

INTERNATIONAL COLD STORAGE

REFRIGERATED BUILDING

ARCHITECTURAL SPECIFICATION

This Model Specification is designed as an aid to specification writers in preparing walk-in refrigeration equipment specifications. Where items appear in brackets [] a selection of one of the alternatives or entry of variables is required by the specification writer. Due to our policy of continuous product improvement ICS reserves the right to change specifications without notice.

1. GENERAL

- a. The equipment provided under this specification shall be factory prefabricated and of seamless one-piece design. **Equipment shall be assembled at manufacturer's facility, ready to be transported to owner's business for final installation without further assembly. The manufacturing technology will allow for future relocation without disassembly.** The equipment shall require a general contractor responsible for preparing a proper footing and foundation for a level slab of the size shown on the shop drawings, flashing of equipment to adjoining building wall (if required), and single point connection of electrical power supply to each refrigeration system's disconnect switch. Walk-in shall be designed and manufactured by International Cold Storage (commonly known as ICS), 215 E 13th, Andover, KS 67002, www.icsco.com. Equipment is to be built in full compliance with the 2009 Energy Independence and Security Act, also known as EISA. **Insulation tested in accordance with ASTM C518 – Standard Test Method for Steady-State Thermal Properties by Means of the Heat Flow Meter Apparatus.**
- b. For purposes of this specification only aged (greater than 180 days) thermal properties will be acceptable proof of EISA compliance. Test results when requested are only accepted from the OEM insulation manufacturer and not the walk-in fabricator.
- c. Other manufacturers' products will be considered if submitted with specification sheets showing compliance with above and the following specifications.
- d. The equipment shall be in conformance with the following model building codes and compliances where applicable:
 - i. International Building Code (IBC) for structural components
 - ii. National Electrical Code (NEC) for electrical systems
 - iii. Underwriters Laboratories, Inc. (UL) and (CUL) for electrical components
 - iv. National Sanitation Foundation NSF/ANSI Standard #7 for sanitation
 - v. The Walk-in shall bear the label of the following national certification agencies:
 1. U.L. (Door Panel Assemblies, refrigeration systems listed for outdoor use)
 2. NSF

2. SIZE & CAPACITY

- a. The room(s) shall be built to specified interior and exterior dimensions as shown on the accompanying drawings. Units built to "Nominal" dimensions shall not be acceptable.
- b. The room(s) shall have sufficient refrigeration when supplied to maintain 35° to 38°·F in compartments designated as "cooler" and 0° to -10°·F in compartments designated "freezer" unless otherwise indicated in these specifications, when the condenser is exposed to maximum ambient temperatures in accordance with ASHRAE Fundamental, Weather Data for the installed location . The equipment is designed for the holding of products not quick chilling, quick freezing, or retail merchandising unless otherwise noted.

3. CONSTRUCTION

- a. Each building unit shall consist of inner and outer metal skin precision formed to enclose the structure components and insulation envelope. The interior pan shall be flanged and mechanically fastened six inches on center. The exterior material shall be configured into an "S" for a tongue and groove connection to provide continuous sealing along the entire joint. **Cam-lock fasteners are not an acceptable means of connecting the metal surfaces to one another. And exposed compression panel gaskets at exterior metal seams are not allowed.**
- b. Floors, where designated, walls, and ceilings (roof) shall have a minimum of 4 inches (R=32.0 @ 20F degrees) of foamed-in-place insulation. There shall be no insulation joints at the metal seams, thus creating a one piece, structurally rigid module.
- c. Partition walls shall be constructed in accordance with the specifications for the interior

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walls. All partition walls shall have full 4 inches foamed-in-place insulation and thermal breaks to prevent condensation and heat transfer between compartments.

- d. There shall be no use of sealing or caulking materials in the food zone of the equipment for any purpose.
- e. The assembled building shall be capable of being lifted into place with the proper material handling equipment for the size and weight supplied.

