

## 1. GENERAL GUIDANCE REGARDING DESIGN

- A. Commissary facilities are Department of Defense (DoD) projects, and as such must be constructed in accordance with the following criteria, codes, and standards.
- B. Project design shall conform to Department of Defense (DoD) criteria and other applicable DoD regulations, manuals, and pamphlets; (latest edition shall be used) including but not limited to the following:
  - 1. Unified Facilities Criteria – Design: General Building Requirements (UFC 1-200-01)
  - 2. Unified Facilities Criteria – Design: Fire Protection Engineering for Facilities (UFC 3-600-01)
  - 3. Unified Facilities Criteria – DoD Minimum Anti-Terrorism Standards for Buildings (UFC 4-010-01)
  - 4. Project location “Installation Design Guide” (IDG), “Base Exterior Architectural Plan” (BEAP), “Architectural Compatibility Standards”, or other general design guide at the project location.
- C. Project design shall conform to national codes and regulations for building construction and safety, including but not limited to the following:
  - 1. International Building Code
  - 2. International Plumbing Code
  - 3. International Mechanical Code
  - 4. International Fuel Gas Code
  - 5. National Electric Code
  - 6. National Fire Protection Association
  - 7. OSHA Regulations
  - 8. ASHRAE Standards
  - 9. All applicable Federal, State, and Local Environmental Regulations
  - 10. Applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities" and ICC/ANSI A117.1.

## 2. GENERAL GUIDANCE REGARDING DESIGN OF SALES AREA

- A. Sales Area layout shall be in accordance with the latest DeCA approved definitive floor plan. Deviations from the approved definitive floor plan shall be identified during the design charrette process and documented in the Final Project Definition Package that is developed for a particular project.
- B. Aisle spacing in Sales Area shall be as follows:
  - 1. Aisles between gondola shelving rows shall be 8'-0" minimum
  - 2. Aisles between refrigerated display case rows and gondola shelving rows shall be 9'-0" minimum
  - 3. Aisles between refrigerated display case rows shall be 10'-0" minimum
  - 4. Aisles between glass door refrigerated display cases shall be 8'-0" minimum plus width of glass doors opening into aisle (i.e., 8'-0" + 2'-6" for glass doors on one side only and 8'-0" + 5'-0" for glass doors on both sides)
  - 5. Aisles between end of gondola shelving rows and refrigerated display cases at back of Sales Area shall be 12'-0" minimum

6. Aisles between end of gondola shelving rows and checkout counters at front of Sales Area shall be 24'-0" minimum
7. Aisle between checkout counters and front wall of Checkout Area shall be 15'-0" minimum
8. Aisle between checkout counters shall be 3'-0" clear.

Maintain these minimum aisle widths unless approved otherwise by DeCA during the design charrette process.

Note that unobstructed exit aisle widths, equivalent to exit width provided at front of Sales Area, shall be provided as required by NFPA 101 Life Safety Code. Space between checkout counters may not be used to satisfy this requirement, unless a dedicated exit path through checkout counters is provided.

- C. A natural color polished concrete floor is to be used in all customer areas of new facilities. Requirements for this system are identified in Section 03361 "Special Concrete Floor Finish".
- D. Resilient floor tile is typically used in customer areas of addition / alteration projects, as this product can better conceal patched or otherwise damaged existing concrete floor slabs. Basis-of-Design for single color vinyl composition floor tile to be used throughout shall be as indicated in the DeCA Image Enhancement "Standard Décor Package". Documents shall indicate that floor tile shall be installed with grain running in one direction, with joints in straight line.
- E. Interior décor shall comply with requirements of the DeCA Image Enhancement "Standard Décor Package". Refer to Section 10445 "Interior Décor Specialties" Design Criteria for further guidance. Typically, new stores should have an exposed structure ceiling and incorporate either a 16'-0" or 18'-0" high standard décor package. Addition / Alteration projects typically have acoustical panel ceiling system with either a 12'-0" and 14'-0" high standard décor package.
- F. Gypsum wallboard soffits (i.e., fur-downs) are typically provided at 8'-0" AFF around the perimeter of the Sales Area to accommodate interior décor elements and conceal HVAC return air ductwork, refrigeration piping, etc. A soffit height of 10'-0" AFF is typically provided at the front of the checkout area to accommodate automatic entrance door packages with glass transoms above. The face of these, roof structure suspended, soffits should be offset from (i.e., extend in front of) the face of, floor-supported, walls below with control joints allowing for movement. This also provides a uniform horizontal banding around the sales area for the interior décor elements.
- G. Provide gypsum wallboard partitions (i.e., wingwalls) at the ends of all display case line-ups along perimeter walls, and between cases with different profiles (i.e., widths, depths, heights, etc.). This is necessary to properly close-off spaces above and at sides of display cases as identified in Design Standard Plates 07920-01 and 07920-02, so that HVAC return air is drawn from the floor. Additionally, if these spaces are left open to the sales area they must have a fire sprinkler system with coverage densities matching that used in the sales area.
- H. Overhead HVAC return air and refrigeration piping vertical drops at island refrigerated display cases shall also be concealed within roof structure supported gypsum wallboard enclosures. These enclosures should have décor elements matching that used throughout the sales area.
- I. In new stores with high bay exposed structure in customer areas, the preferred method of illumination is continuous rows of fluorescent light fixtures, mounted at décor height (i.e., 18'-0" or 16'-0") and running perpendicular to shopping aisles (refer to Division 16 for required foot-candle levels). Consider fluorescent light fixtures above checkout counters, mounted at a lower height, to provide even illumination with less glare for cashier functions. Refer to Section 10445 "Interior Décor Specialties" Design Criteria for additional guidance regarding painting of exposed utilities in customer areas.
- J. On addition / alteration projects, acoustical panel ceiling systems are typically used in lieu of exposed structure. This is usually necessary to conceal existing ductwork, piping, conduits, etc that were previously installed. Recessed continuous strip fluorescent lighting rows should run perpendicular to shopping aisles.
- K. Coordinate placement of décor banners so that they are not located directly beneath light fixtures. Arrange décor banners so that the same color banners are not placed next to each other.
- L. Do not locate light switches in areas accessible to customers. If necessary to do so, provide lockable switch covers.

