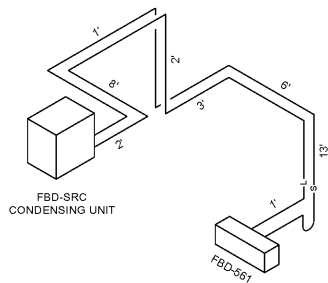


ALL PIPING INSULATION EXPOSED TO WEATHER SHALL BE INSTALLED WITH REMOVABLE INSULATION PROTECTION PVC WRAP OR EQUIVALENT MEANS FOR EXTERIOR WEATHER/UV PROTECTION PER IECC C403.2.10.1

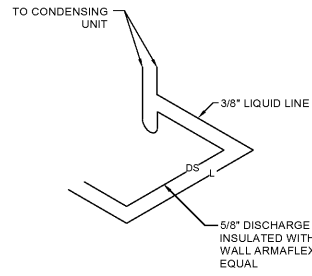


FROZEN LEMONADE MACHINE LIQUID AND DISCHARGE REFRIGERANT LINE LENGTHS

- DESIGN NOTES:
- PRE-CHARGED R404A REFRIGERATION LINESETS ARE PROVIDED BY THE VENDOR, IN 50' SECTIONS, WITH 5/8" DS & 3/8" L (EF-1 #295)
  - PIPING LENGTH = 36'
  - COMPRESSOR LOCATED IN FBD UNIT

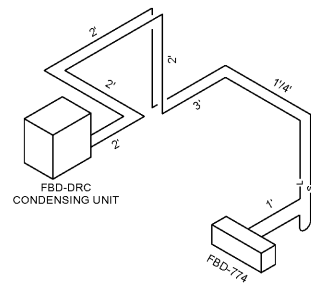
REFER TO FBD INSTALLATION MANUAL  
[HTTPS://DOWNLOADS.FBDFROZEN.COM/DOWNLOADS/DOWNLOAD/272](https://downloads.fbdfrrozen.com/downloads/download/272)

**6 FROZEN LEMONADE**  
 N.T.S.



ENLARGED INTERIOR FROZEN LEMONADE MACHINE LIQUID AND DISCHARGE REFRIGERANT LINE SIZES AND CONNECTIONS

- INSTALLATION NOTES:
- MAXIMUM LINE LENGTH SHALL NOT EXCEED 50'
  - LINE SETS SHALL BE MEASURED AND CUT TO FIT TOTAL DEVELOPED LENGTH AS TO NOT HAVE ANY REMAINING COIL OF TUBING ON-SITE

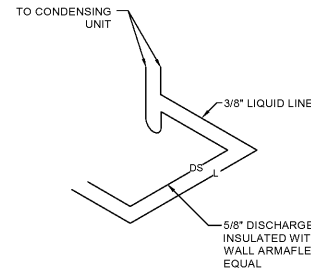


SLURPEE MACHINE (EACH) LIQUID AND DISCHARGE REFRIGERANT LINE LENGTHS

- DESIGN NOTES:
- PRE-CHARGED R404A REFRIGERATION LINESETS ARE PROVIDED BY THE VENDOR, IN 50' SECTIONS, WITH 5/8" DS & 3/8" L (EF-1 #295)
  - PIPING LENGTH = 26'/29'
  - COMPRESSOR LOCATED IN FBD UNIT

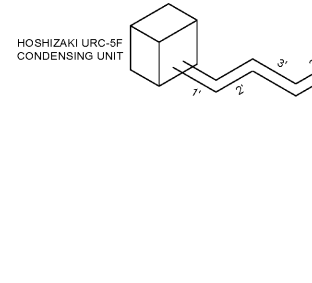
REFER TO FBD INSTALLATION MANUAL  
[HTTPS://DOWNLOADS.FBDFROZEN.COM/DOWNLOADS/DOWNLOAD/272](https://downloads.fbdfrrozen.com/downloads/download/272)

**5 SLURPEE MACHINE (EACH)**  
 N.T.S.



ENLARGED INTERIOR SLURPEE MACHINE (EACH) LIQUID AND DISCHARGE REFRIGERANT LINE SIZES AND CONNECTIONS

- INSTALLATION NOTES:
- MAXIMUM LINE LENGTH SHALL NOT EXCEED 50'
  - LINE SETS SHALL BE MEASURED AND CUT TO FIT TOTAL DEVELOPED LENGTH AS TO NOT HAVE ANY REMAINING COIL OF TUBING ON-SITE