4. FLOOR

- a. When shown on the shop drawings an insulated 4" thick prefabricated finish floor with NSF listing is supplied with metal finish. The floor shall be supplied **without panel lock access holes**. The floor shall be constructed for use [directly on grade slab] [1 ½" above grade on permanent steel skids]. [The 1 1/2" elevation provides for air circulation under the floor to eliminate corrosion and the need for an insulated and/or ventilated slab.] The floor shall have capacity to support a minimum of 690 Lbs./Sq. Ft. of evenly distributed load when elevated 1 ½" above grade or 5000 Lbs./Sq. Ft. when installed on grade.

5. METAL FINISHES

- a. Interior walls and ceilings shall be finished with the following:
 - i. **The standard material is 26 Ga. Stucco Embossed Acrylum®**
 - ii. Optional materials are;
 - iii. [26 Ga. White Stucco Embossed Galvanized Steel]
 - iv. [26 Ga. Black Stucco Embossed Galvanized Steel]
 - v. [.032" Stucco Embossed Aluminum]
 - vi. [.032" White Stucco Embossed Aluminum]
 - vii. [.040" Stucco Embossed Aluminum]
 - viii. [.040" White Stucco Embossed Aluminum]
 - ix. [24 Ga. Stainless Steel 201 #3 Finish]
 - x. [22 Ga. Stainless Steel 304 #2B Finish]
 - xi. [24 Ga. Stainless Steel 430 RO]
 - xii. [24 Ga. Stainless Steel 430 RO, Stucco Embossed]
- b. Exterior walls shall be finished with the following;
 - i. **The standard material is 24 Ga. Stucco Embossed Galvanized Steel coated with a polyester finish in one of the following colors; [Polar White] [Autumn Brown] [Mist Gray] [Almond] [Sand] [Colonial Red] or [Natural Mill Aluminum]**
 - ii. Optional materials are;
 - iii. [.032 Stucco Embossed Aluminum] with a polyester finish in one of the following colors; [Polar White] [Autumn Brown] [Mist Gray] [Almond] [Sand] [Colonial Red] or [Natural Mill Aluminum]
- c. Floor shall be finished with the following;
 - i. **The standard floor finish shall be .090" mill finish aluminum for NSF listed products;**
 - ii. Optional materials are;
 - iii. [16 Ga. galvanized steel, for Non NSF listed products]
 - iv. [.100" Aluminum diamond tread plate, for NSF listed products]
 - v. [.125" mill finish Aluminum diamond tread plate, for NSF listed products]
 - vi. [.125" welded seam, mill finish aluminum plate, for NSF listed products]
 - vii. [18 Ga 304 Stainless Steel, for NSF listed products]
 - viii. [7/16" OSB Wood Underlayment for miscellaneous overlays]

6. INSULATION

- a. All insulation shall be foamed in place, with 2.0 lbs./ft³ core density rigid urethane foam bonded to inner and outer metal pans. Insulation is a two-component polymeric MDI based system utilizing water and HFC245fa as blowing agents. This system is designed specifically for insulation of discontinuous, metal-faced sandwich panels.
- b. The thermal conductivity (K) shall not exceed .125 (BTU) (IN) / (HR.) (Ft²) (°F) when rated at 20 °F per 2009 EISA standards. "R" factor shall be no less than 32.4 in a four inch thick

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cross section.

- c. The insulation shall be Underwriter Laboratories classified Class I (per ASTM E-84) having a flame spread of 20 and smoke developed of 450 when tested in a six inch cross section, (File#R5692).
- d. Walls shall be furnished in the following insulation thickness: [4" standard], and [5" optional] or [6" optional].

7. LIGHTING AND ELECTRICAL WIRING SYSTEM

- a. Unit shall be complete with interior [Compact (CFL) Fluorescent] [4' Strip Fluorescent] [Compact LED], [4' strip LED] light fixtures of sufficient number to produce a light level of 10 foot candles minimum at 36" AFF. All light fixture wiring to be concealed in wall or ceiling system and factory installed and tested for proper operation prior to shipment.
- b. **The equipment manufacturer is responsible for the connection of all light fixtures, heaters, vents, indicating temperature instruments, condensate pipe tracing, anti-sweat heaters to a single point connection point.**
- c. Lights shall be controlled by doorway mounted switches as shown on the plans. All switches are SPST unless otherwise noted on drawings. Switch incorporates an indicating temperature instrument where mounted adjacent to a refrigerated room entry door.