- M. Do not locate HVAC thermostats or hose bibs in areas accessible to customers. If necessary to do so, provide lockable covers.
- N. All wall surfaces accessible to impact damage from shopping carts shall have wood bumper rails and protection posts. Corners of island refrigerated display cases shall be protected with display case corner guards. Automatic entrance door shall be protected with protection posts at door jambs and protection plates on impact side of sliding doors. Floor mounted storefront systems shall be protected with cart bumpers. Refer to Section 10261 Design Criteria for additional information and Design Standard Plates 08000-01 and 10261-01.
- O. Coordinate mounting height of electrical receptacles on walls with wood bumper rail protection. Refer to Design Standard Plate 10261-01.
- P. Janitor Closets with doors opening directly into customer areas shall have door closers.
- Q. Fire extinguishers shall be located throughout the commissary in accordance with NFPA 10. Extinguishers located in customer and admin areas shall be contained within fully recessed or semi-recessed cabinets. Extinguishers located in warehouse and other related storage areas shall be exposed with manufacturers standard surface mounting bracket. Refer to Section 10520 "Fire Protection Specialties" Design Criteria for additional guidance.

### 3. GENERAL GUIDANCE REGARDING DESIGN OF OPERATIONAL SUPPORT AREAS

- A. Wall surfaces facing the staging / receiving / MHE areas shall be full height CMU, sealed air tight to roof structure and at all wall penetrations. This is necessary to minimize infiltration of warm humid air in the warehouse area from entering the open space above cold storage rooms, allowing condensation to form on refrigeration piping and cold storage room ceilings. At project locations with normally high humidity, the interior CMU walls facing the warehouse areas should be painted with an interior vapor barrier primer/sealer. In low volume small stores, if discussed, approved, and documented during the Final Project Definition Package, these walls may be constructed of gypsum wallboard with 8'-0" high fiberglass reinforced plastic (FRP) panels and single wood bumper rail system.
- B. Provide HM access doors (2'-8" wide x 3'-8" high) in these walls, allowing access from warehouse area to space above cold storage rooms as required for service access and maintenance. Locate bottom of access doors immediately above cold storage room ceilings at 11'-4" AFF. Provide service lighting (minimal footcandle required) above cold storage rooms controlled by light switch (with pilot light) located immediately adjacent to the access door, with switch facing the warehouse area. At a minimum, position access door so that a ladder or movable stair can be positioned directly in front of the opening, against the wall. If access door can be located with clear floor space below, provide permanent fixed ladder with access platform at each access door location. Refer to Design Standard Plates 05500-02, 05500-03, and Guide Specification, Division 5, Section "Metal Fabrications" for information on "Above-Cooler-Access Ladder and Platform".
- C. Design freezer in accordance with Section 03305 "Insulating Concrete Freezer Floors" Design Criteria, Section 13033 "Cold Storage Rooms" Design Criteria, and related Design Standard Plates 03305-01, 03305-02, 03305-03, and 13033-01 through 13033-18. Provide adequate air space between freezer wall panels and adjacent non-refrigerated wall surfaces, with positive mechanical ventilation of air space. This is necessary to prevent condensation from occurring within air space, possibly causing mold growth and damage to adjacent wall surfaces. Provide heater cable within concrete curbs on exterior sides of freezer walls to prevent condensation and ice from forming on curbs and adjacent floor surfaces.
- D. Provide stainless steel closures to seal air spaces between cold storage room walls and adjacent partitions. This is necessary for sanitation and rodent control. Refer to Design Standard Plate 13033-05.
- E. When locating sliding cold storage room doors, verify that adequate space is available for the sliding portion of the door. Minimum space requirements are 8" on the latch side of door opening, actual door width, and door width plus 15" on the sliding side of door opening ( $8" + 6'-0" + 7'-3" = 13'-11"$  minimum).
- F. It is undesirable to locate electrical panels within janitor closets. These rooms are frequently locked, have maintenance equipment stored within that often block access to panels, and are also subject to contact with water from mop basin faucet hose, which is a safety concern. When multiple panels are required in one area, consider providing a separate electrical room. If only a random single electrical panel is required, locate on wall in non-customer areas (i.e., vestibule between sales and warehouse, or warehouse area).

END OF SECTION