



CERTIFICATION

TERRENCE J. WAGNER
REGISTERED
No. 20707
STATE OF
INDIANA
PROFESSIONAL ENGINEER
Terrence J. Wagner

All drawings, notes, designs, plans and details as shown on this document are the sole property of Design Collaborative, Inc. and shall not be used for any purpose without their expressed written consent. The owner shall be permitted to view copies for information and reference.

Wells County Public Library
200 West Washington Street
Bluffton, Indiana 46714

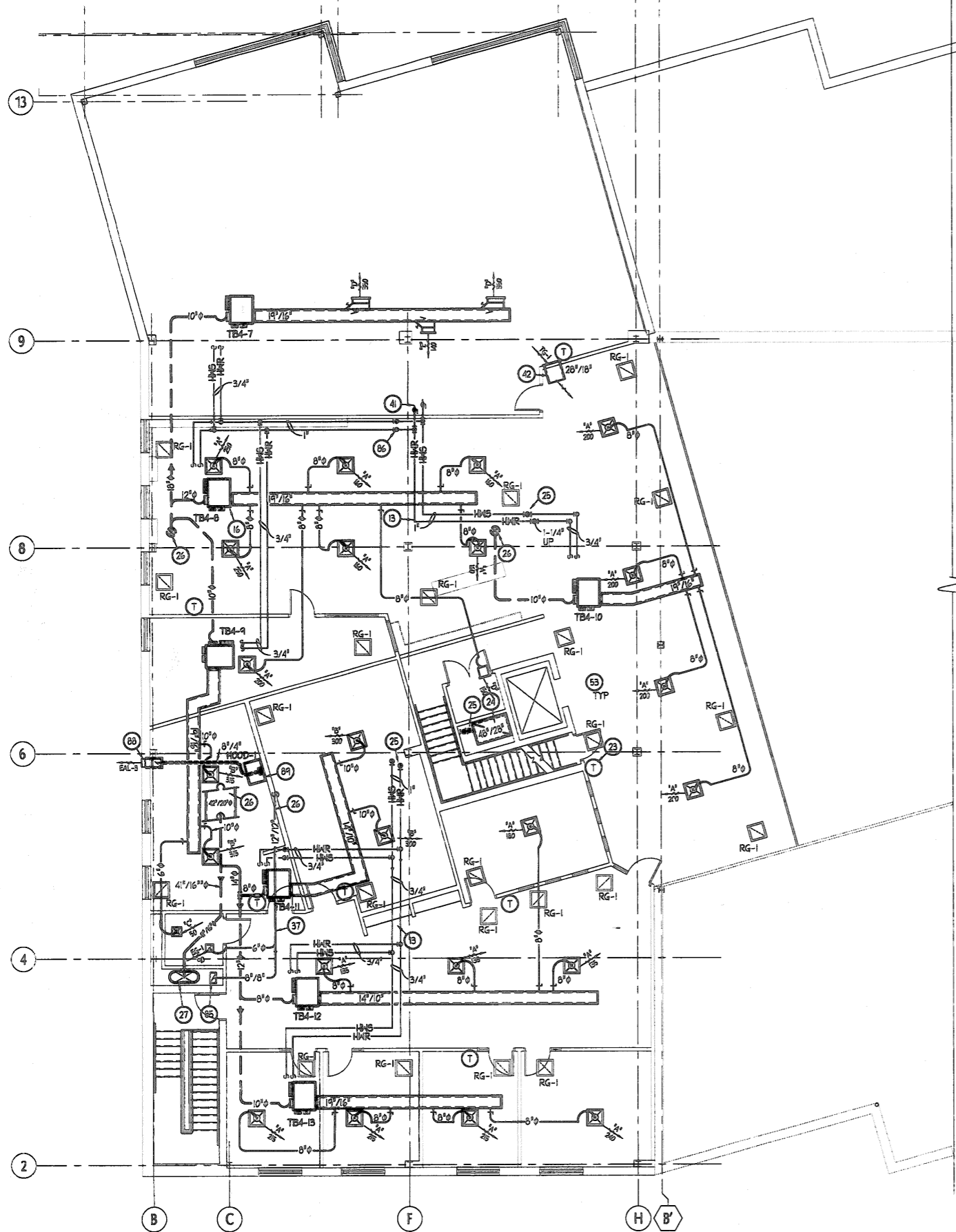


REVISION DATE BY

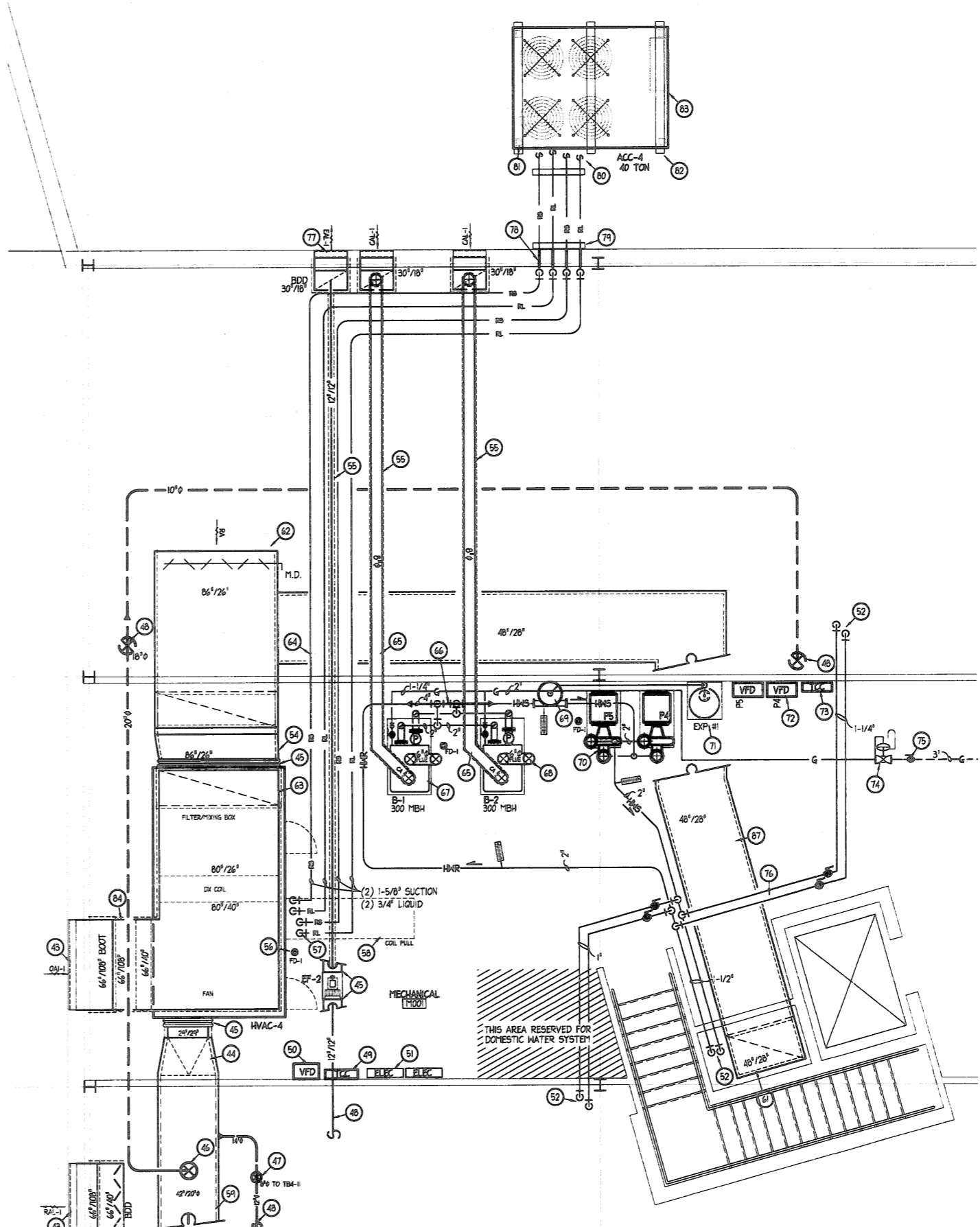
DATE PROJECT
11/2/2005 2005.0039

TITLE
Second Floor Mechanical Plan Notes & Details
SHEET

M1.2



SECOND FLOOR MECHANICAL PLAN
SCALE: 1/8" = 1'-0"
NORTH



MEZZANINE MECHANICAL PLAN
SCALE: 1/8" = 1'-0"
NORTH

CONSTRUCTION PLAN NOTES (PARTIAL NOTES- SEE M1.1 FOR CONTINUATION)

