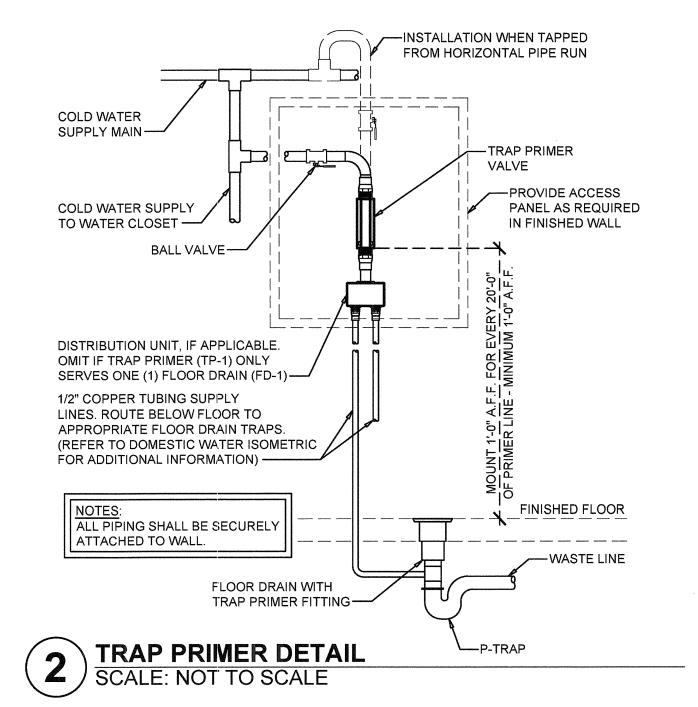
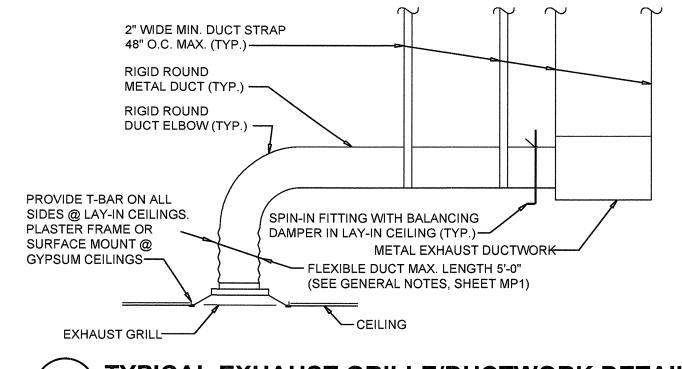
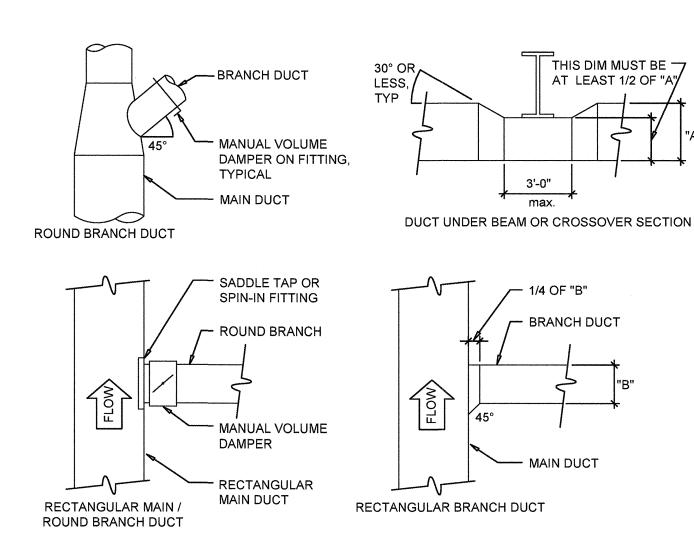
1) DIFFUSER DIRECT CONNECTION TO SUPPLY TRUNK SCALE: NOT TO SCALE



