC RELIEF HOOD. THROAT SIZE AS NOTED ON PLANS. REFER TO DETAILS.</p> <p>(7) DUCT OPENING ON TOP OF DUCT. REFER TO RETURN AIR DUCT DETAIL.</p> <p>(8) 4" MINIMUM FROM THE END OF THE RA DROP ELBOW AND THE START OF THE HORIZONTAL ELBOW.</p> <p>(9) FLEX UP TO 5 FEET MAX.</p> <p>(10) MAKEUP AIR TRANSFER DUCT FROM AUDITORIUM CEILING PLENUM TO BOOTH CEILING. REFER TO DETAIL.</p> <p>(11) EXTEND 10" ROUND HIGH TEMPERATURE FLEX FROM PROJECTOR CONSOLE TO TO 3" BELOW CEILING. TRANSITION AND EXTEND 10" TO EXHAUST FAN. REFER TO DETAIL.</p> <p>(12) HOOD MOUNTED DCV CONTROL CABINET. COORDINATE INSTALLATION WITH FIELD INSTALLED ANSUL SYSTEM.</p> | <p>(13) NOT USED.</p> <p>(14) EXTEND DUCT MAIN A MINIMUM OF 30" FROM END OF LAST DUCT TAP.</p> <p>(15) OFFSET TRANSFER DUCT AND CONNECT TO SIX (6) TYPE EG RETURN GRILLES TRANSITION DUCT AS REQUIRED.</p> <p>(16) INSTALL SOUND Baffle ABOVE TRANSFER OPENINGS AND RETURN AIR OPENINGS. REFER TO DETAIL.</p> <p>(17) INSTALL RETURN AIR SOUND BOOT. REFER TO DETAIL.</p> <p>(18) TRANSFER DUCT ABOVE CEILING. SIZE AS NOTED ON PLANS.</p> <p>(19) INSTALL PIPING FROM ICE MACHINE TO REMOTE AIR COOLED CONDENSER PER THE MANUFACTURER'S REQUIREMENTS AND TO MINIMIZE ELBOWS AND FITTINGS. DO NOT EXCEED THE MAXIMUM LENGTH AS RECOMMENDED BY THE MANUFACTURER.</p> <p>(20) SEE DETAILS ON SHEET MEPO.1 FOR CO2 AND/OR TEMPERATURE SENSOR MOUNTING DETAIL. COORDINATE WITH THE ELECTRICAL CONTRACTOR.</p> <p>(21) REFER TO DUCTS PENETRATING WALL DETAIL.</p> <p>(22) RETURN DUCT FULL SIZE OF ROOFTOP UNIT DUCT CONNECTION.</p> <p>(23) CO2 SENSO MOUNTED IN TRANSFER DUCT. REFER TO DETAIL.</p> <p>(24) HOOD MOUNTED FIRE SUPPRESSION SYSTEM. ANSUL SYSTEM IS FACTORY INSTALLED AT END OF HOOD WITH HOOD CABINET. COORDINATE MOUNTING AND INSTALLATION WITH THE MANUFACTURER.</p> | <p>(25) 14" 16 GAUGE WELDED GREASE DUCT DN TO HOOD DUCT CONNECTION AND UP TO GREASE FAN ON ROOF. FIRE WRAP DUCT. REFER TO DETAILS ON SHEET M4.1.</p> <p>(26) 16" 16 GAUGE WELDED GREASE DUCT UP TO GREASE FAN ON ROOF. FIRE WRAP DUCT. REFER TO DETAILS ON SHEET M4.1.</p> <p>(27) EXHAUST HOOD SUPPLY AIR PLENUM ON FRONT OF HOOD.</p> <p>(28) 24/10 MJA DN AND CONNECT TO SUPPLY PLENUM INLET. BALANCE TO 640 CFM (TYP OF 2).</p> <p>(29) 28/12 MJA DN AND CONNECT TO SUPPLY PLENUM INLET. BALANCE TO 810 CFM (TYP OF 2).</p> <p>(30) 28/12 MJA DN AND CONNECT TO SUPPLY PLENUM INLET. BALANCE TO 741 CFM (TYP OF 3).</p> <p>(31) 12/12 22 GAUGE ALUMINUM DISHWASHER EXHAUST DUCT DN TRANSITION AND CONNECTION TO DISHWASHER HOOD.</p> <p>(32) 28/12 MJA DN AND CONNECT TO SUPPLY PLENUM INLET. BALANCE TO 491 CFM (TYP OF 3).</p> <p>(33) WRAP KITCHEN SUPPLY, RETURN OR MAKE-UP AIR DUCT WITH MINIMUM 2" OF DUCT WRAP.