8. REFRIGERATED ROOM ENTRY DOOR

- a. Doors shall be of the size and swing and in the location shown on the plans and drawings. They shall be complete with 4" of insulation, magnetic gasket, door sweep, metal finish the same as adjacent walls, and with chrome plated hinges. Hardware has a provision for locking, and a safety release which prevents entrapment of personnel within the walk-in. Door frame electrical assembly shall be UL and/or CSA listed.
- b. Nominal Door width: [30"], [36"] Standard, and
- c. Optional: [42"], [48"], [54"], [60"], [66"], [72"].
- d. Nominal Door height: 78" Standard, and
- e. Optional [72"], [84"].
- f. Door mounting system is complete with internal mounting plates in door frame section and at all hinge, latch and accessory mounting locations.
- g. Door(s) to be raised [1/2"] [5/8"] [2"] when the installation of [quarry tile] is noted on plans for the finish floor wearing surface to continue through doorway.
- h. Doors shall have a three sided magnetic gasket, forming a positive airtight seal when door is closed. Gasket shall be dart mounting type to facilitate easy replacement. The door gasket and sweep shall be water, oil, sunlight, and fat resistant. All standard door sections shall utilize a foamed in place PVC vinyl extrusion between the interior and exterior skin to reduce thermal conductivity.
- i. All freezer doors shall contain a heater cable system and heated air vent as required. Heater cable shall be easily replaceable.
- j. All personnel size doors require closers to meet EISA compliance. Doors shall be furnished with;
 - i. [Commercial grade Calibre Series 6500 Series hydraulic style bolted to door and frame by means of 11 Ga. steel foamed-in-place hardware mounting plates] or
 - ii. [Standard industry grade (K1094) snubber style closer bolted to door and frame by means of 11 Ga. steel foamed in place hardware mounting plates].

9. COMMERCIAL SERVICE DOOR FOR NON-REFRIGERATED ROOM

- a. Door(s) shall be of the size and swing and in the location shown on the plans and drawings. Door shall be **a)** 18 ga. steel coated with **b)** two coats of premium commercial paint. Door frame is **c)** 16 ga. steel reinforced with **d)** no less than 5/16" structural grade c-channel welded around the entire perimeter of the opening. Complete with **e)** 1.75" of styrene insulation, **f)** perimeter edge weather-seal, **g)** door sweep, **h)** hydraulic door closer, **i)** threshold, **j)** three security stud hinges, **k)** door scope (security viewer), **l)** UL listed door panic bar, **m)** flush deadbolt lock with **n)** Schlage keyway, and **o)** double return exterior pull

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- handle. Room supplied with p) rain diverter mounted over door.
 - i. Nominal door width is;
 - ii. Standard is 42"
 - iii. Optional is [36"] [48"]
 - iv. Nominal door height is 80"

10. DOOR LOCKING BAR

- a. Any doors specified as Refrigerated Room Entry Door shown to open to ambient temperatures shall be equipped with a locking bar to prevent unauthorized malicious entry into the room. The door shall be supplied with an inside safety release mechanism.

11. DOOR DRIP SHIELD

- a. A drip shield shall be supplied on all doors exposed to ambient temperatures.
- b. The drip shield shall act to divert rain and ice from the gasket area of all exterior doors. It shall match exterior wall finish and shall be factory mounted.