- 11) INSTALL HIGH POINT VENTS AND LOW POINT DRAINS IN ALL HYDRONIC LINES PER ACCEPTED PRACTICES.
- 12) INSTALL RETURN DUCT AS HIGH AS POSSIBLE.
- 13) INSTALL THESE LOUVERS PER THE ELEVATIONS ON THE ARCHITECTURAL PLANS. SEAL THE LOUVERS 100% WATER AND AIRTIGHT.
- 14) TRANSITION FROM THE SQUARE TO FLAT-OVAL K-27 DUCTWORK.
- 15) INSTALL FLEX CONNECTIONS AT THE RETURNS AND SUPPLIES AT THE AIR MOVING EQUIPMENT. TYPICAL.
- 16) TAP THE TOP OF THE FLAT OVAL AND ROUTE THE 20" DUCT AS SHOWN AS HIGH AS POSSIBLE.
- 17) TAP BOTTOM OF THE DUCT TO SUPPLY TBA-11. SEE SECOND FLOOR PLAN FOR CONTINUATION.
- 18) SEE SECOND FLOOR PLAN FOR CONTINUATION OF THESE HIGH PRESSURE AND EXHAUST DUCTS.
- 19) LOCATION OF THE TEMPERATURE CONTROL PANEL FOR THE NEW HVAC-4. SEE TCC SPECS FOR ADDITIONAL INFORMATION.
- 20) NEW VARIABLE FREQUENCY DRIVE FOR HVAC-4. THIS DRIVE FURNISHED BY TCC AND INSTALLED BY E.C. TCC TO ROUTE SEPARATE CONDUIT FOR CONTROL INTO THE DRIVE PER MANUFACTURERS RECOMMENDATIONS.
- 21) AVOID ROUTING ANY PIPING OR DUCTWORK OVER TOP OF THE NEW ELECTRICAL PANELS.
- 22) NEW HYDRONIC LINES DOWN TO SECOND FLOOR. SEE SECOND FLOOR PLAN FOR CONTINUATION.
- 23) ALL FIRE PROTECTION MAINS SHALL BE ROUTED UP WITHIN THE STEEL TO AVOID INTERFERENCES WITH ALL OTHER TRADES. TYPICAL ALL NEW AREAS.
- 24) SEE SPECS FOR INSULATION SPECS FOR THE NEW RETURN DUCTWORK.
- 25) THESE DUCTS SHALL BE WRAPPED WITH 2" FRK DUCT WRAP PER SPECS.
- 26) COORDINATE ALL NEW FLOOR DRAINS WITH PC.
- 27) INSTALL LIQUID LINE SOLENOIDS AND ALL REQUIRED TRIM AT THE REFRIGERANT COIL. IN STRICT COMPLIANCE WITH MANUFACTURERS RECOMMENDATIONS.
- 28) COIL FILL AREA TO REMAIN CLEAR.
- 29) ALL HIGH PRESSURE DUCTWORK TO BE UNITED MC-GILL K-27 WALL (PERFORATED INNER) INSULATED DUCT TO ATTENUATE NOISE OF THE HVAC UNIT.
- 30) INSTALL A LOW LEAK 66/400' RELIEF BACKDRAFT DAMPER EQUAL TO RUSKIN CBD-6. 5"X SHALL TRANSITION SMOOTHLY TO THE NEW BACKDRAFT DAMPER. LOCATE THE BDD AT THE TOP HALF OF THE NEW LOUVER AND SEAL THE DUCTWORK SO THAT IF SNOW PENETRATES THE LOUVER AND MELTING OCCURS THE MOISTURE IS ALLOWED TO DRAIN OUT THRU THE LOUVER.
- 31) NEW RETURN DUCT ROUTED DOWN TO THE FIRST FLOOR. SEE M1.1 FOR CONTINUATION.
