

SPECIFICATION #13120  
DESIGN-BUILT-INSTALL PREFABRICATED OFFICE UNITS  
SANDIA NATIONAL LABORATORIES  
ALBUQUERQUE, NEW MEXICO

PART 1      GENERAL

1.01    SCOPE

A.      Architectural

1.      Manufacture, transport, and set-up modular office units to be arranged together into an office complex with the passageways connected together to provide a continuous watertight pathway between the units. The prefabricated office units will be used for business occupancy.

B.      Mechanical

1.      The mechanical system shall consist of the following areas of construction and subsystems:
  - a.      HVAC system
  - b.      If the restroom option is noted in the contract, the restroom option attachment (Section 4.03) will be included with this specification.

C.      Electrical

1.      Furnish all labor, materials, equipment, and services to design, construct, and install the complete electrical systems and related as specified herein. The electrical system shall consist of the following areas of construction and subsystems:
  - a.      Power distribution and receptacle system
  - b.      Lighting

D.      Site Preparation

1.      The following site preparations will be performed by Sandia prior to delivery of the prefabricated office units.
  - a.      Preparation of the grade upon which the trailers will be installed with walkways.
  - b.      Provisions for accessing the site and placement of the trailers.

- c. Stub-up for connection to the underground water distribution system and sanitary sewer system (if optional restroom installation is selected).
- d. Transformer and switchgear as required to supply electrical load for the prefabricated office units.
- e. Communication infrastructure.
- f. Fire alarm system infrastructure.

1.02 REFERENCES (to be included with the Contract Package)

- A. Prefabricated Office Units Layout Plans - Interior
- B. Location Plan - Exterior
- C. Blank 3-phase Panel Schedule
- D. Standard Drawing E-0006STD "Standard Symbols List and General Notes"

1.03 CODES AND STANDARDS

- A. All prefabricated office units and related equipment shall conform to the following minimum standards and codes:
  - 1. National Electrical Code
  - 2. Americans with Disabilities Act Guidelines (ADA)
  - 3. International Building Code
  - 4. International Mechanical Code
  - 5. Uniform Fuel Gas Code
  - 6. International Plumbing Code
  - 7. Uniform Federal Accessibility Standards (UFAS)
  - 8. Occupational Safety and Health Act
  - 9. NFPA 90B, Standard for the Installation of Warm Air Heating and Air Conditioning Systems

10. NFPA 101, Life Safety Code

- 11. ASHRAE Standard 62-2001
- 12. ASHRAE Standard 09.1-2001

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13. SMACNA HVAC Duct Construction Standards

- B. Where contradictions occur between this specification and any of the above, this specification shall take precedence.

1.04 SUBMITTALS

- A. Product Data: Include material descriptions of the following individual components. Submittals to be approved by SNL Facility Engineering prior to use in the construction of building units.

1. Architectural Systems

- a. Door Hardware

2. Mechanical Systems

- a. HVAC Unit  
b. Thermostat  
c. Restroom Fixtures (If restroom option is selected)  
d. Fixture Hangers

3. Electrical Systems

- a. Light Fixtures  
b. Receptacles  
c. Light Switches  
d. Panelboard

- B. Shop Drawings: Provide the following plans and schedules.

1. Overall floor plan complete with dimensions.
2. Foundation anchoring plans and details.
3. HVAC ductwork layout complete with dimensions, CFM, and diffuser locations.
4. Lighting floor plan.
5. Receptacle floor plan.
6. Electrical panel schedule.
7. Plumbing floor plan complete with partition dimensions, pipe sizes, and fixture locations (provide with Restroom Option).

C. Documents

1. AutoCAD electronic drawing files (CD media is preferred)
2. HVAC calculations
3. Lighting calculations
4. Structural calculations
5. Electrical Panel schedules.
6. HVAC Test & Balance Reports.

