

Canteen Freezer

Work Statement

Provide Labor and Material Necessary For :

- 1) Remove and dispose of the existing walk-in freezer located in building one loading dock, including walls, electrical, dry type fire protection, and quarry tile floor. Two weeks notice is needed for VA Canteen service to remove their storage.
- 2) Repair remaining concrete floor to provide a smooth surface for installation of new walk-in freezer.
- 3) Provide and install one new stainless steel walk-in freezer/fridge combination. The new walk-in will be complete with stainless steel floor. It is also necessary for the freezer portion of the walk-in to have a four inch thick insulated wall/floor, in accordance with the latest codes. A ramp will be incorporated into the freezer floor to accommodate the elevation differences between the freezer and fridge floors.
- 4) Install new dry type fire protection piping as required per code.
- 5) Install new lighting.
- 6) Reconnect door security hardware.
- 7) Provide Test and Start.

Dimensions shall be field verified by the contractor

Approximate Box size:

46'1" long x 16'4-1/2" wide x 8'6" high

2 Compartments

4" thick walls, partition, ceiling, and freezer floor

22 Ga SS (smooth) w/ 1/8" thick Aluminum tread plate floor.

Stainless Steel Ramp between refrigerator & freezer.

WALK-IN COOLERS AND FREEZERS

1. Walk-in site assembled refrigerators and freezers for Dietetics. Sanitary standard: walk-in units in food service shall comply with NSF Standard No. 7 and bear the NSF label. Submit shop drawings, product data, and samples. Manufacturer's literature and data: walk-in units, including assembly instructions.
2. Applicable Publications:
 - a. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
 - b. Air-conditioning and Refrigeration Institute (ARI):
420-00.....Unit Coolers for Refrigeration.
520-04.....Performance Rating of Positive Displacement Condensing Units
 - c. American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE):
15-10.....Safety Standard for Refrigeration Systems
 - d. American Society for Testing and Materials (ASTM):
A167-99 (R2009)Stainless and heat-resisting chromium-nickel steel plate, sheet, and strip
E84-11.....Surface burning characteristics of Building materials
 - e. National Sanitation Foundation (NSF):
7-09.....Commercial Refrigerators and Storage Freezers
3. Walk-in Refrigerator/freezer construction
 - a. General: Prefabricated, sectional, all-metal clad, modular, designed for easy accurate field assembly.
 - b. Room Dimensions: Field verified.
 - c. Door Sizes: 1220mm (48 inches) wide by 1980 mm (78 inches) high, except doors for freezers with floor area less than 14 square meter (150 square feet) may be 914 mm (36 inches) (nominal) wide.
 - d. Metal Finishes:
 1. Inside facing of walls and ceiling, and outside facing of exposed walls:

Stainless steel, minimum 0.85 mm thickness (22 gauge), No. 3 finish, ASTM A167, Type 302B. Provide stainless steel close-off panels, with supports, from exposed faces of walk-in ceiling.

2. Concealed outside facings: Embossed aluminum sheet, 1mm (0.040 inch) thick, or 0.55 thick (26 gauge) galvanized steel panel.

3. Interior Floor: 1.9 mm thick (14 gauge) galvanized steel

4. Panel Construction:

a. General: 100 mm (4 inches) thick, precisely formed interior and exterior metal pans, filled with foamed-in-place urethane foam, overall "U" factor 0.09 (0.03), interchangeable, nominal 300, 600, 900, and 1200 mm (1, 2, 3, and 4 foot) widths, without wood or metal structural members, quick-lock panel fasteners. Provide special locking wrench and press-fit caps to close wrench holes.

b. Corner panels: 90 degrees angle, radiuses 15 mm (0.5 inch) inside and out-side, with 300 mm (12 inch) dimensions each side.

c. Panel edges: Foam-in-place, tongue-and-grooved urethane to assure tight joints. Provide gaskets on the interior and exterior of each panel along every tongue to provide a gasket seal at each panel joints

d. Insulation: "Pour-type" urethane, foamed-in-place thermal conductivity (k) not more than 0.017 (0.12), 97 percent closed cell, flame spread rating 25 or less, when tested in accordance with ASTM E84. Fiberglass, polystyrene or similar materials are not acceptable. For freezer spaces on grade or above grade with fill, provide floor heating system beneath floor insulation to prevent frost formation and subsequent floor heaving.

e. Door panel and door: Provide channel thermal breaker type reinforcing steel frame around the entire perimeter of the door opening. Door shall be an in fitting flush-mounted type with dual flexible blade wiper gasket on the bottom, and a replaceable magnetic gasket on the top edge and along both sides. Provide heated, double glass view windows in refrigerator doors. Door shall be super type, with three hinges, for rough usage including aluminum diamond plate on inside of door panel and frame to a height of 914 mm (36 inches).

Provide hydraulic exterior door closer to prevent slamming and assure secure closing.

1. Door hinges and latch and strike assembly: Manufacturer's standard, self-closing cam-lift type hinges, for 1220mm (48 inch) door, chrome plated or polished aluminum finish, made to provide for locking, but with an inside safety release mechanism to prevent anyone from being locked inside, when door is locked outside.
 2. Concealed, energy use selective, anti-sweat heater wire circuit: Provide sufficient heat to prevent condensation and frost formation at the door jambs and exterior edges of the door on all sides.
 3. Door panel and inside lighting: Vapor proof incandescent. Provide exterior toggle switch and pilot light, and top mounted junction box. This switch shall operate all lights in the walk-in refrigerator/freezer. See electrical drawings for lights and installation.
 4. Thermometer: Manufacturer's standard, 50 mm (2-inch) minimum diameter, dial type, flush mounted in door panel.
- f. Pressure relief port: Provide for all freezers operating at -18 degree C (zero degree F), or lower, two-way type ports, to allow for an increase or decrease of air pressure on the interior of the freezer to equalize with air pressure on the exterior. Provide ports with automatically controlled, UL approved anti-sweat heaters. Complete device shall carry Underwriters Label and be assembled ready for connection. Install port in a wall panel away from the direct air stream flowing from the coils.
- g. Floor panel strength: Capable of withstanding 28.7 kPa (600 pounds per square foot) uniform load.
- h. Wherever compartment dimension exceed clear-span ability of ceiling panels, provide I-beam support on exterior of ceiling or spline-hangers. Install 13 mm (1/2 inch) diameter steel rods through beam/hangers and secure to structure above. Beams or posts within compartments are not acceptable.
- i. Rub rail wall protectors: Manufacturers standard, at floor line of walls exposed to traffic.
- j. Entrance Ramps: Provide built-in ramps where walk-in floor panels are installed on existing floors. The condenser fan shall be driven by permanent split capacitor motors.

k. Special Requirements for Frozen Food Freezers – Provide entrance to frozen food freezers through a refrigerator of a high temperature. Locate thermometer serving frozen freezer outside of higher temperature refrigerator used as entrance vestibule.