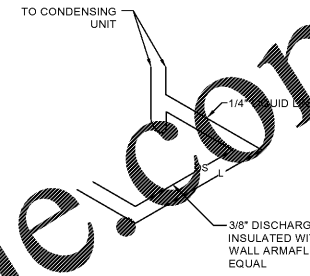


ICE MAKER LIQUID AND DISCHARGE REFRIGERANT LINE LENGTHS

- DESIGN NOTES:
- PRE-CHARGED R404A REFRIGERATION LINESETS ARE PROVIDED BY THE VENDOR, IN 50' SECTIONS, WITH 5/8" DS & 1/4" L (EF-1 #112)
  - PIPING LENGTH = 28'
  - COMPRESSOR LOCATED IN ICE MAKER

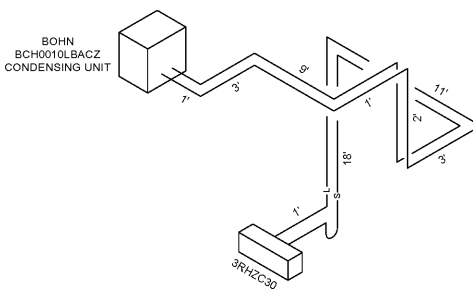
REFER TO REFRIGERATION INSTALLATION MANUAL  
[HTTP://WWW.HOSHIZAKI.COM/DOCS/MANUALS/FLAKER\\_IS\\_BC\\_INST.PDF](http://www.hoshizaki.com/docs/manuals/flaker_is_bc_inst.pdf)

**4 FD-1002MRJ-C ICE MAKER (EACH)**  
 N.T.S.



ENLARGED INTERIOR ICE MAKER LIQUID AND DISCHARGE REFRIGERANT LINE SIZES AND CONNECTIONS

- INSTALLATION NOTES:
- MAXIMUM LINE LENGTH SHALL NOT EXCEED 66'
  - MAXIMUM RISE IS 33'
  - LINE SETS SHALL BE MEASURED AND CUT TO FIT TOTAL DEVELOPED LENGTH AS TO NOT HAVE ANY REMAINING COIL OF TUBING ON-SITE



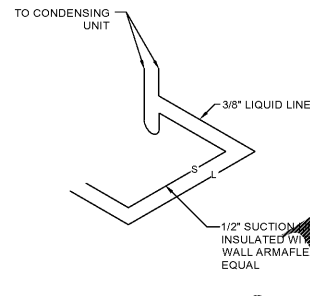
REACH-IN FREEZER LIQUID AND SUCTION REFRIGERANT LINE LENGTHS

- DESIGN NOTES:
- LINE SIZING TABLE 9 FROM THE MANUAL SHOWS 4,000 BTUH REQUIRES A 1/2" SUCTION FOR UP TO 100' OF EQUIVALENT LINE LENGTH.
  - HORIZONTAL SUCTION LINES SHALL SLOPE AWAY FROM THE EVAPORATOR TOWARD THE COMPRESSOR AT THE RATE OF 1" PER 10' FOR SUFFICIENT OIL RETURN.

PIPING DIAGRAM FOR THE R448A LOW TEMPERATURE (+20°F SS1) FREEZER REFRIGERATION SYSTEM

REFER TO REFRIGERATION INSTALLATION MANUAL FOR LONGER LINE RUNS.  
[HTTPS://WWW.HEATCRAFT.COM/PDF/I&O/H-IM-CU.PDF](https://www.heatcraft.com/pdf/i&o/h-im-cu.pdf)

**3 REACH-IN FREEZER CASE**  
 N.T.S.



REACH-IN FREEZER LIQUID AND SUCTION REFRIGERANT LINE SIZES

- LINE SIZING - 413 BTUH @ +20°F:
- (2) 1/2" ELBOWS: EQUIVALENT LINE LENGTH = 10'
  - PIPING LENGTH = 49'
  - TOTAL DEVELOPED LENGTH = 59'
  - SUCTION LINE SIZE = 1/2"
  - LIQUID LINE SIZE = 3/8"



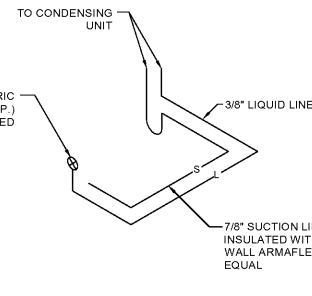
VAULT BEER CAVE LIQUID AND SUCTION REFRIGERANT LINE LENGTHS

- DESIGN NOTES:
- LINE SIZING TABLE 9 FROM THE MANUAL SHOWS 30,000 BTUH REQUIRES A 7/8" SUCTION FOR UP TO 50' OF EQUIVALENT LINE LENGTH.
  - HORIZONTAL SUCTION LINES SHALL SLOPE AWAY FROM THE EVAPORATOR TOWARD THE COMPRESSOR AT THE RATE OF 1" PER 10' FOR SUFFICIENT OIL RETURN.