1.05 QUALITY ASSURANCE

- A. Buyer/Leaser may choose to inspect the units prior to shipping. Sell or/Lease will notify the Sandia Delegated Representative (SDR) one week prior to construction of any unit that reaches the completed electrical/mechanical rough in and topout, and prior to beginning insulation installation. All products supplied shall be of specified manufacture and model, or equipment.
- B. Final HVAC system test and balance shall be performed by an "NEBB certified" contractor and a report submitted indicating final diffuser airflows are performing within  $\pm 10\%$  of design.

1.06 STRUCTURAL LOADS

- A. Design, manufacture, and set-up of the prefabricated office units shall be based on the following structural design loads:
  1. Lateral
    - a. Wind loads shall be 25 psf.
    - b. Seismic loads shall be as specified by the UBC.
  2. Gravity
    - a. Roof live loads shall be 20 psf.
    - b. Floor live loads shall be 100 psf uniformly distributed or an equivalent of 2000 lb concentrated load placed over a 2.5-foot square area, located so as to produce the maximum load effect in the structural members.
- B. Loading combinations shall be as specified in the UBC.

PART 2 PRODUCTS

2.01 GENERAL

- A. The prefabricated office units supplied for this installation shall be of the same manufacturer. The floor lines and door openings shall match each other in order for the units to be set adjacent to each other to form a single-office complex. Finished ceiling height shall be full wall.
- B. Exterior Requirements
1. Exterior wall system shall be 29 ga steel with a baked enamel finish installed over structural thermo ply sheathing. Color shall be light tan.
  2. Roofing system shall provide positive roof drainage by sloping roofs and roofing details shall comply with roofing manufacturer's standard details.
  3. Provide rain gutters to prevent water from draining onto entryways and ramps.
  4. Provide insulation in exterior walls, floor joist spaces, and the roof space adjacent to the roof sheathing. Insulation shall be fiberglass having a minimum value of R-11 for exterior walls and floor and R-19 for the roof. Insulation shall provide a continuous thermal and vapor barrier in walls, roof, and floor. Adequately secure the roof insulation close to the roofing sheathing to provide a climate-controlled ceiling space and unobstructed space for other utilities. Provide foil-faced vapor barrier in all ceiling plenums.
  5. All perimeter doors shall be hollow metal doors of a minimum size of 3'-0" wide by 6'-8" high by 1 3/4" thick. Doors shall be prepared with ANSI A115.2 (161) prep for lockset. Doors shall be provided with a minimum of 1-1/2 pairs of hinges per door. Provide a door closer, weather-stripping, and ADA-approved threshold. ANSI Grade 1 lockset by Sargent Manufacturing, Model 28 11G05 LL 26D LA 1 bitted.
  6. Each room at an exterior wall of each complex grouping having exposure to natural lighting shall have one or more standard sized 3-foot high by 4-foot wide, double-glazed, Low E, non-operable windows.
  7. Provide skirting all around the trailer complex extending from the bottom of the trailer down to the ground. The skirting shall be of the same material as the siding with removable access panels at a minimum of 2'-6" wide and 2'0" high on each trailer unit.

8. Provide stairs and ramps using pressure-treated lumber installed per ADA standards. Use screw fasteners and provide concrete footing block.

C. Interior Requirements

1. Provide full height walls. Walls shall be standard stud wall construction using a minimum of 2" x 4" studs on 16" centers with 5/8" gypsum board. Minimum fire rating for wall finishes throughout shall be Class "A" having a flame spread rating of 25 or less and a smoke developed rating of 50 or less. Color shall be off-white.
2. Ceilings shall be 2' x 4' and 5/8" thick, fiberglass or mineral fiber acoustical tile having a flame spread rating of 25 or less and a smoke developed rating of 50 or less. Ceilings shall have a white factory finish and an NRC of 0.50 or better. Finished ceiling height shall be a nominal 8 feet.
3. Provide wood doors to all interior rooms. Doors shall be a minimum of 3'-0" wide by 6'-8" high by 1-3/4" thick, flush hollow-core wood. Doors shall be provided with a minimum of 1-1/2 pairs of hinges per door.
4. Unless otherwise noted, finish hardware for office doors shall be ANSI Grade 2 by Sargent, Model 28 7G05 LL 26D LA 1 bitted for key lockage offices and model 28 7U15 LL 26D passage sets for non-locking rooms/offices.
5. Each window shall be provided with metal mini-Venetian blinds, color shall be off-white.
6. Provide commercial-grade, minimum 26 ounce, broadloom carpet. Provide 1/8" thick, tan colored, resilient base throughout.
7. Internal columns are not preferred. If column support is required, location must accommodate the office layout and not obstruct offices or aisles.

