

**SPECIFICATION
FOR
HOME, MANUFACTURED, PREFABRICATED, MOBILE**
Overall Size: 60 Feet Long x 14 feet Wide (excluding Hitch dimension)

(THIS SPECIFICATION IS RELEASED FOR PROCUREMENT PURPOSES UNTIL REVISED OR RESCINDED.)

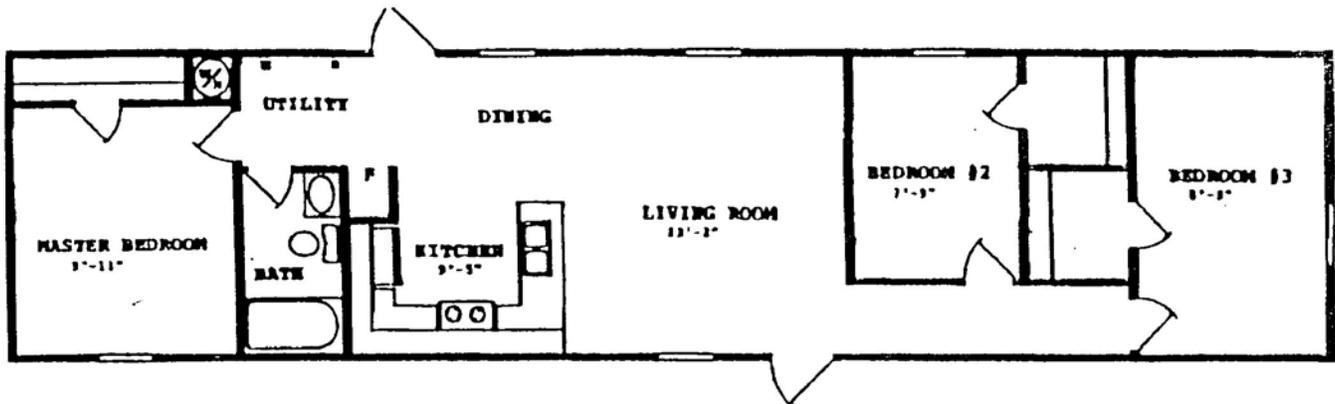
1. SCOPE, OBJECTIVE

This specification defines the minimum standards for manufactured home construction and outfitting to meet the State of North Carolina contract requirements. The standards identify minimum square footage of living space, floor plan configuration, finishes, necessary to provide emergency housing for disaster relief operations. The manufactured homes procured under these specifications shall meet the design and construction requirements established in the latest version of Manufactured Housing Construction and Safety Standards (Part 3280) as issued by the U.S. department of Housing and Urban Development (HUD) see addendum A for outline. The units will meet the specific HUD geographical and climatic requirements for the areas utilized (i.e., roof loading, wind pressure and thermal protection and comfort) and the additional requirements as outlined herein. Where requirements listed below specify the "manufacturer's standard", the materials and workmanship shall be the same as normally delivered to a retail sales outlet.

The unit shall be constructed to Wind Zone 2 requirements and Roof Load to South Zone.

2. REQUIREMENTS

2.1 Size and Configuration



Overall Size 60 Feet Long x 14 feet Wide (excluding Hitch dimension)
Floor Area (nominal) 833 square feet

Fig 1. Manufactured Home Typical Floor Plan (3 Bedroom, 1 Bath)

The nominal dimensions of the manufactured home shall be 14 ft wide and 60 ft long excluding fixed hitch dimension. Floor area 833 sq ft nominal. The unit shall be configured with three bedrooms, one bathroom, kitchen, dining area, living room, utility area and ample closets/storage areas. See figure 1, Typical Floor Plan. The actual manufacturer's floor plan may vary slightly except that the kitchen and bathroom must be in a back-to-back configuration.

2 Exterior Construction

Unit shall be covered with the manufacturers' standard full vinyl siding. Roof shall have shingles with 20-year warranty.

Front door shall be conventional house type with a storm door. Rear door to be a slab door.

All windows shall have storm windows provided.

Manufactured Home Colors shall be limited to : White/Black, Beige/Black and Light Gray/Black

2.3 Interior Construction

Wall Coverings shall be vinyl covered wallboard or washable paper covered wallboard. (manufacturer's standard)

Ceiling Coverings shall be the manufacturer's standard materials and colors.

Floor coverings shall be the manufacturer's standard sheet vinyl throughout the unit

2.4 Heating /Cooling System

The unit shall be equipped with an Electric Furnace or a gas furnace capable of operating on natural or liquefied petroleum gas. The BTU output of the unit shall have the capacity to maintain an average of 70 degrees Fahrenheit temperature for the geographic location of use (reference ASHRAE Handbook or appropriate document). The furnace shall be equipped for future installation of a split-system air conditioner by having space provided in the furnace cabinet for A-coil evaporator unit. The size of the A-coil shall be based on a recommended 2.5 ton minimum air conditioner, 12 SEER efficiency rating. The airflow generated by the air handler shall be sized to provide the 70 degrees Fahrenheit temperature in both the heating and cooling modes. The air handler is included in the furnace package and is supplied by the mobile home manufacturer. The sizing of the air handler in the cooling mode must be considered by the mobile home manufacturer when selecting the heating furnace. The air conditioner outside compressor unit and the A-coil evaporator unit will be provided by the installer as part of the Mobile Home Set Up contract. The air handler is provided by the mobile home manufacturer.