12. ROOF

- a. A metal, standing seam type roof system shall be factory installed to provide a waterproof covering over the ceiling assembly of the Walk-in.
- b. The roof shall overlap the exterior finish walls on all sides and shall be adhered to the roof deck.
- c. The roof system shall be of not less than 24 gauge G90 galvanized steel and shall be pitched ¼" per foot over span of the roof
- d. **The building shall be engineered with the following design considerations;**
 - i. **The system shall be designed to support a MAXIMUM EQUIVALENT ROOF UNIFORM LOAD NO LESS THAN [] PSF with loads imposed per International Building Code (IBC) for the following zip code, []; and the following;**
 - ii. **A 3 Second Gust Wind Speed of []mph.**
 - iii. **A height difference between adjacent building and this building is [] feet for determination of drift loads.**
 - iv. **When required the above loads will be validated through submittal of sealed engineered drawings by a registered Engineer or Architect in the state of the job by the manufacturer.**

13. REFRIGERATION SYSTEM

- a. When specified the walk-in shall have sufficient refrigeration to maintain [32°F] [35°F] [38°F] temperature inside the [cooler and/or [-20°F] [-10°F] [0°F] temperature inside the [freezer] compartment assuming products enter at storage temperature with ambient temperatures in accordance with ASHRAE Fundamental, Weather Data for the installed location. The average number of ingresses is [1] [2] [3] [4] [10] per hour, and there are [no] [] BTUH] additional product loads from products entering above storage room temperature. The refrigeration system(s) shall be wired to operate from [208V/60Hz/1Ø] [208-230V/60Hz/1Ø] [208-230V/60Hz/3Ø] [460/60Hz/3Ø] electrical supply.
- b. Air Cooled type split refrigeration system(s) shall be supplied by the walk-in unit manufacturer.
- c. R-1 Condensing Unit Model No. []
- d. R-2 Condensing Unit Model No. []
- e. R-3 Condensing Unit Model No. []
- f. R-1 Evap Blower Coil Model No. []
- g. R-2 Evap Blower Coil Model No. []
- h. R-3 Evap Blower Coil Model No. []
- i. Systems shall be complete and ready to operate with only the connection of the necessary electrical service.

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- j. Refrigerant shall be non-flammable type R-404a.
- k. Refrigeration specialty components (TXV, thermostat, liquid line solenoid) are mounted by manufacturer. Electrical controls are mounted in the condensing unit and blower coils as required for the connection of electrical power source. Electrical disconnect switches unless specifically noted [are] [are not] provided.
- l. Refrigeration system(s) shall be complete with the following: Horizontal discharge air-cooled condenser, with Emerson Copeland brand [Semi-hermetic], [Hermetic], [Scroll], [Discus] type compressor with overload protection, contactors (as required), UL listed outdoor weather hood, fan guards, receiver tank with liquid shut off valve, [suction line accumulator], liquid line filter/drier and sight glass, high/low pressure control and liquid line solenoid valve, crankcase heater, low ambient controls, and UL labeled electrical panel.
 - i. **The condenser shall be equipped with an aluminum micro-channel heat exchanger to minimize the refrigerant charge of the system.**
- m. Evaporator blower coil(s) shall be furnished with appropriate defrost for operating temperature range. Electric defrost shall be included on all refrigeration systems operating at +32°F and below. Electric defrost shall be time initiated and time/temperature terminated with fan delay to reduce room condensation. Defrost timers shall be provided on all rooms operating at or above 35 degrees.
 - i. **All electric defrost systems shall include a control (Interlink SDK) to automatically adjust the frequency of defrost cycles without operator intervention to reduce the overall occurrences of defrost cycles.**
- n. All condensate pans shall be piped by the manufacturer in Schedule 40 PVC drain lines complete with internal heat trace (except +35°F and above systems) exiting the wall nearest to drain pan. Evaporators shall be located as shown on plans and drawings. Evaporator blower coil(s) are to be listed for sanitation and electrical safety by NSF and/or UL.