D. Structural Requirements – Support System

1. All structural components shall be designed and constructed to withstand loads as described in Section 1.06 – Structural Loads.
2. The trailer blocking, leveling, and support system shall incorporate conventional jack stands, masonry blocking, or concrete foundations per industry standards as well as metal ties from trailer to embedded ground anchors for overturning. Metal ties shall be capable of transmitting design lateral forces to the ground anchors.

3. Assume that the surface at the site is graded earth and the soil bearing pressure is 2,500 psf. Jack stands shall be designed to support vertical loads and to transfer the load to the ground.

## 2.02 MECHANICAL

### A. Heating, Ventilating, and Air-Conditioning (HVAC)

1. An HVAC system shall be provided for the office unit using electric refrigerant cooling units and either gas furnace or electric resistance heating coils as specified on the contract documents. The system shall be designed and sized in accordance with the ASHRAE Fundamentals Handbook and ASHRAE Standard 90.1, to provide an indoor condition of 72°F summer and 71°F winter under the following conditions; 1.)ASHRAE 1% summer dry bulb & wet bulb temperatures. 2.) ASHRAE 99% winter dry bulb temperature. 3.) Miscellaneous loads for special use areas as specified in contract documents. 4.) 1.8 watts per square foot miscellaneous loads in offices. 5.) Actual lighting, skin loads, windows, doors, infiltration, and ventilation (20 CFM/person) loads. Individual systems shall be configured to provide zoning to areas of similar use and loads. 6.) Equipment sized to perform at 5400' elevation.
2. Provide mechanical ventilation to meet the requirements of UMC and ASHRAE Standard 62-2001.
3. Each HVAC unit shall be electric or combination gas / electric unit(s) sized for the calculated use and applicable codes. Provide units rated to operate with a 208 Volt, 3 Phase service. Provide an electronic 7-Day programmable thermostat to control each unit. The thermostat shall be able to individually control the operational schedules for the workweek, Saturday and Sunday. The air-handling units shall have a 30% pleated air filter. Units shall be Carrier, Trane, Eubank or equal with an SEER rating of 10 or better.
4. Submit HVAC heating/cooling load calculations and room airflows. Perform an HVAC system test and balance and submit a certified report indicating airflows. Units shall perform within  $\pm 10\%$  of the design.
5. The HVAC air distribution system shall consist of a ducted main with flexible drops to each supply diffuser. Each occupied space shall be properly sized and diffusers marked with flow rate requirements listed in CFM.
6. The supply ductwork will be constructed of unlined galvanized steel with sealed sections, appropriately sized for stated flows and suspended from the rafters using 1" X 20 gage solid galvanized strap above the suspended ceiling. Reduction in duct sizing shall be made using reducers with a minimum of a 2:1 run to dimension change. Branch takeoffs will contain 45-degree

approaches. Supply duct will be externally insulated with a minimum of R-5 foil faced insulation without gaps and seams taped with metal foil tape.

7. Use of flexible connectors when connecting between the supply plenum or branch duct and the diffuser shall not exceed 14 ft. Diffusers shall be provided with integral balancing dampers.

