

ARTICLE I. GENERAL

Section 101: Short Title. This document is entitled "The Zoning Ordinance of Molena, Georgia." It may also be known by and cited by the short title of "Molena Zoning Ordinance."

Section 102: Authority. The power of a local government to enact an ordinance such as this, which is intended to protect the public health, safety, and welfare, is provided by the Home Rule provisions of the Constitution and Laws of the State of Georgia.

Section 103. Jurisdiction. This Ordinance applies to all land within the incorporated areas of Molena, Georgia.

Section 104: Purposes.

- A. The Zoning Ordinance of Molena, Georgia seeks to encourage the development of desirable land use patterns within Molena in accordance with the Molena Land Use Plan (where one exists). The promotion of sound land use patterns is intended to reduce or eliminate the occurrence of certain conditions which can threaten the general health, safety, and welfare of the residents of Molena. This Ordinance should serve the following purposes:
1. Reduce the occurrence of hazardous traffic patterns and general congestion.
 2. Secure safety from fire, panic, and other dangers.
 3. Assure that adequate light and air are provided.
 4. Prevent the overcrowding of land and undue concentration of population.
 5. Facilitate the adequate provision of public utilities and facilities.
 6. Promote adequate living conditions and sustained suitability of neighborhoods.
 7. Protect property against blight and depreciation
- B. Additional benefits to the public interest which can accrue from the development of sound land use patterns are as follows:
1. Efficient development and use of community utility networks.

2. Economy in governmental expenditures.
3. A higher level of convenience, order, prosperity, and aesthetics.

Section 105: Content. This Ordinance provides for the following:

- A. Defines certain terms used in this Ordinance.
- B. Establishes certain land use districts and specifies the boundaries of those districts.
- C. Provides procedures for administering and amending the Ordinance.
- D. Regulates the erection, alteration, and use of buildings and structures.
- E. Provides penalties for violation of this Ordinance.
- F. Defines the powers and duties, as they relate to this Ordinance, of the Mayor and Council, as well as such administrative officers, bodies, and agencies as the Mayor and Council may establish for the efficient exercise of the zoning powers of Molena under provisions specified in the Zoning Procedures Law (Ga. Code 1981, Section 36-66-1, enacted by Ga. L. 1985, p.1139, 1.), paragraph 2-(b)-(1). This includes at a minimum the Administrative Officer, the Planning Commission, and the Board of Appeals.
- G. Repeals conflicting ordinances.

Section 106: Related Uniform Development Ordinances.

- A. **Uniform Development Standards Adopted by Reference:** The following uniform development standards are referred to frequently in the Molena Zoning Ordinance and are included as appendixes in the complete book of unified development ordinances of Molena. This adopts them by reference as part of this Ordinance:
 1. American National Standards Institute ANSI A225.1 Manufactured Home Installations - 1982 (as amended). (See Appendix E. Contains uniform standards for installation of manufactured homes.)
 2. American National Standards Institute ANSI A119.1 Mobile Homes (1974). (See Appendix G. contains uniform standards for construction of Class C (Non-HUD) manufactured homes. See definitions in Article II.)

3. Standards for Off-Street Parking and Service Facilities (Contains uniform standards for design and minimum required number of off-street parking and services facilities.)
4. Georgia Building Code (as amended). (Not included as appendix--Administrative Officer's copy may be reviewed in his office, or copy may be purchased from Georgia Department of Community Affairs.)
5. (Reserved)

B. **Uniform Development Ordinances Related to Zoning Ordinance:** The following uniform development ordinances are referred to frequently in the Molena Zoning Ordinance. Although they are adopted as separate ordinances, they are closely related to the Zoning Ordinance and are included as appendixes in the complete book of unified development ordinances of Molena. These ordinances are as follows:

1. Ordinance Establishing Molena Planning Commission. (See Appendix B.)
2. Ordinance Establishing Molena Board of Appeals. (See Appendix C.)
3. Molena Soil and Sedimentation Control Ordinance. (See Appendix D.)
4. Molena Sign Ordinance. (See Appendix F.)
5. Molena Flood Damage Prevention Ordinances. (See Appendix H.)
6. (Reserved)
7. Molena Development Ordinance. (See Appendix K.)

ARTICLE II. DEFINITIONS OF TERMS USED

Section 201: Interpretation of Certain Common Terms. When used in this Ordinance, the following words and phrases have the meaning as defined in this article. Terms not defined here have the same meaning as is found in most dictionaries, where consistent with the context. The terms "must", "will", and "shall" are mandatory in nature, indicating that an action has to be done. The term "may" is permissive and allows discretion regarding an action. When consistent with the context, words used in the singular number include the plural, and those used in the plural number include the singular. Words used in the present tense include the future. The word "developer" includes a "firm", "corporation", "co-partnership", "association", "institution", or "person". The word "lot" includes the words "plot" and "parcel". The word "building" includes the word "structure". The words "used" or "occupied" as applied to any land or building include the words "intended", "arranged", or "designed", "to be used" or "occupied".

Section 202. General Definitions.

- A. **Administrative, Officer:** The person, officer, or official and his authorized representative, whom the Mayor and Council of Molena has designated as its agent for the administration of these regulations.
- B. **Agriculture:** The raising of soil crops in a customary manner on tracts of land at least three (3) acres in size, including all associated activities. Retail selling of products raised on the premises is permitted provided that space necessary for the parking of customers' vehicles is provided off the public right-of-way.
- C. **Airport:** A transportation terminal facility where aircraft take off and land.
- D. **Airstrip, Private:** An area designated for the take-off and landing of private, non-commercial aircraft, with no terminal facilities and no scheduled take-offs and landings.
- E. **Alley:** A secondary way which affords access to the side or rear of abutting property.
- F. **Alteration:** Any change in the supporting members of a building, any modification or change in construction, any addition which increases the area or height, any change in use from that of one district classification to another, or movement of a building from one location to another.

- G. **Antenna, Dish:** A structure intended for receiving audio or video signals via a satellite orbiting the earth. It is constructed of a round or square surface which is parabolically curved focusing on a low-noise signal amplifier and the apparatus is mounted on a base. Such antennas must meet the following development standards as well as all other applicable regulations.
1. They must not exceed a size of eighteen (18) feet in diameter or twenty (20) feet above the surface upon which the base is affixed.
- H. **Automobile Service Station:** A land use where gasoline, oils, greases, batteries, tires, and general automobile accessories may be provided, but where no part of the premises is used for the storage or dismantling of wrecked or junked vehicles.
- I. **Block:** A piece or parcel of land entirely surrounded by public highways or streets, other than alleys.
- J. **Mayor and Council:** The Mayor and Council of Molena.
- K. **Boarding or Rooming House:** A building used or intended for use as a place for lodging or feeding or both, of three (3) or more persons, for compensation.
- L. **Buffer:** That portion of a lot established for open space purposes and intended to separate properties with different and possibly incompatible types of uses. A buffer must not be otherwise occupied with structures. A buffer must be at least ten (10) feet wide and provide reasonable visual screening of the property through the provision of one of the following:
1. Planted vegetative screen at least ten (10) feet wide and Six (6) feet high.
 2. Fence or wall at least six (6) feet high which provides visual screening.
- M. **Building:** Any structure having a roof and intended for shelter, housing, or enclosure of persons, animals, or property of any kind.
- N. **Building, Accessory:** A structure used for a purpose that is customarily incidental and subordinate to the principal use or structure, and located on the same lot as such a principal use or structure.
- O. **Building, Principal:** The building on a lot in which the principal use of the lot is conducted.

- P. **Building Height:** The vertical distance of a building, measured from the average elevation of the finished grade at the front of the building to the highest point of the building.
- Q. **Building Line:** The line which represents the distance a building must be set back from the boundary line of a lot, measured at the foundation of the building.
- R. **Cemetery:** Land either already reserved for burial plots for the deceased, or which may, in the future, be so reserved; it may be maintained either by a family, a church or other place of worship, or a private corporation.
- S. **Center Line, Street:** That line surveyed and monumented by the governing authority as the center line of a street, or if such a center line has not been surveyed, it is the line running midway between the outside curbs or ditches of the street.
- T. **Clinic:** An establishment where medical or dental patients are admitted for examination and treatment, but where there is no overnight lodging.
- U. **Club or Lodge:** An incorporated or unincorporated association for civic, social, cultural, religious, fraternal, literary, political, recreation, or like activities, operated for the benefit of its members and not open to the general public.
- V. **Curb Cut:** The point at which vehicular access is provided to an adjoining street from a lot.
- W. **Density:** The number of dwelling units per acre of land use for residential purposes. Unless otherwise stated, density figures are to be in terms of net acres, or the land devoted to residential use exclusive of streets or other public lands.
- X. **Easement:** The right or privilege of using another's property, for purposes such as constructing and maintaining sanitary sewers, water mains, electric lines, telephone lines, storm sewers, gas lines, bicycle paths, pedestrian ways, and other purposes.
- Y. **Elevation, Front:** The view of a building or group of buildings as seen from directly in front of the structure.
- Z. **Employee, Fulltime:** A person who works forty (40) hours for one (1) employer.

- AA. **Family:** One or more persons related by blood, marriage, or adoption, including up to three (3) additional unrelated individuals, occupying a dwelling unit. A family may also consist of no more than four (4) unrelated individuals.
- BB. **Farm:** Any tract or parcel of land containing three (3) or more acres which is devoted to the raising of agricultural products, including, but not limited to, soil crops, livestock, fish, fowl, and commercial timber--regardless of the quantity or value of production.
- CC. **Flood Boundary:** That area threatened by possible flood under normal to severe circumstance; determined as shown on the Flood Hazard Boundary Map, published by the Federal Emergency Management Agency (FEMA), 1972.
- DD. **Floor Area:** The area of a dwelling exclusive of attic, basement, garage, carport, patios, and open porches measured from the exterior face of the exterior walls of a dwelling. Also, the gross leasable floor area for any business or industry based on interior dimensions.
- EE. **Garage, Public:** Any garage, other than a private garage, which is used for storage, minor repair, rental, servicing, washing, adjusting, or equipping of automobiles or other motor vehicles, but not including the storage of wrecked or junked vehicles.
- FF. **Garage, Repair:** A public garage intended to be used to make major commercial automobile, motorcycle, lawn mower, or other motor vehicle repairs; such a use should meet the following development standards as well as all other applicable regulations:
1. All body work and painting must be conducted within a fully enclosed building.
 2. No open storage of junk, wrecked vehicles, dismantled parts, or supplies visible beyond the premises is permitted.
- GG. **Garage or Carport, Private:** A covered space for the storage of one (1) or more motor vehicles belonging to the occupants of the principal use on the lot. No business occupation or service may be conducted for profit within the private garage except a home occupation under conditions specified in Section 202.

HH. Home Occupation: An occupation for gain or support conducted only by members of a family residing on the premises and entirely within the principal dwelling. The following required development standards must be met by all Home Occupations:

1. Only residents of the dwelling may be engaged in the home occupation.
2. The home occupation must be clearly incidental to the residential use of the dwelling and must not change the essentially residential character of the building.
3. No display of products may be visible from the street.
4. Use of the building for this purpose may not exceed twenty-five (25) percent of the principal building.
5. No internal or external alterations inconsistent with the residential use of the building is permitted.
6. No accessory buildings or outside storage may be used in connection with the home occupation except a private garage.
7. Only vehicles designed and used primarily as passenger vehicles (this includes light pickup trucks) may be used in connection with the conduct of the home occupation.

II. Hotel: A building in which overnight accommodations, without separate cooking facilities, are provided to the public. The term "hotel" includes the terms "motel" and "tourist court".

JJ. Industrialized Building: Any structure or component thereof, which is, wholly or in substantial part, made, fabricated, formed, or assembled in manufacturing facilities for installation or assembly and installation on a building site and has been manufactured in such a manner that all parts or processes cannot be inspected at the installation site without disassembly, damage to, or destruction thereof; and which bears the insignia of approval issued by the Commissioner of the Georgia Department of Community Affairs.

KK. Institution: A non-profit corporation, establishment, or entity; for public or semi-public use.

- LL. **Intermediate Care Home:** A facility which admits residents on medical referral. It maintains the services and facilities for institutional care and has a satisfactory agreement with a physician and dentist who will provide continuing supervision including emergencies. It otherwise complies with the rules and regulations contained in Chapter 290-5-9: Intermediate Care Homes (Rules of the Georgia Department of Human Resources).
- MM. **JunkYard:** Any use involving the parking, storage or disassembly of junked vehicles, or wrecked or non-operable automobiles, trucks, or other vehicles; storage, bailing, or otherwise dealing in bones, animal hides, scrap iron and other metals, used paper, used cloth, used plumbing fixtures, old stoves, old refrigerators, and other old household appliances, and used brick, wood, or other building materials. These uses are considered junkyards whether or not all or part of these operations are conducted inside a building or in conjunction with, in addition to, or accessory to other uses of the premises.
- NN. **Junked Vehicle:** Any wrecked or non-operable automobile, truck, or other vehicle which does not bear a current license plate.
- OO. **Kennel:** The housing for four (4) or more dogs, cats, or other domestic animals for the purpose of providing an income or revenue.
- PP. **Loading Space:** Space logically and conveniently located for pickup and delivery service, scaled to the vehicles expected to be used, and accessible to such vehicles at all time.
- QQ. **Lot:** A parcel of land occupied or capable of being occupied by one or more buildings and customarily incidental accessory buildings or uses, including such open spaces as are required by this Ordinance.
- RR. **Lot, Corner:** A lot located at the intersection of two or more streets.
- SS. **Lot, Double Frontage:** A lot, other than a corner lot, which has frontage on more than one street.
- TT. **Lot Width:** The distance between side lot lines measured at the front building line. If a corner lot, the distance between lot lines measured along the front building line which parallels or more nearly parallels the rear lot line.

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- UU. **Nursing Home:** A facility which admits patients on medical referral only and for whom arrangements have been made for continuous medical supervision. It maintains the services and facilities for skilled nursing care, rehabilitative nursing care, and has a satisfactory agreement with a physician and dentist who will be available for any medical and/or dental emergency and who will be responsible for the general medical and dental supervision of the home. It otherwise complies with the rules and regulations contained in Chapter 290-5-8: Nursing Homes (Rules of the Georgia Department of Human Resources).
- VV. **Official Map:** The map entitled "The Official Zoning Map of Molena, Georgia", indicating the locations of zoning district boundaries in Molena.
- WW. **Parking Space:** The storage space for one (1) motor vehicle. (See Standard Building Code of SBCCI for dimension standards required of standard parking spaces and those accessible to handicapped persons.)
- XX. **Personal Care Home:** A building or group of buildings, a facility, or place in which is provided two (2) or more beds and other facilities and services --including rooms, meals, and personal care for non-family ambulatory adults. It otherwise complies with the rules and regulations contained in Chapter 290-5-35: Personal Care Homes (Rules of the Georgia Department of Human Resources). For the purpose of this Ordinance, Personal Care Homes are classified as follows:
1. Family Personal Care Home: A home for adults in a family type residence, noninstitutional in character, which offers care to two (2) through six (6) persons.
 2. Group Personal Care-Home: A home for adult persons in a residence or other type building(s), noninstitutional in character, which offers care to seven (7) through fifteen (15) persons.
 3. Congregate Personal Care-Home A home for adults which offers care to sixteen (16) or more persons.
- YY. **Planning Commission:** The Molena Planning Commission.
- ZZ. **Plat:** A map, plan, or layout of a county, city, town, section, or subdivision indicating the location and boundaries of properties.
- AAA. **Right-of-Way:** A strip of land designed, reserved, dedicated, or purchased for the purpose of pedestrian or vehicular access or utility line installation.

- BBB. Story:** That portion of a building, not including a basement, between the surface of any floor and the surface of the floor next above it, or if there is no floor above, then the space between the floor and the ceiling next above it.
- CCC. Street/Road, Arterial:** A road which is on the Georgia state highway system and is designated by a State Route number. Such a street primarily serves the purpose of moving traffic through the City. Connecting roads and access to adjacent property should be kept to a minimum on an Arterial Road, as these interfere with traffic flow, adversely affecting the capacity and safety of the road. (See Functional Classification of Thoroughfares in the Molena Land Use Plan (where one exists).)
- DDD. Street/Road, Collector:** A road which is not on the Georgia state highway system. Such a road would usually serve to distribute traffic from individual lots to Arterial Streets/Roads. They may also connect neighborhoods with one another. (See Functional Classification of Thoroughfares in the Molena Land Use Plan (where one exists).)
- EEE. Street/Road, Local:** A road which serves adjacent property by providing access to the road network. A Local Street/Roads is characterized by short trips, low speeds, and small traffic volumes. The design of this type of road should be toward eliminating through traffic. (See Functional Classification of Thoroughfares in the Molena Land Use Plan (where one exists).)
- FFF. Structure:** Anything constructed or erected that requires a fixed location on the ground or which is attached to something having a fixed location on the ground.
- GGG. Subdivision:**
- A. The division of a lot of record at the time of enactment of this Ordinance into three (3) or more lots, building sites, or other divisions for the purpose--whether immediate or future--of sale, legacy, or building development. This definition includes all of the following:
1. All divisions of land involving a new street.
 2. All divisions of land involving a change in existing streets.
 3. Any resubdivision of land.

4. The process of subdividing.
 5. Any land or area subdivided.
- HHH. Use:** Any purpose for which a building or tract of land may be designed, arranged, intended, maintained, or occupied; or any activity, occupation, business, or operation carried on, or intended to be carried on, in a building or structure or a tract of land.
- III. Use, Accessory:** A use or structure customarily incidental and subordinate to the principal use or structure, and located on the same lot as the principal use or structure.
- JJJ. Use, Conditional:** A use which is permitted in a particular zoning district, but only under certain specified conditions.
- KKK. Use, Non-Conforming:** Use of land and/or buildings that does not conform to the regulations and standards of the district in which it is located, which lawfully existed at the time of adoption of this Ordinance and is allowed to continue under the provisions for Non-Conforming Uses (See Section 403).
- LLL. Use, Principal:** The main purpose for which a lot is intended and for which it is used.
- MMM. Variance:** A permit issued by the Board of Appeals which allows use of a parcel of land in a way that does not meet certain requirements for the district in which the property is located. See Section 407 for further details.
- NNN. Yard:** A required open space on a lot that is left unoccupied with structures and facilities, except as permitted in this Ordinance. A yard may also be known as a setback.
- OOO. Yard, Front:** The open space on a lot located between the right-of-way boundary of the abutting street(s) and the front building line projected to the side lot lines.
- PPP. Yard, Rear:** The open space between the rear property line and the rear building line projected to the side lot lines.
- QQQ. Yard, Side:** The open space between the side property line and the side building line extending from the rear line of the front yard to the front line of the rear yard.

RRR. **Zoning District:** One (1) or more sections of Molena, Georgia as delineated and designated on the Official Map, within which the zoning regulations are uniform.

Section 203. Housing Definitions.

- A. **Conventional Construction:** A dwelling unit constructed on the building site from basic materials delivered to the site; and which is constructed in accordance with the Standard Building Code of the Southern Building Code Congress International (SBCCI) (or a similar, nationally recognized code adopted by the State of Georgia).
- B. **DCA:** Georgia Department of Community Affairs.
- C. **Double Wide:** An obsolete term used to describe a mobile home or manufactured home having a width of generally between twenty (20) and twenty-eight (28) feet. In the context of this Ordinance this term has no specific meaning. See definition of manufactured home.
- D. **Dwelling:** A building or portion thereof designed, arranged, or used principally for residential occupancy, not including motels, hotels, boarding houses, or rooming houses.
- E. **Dwelling, Apartment:** One (1) or more dwelling units, under a single ownership, located on one (1) lot of land, occupied by renters.
- F. **Dwelling, Cluster:** One of a series of attached and/or detached dwelling units developed under a single ownership.
- G. **Dwelling, Condominium:** An individually-owned dwelling unit in an attached, detached, or multi-family structure, combined with joint ownership of common areas of the buildings and grounds.
- H. **Dwelling, Garden Apartment:** A multi-family dwelling one (1) or two (2) stories in height containing from one (1) to four (4) dwelling units, and where the area immediately surrounding the dwelling is landscaped and may contain recreation facilities for the private use of dwelling occupants.

- I. **Dwelling, Multiple Family:** A building designed, constructed, altered or used for five (5) or more adjoining dwelling units, with each dwelling unit having a party wall or walls and/or a party floor and ceiling connecting it with at least one other dwelling unit located on one lot of land. A multiple-family dwelling may be apartments or condominiums.
- J. **Dwelling, Patio:** A single-family dwelling in which all or a portion of the area required for side and rear yards may be consolidated into one or more garden court spaces within the walls of the dwelling unit.
- K. **Dwelling, Single-Family Attached:** A building containing two (2) or more single-family dwelling units joined at one or more points by one or more party walls or other common facilities (not including the walls of an enclosed courtyard or similar area) and with property lines separating each dwelling unit.
- L. **Dwelling, Single-Family Detached:** A single residential detached building designed for or containing one (1) dwelling unit.
- M. **Dwelling, Townhouse:** One of a series of three (3) or more attached dwelling units on separate lots which are separated from each other by fire walls extending at least from the lowest floor level to the roof.
- N. **Dwelling, Two-Family:** A detached dwelling designed, constructed, altered, or used for two (2) adjoining dwelling units, with each dwelling unit having a party wall connecting it with the other dwelling unit, located on one lot; also known as a "duplex".
- O. **Dwelling-Unit:** One (1) or more rooms within a dwelling forming a separate, independent housekeeping establishment for use of one (1) family involving owner or renter occupancy, with provisions for cooking, eating, and sleeping, and which is physically set apart from other rooms or dwelling units in the same building.
- P. **Factory-Built Housing:** An obsolete term used to describe an industrialized home. In the context of this Ordinance, this term has no specific meaning. See definition of industrialized home.
- Q. **HUD:** U.S. Department of Housing and Urban Development.

R. **Industrialized Home:** A home manufactured in accordance with the Georgia Industrialized Building Act and the Rules of the Commissioner of the Georgia Department of Community Affairs issued pursuant thereto. State approved buildings meet the State Building and Construction Codes and bear an insignia of Approval issued by the Commissioner.

S. **Manufactured Home, Class A:**

1. A dwelling unit fabricated in an off-site facility for installation or assembly at the building site, bearing a label certifying it is constructed in compliance with the Federal Manufactured Home and Standards Act 42 U.S.C. 5401-5445 (the HUD Code, which became effective on June 15, 1976), and meeting the following development standards:

- a. The home has a length not exceeding four (4) times its width.
- b. The pitch or the home's roof has a minimum vertical rise of one (1) foot for each five (5) feet of horizontal run, and the roof is finished with a type of shingle that is commonly used in conventional residential construction.
- c. The exterior siding consists of wood, hardboard, or aluminum (vinyl covered or painted, but in no case exceeding the reflectivity of gloss white paint) comparable in composition, appearance, and durability to the exterior siding commonly used in conventional residential construction.
- d. A curtain wall--unpierced except for required ventilation and access, and constructed of either masonry or a simulated rock or brick material manufactured for such a purpose--is installed so that it encloses the area located under the home to the ground level. Such a wall must meet the standards specified in ANSI A225.1.
- e. The tongue, axles, transporting lights, and towing apparatus are removed after placement on the lot and before occupancy.

2. All manufactured homes must be installed in accordance with ANSI A225.1 (See Appendix E).

~~*~~ 3. Manufactured homes are not permitted to be used as storage buildings.

*Amended
4' rise
12' for each*

T. **Manufactured Home, Class B.** A dwelling unit fabricated in an off-site facility for installation or assembly at the building site, bearing a label certifying it is constructed in compliance with Federal Manufactured Home Construction and Safety Standards Act 42 U.S.C. 5401-5445 (the HUD Code, which became effective on June 15, 1976), but does not satisfy the criteria necessary to qualify the unit as a Class A manufactured home. All manufactured homes must be installed in accordance with ANSI A225.1 (See Appendix E). Manufactured homes are not permitted to be used as storage buildings.

U. **Manufactured Home, Class C.** Any manufactured home that does not meet the definitional criteria of a Class A or Class B manufactured home (not constructed to the HUD code). All manufactured homes must be installed in accordance with ANSI A225.1 (See Appendix E). Class C manufactured homes must meet the construction standards specified in ANSI A119.1 (See Appendix G). Compliance with ANSI A119.1 may be determined by any of the following procedures:

1. For manufactured homes located within Molena, the Molena Administrative Officer must inspect the unit and determine what (if anything) is needed to bring the unit up to the standards of ANSI 119.1. Upon determining that the unit meets ANSI 119.1 standards and that the provisions of all other applicable Molena ordinances are met by the proposed placement of the manufactured home, the Administrative Officer will issue the permit for placement of the manufactured home.
2. For manufactured homes located outside of Molena, the owner may pay expenses incurred by the Molena Administrative Officer to travel to the location of the manufactured home in order to inspect it and determine what (if anything) is needed to bring the unit up to the standards of ANSI 119.1. Upon determining that the unit meets ANSI 119.1 standards and that the provisions of all other applicable Molena ordinances are met by the proposed placement of the manufactured home, the Administrative Officer will issue the permit for placement of the manufactured home.
3. For manufactured homes located outside of Molena, the owner of the unit may, by agreement with the Molena Administrative Officer, arrange for the Administrative Officer of competent jurisdiction in the locality in which the manufactured home is located to inspect it and determine what (if anything) is needed to bring the unit up to the standards of ANSI 119.1. Upon determining that the unit meets ANSI 119.1 standards, that

Administrative Officer must certify the same to the Molena Administrative Officer. After receiving such a certification and after determining that the provisions of all other applicable Molena ordinances are met by the proposed placement of the manufactured home, the Molena Administrative Officer will issue the permit for placement of the manufactured home.

4. The Molena Administrative Officer is not bound by the findings of the Administrative Officer of the other locality. If upon final inspection the Molena Administrative Officer finds that the manufactured home does not meet the ANSI 119.1 standards, he will not issue a Certificate of Occupancy until these standards are met.
 5. Manufactured homes are not permitted to be used as storage buildings.
- V. **Manufactured Home Space:** An area of land within a planned manufactured home community designed to accommodate one (1) manufactured home.
- W. **Manufactured Housing:** A general term used to describe a type of housing which is produced, either completely or partially in a factory, including manufactured homes, modular homes, and industrialized homes. In the context of this Ordinance, this term has no specific meaning.
- X. **Mobile Home:** An obsolete term used to describe a manufactured home. In the context of this Ordinance, this term has no specific meaning. See definition of manufactured home.
- Y. **Mobile Home Park:** An obsolete term used to describe a planned manufactured home park. In the context of this Ordinance, this term has no specific meaning. See definition of planned manufactured home park.
- Z. **Modular Home:** A factory-fabricated single-family dwelling which is constructed in one (1) or more sections and complies with the definition of Industrialized Home.
- AA. **Multi-Section Home:** An obsolete term used to describe a manufactured home finished in two (2) or more sections. In the context of this Ordinance, this term has no specific meaning. See definition of manufactured home.

- BB. National Manufactured Home Construction and Safety-Standards:** The national building code for all manufactured homes built since June 15, 1976, written and administered by the U. S. Department of Housing and Urban Development; also known as the "HUD Code".
- CC. Planned Apartment Home Community:** A lot used or intended for use as a residential area occupied by apartment homes and conforming to an approved development plan; with appropriate and adequate community services, recreation facilities, utilities, streets, and sidewalks provided by the developer.
- DD. Planned Manufactured Home Community:** A lot used or intended for use as a residential area occupied by manufactured homes; and conforming to an approved Development Plan with appropriate and adequate community services, recreation facilities, utilities, streets, and sidewalks provided by the developer; where the resident owns or rents the manufactured home and rents the manufactured home space. All manufactured home parks must be designed and constructed in accordance with ANSI A225.1 (NFPA 501A), Manufactured Home Installations 1982, as amended.
- EE. Pre-Fabricated Home:** A general term used to describe any home constructed in a factory setting including manufactured homes, modular homes, and industrialized homes. In the context of this Ordinance, this term has no specific meaning.
- FF. SBCCI:** Southern Building Code Congress International.
- GG. Sectional Home:** A general term used to describe any home constructed in a factory setting, especially manufactured homes. In the context of this Ordinance, this term has no specific meaning.
- HH. Single-Wide:** An obsolete term used to describe a mobile home or manufactured home having a width of between eight (8) and fourteen (14) feet. In the context of this Ordinance, this term has no specific meaning. See definition of manufactured home.
- II. Site-Built Home:** See definition of conventional construction.
- JJ. Stick-Built Home:** See definition of conventional construction.
- KK. Trailer:** An obsolete term used to describe a manufactured home. In the context of this Ordinance, this term has no specific meaning.

- LL. **Trailer Court:** An obsolete term used to describe a planned manufactured home community. See definition of planned manufactured home community.
- MM. **Trailer Park:** An obsolete term used to describe a planned manufactured home community. See definition of planned manufactured home community.
- NN. **Travel-Trailer:** A vehicle designed as a temporary dwelling for travel or recreational uses, not more than eight (8) feet in width and not more than thirty (30) feet in length.
- OO. **Travel Trailer Park:** A lot on which are parked two (2) or more travel trailers for a period of less than thirty (30) days.

ARTICLE III. (Reserved)

ARTICLE IV. GENERAL PROCEDURES

Section 401: Initial Information.

- A. Article IV outlines the procedures to be followed in order to comply with the requirements of this Ordinance. The developer (See definition of "developer" in Article II), who initially may not be familiar with this Ordinance, first visits the Administrative Officer to get information concerning ordinance affecting his proposed development.
- B. The Administrative Officer will show the developer a copy of this Ordinance. The developer may either review the document in the office or he may purchase a copy for his own use.

Section 402: Compliance with Zoning Ordinance Required.

- A. No building is to be erected, used, occupied, moved, or altered in a manner that does not conform to the requirements specified for the district in which it is located.
- B. The only exception to this requirement is that all buildings or uses which lawfully existed at a particular location at the time this Ordinance was adopted may be continued as "Non-Conforming Uses".

Section 403: Continuance of Non-Conforming Uses.