</p> <p>(34) PRE-CHARGED REFRIGERATION PIPING FROM WALK-IN COOLER OR FREEZER TO CONDENSING UNIT ON WALK-IN WITH CONTROL WIRE. OFFSET PIPING AS REQUIRED.</p> <p>(35) 12/12 22 GAUGE ALUMINUM DISHWASHER EXHAUST DUCT UP TO EXHAUST FAN.</p> <p>(36) INSTALL DISHWASHER EXHAUST DUCT AT A MINIMUM OF 1/4" PER FOOT.</p> <p>(37) FURNISH AND INSTALL QUARTER END PANELS.</p> | <p>(38) FURNISH AND INSTALL 3" SCH. 40 PVC PIPES (CAT. IV) FOR BOTH VENT AND COMBUSTION DUCTS (PIPES) FROM WATER HEATER TO WALL TERMINATION. FURNISH AND INSTALL CONCENTRIC VENT PIPES AS REQUIRED BY THE HEATER MANUFACTURER. REFER TO PLUMBING AND COORDINATE WITH PLUMBING CONTRACTOR. VENT/INTAKE PIPING INCLUDING CONCENTRIC VENT KIT SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS AND RECOMMENDATION. FURNISH AND INSTALL CONDENSATE TRAP (3" W.C.) AT WATER HEATER VENT CONNECTION AND EXTEND AND TERMINATE AT APPROVED RECEPTACLE AS REQUIRED BY THE MANUFACTURER AND THE AUTHORITY HAVING JURISDICTION. SLOPE PIPES AT A MINIMUM OF 1/4" PER FOOT.</p> <p>(39) FURNISH AND INSTALL 4" HORIZONTAL DIRECT VENT CONCENTRIC VENT/INTAKE KIT FOR SIDE WALL VENTING. VENT KIT SHALL BE FURNISHED BY THE MANUFACTURER AND INSTALLED BY THE CONTRACTOR AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSTALL VENT TERMINATION THROUGH WALL AS HIGH POSSIBLE. COORDINATE EXACT LOCATION WITH THE ARCHITECT AND GENERAL CONTRACTOR.</p> <p>(40) ATCS (CONNECTION) ZONE LINK BUS EXPANSION MODULE TO ALLOW MORE THAN 31 RTU'S ON ONE NCP.</p> <p>(41) FURNISH AND INSTALL CATEGORY III STAINLESS STEEL VENT AND COMBUSTION AIR DUCTS (PIPES) FROM WATER HEATER TO WALL. CONCENTRIC VENT KIT. FURNISH AND INSTALL CONCENTRIC VENT KIT AS REQUIRED BY THE HEATER MANUFACTURER. REFER TO PLUMBING AND COORDINATE WITH PLUMBING CONTRACTOR. VENT/INTAKE SYSTEM INCLUDING CONCENTRIC VENT KIT SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS AND RECOMMENDATIONS. WRAP-VENT (FLUE) PIPE BELOW CEILING WITH R-5 PROTECTIVE COVER OR EQUAL.</p> |
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GENERAL NOTES

- ALL AUDITORIUMS SHALL HAVE SUPPLY RECTANGULAR DUCTS (IN BOTH AND AUDITORIUM) INSULATED WITH MINIMUM OF 1" LINING. ALL ROUND DUCTS SHALL BE EXTERNALLY WRAPPED. THE INTERNAL LINING SHALL BE ON ALL RECTANGULAR DUCTS TO, FROM & IN THE AUDITORIUMS OR ATTACHED TO THE ROOFTOP UNIT SERVING THE AUDITORIUM. INSULATION R-VALUES SHALL MEET THE REQUIREMENTS OF THE LOCAL CODES AND THE AUTHORITY HAVING JURISDICTION. INCREASE INSULATION THICKNESS AS REQUIRED TO MEET LOCAL CODE REQUIREMENTS.
- INSTALL DUCTWORK IN AUDITORIUMS TIGHT TO BOTTOM OF STEEL. ELBOW BRANCH DUCTS DOWN TO DIFFUSER HEIGHT AND CONNECT TO DIFFUSER SOUND BOOT WITH FLEX DUCT.