## 2.03 ELECTRICAL

- A. Provide a NEMA 3R service entrance, 3-phase, 120/208-volt, 225-amp, 42-circuit, copper bus, bottom-feed panelboard with a 225-amp main circuit breaker.
- B. For each available circuit in the panelboard, provide a minimum 20-amp single-pole breaker so that the maximum 42 circuits are occupied by a circuit breaker. Provide circuit breaker lockout devices for each breaker.
- C. Panelboards shall have copper bus and bolt on circuit breakers. Interrupting capacity of the breakers shall be 10,000 or 22,000 amps minimum as specified by Sandia based on the available short circuit at the panelboard.
- D. Include a panel schedule in each panel that shows all circuit breakers and load descriptions. Utilize attached panel schedule for the panel schedule template.
- E. Provide general interior lighting with a minimum level of 10 foot-candles in corridors and 50 foot-candles at desk height in all office and open areas. Use fluorescent fixtures with electronic ballasts and T8 lamps.
- F. Fixtures shall be complete with acrylic prismatic lens diffusers.
- G. Provide outside area lighting with 32W triple compact fluorescent lamps with photoelectric controls over all exterior doors. Fixtures shall be listed for outdoor use.
- H. Provide exit signs with red letters and arrows at all exits and in locations to direct the occupants to the exits.
- I. Electrical devices (e.g., receptacles, switches, etc.) shall be as specified on Sandia Standard Drawing E-0006STD.
- J. Electrical cable conductors shall be copper, size 12 AWG or larger.
- K. Non-metal conduit is not allowed in power circuits (>50 volts).



PART 3 EXECUTION

3.01 ARCHITECTURAL

- A. All installation work shall be in accordance with standard construction practices and applicable codes.
- B. All hardware shall be adjusted and demonstrated to work properly.
- C. A minimum of two means of egress are required when:

- 1) The travel distance exceeds 200 feet (An exit is required within 200 feet of travel regardless of occupancy load).

Or when:

- 2) The calculated occupant load is equal to or greater than 30.

Example 1: 3000 gross square feet, office occupancy only. 3000sq. ft./100sq. ft. per occupant=30 occupants. Minimum two means of egress are required regardless of travel distances.

Example 2: 2000 gross square feet, office occupancy only. 2000sq. ft./100sq. ft. per occupant=20 occupants. Minimum one means of egress is required unless any travel distance is greater than 200 feet.

Example 3: 2000 gross square feet, office occupancy (1700 sq. ft.) and conference room (300 sq. ft.). 1700sq. ft./100sq. ft. per occupant=17 occupants, 300 sq. ft./15 sq. ft. per occupant=20 occupant. Total occupant load = 37. Minimum two means of egress are required regardless of travel distances.

Example 4: 450 gross square feet, conference room type assembly occupancy only. 450 sq. ft./15 sq. ft. per occupant=30 occupants. Minimum two means of egress are required regardless of travel distances.

- D. Entry stairs and ADA-compliant ramps shall be installed at each building per ADA standards. When two or more means of egress are required, ramps need only be provided for two of the accessible means of egress. The accessible means of egress equipped with ramps shall be separated a minimum of 1/2 the diagonal distance of the area being served.

### 3.02 MECHANICAL

- A. All work shall be in accordance with the Uniform Mechanical Code, the Uniform Plumbing code and the Uniform Fuel Gas Code. Ductwork shall be installed in accordance with SMACNA Duct Construction Standards-Metal and Flexible.
- B. All mechanical systems shall be placed in operation and cycled to demonstrate their functional capabilities.
- C. HVAC
  - 1. Use of flexible ductwork will be routed to avoid sharp bends or interference with light fixtures, plumbing, or conduits. Diffusers will be located to allow proper air distribution following the diffuser manufacturer's recommendations.
  - 2. Extend condensate drains from HVAC units to within 6 inches of grade with tubing connected to the wall.