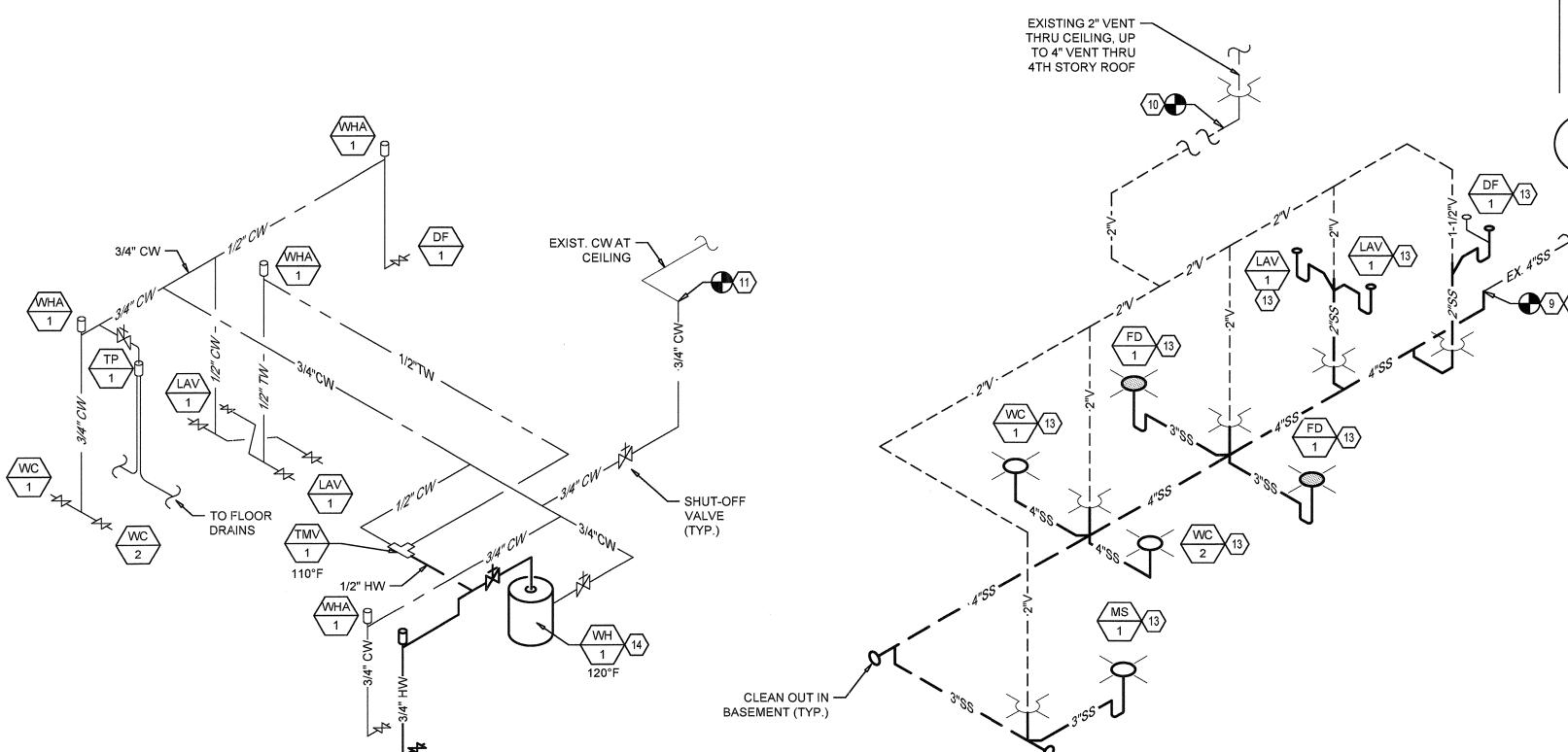
3 DOMESTIC WATER ISOMETRIC SCALE: NOT TO SCALE



