



ISSUE  
10-24-11 LANDLORD REVIEW  
11-03-11 ISSUED FOR PERMIT AND PRICING

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PROJECT NAME



Cafe Express Restaurant  
PROJECT ADDRESS  
3800 SW. Freeway, Suite 124  
Houston, Texas 77027

PROJECT NUMBER  
11039  
SHEET NAME

**MECHANICAL  
DETAILS**

SHEET NUMBER

**M3.1**

PIPE SIZE	SUPPORT SPACING (FEET)
1-1/4"	4
1-1/2"	4
2"	4
2-1/2"	5
3"	5
4"	5.5
5"	7
6"	7.5

NOTE: PIPE 2" AND SMALLER, SADDLE TO BE 12" LONG. PIPE 2-1/2" AND LARGER, SADDLE TO BE 18" LONG. ANCHORS SHALL BE GALVANIZED WHERE EXPOSED OUTSIDE.

**CONDENSATE DRAIN SUPPORT & INSULATION**  
SCALE: NONE

AHU (SEE PLANS FOR LOCATION)  
THREADED TEE, EXTENDED NECK & CAP FOR CLEANING TRAP, TYPICAL FOR ALL AIR HANDLING UNITS.  
REFERENCE SPECIFICATIONS FOR INSULATION REQUIREMENTS  
2"  
PROVIDE 4" MINIMUM TRAP SIZE 1" DEEPER THAN AHU TOTAL STATIC PRESSURE

**CONDENSATE DRAIN PIPING AT AHU**  
SCALE: NONE

UNIT COUNTER FLASHING  
TREATED WOOD NAILER  
WELDED ALUM. CURB  
ROOFING FELT  
RIGID INSULATION  
FIBROUS CANT  
ROOFING ASSEMBLY (REF. ARCH. DWGS)  
14" MIN.  
9" MIN.

**ROOF CURB**  
SCALE: NONE

2x" W" MIN.  
3/4" x" W"  
SHEETMETAL DUCT  
AIR FLOW  
END CAP  
EXTERNAL DUCTWORK INSULATION  
DUCT BOOT TO DIFFUSER  
S.A. DIFFUSER  
VOLUME CONTROL

**RIGID DUCT TAP TO SINGLE SUPPLY AIR DIFFUSER**  
SCALE: NONE

VERIFY DIM. TO SUITE PIPE SIZES.  
SIDES & FLASHING TO BE 22 GA. STAINLESS STEEL, SOLDER ALL JOINTS  
VERIFY DIM. TO SUITE PIPE SIZES.  
9-1/2"  
22 GA. STAINLESS STEEL PIPE COVER WITH REMOVABLE TOP, SECURE WITH S.S. SCREWS.  
1"  
1/2"  
3" MIN.  
CUT HOLES FOR PIPING, CAULK ANNULAR SPACE WITH DOW #732 RTV.  
REF. ROOF CURB DETAIL  
INSULATED PIPE/CONDUIT  
PROVIDE HOLE IN ROOF TO SUITE PIPE SIZES, PACK W/ INSULATION AND SEAL.

**INSULATED PIPE THRU ROOF**  
SCALE: NONE

SUPPORT AS REQUIRED  
DIA. 10"  
1.5 X 10" MINIMUM (SEE NOTE)  
INSULATED FLEXIBLE DUCTWORK (6'-0" MAX)  
STAINLESS STEEL CLAMP (1 EA. FOR FLEX. DUCT & 1 EA. FOR INSULATION)  
SQUARE TO ROUND TRANSITION  
CEILING  
COVER BACK OF DIFFUSER WITH EXTERNAL DUCTWORK INSULATION  
DIFFUSER (REF. GRILLE SCH.)  
NOTE: IF MINIMUM TURNING RADIUS CANNOT BE MAINTAINED PROVIDE ADAPTER FOR FLEXIBLE DUCT.