### 3.03 ELECTRICAL

- A. General Requirements
  - 1. The exact placement of electrical devices and the routing of conduits and cables shall be governed by structural conditions and mechanical obstructions.
  - 2. All work shall be in accordance with the National Electrical Code (NEC). The only wiring methods permitted in trailers that have a dropped ceiling, where the space above the ceiling is used for supply or return air, is wiring as specified in NEC section 300-22(B) and (C). Type AC (BX) cabling shall be utilized for receptacles and lighting circuits. Except when connecting to flex conduit, EMT conduit systems shall utilize compression-type couplings and fittings. Type AC cabling may utilize setscrew box connectors.
  - 3. Conduits and Type AC (BX) cables shall be neatly run and evenly spaced when run in banks. All conduits not terminated at boxes shall be stubbed-up 6" into the ceiling space. All conduits and cables shall be labeled at both termination point indicating service and destination.
  - 4. In addition to NFPA 70 grounding requirements, install a ground wire in every electrical conduit installed.
  - 5. Color-code conductors and conduits per the requirements on Sandia Standard Drawing E-0006STD. Color code shall be consistent from

circuit breaker to final termination device. Label each power, receptacle, and lighting conductor with the circuit number at both termination points.

B. Power

1. Mount the main panelboard on the exterior wall of one section of each prefabricated office unit. The panelboard shall be installed no higher than 6'-6" above grade, measured from the top of the panelboard.
2. The service entrance feeder to the 225-amp main panelboard will be installed by SNL.
3. Provide a circuit breaker or safety switch in a NEMA-type 3R enclosure as a main disconnect for each HVAC unit and connect with EMT back to the panelboard.
4. Provide the complete power and controls required for the mechanical equipment. Refer to the mechanical section of this specification for the mechanical requirements.
5. Label outside of panel doors with engraved anodized aluminum nameplates (1/2" block letters to indicate mobile office and panel type for each panel. For example: "MO PANEL A 120/208 VOLTS." The service entrance feeder to the 225-amp main panelboard will be installed by SNL.

C. Receptacles

1. Provide a minimum of four receptacles per office, with a minimum of one per wall.
2. In the corridors, install one centrally located receptacle in each corridor on a dedicated circuit.
3. Four receptacles per office, a maximum of four receptacles shall be fed from a 20-amp circuit breaker. Adjacent receptacles shall be on different circuits.
4. Provide a dedicated 120-volt duplex receptacle for the water cooler.
5. Provide a Dymo-type label with 5/16" letters on each receptacle showing the circuit number.
6. Provide weatherproof-style 120-volt GFCI duplex receptacles, at each water inlet floor, for future connection of heat tape to piping. Placement of these receptacles shall be close to the skirting areas.

D. Lighting

1. Coordinate exact fixture locations with mechanical HVAC equipment.
2. Provide one light switch for each room.
3. Provide 3-way light switches toward the ends of each corridor.
4. Provide a Dymo-type label, with 5/16" letters on each switch showing the circuit number.

3.04 COMMUNICATIONS

- A. Provide a 3/4" ENT raceway concealed in the wall for future telecommunication cables. The raceway should terminate at a junction box with centerline at 42" AFF in each office and conference room and extended at least 6 inches into the ceiling space. Others will install telecommunication cables, receptacles, and equipment for voice and data on a separate contract.

3.05 FIRE ALARM SYSTEM

- A. The fire alarm system will be installed on a separate contract by others.

PART 4 OPTIONAL FEATURES, CODE WAIVERS AND EXCLUDED FEATURES

4.01 Optional Features

- A. The following items are considered optional features and will not normally be called out in this specification. Specifications for these optional items will be attached if specifically called out in the contract.
1. RESTROOM OPTION. (Section 4.03)
  2. PLUMBING FIXTURES (for Restroom, Section 4.04)
  3. VESTIBULES/OFFICE WINDOWS (Section 4.05)
  4. IDR TELECOMMUNICATIONS ROOM (Section 4.06)

4.02 Excluded Features

- A. The following items are considered excluded features and are not included in this specification.
1. Security Vault-Type Rooms or VTR-type areas.
  2. Internally illuminated exit signs.

3. Lab Space.
4. Raised floors.

#### 4.03. Code Waivers

- A. A waiver to UPC, 1997 is granted to allow clear primer in lieu of purple primer. The contractor/supplier shall provide a five-year warranty on the piping systems where the clear primer is used.