4 TYPICAL EXHAUST GRILLE/DUCTWORK DETAIL SCALE: NOT TO SCALE



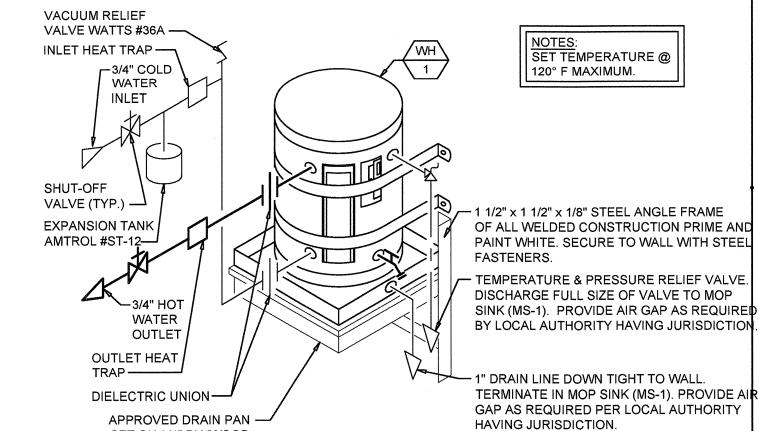
5 DUCT CONNECTION DETAILS
SCALE: NOT TO SCALE



6 WASTE AND VENT ISOMETRIC SCALE: NOT TO SCALE

- BI-DIRECTIONAL FLOW FILTER DRYER — EXISTING CURB/ - SIGHT GLASS UNIT MOUNTED A PENETRATION WITH MOISTURE MINIMUM OF INDICATOR 10'-00" FROM EDGE OF ROOF OUTDOOR WEATHER HEAT PUMP **TIGHT** UNIT **EQUIPMENT** MOUNTING RAILS TO SECURE UNIT TO ROOF REFRIGERANT LINE SIZING:
ALL REFRIGERANT LINES AND ACCESSORIES SHALL BE INSTALLED AND LOCATED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFRIGERANT LINE SIZE, ROUTING, AND INSTALLATION SHALL BE STRICTLY PER MANUFACTURER'S INSTRUCTIONS. FAILURE TO INSTALL PIPING AS DESCRIBED MAY RESULT IN CONTRACTOR REPLACING REFRIGERANT PIPING AT NO ADDITIONAL COST TO OWNER. COORDINATE ROUTING OF REFRIGERANT PIPING WITH OTHER TRADES PRIOR TO INSTALLATION. 4TH STORY -PIPING SHALL BE SUPPORTED AT 5FT INCREMENTS AND AT BENDS. SUCTION AND LIQUID LINES SHALL BE BUNDLED TOGETHER AND SHALL BE INSTALLED SQUARE TO BUILDING LINES.

7 OUTDOOR HEAT PUMP MOUNTING DETAIL
SCALE: NOT TO SCALE



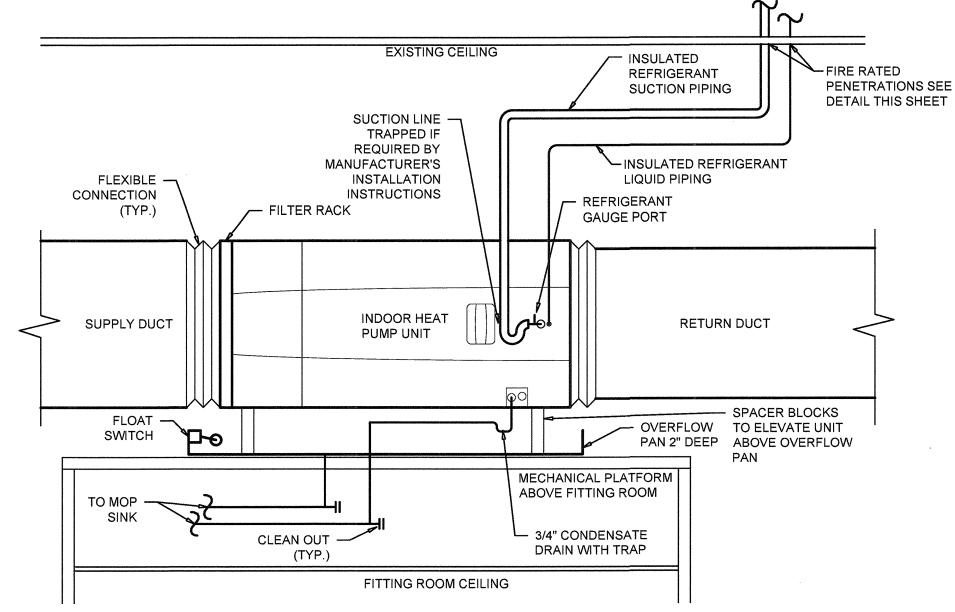
EXPANSION TANK SUPPORT:
IT IS THE CONTRACTOR'S RESPONSIBILITY TO
PROVIDE ADEQUATE SUPPORT FOR THE
EXPANSION TANK. SUPPORT TO ADJACENT WALL
OR FROM EXISTING STRUCTURE ABOVE WITH
UNISTRUT. DO NOT SUPPORT FROM PIPE ALONE.