PIPING DIAGRAM FOR THE R448A MEDIUM TEMPERATURE (+20°F SS1) FREEZER REFRIGERATION SYSTEM

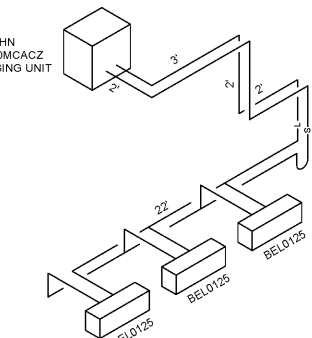
REFER TO REFRIGERATION INSTALLATION MANUAL FOR LONGER LINE RUNS.  
[HTTPS://WWW.HEATCRAFT.COM/PDF/I&O/H-IM-CU.PDF](https://www.heatcraft.com/pdf/i&o/h-im-cu.pdf)

**2 VAULT BEER CAVE**  
 N.T.S.



VAULT BEER CAVE LIQUID AND SUCTION REFRIGERANT LINE SIZES

- LINE SIZING - 24,300 BTUH @ +20°F:
- (5) 7/8" ELBOWS: EQUIVALENT LINE LENGTH = 10'
  - PIPING LENGTH = 21'
  - TOTAL DEVELOPED LENGTH = 31'
  - SUCTION LINE SIZE = 7/8"
  - LIQUID LINE SIZE = 3/8"



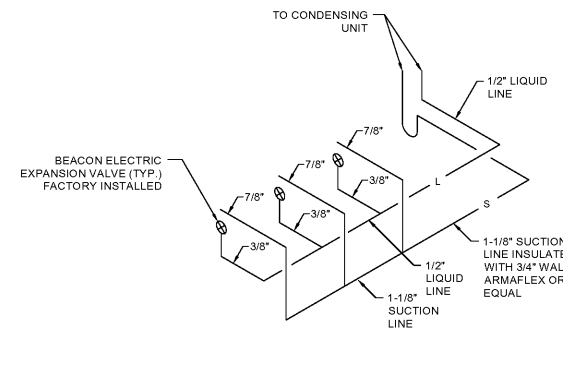
VAULT COOLER LIQUID AND SUCTION REFRIGERANT LINE LENGTHS

- DESIGN NOTES:
- LINE SIZING TABLE 9 FROM THE MANUAL SHOWS 42,000 BTUH REQUIRES A 1-3/8" SUCTION FOR UP TO 100' OF EQUIVALENT LINE LENGTH.
  - HORIZONTAL SUCTION LINES SHALL SLOPE AWAY FROM THE EVAPORATOR TOWARD THE COMPRESSOR AT THE RATE OF 1" PER 10' FOR SUFFICIENT OIL RETURN.
  - FOR MULTIPLE EVAPORATORS CONNECTED IN SERIES USING A COMMON SUCTION LINE, THE BRANCH SUCTION LINES MUST ENTER THE TOP OF THE COMMON SUCTION LINE.

PIPING DIAGRAM FOR THE R448A MEDIUM TEMPERATURE (+20°F SS1) COOLER REFRIGERATION SYSTEM

REFER TO REFRIGERATION INSTALLATION MANUAL FOR LONGER LINE RUNS.  
[HTTPS://WWW.HEATCRAFT.COM/PDF/I&O/H-IM-CU.PDF](https://www.heatcraft.com/pdf/i&o/h-im-cu.pdf)

**1 VAULT COOLER**  
 N.T.S.



VAULT COOLER LIQUID AND SUCTION REFRIGERANT LINE SIZES

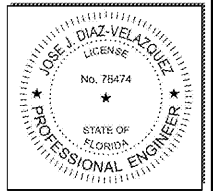
- LINE SIZING - 37,350 BTUH @ +20°F:
- (7) 1-3/8" ELBOWS: EQUIVALENT LINE LENGTH = 28'
  - (1) 1-3/8" TEE: EQUIVALENT LINE LENGTH = 4'
  - (1) 1-1/8" TEE: EQUIVALENT LINE LENGTH = 3'
  - (2) 7/8" ELBOW: EQUIVALENT LINE LENGTH = 4'
  - PIPING LENGTH = 44'
  - TOTAL DEVELOPED LENGTH = 83'
  - SUCTION LINE SIZE = 1-3/8"
  - LIQUID LINE SIZE = 1/2"

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CLIENT NAME  
**BLACKFIN PARTNERS INVESTMENTS, INC.**  
 4400 PCA BLVD, SUITE 600  
 PALM BEACH GARDENS, FL 33410

PROJECT NAME  
**7-ELEVEN #11795 - OCALA, FL**  
 9000 BLOCK OF SE MARICAMP ROAD  
 OCALA, FL 34470



PROJECT NO.	2200355
DATE	12/17/2020
DRAWN	FD
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Order Plans

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REFRIGERATION PIPING RISER DETAILS