Invariably, at the time a land use and development control ordinance is adopted or amended, certain uses which lawfully existed prior to the adoption or Amendment will not conform to the regulations and standards for the districts in which they are located. These are known as non-conforming uses, and in order to feasibly adopt the ordinance and so as not to cause undue economic hardship on owners of non-conforming uses, these uses are allowed to continue under Special Conditions as outlined in the following parts of this section:

- A. Where a non-conforming use of a building or lot has ceased for more than six (6) months or has changed to a permitted or conforming use, further use of the building or lot must be in conformance with the standards and requirements for the district in which it is located.
- B. A non-conforming use must not be extended or altered unless the extension or alteration is in conformance with the requirements of the Ordinance.

- C. A non-conforming use which is altered or extended must meet applicable Molena building codes and development regulations. When an applicant seeks a Building Permit for the extension or alteration of a non-conforming use, the Administrative Officer will inspect the unit and determine what (if anything) is needed to bring the unit into conformance with applicable building codes and development regulations. Upon determining that the unit meets applicable building codes and development regulations, he will issue the Building Permit for the non-conforming use.
- D. If a non-conforming building or structure suffers damage which does not exceed fifty (50) percent of its assessed valuation, the building or structure may be reconstructed and reused as before if done within twelve (12) months from the time such damage occurred. If such damage is greater than fifty (50) percent of its assessed valuation, such a building or structure may only be reconstructed and used in conformity with the standards and requirements for the district in which it is located.
- E. A use which is non-conforming only with respect to screening or buffer requirements must provide required screens or buffers within a period of three (3) years from the effective date of this Ordinance. This time period is to allow for the growth of natural vegetative buffers.

Section 404: Building Permit Required.

- A. The developer or other person wishing to do any of the following must first apply to the Administrative Officer for a Building Permit:
 - 1. Excavation or filling of a lot for the construction of a building.
 - 2. Erection, movement, extension, or enlargement of a building.
 - 3. Work on an existing building which increases the assessed value \$500 or more.
 - 4. Installation of a Manufactured Home or Industrialized Building.
- B. No electricity, water, or sewage hookup will be made available to the site of new construction until a Building Permit is secured.

- C. The Building Permit must be applied for either by the owner of the land upon which the proposed building or alteration is to be located, or by the contractor doing the work.
- D. The applicant may obtain a Building Permit application from the Administrative Officer. He should complete the application form and submit it to the Administrative Officer, together with any supporting documentation which the Administrative Officer may specify.
- E. No application will be accepted from any person who is in violation of the Zoning Ordinance. If an applicant for a Building Permit is, at the time of such an application, determined by the Administrative Officer to be in violation of the Zoning Ordinance, then the Administrative Officer will be prohibited from accepting or processing any application from that applicant until the applicant does one of the following:
1. He must voluntarily remove or change the cause of the violation and cease to be in violation. The applicant must notify the Administrative Officer that he has ceased the violation and obtain a release from the Administrative Officer as to the violation.
 2. He must be tried before a Court of competent jurisdiction and acquitted of charges and present a certified copy of the Court Order to the Administrative Officer within thirty (30) days of the final order of the Court.
- F. When the applicant has ceased to be in violation by either "1" or "2" above, the Administrative Officer will then accept the application for Building Permit.
- G. Before a Building Permit is issued by the Administrative Officer, the Pike County Health Department must approve the proposed water supply and sewage disposal facilities required in connection with the proposed building or structure. In areas served by a public water and sewage system, the Health Department may elect to waive the requirement for approval. After study of the site of a proposed use, the Health Department may require for health reasons that all or any portion of the site not be used for the intended purpose. The Health Department may also set a minimum lot size larger than that required by this Ordinance.

The Pike County Health Department will either approve or disapprove the water and sewer facilities within thirty (30) days of receipt of the application from the Administrative Officer, providing a written decision, including reasons for the decision.

- H. An existing use which is altered or extended must meet applicable Molena building codes and development regulations. When an applicant seeks a Building Permit for the extension or alteration of an existing use, the Administrative Officer will inspect the use and determine what (if anything) is needed to bring the use into conformance with applicable building codes and development regulations before a Building Permit may be issued.
- I. The Administrative Officer is in charge of issuing Building Permits. The Administrative Officer will contact the applicant at the address shown on the application. The Building Permit will be issued if, upon review of the application and inspection of the site, the Administrative Officer is satisfied that the proposed project will meet the requirements of this Ordinance and all other applicable ordinances. The Administrative Officer may require the submission of additional materials if he feels additional information is needed in order to determine if the proposed project meets the requirements of this Ordinance.
- J. If the Administrative Officer feels that the proposed project as presented in the Building Permit application will not satisfy the requirements of this Ordinance, he will not issue a Building Permit. He will notify the applicant in writing within ten (10) days of the submission of the application, stating reasons for the refusal. The applicant will then need to confer with the Administrative Officer to determine what he needs to do in order to comply with the Ordinance and be eligible for a Building Permit.
- K. Construction on an approved project must start within six (6) months from the date of issue of the Building Permit, or the permit will become invalid and a new one must be applied for if construction of the project is desired at a future date. If construction has begun on an approved project and then ceases before the project is completed, construction must be restarted within twelve (12) months from the time that it was stopped, or the permit will become invalid and a new one must be applied for if construction of the project is desired to resume at a future date. Records of Building Permit applications and supporting materials will be maintained by the Administrative Officer.

- L. All newly constructed buildings, as well as additions, extensions, or enlargements of structures must comply with all building codes in effect in Molena. The Administrative Officer will explain the procedures and timing of inspections to determine if work meets applicable codes.

Section 405: Certificate of Occupancy Required.

- A. A Certificate of Occupancy is required before a structure for which a Building Permit has been issued may be occupied or used. The Building Permit becomes the Certificate of Occupancy when the Administrative Officer signs it in the appropriate space, certifying that to the best of his knowledge all requirements of this Ordinance have been met. The owner/contractor will then receive the Certificate of Occupancy to be used as confirmation that he has complied with the provisions of this Ordinance.
- B. The Administrative Officer will issue the Certificate of Occupancy within ten (10) days of receiving the Building Permit with required certifications, if he finds that all requirements of this Ordinance and all other applicable ordinances have been met. However, if he finds that all requirements of such ordinances have not yet been met when the owner/contractor seeks a Certificate of Occupancy, the Administrative Officer will not issue the Certificate of Occupancy. He will notify the owner/contractor within ten (10) days, stating reasons for the refusal. The owner/contractor will then need to confer with the Administrative Officer to determine what he needs to do in order to comply with the Ordinance and be eligible for a Certificate of Occupancy.

Section 406: Appealing an Action of the Administrative Officer or Planning Commission.

- A. If the Administrative Officer or Planning Commission executes an action which the developer or other aggrieved party believes to be contrary to law, that action may be appealed. Findings of fact, however, may not be appealed. Such an appeal must be filed within thirty (30) days of the date on which the action by the Administrative Officer or Planning Commission was taken.

- B. The Board of Appeals has jurisdiction for hearing appeals concerning actions of the Administrative Officer or Planning Commission related to this Ordinance. Applications for appeal may be obtained from and submitted to the Administrative Officer, who will transmit them to the Board of Appeals for its consideration.
- C. When an action of the Administrative Officer or Planning Commission is appealed, all construction or other activity authorized by the appealed action must be stopped immediately. In certain cases, however, the Administrative Officer may feel that the stopping of such construction or other activity authorized by the appealed action will cause imminent peril to life or property. Then, the Administrative Officer may certify to the Board of Appeals that, by reason of facts stated in the certificate, the halting of construction or other activity authorized by the appealed action would in his opinion cause imminent peril to life or property. In such cases, the construction or other activity authorized by the appealed action is allowed to continue unless a restraining order is granted by either the Board of Appeals or a court of appropriate jurisdiction.
- D. When an application for appeal of an action of the Administrative Officer or Planning Commission is received, the Board of Appeals will set a time and place for a public hearing on the appeal. Notice of the hearing must be published in a newspaper of general circulation in Molena at least fifteen (15) days before the hearing. In addition, the parties to the appeal will be notified of the date of the hearing by the Board of Appeals by U. S. Mail at least fifteen (15) days before the hearing. Any person may appear at the hearing, or have a representative attend instead.
- E. The Board of Appeals will make a decision concerning the appeal and record the decision in the minutes for that meeting. Further appeal on points of law may be made to the Pike County Superior Court.

Section 407: Variances:

- A. A Variance is a permit, issued by the Board of Appeals, which allows use of a parcel of land in a way that does not meet certain requirements for the district in which the property is located. A Variance may be granted only in an individual case where an extreme hardship would result if all of the requirements of this Ordinance were applied stringently to a particular

piece of property. The hardship must be proven by showing beyond a doubt that reasonable use of the land is not possible if all of the requirements of this Ordinance are to be met. The hardship cannot be self-created such as:

1. A lot purchased with knowledge of an existing restriction.
 2. A claim of hardship in terms of prospective sales.
 3. An expressed economic need requiring a Variance, when such a need can be met in other ways which would not require a Variance.
- B. Relief from the hardship--the Variance--must not cause substantial detriment to the public good or impair the purposes of this Ordinance.
- C. When a Variance is issued, the spirit of this Ordinance must be observed and the public safety and welfare secured. A Variance may be granted only for Permitted Uses in the zoning district in which the property in question is located. (For example, a two-family dwelling would not be allowed to be placed in an R-1 district under a Variance).
- D. The developer or owner wishing to request a Variance must have at least fifty-one (51) percent ownership of the subject property or be the duly authorized agent of such a person, possessing notarized authorization in writing, under the owner's signature. The Planning Commission or Mayor and Council may also propose a Variance. However, the power to approve a Variance rest with the Board of Appeals.
- E. Application for a Variance may be made with the Administrative Officer. The Administrative Officer will take the required information and transmit it to the Board of Appeals for its consideration. No application is to be accepted from any person in violation of the Zoning Ordinance. If an applicant for a Variance or any other action by the Board of Appeals is, at the time of such application, determined by the Administrative Officer to be in violation of the Zoning Ordinance, then the Administrative Officer will be prohibited from accepting or processing any application from that applicant until the applicant does one of the following:
1. He must voluntarily remove or change the cause of the violation and cease to be in violation. The applicant must notify the Administrative Officer

that he has ceased the violation and obtain a release from the Administrative Officer as to the violation.

2. Has been tried before a Court of competent jurisdiction and acquitted of charges and presents a certified copy of the Court Order to the Administrative Officer within thirty (30) days of the final order of the Court.
- F. When the applicant has ceased to be in violation by either 1. or 2. above, the Administrative Officer will then accept the application for Variance.
 - G. When an application for a Variance is received, the Board of Appeals will set a time and place for a public hearing on the Variance. Notice of the hearing must be published in a newspaper of general circulation in Molena at least fifteen (15) days before the hearing. Such notice will state the application number, owner's name, property location, its area, time, place and subject of the hearing. At least fifteen (15) days before the public hearing, notice of the time, place, and subject of the hearing will be sent to the appellant or petitioner in writing by U.S. Mail to his last known address. Copies of all such letters will be maintained in the applicant file for permanent record.
 - H. The Board of Appeals will make a decision concerning the Variance and record the decision in the minutes for that meeting.
 - I. The Variance issued by the Board of Appeals must specify which requirements are to be varied from. It must specify alternative requirements to be met, replacing the requirements varied from.
 - J. The Board of Appeals may establish performance bonds to assure compliance with any requirements it has set for granting a Variance. Where a Variance is granted for a construction activity requiring a Building Permit, the Building Permit must be obtained and construction must begin within six (6) months of the issuance of the Variance. Otherwise, the Variance expires after six (6) months.
 - K. The decision of the Board of Appeals on the application for Variance may be appealed on points of law to the Pike County Superior Court.

Section 408: (Reserved).

Section 409: (Reserved).

Section 410: Amendments.

- A. If a developer or landowner finds that a proposed new use of his land does not meet the requirements of this Ordinance, he may request that this Ordinance be amended to permit his proposed use. The developer or owner wishing to request an Amendment of the Official Map must have at least fifty-one (51) percent ownership of the subject property or be the duly authorized agent of such a person, possessing notarized authorization in writing under the owner's signature. The Planning Commission or the Mayor and Council may also propose an Amendment. However, the power to approve and enact an Amendment rests with the Mayor and Council.
- B. Application for an Amendment may be made with the Administrative Officer. The Administrative Officer will take the required information and transmit it to the Board of Appeals for its consideration. No Application is to be accepted from any person in violation of the Zoning Ordinance. If an applicant for an Amendment or any other action by the Board of Appeals is, at the time of such an application, determined by the Administrative Officer to be in violation of the Zoning Ordinance, then the Administrative Officer will be prohibited from accepting or processing any application from that applicant until the applicant does one of the following:
1. He must voluntarily remove or change the cause of the violation and cease to be in violation. The applicant must notify the Administrative Officer that he has ceased the violation and obtain a release from the Administrative Officer as to the violation.
 2. He must be tried before a Court of competent jurisdiction and acquitted of charges and present a certified copy of the Court Order to the Administrative Officer within thirty (30) days of the final order of the Court.
- C. When the applicant has ceased to be in violation by either 1. or 2. above, the Administrative Officer will then accept the application for Amendment.
- D. When an Amendment is initiated which involves changing the zoning district of a parcel of land, the Administrative Officer must post a sign at least two (2) feet by three (3) feet in size in a conspicuous

place on the property at least fifteen (15) days but not more than forty-five (45) days prior to the date of the scheduled public hearing. The sign must set forth the fact that it is a "ZONING NOTICE". It must show the present zoning classification, the proposed zoning classification, the purpose, date, time, and place of the scheduled public hearing, and it must inform the public that additional information may be obtained from the Administrative Officer.

E. All applications for Amendment must first be reviewed by the Planning Commission. The Planning Commission will study the proposed Amendment and determine if it meets the requirements of this Ordinance, as well as other applicable ordinances of Molena. At this time, the Administrative Officer may review the proposed Amendment and make written recommendations to the Planning Commission.

F. The Planning Commission must then conduct a public hearing on the Amendment. The responsibility of conducting the public hearing is delegated by the Mayor and Council to the Planning Commission under provisions specified in the Zoning Procedures Law (Ga. Code 1981, Section 36-66-1, enacted by Ga. L. 1985, p.1139, 1.), paragraph 2-(b)-(1). (See Section 105, paragraph F. of this Ordinance for additional details.) Notice of the hearing must be published in a newspaper of general circulation in Molena at least fifteen (15) days but not more than forty-five (45) days before the hearing Contents of Notice set forth. The location of the property, present zoning classification, and proposed zoning classification must be indicated in the newspaper notice.

G. The following policies and procedures will be observed in conducting the required public hearing:

1. The hearing will be held in the Molena City Hall.
2. Written comments on the subject of the hearing may be submitted by any citizen or property owner at any time prior to the adjournment of the hearing.
3. Persons desiring to be heard orally may present their views at the hearing. The length of time of oral presentations permitted to each speaker will be governed by the Planning Commission, depending upon the number of persons present and desiring to speak. Personal remarks will not be tolerated.

4. Any person desiring a transcript of the hearing must arrange for a court reporter at their own expense.
5. Cross-examination of persons making oral presentations will not be permitted.
6. All questions will be addressed to the Chairman of the Planning Commission or the Planning Commission member then presiding.
7. "Standing" to challenge a zoning decision is not conferred by being permitted to speak orally at a hearing, nor by being permitted to file statement or pleadings.

H. The Planning Commission will, when considering a proposed Amendment to the Zoning Ordinance, first determine whether the limitation imposed by such an Amendment, if any, on the right to unrestricted use of property which might result from the proposed Amendment is necessary to promote the public health, safety, or general welfare. In considering whether to recommend a change in the zoning classification of any particular property, the Planning Commission will balance the benefit to the public of the present zoning classification of the property against the detriment to the property owner, and scrutinize the application in light of the character of the land in question and the effect of the zoning decision upon the property owner's rights. In making these determinations, the Planning Commission must consider the following:

1. The existing uses and zoning of nearby property.
2. The suitability of the property for the zoned purpose.
3. The length of time the property has been vacant.
4. The threat to the public health, safety, and welfare if rezoned.
5. The extent to which the value of the property is diminished by the present zoning.
6. The balance between the hardship on the property owner and the benefit to the public in not rezoning.

- I. The Planning Commission may also consider whether development of the property in the zoning classification sought would do any of the following:
 1. Have an adverse effect on the insurance rating of the City, or any substantial portion of the City, issued by the Insurance Service Office or similar rating agency.
 2. Overtax the public utilities and streets presently existing to serve the site.
 3. Have a substantial adverse impact on the environment, including but not limited to, drainage, soil erosion and sedimentation, flooding, air quality, and water quality and quantity.

- J. The Planning Commission will make a written record of the comments received at the public hearing. After the public hearing, and at an official meeting of the Planning Commission, the Planning Commission will formulate its recommendations to the Mayor and Council, recording them in the minutes for that meeting. The Planning Commission will send the written record of comments received at the public hearing along with its recommendations on the proposed Amendment in writing to the Mayor and Council within thirty (30) days of the close of the public hearing, stating reasons for its recommendations. If the Planning Commission fails to send its recommendations to the Mayor and Council within thirty (30) days of the close of the public hearing, the Mayor and Council will assume that the Planning Commission approves.

- K. After reviewing the record of the public hearing and considering recommendations from the Planning Commission, the Mayor and Council will then make an official decision on the proposed Amendment. The decision may or may not concur with the recommendations of the Planning Commission.

- L. If the Mayor and Council deny a proposed Amendment, a minimum period of twelve (12) months must pass before the same Amendment proposal is again submitted for consideration.

Section 411: (Reserved).

Section 412: Appealing an Action of the Mayor and Council.

If the Mayor and Council execute an action which the developer or other aggrieved party believes to be contrary to law, that action may be appealed to the Pike County Superior Court. Findings of fact, however, may not be appealed. Such an appeal must be filed within thirty (30) days of the date on which the action of the Mayor and Council was taken.

Section 413: Penalties. Any person who violates any of the provisions of this Ordinance must face penalties. If a developer or landowner exhausts the decision and appeals procedures contained in Article IV and is still dissatisfied with the decision, he must then comply with the final decision or face penalties. Anyone who violated any of the provisions of this Ordinance, upon conviction, will be fined no more than five hundred (500) dollars for each offense. In addition, he must pay all costs and expenses involved in the case. Each day such a violation continues constitutes a separate offense.

- A. The owner or tenant of any building, structure, premises, or part thereof, and any architect, builder, contractor, agent, or other person who commits, participates in, assists in, or maintains such a violation may each be found guilty of a separate offense and suffer the penalties provided here.

Section 414: Remedies. If any building or land is used or maintained in violation of this Ordinance, anyone, including the City, who would be harmed by such a violation may initiate legal proceedings to obtain an injunction or other appropriate remedy to stop the violation or to prevent any act which would constitute such a violation. Other legal remedies are also available as provided by Georgia law.

V. REQUIRED DEVELOPMENT STANDARDS.

Section 501: Development Standards in General.

- A. **Suitability of Land:** Land on which there is a danger to health, safety, or property must not be platted for residential use or other use that will continue or increase such danger, unless such hazards can be and are corrected. Examples of such conditions are as follows:
1. Land subject to flooding, improper drainage, or erosion.
 2. Land with excessive slope or other physical constraints which make it unsuitable for development.
- B. **Name of Subdivision:** The name of the subdivision must have the approval of the Planning Commission. The name must not duplicate or closely approximate the name of an existing subdivision.
- C. **Access:** Access to every subdivision must be provided over a public street, and every lot within a subdivision must be served by a publicly dedicated street or a private street meeting the standards of a public street and approved by the Planning Commission.
- D. **Conformance with Adopted Land Use Plan (where one exists):** Proposed subdivisions must conform with the adopted Molena Land Use Plan (where one exists) and development policies in effect at the time of submission to the Planning Commission. When features of the Molena Land Use Plan (where one exists) such as sites for schools, public buildings, parks, major streets, or other public uses are located in whole or in part in a proposed subdivision, such features must be either dedicated or reserved by the subdivider for acquisition within a reasonable time by the appropriate public agency.
- E. **Reservation or Dedication of Public Use Areas:**
1. Reservation of Plan Features: Where the features of the Molena Land Use Plan (where one exists) such as sites for schools, public buildings, parks, major streets, or other public uses are located in whole or in part in a proposed subdivision, such features must be reserved by the subdivider. However, no more than ten (10) percent of the total area of the subdivision will be required for reservation to fulfill this

requirement. Whenever the land required for such Plan features is not purchased, acquired, optioned, or condemned by the appropriate public agency within a two-year period from the date of recording the subdivision or by the time that at least seventy-five (75) percent of the lots are built on and occupied--whichever is sooner--the subdivider may claim the original reservation and subdivide it in a manner that meets the requirements of this Ordinance. Whenever a public body responsible for land acquisition executes a written release stating that the reserved land is not to be acquired, the Planning Commission will waive the reservation requirements.

2. **Reservation Omissions:** The Planning Commission will not approve a subdivision plat when features specified in the Molena Land Use Plan (where one exists) are not incorporated into the subdivision plat and the reservation requirements for such features have not been waived.
 3. **Unsuitable Reservations:** Whenever the Planning Commission finds that a proposed reservation or dedication of land for public use is not suitable for such public use, it may require the rearrangement of lots to provide suitable land for public use.
 4. **Unnecessary Reservations:** Whenever the Planning Commission finds that a proposed reservation or dedication of land for public use is not necessary, it may permit the rearrangement or lots to eliminate the area proposed for such public use.
- F. **Planned Developments:** A Planned Development--including large-scale construction of housing units, streets, and off-street parking facilities--may be approved by the Planning Commission, although the design of the project does not include standard streets, lots, or subdivision arrangements, if departure from the normal requirements of this Ordinance are consistent with the intent of this Ordinance. The developer of such a proposal is urged to consult early with the Planning Commission to coordinate, plan, and plat properly.
- G. **Community Assets:** In all subdivisions, due regard must be shown for all natural features such as large trees, water courses, historical sites, and similar community assets which will add attractiveness and value to the property if preserved.

Section 502: Development Standards for Streets. All streets established in the City of Molena after the effective

date of this Ordinance must comply with the following development standards.

- A. **Continuation of Existing Streets:** Wherever slope will permit, the arrangement of streets in a subdivision must provide for the alignment and continuation or projection of existing streets into adjoining areas. Existing streets must be continued at the same or greater width, but in no case less than the required width.
- B. **Street Names:** Streets or roads that are extensions of or obviously in alignment with existing street. The names of new streets and roads are subject to the approval of the Planning Commission and must not duplicate or be similar in sound to existing names--even if the suffix street, avenue, drive, etc. is different.
- C. **Development Along Arterial Streets:** Where a subdivision abuts or contains an Arterial Street (see Molena Land Use Plan (where one exists) for street classification plan), the Planning Commission may require a street approximately parallel to and on either side of the right-of-way of the Arterial Street to provide access to lots along the Arterial Street while avoiding direct driveway curb cuts on the Arterial Street. Such a street may either abut the Arterial Street or railroad right-of-way or be located a suitable distance away to allow an appropriate use of the intervening land with a non-access reservation along the Arterial Street and a buffer. In such cases, lots must have access only from the access street.
- D. **Intersections:** The centerlines of no more than two (2) streets may intersect at any one point. Streets must be laid out so as to intersect as nearly as possible at right angles. No street may intersect any other street at an angle of less than sixty (60) degrees. The angle of intersection is to be measured at the intersection of the street centerlines.
- E. **Offset Intersections (Street Jogs):** Offset intersections with centerline offsets of less than 125 feet are not permitted.
- F. **Dead-End Streets (Cul-de-sacs):** Local Streets designed to have one end permanently closed must be provided with a turnaround at the closed end having a right-of-way of at least 100 feet in diameter and a pavement of at least 70 feet in diameter.
- G. **Private Streets:** Private streets may be permitted by the Planning Commission in Planned Developments where controlled access or privacy is desired by the

developer. Such streets must meet the development standards for a public street.

- H. **Half Streets:** Half Streets are prohibited. Whenever a street is planned adjacent to the proposed subdivision tract boundary, the entire street right-of-way must be platted within the proposed subdivision.
- I. **Split-Level Streets:** Streets which are constructed so as to have two traffic ways--each at a different level within the same right-of-way--must provide any additional right-of-way required by this Ordinance when cut and fill techniques have been used in the construction of the street.
- J. **Alleys:** Alleys or service drives may be required at the rear of all lots used for multi-family, commercial, or industrial developments, but must not be provided in one- or two-family residential developments unless the alley or service drive is to provide secondary access to a lot(s) whose natural grade is more than six (6) feet above the finished street grade, or unless the subdivider shows the need for an alley or service drive to the satisfaction of the Planning Commission.
- K. **Marginal Access Streets:** These are streets which are constructed so as to provide secondary access only. No more than six (6) lots may abut any such street, and no such street may exceed 1000 feet in length. Such streets may not be used as through streets and should be permitted only when lots abut an arterial or collector street.
- L. **Minimum Required Street Right-of-Way Width:** The right-of-way is the perpendicular distance across a street from property line to property line. Minimum required street right-of-way is as follows:
 - 1. Arterial Street:¹ n²
 - 2. Collector Street:¹ 60 feet.
 - 3. Local Street:¹ 50 feet.
 - 4. Marginal Access: 24 feet.
 - 5. Alley/Service: 24 feet.
 - 6. Cul-de-sac: 100 feet diameter.

¹ See Molena Land Use Plan for street classification system and map.

² As shown in the Molena Land Use Plan; the Official Zoning Map, City of Molena, Georgia; or as defined by the appropriate local government authority.

M. Minimum Required Street Pavement Width Without Curb and Gutter: Streets without curb and gutter must be graded to provide at least a six (6) foot shoulder on each side of the pavement where cut and fill requirements will reasonably permit. Such shoulders must have at least a two (2) percent slope away from the edge of the pavement. Minimum required street pavement width without curb and gutter is as follows.

1. Arterial Street:¹ n^2
2. Collector Street:¹ 24 feet.
3. Local Street:¹ 20 feet.
4. Marginal Access: 12 feet.
5. Alley/Service: 12 feet.
6. Cul-de-sac: 70 feet diameter.

N. Minimum Required Street Pavement Width With Curb and Gutter: Pavement width with curb and gutter is measured from back of curb to back of curb. Minimum required street pavement width with curb and gutter is as follows:

1. Arterial Street:¹ n^2
2. Collector Street:¹ 28 feet.
3. Local Street:¹ 24 feet.
4. Marginal Access: 16 feet.
5. Alley/Service: 16 feet.
6. Cul-de-sac: 74 feet diameter.

O. Additional Right-of-Way for Cut and Fill: Where cut and fill techniques are to be use in the construction of a street, the right-of-way width must be increased above the required minimum two (2) feet for each one (1) foot of material removed for the cut or added for the fill. This additional right-of-way must be added to the side or sides where the cut or fill takes place. The maximum allowable degree of slope on a back slope is 1.5 to 1 (1.5:1), and on a fill slope the maximum allowable degree of slope is 2 to 1 (2:1).

¹ See Molena Land Use Plan for street Classification system and map.

² As shown in the Molena Land Use Plan; the Official Zoning Map, City of Molena, Georgia; or as defined by the appropriate local government authority.

P. **Additional Right-of-Way on Existing Streets:** In subdivisions that adjoin existing streets, the subdivider must dedicate additional right-of-way to meet stated minimum right-of-way requirements as follows:

1. Where any part of the subdivision is on both sides of the street, the entire right-of-way must be provided.
2. When the subdivision is located on one side of an existing street, on-half (1/2) of the required right-of-way measured from the centerline of the existing roadway must be provided.

Q. **Construction Standards for Streets:** All streets, alleys, and service drives must be prepared and paved according to the following methods or by equivalent methods that are acceptable to the Planning Commission:

1. **Base:** The base must consist either of select topsoil, sand clay, or other approved material having a minimum thickness of five (5) inches after being thoroughly compacted: The base must be constructed on a prepared subgrade in accordance with these specifications and in conformity with the lines, grades, and typical cross section as shown in the approved Construction Plans. Specific standards for the Base are as follows:
 - a. All materials must be of an approved type.
 - b. All materials must be mixed to the extent necessary to produce a thoroughly pulverized and homogeneous mixture.
 - c. As soon as the base material has been spread and mixed, the base must be brought to the approximate line, grade, and cross section, and then rolled with a sheepsfoot roller until the roller "walks out." Then the base material must be rolled with a pneumatic tire or general purpose roller until full thickness of the base course has been compacted thoroughly. Defects must be remedied as soon as they are discovered.
 - d. The base course must be maintained under traffic and kept free from ruts, ridges, and dustings. It must be kept true to the approved cross section until it is primed.
 - e. Base material must not be deposited or shaped

when subgrade conditions are freezing, thawing, or otherwise unfavorable for stability.

2. **Pavement:** Wearing surface must conform to mixes found suitable by the Georgia Department of Transportation or an independent testing laboratory. Wearing surface must be applied after a prime coat. Unless otherwise approved by the Administrative Officer, pavement must be constructed as follows:
 - a. The prime coat must be cut-back asphalt or cut-back asphalt emulsion applied on a clean, slightly damp surface in an amount of from 0.10 to 0.30 gallons per square yard, depending upon the nature and condition of the surface.
 - b. The wearing surface must consist of either an approved plant mix prepared in a central plant and composed of aggregate and bituminous materials having an in-place minimum compacted thickness of 1.5 inches; or a triple surface treatment consisting of the following materials: A first application of AC-15 (0.30 to 0.40 gallons), second spreading of aggregate (0.45 to 0.55 cubic feet, size M-5), second application of AC-15 (0.35 to 0.40 gallons), second spreading of aggregate (0.13 cubic feet, size 7), third application of AC-15 (0.15 to 0.20 gallons), and third spreading of aggregate (0.14 cubic feet, size 8).
3. **Seals:** Care and caution must be taken that all points between such structures as manholes and curbs, and the surface mixture are well sealed.
- R. **Reserve Strips:** Reserve strips designed as non-access reservations to control access to streets or other areas must be at least five (5) feet wide and must be dedicated to the City of Molena.
- S. **Buffers:** Buffers designed to separate incompatible land uses, as required in certain cases by the Molena Zoning Ordinance, and be dedicated to the City of Molena.
- T. **Grades:** All street grades must conform to the Georgia Department of Transportation Geometric Design Standards for each class of street as follows:
 1. **Arterial Streets:** Must conform to standards for Class IV roads.