14. ELECTRICAL SERVICE REQUIREMENTS

- a. Manufacturer to provide all electrical circuits terminated to a single location at roof level for each roof top unit. The electrical service requirements are as follows;
 - i. Refrigeration Unit R-1: [] service to electrical disconnect box.
 - ii. Refrigeration Unit R-2: [] service to electrical disconnect box.
 - iii. Refrigeration Unit R-3: [] service to electrical disconnect box.
- b. Lighting and Miscellaneous 120V equipment, 120V, 20 Amp to electrical disconnect box

15. OPTIONAL ACCESSORIES

The following optional equipment and/or accessories are to be provided and installed with the walk-in only where indicated:

16. INTERIOR FLOOR RAMP

- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
- b. Shall be sized the width of the door x 30" long and shall be complete with .10" aluminum tread plate.

17. EXTERIOR FLOOR RAMP

- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
- b. Shall be sized the width of the door x 30" long, and shall attach to the front of the door jamb by means of removable bolts, and shall have an aluminum tread-plate surface.

18. INTERIOR STAINLESS STEEL DOOR KICKPLATE

- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
- b. Shall be not less than 12"H x width of door and of 18 Ga. type 304 stainless steel with corners beveled and de-burred.

19. EXTERIOR STAINLESS STEEL DOOR KICKPLATE

- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____

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- b. Shall be not less than 12"H x width of door and of 18 Ga. type 304 stainless steel with corners beveled and de-burred.
20. INTERIOR ALUMINUM TREADPLATE DOOR KICKPLATE
- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
 - b. Shall be not less than 48" high x width of door and constructed of .100" alloy 3003 aluminum tread-plate with corners beveled and de-burred.
21. EXTERIOR ALUMINUM TREADPLATE DOOR KICKPLATE
- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
 - b. Shall be not less than 24" high x width of door and constructed of .100" alloy 3003 aluminum tread-plate with corners beveled and de-burred.
22. AUXILIARY DOOR LOCK BAR (INFITTING) STYLE DOOR
- a. American Series 2200 enclosed hasp lock constructed of forged steel.
 - b. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
23. PADLOCKING HASP WITH INSIDE RELEASE (FLUSH) STYLE DOOR
- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
 - b. Kason 36 Chrome plated zinc post; stainless steel locking bar with brushed finish; polycarbonate twist off knob for entrapment release.
24. CYLINDER LOCK LATCH
- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
 - b. Shall be key operated (furnished with two keys), chrome plated and complete with inside release mechanism to prevent malicious entrapment.
25. COVE BASE TRIM
- a. 4" x ½" x 0.10" aluminum formed to provide wall to floor juncture trim.
 - b. Supplied as shown on the plans and drawings in C-1 ____, C-2 ____, C-3 ____.
26. DIGITAL TEMPERATURE INDICATORS
- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
 - b. Shall be factory installed on each refrigerated room door jamb at eye level, and shall be factory calibrated for +/- 2°F accuracy.
27. STRIP DOOR CURTAIN
- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
 - b. Shall be NSF approved and labeled and constructed of not less than 1/8" thick clear vinyl material. Curtain shall remain clear at compartment operating temperatures. Individual panels of strip curtain shall overlap jamb and each other by not less than 1" and shall touch (-/+ ½") floor of walk-in. Strip door curtain shall not be factory mounted if unit is UL listed.
28. BIPART DOOR CURTAIN
- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
 - b. Shall be NSF approved and labeled and constructed of not less than 1/8" thick clear vinyl material. Curtain shall remain clear at compartment operating temperatures. Individual curtain panels shall overlap over-lap at the center point, and shall touch (-/+ ½") floor of walk-in. Door curtain shall not be factory mounted if unit is UL listed commercial unit is applicable.
29. FRAMED WALL OPENING
- a. Supplied at W-1 ____ W-2 ____ W-3 ____ W-4 ____
 - b. Shall be of the dimensions shown and located as shown on the plans and drawings and shall be finished with same material and in same manner as the door jamb.

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30. VIEW WINDOWS

- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
- b. Shall be 14"x14" factory mounted in entrance door(s) as indicated on the plans. The window shall be double pane in coolers and triple pane glass in freezers. The window shall be heated for use on compartments +32°F and below.