A standard thermostat shall be provided to control both the heating and cooling units. The low voltage wiring from the thermostat to the furnace and the cooling unit shall be provided by the mobile home manufacturer. The low voltage wiring from the thermostat to the cooling unit shall be stubbed out under the mobile home in the general location of the outside unit. Sufficient wiring shall be provided to connect to the cooling unit.

2.5 Electrical Systems

The unit electrical service shall consist of a 200 amp, 120/240 volts three-wire panel board complete with master and branch circuit breakers (16 slot minimum capacity). The panel board will be located in a readily accessible and safe location inside the unit.

Minimum interior lighting requirements shall include a ceiling mounted fixture in each of the following areas: bedrooms, hallway, kitchen, living room. Dining area, utility area, and bathroom. Ceiling fixtures will be manufacturer's standard and will be wall switch controlled, have dual sockets and 60-watt bulbs installed, and be equipped with break resistant shades and/or globes.

Fixtures shall be the manufacturer's standard and appropriately protected during transport.

2.6 Plumbing Fixtures and Accessories

Bathroom shall have a bathtub/shower combination unit installed to manufacturer's standard. The unit will be provided with curtain rod, shower curtain and curtain hooks. The tub/shower assembly will include faucet/shower diverter and drain plug. The bathrooms shall also have the manufacturer's standard vanity with lavatory with drain plug, water closet, medicine cabinet with mirror and accessories (soap/toothbrush/paper holder, 24" towel bar).

Kitchen shall be equipped with manufacturer's standard stainless steel double-bowl sink with faucet and drain/strainers (2).

Hot and cold water hose bibs and an open standpipe drainage receptor shall be installed in the utility area for washing machine location shown on figure 1. Electrical connections shall be furnished.

Unit shall be wired for electric dryer and opening shall be provided for the dryer exhaust. Washer and dryer are **NOT** part of this contract.

2.7 Kitchen Cabinets

Kitchen cabinets shall be the manufacturer's standard materials, and finish. This includes floor (base cabinets) and wall units as shown on figure 1.

Wall cabinet units shall be provided over the refrigerator, along front door side wall to the end of kitchen counter top.

2.8 Appliances

A 30-gallon(minimum), 3800 Watt (minimum) electric water heater shall be provided for hot water supply.

A 30-inch electric cooking range having four burners and a thermostatically controlled oven and a lighted, power range hood vented to the outside shall be provided.

A 14cft. (minimum) Frost-free refrigerator with freezer shall be provided.

2.9 Furnishings

Furnishings shall be the manufacturer's standard for functional quality (provides usability, comfort and minimum maintenance). Required items include the following:

Each bedroom will be furnished with 1 full size mattress (6" thick Foam) and box springs (54 in X 76 in) and a metal bed frame; 1 chest of drawers having minimum dimensions of 30 in wide and 21 in long and 36 in high and 4 or 5 drawers and 1 night stand. The chest and nightstand will be wood construction.

Each living room will be furnished with one sofa bed capable of sleeping two adults; one armchair; and one coffee table and one end table. The coffee table and end table shall be wood construction.

The dining room area in the unit will be furnished with a minimum 3ft x 5ft-dinette table and six matching chairs.

All operable windows in the unit will have white Venetian mini blinds with color coordinated valance installed.

Each home will be equipped with a five pound A-B-C type fire extinguisher and a mounting bracket. The mounting bracket will be secured to a wall stud in the kitchen area near the cooking range and accessible without reaching across the range top. The bracket shall be mounted 54 in above the finished floor surface.

2.10 Transport Readiness

The manufacturer and/or supplier of the manufactured homes shall ready the units for transport to the designated staging area and/or installation site. This includes but is not limited to:

Exterior appurtenances (e.g., lighting fixtures at entrance doors, vent stacks, etc.) shall be removed and stored or appropriately secured for protection during transport of the unit.

Interior appurtenances and furnishings (furniture, appliances, etc.) shall be appropriately packaged and/or secured inside the unit to prevent shifting and damage during transport.

Manufacturer's installation guidelines and technical data for set-up and activation of the unit shall be provided in a packet stored in a readily locatable area within the unit.