#### 4.04 RESTROOM OPTION

##### A. General

1. If the restroom option is selected, provide toilet facilities in one of the prefabricated office units with all the plumbing fixtures, toilet compartments, screens, when applicable, and interior features as shown on the drawings, and described below per ADA Standards.

##### B. Architectural/Structural

1. Provide full height partitions in each unit as shown on drawings. Minimum fire rating for wall finishes shall have a flame spread of 25 or less.
2. Provide toilet compartments and urinal screens per ADA requirements as shown on the drawings.
3. Provide manufacturer's standard vinyl composite tile flooring with resilient base throughout. Class "A" fire rating (25-75 flame spread) is required. Color to be off-white.
4. Provide vitreous china with backsplash for lavatories where shown on drawings. Lavatories shall be mounted at sufficient height to allow handicapped access.
5. Restroom windows shall have frosted glazing.
6. Provide mirrors in Men's and Women's restrooms.
7. The following toilet accessories shall be furnished and installed by SNL:
  - a. Paper towel, lotion, and soap dispensers.
  - b. Feminine/tampon vendors without coin operation and napkin disposal unit.

c. Disposable seat cover and toilet tissue dispensers.

8. Floor live loads in lavatory units shall be 50 psf.

C. Mechanical - Plumbing

1. Urinals shall be at least 24" from floor to lip except for ADA units. One water closet in each of the Men's and Women's restrooms shall be provided for handicapped access. Provide white open front seats on the water closets.
2. Provide all drainage, vent, cold water, and hot water piping systems as required. Termination from T&P valve will be outside of building skirting and will not include any vertically upward runs and shall be turned down to within six inches of grade.
3. Water piping shall be Type L hard drawn copper with wrought copper soldered fittings and 95-5 tin/antimony soldered joints. Piping shall be pressure tested to ensure connection integrity.
4. Waste, soil, and vent piping shall be ABS or PVC for drainage, waste, and vent piping constructed and tested per the requirements of the UPC.
5. All domestic hot and cold water lines installed on the exterior side of the building insulation, including those exposed beneath the trailer units shall be heat wrapped and insulated with 1" thick snap-on type fiberglass insulation with all service jackets installed per manufacturer's recommendations.
6. Connections to existing sanitary sewer and water utility stub-ups will be made by others. Provide single sanitary sewer and water header to facilitate connections to existing site utilities.

D. Electrical

1. Provide electrical service to water heater. Size circuit breaker and conductors per manufacturer's recommendations and per NFPA 70.
2. Provide general interior lighting with a minimum level of 50-footcandles in restrooms.
3. Provide a minimum of one GFCI duplex receptacle in each restroom.

4.05 PLUMBING FIXTURES (for Restroom Option)

Ordinary plumbing fixtures are specified here. Fixtures shall be white and furnished with all trim and accessories required for a complete installation. Fixtures shall be provided

with stop valves on both hot and cold water supplies. Metal trimmings on fixtures and exposed piping to fixtures, unless otherwise noted, shall be chromium plated with chromium-plated escutcheons. Toilets and lavatories shall be mounted on Sandia Delegated Representative (SDR) approved carriers or as indicated on the drawings.

A. Toilets

1. Crane "Whirlton," No. 3-325E, low consumption (1.6 gallons per flush), elongated rim, vitreous china, siphon action, whirlpool flush, 1 ½" top spud bowl and bolt caps.
2. Seat Cover: Bemis "1955C Profile," elongated, open front, white.
3. Flush Valve: Slogan "Regal Model 111," low consumption (1.6 gallons per flush)

B. Urinal

1. Crane "7-209 Manhattan," low consumption (1.0 gallons per flush), vitreous china wall hung, siphon jet action urinal with integral trap, ¾ top inlet, 2" I.P.S. female outlet connection and supporting hangers.
2. Flush Valve: Slogan "Regal Model 186-1," low consumption (1.0 gallons per flush).