2. Collector Streets: Must conform to standards for Class V roads.
 3. Local Streets and others: Must conform to standards for Class VI roads.
- V. **Tangents:** All tangents between reverse curves must conform to the Georgia Department of Transportation Geometric Design Standards for each class of street as follows:
1. Arterial Streets: Must conform to standards for Class IV roads.
 2. Collector Streets: Must conform to standards for Class V roads.
 3. Local Streets and others: Must conform to standards or Class VI roads.
- W. **Vertical Alignment:** Vertical Alignment (shopping sight distance), measured between points four and one-half (4 1/2) feet above the centerline of the street, must conform to the Georgia Department of Transportation Geometric Design Standards for each class of streets as follows:
1. Arterial Streets: Must conform to standards for Class IV roads.
 2. Collector Streets: Must conform to standards for Class V roads.
 3. Local Streets and others: Must conform to standards for Class VI roads.
- X. **Curb-line Radii:** At street intersections, property lines must be rounded with a curb radius of twenty (20) feet. However, in situations where the angle of intersection of two streets is less than 90 degrees, the Planning Commission may permit comparable cut-offs or chords in place of rounded corners.
- Y. **Right-of-Way Radius:** The right-of-way radius at street intersections must parallel the curb line radius.
- Z. **Steep Slope Development:** Street design and construction in areas of steep slopes are subject to variance from the development standards contained in this Ordinance if deemed by the Planning Commission to be necessary to carry out the intent and purpose of this Ordinance and if so ordered by the Planning Commission. If such a variance is ordered, the Administrative Officer will establish appropriate design and construction standards on an individual

basis.

AA. **Grading:** All streets, roads, and alleys must be graded by the developer in such a manner that pavements and other improvements (sidewalks and curb and gutter, if provided or required) can be constructed to the required cross section. The minimum width of grading must be the pavement width as specified in this Ordinance, plus six (6) feet on each side measured from the back of curb or pavement edge. Deviation from the above will be allowed only when due to special topographical (slope) conditions.

1. **Preparation:** Before grading is started, the entire right-of-way area must be first cleared of all stumps, roots, brush, other objectionable materials, and trees not intended for preservation.
2. **Cuts:** All tree stumps, boulders, and other obstructions must be removed to a depth of two (2) feet below the subgrade. Rock, when encountered, must be scarified (broken up and loosened) to a depth of twelve (12) inches below the subgrade.
3. **Fill:** All suitable material from roadway cuts may be used in the construction of fills, approaches, or at other places as needed. Excess materials, including organic materials, soft clay, etc., must be removed from the roadway. The fill must be spread in layers no more than twelve (12) inches thick and compacted. The filling of utility trenches and other places not accessible to the roller must be mechanically tamped.
4. **Subgrade:** The subgrade must be properly shaped, rolled, and uniformly compacted to conform with the lines, grades, and typical cross sections as shown on required drawings and approved by the Administrative Officer. Unsuitable material must be excavated and replaced with acceptable compacted material.

BB. **Sidewalks:** Sidewalks may be required by the Planning Commission where it is determined that safe and convenient pedestrian movement are essential. Common examples of such situations are school sites, commercial areas, places of public assembly, or across unusually long blocks. Required sidewalks or those installed at the option of the subdivider must meet the following development standards:

1. They must be at least three (3) feet wide.
2. They must not be placed immediately adjacent to

street curbs.

3. They must otherwise be installed according to required construction plans as approved by the Administrative Officer.
- CC. **Street Name Signs:** Street name signs must be installed at intersections within a subdivision. The location and design of such signs must be approved by the Administrative Officer.
- DD. **Street Trees:** The planting of street trees is not required. However, the subdivider is encouraged to plant trees along the street to enhance the appearance of the subdivision. Such trees, if planted on a street right-of-way, must be planted in a manner to insure that there will be no conflict with utility lines either above or below the ground surface.

Section 503: Development Standards for Lots. All lots established in the City of Molena after the effective date of this Ordinance must comply with the development standards contained in this paragraph. However, where provisions of the Molena Zoning Ordinance apply and are more strict, those provisions take precedence. Development standards for lots are as follows:

- A. **Lot Lines:** As far as practical, side lot lines must be perpendicular or radial to street lines.
- B. **Jurisdictional Limits and Lot Lines:** Lots must not be divided by city or county boundary lines.
- C. **Lot Frontage Arrangements:** Land must be subdivided in a manner that provides each lot in the subdivision with direct abutting access to an existing public street or to an approved street contained within the proposed subdivision. Each lot must front for at least thirty (30) feet upon an approved street or road. (See Panhandle or Flag Lots.)
- D. **Adequate Building Sites:** Each lot must contain an adequate building site not subject to flooding and outside the limits of existing easements or building setback lines required by this Ordinance or any existing ordinance as is appropriate.
- E. **Panhandle or Flag Lots:** "Panhandle" or "Flag" Lots, of required width and area are allowed where terrain makes standard design or frontage impossible or impractical. Where such lots are allowed, the street frontage of each panhandle access must be at least thirty (30) feet wide and the panhandle access must be no more than 300 feet long. No more than two (2) such panhandle access points may abut each other.

- F. **Double or Reverse Frontage Lots:** Double and reverse frontage, unless required by the Planning Commission, are prohibited except where essential to provide separation of residential development from traffic arteries or to overcome specific disadvantages of slope, orientation, or property size. A Reserve Strip planted with a vegetative screen across which there is no right of access may be required along the line of lots abutting such a traffic artery or other incompatible use.
- G. **Commercial and Industrial Lots:** Size, shape, and arrangement of commercial and industrial lots, where platted and classified as a subdivision, are subject to the approval of the Planning Commission. Where public water and/or sewage are not available, minimum lot size and minimum coverage will be based on lot area needed for proper sewage disposal and/or water supply. However, the building setback must be at least fifteen (15) feet from the front property line of the lot, regardless of the classification of the street. Within this setback, no permanent surface structures or facilities are allowed to be constructed.
- H. **Lot Remnants:** Lot remnants are prohibited. Such remnant areas must be added to adjacent lots, rather than remain as unusable parcels.
- I. **Monuments:** Solid steel rods at least one-half (1/2) inch in diameter or square and two (2) feet long, must be set at all street corners, at all points where street lines intersect the exterior boundaries of the subdivision, at angle points in streets, at points of curve in streets, and at points of change of direction in the exterior boundaries of the subdivision. The top of the monument must have an indented cross to identify the finished grade. All other lot corners must be marked with solid steel rods no less than 1/2 inch in diameter, and at least two (2) feet long, driven so as to be flush with the finished grade.

Section 504: Development Standards for Utility Installations.

- A. **Utility Easements:** When it is found to be necessary and desirable to locate public utility lines in other than street right-of-ways, easements must be shown on the plat for such purposes. Such easements must not be less than twelve (12) feet wide and, where possible, must be centered on rear or side lot lines.
- B. **Installation of Utilities:** After grading is completed and approved and before any base is applied, all of the underground work within the street right-of-way--water mains, gas mains, etc.-- must be installed completely and approved throughout the length of the road and

across the flat section. At the same time, all service connections must be stubbed out to each lot.

C. Water Supply Systems:

1. Public Water System: If a public water supply is available to a proposed subdivision and connection to it is permitted, water mains, fire hydrants, and stub connections to each lot within the subdivision must be provided as shown on approved construction plans.
2. Community Water Supply System: If a public water supply is not available, the subdivider may install a community water system developed according to plans and specifications shown on the approved construction plans and approved by the Environmental Protection Division of the Georgia Department of Natural Resources.
3. Individual Water Supply: When a public water supply is not available and a community water system is not proposed by the subdivider, the subdivider must carefully consider the capability and suitability of the general area of the subdivision to support individual water supplies. Such proposed water supplies must be approved by the Pike County Health Department. The Planning Commission must consider the recommendation of the Pike County Health Department regarding any proposed private water supplies in considering approval of a plat.

D. Sanitary Sewer Disposal Systems:

1. Public Sewage System: If a public sewage system is available to a proposed subdivision and connection to it is permitted, sewage mains, and stub connections to each lot within the subdivision must be provided as shown on approved construction plans.
2. Community Sewage Supply System: If a public sewage system is not available, the subdivider may install a community sewage system developed according to plans and specifications shown on the approved construction plans and approved by the Environmental Protection Division of the Georgia Department of Natural Resources.
3. Individual Sewage Supply: When a public sewage system is not available and a community sewage system is not proposed by the subdivider, the subdivider must carefully consider the capability and suitability of the general area of the

subdivision to support individual sewage systems (septic tanks). Such proposed sewage system must be approved by the Pike County Health Department. The Planning Commission must consider the recommendation of the Pike County Health Department regarding any proposed private sewage systems in considering approval of a plat.

Section 505: Development Standards for Drainage Facilities.

- A. **Watercourse and Drainage Easements:** Where a proposed subdivision is traversed by a watercourse, drainageway, or stream, appropriate provisions must be made to accommodate stormwater and drainage through and from the proposed subdivision. Such an easement must conform substantially with the lines of the watercourse and be wide enough and of adequate construction to be satisfactory for the purpose.
- B. **Storm Drainage:** An adequate drainage system, including necessary open ditches, pipes, culverts, intersectional drains, drop inlets, bridges, etc., must be provided for the proper drainage of all surface water according to required curb and gutter plans as approved by the Administrative Officer. Cross-drains must be provided to accommodate all natural waterflow and must be long enough to traverse the full width of the roadway and required slopes. The size of the pipe to be provided will be determined and approved by the Administrative Officer.

Section 506: Surety for Completion of Improvements.

- A. **When Allowed:** Instead of completing required improvements in a subdivision before seeking approval of the Final Plat, the subdivider may provide surety for completion of such improvements and proceed with submitting a Final Plat to the Planning Commission for approval. He must then complete the required improvements within the period of performance specified by the government authority or forfeit the surety.
- B. **Requirements:** To assure the construction and installation of required improvements, the subdivider must deliver to the appropriate government authority a certified check, letter of credit, cash escrow, bond, or other acceptable surety--whichever is specified by the government authority--in the amount estimated by the government authority to be the total cost of the construction and installation of the required improvements which are the responsibility of the subdivider.
- C. **Conditions:** Bonds posted or other surety provided must

run to the government authority having jurisdiction over the required improvements for which surety is made. The surety must provide that the subdivider, his heirs, successors, agents, and servants will comply with all applicable terms, conditions, provisions, and requirements of these regulations, and with other laws, regulations, and requirements as specified by the appropriate government authority. If bond is offered, it must be executed by a surety and guaranty company qualified to transact business in the State of Georgia.

- D. **Duration and Release:** Bonds posted or other surety provided pursuant to these regulations must be released, returned, or otherwise disposed of by the holder at the time facilities guaranteed have been installed and approved. Approval will be in writing and accurately described the improvements covered. Facilities will not be accepted or approved unless they conform to the specifications and requirements of these regulations and the government authority.
- E. **Default:** The subdivider will be in default of the surety if the construction or installation of any improvements or facilities by the subdivider, for which a bond is posted or other surety is provided, is not completed within the period of performance specified by the public authority at the time the surety is provided or is not completed in accordance with applicable specifications and requirements of the appropriate authority. In such situations, the government authority may complete the construction or installation using the proceeds from the surety deposits to pay for the work. Such work may be done under contract or by the local government authority. It will be completed within six (6) months after the date that the offending construction or installation was determined to be in violation of this Ordinance. Any portion of the surety deposit not used by the government authority will be returned to the person making the deposit.
- F. **Certification of Receipt of Surety for Required Improvements:** A certificate or statement of receipt of surety by the government authority having jurisdiction will be inscribed on or attached to the Final Plat and executed by the appropriate government authority for the required improvement(s) for which separate surety is provided.

ARTICLE V. (RESERVED)

**ARTICLE VI. R-1 SINGLE-FAMILY RESIDENTIAL -
LOW DENSITY**

Section 601: Purpose. R-1 zoning districts are intended to establish and preserve quiet, relatively low-density neighborhoods of single-family residences as desired by large numbers of people. These districts are free from other uses which are incompatible with single-family homes.

Section 602: Determining if an Area is Suitable for Inclusion Within an R-1 District. The factors contained in Section 410 of this Ordinance must be thoroughly considered by the Planning Commission as well as the Mayor and Council when determining in which zoning district an area of land is to be placed. This will assure that rational comprehensive planning principles are the basis upon which the decision is made. Land use decisions which are based on sound planning principles encourage the development and preservation of land use patterns that provide healthful and safe living conditions for the residents of Molena.

Section 603: Boundaries of R-1 Districts. The Official Map (Section 2301 of this Ordinance) shows the boundaries of all R-1 Districts within Molena. Article XXIII also contains additional information concerning interpreting district boundaries, amending boundaries, etc.

Section 604: Permitted Uses.

- A. The following **Principal Uses** are permitted in R-1 districts:
1. Site-built single-family detached dwelling with a floor area of at least ~~1,200~~^{1,500} square feet.
 2. Industrialized home with a floor area of at least ~~1,200~~^{1,300} square feet.
 3. Local, State, or Federal government building.
 4. Family Personal Care Home.
 5. Publicly owned and operated park or recreation area.
 6. Subdivision recreation area owned, operated, and maintained by a homeowner's association exclusively for the use of residents and their guests.

7. Agriculture.
8. Utility substations meeting the following development standards:
 - a. Structures must be placed at least thirty (30) feet from all property lines.
 - b. Structures must be enclosed by a wovenwire fence at least eight (8) feet high with bottom of fence either flush with the ground or with a masonry footing.
 - c. No vehicles or equipment may be stored on the lot.
 - d. A buffer must be maintained along the side and rear property lines.

B. The following **Principal Uses** are permitted as **Special Exceptions** in R-1 districts:

1. None.

C. The following **Accessory Uses** are permitted in R-1 districts:

1. Private garage or carport not to exceed the storage capacity of three (3) automobiles per dwelling unit.
2. Structure for the storage of equipment and supplies used in maintaining the principal building and its grounds.
3. Structure for a children's playhouse and the storage of children's play equipment.
4. Private swimming pool and bath house or cabana meeting the following development standards:
 - a. All such swimming pools which are at least three (3) feet deep must be completely enclosed by a fence that is at least four (4) feet high.
5. Private tennis court and/or basketball facilities; if lighted, lights must be designed so that they do not intrude upon adjacent lots. Such a court may be surrounded by a fence up to ten (10) feet high.

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6. Non-commercial garden, including a greenhouse and other customary garden structures not over eight (8) feet high.
7. Deck, patio, barbecue grill, or other such facility.
8. Fence, wall, exterior lighting fixture, or other general landscaping and site development facility.
9. Antenna--satellite, television, radio, etc.
10. Temporary building for storage of materials meeting the following development standards:
 - a. Permitted only in conjunction with construction of a building;
 - b. Allowed either on the same lot where construction is taking place or on adjacent lots;
 - c. Such a use must be terminated upon completion of construction.
11. The parking of one (1) unoccupied travel trailer, motor coach, or pleasure boat.
12. Sign as permitted by the Molena Sign Ordinance. (Appendix F).
13. Home Occupation, excluding Public Garage and Repair Garage.

D. The following **Accessory Uses** are permitted as **Special Exceptions** in R-1 districts:

1. Manufactured home for temporary use in case of Certified hardship meeting the following development standards:
 - a. A person having a Certified hardship shown according to the procedure contained in this section and meeting any one (1) of the following conditions may apply to the Board of Appeals for this Special Exception Permit.
 - a'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and is 65 years of age or older.

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Age limit?

- b'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit; at least one (1) member of his family who will reside in the unit is 65 years of age or older.
 - c'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and is physically disabled and requires frequent attendance by others for medical or physical care.
 - d'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and at least one (1) member of his family is physically disabled and requires frequent attendance by others for medical or physical care.
 - e'. The applicant for the Special Exception is not to be the owner and occupant of the temporary unit but at least one (1) of the residents of the unit is a member of the applicant's family and is 65 years of age or older.
 - f'. The applicant for the Special Exception is not to be the owner and occupant of the temporary unit but at least one (1) of the residents of the unit is a member of the applicant/owner's family and is physically disabled and requires frequent attendance by others for medical or physical care.
- b. In order to determine if the need for the Special Exception Permit presented by the applicant is a certified hardship, the Board of Appeals will require a doctor's certificate currently dated, attesting to the health of the person who is asserted to be physically disabled and also attesting to the need for frequent attendance upon such a person by other people. The certificate will be requested by the Board of Appeals directly from the doctor in attendance upon the person who is asserted to be disabled. The applicant will be required to sign a release to the doctor for such information to be

supplied to the Board of Appeals prior to any action by the Board of Appeals to obtain the certificate from the doctor and any possible subsequent issuance of the Special Exception Permit.

- c. The procedure for applying for a Special Exception Permit for a temporary manufactured home for certified hardship is as follows:
 - a'. Application should be made to the Board of Appeals for the Special Exception Permit for a temporary manufactured home for certified hardship.
 - b'. The Board of Appeals will explain to the applicant all conditions and limitations attached to such a permit and will secure the written certification of the applicant that he understands and will abide by those conditions if issued the Special Exception Permit.
 - c'. The Board of Appeals will consider such applications, and upon determining that all requirements have been met for such a permit, will issue the Special Exception Permit.
- d. Upon being granted a Special Exception Permit to allow a temporary manufactured home for certified hardship, the applicant must then apply to the Administrative Officer for a Building Permit for the installation of the temporary manufactured home. The procedure is as follows:
 - a'. Plans for a water/well and sewage/septic system suitable for the temporary manufactured home proposed to be installed on the site must be submitted to the Pike County Health Department for its review and approval.
 - b'. Upon securing concurrence of the Pike County Health Department of the proposed water and sewage systems to serve the proposed temporary manufactured home, the owner should present evidence of such approval to the

Administrative Officer and apply for a Building Permit for installation of the proposed temporary manufactured home, including the water and sewage systems.

- c'. Upon approval of the Administrative Officer and receipt of the Building Permit, the owner should proceed with installation of the proposed temporary manufactured home, including water and sewage systems. The Administrative Officer will provide required inspections of these systems during and upon completion of construction.
- e. The following conditions apply to Special Exception Permits issued for temporary use of a manufactured home for hardship:
 - a'. It is temporary and valid only for a specific period of time.
 - b'. A development plan must be submitted showing the proposed locations of the principal building, the water and sewage systems, and the temporary manufactured home. That development plan must be approved by the Board of Appeals before issuing the temporary Special Exception Permit.
 - c'. During its period of approval, the temporary manufactured home must be connected to the approved water and sewage systems.
 - d'. The temporary manufactured home must be removed within thirty (30) days of either the expiration of the Special Exception Permit for the temporary manufactured home or upon finding of the Board of Appeals, upon its own application or that of any aggrieved party and after giving due notice to all concerned parties and granting full opportunity for a hearing, that the conditions for which the Special Exception was granted no longer exist--whichever is earlier.
 - e'. The temporary manufactured home must be either a Class B or Class C manufactured home.

f'. No more than one (1) such unit is permitted per lot.

g'. The unit must be located entirely within the rear yard of the principal dwelling, as shown on the approved development plan.

E. All accessory uses must meet the following standards:

1. They must be located in the rear yard.
2. They may not be located closer than five (5) feet from any property line.
3. They may not be located in any front or side yard.
4. Accessory buildings and structures not attached to the principal building must be located at least twelve (12) feet from the principal building on the lot.

F. All uses not permitted within R-1 districts by this Section are specifically prohibited.

Section 605: Development Standards for R-1 Districts. In addition to the development standards contained in Article IV of this Ordinance, the following standards are required within R-1 districts:

A. **Minimum Floor Area per Dwelling Unit:**

1,200 square feet.

B. **Minimum Lot Area:**

1,600

1. **Unsewered Areas:**

As specified by the Pike County Health Department, but in no case less than 43,560 square feet 1 (acre); however, a lot of record lawfully existing at the time of passage of this Ordinance and having an area of less than 1 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-1 district if approved by the Pike County Health Department.

2. **Sewered Areas:**

43,560 square feet (1 acre); however, a lot of record lawfully existing at the time

of passage of this Ordinance and having an area of less than 1 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-1 district.

- C. **Minimum Lot Width:** 150 feet.
- D. **Minimum Front Yard:**
1. **Arterial Street/Roads:** 80 feet. The front of all buildings must be at least 35 feet from the front property line.
 2. **Collector Streets/Roads:** 65 feet. The front of all buildings must be at least 35 feet from the front property line.
 3. **Other Streets/Roads:** 55 feet. The front of all buildings must be at least 35 feet from the front property line.
- E. **Minimum Side Yard:** 15 feet.
- F. **Minimum Rear Yard:** 40 feet.
- G. **Maximum Bldg. Height:** 35 feet; however, this height limit does not apply to projections not intended for human habitation--except for satellite, television, and radio antennas, to which this limit does apply. For buildings and structures with such projections, the minimum required yards must be increased one (1) foot for every two (2) feet (or part of two (2) feet) of height greater than 35 feet.
- H. **Maximum Lot Coverage by Building:** 25 percent.

- I. **Sight Distance:** In order to assure maintenance of adequate sight distances at intersections, no fence, wall, shrubbery, or other obstruction to vision between the heights of three (3) feet and fifteen (15) feet above the ground is permitted within twenty (20) feet of the intersection of the right-of-ways of streets or of streets and railroads.
- J. **Applicability to Land, Buildings, and Open Space:** No building, structure, land, or open space may be used or occupied--and no building or structure or part of a building or structure may be erected, constructed, reconstructed, moved, or structurally altered--unless in conformity with all of the regulations specified for the district in which it is located.
- K. **Every Use Must Be on a Lot:** No building or structure may be erected or use established unless upon a lot as defined by this Ordinance.
- L. **Only One Principal Building Per Lot:** Only one (1) principal building and its accessory buildings may be erected on any lot, except for planned developments or as otherwise provided.
- M. **Open Space Not to Be Encroached Upon:** No open space may be encroached upon or reduced in any manner except in conformity with the yard, setback, off-street parking spaces, and other such required development standards contained in the Ordinance. Shrubbery, driveways, retaining walls, fences, curbs, and buffers are not considered to be encroachments of yards. Open space areas as required by this Ordinance must be permanently maintained as open space in accordance with the requirements of this Ordinance.
- N. **Reduction of Yards or Lot Area:** Except as otherwise provided in this Ordinance, no lot existing at the time of passage of this Ordinance may not be reduced, divided, or changed so as to produce a tract of land which does not comply with the minimum dimension or area requirements of this Ordinance for the district in which it is located unless that reduction or division is necessary to provide land which is needed and accepted for public use.
- O. **Lots with Multiple Frontage:** In case of a corner lot or double frontage lot, front yard setback requirements apply to all lot lines abutting a street.
- P. **Landlocked Lots:** In the case of a landlocked lot (a lot without direct access to a public street or road) lawfully existing as of the effective date of this Ordinance, the property owner is entitled to one

(1) Building Permit, as long as all of the following requirements are met:

1. No other principal building exists or is being constructed on the property.
2. No other valid Building Permit has been issued prior to the effective date of this Ordinance and is currently valid.
3. The property was and continues to be under single ownership since the effective date of this Ordinance.
4. The property owner has acquired a thirty (30) foot easement to a City-, County-, or State-maintained street or road, and the easement has been duly recorded and made a part of the property deed.
5. In the event the property is divided, no additional permits will be issued.

Q. **Street Frontage:** No principal building may be erected on any lot which has less than (30) feet of immediate frontage on at least one (1) public street.

R. **Yards and Other Spaces:** No part of a yard, other open space, off-street parking, or loading space required for another building may be included as a part of the yard, off-street parking, or loading space required for another building, except as specifically provided for in this Ordinance.

S. **Substandard Lots:** Any lot existing at the time of the adoption of this Ordinance, which has an area or a width which is less than required by this Ordinance, is subject to the following exceptions and modifications:

1. **Adjoining Lots in Same Ownership:** When two (2) or more adjoining and vacant lots within a non-approved development with continuous frontage are in a single ownership at the time of application and such lots have a frontage or lot area less than is required by the district in which they are located, such lots must be replatted or re-parcelled so as to create one or more lots which conform to the minimum frontage and area requirements of the district.
2. **Single Lot:** When a lot has an area or frontage which does not conform with the requirements of the district in which it is located, but was a lot at the effective date of this Ordinance, such a lot may be used for any use allowed in the zoning

district in which it is located as long as all other requirements of this Ordinance are met.

- T. **Encroachment on Public Rights-of-Way:** No building, structure, service area, required off-street parking, or loading/unloading facility is permitted to encroach on public rights-of-way.
- U. **Physical Design Standards:** Minimum design standards for driveways, loading areas, and other such physical site improvements are contained in applicable development regulations of Molena. Consult the Administrative Officer for specific requirements.
- V. **Off-Street Parking and Service Requirements:** Minimum standards for Off-Street Parking and Service Requirements are contained in the Pike County Standard for Off-Street Parking and Service Facilities (Appendix I).
- W. **Other Applicable Development Regulations:** Information concerning any other applicable development regulations may be obtained by consulting the Administrative Officer.
- X. **Signs:** Minimum design and location standards are contained in the Pike County Sign Ordinance (See Appendix F). Consult that document for specific requirements.

ARTICLE VII. (RESERVED)

ARTICLE VIII. (RESERVED)

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ARTICLE IX. R-4 GENERAL RESIDENTIAL

Section 901: Purpose. R-4 zoning districts are intended to establish and preserve quiet, medium-density neighborhoods with a variety of types of dwellings--as well as some non-residential uses which are compatible if proper design controls are maintained. These districts are free from other uses which are incompatible with or would detract from permitted uses. When permitted uses are developed within an R-4 district, they are protected from the detrimental effects of intrusion by incompatible land uses. Diverse neighborhoods that are both stable and attractive may therefore be established and preserved.

Section 902: Determining if an Area is Suitable for Inclusion Within an R-4 District. The factors contained in Section 410 of this Ordinance must be thoroughly considered by the Planning Commission as well as the Mayor and Council when determining in which zoning district an area of land is to be placed. This will assure that rational comprehensive planning principles are the basis upon which the decision is made. Land Use decisions which are based on sound planning principles encourage the development and preservation of land use patterns that provide healthful and safe living conditions of the residents of Molena.

Section 903: Boundaries of R-4 Districts. The Official Map (Section 2301 of this Ordinance) shows the boundaries of all R-4 districts within Molena. Article XXIII also contains additional information concerning interpreting district boundaries, amending boundaries, etc.

Section 904: Permitted Uses.

- A. The following **Principal Uses** are permitted in R-4 districts:
1. Site-built single-family attached dwelling with a floor area of at least 950 square feet.
 2. Garden Apartment dwelling with a floor area per dwelling unit of at least 950 square feet.
 3. Two-family dwelling with a floor are per dwelling unit of at least 950 square feet.
 4. Cluster dwelling with a floor area of at least 950 square feet.

5. Patio dwelling with a floor area of at least 950 square feet.
6. (Reserved)
7. Industrialized home with a floor area of at least 950 square feet.
8. Class A manufactured home with a floor area of at least 950 square feet.
9. Class B manufactured home with a floor area of at least 950 square feet.
10. Local, State, or Federal government building.
11. Family Personal Care Home.
12. Group Personal Care Home.
13. Congregate Personal Care Home.
14. Intermediate Care Home.
15. Club or lodge meeting the following development standards:
 - a. Must be located on an Arterial Street/Road.
 - b. All buildings must be placed at least fifty (50) feet from any property lines.
 - c. A buffer must be maintained along the side and rear property lines.
16. Boarding or rooming house.
17. Nursery school or kindergarten meeting the following development standards:
 - a. Must have at least 150 square feet of outdoor play area for each child.
 - b. The outdoor play area must be enclosed by a woven wire fence at least four (4) feet high, the bottom of which must be either flush with the ground or with a masonry footing.
18. Clinic.
19. Hospital meeting the following development standards:
 - a. Must be located on an Arterial Street/Road.

- b. All buildings must be placed at least fifty (50) feet from any property lines.
 - c. A buffer must be maintained along the side and rear property lines.
20. Nursing Home meeting the following development standards:
- a. Must be located on an Arterial Street/Road.
 - b. All buildings must be placed at least fifty (50) feet from any property lines.
 - c. A buffer must be maintained along the side and rear property lines.
21. School, public or private.
22. Local, State, or Federal government building.
23. Publicly owned and operated park or recreation area.
24. Subdivision recreation area owned, operated, and maintained by a homeowner's association exclusively for the use of residents and their guests.
25. Agriculture.
26. Utility substation meeting the following development standards:
- a. Structures must be placed at least thirty (30) feet from all property lines.
 - b. Structures must be enclosed by a wovenwire fence at least eight (8) feet high with bottom of the fence either flush with the ground or with a masonry footing.
 - c. No vehicle or equipment may be stored on the lot.
 - d. A buffer must be maintained along the side and rear property lines.
- B. The following **Principal Uses** are permitted as **Special Exceptions** in R-4 districts:
- 1. None.

- C. The following **Accessory Uses** are permitted in R-4 districts:
1. Private garage or carport not to exceed the storage capacity of three (3) automobiles per dwelling unit.
 2. Structure for the storage of equipment and supplies used in maintaining the principal building and its grounds.
 3. Structure for a children's playhouse and the storage of children's play equipment.
 4. Private swimming pool and bath house or cabana meeting the following development standards:
 - a. All such swimming pools which are at least three (3) feet deep must be completely enclosed by a fence that is at least four (4) feet high.
 5. Private tennis court and/or basketball facilities; if lighted, lights must be designed so that they do not intrude upon adjacent lots. Such a court may be surrounded by a fence up to ten (10) feet in height.
 6. Non-commercial garden, including a greenhouse and other customary garden structures not over eight (8) feet in height.
 7. Deck, patio, barbecue grill, or other such facility.
 8. Fence, wall, exterior lighting fixture, or other general landscaping and site development facility.
 9. Antenna--satellite, television, radio, etc.
 10. Temporary building for storage of materials meeting the following development standards:
 - a. Permitted only in conjunction with construction of a building.
 - b. Allowed either on the same lot where construction is taking place or on a adjacent
 - c. Such a use must be terminated upon completion of construction.
 11. The parking of one (1) unoccupied travel trailer, motor coach, or pleasure boat.