Fixed hitch, (2) brake Axles, two idlers, all running gear to remain with the unit (includes wheels and tires)

2.11 Warranty

The bidder must warrant the structure for a period of one year. Such replacement shall include parts, freight, labor, and round-trip travel to the user's site, which will all be the responsibility of the contractor

2.12 Other

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The unit manufacturer or supplier shall furnish entry door keys as required. (To be defined in IFB)

Insulation "R" factors are as follows are as follows: Floor: R-22, Wall: R11, Ceiling: R-28

Addendum A

PART 3280 MANUFACTURED HOME CONSTRUCTION AND SAFETY STANDARDS

Subpart A--General

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3280.1	Scope.
3280.2	Definitions.
3280.3	Manufactured home procedural and enforcement regulations and consumer manual requirements.
3280.4	Incorporation by reference.
3280.5	Data plate.
3280.6	Serial number.
3280.7	Excluded structures.
3280.8	Waivers.
3280.9	Interpretative bulletins.
3280.10	Use of alternative construction.
3280.11	Certification label.

Subpart B--Planning Considerations

3280.101	Scope.
3280.102	Definitions.
3280.103	Light and ventilation.
3280.104	Ceiling heights.
3280.105	Exit facilities; exterior doors.
3280.106	Exit facilities; egress windows and devices.
3280.107	Interior privacy.
3280.108	Interior passage.
3280.109	Room requirements.
3280.110	Minimum room dimensions.
3280.111	Toilet compartments.
3280.112	Hallways.
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Subpart C--Fire Safety

3280.201	Scope.
3280.202	Definitions.
3280.203	Flame spread limitations and fire protective requirements.
3280.204	Kitchen cabinet protection.
3280.205	Carpeting.
3280.206	Firestopping.
3280.207	Requirements for foam plastic thermal insulating materials.
3280.208	Fire detection equipment.
3280.209	Fire testing.

Subpart D--Body and Frame Construction Requirements

- 3280.301 Scope.
- 3280.302 Definitions.
- 3280.303 General requirements.
- 3280.304 Materials.
- 3280.305 Structural design requirements.
- 3280.306 Windstorm protection.
- 3280.307 Resistance to elements and use.
- 3280.308 Formaldehyde emission controls for certain wood products.
- 3280.309 Health Notice on formaldehyde emissions.

Subpart E--Testing

- 3280.401 Structural load tests.
- 3280.402 Test procedures for roof trusses.
- 3280.403 Standard for windows and sliding glass doors used in manufactured homes.
- 3280.404 Standard for egress windows and devices for use in manufactured homes.
- 3280.405 Standard for swinging exterior passage doors for use in manufactured homes.
- 3280.406 Air chamber test method for certification and qualification of formaldehyde emission levels.

Subpart F--Thermal Protection

- 3280.501 Scope.
- 3280.502 Definitions.
- 3280.503 Materials.
- 3280.504 Condensation control and installation of vapor retarders.
- 3280.505 Air infiltration.
- 3280.506 Heat loss/heat gain.
- 3280.507 Comfort heat gain.
- 3280.508 Heat loss, heat gain and cooling load calculations.
- 3280.509 Criteria in absence of specific data.
- 3280.510 Heat loss certificate.
- 3280.511 Comfort cooling certificate and information.

Subpart G--Plumbing Systems

- 3280.601 Scope.
- 3280.602 Definitions.
- 3280.603 General requirements.
- 3280.604 Materials.
- 3280.605 Joints and connections.
- 3280.606 Traps and cleanouts.
- 3280.607 Plumbing fixtures.

- 3280.608 Hangers and supports.
- 3280.609 Water distribution systems.
- 3280.610 Drainage systems.
- 3280.611 Vents and venting.

3280.612 Tests and inspection.

Subpart H--Heating, Cooling and Fuel Burning Systems

- 3280.701 Scope.
- 3280.702 Definitions.
- 3280.703 Minimum standards.
- 3280.704 Fuel supply systems.
- 3280.705 Gas piping systems.
- 3280.706 Oil piping systems.
- 3280.707 Heat producing appliances.
- 3280.708 Exhaust duct system and provisions for the future installation of a clothes dryer.
- 3280.709 Installation of appliances.
- 3280.710 Venting, ventilation and combustion air.
- 3280.711 Instructions.
- 3280.712 Marking.
- 3280.713 Accessibility.
- 3280.714 Appliances, cooling.
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Subpart I--Electrical Systems

- 3280.801 Scope.
- 3280.802 Definitions.
- 3280.803 Power supply.
- 3280.804 Disconnecting means and branch-circuit protective equipment.
- 3280.805 Branch circuits required.
- 3280.806 Receptacle outlets.
- 3280.807 Fixtures and appliances.
- 3280.808 Wiring methods and materials.
- 3280.809 Grounding.
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- 3280.811 Calculations.
- 3280.812 Wiring of expandable units and dual units.
- 3280.813 Outdoor outlets, fixtures, air conditioning equipment, etc.
- 3280.814 Painting of wiring.
- 3280.815 Polarization.
- 3280.816 Examination of equipment for safety.

Subpart J--Transportation

- 3280.901 Scope.
- 3280.902 Definitions.
- 3280.903 General requirements for designing the structure to withstand transportation shock and vibration.
- 3280.904 Specific requirements for designing the transportation system.

Authority: 42 U.S.C. 3535(d), 5403, and 5424.

Source: 40 FR 58752, Dec. 18, 1975, unless otherwise noted. Redesignated at 44 FR 20679, Apr. 6, 1979.