31. MERCHANDISING DOORS

- a. Supplied at W-1 ____ W-2 ____ W-3 ____ W-4 ____
- b. Shall be of the size as shown on the drawings. They shall be factory mounted and complete with: magnetic gaskets, polished extruded aluminum frames, pull type door handles, self closing hinges, [two] [three] panes of tempered safety glass with heated glass on +32°F and below applications, door and frame heaters, and fluorescent lights. Shelving shall be as stated shown on plans and drawings.

32. ROOF TO WALL FLASHING MATERIALS

- a. Supplied for ____ LF
- b. Flashing materials shall be furnished for use by general contractor in weather-sealing building to an adjacent structure. Flashing kit shall include 24 GA galvanized flashing material and installation drawings and directions. Contractor will provide counter-flashing and caulking material. Contractor will install flashing per detail shown on manufacturer's plan and drawings. No punctures of any kind to the walk-in roof shall be acceptable.

33. DRIP EDGES

- a. Supplied for ____ LF.
- b. Shall be factory installed on the walk-in. Drip edge shall provide a water diversion for field installation of traditional building finishes directly to walk-in walls. Edge extends under the roof and provide positive water run-off over the top edge of the stucco. Stucco flashing is to be of the same material and color as the exterior siding of the walk-in.

34. CANTILEVER WALL MOUNT SHELVING SYSTEM

- a. Supplied in C-1 ____ C-2 ____ C-3 ____.
- b. Shall be adjustable, CANTILEVER type of size and number of tiers shown on the plan and drawing. Shelving shall be NSF approved and so labeled. Shelving system shall be factory installed and not include front posts. Shall include all necessary frames, shelves, and brackets for complete system.

35. INSULSAFE® WALL SYSTEM

- a. Shall be installed within all walls where shown on the plans and drawings. The walls will contain reinforcing material for added security to aid in the prevention of vandalism. The walls shall contain one of the following materials;
 - i. Reinforcing wire mesh _____
 - ii. Expanded steel _____
 - iii. Reinforcing steel bars _____

36. REINFORCED FLOOR SYSTEM

- a. Supplied in C-1 ____ C-2 ____ C-3 ____.
- b. Shall be factory installed where shown on plans and drawings utilizing, 3/4" plywood substrate floor underlayment. Reinforced area shall be rated without floor support skid system at 10,000 pounds per sq ft uniformly distributed load.

37. RESILIENT FLOOR COVERING SYSTEM

- a. Resilient floor covering is manufactured from 100% recycled thermoplastic polyvinylchloride, interlaced with strand reinforcements. Sheet PVC floor covering material is provided in 5'x 8' sheets and 1/4" thick. Top surface pattern to be Stipple finish and the back Cloth. Color may be selected from First Choice Safety Flooring™ standard palette of color choices. The wall base shall be a minimum of six inches high.

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- b. The adhesive material is stabilized water-resistant two part epoxy. Joins are seamed with thermoplastic welding rod as specified by B&H Commercial Services, Inc.
- c. Specialties are supplied where needed in the form of; a) aluminum edge flashing (cove cap), b) stainless steel drain rings, c) corner angle guards, d) and transition strips.

38. WIND TIE DOWN SYSTEM

- a. Supplied for [] LF.
- b. Shall be factory provided for installation by others. The tie downs shall be engineered to prevent the overturn of the building. Size and length will vary and is determined by engineering analysis and local code.

39. EXTERIOR CORNER TRIM

- a. Supplied for [] exterior corners.
- b. Shall be factory provided for installation by others. Each corner trim piece (2 required) shall be of the same material and color as the siding of the walk-in, shall be the full height of the walk-in , and shall be complete with fasteners and installation instructions.

40. DOOR TRIM KIT

- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
- b. Shall be factory provided for field installation. Door trim kit for close off of space between walk-in door area and adjoining building is to be supplied. Trim pieces to be of same color and material as door. Kit is to include necessary fasteners.

41. FLOORLESS INTERIOR WALL TO FLOOR TRIM

- a. Supplied for [] LF.
- b. Shall be factory provided and installed by walk-in manufacturer. Interior floor trim pieces shall be of the .090" mill finish aluminum formed with 1/4" radius, and shall be complete with fasteners, and sealing materials.