10 WATER HEATER DETAIL
SCALE: NOT TO SCALE

SET ON 3/4" PLYWOOD

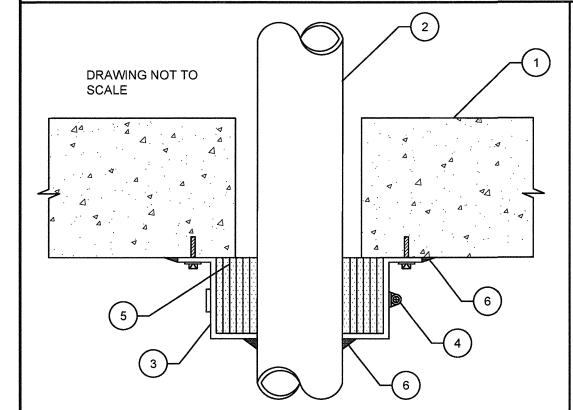
PLATFORM. MOUNT WATER

HEATER ABOVE LAY-IN CEILING.



8 INDOOR HEAT PUMP DETAIL SCALE: NOT TO SCALE

## 2 HOUR FIRE RATED THROUGH PENETRATION FIRESTOP FOR SINGLE PLASTIC PIPE THROUGH CONCRETE FLOORS



- 1) PRE-RATED CONCRETE FLOOR: MIN. 4-1/2" THICKNESS
- 2) PLASTIC PIPE (SCH40 CELLULAR OR SOLID CORE PVC, OPEN OR CLOSED PIPING SYSTEM) 4" NOMINAL DIAMETER (OR SMALLER). THE ANNULAR SPACE SHALL BE 1/4".
- 3 3M RC-1 RESTRICTING COLLAR, MECHANICALLY FASTENED FLUSH TO THE UNDERSIDE OF FLOOR ASSEMBLY VIA 1/4"Ø X 1-1/2"LG MASONRY FASTENERS. USE 1-1/4" FENDER WASHERS. USE 3 FASTENERS FOR 3"Ø PIPE AND SMALLER. USE 4 FASTENERS FOR 4"Ø PIPE
- 4 STEEL HOSE CLAMP
- 5 3M FIRE BARRIER FS-195+ WRAP/STRIPS (REFER TO MANUFACTURE'S INSTALLATION INSTRUCTIONS FOR MINIMUM NUMBER OF WRAPS)
- (6) 3M FIRE BARRIER CP 25WB+ CAULK (1/4" BEAD) OR MOLDABLE PUTTY+

PRE-ASSEMBLED 3M FIRE BARRIER PLASTIC PIPE DEVICE (PPD), UL FILE NO. R9269
MAY BE SUBSTITUTED FOR RC-1 COLLAR AND FS-195+ WRAP.

THE PENETRATION SEAL SHALL BE CAPABLE OF PASSING ASTM E814 (ANSI/UL 1479) STANDARD METHOD OF FIRE TESTS FOR THROUGH PENETRATION FIRE STOPS UP TO THE DESIRED FIRE RESISTANCE.

9 INDOOR HEAT PUMP DETAIL SCALE: NOT TO SCALE



10877 WATSON ROAD ST. LOUIS, MO 63127 PROJECT MANAGERS

ISSUED DATES

REVISIONS

PURE BARRE
ONGRESS STREE
TLAND, ME 04101

MICHAEL
GRAPERHUS
LICENSE # 12050
EXPIRATION DATE 12/31/2017

Professional of Record

DRAWN BY

JCD

CHECKED BY MCG

PROJECT NUMBER

316157
SHEET NAME
MECH/PLUM

MECH/PLUMB
ISOMETRICS
& DETAILS
SHEET NUMBER

MP2