12. Sign as permitted by the Molena Sign Ordinance (Appendix F).
 13. Home Occupation, excluding Public Garage and Repair Garage.
- D. The following **Accessory Uses** are permitted as **Special Exceptions** in R-4 districts:
1. Manufactured home for temporary use in case of Certified hardship meeting the following development standards:
 - a. A person having a Certified Hardship shown according to the procedure contained in this Section and meeting any one (1) of the following conditions may apply to the Board of Appeals for the Special Exception Permit.
 - a'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and is 65 years of age or older.
 - b'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit; at least one (1) member of his family who will reside in the unit is 65 years of age or older.
 - c'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and is physically disabled and requires frequent attendance by others for medical or physical care.
 - d'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and at least one (1) member of his family is physically disabled and requires frequent attendance by others for medical or physical care.
 - e'. The applicant for the Special Exception is not to be the owner and occupant of the temporary unit but at least one (1) of the residents of the unit is a member of the applicant's family and is 65 years of age or older.

- f'. The applicant for the Special Exception is not to be the owner and occupant of the temporary unit but at least one (1) of the residents of the unit is a member of the applicant/owner's family and is physically disabled and requires frequent attendance by others for medical or physical care.

- b. In order to determine if the need for the Special Exception Permit presented by the applicant is a certified hardship, the Board of Appeals will require a doctor's certificate currently dated, attesting to the health of the person who is asserted to be physically disabled and also attesting to the need for frequent attendance upon such a person by other people. The certificate will be requested by the Board of Appeals directly from the doctor in attendance upon the person who is asserted to be disabled. The applicant will be required to sign a release to the doctor for such information to be supplied to the Board of Appeals prior to any action by the Board of Appeals to obtain the certificate from the doctor and any possible subsequent issuance of the Special Exception Permit.

- c. The procedure for applying for a Special Exception Permit for a temporary manufactured home for certified hardship is as follows:
 - a'. Application should be made to the Board of Appeals for the Special Exception Permit for a temporary manufactured home for certified hardship.

 - b'. The Board of Appeals will explain to the applicant all conditions and limitations attached to such a permit and will secure the written certification of the applicant that he understands and will abide by those conditions if issued the Special Exception Permit.

 - c'. The Board of Appeals will consider such applications, and upon determining that all requirements have been met for such a permit, will issue the Special Exception Permit.

d. Upon being granted a Special Exception Permit to allow a temporary manufactured home for certified hardship, the applicant must then apply to the Administrative Officer for a Building Permit for the installation of the temporary manufactured home. The procedure is as follows:

a'. Plans for a water/well and sewage/septic system suitable for the temporary manufactured home proposed to be installed on the site must be submitted to the Pike County Health Department for its review and approval.

b'. Upon securing concurrence of the Pike County Health Department of the proposed water and sewage systems to serve the proposed temporary manufactured home, the owner should present evidence of such approval to the Administrative Officer and apply for a Building Permit for installation of the proposed temporary manufactured home, including the water and sewage systems.

c'. Upon approval of the Administrative Officer and receipt of the Building Permit, the owner should proceed with installation of the proposed temporary manufactured home, including water and sewage systems. The Administrative Officer will provide required inspections of these systems during and upon completion of construction.

e. The following conditions apply to Special Exception Permits issued for temporary use of a manufactured home for hardship:

a'. It is temporary and valid only for a specific period of time. Must be renewed every 12 months.

b'. A development plan must be submitted showing the proposed locations of the principal building, the water and sewage systems, and the temporary manufactured home. That development plan must be approved by the Board of Appeals before issuing the temporary Special Exception Permit.

- c'. During its period of approval, the temporary manufactured home must be connected to the approved water and sewage systems.
- d'. The temporary manufactured home must be removed within thirty (30) days of either the expiration of the Special Exception Permit for the temporary manufactured home or upon finding of the Board of Appeals, upon its own application or that of any aggrieved party and after giving due notice to all concerned parties and granting full opportunity for a hearing, that the conditions for which the Special Exception was granted no longer exist--whichever is earlier.
- e'. The temporary manufactured home must be either a Class B or Class C manufactured home.
- f'. No more than one (1) such unit is permitted per lot.
- g'. The unit must be located entirely within the rear yard of the principal dwelling, as shown on the approved development plan.

E. All accessory uses must meet the following standards:

1. They must be located in the rear yard.
2. They may not be located closer than five (5) feet to any property line.
3. They may not be located in any front or side yard.
4. Accessory buildings and structures not attached to the principal building must be located at least twelve (12) feet from the principal building on the lot.

F. All uses not permitted within R-4 districts by this Section are specifically prohibited.

Section 905: Development Standards for R-4 Districts. In addition to the development standards contained in Article IV of this Ordinance, the following standards are required within R-4 districts:

A. **Minimum Floor Area per Dwelling Unit (for residential) or for buildings (for non-residential):** 950 square feet.

B. **Minimum Lot Area:**

1. **Unsewered Areas:**

a. **With Jointly-Owned Common Areas:**

As specified by the Pike County Health Department, but in no case less than 43,560 square feet (1 acre); however, a lot of record lawfully existing at the time of passage of this Ordinance and having an area of less than 1 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-4 district if approved by the Pike County Health Department.

b. **Without Jointly-Owned Common Areas:**

As specified by the Pike County Health Department but in no case less than 43,560 square feet (1 acre); however, a lot of record lawfully existing at the time of passage of this Ordinance and having an area of less than 1 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-4 district if approved by the Pike County Health Department.

2. Sewered Areas:

a. With Jointly-
Owned Common
Areas:

1/2 acre; however, a lot of record lawfully existing at the time of passage of this Ordinance and having an area of less than 1/2 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-4 district if approved by the Pike County Health Department.

b. Without Jointly-
Owned Common
Areas:

1/2 acre; however, a lot of record lawfully existing at the time of passage of this Ordinance and having an area of less than 1/2 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-4 district if approved by the Pike County Health Department.

C. **Minimum Lot Width:**

80 feet.

D. **Minimum-Front-Yard:**

1. Arterial Streets/
Roads:

80 feet. The front of all buildings must be at least 35 feet from the front property line.

2. Collector Streets/
Roads:

50 feet. The front of all buildings must be at least 35 feet from the front property line.

3. Other Streets/
Roads:

50 feet. The front of all buildings must be at least 35 feet from the front property line.

E. **Minimum Side Yard:**

Total for both side yards of twenty (20) feet (for example, side yards of 10 feet and 10 feet, or side yards of 5 feet and 15 feet, or side yards of

20 feet and 0 feet). A fire wall is required for side yards of ten (10) feet or less. If side lot line adjoins an R-1 or R-2 district, minimum required side yard is thirty (30) feet, regardless of the type of wall.

F. Minimum Rear Yard:

None. A fire wall is required for rear yards of ten (10) feet or less. If rear lot line adjoins an R-1 or R-2 district, minimum required side yard is forty (40) feet, regardless of the type of dwelling unit on the lot.

G. Maximum Bldg. Height:

35 feet; however, this height limit does not apply to projections not intended for human habitation--except for satellite, television, and radio antennas, to which this limit does apply. For buildings and structures with such projections, the minimum required yards must be increased one (1) foot for every two (2) feet (or part of two (2) feet) of building height greater than thirty-five (35) feet.

H. Maximum Lot Coverage by Building:

35 percent.

I. Sight Distance: In order to assure maintenance of adequate sight distances at intersections, no fence, wall, shrubbery, or other obstruction to vision between the heights of three (3) feet and fifteen (15) feet above the ground is permitted within twenty (20) feet of the intersection of the right-of-ways of streets or of streets and railroads.

J. Applicability to Land, Buildings, and Open Space: No building, structure, land, or open space may be used or occupied--and no building or structure or part of a building or structure may be erected, constructed, reconstructed, moved, or structurally altered--unless in conformity with all of the regulations specified for the district in which it is located.

- K. **Every Use Must Be on a Lot:** No building or structure may be erected or use established unless upon a lot as defined by this Ordinance.
- L. **Only One Principal Building Per Lot:** Only one (1) principal building and its accessory buildings may be erected on any lot, except for planned developments or as otherwise provided.
- M. **Open Space Not to Be Encroached Upon:** No open space may be encroached upon or reduced in any manner except in conformity with the yard, setback, off-street parking spaces, and other such required development standards contained in the Ordinance. Shrubbery, driveways, retaining walls, fences, curbs, and buffers are not considered to be encroachments of yards. Open space areas as required by this resolution must be permanently maintained as open space in accordance with the requirements of this Ordinance.
- N. **Reduction of yards or Lot Area:** Except as otherwise provided in this Ordinance, no lot existing at the time of passage of this Ordinance may not be reduced, divided, or changed so as to produce a tract of land which does not comply with the minimum dimension or area requirements of this Ordinance for the district in which it is located unless that reduction or division is necessary to provide land which is needed and accepted for public use.
- O. **Lots with Multiple Frontage:** In case of a corner lot or double frontage lot, front yard setback requirements apply to all lot lines abutting a street.
- P. **Landlocked Lots:** In the case of a landlocked lot (a lot without direct access to a public street or road) lawfully existing as of the effective date of this Ordinance, the property owner is entitled to one (1) Building Permit, as long as all of the following requirements are met:
1. No other principal building exists or is being constructed on the property.
 2. No other valid Building Permit has been issued prior to the effective date of this Ordinance and is currently valid.
 3. The property was and continues to be under single ownership since the effective date of this Ordinance.

4. The property owner has acquired a thirty (30) foot easement to a City-, County-, or State-maintained street or road, and the easement has been duly recorded and made a part of the property deed.
 5. In the event the property is divided, no additional permits will be issued.
- Q. **Street Frontage:** No principal building may be erected on any lot which has less than (30) feet of immediate frontage on at least one (1) public street.
- R. **Yards and Other Spaces:** No part of a yard, other open space, off-street parking, or loading space required for another building may be included as a part of the yard, off-street parking, or loading space required for another building, except as specifically provided for in this Ordinance.
- S. **Substandard Lots:** Any lot existing at the time of the adoption of this Ordinance, which has an area or a width which is less than required by this Ordinance, is subject to the following exceptions and modifications:
1. **Adjoining Lots in Same Ownership:** When two (2) or more adjoining and vacant lots within a non-approved development with continuous frontage are in a single ownership at the time of application and such lots have a frontage or lot area less than is required by the district in which they are located, such lots must be replatted or reparcelled so as to create one or more lots which conform to the minimum frontage and area requirements of the district;
 2. **Single Lot:** When a lot has an area or frontage which does not conform with the requirements of the district in which it is located, but was a lot at the effective date of this Ordinance, such a lot may be used for any use allowed in the zoning district in which it is located as long as all other requirements of this Ordinance are met.
- T. **Encroachment on Public Rights-of-Way:** No building, structure, service area, required off-street parking, or loading/unloading facility is permitted to encroach on public rights-of-way.
- U. **Physical Design Standards:** Minimum design standards for driveways, loading areas, and other such physical site improvements are contained in Appendix A, Molena Subdivision Regulations. Consult that document for specific requirements.

- V. **Off-Street Parking and Service Requirements:** Minimum standards for Off-Street Parking and Service Requirements are contained in the Molena Standard for Off-Street Parking and Service Facilities (Appendix I).
- W. **Other Applicable Development Regulations:** Information concerning any other applicable development regulations may be obtained by consulting the Administrative Officer.
- X. **Signs:** Minimum design and location standards for signs are contained in the Molena Sign Ordinance (See Appendix F). Consult that document for specific requirements.
- Y. **Length of Townhouse Row:** More than four (4) attached dwelling units must be arranged in adjacent sets of dwellings, each set having a front foundation line offset of at least ten (10) feet from the foundation line of the adjacent set of dwelling units.
- Z. **Fire Walls:** All side and rear walls of attached dwelling units which are less than ten (10) feet from the lot line must be fire walls. (See Georgia Building Code for construction standards.)

ARTICLE X. (RESERVED)

ARTICLE XI. (RESERVED)

ARTICLE XII. (RESERVED)

ARTICLE X. (RESERVED)

ARTICLE XI. (RESERVED)

ARTICLE XII. (RESERVED)

ARTICLE XIII. P-R PLANNED DEVELOPMENT - RESIDENTIAL

Section 1301: Purpose.

- A. P-R zoning districts are intended to:
1. Encourage the development of land as planned neighborhoods or communities.
 2. Preserve the natural amenities of the land by encouraging scenic and functional open areas within residential areas.
 3. Provide for efficient use of land resulting in smaller networks of utilities and streets as well as lower development and housing costs.
 4. Provide an environment of stable character which is compatible with surrounding residential areas.

Section 1302: Determining if an Area is Suitable for Inclusion within a P-R District. The factors contained in Section 410 of this Ordinance as well as data submitted with the development plan of the applicant for a planned development, must be thoroughly considered by the Planning Commission as well as the Mayor and Council when determining whether or not the provision of a P-R district is appropriate. This will assure that rational comprehensive planning principles are the basis upon which the decision is made. Land use decisions which are based on sound planning principles encourage the development and preservation of land use patterns that provide healthful and safe living conditions for the residents of Molena.

Section 1303: Boundaries of P-R Districts. The official Map (Section 2301 of this Ordinance) shows the boundaries of all P-R districts within Molena. Article XXIII also contains additional information concerning interpreting district boundaries, amending boundaries, etc.

Section 1304: Permitted Uses.

- A. The following are permitted as Principal Uses in P-R districts:
1. Planned Apartment Home Community.
 2. Planned Manufactured Home Community.
 3. Recreation area owned, operated, and maintained by the owner(s) of the permitted use, exclusively for the use of residents and their guests.

4. Utility substation meeting the following development standards:
 - a. Structures must be placed at least thirty (30) feet from all property lines.
 - b. Structures must be enclosed by a woven-wire fence at least eight (8) feet high with bottom of fence either flush with the ground or with a masonry footing.
 - c. No vehicles or equipment may be stored on the lot.
 - d. A buffer must be maintained along the side and rear property lines.
- B. The following **Principal Uses** are permitted as **Special Exceptions** in P-R districts:
 1. None.
- C. The following are permitted as **Accessory Uses** in P-R districts:
 1. Private garage or carport not to exceed the storage capacity of three (3) automobiles per dwelling unit.
 2. Structure for the storage of equipment and supplies used in maintaining the principal building and its grounds.
 3. Structure for a children's playhouse and the storage of children's play equipment.
 4. Private swimming pool and bath house or cabana meeting the following standards:
 - a. All such swimming pools which are at least (3) three feet deep must be completely enclosed by a fence that is at least (4) four feet high.
 5. Private tennis court and/or basketball facilities; if lighted, lights must be designed so that they do not intrude upon adjacent lots. Such a court may be surrounded by a fence up to ten (10) feet high.
 6. Non-commercial garden, including a greenhouse and other customary garden structures not over eight (8) feet high.

7. Deck, patio, barbecue grill, or other such facility.
 8. Fence, wall, exterior lighting fixture, or other general landscaping and site development facility.
 9. Antenna--satellite, television, radio, etc.
 10. Temporary building or storage of materials meeting the following development standards:
 - a. Permitted only in conjunction with construction of a building.
 - b. Allowed either on the same lot where construction is taking place or on adjacent lot.
 - c. Such a use must be terminated upon completion of construction.
 11. The parking of one (1) unoccupied travel trailer, motor coach, or pleasure boat per dwelling unit.
 12. Sign as permitted by the Molena Sign Ordinance (Appendix F).
- D. The following **Accessory Uses** are permitted as **Special Exceptions** in P-R districts:
1. None.
- E. All accessory uses must meet the following standards:
1. They may not be located closer than five (5) feet to any property line.
 2. Accessory buildings not attached to the principal building must be located at least twelve (12) feet from the principal building on the lot.
- F. All uses not permitted within P-R districts by this Section are specifically prohibited.

Section 1305: Plan Review and Approval Procedures.

- A. **Pre-application Conference:** Prior to filing a formal application for a P-R, the applicant is encouraged to confer with the Administrative Officer and the Planning Commission in order to review the general character of the plan (on the basis of tentative land use sketch if

available), and to obtain information on development standards and ordinances affecting the proposed project.

B. Submission of Application for P-R Approval:

1. The applicant must file a petition with the Administrative Officer for approval of the proposed P-R. This application must be supported by a development plan and a written summary of intent. The relationship between the proposed development and the surrounding area, both existing and proposed, must be shown. The following information must be presented with the application:
 - a. A general location map.
 - b. Existing topographic conditions, including contour intervals of no more than five (5) feet based on field surveys or photogrammetric methods.
 - c. The existing and proposed land uses and the approximate location of all buildings and structures.
 - d. The approximate location of existing and proposed streets.
 - e. The approximate location of all existing and proposed utilities, including a preliminary utility and drainage plan.
 - f. The present zoning pattern in the area.
 - g. A legal description of the subject property.
 - h. The location and use of existing and proposed public, semi-public, and community facilities such as schools, parks, and open areas on the site. This includes areas proposed to be dedicated or reserved for community or public use.
 - i. Perspective drawings of representative building types; however, this is not required for single-family detached dwellings.
2. If a proposed development creates special problems or involves unusual circumstances, additional information may be required in order to properly evaluate the proposal as follows:
 - a. An off-street parking and loading plan.

- b. An economic feasibility report or market analysis.
 - c. A traffic study of the area, and a circulation plan within the proposed development as well as to and from existing streets adjacent to the site.
3. The written summary of intent submitted with the development plan must include the following information:
- a. A statement of the present ownership of all land within the proposed development.
 - b. An explanation of the character of the proposed development; this includes a summary of acres, number and types of dwelling units, and gross density by type of land use.
 - c. A general statement of the proposed development schedule.
 - d. Agreements, provisions, and covenants which govern the use, maintenance, and protection of the development and any common or open areas.

C. Review and Approval of P-R Application:

1. An application for approval of a P-R is treated administratively as an application for an amendment to this Ordinance (rezoning). This is because P-R districts are created only upon request of a developer, whose application materials demonstrate a firm commitment to construction of a well-designed P-R. Upon approval of the P-R, existing zoning must be changed to a P-R zone--which is an amendment to the Ordinance. The amendment procedures contained in Section 410 and 2302 must be followed in granting the amendment to permit the P-R.
2. The Administrative Officer will turn over the application materials to the Planning Commission for its recommendations. The Planning Commission will thoroughly study the materials and make written recommendations to the Mayor and Council, stating the reasons for its recommendations (according to procedures contained in Sections 410 and 2302).

3. The power to approve an amendment creating a P-R district rests with the Mayor and Council. After conducting the public hearing and considering recommendations from the Planning Commission (Section 410), the Mayor and Council will then make an official decision on the proposed P-R. The Mayor and Council may approve, disapprove, or conditionally approve the development plan.
 4. If the development plan is approved as submitted, the Official Map will be changed to indicate the P-R district (Section 2302). If the plan is approved with modifications, the applicant must file with the Administrative Officer the following:
 - a. Written notice of consent to the modifications.
 - b. A properly revised site plan.
 5. The Official Map will then be changed (Section 2302). The site plan and supporting information of any approved plan will be properly identified and permanently filed with the Administrative Officer.
 6. No Building Permits will be issued by the Building Official until the development plan has been approved by the Mayor and Council.
- D. **Issuance of Building Permits:** The Administrative Officer will issue Building Permits for buildings and structures in the area covered by the approved development plan if the proposed buildings and structures are in conformity with the approved development plan, the development schedule, and all other applicable regulations. (See Section 404.)
- E. **Revision of Development Plan After Approval of Plan:**
1. Minor extensions, alterations, or modifications of existing buildings or structures may be permitted after review and approval by the Planning Commission; such changes must be consistent with the purposes and intent of the development plan.
 2. Any major or substantial change in the approved development plan which affects the intent and character of the development, the density of land use pattern, the location or dimensions of streets, or similar substantial changes must be reviewed and approved by the Mayor and Council after receipt of recommendations from the Planning

Commission. A request for a revision of the development plan must be supported by a written statement indicating the nature of the revision and the reasons it is considered necessary or desirable to revise the development.

- F. **Approval of P-R Revoked if Construction Not Begun:** Construction of the planned development must begin within one (1) year of the approval of the P-R. If no construction has begun by then, or if the applicant fails to maintain the approved development schedule, approval of the development plan will lapse. At its discretion and for good cause, the Mayor and Council may extend the period for beginning construction of any phase of the project for one (1) additional year. If approval of the development plan lapses under this provision, the subject P-R district will be removed from the Official Map (See Section 2302) and the zoning districts and regulations which were in effect prior to the approval of the development plan will be reinstated. It is not necessary to follow Section 410 amendatory procedures for this action, since its purpose is to correct an illegal situation caused by the failure of the applicant to fulfill the conditions upon which the approval of the P-R was granted.

Section 1306: Development Standards for P-R Districts. In addition to the development standards contained in Article IV of this Ordinance, the following standards are required within P-R districts:

- A. **Minimum Floor Area per Dwelling Unit:** 600 square feet.
- B. **Minimum Lot Area:**
1. **Unsewered Areas:**
- a. **Planned Apartment Home Communities:** As specified by the Pike County Health Department, but in no case less than five (5) acres.
- b. **Planned Manufactured Home Communities:** As specified by the Pike County Health Department, but in no case less than five (5) acres.

2. Sewered Areas:
- a. Planned Apartment Home Communities: Three (3) acres.
 - b. Planned Manufactured Home Communities: Three (3) acres.
- C. **Minimum Lot Width:** 150 feet for entire depth of lot.
- D. **Minimum Front Yard:**
1. Arterial Streets/Roads: 80 feet. The front of all buildings must be at least 35 feet from the front property line.
 2. Collector Streets/Roads: 50 feet. The front of all buildings must be at least 35 feet from the front property line.
 3. Other Streets/Roads: 50 feet. The front of all buildings must be at least 35 feet from the front property line.
- E. **Minimum Side Yard:** 20 feet.
- F. **Minimum Rear Yard:** 30 feet.
- G. **Maximum Building Height:** 35 feet. This height limit does not apply to projections not intended for human habitation--except for satellite, television, and radio antennas, to which this limit does apply. For buildings and structures with such projections, the minimum required yards must be increased one (1) foot for every two (2) feet (or part of two (2) feet) of height greater than 35 feet.

- H. **Maximum Lot Coverage by Building:** 45 percent.
- I. **Sight Distance:** In order to assure maintenance of adequate sight distances at intersections, no fence, wall, shrubbery, or other obstructions to vision between the heights of three (3) feet and fifteen (15) feet above the ground is permitted within twenty (20) feet of the intersection of the right-of-ways of streets or of streets and railroads.
- J. **Applicability to Land, Buildings, and Open Space:** No building, structure, land, or open space may be used or occupied--and no building or structure or part of a building or structure may be erected, constructed, reconstructed, moved, or structurally altered--unless in conformity with all of the regulations specified for the district in which it is located.
- K. **Every Use Must Be on a Lot:** No building or structure may be erected or use established unless upon a lot as defined by this Ordinance.
- L. **(Reserved)**
- M. **Open Space Not to Be Encroached Upon:** No open space may be encroached upon or reduced in any manner except in conformity with the yard, setback, off-street parking spaces, and other such required development standards contained in this Ordinance. Shrubby, driveways, retaining walls, fences, curbs, and buffers are not considered to be encroachments of yards. Open space areas as required by this Ordinance must be permanently maintained as open space in accordance with the requirements of this Ordinance.
- N. **Reduction of yards or Lot Area:** Except as otherwise provided in this Ordinance, no lot existing at the time of passage of this Ordinance may not be reduced, divided, or changed so as to produce a tract of land which does not comply with the minimum dimension or area requirements of this Ordinance for the district in which it is located unless that reduction or division is necessary to provide land which is needed and accepted for public use.
- O. **Lots with Multiple Frontage:** In case of a corner lot or double frontage lot, front yard setback requirements apply to all lot lines abutting a street.
- P. **Landlocked Lots:** Landlocked lots are not eligible for placement within a P-R zoning district.

- Q. **Street Frontage:** No principal building may be erected on any lot which has less than (30) feet of immediate frontage on at least one (1) public street.
- R. **Yards and Other Spaces:** No part of a yard, other open space, off-street parking, or loading space required for another building may be included as a part of the yard, off-street parking, or loading space required for another building, except as specifically provided for in this Ordinance.
- S. **Substandard Lots:** Substandard lots are not eligible for placement within a P-R zoning district.
- T. **Encroachment on Public Rights-of-Way:** No building, structure, service area, required off-street parking, or loading/unloading facility is permitted to encroach on public rights-of-way.
- U. **Physical Design Standards:** Minimum design standards for driveways, loading areas, and other such physical site improvements are contained in applicable development regulations of Molena. Consult that document for specific requirements.
- V. **Off-Street Parking and Service Requirements:** Minimum standards for Off-Street Parking and Service Requirements are contained in the Molena Standard for Off-Street Parking and Service Facilities (Appendix I). See also additional requirements in paragraph Z-7 of this Section.
- W. **Other Applicable Development Regulations:** Information concerning any other applicable development regulations may be obtained from the Administrative Officer.
- X. **Signs:** Minimum design and location standards for signs are contained in the Molena Sign Ordinance (See Appendix F). Consult that document for specific requirements.
- Y. **Development Standards Shown in Approved Development Plan:** Other development standards shown in an approved development plan apply only to the development shown on the specific development plan. Such development standards must be maintained. (See Section 1305 for related details.)
- Z. **Design Standards for all P-R developments:**
1. **General:** Condition of soil, ground water level, drainage, and ground slope must not create hazards to the property, or to the health or safety of residents. The site must not be exposed to objectionable smoke, noise, odors, or other

adverse conditions; and no part subject to flooding or erosion can be used for any purpose that would expose people or property to danger.

2. Soil and Ground Cover: Exposed ground surfaces throughout the development must be protected with a vegetative growth that prevents soil erosion, standing puddles, and dust. If this is not possible, such areas may be covered with a solid material such as stone, or may be paved.
3. Site Drainage: The ground surfaces throughout the development must be equipped to drain all surface water in a safe, efficient manner, either through grading or installation of drains.
4. Street Width:
 - a. Internal Streets: All internal streets must be paved. minimum required pavement width is as follows:
 - a'. No on-street parking: 20 feet.
 - b'. Parking one side: 28 feet.
 - c'. Parking both sides: 36 feet.
 - b. Dead End Streets: All dead end streets must have a turn-around at the closed end, with an outside paved diameter of at least eighty (80) feet.
5. Street Lighting: Outdoor lighting is required which will provide the following average maintained levels of illumination for the safe movement of pedestrians and vehicles at night:
 - a. All parts of the street system of the development: Ten (10) footcandles.
 - b. Potentially hazardous locations, such as major street intersections, steps, and stepped ramps: Individually lighted, with a minimum of twenty (20) footcandles.
6. Street Construction and Design:
 - a. Pavement: All streets must be paved with a material and thickness which meets the standards specified in Molena Development Ordinance (See Appendix K).

- b. Grades: Minimum permitted grade for streets is ten (10) percent. Short runs with a maximum grade of fifteen (15) percent may be permitted upon specific approval of the Administrative Officer, if traffic safety is assured by adequate leveling areas, and avoidance of lateral curves.
- c. Offset Intersecting Streets (Street Jogs) and Reverse Curves: Offset intersecting streets must be offset at the centerlines at least 150 feet. Reverse curves must be connected by a straight section that is at least 150 feet long.

7. Paved Parking Areas:

- a. Paved off-street parking areas must be provided for the use of residents. At least two (2) spaces for each dwelling unit must be furnished. In a Planned Manufactured Home Community, resident parking must be furnished at the Manufactured Home Space which it serves.
- b. Paved parking areas for guests may be either on-street, in a separate off-street lot, or a combination of both. At least 0.2 paved guest parking spaces per dwelling unit must be furnished.
- c. See Appendix I for required parking space design standards.

8. Walks:

- a. General Requirements: All developments must have safe, convenient, all-season pedestrian access of adequate width for intended use. Walks must be durable and convenient to maintain. Sudden Changes in alignment and gradient should be avoided.
- b. Common Walk System: Common walks, where provided, should be at least three and one-half (3 1/2) feet wide.
- c. Individual Walks: All Apartment Dwellings and Manufactured Home Spaces must be connected either to common walks, paved streets, paved driveways, or parking spaces adjacent to paved streets. Such individual walks must have a minimum width of two (2) feet.

9. Service Buildings and Other Such Facilities: Service buildings, recreation buildings, and other such facilities of the development must meet the requirements of applicable codes and development regulations adopted by Molena.
 10. Minimum Common Open Space: 300 square feet for each dwelling unit--may be either one large area, or several separate areas.
- AA. The following required development standards apply only to **Planned Apartment Home Communities.**
1. Maximum Density: Ten (10) units per acre, where central sewage and water is provided. Where central sewage and water is not provided densities must meet the requirements the Pike County Health Department, but may not be greater than Ten (10) dwelling units per net acre.
 2. Maximum Lot Coverage by Building: Thirty (30) percent.
- BB. The following required development standards apply only to **Planned Manufactured Home Communities:**
1. ANSI A225.1: All requirements of ANSI A225.1 must be met by the Planned Manufactured Home Community. All Manufactured Homes must be installed in accordance with ANSI A225.1.
 2. Maximum Density: 7 units per net acre, where central sewage and water is provided. Where central sewage and water is not provided, densities must meet the requirements of the Pike County Health Department, but may not be greater than seven (7) dwelling units per net acre.
 3. Minimum Development Size: Three (3) acres.
 4. Minimum Separation of Dwelling Units: Twenty-five (25) feet.
 5. Minimum Manufactured Home Space Area: 6,000 square feet.
 6. Maximum Manufactured Home Space Coverage: Fifty (50) percent.
 7. Minimum Manufactured Home Space Front Yard: Twenty (20) feet.

ARTICLE XIV. O-1 OFFICE-RESIDENTIAL.

