

U.S. Department of Justice Coordinated Tribal Assistance Solicitation

Purpose Area # 4—Bureau of Justice Assistance (BJA)

BJA Tribal Justice Systems Infrastructure Program

Permanent Modular Facility Construction Minimum Requirements (20- to 30-year facility life)

Depending which building code the tribe prefers (International Building Code [IBC] or state, county, or local/city code), if the code requirements are more stringent, the code shall supersede the following:

The following HUD guidebook link for “Permanent Concrete Foundations for Manufactured Homes” is an **acceptable code** to follow for permanent BJA grant facilities:

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

BJA grant foundation requirements for a permanent modular facility

- Soils testing and geotechnical recommendations
- A Professional Licensed Structural Engineer shall design the permanent concrete pier foundations and roof holddown requirements for applicable project site location code dead/live load, wind, and seismic conditions.
- **As a minimum, the modular structure shall be permanently supported on reinforced concrete piers to a depth of one foot below worst local frost depth.** Concrete piers shall be located under the modular steel frames or under the perimeter and marriage wall(s) floor framing. Alternative concrete foundation systems such as thickened slab on grade at perimeter and marriage wall(s) is acceptable in areas where frost is not a winter problem.
- As 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 slab, treated framing lumber, and cement fiber board siding to match modular siding, with R19 insulation board or foam board. If winter conditions are severe, additional water and sewer piping may require electrical heat tracing (tape).
- The front entrance porch shall be constructed of concrete steps; landing shall be ADA ramp and handrail compliant; steel steps and ramps as allowed by ADA code can be installed at other exterior doors.

Other BJA modular manufacture and site recommendations if the grant budget will allow

Foundations

- Soils testing and geotechnical recommendation.
- A Professional Licensed Structural Engineer shall design the foundation and roof hold down requirements for applicable project site location code dead/live load, wind, and seismic conditions.
- Concrete perimeter stem wall with R-19 insulation board or foam and interior concrete piers one foot below worst frost depth.
- Embed 2"x4" 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

- 2"x10" @ 16" on center (OC) floor joists
- Glued 3/4" sub floor and 1/4" underlayment board for 1" two-layer subfloor
- Optional two steel channels or beams for modular or trailer transporting

Exterior wall structure

- Exterior 2"x6" studs @ 16" OC with cement fiber board siding or equal

Interior wall structure

- 2"x4" studs @ 16" OC
- Sheetrock taped and textured and two coats of paint

Roofing system

- A Professional Licensed Structural Engineer shall design the roof structure and hold down requirements for specific project site location code considering dead/live load, wind, and seismic conditions
- Minimum 1/4" sloped trussed 24" OC roof
- 1/2" roof sheathing, tar paper or equal, nailed asphalt three-tab shingle OR membrane, modified bitumen, or standing seam metal roof

Energy efficiency

- Synthetic high-density polyethylene fiber synthetic sheeting air and water barrier or equal, batt or blow-in insulation
- Minimum R-38 ceiling, R-30 exterior walls and R-19 floors (or all higher if regional energy code requires)
- Light-emitting diode (LED) lighting fixtures

Soundproofing (if required)

- For justice court, police, or social programs or facilities where soundproofing is critical, a Professional Licensed Architect/Engineer (A/E) should review the owners' facility program and provide design for soundproofing with a minimum sound transmission class (STC) rating of 50–60 or stronger
- Soundproofing design options that should be considered include the following:
 - Wall framing thickness
 - Insulation thickness and R rating used on walls and ceilings
 - Mass loaded vinyl wrap over the insulation batts
 - Resilient channels cross ways to studs
 - High density, soundproof sheetrock with minimum STC rating
 - No sheetrock nails/screws into the wood studs
 - Soundproofing permanent adhesive between double thickness sheetrock
 - Sealant for all sheetrock seams
 - Sound proofing rooms shall not have louvered or plenum heating/ventilation/air conditioning (HVAC) air transfer
 - Sound proofing rooms shall have HVAC supply and return insulated ducts with sound attenuator baffles
 - Soundproof rooms shall have door jamb seals and actuated door bottom seal

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 Professional Licensed Architect/Engineer (A/E) should review the owners' 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/E shall review the project site water system flow rate and pressure to assess if the project water supply is adequate.