- 32) BALANCE THE RETURN DUCTWORK FOR THE AIRFLONS OF THE SECOND FLOOR ONLY. ALL OTHER RETURN TO ROUTE THRU THE 48"/28" DUCT AS SHOWN IN NOTE 60.
- 33) ROUTE THE OUTSIDE AIR DUCT AS HIGH AS POSSIBLE AND WRAP WITH 2" FRK DUCT WRAP PER SPECS.
- 34) ROUTE THE REFRIGERANT LINES AS HIGH AS REQUIRED TO AVOID INTERFERENCES. LINES SHALL BE A MINIMUM OF 6'-0" ABOVE THE FLOOR OF THE MEZZANINE.
- 35) ROUTE THE COMBUSTION AIR DUCTS AS HIGH AS REQUIRED TO AVOID INTERFERENCES. DUCTS SHALL BE A MINIMUM OF 6'-0" ABOVE THE FLOOR OF THE MEZZANINE.
- 36) OVERSIZED HEADER (TO #4) TO SLOW THE WATER VELOCITY AT THE BOILER TAPS.
- 37) INSTALL THE NEW BOILERS ON HOUSEKEEPING PADS AND IN STRICT COMPLIANCE WITH MANUFACTURERS RECOMMENDATIONS. ALL CONTROL WIRING TO BE INSTALLED IN METALLIC CONDUITS. TYPICAL.
- 38) ROUTE THE NEW 6" TYPE B FLUES UP THRU ROOF PER MANUFACTURERS RECOMMENDATIONS THRU AN INSULATED THIMBLE. THE ROOFING SUPPLIER SHALL INSTALL AN APPROVED CURB FOR THE NEW FLUE. THIS CONTRACTOR SHALL COORDINATE THE CURB WITH THE GC. INSTALL A ROOF CAP ON THE B-VENT. THE EXTERIOR B-VENT SHALL HAVE ITS INTERIOR AND EXTERIOR CONSTRUCTED OF 300 SERIES STAINLESS STEEL, INCLUDING ALL FASTENERS TO PREVENT CORROSION. TYPICAL BOTH BOILERS.
- 39) INSTALL THE AIR SEPARATOR AT 6'-0" MINIMUM AND SUPPORT FROM THE MEZZANINE DECK. SEE SHEET M4.2 FOR ADDITIONAL DETAILS FOR INSTALLATION OF THE AIR SEPARATOR.
- 40) SEE SHEET M4.2 FOR ADDITIONAL DETAILS FOR INSTALLATION OF THESE PUMPS. INSTALL PUMPS ON 4" HOUSEKEEPING PADS AND HAVE PUMPS ALIGNED AT THE SITE WITH FACTORY APPROVED PERSONNEL. INCLUDE ALIGNMENT REPORT IN OPI MANUALS.
- 41) EXPANSION TANK #1 SHALL BE EQUAL TO B&G MODEL D-40V, 11.3 GALLON ACCEPTANCE VOLUME.
- 42) NEW VARIABLE FREQUENCY DRIVES FOR PUMPS, THESE DRIVES FURNISHED BY TCC AND INSTALLED BY E.C. TCC TO ROUTE SEPARATE CONDUIT FOR CONTROL INTO THE DRIVE PER MANUFACTURERS RECOMMENDATIONS.
- 43) LOCATION OF THE TEMPERATURE CONTROL PANEL FOR THE PUMPS AND BOILER CONTROL. SEE TCC SPECS FOR ADDITIONAL INFORMATION.
- 44) INSTALL A NEW SPRING/PIVC GAS REGULATOR TO SUPPLY GAS TO THE TWO BOILERS. ROUTE VENT LINE FROM REGULATOR OUT THRU THE SIDEWALL NEAR THE CONDENSING UNIT. THE PC TO ROUTE A SPIKE GAS LINE UP TO THE MEZZANINE AND TERMINATE WITH AN AGA VALVE (NOTE 75).
