



Design Standard Interim Housing

Purpose:

This design standard has the purpose of creating a consistent installation of interim housing for use during the bond program throughout the South San Francisco Unified School District therefore achieving a standard of aesthetic quality, maintenance and performance throughout all projects.

Design Standard:

Interim Housing Units

- Interim housing units include structures used for the temporary relocation of classrooms or other uses during construction, and are often referred to as portables, relocatables, or temporary bungalows, and do not include permanent modular buildings.
- State Allocation Board approval is required.

Site Placement

- Provide required spacing between interim housing units and required fire separations between interim housing units and existing buildings per CBC, DSA, and modular building supplier requirements. With prior approval from the District, interim housing units with one-hour fire-rated exterior wall construction are available when limited space does not allow for required fire separation between interim housing units and existing buildings. Ensure that placement of interim housing units provides adequate fire department access to the site and both permanent buildings and interim housing units. Review interim housing layout with Fire Department.
- Consider impact of interim housing placement on school site, including play yard and athletic facilities, and review with school administration.
- Coordinate layout of interim housing units, including orientation of entrances/exits, ramps, stairs, and electrical and HVAC equipment with portable building supplier's standard models pre-approved for use by the District.

Scope Definition, Division of Work, and Utilities

- Placement, installation, and removal at the end of construction of interim housing units shall be performed by the District's portable building supplier. Contractor shall coordinate with portable building supplier and provide any required re-grading and re-paving for placement of units and to provide required level landings (maximum 2% slope in all directions) at bottom of ramps and stairs. In addition, contractor shall patch, repair,



South San Francisco Unified School District



Section 01 00 06

Version 1, 2011.9.30

and restore the site after removal of the interim housing units. Ensure an accessible path of travel complying with CBC and Americans with Disabilities Accessibility Guidelines (ADAAG) requirements is provided to and between all interim housing units, permanent buildings, and site features that are required to be accessible.

- Portable building supplier typically provides units with lighting, electrical outlets, one wall-mounted clock, thermostat, and HVAC equipment. Contractor shall install phone and data jacks, security, and fire alarm system components within the interim housing units, and extend power and low-voltage service to the interim housing units. Avoid trenching and provide overhead utilities whenever possible. Contractor's scope of work shall include connection of all utilities upon placement of units and disconnection of all utilities upon removal. Confirm and coordinate with modular building supplier's drawings on connections and limit of work.
- Electrical layout shall include:
 - Two electrical sub-panels per each 24'x60' (2 units) with locks
 - Each sub-panel requires 100 amperes and 220 volts
 - Single phase electrical service
 - Locations of manual pull stations, horn/strobes (maintain a minimum 15 dba audibility and 85 candela visibility each bungalow)
 - Emergency light locations.
 - Location of phones or two-way intercom in each portable. Phones need access to main office and "911"
- Contractor's scope of work shall include providing fencing between and around units in order to restrict access to areas required to be off-limits for security and safety. Review with school administration and portable building supplier.
- Avoid providing water and drainage service to interim classroom units if possible.
- Avoid using restroom portables whenever possible. Interim restroom portables may be needed when construction phasing requires relocation of kindergarten classrooms to interim housing units. Review any such unique conditions with District project manager and Facilities Department. When required, contractor's scope of work shall include providing domestic water service and sanitary sewer. Coordinate with plumbing work provided by modular building supplier. Restroom portables typically require 2" water service.
- Interim housing units are provided with rainwater gutters and downspouts. Do not connect downspouts to storm drain lines. Confirm rainwater surface flows to drain.

DSA and Fire Department Approval

- DSA and the Fire Department require that all interim housing units meet the requirements listed below and have both plan review and inspection approval before occupancy.



South San Francisco Unified School District



Section 01 00 06

Version 1, 2011.9.30

Approval by the Fire Department is required prior to submitting to DSA. Over-the-counter approval by DSA is available for projects involving interim housing work only. Applications to DSA must include drawings of DSA pre-approved interim housing units and ramps for reference only, to be supplied by modular building supplier.