**FLEX DUCT CONNECTION AT SUPPLY AIR DIFFUSER**  
SCALE: NONE

BRANCH DUCT  
SPIN-IN TAP  
LOCKING QUADRANT OPERATOR-ELGEN MODEL RP-4C  
RAISE OPERATOR TO ALLOW FOR INSULATION  
END BEARING ELGEN MODEL E-101  
EXTERNAL INSULATION  
FLEXIBLE DUCTWORK  
TO SUPPLY AIR DIFFUSER  
NYLON DUCT CLAMP  
22 GA. GALV. DAMPER WITH CONTINUOUS DAMPER ROD  
END BEARING ELGEN MODEL E-104  
10 1/2"

**FLEXIBLE DUCT TAP**  
SCALE: NONE

ROOF MOUNTED RELIEF VENT  
CEILING MOUNTED EXHAUST FAN

**DUCT LINER & INSULATION DETAIL**  
SCALE: NO SCALE

HOOD SUPPLY FAN  
10'-0" MIN.  
ROOF  
HOOD EXHAUST FAN  
12/10  
20/12  
10/20  
12/10  
16 GAUGE WELDED BLACK STEEL  
NOTE: ALL EXISTING KITCHEN HOODS, FANS, AND ASSOCIATED DUCTWORK SHALL REMAIN.

**EXISTING HOOD FAN SYSTEM**  
SCALE: NONE

ROOF MOUNTED APPLIANCE  
S.S. LAG BOLT W/ NEOPRENE WASHER  
24 GA. STAINLESS STEEL COUNTER FLASHING  
TREATED WOOD NAILER  
WELDED ALUM. SUPPORT  
ROOFING FELT  
RIGID INSULATION  
FIBROUS CANT  
EXISTING ROOFING ASSEMBLY  
NOTE: MINIMUM EXPOSURE B, 90 MPH / 110 MPH (3 SECOND) GUSTS.

**APPLIANCE ANCHORING DETAILS**  
SCALE: NONE

AIR HANDLING UNIT  
RETURN AIR DUCTWORK  
SUPPLY AIR DUCTWORK  
SUPPLY AIR DUCTWORK

**AIR HANDLING UNIT**

ROOF MOUNTED RELIEF VENT  
CEILING MOUNTED EXHAUST FAN

**EXHAUST AIR SYSTEMS**

NOTES  
① SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.  
② EXTERNAL INSULATION (MIN. R-6) ON BACK PAN OF RETURN AIR GRILLE.  
③ FLEXIBLE DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.  
④ SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER FROM AIR HANDLING UNIT DISCHARGE TO 10'-0" DOWNSTREAM.  
⑤ SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER 10'-0" UPSTREAM OF ROOF TOP UNIT TO RETURN AIR INLET.

SERVICE VALVES  
EXPANSION VALVE  
DX COIL IN AHU  
SOLENOID VALVE  
EXTERIOR METAL BUILDING WALL  
CEILING  
FLOOR LEVEL  
ACCU  
4" HOUSEKEEPING PAD  
NOTE: REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS ON REFRIGERANT PIPING.

**REFRIGERANT PIPING DETAIL**  
SCALE: NONE

SUSPEND UNIT FROM STRUCTURE WITH ISOLATORS  
VIBRATION ISOLATORS (RE: SPECIFICATIONS)  
FILTER  
SUPPLY DUCT REFER TO PLANS FOR SIZES  
RETURN AIR DUCT REFER TO PLANS FOR SIZES  
FAN COIL UNIT  
CONDENSATE DRAIN TRAP  
3/4" AUXILIARY PAN DRAIN  
AUXILIARY DRAIN PAN WITH CONDUCTIVITY SENSOR TO DE-ENERGIZE UNIT ON SENSING MOISTURE IN PAN. PAN TO EXTEND UNDER VALVING OF UNIT AND 6" BEYOND UNIT ELSEWHERE.  
CONDENSATE DRAIN ROUTED TO FLOOR DRAIN. REFER TO PLANS FOR SIZE

**AIR HANDLING UNIT DETAIL**  
SCALE: NONE