- 45) PC TO ROUTE GAS LINE UP TO MEZZANINE AND TERMINATE WITH A VALVE AT THIS APPROXIMATE LOCATION. SEE PIPING PLANS FOR CONTINUATION.
- 46) ROUTE THE NEW HYDRONIC LINES UP AS HIGH AS REQUIRED TO AVOID THE RETURN DUCT.
- 47) INSTALL THESE NEW LOUVERS BELOW THE SOFFIT AS HIGH AS POSSIBLE IN THE MECHANICAL ROOF DECK AREA. SEAL THE LOUVERS 100% WATER AND AIRTIGHT. TYPICAL.
- 48) INSTALL SLEEVES IN WALL DURING CONSTRUCTION AND SEAL THE REFRIGERANT LINES, CONTROL LINE AND POWER CONDUITS 100% WATER AND AIRTIGHT.
- 49) INSTALL THE REFRIGERANT LINES ON A PATE PIPE CURB, 12" TALL, AND UTILIZE A FIBERGLASS UNISTRUT FOR CLAMPING THE PIPING TO THE CURB. ALLOW ADDITIONAL ROOM ON THE CURB TO ROUTE THE POWER AND CONTROL CONDUITS TO THE UNIT. FURNISH AND INSTALL TREATED MOOD BLOCKING BETWEEN THE CURB AND THE METAL DECK BELOW.
- 50) INSTALL FILTER DRYERS ON THE SUCTION LINES AND ALL ADDITIONAL REQUIRED TRIM AT THE CONDENSING UNIT IN STRICT COMPLIANCE WITH MANUFACTURERS RECOMMENDATIONS.
- 51) INSTALL RUBBER SHEAR ISOLATION BLOCKS BETWEEN THE CURB AND THE CONDENSING UNIT.
- 52) INSTALL THE CONDENSING UNIT ON A PATE STRUCTURAL EQUIPMENT CURB, MINIMUM 14" TALL. FURNISH AND INSTALL TREATED MOOD BLOCKING BETWEEN THE CURB AND THE METAL DECK BELOW. THIS CONTRACTOR TO INSTALL ADDITIONAL STRUCTURAL STEEL SUPPORT BELOW ROOF DECK DIRECTLY BELOW CURBS WHERE THE CURBS DO NOT SET DIRECTLY ON THE NEW B&G-20STS.
- 53) INSTALL NEW CONDENSING UNIT IN STRICT COMPLIANCE WITH MANUFACTURERS RECOMMENDATIONS. SEE SCHEDULE FOR MODEL INFORMATION.
- 54) TRANSITION TO THE LARGE LOUVER AND WATERPROOF PER NOTE 60.
- 55) ROUTE EXHAUST DUCT DOWN TO FIRST FLOOR. SEE SHEET M1.1 FOR CONTINUATION.
- 56) OFFSET ALL HYDRONIC LINES UP TO WITHIN STEEL BAR JOISTS TO AVOID INTERFERENCES.
- 57) KEEP THIS RETURN DUCT AT MINIMUM OF 7'-0" ABOVE THE MEZZANINE FLOOR.
- 58) FLASH THIS LOUVER FROM THE KITCHEN HOOD 100% WATER TIGHT. THE LOUVER SHALL BE AS HIGH AS POSSIBLE.
- 59) OFFSET THE EXHAUST DUCT UP INSIDE OF THE STEEL TO AVOID INTERFERENCE. TYPICAL OF HOOD #1 AND HOOD #2.