C. Lavatories and Faucets

1. Crane "1-320 Westmont," 10" x 17" vitreous china lavatory with semi-oval basin, ledge back, front overflow, and two soap depressions, wall mounted with supplied concealed hanger.
2. Faucet: Kohler "K-15199-P", 4"- centers, meter construction, one-piece self contained valve cartridge, lever handle (ADA).

D. Service Sink (Janitor Closet):

1. Florestone, No. MSR-2424, Floor mounted, seamless with integral drain and stainless steel rim guards, chrome faucet with arm handles, vacuum breaker, rubber hose and pail hook.

E. Wall Hydrant:

1. Arrowhead Brass Products No. 486BFP, freeze-proof, -, 1-inch hose connection, with vacuum breaker, polished brass with fixed key.

F. Drinking Fountains, Electric

1. If this option is chosen, new drinking fountains shall be barrier-free Elkay Model No. EBFSA-8. . Dual Fountain heights, heavy gauge stainless steel construction with No. 4 satin finish, provided with 3-wire grounding type cord and plug, UL listed. If this option is not chosen, provide an equivalent alcove for a bottled water cooler with a GFCI duplex receptacle.

G. Domestic Water Heaters:

1. Domestic water heaters shall be a sized per use and per code from stock catalog item of standard manufacturer, glass lined, and unconditionally guaranteed for a minimum of 6 years. The minimum size of the water heaters shall be 10 gallons and be foam insulated with minimum R-Value of 12. Unit shall be UL listed. Set unit in approved drain pan with full size drain line to the outside of the mobile office and turned down to within six inches of grade.
2. Two copies of the manufacturer's Data Sheets shall be submitted to the SDR for approval and record keeping.
3. Water heaters shall be provided with pressure relief valves with test lever piped full size to outside of trailer.
4. Eemax No. EX190T single-point instantaneous water heater (208 volt) or model SP4208 for each sink may be used (and is encouraged) in lieu of tank heater.

4.06 VESTIBULES/OFFICE WINDOWS

A. Vestibules

1. When necessary, arrange each prefabricated office unit into an office complex with a 10-foot separation between trailers. Connect prefabricated office units with watertight sealed passageways to be fabricated and installed to match the trailers. The passageways shall provide a 10' x 12' extension of each trailer's normal egress path. The passageway shall be provided with power, lighting, and HVAC. Floor elevations of the trailer units shall match the elevations of the connecting passageways. Passageway exterior to be constructed with the same material as the siding. Entry stairwells shall be provided at the midpoint of passageway.
2. Provide insulation in vestibule exterior walls, floor joist spaces, and the roof space adjacent to the roof sheathing. Insulation shall be fiberglass having a minimum value of R-11 for exterior walls and floor and R-19 for



the roof. Insulation shall provide a continuous thermal and vapor barrier in walls, roof, and floor. Adequately secure the roof insulation close to the roofing sheathing to provide a climate-controlled ceiling space and unobstructed space for other utilities. Provide roof insulation with foil-faced vapor barrier.

3. Provide skirting for the connecting passageways extending from the bottom of the passageway down to the ground. The skirting shall be of the same material as the trailer siding.
4. All vestibule structural components shall be designed and constructed to withstand loads as described in Section 1.06 – Structural Loads.
5. Each vestibule shall have one standard sized 3-foot high by 4-foot wide, double-glazed, Low E, non-operable trailer windows.

#### 4.07 IDR TELECOMMUNICATIONS ROOM

- A. Provide a properly sized, wall-mounted air conditioner installed on the outside of the exterior wall of the IDR room to provide cooling for the electronic equipment to be installed by others. Water drainage from the air conditioner unit shall be outside of the IDR room.
- B. Provide four 20-amp dedicated electrical circuits inside the IDR room, one on each wall.
- C. If the SOW requires the installation of an IDR room as an extension of the vestibule connecting the trailers, provide an insulated 10' x 16' lockable room of the same construction as the vestibule.

END OF SECTION 13120