

U.S. Department of Justice
CTAS Purpose Area #4—Bureau of Justice Assistance (BJA)
Tribal Victim Services Set-Aside—Office for Victims of
Crime (OVC)

Permanent Facilities Minimum Construction Requirements and Recommendations
(20- to 30-year facility life)

BJA and OVC Permanent Foundation Requirements:

The following Permanent Facility Requirements shall supersede HUD and Tribe preferred codes and requirements:

1. Soil testing and geotechnical foundation recommendations are required.
2. A licensed Professional Engineer (PE)/Architect shall design all Permanent Foundation Systems.
3. A Permanent Foundation System shall use reinforced concrete piers and/or crawl space structural steel column supports and shall be welded/bolted to both the concrete pier(s) and Modular steel frame(s).
4. The Modular structure and foundation shall be designed to meet specific site location conditions and code requirements for dead/live load, wind, and seismic conditions.
5. As a minimum, the modular/manufactured structure shall be permanently supported on reinforced concrete or CMU (Concrete Masonry Units) or steel piers to a depth of one foot below local frost depth. Piers shall be located under the modular steel frames, under the modular perimeter and/or framed wall(s) and floor joists. When a crawl space is not required or in areas where winter frost is not a problem, an acceptable and alternative concrete foundation system such as a slab on grade with thickened haunches would meet BJA requirements. The thickened haunches should be one foot below local frost depth at modular perimeter and marriage walls. Foundation design should be coordinated with the modular manufacturer's utility locations.
6. At a minimum the perimeter of the modular crawl space (24-inch clear depth) shall be skirted with a one-foot-wide, four-inch-deep perimeter concrete footing, treated framing lumber, and skirting to match modular siding (if possible), with Resistance to Heat Flow (R) R19 insulation board or foam board. If winter conditions are severe, additional water and sewer piping may require electrical heat tracing (tape). Crawl space access should be provided for utility service, either through the skirt at the exterior or through an insulated access door in the interior of the building, e.g., trap door in closet or utility room.
7. A "permanent" front entrance shall be constructed of concrete steps, a concrete landing, and a concrete ramp. The front entrance to a permanent Justice facility shall be Americans with Disabilities Act (ADA) compliant.
8. Steel or aluminum steps, landings and ramps as allowed by ADA code can be installed at other exterior doors.
9. Any concrete block or cinder block (CMU) used as a "permanent" foundation support structure for a Modular/Manufactured Home facility shall be properly grouted and reinforced per design by a licensed PE/Architect (see requirements item #2).

10. Building Codes:

- a. "Modular" Building Codes: The Tribe shall decide which code they are required or prefer to follow: International Building Code (IBC), state, county, or local/city code.
- b. "Manufactured Home" Building Codes: Manufactured Homes shall follow HUD Guidelines and the following link to the Code of Federal Regulations Title 24 Part 3280: <https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280>.

11. In addition to the above BJA Grant Foundation "Requirements" items 1–10, the following United States Department of Housing and Urban Development (HUD) guidebook link for HUD "Permanent Concrete Foundations for Manufactured Homes is an acceptable HUD Code to follow for "permanent" DOJ-BJA grant-funded facilities*:

https://www.hud.gov/program_offices/administration/hudclips/guidebooks/4930.3G.

*Except: No use of non-grouted and unreinforced concrete block piers or any use of cinder block are allowed.

12. In remote regions with extreme and challenging ground conditions (e.g. Alaskan permafrost areas), utilize triodetic or floating foundations where local or Tribal construction requires.

BJA and OVC Permanent Structure and Site Recommendations (if the Grant Budget allows)

Foundations

1. Concrete perimeter foundation stem wall with R-19 insulation board or foam.
2. Embed 2"x 4" treated wood nailers in the exterior surface of the perimeter concrete foundation stem wall to allow installation of cement fiber board siding to match modular siding.