- Plans shall be submitted to the Fire Department Plan Check Division and DSA for review and approval. The plans shall contain the following:
 - A copy of any correspondence pertaining to the request
 - Details on how the structure will be anchored to the ground/foundation with structural engineer's stamp
 - Closures between the adjacent landings and ramps and the buildings to prevent trash build-up under the ramps
 - Details for ramps and stairs, including anchoring of ramps and stairs to portables. Comply with CBC requirements.
 - Design compliant with ADA and CBC accessibility requirements.
 - Site plan for entire school property, indicating fire department access to school grounds, all permanent buildings, and interim housing units, including vehicular and pedestrian gates, roadways, driveways, fire truck access and turnaround area where required, fire hydrants (on both sides of the streets), building entrances, and fire alarm annunciator and control panels.

Fire Alarm System

- Review plans with DSA and Fire Department
- Printed hard copy and electronic CAD drawings for evacuation plans are required to be submitted to the District.
- A/E shall design and contractor shall install one combination horn/strobe, one manual pull station, and one hardwired automatic detection device (smoke detector) linked to the fire alarm control panel. A fully automatic and addressable fire alarm system is not required for interim housing units. Protective covers shall be installed over manual pull stations.
- Fire sprinklers are not required for interim housing units.
- Interim housing fire alarm system shall be connected to the school's fire alarm system unless stand alone system is approved by the District in advance.
- DSA inspection prior to occupation is required.
- Contractor shall pay for all other required inspections.
- Maintenance for alarm of main facility to include system for temporary portables.



South San Francisco Unified School District



Section 01 00 06

Version 1, 2011.9.30

Access for Persons with Disabilities

- Accessible ramps, landings, and handrails shall be provided per DSA regulations and to comply with ADAAG and CBC
- When designing ramps, do not design to the maximum slopes. Allow for construction tolerance. For example, ramps may be designed with a slope of 1:13 instead of the maximum allowed slope of 1:12.
- Cross-slopes on ramps, accessible parking spaces, access aisles, and paths of travel are not to exceed 2% per CBC and ADAAG requirements.

Security

- Review security requirements with school site and District
- Equip windows with 3/4-inch diamond pattern 9 gauge expanded metal screens with emergency releases.
- Provide locks for electrical panel boxes, HVAC units, and main power switches.
- Provide security alarm devices and systems.
- Provide security lights with automatic timers. Do not use photo-cells.
- Doors shall be fitted with galvanized astragal plates for security.

Equipment Noise and Vibration Considerations

- Refer to Acoustical Design Standard, for Equipment Noise and Vibration considerations

Ventilation Requirements

- At the time of delivery it should be verified that all mechanical ventilation units are equipped with outside air intakes (not barometric relief assemblies), and that the intakes are open and operational. A representative of the supplier of the portable units would be the best person to verify that the units are so configured.
- As soon as possible after delivery the mechanical ventilation units should be equipped with power and activated. Activation should be performed before touch-up painting, installation and/or repair of flooring, and other activities making use of chemicals such as paints, adhesives, and cleaners. If it is not possible to activate the ventilation units prior to such work, temporary fans must be used to increase outdoor air exchange must be used; opening available doors and windows is not sufficient to provide adequate air exchange and remove added volatiles.



South San Francisco Unified School District



Section 01 00 06

Version 1, 2011.9.30

- During setup work and until classes are held in the portables controls on ventilation units should be overridden and set to operate continuously, 24/7 to allow for volatiles and particulates stirred up by installation to be flushed out of the portable. To save on energy costs temperature settings can be lowered to the mid-50's, just above the point where condensation on surfaces is a concern. This continuous ventilation should continue during the moving of furniture and educational supplies into the portable as these activities can release additional dust and particulates.
- When ventilation controllers are configured for normal operation, fans should be programmed to start at least an hour and a half (1.5 hours) prior to the start of classes and continuously operate throughout the entire school day and beyond, until at least one and a half hours after the end of the school day.
- A note should be conspicuously posted explaining how the heating in the portable can be adjusted. If it is possible for classroom occupants to manually switch fans off the note should indicate that fans need to be kept operating continuously during school hours.
- Within the first week of classroom occupancy, filters in the ventilation units should be replaced.

Approved Manufacturers

Mobile Modular Corporation, www.mobilemodularrents.com

Substitutes Allowed?

- Yes. If performance and quality can be evidenced.

Associated Design Standards:

- N/A

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