Section 1401: Purpose. O-1 zoning districts are intended to establish and preserve districts for lower density office activities, with a mix of certain compatible residential activities also permitted. In many cases this district may be appropriate to provide a transition from residential uses where it is elected not to use a buffer for such purposes and where adequate space exists for such a transition area. O-1 development standards require adequate yard space and off-street parking and service facilities. Permitted uses are restricted and protected from encroachment by uses capable of adversely affecting the limited character of the district.

Section 1402: Determining if an Area is Suitable for Inclusion Within an O-1 District. The factors contained in Section 410 of this Ordinance must be thoroughly considered by the Planning Commission as well as the Mayor and Council when determining in which zoning district an area of land is to be placed. This will assure that rational comprehensive planning principles are the basis upon which the decision is made. Land use decisions which are based on sound planning principles encourage the development and preservation of land use patterns that provide healthful and safe living conditions for the residents of Molena.

Section 1403: Boundaries of O-1 Districts. The Official Map (Section 2301 of this Ordinance) shows the boundaries of all O-1 districts within Molena. Article XXIII also contains additional information concerning interpreting district boundaries, amending boundaries, etc.

Section 1404: Permitted Uses.

- A. The following Principal Uses are Permitted in O-1 districts:
1. Site-built single-family detached dwelling with a floor area of at least 950 square feet.
 2. Two-family dwelling with a floor area of at least 950 square feet.
 3. Industrialized home with a floor area of at least 950 square feet.
 4. Family personal care home.
 5. Group personal care home.
 6. Congregate personal care home.

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Section 1402: Determining if an Area is Suitable for Inclusion Within an O-1 District. The factors contained in Section 410 of this Ordinance must be thoroughly considered by the Planning Commission as well as the Mayor and Council when determining in which zoning district an area of land is to be placed. This will assure that rational comprehensive planning principles are the basis upon which the decision is made. Land use decisions which are based on sound planning principles encourage the development and preservation of land use patterns that provide healthful and safe living conditions for the residents of Molena.

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 3. Industrialized home with a floor area of at least 950 square feet.
 4. Family personal care home.
 5. Group personal care home.
 6. Congregate personal care home.

7. Intermediate care home.
8. Clinic.
9. Nursing home.
10. Hospital.
11. Professional or business office meeting the following development standards:
 - a. No wholesale or retail merchandise may be offered for sale.
12. Club or lodge.
13. School, public or private.
14. College or university.
15. Business or commercial school.
16. Retail uses in conjunction with and normally appurtenant to office/institutional uses--including florist shop, cafeteria, snack shop, pharmacy, or gift shop when located within an office or medical building.
17. Publicly owned and operated park or recreation area.
18. Cemetery.
19. Church, synagogue, chapel, or other place of religious worship or education.
20. Utility substation meeting the following development standards:
 - a. Structures must be placed at least thirty (30) feet from all property lines.
 - b. Structures must be enclosed by a woven-wire fence at least eight (8) feet high with bottom of fence either flush with the ground or with a masonry footing.
 - c. No vehicles or equipment may be stored on the lot.
 - d. A buffer must be maintained along the side and rear property lines.

- B. The following **Principal Uses** are permitted as **Special Exceptions** in O-1 districts:
 - 1. None.
- C. The following **Accessory Uses** are permitted in O-1 districts:
 - 1. Those determined by the Administrative Officer to be customarily appurtenant to those uses permitted in this district.
 - 2. Satellite dish antennas and television antennas.
 - 3. Home Occupation, excluding Public Garage and Repair Garage.
- D. The following **Accessory Uses** are permitted as **Special Exceptions** in O-1 districts:
 - 1. None.
- E. All **Accessory Uses** must meet the following standards:
 - 1. They must be located in the rear yards.
 - 2. They must be located at least five (5) feet from any property line.
 - 3. They may not be located in any front or side yard.
 - 4. Accessory buildings and structures not attached to the principal building must be located at least twelve (12) feet from the principal building on the lot.
- F. All uses not permitted within O-1 districts by this Section are specifically prohibited.

Section 1405: Development Standards for O-1 Districts. In addition to the development standards contained in Article IV of this Ordinance, the following standards are required within O-1 districts:

- A. **Minimum Floor Area for Buildings:** 950 square feet.
- B. **Minimum Lot Area:**
 - 1. **Unsewered Areas:** As specified by the Pike County Health Department, but in no case less than 43,560 square feet (1 acre); however, a lot of

record lawfully existing at the time of passage of this Ordinance and having an area of less than 1 acre (non-conforming) may nevertheless be developed with a use which is permitted within an O-1 district if approved by the Pike County Health Department.

2. Sewered Areas: 21,780 square feet (1/2 acre); however, a lot of record lawfully existing at the time of passage of this Ordinance and having less than 1/2 acre (non-conforming) may nevertheless be developed with a use which is permitted within an O-1 district.
- C. Minimum Lot Width: 100 feet.
- D. Minimum Front Yard:
1. Arterial Streets/Roads: 80 feet. The front of all buildings must be at least 35 feet from the front property line.
2. Collector Streets/Roads: 50 feet. The front of all buildings must be at least 35 feet from the front property line.
3. Other Streets/Roads: 50 feet. The front of all buildings must be at least 35 feet from the front property line.
- E. Minimum Side Yard: 10 feet.
- F. Minimum Rear Yard: 30 feet.
- G. Maximum Building Height: 35 feet. This height limit does not apply to projections not intended for human habitation--except for satellite,

television, and radio antennas, to which this limit does apply. For buildings and structures with such projections, the minimum required yards must be increased one (1) foot for every two (2) feet (or part of two (2) feet) of height greater than 35 feet.

- H. **Maximum Lot Coverage by Building:** 35 percent.
- I. **Sight Distance:** In order to assure maintenance of adequate sight distances at intersections, no fence, wall, shrubbery, or other obstruction to vision between the heights of three (3) feet and fifteen (15) feet above the ground is permitted within twenty (20) feet of the intersection of the right-of-ways of streets or of streets and railroads.
- J. **Applicability to Land, Buildings, and Open Space:** No building, structure, land, or open space may be used or occupied--and no building or structure or part of a building or structure may be erected, constructed, reconstructed, moved, or structurally altered--unless in conformity with all of the regulations specified for the district in which it is located.
- K. **Every Use Must Be on a Lot:** No building or structure may be erected or use established unless upon a lot as defined by this Ordinance.
- L. **Only One Principal Building Per Lot:** Only one (1) principal building and its accessory buildings may be erected on any lot, except for planned developments or as otherwise provided.
- M. **Open Space Not to Be Encroached Upon:** No open space may be encroached upon or reduced in any manner except in conformity with the yard, setback, off-street parking spaces, and other such required development standards contained in this Ordinance. Shrubby, driveways, retaining walls, fences, curbs, and buffers are not considered to be encroachments of yards. Open space areas as required by this Ordinance must be permanently maintained as open space in accordance with the requirements of this Ordinance.
- N. **Reduction of yards or Lot Area:** Except as otherwise provided in this Ordinance, no lot existing at the time of passage of this Ordinance may not be reduced, divided, or changed so as to produce a tract of land

which does not comply with the minimum dimension or area requirements of this Ordinance for the district in which it is located unless that reduction or division is necessary to provide land which is needed and accepted for public use.

- O. **Lots with Multiple Frontage:** In case of a corner lot or double frontage lot, front yard setback requirements apply to all lot lines abutting a street.
- P. **Landlocked Lots:** In the case of a landlocked lot (a lot without direct access to a public street or road) lawfully existing as of the effective date of this Ordinance, the property owner is entitled to one (1) Building Permit, as long as all of the following requirements are met:
1. No other principal building exists or is being constructed on the property.
 2. No other valid building permit has been issued prior to the effective date of this Ordinance and is currently valid.
 3. The property was and continues to be under single ownership since the effective date of this Ordinance.
 4. The property owner has acquired a thirty (30) foot easement to a City-, County- or State-maintained street, or roads and the easement has been duly recorded and made a part of the property deed.
 5. In the event the property is divided, no additional permits will be issued.
- Q. **Street Frontage:** No principal building may be erected on any lot which has less than (30) feet of immediate frontage on at least one (1) public street.
- R. **Yards and Other Spaces:** No part of a yard, other open space, off-street parking, or loading space required for another building may be included as a part of the yard, off-street parking, or loading space required for another building, except as specifically provided for in this Ordinance.
- S. **Substandard Lots:** Any lot existing at the time of the adoption of this Ordinance, which has an area or a width which is less than required by this Ordinance, is subject to the following exceptions and modifications:
1. Adjoining Lots in Same Ownership: When two (2) or more adjoining and vacant lots within a non-approved development with continuous frontage are

in a single ownership at the time of application and such lots have a frontage or lot area less than is required by the district in which they are located, such lots must be replatted or reparcelled so as to create one or more lots which conform to the minimum frontage and area requirements of the district;

2. Single Lot: When a lot has an area or frontage which does not conform with the requirements of the district in which it is located, but was a lot at the effective date of this Ordinance, such a lot may be used for any use allowed in the zoning district in which it is located as long as all other requirements of this Ordinance are met.
- T. **Encroachment on Public Rights-of-Way**: No building, structure, service area, required off-street parking, or loading/unloading facility is permitted to encroach on public rights-of-way.
 - U. **Physical Design Standards**: Minimum design standards for driveways, loading areas, and other such physical site improvements are contained in applicable development regulations of Molena. Consult the Administrative Officer for specific requirements.
 - V. **Off-Street Parking and Service Requirements**: Minimum standards for Off-Street Parking and Service Requirements are contained in the Molena Standard for Off-Street Parking and Service Facilities (Appendix I).
 - W. **Other Applicable Development Regulations**: Information concerning any other applicable development regulations may be obtained by consulting the Administrative Officer.
 - X. **Signs**: Minimum design and location standards are contained in the Molena Sign Ordinance (See Appendix F). Consult that document for specific requirements.
 - Y. **Yards Abutting Railroads**: Side yards and rear yards are not required adjacent to railroad rights-of-way.

ARTICLE XV. (RESERVED)

ARTICLE XVI. C-2 COMMERCIAL - GENERAL/HIGHWAY

Section 1601. Purpose. C-2 zoning districts are intended establish and preserve business areas that are motor vehicle oriented, rather than pedestrian oriented. C-2 districts provide areas that are convenient and attractive for retail activities, business transactions, and services to the public designed primarily to meet the day-to-day shopping and service needs not only of residents of Molena, but of surrounding communities as well. Off-street parking and minimum yards are required. These areas are more suburban in nature than of a "downtown" character.

Section 1602. Determining if an Area is Suitable for Inclusion Within a C-2 District. The factors contained in Section 410 of this Ordinance must be thoroughly considered by the Planning Commission as well as the Mayor and Council when determining in which zoning district an area of land is to be placed. This will assure that rational comprehensive planning principles are the bases upon which the decision is made. Land use decisions which are based on sound planning principles encourage the development and preservation of land use patterns that provide healthful and safe living conditions for the residents of Molena.

Section 1603. Boundaries of C-2 Districts. The Official Map (Section 2301 of this Ordinance) shows the boundaries of all C-2 districts within Molena. Article XXIII also contains additional information concerning interpreting district boundaries, amending boundaries, etc.

Section 1604: Permitted Uses.

- A. The following **Principal Uses** are permitted in C-2 districts:
1. Any retail business or service.
 2. Gasoline Service Station that meets the following development standards:
 - a. All structures, including underground storage tanks, must be placed at least thirty (30) feet from any property line.
 - b. Must be located on a corner lot or on a tract which includes a corner lot.
 - c. Curb cuts must be located at least fifteen (15) feet from the intersection of street lines.

3. Hotel.
4. Office.
5. Bank.
6. Radio station.
7. Printing, copying, publishing establishment.
8. Off-street parking lot or parking garage.
9. Education or training facility.
10. Lodge or club.
11. Local, State, or Federal government building.
12. Utility substation meeting the following development standards:
 - a. Structures must be placed at least thirty (30) feet from all property lines.
 - b. Structures must be enclosed by a woven-wire fence at least eight (8) feet high with bottom of fence either flush with the ground or with a masonry footing.
 - c. No vehicles or equipment may be stored on the lot.
 - d. A buffer must be maintained along the side and rear property lines.

B. The following **Principal Uses** are permitted as **Special Exceptions** in C-2 districts:

1. None.

C. The following **Accessory Uses** are permitted in C-2 districts:

1. Those determined by the Administrative Officer to be customarily appurtenant to those uses permitted in this district.
2. Manufacturing in connection with the principal retail business or service on the lot meeting the following standards:
 - a. Occupies less than forty (40) percent of the floor area.

- b. Employs no more than five (5) persons. (The intent here is to assure that activities which are primarily manufacturing in nature are directed away from commercial areas and into manufacturing areas. Establishments with five or fewer manufacturing employees in connection with a commercial activity are considered to be primarily commercial and compatible with a commercial district. Manufacturing activities with more than five employees would be considered large enough to belong in a manufacturing district with other such uses rather than in a commercial district.)

- D. The following **Accessory Uses** are permitted as **Special Exceptions** in C-2 districts:
 - 1. None

- E. All accessory uses must meet the following standards:
 - 1. They may not be located closer than five (5) feet to any property line.
 - 2. Accessory buildings not attached to the principal building must be located at least twelve (12) feet from the principal building on the lot.

- F. All uses not permitted within C-2 districts by this Section are specifically prohibited.

Section 1605. Development Standards for C-2 Districts. In addition to the development standards contained in Article IV of this Ordinance, the following standards are required within C-2 districts:

- A. **Minimum Floor Area for Buildings:** None.

- B. **Minimum Lot Area:**
 - 1. **Unsewered Areas:** As specified by the Pike County Health Department; a lot of record lawfully existing at the time of passage of this Ordinance (non-conforming) may be developed with a use which is permitted within a C-2 district if approved by the Pike County Health Department.

2. Sewered Areas: No minimum requirement; a lot of record lawfully existing at the time of passage of this Ordinance (non-conforming) may be developed with a use which is permitted within a C-2 district.
- C. **Minimum Lot Width** 60 feet.
- D. **Minimum Front Yard:**
1. Arterial Streets/Roads: 50 feet. The front of all buildings must be at least 35 feet from the front property line.
2. Collector Streets/Roads: 40 feet. The front of all buildings must be at least 35 feet from the front property line.
3. Other Streets/Roads: 35 feet. The front of all buildings must be at least 35 feet from the front property line.
- E. **Minimum Side Yard:** 10 feet.
- F. **Minimum Rear Yard:** 30 feet.
- G. **Maximum Bldg. Height:** 35 feet. This height limit does not apply to projections not intended for human habitation. For buildings and structures with such projections, the minimum required yards must be increased one (1) foot for every two (2) feet (or part of two (2) feet) of height greater than 35 feet.
- H. **Maximum Lot Coverage by Building:** 35 percent.

- I. **Sight Distance:** In order to assure maintenance of adequate sight distances at intersections, no fence, wall, shrubbery, or other obstruction to vision between the heights of three (3) feet and fifteen (15) feet above the ground is permitted within twenty (20) feet of the intersection of the right-of-ways of streets or of streets and railroads.
- J. **Applicability to Land, Buildings, and Open Space:** No building, structure, land, or open space may be used or occupied--and no building or structure or part of a building or structure may be erected, constructed, reconstructed, moved, or structurally altered--unless in conformity with all of the regulations specified for the district in which it is located.
- K. **Every Use Must Be on a Lot:** No building or structure may be erected or use established unless upon a lot as defined by this Ordinance.
- L. **Only One Principal Building Per Lot:** Only one (1) principal building and its accessory buildings may be erected on any lot, except for planned developments or as otherwise provided.
- M. **Open Space Not to Be Encroached Upon:** No open space may be encroached upon or reduced in any manner except in conformity with the yard, setback, off-street parking spaces, and other such required development standards contained in the Ordinance. Shrubbery, driveways, retaining walls, fences, curbs, and buffers are not considered to be encroachments of yards. Open space areas as required by this Ordinance must be permanently maintained as open space in accordance with the requirements of this Ordinance.
- N. **Reduction of yards or Lot Area:** Except as otherwise provided in this Ordinance, no lot existing at the time of passage of this Ordinance may not be reduced, divided, or changed so as to produce a tract of land which does not comply with the minimum dimension or area requirements of this Ordinance for the district in which it is located unless that reduction or division is necessary to provide land which is needed and accepted for public use.
- O. **Lots with Multiple Frontage:** In case of a corner lot or double frontage lot, front yard setback requirements apply to all lot lines abutting a street.

- P. **Landlocked Lots:** In the case of a landlocked lot (lot without direct access to a public street or road) lawfully existing as of the effective date of this Ordinance, the property owner is entitled to one (1) Building Permit, as long as all of the following requirements are met:
1. No other principal building exists or is being constructed on the property.
 2. No other valid Building Permit has been issued prior to the effective date of this Ordinance and is currently valid.
 3. The property was and continues to be under single ownership since the effective date of this Ordinance.
 4. The property owner has acquired a thirty (30) foot easement to a City-, County-, or State-maintained street or road, and the easement has been duly recorded and made a part of the property deed.
 5. In the event the property is divided, no additional permits will be issued.
- Q. **Street Frontage:** No principal building may be erected on any lot which has less than (30) feet of immediate frontage on at least one (1) public street.
- R. **Yards and Other Spaces:** No part of a yard, other open space, off-street parking, or loading space required for another building may be included as a part of the yard, off-street parking, or loading space required for another building, except as specifically provided for in this Ordinance.
- S. **Substandard Lots:** Any lot existing at the time of the adoption of this Ordinance, which has an area or a width which is less than required by this Ordinance, is subject to the following exceptions and modifications:
1. Adjoining Lots in Same Ownership: When two (2) or more adjoining and vacant lots within a non-approved development with continuous frontage are in a single ownership at the time of application and such lots have a frontage or lot area less than is required by the district in which they are located, such lots must be replatted or reparcelled so as to create one or more lots which conform to the minimum frontage and area requirements of the district;

2. **Single Lot:** When a lot has an area or frontage which does not conform with the requirements of the district in which it is located, but was a lot at the effective date of this Ordinance, such a lot may be used for any use allowed in the zoning district in which it is located as long as all other requirements of this Ordinance are met.
- T. **Encroachment on Public Rights-of-Way:** No building, structure, service area, required off-street parking, or loading/unloading facility is permitted to encroach on public rights-of-way.
- U. **Physical Design Standards:** Minimum design standards for driveways, loading areas, and other such physical site improvements are contained in applicable development regulations of Molena. Consult the Administrative Officer for specific requirements.
- V. **Off-Street Parking and Service Requirements:** Minimum standards for Off-Street Parking and Service Requirements are contained in the Molena Standard for Off-Street Parking and Service Facilities (Appendix I).
- W. **Other Applicable Development Regulations:** Information concerning any other applicable development regulations may be obtained from the Administrative Officer.
- X. **Signs:** Minimum design and location standards are contained in the Pike County Sign Resolution. Consult that document for specific requirements.
- Y. **(Reserved)**

ARTICLE XVII. C-3 COMMERCIAL - INTENSIVE/CBD.

Section 1701: Purpose. C-3 zoning districts are intended to establish and preserve a prominent central business district that is convenient and attractive for retail activities, business transactions, and services to the public designed primarily to meet the day-to-day shopping and service needs, not only of residents of Molena, but of surrounding communities as well. The intensive development permitted allows the pedestrian mode of travel to assume primary importance within this district. C-3 districts are permitted only where public water and sewage are provided.

Section 1702. Determining if an Area is Suitable for Inclusion Within a C-3 District. The factors contained in Section 410 of this Ordinance must be thoroughly considered by the Planning Commission as well as the Mayor and Council when determining in which zoning district an area of land is to be placed. This will assure that rational comprehensive planning principles are the basis upon which the decision is made. Land use decisions which are based on sound planning principles encourage the development and preservation of land use patterns that provide healthful and safe living conditions for the residents of Molena.

Section 1703: Boundaries of C-3 Districts. The Official Map (Section 2301 of this Ordinance) shows the boundaries of all C-3 districts within Molena. Article XXIII also contains additional information concerning interpreting district boundaries, amending boundaries, etc.

Section 1704. Permitted Uses.

A. The following **Principal Uses** are permitted in C-3 districts:

1. Any retail business or service.
2. Gasoline service Station that meets the following development standards:
 - a. All structures, including underground storage tanks, must be placed at least thirty (30) feet from any property line.
 - b. Must be located on a corner lot or on a tract which includes a corner lot.
 - c. Curb cuts must be located at least fifteen (15) feet from the intersection of street lines.

3. Hotel.
 4. Office.
 5. Bank.
 6. Radio station.
 7. Printing, copying, publishing establishment.
 8. Off-street parking lot or parking garage.
 9. Education or training facility.
 10. Lodge or club.
 11. Apartment dwelling located at second story level or above.
 12. Condominium dwelling located at second story level or above.
 13. Local, State, or Federal government building.
 14. Utility substation meeting the following development standards:
 - a. Structures must be placed at least thirty (30) feet from all property lines.
 - b. Structures must be enclosed by a woven-wire fence at least eight (8) feet high with bottom of fence either flush with the ground or with a masonry footing.
 - c. No vehicles or equipment may be stored on the lot.
 - d. A buffer must be maintained along the side and rear property lines.
- B. The following **Principal Uses** are permitted as **Special Exceptions** in C-3 districts:
1. None.
- C. The following **Accessory Uses** are permitted in C-3 districts:
1. Those determined by the Administrative Officer to be customarily appurtenant to those uses permitted in this district.

2. Manufacturing in connection with the principal retail business or service on the lot meeting the following standards:
 - a. Occupies less than forty (40) percent of the floor area.
 - b. Employs no more than five (5) persons. (The intent here is to assure that activities which are primarily manufacturing in nature are directed away from commercial areas and into manufacturing areas. Establishments with five or fewer manufacturing employees in connection with a commercial activity are considered to be primarily commercial and compatible with a commercial district. Manufacturing activities with more than five employees would be considered large enough to belong in a manufacturing district with other such uses rather than in a commercial district.
- D. The following **Accessory Uses** are permitted as **Special Exceptions** in C-3 districts:
 1. None
- E. All accessory uses must meet the following standards:
 1. No special development standards apply to accessory uses in C-3 districts.
- F. All uses not permitted within C-3 districts by this Section are specifically prohibited.

Section 1705. Development Standards for C-3 Districts. In addition to the development standards contained in Article IV of this Ordinance, the following standards are required within C-3 districts:

- A. **Minimum Floor Area for Buildings:**
 1. Residential Uses: 600 square feet per dwelling unit.
 2. Other Uses: No minimum requirement.
- B. **Minimum Lot Area:** None; a lot of record lawfully existing at the time passage of this Ordinance (non-

conforming) may be developed with a use which is permitted within a C-3 district.

- C. **Minimum Lot Width** None.
- D. **Minimum Front Yard:**
 - 1. Arterial Streets/Roads: None.
 - 2. Collector Streets/Roads: None.
 - 3. Other Streets/Roads: None.
- E. **Minimum Side Yard:** None.
- F. **Minimum Rear Yard:** 15 feet.
- G. **Maximum Bldg. Height:** 50 feet. This height limit does not apply to projections not intended for human habitation.
- H. **Maximum Lot Coverage by Building:** None.
- I. (Reserved)
- J. **Applicability to Land, Buildings, and Open Space:** No building, structure, land, or open space may be used or occupied--and no building or structure or part of a building or structure may be erected, constructed, reconstructed, moved, or structurally altered--unless in conformity with all of the regulations specified for the district in which it is located.
- K. **Every Use Must Be on a Lot:** No building or structure may be erected or use established unless upon a lot as defined by this Ordinance.
- L. **Only One Principal Building Per Lot:** Only one (1) principal building and its accessory buildings may be erected on any lot, except for planned developments or as otherwise provided.
- M. **Open Space Not to Be Encroached Upon:** No open space may be encroached upon or reduced in any manner except in conformity with the yard, setback, off-street parking spaces, and other such required development standards contained in the Ordinance. Shrubbery, driveways, retaining walls, fences, curbs, and buffers

are not considered to be encroachments of yards. Open space areas as required by this Ordinance must be permanently maintained as open space in accordance with the requirements of this Ordinance.

- N. **Reduction of yards or Lot Area:** Except as otherwise provided in this Ordinance, a lot existing at the time of passage of this Ordinance may not be reduced, divided, or changed so as to produce a tract of land which does not comply with the minimum dimension or area requirements of this Ordinance for the district in which it is located unless that reduction or division is necessary to provide land which is needed and accepted for public use.
- O. **Lots with Multiple Frontage:** In case of a corner lot or double frontage lot, front yard setback requirements apply to all lot lines abutting a street.
- P. **Landlocked Lots:** In the case of a landlocked lot (lot without direct access to a public street or road) lawfully existing as of the effective date of this Ordinance, the property owner is entitled to one (1) Building Permit, as long as all of the following requirements are met:
1. No other principal building exists or is being constructed on the property.
 2. No other valid building permit has been issued prior to the effective date of this Resolution and is currently valid.
 3. The property was and continues to be under single ownership since the effective date of this Ordinance.
 4. The property owner has acquired a thirty (30) foot easement to a City-, County- or State-maintained street or road, and the easement has been duly recorded and made a part of the property deed.
 5. In the event the property is divided, no additional permits will be issued.
- Q. (Reserved)
- R. **Yards and Other Spaces:** No part of a yard, other open space, off-street parking, or loading space required for another building may be included as a part of the yard, off-street parking, or loading space required for another building, except as specifically provided for in this Ordinance.

- S. **Substandard Lots:** Any lot existing at the time of the adoption of this Ordinance, which has an area or a width which is less than required by this Ordinance, is subject to the following exceptions and modifications:
1. **Adjoining Lots in Same Ownership:** When two (2) or more adjoining and vacant lots within a non-approved development with continuous frontage are in a single ownership at the time of application and such lots have a frontage or lot area less than is required by the district in which they are located, such lots must be replatted or reparcelled so as to create one or more lots which conform to the minimum frontage and area requirements of the district;
 2. **Single Lot:** When a lot has an area or frontage which does not conform with the requirements of the district in which it is located, but was a lot at the effective date of this Ordinance, such a lot may be used for any use allowed in the zoning district in which it is located as long as all other requirements of this Ordinance are met.
- T. **Encroachment on Public Rights-of-Way:** No building, structure, service area, required off-street parking, or loading/unloading facility is permitted to encroach on public rights-of-way.
- U. **Physical Design Standards:** Minimum design standards for driveways, loading areas, and other such physical site improvements are contained in applicable development regulations of Molena. Consult the Administrative Officer for specific requirements.
- V. **Off-Street Parking and Service Requirements:** Minimum standards for Off-Street Parking and Service Requirements are contained in the Molena Standard for Off-Street Parking and Service Facilities (Appendix I).
- W. **Other Applicable Development Regulations:** Information concerning any other applicable development regulations may be obtained from the Administrative Officer.
- X. **Signs:** Minimum design and location standards are contained in the Pike County Sign Resolution. Consult that document for specific requirements.
- Y. **(Reserved)**

- Z. **Public Water and Sewage Required:** All buildings within C-3 districts must be served by public water and sewage lines. Where such lines do not already exist, the developer is responsible for installation of them. (See Molena Development Ordinance for additional details on utility installation.)

ARTICLE XVIII. M-1 MANUFACTURING-LIGHT

Section 1801: Purpose. M-1 zoning districts are intended to establish and preserve physically and aesthetically desirable areas in which clean, low-intensity manufacturing activities may locate and be protected from the intrusion of incompatible land uses. By having such areas available, both new and existing industries may operate and undertake expansion of facilities with the least possible adverse effect on other types of activities which might be incompatible with manufacturing. The elimination of non-manufacturing activities from M-1 districts benefits manufacturing activities by removing some possible obstacles to their smooth operation and expansion.

Section 1802: Determining if an Area is Suitable for Inclusion Within an M-1 District. The factors contained in Section 410 of this Ordinance must be thoroughly considered by the Planning Commission as well as the Mayor and Council when determining in which zoning district an area of land is to be placed. This will assure that rational comprehensive planning principles are the basis upon which the decision is made. Land use decisions which are based on sound planning principles encourage the development and preservation of land use patterns that provide healthful and safe living conditions for the residents of Molena.

Section 1803: Boundaries of M-1 Districts. The Official Map (Section 2301 of this Ordinance) shows the boundaries of all M-1 districts within Molena. Article XXIII also contains additional information concerning interpreting district boundaries, amending boundaries, etc.

Section 1804: Permitted Uses.

- A. The following Principal Uses are permitted in M-1 districts:
1. Manufacturing activity which does not cause injurious or obnoxious noise, vibrations, smoke, gas, fumes, odor, dust, fire hazard, or other objectionable conditions.
 2. Wholesale and Warehousing operation.
 3. Building material yard which is entirely enclosed by a fence that is at least six (6) feet high and screens the yard from view.
 4. Public garage.
 5. Repair garage.

6. Newspaper or printing plant.
7. Off-street parking lot or parking garage.
8. Armory.
9. Bottling plant.
10. Cabinet shop.
11. Cold storage, ice plant, or freezer locker.
12. Cosmetic and pharmaceuticals manufacturing.
13. Dairy plant, ice cream manufacturing.
14. Distribution of products or merchandise.
15. Dry cleaning or laundering establishment.
16. Education or training facility.
17. Electrical appliance and equipment sales and repair.
18. Electronic manufacturing and assembly.
19. Fabricating shop such as woodworking, upholstery, or sheet metal shop.
20. Machine shop.
21. Plumbing shop, other contractor--including open storage of materials when located in rear yard.
22. Printing, publishing, reproducing establishment.
23. Sign painting and fabricating shop.
24. Textile manufacturing plant.
25. Local, State, or Federal government building.
26. Agriculture.
27. Utility substation meeting the following development standards:
 - a. Structures must be placed at least thirty (30) feet from all property lines.
 - b. Structures must be enclosed by a woven-wire fence at least eight (8) feet high with bottom of fence either flush with the ground or with a masonry footing.