- PROVIDE FACTORY BLACK AIR DEVICES IN BLACK CEILING WHETHER SHOWN OR NOT.
- SHEET METAL FABRICATION DRAWINGS ARE REQUIRED. REFER TO SPECIFICATIONS.
- ALL PARTITIONS EXTENDING TO STRUCTURE WHERE TRANSFER DUCTS ARE NOT SHOWN ON PLANS ARE TO HAVE 24"x12" RETURN AIR TRANSFER DUCTS.
- COORDINATE EXACT LOCATION OF SENSORS WITHIN AUDITORIUMS WITH DIAGRAM ON MEPO.2.
- ALL BRANCH DUCT TAKE-OFFS SHALL HAVE MANUAL BALANCING DAMPERS, EXCEPT IN AUDITORIUMS.
- CONCEALED BUILDING SPACES USED AS RETURN AIR PLENUMS SHALL BE IN COMPLIANCE WITH THE MECHANICAL CODE & NFPA 90A. (SHALL CONTAIN NO COMBUSTIBLES & SHALL MEET 25/50 FLAME & SMOKE SPREAD)
- ALL AIR HANDLING DUCTS AND PLENUMS SHALL BE CONSTRUCTED, INSTALLED, INSULATED AND SEALED AS PER THE LOCAL MECHANICAL CODE & SMACNA.
- AIR DEVICES IN PUBLIC SPACES (I.E. LOBBY, PROMENADE, ETC.) ARE TO BE PAINTED TO MATCH COLOR SCHEMES. COORDINATE EXACT COLORS WITH ARCHITECT.
- ALL SUPPLY AND RETURN DUCTWORK INSULATION (DUCT LINER, DUCT WRAP, FLEX DUCTS) WITHIN BUILDING SHALL HAVE A MINIMUM R-VALUE MEETING THE REQUIREMENTS OF THE LOCAL CODES.
- ALL WALL MOUNTED SENSORS SHALL BE INSTALLED AT 84" AFF, EXCEPT IN AUDITORIUMS. REFER TO SENSOR DIAGRAMS ON SHEET MEPO.2 FOR AUDITORIUM SENSOR MOUNTING HEIGHTS.
- ALL DUCTWORK TO BE SEALED WITH MASTIC, WELDS, OR GASKETS PER THE AUTHORITY HAVING JURISDICTION; TAPES ARE NOT ALLOWED. REFER TO SECTION 503.2.7 OF THE I.E.C.C.
- DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING TEN FEET (10 FT) OR BY OTHER APPROVED DUCT SUPPORT SYSTEMS. FLEXIBLE DUCTS SHALL BE SUPPORTED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. DUCTS SHALL NOT LIE ON THE CEILING GRID.
- ALL RETURN GRILLES LOCATED IN PUBLIC SPACES SHALL HAVE RETURN AIR SOUND BOOTS INSTALLED. REFER TO DETAIL.
- CONTRACTOR SHALL COORDINATION WITH SPRINKLER, HVAC, ELECTRICAL AND PLUMBING. DRAWINGS AND APPROVED SHOP DRAWINGS PRIOR TO FABRICATING AND INSTALLING HVAC WORK.
- TRANSFER DUCTS SHALL BE LINED SHEET METAL.
- DUCTWORK SERVING SPACES UNDER RISERS SHALL RUN IN THE VOID SPACE BETWEEN BOTTOM OF TOP RISER AND RISER SUPPORT, IF THERE IS NOT ENOUGH ROOM TO RUN ABOVE DROP CEILING.
- AUDITORIUM DUCTS SHALL BE INSTALLED TIGHT TO BOTTOM OF STEEL. 18" ROUND BRANCH DUCTS SHALL ELBOW DOWN TO WITHIN 5 FEET OF DIFFUSER AND FLEX TO SUPPLY PLENUM (5'-0" MAXIMUM FLEX LENGTH).
- ALL SUPPLY, RETURN, TRANSFER AND EXHAUST DUCTWORK, EXCEPT GREASE DUCTS SHALL BE FABRICATED TO 2" W.C.



REV	DATE	ISSUE
5/12/17	5/12/17	PERMIT ISSUE
5/24/17	5/24/17	ISSUE FOR BID