42. RAISED DOOR THRESHOLD

- a. Supplied at D-1 ____ D-2 ____ D-3 ____ D-4 ____
- b. Shall be factory provided for use in each compartment is to be tiled. Finish threshold height shall be of []" to match the total mud and tile height.

43. EXTERIOR VENEER ARCHITECTURAL FINISHES

- a. Exterior finish shall be supplied with a manufacturer installed veneer finish in; [Brick], [Stone] [Block], [Split Block], [Stucco] as provided by either Fullerton Finish Systems, Inc. or Nichiha USA. For specification see; www.fullertonfs.com or www.nichiha.com .

44. CONDENSATE LINE INSTALLATION & PIPE ROUTING

- a. Supplied for [] LF.
- b. Shall be factory provided and installed by walk-in manufacturer. Routing shall be inside the walk-in and from the evaporator drain pan outlet(s) to location shown on manufacturer drawings. Condensate piping shall include heater cable in all compartments that operate at less than 32°F and shall be securely fastened to the walk-in walls at not less than four foot intervals, and shall maintain a positive slope for drainage of not less than 1" per foot.

45. COMBINATION ALARM & DATA ACQUISITION INSTRUMENT

- a. Where indicated on the plans and drawings at; D-1____, D-2____, D-3____, D-4____
- b. Each refrigerated compartment shall be monitored by a Modularm Model 75LC multi-monitor with 3 button user interface, **digital temperature indicator, built-in audible alarm, built-in dry contacts for remote notification capability, built-in transformer, and built-in rechargeable battery with recharging circuitry.** 75LC provides **HI-Lo Temperature Alarm with Auto-set capability, AC Failure Alarm, Door Ajar Alarm, Panic Alarm** and Energy Independence and Security Act compliant **timed lighting**

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control. 75LC includes **built-in data/communication port** for Data Logging and system expansion.

- c. Optional: System includes magnetic contacts at each door and a low voltage IP-1 illuminated push button inside of each compartment by the door to provide light switch and panic alarm function. The IP-1 will remain lit at all times even during a power failure. Multiple IP-1's to be provided by each door in multi-door compartments to integrate with 75LC timed lighting function and to replace conventional 3 and 4 way light switching.
- d. Optional: Low voltage MD-1 motion detector shall be provided inside the walk-in for occupancy detection and for automatic light control. MD-1 to be mounted inside of the walk-in above the door.
- e. Optional: 75LC Communicator shall be provided for collection of data generated by 75LC(s). Interconnecting wire between 75LC's and Communicator will be 3 conductor low voltage and will be installed by KEC or by others. Communicator contains software for data collection and reporting, and for generation of email and text message notification of alarm conditions. Communicator includes Ethernet port for remote connection to computer, computer network or the Internet.

46. GENERAL STATEMENT OF WARRANTY

- a. Read Limited Warranty Statement for complete terms of the warranty, following is the summary;
 - i. Insulation Material – Twenty (20) years material only.
 - ii. Compressor(s) – 1 year OEM manufacturer (wholesaler supplied).
 - iii. Refrigeration component(s) - 12 month material only.
 - iv. Non-Refrigeration component(s) – 12 months labor and materials.
 - v. Doors – 5 years material only, excludes hardware.
 - vi. Accessories & Buyouts – OEM warranty not to exceed 12 months.

47. EXTENDED WARRANTY & LABOR SERVICE AGREEMENT

- a. The following are available optionally at additional cost;
 - i. [Refrigeration component(s) – 12 month Extended labor & materials with 24/7 dispatch from date of installation].
 - ii. [Refrigeration component(s) – 24 month Extended labor & materials with 24/7 dispatch from date of installation].
 - iii. [Refrigeration component(s) – 60 month Extended labor & materials with 24/7 dispatch from date of installation].
 - iv. [Compressor(s) – 48 month extended warranty, materials only, for a total of 60 months from date of installation].