- c. No vehicles or equipment may be stored on the lot.
 - d. A buffer must be maintained along the side and rear property lines.
28. Airport, heliport.
29. Radio or television transmission tower over 35 feet high.
- B. The following **Principal Uses** are permitted as **Special Exceptions** in M-1 districts:
- 1. None.
- C. The following **Accessory Uses** are permitted in M-1 districts:
- 1. Those determined by the Administrative Officer to be customarily appurtenant to those uses permitted in this district.
- D. The following **Accessory Uses** are permitted as **Special Exceptions** in M-1 districts:
- 1. None.
- E. All **Accessory** uses must meet the following standards:
- 1. They may not be located closer than five (5) feet to any property line.
 - 2. Accessory buildings and structures not attached to the principal building must be located at least twelve (12) feet from the principal building on the lot.
- F. All uses not permitted within M-1 districts by this Section are specifically prohibited.

Section 1805: Development Standards for M-1 Districts. In addition to the development standards contained in Article IV of this Ordinance, the following standards are required within M-1 districts:

- A. **Minimum Floor Area for Buildings:** None.

B. Minimum Lot Area:

1. Unsewered Areas:

As specified by the Pike County Health Department, but in no case less than 2 acres; however, a lot of record lawfully existing at the time of passage of this Ordinance and having an area of less than 2 acres (non-conforming) may nevertheless be developed with a use which is permitted within an M-1 district if approved by the Pike County Health Department.

2. Sewered Areas:

2 acres; however, a lot of record lawfully existing at the time of passage of this Ordinance and having less than 2 acres (non-conforming) may nevertheless be developed with a use which is permitted within an M-1 district.

C. Minimum Lot Width:

100 feet.

D. Minimum Front Yard:

1. Arterial Streets/
Roads:

100 feet. The front of all buildings must be at least 35 feet from the front property line.

2. Collector Streets/
Roads:

70 feet. The front of all buildings must be at least 35 feet from the front property line.

3. Other Streets/
Roads:

55 feet. The front of all buildings must be at least 35 feet from the front property line.

E. Minimum Side Yard:

30 feet.

F. Minimum Rear Yard:

50 feet.

- G. **Maximum Bldg. Height:** 35 feet. This height limit does not apply to projections not intended for human habitation. For buildings and structures with such projections, the minimum required yards must be increased one (1) foot for every two (2) feet (or part of two (2) feet) of height greater than 35 feet.
- H. **Maximum Lot Coverage by Building:** 50 percent.
- I. **Sight Distance:** In order to assure maintenance of adequate sight distances at intersections, no fence, wall, shrubbery, or other obstruction to vision between the heights of three (3) feet and fifteen (15) feet above the ground is permitted within twenty (20) feet of the intersection of the right-of-ways of streets or of streets and railroads.
- J. **Applicability to Land, Buildings, and Open Space:** No building, structure, land, or open space may be used or occupied--and no building or structure or part of a building or structure may be erected, constructed, reconstructed, moved, or structurally altered--unless in conformity with all of the regulations specified for the district in which it is located.
- K. **Every Use Must Be on a Lot:** No building or structure may be erected or use established unless upon a lot as defined by this Ordinance.
- L. **Only One Principal Building Per Lot:** Only one (1) principal building and its accessory buildings may be erected on any lot, except for planned developments or as otherwise provided.
- M. **Open Space Not to Be Encroached Upon:** No open space may be encroached upon or reduced in any manner except in conformity with the yard, setback, off-street parking spaces, and other such required development standards contained in the Ordinance. Shrubby, driveways, retaining walls, fences, curbs, and buffers are not considered to be encroachments of yards. Open space areas as required by this Ordinance must be permanently maintained as open space in accordance with the requirements of this Ordinance.

- N. **Reduction of yards or Lot Area:** Except as otherwise provided in this Ordinance, a lot existing at the time of passage of this Ordinance may not be reduced, divided, or changed so as to produce a tract of land which does not comply with the minimum dimension or area requirements of this Ordinance for the district in which it is located unless that reduction or division is necessary to provide land which is needed and accepted for public use.
- O. **Lots with Multiple Frontage:** In case of a corner lot or double frontage lot, front yard setback requirements apply to all lot lines abutting a street.
- P. **Landlocked Lots:** In the case of a landlocked lot (lot without direct access to a public street or road) lawfully existing as of the effective date of this Ordinance, the property owner is entitled to one (1) Building Permit, as long as all of the following requirements are met:
1. No other principal building exists or is being constructed on the property.
 2. No other valid Building Permit has been issued prior to the effective date of this Ordinance and is currently valid.
 3. The property was and continues to be under single ownership since the effective date of this Ordinance.
 4. The property owner has acquired a thirty (30) foot easement to a City-, County-, or State-maintained street, and the easement has been duly recorded and made a part of the property deed.
 5. In the event the property is divided, no additional permits will be issued.
- Q. **Street Frontage:** No principal building may be erected on any lot which has less than (30) feet of immediate frontage on at least one (1) public street.
- R. **Yards and Other Spaces:** No part of a yard, other open space, off-street parking, or loading space required for another building may be included as a part of the yard, off-street parking, or loading space required for another building, except as specifically provided for in this Ordinance.

- S. **Substandard Lots:** Any lot existing at the time of the adoption of this Ordinance, which has an area or a width which is less than required by this Ordinance, is subject to the following exceptions and modifications:
1. **Adjoining Lots in Same Ownership:** When two (2) or more adjoining and vacant lots within a non-approved development with continuous frontage are in a single ownership at the time of application and such lots have a frontage or lot area less than is required by the district in which they are located, such lots must be replatted or reparcelled so as to create one or more lots which conform to the minimum frontage and area requirements of the district.
 2. **Single Lot:** When a lot has an area or frontage which does not conform with the requirements of the district in which it is located, but was a lot at the effective date of this Ordinance, such a lot may be used for any use allowed in the zoning district in which it is located as long as all other requirements of this Ordinance are met.
- T. **Encroachment on Public Rights-of-Way:** No building, structure, service area, required off-street parking, or loading/unloading facility is permitted to encroach on public rights-of-way.
- U. **Physical Design Standards:** Minimum design standards for driveways, loading areas, and other such physical site improvements are contained in applicable development regulations of Molena. consult the Administrative Officer for specific requirements.
- V. **Off-Street Parking and Service Requirements:** Minimum standards for Off-Street Parking and Service Requirements are contained in the Molena Standard for Off-Street Parking and Service Facilities (Appendix I).
- W. **Other Applicable Development Regulations:** Information concerning any other applicable development regulations may be obtained from the Administrative Officer.
- X. **Signs:** Minimum design and location standards are contained in the Molena Sign Ordinance (See Appendix F). Consult that document for specific requirements.
- Y. **Yards Abutting Railroads:** Side yards and rear yards are not required adjacent to railroad right-of-way.

ARTICLE XIX. (RESERVED)

ARTICLE XX. S-1 SENSITIVE LAND-FLOOD HAZARD

Section 2001: Purpose.

- A. S-1 is an "overlay district," which applies additional standards of specific areas which may lie within any of the districts referred to in Articles V through XIX. In each zoning district located within the boundaries of the S-1 district, both the regulations of that district and the regulations of the S-1 district apply. If required development standards are specified for the same item in both district Articles, the more stringent governs.
- B. Within the land area covered by this Ordinance, there exists land which is subject to periodic flooding and inundation. Within these areas, development standards are intended to reduce the proliferation of unsuitable development and minimize destruction of life and property due to flood.

Section 2002. Features which Make Land Suitable for Inclusion Within the S-1 District. Areas subject to periodic flooding are included within the S-1 district. Such areas are indicated on the Federal Emergency Management Agency (FEMA) Flood Insurance Program Flood Hazard Boundary Maps (FHBM) for Molena.

Section 2003: Boundaries of S-1 Districts. The flood hazard boundary maps (FHBM) and the flood insurance rate maps (FIRM) for Molena are hereby made a part of this Ordinance by reference, and are used to determine the location and extent of flood prone areas and the boundaries of the S-1 district.

Section 2004: Development Standards for S-1 Districts.

- A. As already stated, S-1 is an "overlay district," which applies additional standards to specific areas which may lie within any of the districts referred to in Articles V through XIX. In each zoning district located within the boundaries of the S-1 district, both the regulations of the S-1 district apply. If required development standards are specified for the same item in both district Articles, the more stringent governs.
- B. The development standards and other requirements for the S-1 district are contained in the Molena Flood Damage Prevention Ordinance (See Appendix H). That Ordinance must be consulted for complete details of development standards associated with the S-1 overlay district.

ARTICLE XXI. S-2 SENSITIVE LAND-WATERSHED PROTECTION.

Section 2101: Purpose.

- A. S-2 is an "overlay district," which applies additional standards of specific areas which may lie within any of the districts referred to in Articles V through XIX. In each zoning district located within the boundaries of the S-2 district, both the regulations of that district and the regulations of the S-2 district apply. If required development standards are specified for the same item in both district Articles, the more stringent governs.
- B. The purpose of this district is to protect certain watersheds which are vital to area public water supplies and have a unique environmental importance to Molena. This district is intended to maintain a high water quality of the surface water (rivers, creeks, streams, and springs) and underground water, and to help assure that a high quality of water is maintained in the future. The zoning for the district is intended to provide for certain permitted uses, and to protect the area from the polluting effects of more intense development and from encroachments of those uses that are not compatible with a protected watershed.

Section 2102. Features Which Make Land Suitable for Inclusion Within the S-2 District. Areas that lie within watersheds which are vital to area public water supplies and have a unique environmental importance to Molena are included within the S-2 district.

Section 2103: Boundaries of S-2 Districts. The S-2 district is delineated on the "S-2 Sensitive Land-Watershed Protection Map," which is made a part of this Ordinance by reference, and is used to show the boundaries of the S-2 district.

Section 2104: Permitted Uses.

- A. **Overlay District:** As already stated, S-2 is an "overlay district," which applies additional standards to specific areas which may lie within any zoning district. If required development standards are specified for the same item in both district Articles, the more stringent governs.

- B. **Permitted Uses:** Each zoning district Article of this Ordinance (not overlay district Article) specifies a list of permitted principal uses, and accessory uses. That list of Permitted Uses given for each primary zoning district must be adhered to on land to which the S-2 overlay district is also applied. However the list of Prohibited Uses given in Paragraph C below of this Section applies to all S-2 land, regardless of which primary zoning district in which it lies.
- C. **Prohibited Uses:** The following uses are specifically prohibited within the S-2 district:
1. Sewage treatment facility--unless prior approval is granted by the Mayor and Council and the Georgia Environmental Protection Division (EPD).
 2. Commercial business which causes, sells, stores, or maintains any toxic chemicals, toxic wastes, or toxic products.
 3. Agricultural activity that does not strictly comply with Georgia Pesticide Act of 1976, Georgia Pesticide Use and Application Act of 1976, and Georgia Laws 1982, House Bill 1780 (O.C.G.A. 2-1-4).
 4. Industry, business or facility which uses, makes or creates as a product or by-product any toxic wastes, heavy materials, grease, animal fat, or organic loading.
 5. Dumping, discharging, releasing, spraying, distributing of any toxic or other harmful products onto the land, into the atmosphere, or in a stream or body of water.

Section 2105: Development Standards for S-2 Districts.

- A. As already stated, S-2 is an "overlay district," which applies additional standards to specific areas which may lie within any zoning district. If required development standards are specified for the same item in both district Articles, the more stringent governs.
- B. The developer/owner must comply with the Molena Soil Erosion and Sedimentation Control Ordinance, as well as any other applicable development regulations.
- C. Any setback measurements stated in this Section are measured from the outer edge of any river, creek, stream, spring, or body of water that is located within the S-2 district--or the outer property line of any property owned, operated, managed, or maintained by any

government agency in Molena as an existing reservoir or designated by a government agency in Molena as a future reservoir.

- D. For any property located within 1,000 feet of any property owned, managed, maintained, or operated by any government in Molena as an existing reservoir or designated by a government agency in Molena as a future reservoir, the following development standards are required:

1. **Agricultural Uses:**

- a. Minimum Lot Area: Three (3) acres.
- b. Minimum Front Yard: 250 feet
- c. Minimum Side Yard: 250 feet.
- d. Minimum Rear Yard: 250 feet.
- e. Minimum Setback for Cultivation: 250 feet.

2. **Residential Uses:**

- a. Minimum Lot Area: Three (3) acres.
- b. Minimum Front Yard: 250 feet.
- c. Minimum Side Yard: 250 feet.
- d. Minimum Rear Yard: 250 feet.
- e. Minimum Setback for Cultivation: 250 feet.

3. **Commercial Uses:**

- a. None Permitted.

4. **Industrial Uses:**

- a. None Permitted.

- D. For other properties located within the S-2 district, but not located within 1,000 feet of any property owned, managed, maintained, or operated by any government in Molena as an existing reservoir or designated by a government agency in Molena as a future

reservoir, the following development standards are required:

1. **Agricultural Uses:**

- a. Minimum Lot Area: Three (3) acres.
- b. Minimum Front Yard: 100 feet.
- c. Minimum Side Yard: 100 feet.
- d. Minimum Rear Yard: 100 feet
- e. Minimum Setback
for Nutrification
Field Lines: 100 feet.

2. **Residential Uses:**

- a. Minimum Lot Area: 1.25 acres for single-family dwellings, unless served by public sewage; 30,000 square feet per two-family dwelling (must be served by public sewage); 4,356 square feet per dwelling unit for multi-family dwellings (must be served by public sewage).
- b. Minimum Front Yard: 100 feet.
- c. Minimum Side Yard: 100 feet.
- d. Minimum Rear Yard: 100 feet.
- e. Minimum Setback
for Nutrification
Field Lines: 100 feet.

3. **Commercial Uses:**

- a. Minimum Lot Area: 1.25 acres.
- b. Minimum Front Yard: 200 feet.
- c. Minimum Side Yard: 200 feet.
- d. Minimum Rear Yard: 200 feet.

e. Minimum Setback
for Nutrification
Field Lines: 200 feet.

4. Industrial Uses:

a. Minimum Lot Area: Five (5) acres.

b. Minimum Front Yard: 200 feet.

c. Minimum Side Yard: 200 feet.

d. Minimum Rear Yard: 200 feet.

e. Minimum Setback
for Nutrification
Field Lines: 200 feet.

- E. No principal or accessory buildings may be constructed any lower than the maximum flood elevation for a distance of one (1) mile downstream from any existing or designated planned reservoir dam.
- F. Should the owner of a lot, parcel or tract of land included in the S-2 district propose to subdivide any portion of such property, the owner or his authorized agent must submit to the Administrative Officer a plat or drawing to scale showing the exact location of any surface water that is located on or within 250 feet of the subject property prior to a request for rezoning or for any permit.
- G. Variances may be considered by the Board of Appeals as to lot sizes and yards provided that sewage generated by the facility located on the property is serviced by an approved public sewage facility. However, variances may not be made as to any residential, commercial, agricultural, or industrial facilities which use, make, or create as a product or a by product any toxic substance or waste.
- H. All other yard requirements of the primary zoning district in which a specific parcel of property lies must be complied with where they are either more stringent than or are not addressed by S-2 development standards.

ARTICLE XXII. (RESERVED)

**ARTICLE XXIII. OFFICIAL ZONING MAP
MOLENA, GEORGIA (OFFICIAL MAP)**

Section 2301: Official Zoning Map, Molena, Georgia (Official Map). The Official Zoning Map, Molena, Georgia is hereby designated to be Section 2301 of this Ordinance. Any reference to the "Official Map" in this Ordinance refers to the Official Zoning Map, Molena, Georgia.

Section 2302: Identification, Alteration, and Replacement of the Official Map.

- A. The Official Map is signed by the Mayor, and bears the seal of the City or that of a Notary Public under the following words: "This certifies that this is the Official Zoning Map, Molena, Georgia referred to in Article XXIII of the Zoning Ordinance of Molena, Georgia", together with the date of adoption of the Ordinance.
- B. The Official Map may be altered only if the proposed alterations are in conformance with the Molena Land Use Plan (where one exists), (this does not necessarily mean a one-to-one correspondence) and sound comprehensive planning principles. Any alteration of the Official Map is an amendment to the Ordinance. The procedure by which amendments are proposed and approved is contained in Section 410. Any amendment involving changes in zoning district boundaries must be entered on the Official Map as soon as the amendment has been approved by the Mayor and Council. The entry must be as follows: "On (date) by official action of the Mayor and Council of Molena the following change (or changes) were made in the Official Zoning Map, Molena, Georgia: (Brief description of change)". It must be signed by the Mayor. No amendment to portions of this Ordinance that are illustrated on the Official Map becomes effective until after the change has been entered as described above on the Official Map.
- C. Alterations to the Official Map may be made only by the procedures contained in Sections 410 and 2302 of this Ordinance. Any unauthorized alteration of the Official Map by any person is a violation of this Ordinance.
- D. The Official Map shall be on display in the office of the Administrative Officer, and is the Final Authority as to the current status of zoning district boundaries.
- E. If the Official Map becomes damaged, destroyed, lost, or difficult to interpret because of the nature or number of changes and additions, the Mayor and Council may adopt a new Official Map which will replace the

previous Official Map. The new Official Map is identified as such in the same manner as described above in this section. When the new Official Map is adopted, a notation must be made on the previous Official Map that it is no longer valid, indicating the date that the new Official Map was adopted, as a reference aid. The previous Official Map should be preserved, if it has not been lost or destroyed, for possible future reference.

Section 2303: (Reserved)

Section 2304: Zoning District Designation for Additional Land Annexed to Molena.

- A. Whenever additional land is annexed to Molena, the Mayor and Council will received a Request for Annexation as provided by Chapter 36 of the Official Code of Georgia, "Annexation of Territory." The applicant for annexation will also apply for an Amendment to this Ordinance assigning a zoning designation under this Ordinance for the subject property should it be annexed.
- B. All applications for annexation/zoning amendment must first be reviewed by the Planning Commission. The Planning Commission will study the proposed annexation/amendment and determine if it meets the requirements of this Ordinance, as well as other applicable ordinances of Molena. At this time, the Administrative Officer may review the proposed annexation/amendment and make written recommendations to the Planning Commission.
- C. Approving a zoning district designation for annexed property and adding the subject property to the Official map involves Amendment to the Molena Zoning Ordinance and Alteration of the Official Map. The procedures contained in Sections 410 and 2302 must be followed in handling such an amendment request.
- D. The Administrative Officer must post a sign at least two (2) feet by three (3) feet in size in a conspicuous place on the property at least fifteen (15) days but not more than forty-five (45) days prior to the date of the scheduled public hearing. The sign must set forth the fact that it is a "ZONING NOTICE." It must show the present zoning classification, the proposed zoning classification, the purpose, date, time, and place of the scheduled public hearing, and it must inform the public that additional information may be obtained from the Administrative Officer.

- E. The Planning Commission must then conduct a public hearing on the amendment to obtain public comment on the proposed zoning district sought by the applicant. The responsibility of conducting the public hearing is delegated by the Mayor and Council to the Planning Commission under provisions specified in the Zoning Procedures Law (Ga. Code 1981, Section 36-66-1, enacted by Ga. L. 1985, p.1139, l.) paragraph 2-(b)-(1). Notice of the hearing must be published in a newspaper of general circulation in Molena at least fifteen (15) days but not more than forty-five (45) days before the hearing Contents of Notice set forth. The location of the property, present zoning classification, and proposed zoning classification must be indicated in the newspaper notice.
- F. The policies and procedures set forth in Section 410 of this Ordinance must be followed in conduct of the public hearing on the amendment.
- G. The Planning Commission will make a written record of the comments received at the public hearing. After the public hearing, and at an official meeting of the Planning Commission, the Planning Commission will formulate its recommendations to the Mayor and Council on the amendment and the annexation request, recording them in the minutes for that meeting. The Planning Commission will send the written record of comments received at the public hearing on the amendment request along with its recommendations on the proposed amendment and annexation in writing to the Mayor and Council within thirty (30) days of the close of the public hearing, stating reasons for its recommendations. If the Planning Commission fails to send its recommendations to the Mayor and Council within thirty (30) days of the close of the public hearing, the Mayor and Council will assume that the Planning Commission approves.
- H. After reviewing the record of the public hearing and considering recommendations from the Planning Commission, the Mayor and Council will then make an official decision on the proposed amendment. The decision may or may not concur with the recommendations of the Planning Commission. This decision will be recorded in the official minutes of the meeting.
- I. If the application for amendment to set a zoning designation for the subject property is not approved by the Mayor and Council, then no action on the application for annexation will be taken, since the zoning designation of property proposed to be annexed must first be set according to minimum required

policies and procedures before property may be annexed. The applicant may then reapply for another zoning district amendment for an alternative zoning designation if he so desires.

- J. If the Mayor and Council approve the amendment for zoning designation of the subject property, they will then make a decision on the annexation request. The decision may or may not concur with the recommendations of the Planning Commission. This decision will be recorded in the official minutes of the meeting.
- K. If the Mayor and Council deny the annexation request, the approval of the amendment for zoning designation of the subject property becomes void. A minimum period of twelve (12) months must pass before the same amendment/annexation proposal is again submitted for consideration.
- L. If the annexation request is approved, the Official Map will be changed. Procedures specified in Section 2302 must be followed in doing this.
- M. Decisions of the Mayor and Council may be appealed on points of law to the Pike County Superior Court. Findings of fact, however, may not be appealed.

Section 2305: Zoning District Boundaries. Where uncertainty exists with respect to the exact location of the boundary of a zoning district shown on the Official Map, the following guidelines will be used in establishing the exact location of the boundary:

- A. Where a zoning district boundary line as appearing on the Official Map divides a single lot that was a single lot at the time of the enactment of this Ordinance, the requirements for the zoning district in which the greater portion of the lot lies must be extended to the balance of the lot.
- B. Where a zoning district boundary is indicated as approximately following a municipal/county boundary.
- C. Where a zoning district boundary is indicated as approximately following a property line or such line extended, the line or lines extended is the boundary.
- D. Where a zoning district boundary is indicated as approximately following the center line of a stream bed, such a center line is the boundary.

- E. Where a zoning district boundary is indicated as approximately parallel to the center line of a street, road, railroad, or the right-of-way of such a facility, the zoning district boundary is parallel to the line and at a distance from it as indicated by scale on the Official Map.

Section 2306: Relationship Between Official Map and Molena Land Use Plan (where one exists).

- A. The Molena Land Use Plan (where one exists) was prepared by the Planning Commission and adopted by the Mayor and Council of Molena. It should provide the best possible indication of desirable Land Use patterns that will meet projected future demand for land uses of various types. The Molena Land Use Plan (where one exists) supplies a body of information on which decisions on future development may be made that are guided by sound planning principles. The Plan does not legally regulate land uses. It contains a Land Use Map, which shows suitable areas for various types of land uses. Actual land uses may not necessarily conform to the Land Use Map.
- B. The zoning districts contained on the Official Map carry standards which must be met by all new development and construction in the City. The arrangement of zoning districts is based on land use information contained in the Molena Land Use Plan (where one exists). Establishment and amendment of zoning district boundaries must be in conformance with the Molena Land Use Plan (where one exists). (This does not necessarily mean a one-to-one correspondence). This assures that such amendments to the Official Map are based on defensible findings of fact as well as sound comprehensive planning principles.

APPENDIX A

(RESERVED)

**ORDINANCE ESTABLISHING
MOLENA PLANNING COMMISSION**

Section 101: Scope. This Ordinance provides for the following:

- A. Establishes the Molena Planning Commission.
- B. Sets regulations for membership, appointments, terms of office, and compensation of members.
- C. Sets rules and procedures for operation.
- D. Defines the powers of the Molena Planning Commission.
- E. Repeals conflicting ordinances.

Section 102: Definitions. The following words, terms and phrases, when used in this Ordinance, have the meanings ascribed to them in this Section, except where the context clearly indicates a different meaning.:

- A. **City:** Molena
- B. **Planning Commission:** The Molena Planning Commission.
- C. **Mayor and Council:** The Molena Mayor and Council.

Section 103: Planning Commission Established. This establishes the Molena Planning Commission. The Zoning Procedures Law (Ga. Code 1981, S36-66-1, enacted by Ga. L. 1985, p.1139, Sl.), paragraph 2-(b)-(1) authorizes such administrative officers, bodies, and agencies as the Mayor and Council of Molena may establish for the efficient exercise of its zoning powers.

Section 104: Purpose and Powers. The purpose of the Planning Commission is as follows:

- A. Advise the Mayor and Council on applications for amendment to this Ordinance by examining amendment applications and providing written recommendations with reasons for the recommendations to the Mayor and Council as specified in Section 410.
- B. Dispense general information about this Ordinance to the public upon request.
- C. Propose amendments to this Ordinance.

APPENDIX B

ORDINANCE ESTABLISHING
MOLENA PLANNING COMMISSION

Section 101: Scope. This Ordinance provides for the following:

- A. Establishes the Molena Planning Commission.
- B. Sets regulations for membership, appointments, terms of office, and compensation of members.
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- D. Defines the powers of the Molena Planning Commission.
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- A. City: Molena
- B. Planning Commission: The Molena Planning Commission.
- C. Mayor and Council: The Molena Mayor and Council.

Section 103: Planning Commission Established. This establishes the Molena Planning Commission. The Zoning Procedures Law (Ga. Code 1981, S36-66-1, enacted by Ga. L. 1985, p.1139, Sl.), paragraph 2-(b)-(1) authorizes such administrative officers, bodies, and agencies as the Mayor and Council of Molena may establish for the efficient exercise of its zoning powers.

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- A. Advise the Mayor and Council on applications for amendment to this Ordinance by examining amendment applications and providing written recommendations with reasons for the recommendations to the Mayor and Council as specified in Section 410.
- B. Dispense general information about this Ordinance to the public upon request.
- C. Propose amendments to this Ordinance.

- D. Maintain and update the Molena Land Use Plan (where one exists) so that it may provide a current data base with which decisions on proposed amendments to this Ordinance may be made that utilize sound planning principles.
- E. Carry out an ongoing comprehensive planning program which, like the Land Use Plan (where one exists), will provide current data on which decisions regarding this Ordinance may be based that utilize sound planning principles.
- F. Advise the Mayor and Council on matters of zoning and annexation, as appropriate.

Section 105: Membership and Appointments. The Planning Commission consists of at least three (3) but no more than five (5) members. All members must reside within Molena. They are appointed by the Mayor and Council. None of the members of the Planning Commission may hold any other public office--except that one (1) member may also be a member of the Molena Board of Appeals. Commission members may be removed by the Mayor and Council for cause, upon written charges, and after a public hearing. Members of the Planning Commission will be disqualified to act upon any matter before the Planning Commission in which they have a personal financial interest or other conflict of interest.

Section 106: Terms of Office. The term of office for each member of the Planning Commission is for three (3) years. However, in the appointment of the first Commission, two (2) members will be appointed for three (3) years, two (2) for two (2) years, and one (1) for one (1) year. Any vacancy in the membership will be filled for the unexpired term in the same manner as the initial appointment. If one appointee is from the Molena Board of Appeals and he ceases to be a member of the Board of Appeals during the term of his appointment to the Planning Commission, his membership in the Planning Commission will terminate and the Mayor and Council may name another member of the Planning Commission to fill the unexpired term of its original appointee.

Section 107: Compensation. Planning Commission members will receive compensation for their service as determined by the Mayor and Council.

Section 108: Rules and Procedures.

- A. The Planning Commission will elect one of its members as Chairman. The Chairman will serve for one (1) year. At the end of that term, he must either be re-elected or a successor elected.

- B. The Planning Commission will appoint a secretary, who may be an officer of Molena or the Planning Commission.
- C. The Planning Commission has the authority to adopt rules of procedure.
- D. Meetings of the Planning Commission will be held at the call of the Chairman, or in his absence the Acting Chairman.
- E. The Chairman or the Acting Chairman may administer oaths and compel the attendance of witnesses by subpoena. The Planning Commission must keep minutes of its proceedings, showing the vote of each member upon each question, or if absent or failing to vote, indicating such a fact. The Planning Commission must also keep records of its examinations and other official actions, all of which must be immediately filed in the office of the Planning Commission and will be public record.
- F. A decision of the Planning Commission must be recorded in the minutes for the meeting at which the decision was made, and must contain a statement of the grounds of its decision or action. The full text of the decision must be sent to the applicant.
- G. No application requesting the same action for the same property will be received or heard by the Planning Commission twice within the same twelve (12) month period. However, that limitation does not affect the right of the Planning Commission to grant a rehearing as provided in the rules and procedures adopted by the Planning Commission.

Section 109: Appealing and Action of the Planning Commission.

- A. If the Planning Commission executes an action which the developer or other aggrieved party believes to be in contrary to law, that action may be appealed. Findings of fact, however, may not be appealed. Such an appeal must be filed within thirty (30) days of the date on which the action by the Planning Commission was taken.
- B. The Board of Appeals has jurisdiction for hearing appeals concerning actions of the Planning Commission related to this Ordinance. Applications for appeal may be obtained from and submitted to the Administrative Officer, who will transmit them to the Board of Appeals for its consideration.

- C. When an action of the Planning Commission is appealed, all construction or other activity authorized by the appealed action must be stopped immediately. In certain cases, however, the Administrative officer may feel that the stopping of such construction or other activity authorized by the appealed action will cause imminent peril to life or property. Then, the Administrative Officer may certify to the Board of Appeals that, because of facts stated in the certificate, the halting of construction or other activity authorized by the appealed action would in his opinion cause imminent peril to life or property. In such cases, the construction or other activity authorized by the appealed action is allowed to continue unless a restraining order is granted by either the Board of Appeals or a court of appropriate jurisdiction.
- D. When an application for appeal of an action of the Planning Commission is received, the Board of Appeals will set a time and place for a public hearing on the appeal. Notice of the hearing must be published in a newspaper of general circulation in Molena at least fifteen (15) days before the hearing. In addition, the parties to the appeal will be notified of the date of the hearing by the board of Appeals by U. S. Mail at least fifteen (15) days before the hearing, or have a representative attend instead.
- E. The Board of Appeals will make a decision concerning the appeal and record the decision in the minutes for that meeting. Further appeal on points of the law may be made to the Pike County Superior Court.

Section 110: Conflict With Other Ordinances Portions of other ordinances that conflict with portions of this Ordinance are repealed. Non-conflicting parts of those ordinances remain in effect.