Floor structure

1. 2"x 10" @ 16" on center (OC) floor joists, wood or engineered wood I-joist equivalent
2. Glued $\frac{3}{4}$ " sub floor and $\frac{1}{4}$ " underlayment board for 1" two-layer subfloor
3. Optional two steel channels or beams for modular or trailer transporting

Exterior wall structure

1. Exterior 2"x 6" studs, metal or wood, @ 16" OC with cement fiber board siding or equal

Interior wall structure

1. 2"x 4" studs, metal or wood, @ 16" OC
2. Sheetrock taped and textured and two coats of paint. Roofing system
3. A PE/Architect shall design the roof structure and hold down requirements for specific project site location code considering dead/live load, wind, and seismic conditions
4. Minimum $\frac{1}{4}$ " sloped trussed 24" OC roof
5. $\frac{1}{2}$ " roof sheathing, tar paper or equal, nailed asphalt three-tab shingle OR membrane, modified bitumen, or standing seam metal roof

Energy efficiency

1. Synthetic high-density polyethylene fiber synthetic sheeting air and water barrier or equal, batt or blow-in insulation.
2. Minimum, R-38 ceiling, R-19 exterior walls and R-19 floors (or all higher if regional energy code requires).
3. Energy efficient Light-Emitting Diode (LED) lighting fixtures.

Sound proofing (if required)

1. For justice court, police, or social programs facilities where soundproofing and privacy is critical, a PE/Architect should review the owners' facility program and provide design for soundproofing for sensitive areas such as judges' chambers, jury deliberation rooms, and conference rooms as determined by the end user with a minimum Sound Transmission Class (STC) rating of 50 to 60 or greater
2. Sound Proofing design options that should be considered include the following:
 - Reference
http://www.usg.com/content/dam/USG_Marketing_Communications/united_states/product_promotional_materials/finished_assets/acoustical-assemblies-en-SA200.pdf
 - Staggered wall studs
 - Wall framing thickness
 - Insulation thickness and material type rock wool or synthetic preferred; such as "Safe & Sound"™ or equivalent material to be used on walls and ceilings to reduce sound transmission
 - Resilient metal channel (hat channel or z-furring) perpendicular to studs
 - High-density, soundproof sheetrock with minimum STC rating such as Quietrock™ or equivalent
 - Soundproofing permanent adhesive between double-thickness sheetrock
 - Acoustic sealant for all sheetrock seams at floors and ceiling intersections
 - Soundproofing rooms shall not have louvered or plenum Heating Ventilation Air Conditioning (HVAC) air transfer systems
 - Soundproof rooms to have continuous framing from floor to ceiling between the treated room and corridors or common areas
 - Sound proofing rooms shall have HVAC supply and return insulated ducts with sound attenuator baffles
 - Soundproof rooms shall have door assemblies rated at STC 45+ or greater

3. Fire/smoke detection, alarm, and suppression
 - Fire/smoke detection and alarm system capable of remotely alarming offsite
 - Fire extinguisher(s) and cabinet(s)
 - Wet or dry fire suppression if required by code
 - 24/7 sleeping reintegration facilities or clinics: A PE/Architect should review the owner's facility program and make recommendation of applicable building code occupancy rating and if a fire sprinkler suppression system is required. If fire sprinkler system is required, a PE/Architect shall review the project site water system flow rate and pressure to assess if the project water supply is adequate.

Considerations for construction in ultra-cold and/or extremely austere areas:

1. Foundation
 - Use appropriate foundations, such as piles or elevated structures on piers/stilts in permafrost areas.
 - Engineered piles or piers to depths ensuring stability in both frozen and thawed states.
 - Have all foundation designs reviewed by a PE/Architect with arctic experience, such as Alaska PEs.
2. Structural Integrity
 - Design buildings to withstand wind loads of the area.
 - Engineer roof structures to support snow loads of the area.
 - Use cold-rated structural materials for durability.
3. Insulation and Moisture Control
 - Ensure R-values are proper for the area.
 - Install a continuous vapor barrier throughout the building envelope.
 - Incorporate thermal breaks in wall, floor, and roof assemblies.
4. General Comments for Water and Waste Management in Communities where portable toilets (such as Porta Potties) are the standard.
 - Allow the use of alternative approaches to plumbing in communities with no plumbing.