Section 111: Validity. Should any section or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, that declaration will not affect the validity of the Ordinance as a whole nor any part of it other than the part that was declared to be unconstitutional or invalid.

Section 112: Effective Date. This Ordinance takes effect
on _____, the date of its adoption.

Mayor Molena, Georgia Mayor Molena, Georgia

Approved As To Legal Sufficiency:

City Attorney
Molena, Georgia

Attest:

APPENDIX C

ORDINANCE ESTABLISHING
MOLENA BOARD OF APPEALS

Section 101: Scope. This Ordinance provides for the following:

- A. Establishes the Molena Board of Appeals.
- B. Defines the purpose and powers of the Molena Board of Appeals.
- C. Sets regulations for membership, appointments, terms of office, and compensation of members.
- E. Repeals conflicting ordinances.

Section 102: Definitions. The following words, terms and phrases, when used in this Ordinance, have the meanings ascribed to them in this Section, except where the context clearly indicates a different meaning:

- A. **City:** City of Molena.
- B. **Board of Appeals:** The Molena Board of Appeals.
- C. **Mayor and Council:** The Molena Mayor and Council.

Section 103: Board of Appeals Established. This establishes the Molena Board of Appeals.

Section 104: Purpose and Powers. The purpose of the Board of Appeals is as follows:

- A. Hears appeals from the Molena Zoning Ordinance and has certain other administrative duties under the Zoning Ordinance.
- B. Duties, and procedures of the Board of Appeals under the Zoning Ordinance are specified in that Ordinance.
- C. Hears appeals from actions of the Administrative Officer.

Section 104: Membership and Appointments. The Board of Appeals consists of at least three (3) but no more than five (5) members. All members must reside within Molena. They

APPENDIX C

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- A. City: City of Molena.
- B. Board of Appeals: The Molena Board of Appeals.
- C. Mayor and Council: The Molena Mayor and Council.

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- A. Hears appeals from the Molena Zoning Ordinance and has certain other administrative duties under the Zoning Ordinance.
- B. Duties, and procedures of the Board of Appeals under the Zoning Ordinance are specified in that Ordinance.
- C. Hears appeals from actions of the Administrative Officer.

Section 104: Membership and Appointments. The Board of Appeals consists of at least three (3) but no more than five (5) members. All members must reside within Molena. They

are appointed by the Mayor and Council. None of the members of the Board of Appeals may hold any other other public office--except that one (1) member may also be a member of the Molena Planning Commission. Board members may be removed by the Mayor and Council for cause, upon written charges, and after a public hearing. Members of the Board of Appeals will be disqualified to act upon any matter before the Board of Appeals in which they have a personal financial interest or other conflict of interest.

Section 105: Terms of Office. The term of office for each member of the Board of Appeals is for three (3) years. However, in the appointment of the first Board, two (2) members will be appointed for three (3) years, two (2) for two (2) years, and one (1) for one (1) years. Any vacancy in the membership will be filled for the unexpired term in the same manner as the initial appointment. If one appointee is from the Molena Planning Commission and he ceases to be a member of the Planning Commission during the term of his appointment to the Board of Appeals, his membership in the Board of Appeals will terminate and the Mayor and Council may name another member of the Planning Commission to fill the unexpired term of its original appointee.

Section 106: Compensation. Board of Appeals members will receive compensation for their service as determined by the Mayor and Council.

Section 107: Rules and Procedures. The Board of Appeals will elect one of its members as Chairman. The Chairman will serve for one (1) year. At the end of that term, he must either be re-elected or a successor elected. The Board of Appeals will appoint a secretary, who may be an officer of Molena or the Planning Commission. The Board of Appeals has the authority to adopt rules of procedure. Meetings of the Board of Appeals will be held at the call of the Chairman, or in his absence the Acting Chairman. The Chairman or the Acting Chairman may administer oaths and compel the attendance of witnesses by subpoena. The Board of Appeals must keep minutes of its proceedings, showing the vote of each member upon each question, or if absent or failing to vote, indicating such a fact. The Board of Appeals must also keep records of its examinations and other official actions, all of which must be immediately filed in the office of the Board of Appeals and will be public record. A decision of the Board of Appeals must be recorded in the minutes for the meeting at which the decision was made, and must contain a statement of the grounds of its decision or action. The full text of the decision must be sent to the appellant. No appeal requesting the same relief for the same property will

be received or heard by the Board of Appeals twice within the same twelve (12) month period. However, that limitation does not affect the right of the Board of Appeals to grant a rehearing as provided in the rules and procedures adopted by the Board of Appeals.

Section 108: Conflict with Other Ordinances. Portions of other ordinances that conflict with portions of this Ordinance are repealed. Non-conflicting parts of those ordinances remain in effect.

Section 109: Validity. Should any section or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, that declaration will not affect the validity of the Ordinance as a whole nor any part of it other than the part that was declared to be unconstitutional or invalid.

Section 110: Effective Date. This Ordinance takes effect on _____, the date of its adoption.

Witnessed by

Mayor

APPENDIX D

**MOLENA SOIL EROSION
AND SEDIMENTATION CONTROL ORDINANCE**

Section 101: Title. This Ordinance is known as the "Molena Soil Erosion and Sedimentation Control Ordinance."

Section 102: Definitions. The following words, terms and phrases, when used in this Ordinance, have the meanings ascribed to them in this Section, except where the context clearly indicates a different meaning:

- A. **City:** The City of Molena.
- B. **Cut:** A portion of land surface or area from which earth has been removed or will be removed by excavation; the depth below original ground surface to excavated surface. Also known as "excavation."
- C. **District:** The Towaliga Soil and Water Conservation District.
- D. **Erosion and Sedimentation Control Plan:** A plan for the control of soil erosion and sediment resulting from a land-disturbing activity. Also known as "plan."
- E. **Existing Grade:** The vertical location of the existing ground surface prior to cutting or filling.
- F. **Filling:** The placement of any soil or other solid material either organic or inorganic on a natural ground surface or an excavation.
- G. **Finished Grade:** The final grade or elevation of the ground surface forming the proposed design.
- H. **Grading:** Altering surfaces to specified elevations, dimensions, and/or slopes; this includes stripping, cutting, filling, stockpiling, and shaping, or any combination of these activities, and it also includes the land in its cut or filled condition.
- I. **Issuing Authority:** The Molena Administrative Officer.

- J. **Land Disturbing Activity:** Any land change which may result in soil erosion from water or wind and the movement of sediments into State water or onto lands within the State, including but not limited to clearing, dredging, grading, excavating, transporting, and filling of land.
- K. **Local Planning Commission:** The Molena Planning Commission.
- L. **Natural Ground Surface:** The ground surface in its original state before any grading, excavation, or filling.
- M. **Permit:** The authorization necessary to begin a land-disturbing activity under the provisions of this Ordinance.
- N. **Person:** Any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, State agency, municipality, or other political subdivision of the State of Georgia, any interstate body, or any other legal entity.
- O. **Sediment:** Solid material--both mineral and organic--that is in suspension, is being transported, or has been moved from its site of origin by air, water, ice, or gravity, as a product of erosion.
- P. **Slope:** Degree of deviation of a surface from the horizontal, usually expressed in percent or degree.
- Q. **Stabilization:** The process of establishing an enduring soil cover of vegetation, mulch, or other ground cover in combination with installation of temporary or permanent structures for the purpose of reducing to a minimum the transport of sediment by wind, water, ice, or gravity.
- R. **Structural Practices:** Soil and water conservation measures--other than vegetation--utilizing the mechanical properties of matter for the purpose of either changing the surface of the land or storing, regulating, or disposing of runoff to prevent excessive sediment loss. This includes but is not limited to the use of riprap, sediment basins,

dikes, level spreaders, waterways, outlets, diversions, grade stabilization structures, sediment traps, land grading, etc.

S. **Vegetative Practices:** Measures for the stabilization of erosion or sediment producing areas by covering the soil with any of the following:

1. Permanent seeding, sprigging, or planting to produce long-term vegetative cover.
2. Short-term seeding to produce temporary vegetative cover.
3. Sodding to cover areas with a turf of perennial sodforming grass.

T. **Watercourse:** Any natural or artificial watercourse, stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, gully, ravine, or wash in which water flows either continuously or intermittently and which has a definite channel, bed, and banks, and including any area adjacent thereto subject to inundation by reason of overflow or floodwater.

Section 103: Scope and Exclusions. This Ordinance applies to any land disturbing activity undertaken by any person on any lands other than federal lands, except for the following:

- A. "Surface Mining", as defined in sub-section (a) of Section 3 of the "Georgia Surface Mining Act of 1968" (Ga. Laws 1968, p.9) as amended.
- B. Granite quarrying and land clearing for such quarrying.
- C. Such minor land disturbing activities as home gardens and individual home landscaping, repairs, maintenance work, and other related activities which result in minor soil erosion.
- D. The construction of single-family residences when they are constructed by or under contract with the owners for his occupancy.
- E. Agricultural practices involving the establishment, cultivation, or harvesting of products of the field

or orchard; preparing and planting of pasture land; forestry land management practices including harvesting; farm ponds; dairy operations; livestock and poultry management practices; and the construction of farm buildings.

- F. Any project carried out under the technical supervision of the Soil Conservation Service of the United States Department of Agriculture;
- G. Any project involving five (5) acres or less; however, this exemption does not apply to any land disturbing activity within 200 feet of the bank of any State waters. For purposes of this paragraph, "State waters" excludes channels and drainageways which have water in them only during and immediately after rainfall events and intermittent streams which do not have water in them year round. Any person responsible for a project which involves five (5) acres or less, which involves land disturbing activity, and which is within 200 feet of a channel or drainageway which has water in it only during and immediately after a rainfall event or an intermittent stream which does not have water in it year round must prevent sediment from moving beyond the boundaries of the property on which such a project is located.
- H. Construction or maintenance projects undertaken or financed in whole or in part by the Georgia Department of Transportation, the Georgia Highway Authority, the Georgia Tollway Authority; any road construction or maintenance project undertaken by any county or municipality; any water or sewage authority established by the General Assembly of Georgia. Projects described in this paragraph must conform to the specifications used by the Georgia Department of Transportation for control of soil erosion and sedimentation on its highway construction projects.
- I. Any land disturbing activities conducted by any airport authority. Any such land disturbing activity must conform as may be feasible and practical to the minimum standards set forth in Section 105 of this Ordinance.
- J. Any land disturbing activities conducted by any electrical membership corporation, municipal electrical system, or any public utility under the

regulatory jurisdiction of the Georgia Public Service Commission. Any such land disturbing activity must conform as may be feasible and practical to the minimum standards set forth in Section 105 of this Ordinance.

Section 104: Application Procedure.

- A. **General:** The landowner, developer, and designated planners and engineers are encouraged to review the general development plans and detailed plans of any unit of government that affect the tract to be developed and the areas surrounding it. They are also encouraged to become acquainted with the zoning ordinance, subdivision regulations, this Ordinance, and other ordinances which regulate the development of land within Molena.
- B. **Compliance:**
1. No person may perform any land-disturbing activity within the confines of Molena without first obtaining a permit from the Administrative Officer to perform such an activity.
 2. Applications for permits must be submitted to the Administrative Officer of Molena. Applications for permits will not be accepted unless accompanied by two (2) copies of the applicant's soil erosion and sediment control plan. Such plans must include, as a minimum, the data specified in subsection D of Section 104 of this Ordinance. Soil erosion and sediment control plans must conform to the provisions of Section 105 of this Ordinance.
 3. A fee, payable to the Mayor and Council of Molena in the amount of Fifty Dollars (\$50) will be charged for each application.
 4. Immediately upon receipt of an application for permit, the Administrative Officer will refer the application and plan to the Towaliga Soil and Water conservation District for its review and recommendations. The results of the District review will be forwarded to the Administrative Officer.
- C. **Permits:**

1. A permit will be issued after the District has determined that the plans for erosion and sedimentation control comply with the requirements of Section 105 of this Ordinance and after the Administrative Officer has determined that the plans comply with all ordinances, rules, and regulations in effect within Molena.
2. Permits will be issued or denied as soon as practical after receipt of the application by the Administrative Officer, but in any event not later than 45 days after receipt of a completed application. If the permit is denied, the reason for denial will be furnished to the applicant.
3. If the tract is to be developed in phases, then a separate permit will be required for each phase.
4. The permit may be suspended, revoked, or modified by the Administrative Officer, upon finding that the holder is not in compliance with this Ordinance.

D. **Data Required:** The applicant's erosion and sedimentation control plan must include, as a minimum, the following information for the entire tract of land to be disturbed, whether or not the tract will be developed in stages:

1. A narrative description of the overall project. This narrative must include the following:
 - a. Anticipated starting and completion dates of each sequence and stage of land disturbing activities and the expected date the final stabilization will be completed.
 - b. A description of the sediment control program and sediment control practices.
 - c. An adequate description of general topographic and soil conditions of the tract, as available from the Towaliga Soil and Water Conservation District.

- d. A description of the zoning classification of adjacent property and a description of existing structures, buildings, and other fixed improvements located on surrounding properties.
 - e. A description of the maintenance program for sediment control facilities, including inspection programs, vegetative establishment of exposed soils, method and frequency of removal and disposal of solid waste material removed from control facilities, and disposition of temporary structural measures.
2. Maps, drawings, and supportive computations bearing the signature/seal of a registered professional engineer or other professionally trained person knowledgeable and competent in this area. These materials must contain the following:
- a. A site location drawing of the proposed project, indicating the location of the proposed project in relation to roadways, jurisdictional boundaries, streams, and rivers.
 - b. A boundary line survey of the site on which the work is to be performed.
 - c. A topographic map containing contours at an interval and scale that will depict the existing and finished grades, existing and proposed watercourses, and the proposed features of the development.
 - d. A plan for temporary and permanent vegetative and structural erosion and sediment control measures.
 - e. Specifications of soil erosion and sedimentation control measures in accordance with the standards and specifications of this Ordinance.
 - f. Computations, timing, schedules, and other supportive data required for review of the applicant's plan.

Section 105: Principles and Standards.

- A. **Implementation:** Excessive soil erosion and resulting sediment pollution can take place during land disturbing activities. Therefore, plans for those land disturbing activities which are not excluded by this Ordinance must contain provisions for application of soil erosion and sediment control measures. These provisions must be incorporated into the preliminary plan. Soil erosion and sediment control measures must conform to the standards and specifications of this Ordinance. The application of measures apply to all features of the site--including streets, utility installations, drainage facilities, and other temporary and permanent improvements. Measures must be installed to prevent or control erosion and sediment pollution during all stages of any land disturbing activity.
- B. **General Design Principles:** Practical combinations of the following principles must be utilized, as a minimum, in planning measures to be installed for any land disturbing activity:
1. The land disturbing activity must conform to existing topography and soil type so as to create the lowest practical erosion potential.
 2. Land disturbing activities must be conducted in a manner minimizing erosion.
 3. The disturbed area and the duration of exposure to erosive elements must be kept to a practical minimum.
 4. Cut and fill operations must be kept to a minimum.
 5. Disturbed soil must be stabilized as quickly as practical.
 6. Whenever feasible, natural vegetation must be retained, protected, and supplemented.
 7. Temporary vegetation or mulching must be employed to protect exposed critical areas during development.

8. Permanent vegetation and structural erosion control measures must be installed as soon as practical.
9. Adequate provisions must be provided to minimize damage from surface water to the cut face of excavations or the sloping surface of fills.
10. To the extent necessary, sediment runoff water must be trapped by the use of debris basins, sediment basins, silt traps, or similar measures until the disturbed area is stabilized.
11. Cuts and fills may not endanger adjoining property.
12. Fills must not encroach upon natural water-courses or constructed channels in a manner so as to adversely affect other property owners.
13. Grading equipment must cross flowing streams by means of bridges or culverts, except when such methods are not feasible. Any cases in which bridges or culverts are not used must be kept to an absolute minimum.

C. **Standards and Specifications:** Plans for land disturbing activities must contain soil erosion and sedimentation control plans and specifications which conform to the publication entitled Manual for Erosion and Sediment Control in Georgia, which is on file in the Office of the Mayor and Council. The publication entitled Manual for Erosion and Sediment Control in Georgia is incorporated by reference in this Ordinance.

D. **Maintenance:**

1. Maintenance of all soil erosion and sedimentation control practices--whether temporary or permanent--is at all times the responsibility of the owner.
2. Sediment basins are considered hazardous to life and property and must be fenced and posted in accordance with the Standards and Specifications incorporated by reference in this Ordinance.

Section 106: Administrative Appeal and Judicial Review.

A. Administrative Remedies:

1. The Administrative Officer may suspend, revoke, modify, or grant with conditions any permit issued under the provisions of this Ordinance upon finding that any one of the following conditions exists:
 - a. The holder of the permit is not in compliance with the approved erosion and sediment control plan.
 - b. The holder of the permit is in violation of conditions placed on the permit by the Administrative Officer.
 - c. The holder of the permit is in violation of any ordinance or regulation adopted pursuant to this Ordinance.
2. If the Administrative Officer executes an action which the permittee or other aggrieved party believes to be contrary to law, that action may be appealed to the Board of Appeals. Findings of fact, however, may not be appealed. Such an appeal must be filed within thirty (30) days of the date on which the action of the Administrative Officer was taken.

- B. Judicial Review:** If the Mayor and Council or Board of Appeals executes an action which the permittee or other aggrieved party believes to be contrary to law, that action may be appealed to the Pike County Superior Court. Findings of fact, however, may not be appealed. Such an appeal must be filed within thirty (30) days of the date on which the action of the Mayor and Council or Board of Appeals was taken.

Section 107: Inspection and Enforcement.

The Administrative Officer will periodically inspect the sites of land disturbing activities for which permits have been issued to determine if the activities are being conducted in accordance with the plan and if the measures required in the plan are effective in controlling erosion and sedimentation. If it is determined that a person engaged in land disturbing

activities has failed to comply with the approved plan, a written notice to comply will be served upon that person. The notice will set forth the measures necessary to achieve compliance with the plan and will state the time within which such measures must be completed. If the person engaged in land disturbing activity fails to comply within the time specified, he will be in violation of this Ordinance. The Mayor and Council has the power to conduct such investigations as it may reasonably deem necessary to carry out its duties as prescribed in this Ordinance. For such investigations, the Mayor and Council may enter at reasonable times any property--public or private--to inspect sites of land disturbing activities. No person may refuse entry or access to any authorized representative or agent of the Mayor and Council bearing proper identifying credentials who requests entry for the purpose of inspection. Moreover, no person may obstruct, hamper, or interfere with any such representative while in the process of carrying out his official duties.

Section 108: Penalties and Incentives. The requirements of this Ordinance are enforced by the Administrative Officer. He will inspect any work performed under the provisions of this Ordinance. If he inspects and finds conditions not as stated in the permittee's application, grading permit, or approved plan, he may take any of the following actions:

- A. He may refuse to approve further work.
- B. He may stop the issue of any further building permits.
- C. He may revoke the original permit until the permittee shows proof of compliance with the terms of the permit.
- D. He may institute an injunction or other appropriate action in the Pike County Superior Court to stop the violation.

Section 109: Legal Status Provisions.

- A. **Conflict with Other Ordinances:** Portions of other ordinances that conflict with portions of this Ordinance are repealed. Non-conflicting parts of those ordinances remain in effect.
- B. **Validity:** Should any section or provision of this Ordinance be declared by the courts to be

unconstitutional or invalid, that declaration will not affect the validity of the Ordinance as a whole nor any part of it other than the part that was declared to be unconstitutional or invalid.

- C. **Liability:** Neither the approval of a plan under the provisions of this Ordinance, nor the compliance with the provisions of this Ordinance relieves any person from responsibility for damage to any person or property otherwise imposed by law. Moreover, neither the approval of a plan under the provisions of this Ordinance, nor the compliance with the provisions of this Ordinance imposes any liability upon Molena for damage to any person or property.
- D. **Effective Date:** This Ordinance takes effect on _____, the date of its adoption.

Witnessed by

Mayor

APPENDIX E

ANSI A225.1

NEPA 501A

Manufactured

Home

Installations

1982



National Fire Protection Association, Batterymarch Park, Quincy, MA 02269
National Conference of States on Building Codes and Standards, Inc., 48 W.
Carlisle Drive, Herndon, VA 22070

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For information on obtaining Formal Interpretations of the document, proposing Tentative Interim Amendments, proposing amendments for Committee consideration, and appeals on matters relating to the content of the document, write to the Secretary, Standards Council, National Fire Protection Association, Batterymarch Park, Quincy, MA 02269 for the fire safety portions and to Director of Codes & Standards, NCSBCS, for other questions.

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**NCSBCS Standard for
Manufactured Home Installations
(Manufactured Home Sites, Communities and Set-ups)**

ANSI A225.1-1982

including

NFPA Standard for

Firesafety Criteria for

Mobile Home Installations, Sites and Communities

NFPA 501A-1982

1982 Edition of ANSI A225.1

This edition of NCSBCS *Standard for Manufactured Home Installations (Manufactured Home Sites, Communities and Set-ups)* was prepared by the National Conference of States on Building Codes and Standards, Inc. (NCSBCS) Committee on Manufactured Home Installations (Manufactured Home Sites, Communities and Set-ups). It was reported out to the NCSBCS Standards and Evaluation Committee at the September 14, 1982 Annual Meeting of the Conference. It was approved by the NCSBCS Standards and Evaluation Committee at that meeting. Prior to approval, the document had been submitted to public review and comment both within NCSBCS and via the American National Standards Institute (ANSI). The document was also submitted to the NFPA Committee and was coordinated with NFPA staff. All public comments were resolved and this document has been submitted to ANSI for their separate approval. However, under the NCSBCS procedures, the NCSBCS Standards and Evaluation Committee approval of September 14, 1982 is the effective date for this standard as an NCSBCS standard and for joint publication as an NCSBCS/NFPA standard. This edition supersedes all previous editions.

1982 Edition of NFPA 501A

This edition of NFPA 501A, *Standard for Firesafety Criteria for Mobile Home Installations, Sites and Communities*, was prepared by the Technical Committee on Firesafety for Mobile Homes and acted on by the National Fire Protection Association, Inc., on May 19, 1982, at its Annual Meeting in San Francisco, California. It was issued by the Standards Council on June 8, 1982 with an effective date of June 28, 1982, and supersedes all previous editions.

Origin and Development of NFPA 501A

NFPA activity in this general area commenced in 1937 when NFPA organized its first Committee on Trailers and Trailer Courts. The first standard covering Trailer Coach Camps appeared in 1939, with revisions in 1940, 1952, 1960, and 1964. A completely new edition was adopted in 1971, and this text was revised in 1972, 1973, 1974, 1975, and 1977.

The American National Standards Institute (ANSI) approved the 1972 NFPA edition on May 8, 1973; the 1973 NFPA edition on December 28, 1973; the 1974 NFPA edition on January 30, 1975; the 1975 NFPA edition on February 27, 1976; and the 1977 NFPA edition on October 18, 1977. This 1982 NFPA edition has also been submitted for similar approval.

The 1977 edition was developed by the Sectional Committee on Mobile Home Installations and processed through the Correlating Committee on Mobile Homes and Recreational Vehicles and was approved by the National Fire Protection Association at its 1977 Annual Meeting, May 16-19. The only substantive changes since the previous (1975) edition were revisions to Part 8 on mobile home park electrical systems with the revisions thereto indicated by vertical marginal rules. Some editorial revisions were accomplished in other Parts and references to other standards referenced therein were updated.

This 1982 edition on *Standard for Firesafety Criteria for Mobile Home Installations, Sites and Communities* supersedes the 1977 edition and was adopted by NFPA at its Annual Meeting held in San Francisco on May 19, 1982.

This edition of the standard was produced by the newly formed Committee for Firesafety for Mobile Homes (June 20, 1979) charged with the responsibility of developing documents for firesafety criteria for single-family mobile homes including the installation, sites and communities and the maintenance of and improvements for existing mobile homes. Therefore, this edition excludes all sections of previous editions not considered within the Committee scope. Notably excluded are stabilizing and anchoring systems; requirements for piers and footings; and plumbing, including sewage disposal systems. Requirements for park electrical systems are addressed by reference to the *National Electrical Code*®.

Modifications have also been made in sections dealing with fuel supply, air conditioning and life and firesafety.

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Manufactured Home Installations
(Manufactured Home Sites, Communities, and Set-ups)**

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This list represents the membership at the time the Committee was balloted on the text of this edition. Since that time, changes in the membership may have occurred.

NOTE: Membership on a Committee shall not in and of itself constitute an endorsement of the Association or any document developed by the Committee on which the member serves.

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**Cross-Reference Between NCSBCS/NFPA Standard for
Manufactured Home Installations (Manufactured Home Sites,
Communities, and Set-ups) and the NFPA Standard for Firesafety
Criteria for Mobile Home Installations, Sites, and Communities**

NCSBCS/ NFPA 1	NFPA 501A	NCSBCS/ NFPA	NFPA 501A
1-1	1-1		
1-2.1 (a)	1-2 (a)	8-2	5-2
1-2.1 (b)	1-2 (b)	8-2.1	5-2.1
1-2.2	1-2.1	8-2.1.1	5-2.1.1
1-3	1-3	8-2.1.2	5-2.1.2
1-4	1-4	8-3	5-3
1-4.2	1-4.1	8-3.1	5-3.1
1-5	1-5	8-3.2	5-3.2
1-5.1	1-5.1	8-3.4	5-3.3
1-5.5	1-5.2	8-4	5-4
1-6.3.1	1-6	8-4.1	5-4.1
		8-4.2	5-4.2
		8-4.3	5-4.3
		8-5.1	5-5.1
		8-5.2	5-5.2
5-1.1	2-1		
5-3.1.1	2-1		
5-2.1.1	2-1.1	9-3.2.2	5-4.4
5-4.1	2-2	9-3.4	5-4.4.1
5-4.3	2-3	9-3.5	5-4.4.2
		9-4.4	5-4.5
6-1	3-1		
6-1.1	3-1.1	Appendix D	Appendix A
6-1.2	3-1.2		
6-1.3	3-1.3		
		Appendix E	Appendix B
7-1	4-1		
7-1.1	4-1	Appendix F	Appendix C
8-1	5-1	Appendix J	Appendix D
8-1.1	5-1.1		
8-1.3.2	5-1.2		
8-1.4	5-1.3		
8-1.5	5-1.4		
8-1.5.1	5-1.4.1		
8-1.5.2	5-1.4.2		
8-1.6	5-1.5		

**Standard for
Manufactured Home Installations
(Manufactured Home Sites, Communities
and Set-ups)**

NFPA 501A-1982

ANSI A225.1-1982

**Chapter 1 Scope and Intent of Standard,
Organization of Standard, and Definitions**

1-1 Scope. This standard covers the installation of manufactured homes, wherever located, and minimum

construction standards for manufactured home communities. Included are requirements for manufactured home sites (whether a single site or sites located in communities), utility facilities (light, heat, water and sanitation), manufactured home set-ups, and manufactured home on-site accessory buildings or structures. This standard also covers firesafety requirements for the installation of manufactured homes, sites including accessory buildings and structures, and communities and the maintenance of and improvements for existing manufactured homes.

1-2 Intended Usage of Manufactured Homes Covered Under this Standard. The provisions of this standard are intended to apply to manufactured homes (single, multiple, or expandable types) for use as single-family dwellings.

Exception 1: This standard does not apply to manufactured homes constructed and approved by the enforcing authority having jurisdiction specifically for multifamily usage.

Exception 2: This standard does not apply to manufactured homes utilized for other than dwelling purposes.

1-2.1 Types of Structures Covered.

(a) *Manufactured Homes.* The manufactured homes covered under this standard are manufactured homes complying with the Manufactured Home Construction and Safety Standards as set forth in 24 C.F.R., Parts 3280, 3282 and 3283 (42 U.S.C. 5401 et seq.) as mandated in the United States of America or, for manufactured homes built prior to June 15, 1976, to those complying with the *Standard for Mobile Homes*, NFPA 501B-1974/ANSI A119.1-1975 in effect at the time of manufacture.

NOTE 1: For the Manufactured Home Procedural and Enforcement Regulations, as applicable in the United States of America, 24 C.F.R., Parts 3280, 3282 and 3283 (U.S.C. 5401 et seq.)

NOTE 2: The *Standard for Mobile Homes*, NFPA 501B (ANSI), may be referred to for guidance and may be used as the governing document in areas outside the United States of America and its possessions where other national or local laws do not apply. Manufactured homes used for other than dwelling purposes are not covered.

NOTE 3: For manufactured homes constructed prior to June 15, 1976, consult with the manufactured home manufacturer for his installation requirements.

(b) *Accessory Buildings and Structures.* See Chapter 9 for requirements and descriptions of all accessory buildings.

1-2.2 Applicability. This standard is designed to be adopted by authorities having jurisdiction responsible for the safety and health of manufactured home users and for establishing regulations applicable to manufactured home communities. It is intended to apply to new rather than existing manufactured home sites, communities and set-ups. While this standard may provide useful technical data for improvements to existing facilities falling within its scope and such use is encouraged, it is not intended to be applied retroactively to existing facilities except where the authority having jurisdiction considers such application essential for the safety and health of the occupants or

users of the facilities. This standard shall not be construed as relieving the installer of a manufactured home of responsibility for compliance with local ordinances, codes, and regulations established by the authorities having jurisdiction; for relieving owners or operators of manufactured home communities from complying with any other legally enforceable regulations of any responsible authority having jurisdiction; or for relieving the manufactured home owner or tenant from responsibilities for the proper use and maintenance of a manufactured home.

1-2.3 Organization of Standard. This standard is divided into nine chapters with appendix material. The chapters are divided generally by the kinds of work involved to facilitate adoption by local jurisdictions. Chapter 1 provides general information; Chapter 2 gives information on site design; Chapter 3 contains material on setting up and stabilizing the manufactured home; Chapter 4 is on plumbing; Chapter 5 on fuels and supply systems; Chapter 6 on heating and cooling; Chapter 7 contains standards for electrical work; Chapter 8 gives information on life and firesafety; and Chapter 9 treats the subjects of manufactured home accessory buildings and structures. Appendix material gives additional guidance as shown in the Contents.

1-3 Definitions and Units.

Accessory Building or Structure, Manufactured Home. A building or structure which is an addition to or supplements the facilities provided by a manufactured home. It is not a self-contained, separate, habitable building or structure. Examples are: awnings, cabanas, ramadas, storage structures, carports, fences, wind-breaks, or porches.

Anchoring Equipment. Straps, cables, turnbuckles, and chains, including tensioning devices, which are used with ties to secure a manufactured home to ground anchors.

Anchoring System. A combination of ties, anchoring equipment, and ground anchors that will, when properly designed and installed, resist overturning and lateral movement of the manufactured home from wind forces.

Approved. Acceptable to the authority having jurisdiction. Acceptance shall be measured to the requirements of the U.S. Department of Housing and Urban Development as regards the Federal Manufactured Home Construction and Safety Standard as set forth in 24 C.F.R., Parts 3280 and 3282 (42 U.S.C. 5401 et seq.).

Authority Having Jurisdiction. The "authority having jurisdiction" is the organization, office, or individual responsible for "approving" equipment, an installation, or a procedure.

NOTE: The National Conference of States on Building Codes and Standards, Inc. (NCSBCS), the National Fire Protection Association (NFPA), and the American National Standards Institute (ANSI) do not approve, inspect or certify any installations, procedures, equipment, or material nor do they approve or certify any installations, procedures, equipment, or material nor do they approve or evaluate testing laboratories. In deter-

mining the acceptability of installations or procedures, equipment or materials, the authority having jurisdiction may base acceptance on compliance with NCSBCS, NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure or use. The authority having jurisdiction may also refer to the listing or labeling practices of an organization concerned with product evaluations which is in a position to determine compliance with appropriate standards for the current production of listed items.

Awning. A shade structure supported by posts or columns and partially supported by a manufactured home installed, erected, or used on a manufactured home site.

Awning, Freestanding. A shade structure supported entirely by columns or posts and not attached to or supported by a manufactured home or other structure.

Awning, Window or Door. A shade structure supported wholly by the manufactured home or building to which it is attached, giving shade to a window or door.

Baling. A method of "wrapping" a cross section (roof, walls, and floor) and the main frame (chassis) of a manufactured home with straps.

Building. A roofed structure erected for permanent use.

Cabana. A room enclosure erected or constructed adjacent to a manufactured home for residential use by the occupant of the manufactured home.

Carport. An awning or shade structure for a vehicle or vehicles which may be freestanding or attached to a manufactured home.

Community Building. Any nonresidential building used for manufactured home community purposes.

Community Building, Manufactured Home. One or more rooms that are designed for industrial, professional or commercial purposes and not intended as a dwelling unit.

Community Electrical Wiring System. All of the electrical wiring, fixtures, equipment and appurtenances related to electrical installations within a manufactured home community (park, estate, subdivision, etc.), including the manufactured home service equipment.

Community Management. The person or entity who owns a manufactured home development or has charge, care, or control of a manufactured home community (park, estate, subdivision, etc.).

Community, Manufactured Home. A parcel (or contiguous parcels) of land which has been so designated and improved that it contains two or more manufactured home sites available to the general public for the placement of manufactured homes for occupancy.

NOTE: The manufactured home sites may be for rent (as in a park), or sites may be sold for residential occupancy (as in a subdivision).

Community Street. A private way which affords

principal means of access to abutting individual manufactured home sites and community buildings.

Diagonal Tie. A tie intended to primarily resist horizontal or shear forces and which may secondarily resist vertical, uplift, and overturning forces.

Dwelling Unit. One or more habitable rooms which are designed to be occupied by one family with facilities for living, sleeping, cooking, eating and sanitation.

Feeder Assembly (Electrical), Manufactured Home. The overhead or underchassis-feeder conductors, including the grounding conductor, together with the necessary fittings and equipment, or a power supply cord approved for manufactured home use, designed for the purpose of delivering energy from the electrical service location (per NCSBCS) to the distribution panel board provided within the manufactured home.

Feeder Equipment (Electrical), Manufactured Home. The equipment containing the disconnecting means, overcurrent protective devices, and receptacles or other means for connecting a manufactured home feeder assembly.

Fence. A structure designed and erected as a free-standing unit, the surface of which has more than 50 percent open area. (Also see *Windbreak*.)

Foundation, Manufactured Home. A site-built or site-assembled system of stabilizing devices which is:

(a) Capable of transferring design dead loads and live loads required by Federal Regulations (*see 1-2*), and other design loads unique to local home sites, wind, seismic and water site conditions, that are imposed by or upon the structure, into the underlying soil and/or bedrock without failure, and

(b) In frost susceptible areas, placed at an adequate depth, or otherwise adequately insulated/protected, to prevent frost damage.

(c) Constructed of materials acceptable to the authority having jurisdiction. (*See Appendix C for examples.*)

Gas Supply Connector. A listed connector designed for connecting the manufactured home to the gas supply source.

Ground Anchor. Any device at the manufactured home stand designed to transfer manufactured home anchoring loads to the ground.

Habitable Room. A room or enclosed floor space arranged for living, eating, food preparation, or sleeping purposes not including bathrooms, toilet compartments, laundries, pantries, foyers, hallways, and other accessory floor space.

Hurricane-Resistive Manufactured Home. A manufactured home which meets the wind design load requirements for Zone II in Subpart D of 3280.305(c)(2) the Federal Standard or the applicable hurricane-resistive design requirements of the *Standard for Mobile*

Homes, NFPA 501B-1974/ANSI A119.1-1975, in effect at the time of manufacture.

Labeled. Equipment or materials to which has been attached a label, symbol or other identifying mark of an organization acceptable to the "authority having jurisdiction" and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

Listed. Equipment or materials included in a list published by an organization acceptable to the "authority having jurisdiction" and concerned with product evaluation, that maintains periodic inspection of production of listed equipment or materials and whose listing states either that the equipment or materials meets appropriate standards or has been tested and found suitable for use in a specified manner.

NOTE: The means for identifying listed equipment may vary for each organization concerned with product evaluation, some of which do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

Main Frame. The structural component on which is mounted the body of the manufactured home.

Manufactured Home. A structure, transportable in one or more sections, which, in the traveling mode, is 8 body ft (2.4 m) or more in width or 40 body ft (12 m) or more in length, or, when erected on site, is 320 or more sq ft (28.8 m²), and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air conditioning and electrical systems contained therein; except that such term shall include any structure which meets the size requirements and with respect to which the manufacturer voluntarily files a certification required by the Secretary of the U.S. Department of Housing and Urban Development and complies with the National Manufactured Home Construction and Safety Standards.

NOTE 1: For the purpose of this standard the phrases "manufactured home" and "mobile home" are synonymous.

NOTE 2: This definition should not be interpreted to include any types of recreational vehicles (including so-called "park models" or travel trailers) which may equal or exceed the body length specified herein.

Mobile Home. A structure, transportable in one or more sections, which is 8 body ft (2.4 m) or more in width and 32 body ft (9.6 m) or more in length, and which is built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation, when connected to the required utilities, and includes the plumbing, heating, air conditioning, and electrical systems contained therein.

NOTE: For the purpose of this standard the phrases "manufactured home" and "mobile home" are synonymous.

Occupied Area of a Manufactured Home Site. The total of all of a manufactured home site covered by a

manufactured home and roofed home accessory buildings and structures.

Pier. That portion of the support system between the footing and the manufactured home, exclusive of caps and shims.

Porch. An outside walking area having the floor elevated more than 8 in. (203 mm) above grade.

Ramada. Any freestanding roof or shade structure, installed or erected above an occupied manufactured home or any portion thereof.

Running Gear Assembly. The assembly (which includes springs, spring hangers, axles, bearings, wheels, brakes, rims and tires with their related hardware) designed to permit the manufactured home to be transported over a highway.

Set-up. The work performed and operations involved in the placement of a manufactured home on a foundation system in accordance with the manufacturer's instructions, to include installation of accessories or appurtenances and anchoring devices, and when local regulations permit, connection of utilities, but excluding preparation of the site.

Shall. Indicates a mandatory requirement.

Should. Indicates a recommendation or that which is advised but not required.

Site, Manufactured Home. A designated parcel of land in a manufactured home park designed for the accommodation of one manufactured home, its accessory buildings or structures, and accessory equipment for the exclusive use of the occupants.

Skirting. A weather-resistant material used to enclose the space from the bottom of the manufactured home to grade.

Special Permission. The written consent of the authority having jurisdiction.

Stabilizing Devices. All components of the anchoring and support systems such as piers, footings, ties, anchoring equipment, ground anchors and any other equipment which supports the manufactured home and secures it to the ground.

Stabilizing System. A combination of the anchoring system and the support system when properly installed.

Stand, Manufactured Home. That area of a manufactured home site which has been reserved for the placement of a manufactured home.

Structure. That which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.

Support System. A combination of footings, piers, caps, and shims that will, when properly installed, support the manufactured home.

Tie. Strap, cable or securing device used to connect the manufactured home to ground anchors.

Vertical Tie. A tie intended to resist the uplifting and overturning forces.

Windbreak. A man-made wall structure designed and erected as a freestanding unit, the vertical surface of which has less than 50 percent open area. (Also see *Fence*.)

1-3.1 Units. Metric units of measurement in this standard are in accordance with the metric system known as the International System of Units (SI). Two units (liter and bar), outside of but recognized by SI, are commonly used. These units are listed in Table 1-3.1 with conversion factors.

Table 1-3.1

Name of Unit	Unit Symbol	Conversion Factor
liter	L	1 gal = 3.785L
cubic decimeter	dm ³	1 gal = 3.785 dm ³
pascal	Pa	1 psi = 6894.757 Pa
bar	bar	1 psi = 0.0689 bar
bar	bar	1 bar = 10 ⁵ Pa

For additional conversions and information see ASTM E380-1979, *Standard for Metric Practice (see Appendix I)*.

1-3.2 If a value for measurement as given in this standard is followed by an equivalent value in other units, the first stated is to be regarded as the requirement. A given equivalent value may be approximate.

1-3.3 The conversion procedure for the SI units is to multiply the quantity by the conversion factor and then round the result to the approximate number of significant digits.

1-4 Single and Multiple Manufactured Home Sites — General.

1-4.1 Location of Utility Lines, Connections. Utility lines and connections shall be located as specified in 4-1.2 for water, 4-1.6.2 for sewer, 7-1 for electrical, and 5-1.3 for gas to serve the manufactured home stand.

NOTE: For manufactured home communities, see also Sections 4-3, 5-3 and 7-3.

1-4.2 Marking of Underground Utility Lines. The location of electrical cables, gas piping, water piping and sewer lines buried underground along the periphery or within 4 ft (1.2 m) of the perimeter of the manufactured home stand shall be indicated by an aboveground sign(s), and/or only by underground marker tapes identifying the proximity of the lines. A plot plan showing the "as built" location of underground utility lines shall be available for installations in multiple-site facilities.

NOTE 1: This requirement is to preclude possible damage to such underground services by the use of ground anchors, in-

stallation of skirting (underfloor enclosures), plantings, foundations for steps at access doors, etc.

NOTE 2: Aboveground sign(s) may be erected to readily assist in locating utility lines, but such sign(s) shall not be misconstrued to be in lieu of the required underground marker tapes identifying the proximity of the lines.

1-5 Manufactured Home Installations.

1-5.1 Installer Qualifications. Manufactured home installers shall be qualified by training, education and experience to erect/install homes in accordance with the provisions of the manufacturer's installation instructions, the provisions of this standard, the standards referenced in 1-2.1, and in accordance with any state or local regulations.

1-5.2 The authority having jurisdiction is responsible for establishing reasonable qualifications for installers which assure that manufactured home installations comply with 1-2.1 and 1-5.1.

Exception: When the manufactured home is located where there is no state or local authority having jurisdiction, the seller/developer is responsible for establishing the qualifications of the installers.

1-5.3 Manufactured Home Utility Connections. When a manufactured home consists of two or more sections, all utility connections from one section to another shall be installed in accordance with the manufacturer's instructions, inspected, and determined to be effective in the manner intended.

1-5.4 Rigid Utility Connections. No rigid utility connections shall be made unless the home is installed on a foundation constructed in accordance either with the local building code having jurisdiction or, in the absence of a local code, with a recognized model building code.

1-5.5 Approved Materials Required. All manufactured home utility services shall be connected to the supply sources only with approved materials.

1-6 Accessory Buildings and Structures.

1-6.1 General. Because of variable conditions encountered in different areas of the United States, it is impractical to develop detailed requirements for manufactured home accessory buildings and structures. The requirements set forth in this standard are basic standards applicable to the type of structures defined.

1-6.2 Scope. When manufactured home accessory buildings and structures are erected, constructed, or occupied on a manufactured home site, they shall comply with this standard.

1-6.3 Construction, General. Every manufactured home accessory building or structure shall be designed and constructed in accordance with any applicable provisions of nationally recognized building codes and shall conform to the criteria of the authority having jurisdiction.

6.3.1 Any manufactured home, accessory building, structure or connecting building construction shall be

located so that any required egress window or door of the manufactured home is not blocked.

1-7 Manufactured Home Community Buildings.

1-7.1 Construction. Every community building shall be designed and constructed in accordance with the applicable provisions of local building codes.

1-7.2 Materials, Fixtures, Devices, Fittings. Materials, fixtures, devices, and fittings, and their installation shall conform to nationally recognized standards.

Chapter 2 Site Design

2-1 Site Acceptability Criteria.

2-1.1 Trespass. Each site shall be located so that access and use can be assured without trespass upon adjoining properties.

2-1.2 Site Hazards. Each site shall be evaluated by the authority having jurisdiction to determine: (a) if it is suitable for its intended use; (b) that such use complies with any applicable federal, state, and local laws; (c) if such hazards as flood, erosion, sediment deposition, noise or air pollution from nearby traffic or industrial activities, vibration from vehicular traffic or construction or industrial production operations, or unstable landfill conditions exist which might impair the use or utility of the property. When, during preparation of the site, such unforeseen factors as rock formation, high groundwater levels, springs, biologically generated gases, etc., are encountered, corrective work shall be taken prior to siting the manufactured home.

NOTE: See Appendix H.

2-1.3 Need For Stabilizing Devices/Systems. Stabilizing devices and stabilizing systems shall be in accordance with Chapter 3 where required by the authority having jurisdiction. (See 3-2.5.1.)

2-1.4 Protective Slopes of Unpaved Areas Around Manufactured Home Stands and Accessory Buildings. Grades shall slope downward from patios and stands, from all walls, skirting, and foundations, and from water supply wells to adequate outfalls or to drainage swales discharging to adequate outfalls.

2-1.5 Selection of Manufactured Home for the Site. The manufactured home shall be located only in climatic zones where it meets or exceeds design requirements.

NOTE: See Appendix B for wind, roof load, and winter climate zone maps.

2-2 Single and Multiple Manufactured Home Site Development.

2-2.1 Site Grading and Drainage. The objectives are: (1) to preserve as many desirable site features as prac-

licable; (2) to provide diversion of surface water away from the manufactured home, accessory structures and stands; (3) to prevent standing water and soil saturation detrimental to structures and site use; (4) to provide for disposal of surface water except as desired for controlled irrigation; (5) to provide finished grades for the safe and convenient access and use of sites; and (6) to provide protection from erosion.

2-2.2 Drainage Provisions. Manufactured home stands, unless subsurface drainage structures are provided, shall have a crown or gradient for surface drainage acceptable to the authority having jurisdiction. At stand perimeters accepting drainage water, surface or subsurface drainage structures shall be provided.

2-2.3 Storm Water Disposal.

NOTE: Drainage designs should accommodate storm runoff calculated on the basis of foreseeable conditions of contributory site and off-site drainage areas.

2-2.3.1 All areas shall slope to lower elevations off the site or to drainage structures on the site.

2-2.3.2 Emergency surface drainage overflows for drain inlets or catch basins shall be provided where necessary to prevent flooding of manufactured home stands, damage to accessory structures and any wells, in the event of failure of any underground drainage structures.

2-2.4 Drainage Structures.

NOTE: Collection and disposal of surface and subsurface water should be provided, as necessary, to protect the manufactured home and its stand and accessory buildings.

2-2.4.1 Required Drainage Structures. Where erosion due to high runoff velocity is not prevented by grading or by plantings, drainage structures shall be constructed.

2-2.4.2 Gutter Connections. Gutters, if provided, shall be connected to adequate outfall with off-site drainage ways protected for permanence.

2-2.4.3 Drain Inlets. Drain inlets shall be sized, designed, and constructed for their intended use.

2-2.4.4 Drain Lines. Drain lines shall be of durable materials, sized and installed to assure positive runoff. Drain lines for surface drainage shall have sealed joints. Drain lines for subsurface drainage shall be permitted to be perforated, porous, or open joint pipe with not less than 9 in. (229 mm) previous backfill over pipe. Drain lines shall be connected to an adequate outfall.

2-2.4.5 Dry Wells. Where their installation is authorized, dry wells shall be located not less than 10 ft (3.5 m) from a manufactured home stand, at least 20 ft (6.10 m) from sewage disposal fields, and not less than 50 ft (15.24 m) from water supply wells.

NOTE: For effectiveness, dry wells should be relied upon only in areas of well-drained soils with high sand and gravel content.

2-3 Single Manufactured Home Site Development.

2-3.1 General. The appropriate provisions of this sec-

tion shall apply to single manufactured home sites (e.g., individual manufactured homes not located in a manufactured home community).

2-3.2 Access. Each site shall be accessible from abutting streets for all essential and emergency uses by vehicular equipment, including equipment used by public protective agencies (fire, police, ambulance services) during all anticipated weather conditions. Access streets shall either be dedicated for public use or, when authorized by the authority having jurisdiction, shall be private ways protected by permanent easements. Driveways shall extend from such access streets to a garage, carport, or parking space with the location, alignment and grades designed to provide for safe and convenient use. Driveways shall have a minimum width of 10 ft (3.05 m) and shall have a 5-ft (1.52-m) radius or shall flare to a 14-ft (4.27-m) width at street entrance.

2-4 Multiple Manufactured Home Site Development.

2-4.1 General. In addition to the provisions for single and multiple site development, the following provisions relate to sites located in manufactured home communities.

2-4.2 Land Use Requirements.

2-4.2.1 Space Utilization. Site coverage and building separation in a manufactured home community for each manufactured home and its accessory structure(s) shall be in accordance with this section and Section 8-2.

2-4.2.2 Setbacks. Each manufactured home stand shall be set back at least 25 ft (7.62 m) from any community boundary line abutting an existing or proposed public street or highway right-of-way line. Each manufactured home stand shall be set back at least 3 ft (0.91 m) from any abutting street within a manufactured home community. (Also see 8-2.1.1.)

NOTE: Where there is no access or when adequate screening or fencing is provided between a manufactured home stand and a public street or highway, the 25-ft (7.62-m) distance may be reduced when authorized by the authority having jurisdiction.

2-4.2.3 Access To Community Streets. Each manufactured home site within a manufactured home community shall have direct access to a community street. The access shall be an unobstructed area, not less than 14 ft (4.27 m) in width for the movement of a manufactured home on or off the site.

2-4.3 Community Streets and Common Walk Systems.

2-4.3.1 Minimum pavement widths shall be 24 ft (7.32 m) for two-way traffic; 14 ft (4.27 m) for one-way traffic; and at least 7 ft (2.13 m) shall be added for each parking lane if provided.

2-4.3.2 The street system shall have direct connection to a public way.

2-4.3.3 Streets and walkways designed for the general use of the manufactured home community residents shall be lighted during the hours of darkness. Lighting shall be provided and maintained to produce a minimum of 0.1 footcandle (1.1 lux) at street level throughout the system.

Potentially hazardous locations, such as major street intersections and steps or stepped ramps, shall be individually illuminated within a minimum of 0.3 footcandle (3.2 lux). Such lighting shall be under the control of the manufactured home community operator or under an automatic control system.

NOTE 1: Street grades should generally be not more than 8 percent. Short runs with a maximum grade of 12 percent may be permitted, provided traffic safety is assured.

NOTE 2: A common walk system should be provided and maintained between locations where pedestrian traffic is concentrated and is not separated from automobile traffic. Such common walks should have a minimum width of 3½ ft (1.07 m). (See also Appendix A, Section A-2.)

NOTE 3: When designing manufactured home communities, care must be taken to provide for maneuvering room for placing manufactured homes on stands considering the home sizes allowed in the community.

Chapter 3 Manufactured Home Foundation Systems

3-1. General. This chapter prescribes standards for the proper design and installation of manufactured home foundation systems. It further clarifies the definition of a "manufactured home foundation," and identifies acceptable alternative foundation systems. This chapter is applicable to all new and relocated manufactured homes, when and wherever newly installed at a home site. Foundation systems designed and constructed in accordance with this chapter may be considered as permanent installations.

3-1.1 Manufactured Home Foundation System. A manufactured home foundation, defined in 1-3, is the means to adequately support the structure. This construction constitutes a foundation constructed in accordance either with the foundation system included in the manufacturer's installation instructions, or requirements of this chapter, or the local building code having jurisdiction or, in the absence of a local code, with a recognized model building code. The manufacturer or owner shall be permitted to design for and specify installation of any foundation system which meets the requirements of this chapter.

Exception: The authority having jurisdiction shall be permitted to waive compliance for anchoring system components based upon local conditions.

3-2 Manufactured Home Installation.

3-2.1 Removal of Manufactured Home Transportation Components at Time of Installation. No portion of a manufactured home shall be removed when located on its home site unless it is designed to be removable and removed in accordance with the manufacturer's instructions.

3-2.2 Manufactured Homes With Manufacturer's Instructions. The manufacturer's instructions shall include a typical foundation system designed by a registered pro-

fessional engineer or architect to support the anticipated loads specified in the manufacturer's installation instructions for the design zone (including climate) of installation, and shall meet the requirements of this chapter. These instructions shall be provided with the home following installation as required by 24 C.F.R., Parts 3280, 3282 and 3283 (42 U.S.C. 5401 et seq.).

3-2.3 Manufactured Homes Without Manufacturer's Installation Instructions. Homes not provided with manufacturer's instructions shall have a foundation system which meets the requirements of this chapter and is installed in a manner acceptable to the authority having jurisdiction. (See Appendix C for recommended foundation design criteria which may be used to determine home foundation requirements.)

3-2.4 Manufactured Home Stabilizing Systems.

3-2.4.1 Stabilizing Devices. Each manufactured home, upon being installed on a manufactured home stand, shall have stabilizing devices, or shall be installed on a foundation constructed in accordance either with the local building code having jurisdiction or, in the absence of a local code, with a recognized model building code, except that the authority having jurisdiction shall be permitted to waive compliance with the provisions for anchoring systems where low design wind velocities do not justify such systems. Requirements for stabilizing devices are included in Paragraphs 3-2.4 through 3-2.10.

3-2.4.2 Stabilizing devices not provided with the manufactured home shall be listed or labeled to meet or exceed the design and capacity requirements of the manufactured home manufacturer and this standard.

3-2.4.3 Footings shall be sized to support the loads shown in the manufacturer's instructions. (Also see 3-2.5.)

3-2.4.4 Support System Spacing. Unless the entire support system is designed by a professional engineer or architect, the support system shall be designed in accordance with Table 3-2.5B. The supports shall begin not more than 2 ft (0.61 m) from the exterior of each end wall. Supports shall be installed directly under the main frame (chassis) of the manufactured home.

NOTE: Methods other than those specified herein may be approved by the authority having jurisdiction.

3-2.4.5 Clearance Under Homes. A minimum clearance of 12 in. (305 mm) shall be maintained beneath the lowest member of the main frame (I-beam or channel beam) in the area of utility connections. No more than 25 percent of the underside of the main frame of the home shall be less than 12 in. (305 mm) above grade.

3-2.4.6 Elevated Manufactured Homes. When the manufactured home is installed on a basement or split-entry type foundation over a habitable lower-level area, or when more than one-fourth of the area of a manufactured home is installed so that the bottom of the main-frame members are more than 3 ft (0.91 m) above ground level, the foundation system shall be designed by a registered professional engineer or architect and the in-

stallation shall be approved by the local authority having jurisdiction.

3-2.5 Footings. Where no manufacturer's instructions are available, the required load-bearing capacity of individual load-bearing supports and their footings shall be calculated (see Table 3-2.5A) at not less than a combined live and dead load of 75 psf (366 kg/m²) for the South Zone or 85 psf (415 kg/m²) for the Middle Zone or 95 psf (464 kg/m²) for the North Zone. Footings shall be adequate in size to withstand the tributary live and dead loads of the manufactured home and any concentrated loads. (Also see 3-2.4.3.)

(a) Footings shall be at least 144 sq in. (0.09 m²) of solid concrete, blocks or other materials approved for the intended use by the authority having jurisdiction.

(b) Footings or pier foundations (unless approved by a registered professional engineer), when required, shall be placed level on firm undisturbed soil or on controlled fill which is free of grass and organic materials, to a minimum load-bearing capacity of 1000 psf (4882 kg/m²). Where unusual conditions exist, the spacing of piers and the load-bearing capacity of the soil shall be determined specifically for such conditions.

NOTE: In areas subject to ground frost heave, see 3-2.7.7. Note 2.

3-2.5.1 Design of Manufactured Home Stand Footing. Where natural soils or controlled-fill (free of

grass and organic material) are used, it shall support the loads imposed by the support system of the manufactured home placed thereon. The required load-bearing capacity shall be calculated based on the design loads shown in Table 3-2.5A.

Table 3-2.5A
Manufactured Home Stand Load-Bearing Calculations**

DESIGN ZONE	SOUTH ZONE		MIDDLE ZONE		NORTH ZONE	
	psf	kg/m ²	psf	kg/m ²	psf	kg/m ²
Roof Live Load:	20*	98.	30*	146.	40*	195.
Roof Dead Load:	5	24.	5	24.	5	24.
Floor Live Load:	40	195.	40	195.	40	195.
Floor Dead Load:	10	49.	10	49.	10	49.
DESIGN DISTRIBUTED LOAD:	75	366.	85	415.	95	464.

*Where greater vertical (snow) loads have been determined to exist in localized areas by the authority having jurisdiction through surveys or experience, such roof live loads shall apply.

**For manufactured homes labeled as complying with the Federal Manufactured Home Construction and Safety Standards refer to the Manufacturer's Installation Instructions.

Table 3-2.5B shall be applicable unless the entire support system is designed and calculated by a registered professional engineer or architect.

Table 3-2.5B
Non-Designed Footing Areas for Allowable Soil Bearing Capacity

Width of Units up to and including (ft)**	Roof Live Load 20 (psf) South Zone 75 (psf)				Multiple Section Homes ***	Roof Live Load 30 (psf) Middle Zone 85 (psf)				Multiple Section Homes ***	Roof Live Load 40 (psf) North Zone 95 (psf)				Multiple Section Homes ***	
	12	14	12	14		12	14	12	14		12	14	12	14		
Tributary Pier Spacing (ft)**	6	6	8	8		6	6	8	8		6	6	8	8		
Pier Load (lb)**	2700	3150	3600	4200		3060	3570	4080	4760		3420	3990	4560	5320		
Allowable Soil Bearing Capacity	Minimum Required Footing Area (sq in.)															
	1000 psf	389	454	518	605		441	514	588	685		493	575	657	766	
	1500 psf	259	302	346	403		294	343	392	457		328	383	438	511	
	2000 psf	194	227	259	302		220	257	294	343		246	287	328	383	
	3000 psf	.	151	173	202		147	171	196	229		164	192	219	255	
	4000 psf	.	.	.	151		.	.	147	171		.	.	164	192	
	6000 psf	.	.	.	.		.	.	.	.		.	.	.	.
8000 psf	.	.	.	.		.	.	.	.		.	.	.	.

- a) Rear cantilever of floor beyond the frame is assumed to be less than 2 ft.
- b) For units wider than the dimensions shown in Table 3-2.5B, an engineering analysis will be needed to determine pier spacing.
- c) Individual supports shall not bear a load greater than 8,000 lb, 14,000 lb ultimate.
- d) *Minimum required footings shall be not less than 144 sq in. (1 sq ft). All values above 144.0 shown.
- e) **If unit(s) is supplied with overhanging eaves, see manufacturer's installation instructions.
- f) To convert to SI units, use the following equivalents: 1 in. = 25.40 mm; 1 ft = 0.3048 m; 1 psf = 4.882 kg/m²; 1 ft² = 0.0929 m².
- g) ***See appropriate column for individual section width selected. Multiple section homes may have concentrated roof support which will require special consideration.

Notes to Table 3-2.5B:

NOTE 1: The following table may be used if the soil type is known. If the soil type is unknown, the following resources may be consulted to determine the soil type/bearing capacity: (a) local authority having jurisdiction; (b) soil conservation district; (c) United States Geological Survey; (d) the Soil Conservation Service of the U.S. Department of Agriculture; (e) highway department. If none of the above resources can provide information on the soil type, a qualified professional engineer can be used to determine the soil type.

psf	kg/m ²	Soil Types
2000	9765	Loose sand, clay soils or medium soft clay
3000	14647	Firm or stiff clay
4000	19530	Loose fine sand or compact sand in organic silt soils
6000	29295	Compact sand-clay soils
8000	39059	Loose coarse to medium sand or medium compact fine sand

NOTE 2: See other requirements in Chapter 3 for information on manufactured home stabilizing systems.

NOTE 3: Where natural soils or controlled fills cannot meet this design, a prepared surface shall be provided to a sufficient depth to meet the minimum load-bearing capacity specified herein.

3-2.6 Piers. Piers or load-bearing supports or devices shall be designed and constructed to evenly distribute the loads. Load-bearing supports or devices shall be listed and labeled, shall be designed by a registered professional engineer or architect, shall be approved for the use intended, or piers shall be constructed as follows:

3-2.6.1 Piers less than 36 in. (914 mm) in height shall be constructed of open or closed cell, 8-in. by 8-in. by 16-in. (203-mm x 203-mm x 406-mm) concrete blocks (with open cells vertically placed upon the footing). Single-stacked block piers shall be installed with the 16-in. (406 mm) dimension perpendicular to the main

(I-beam) frame. The piers shall be covered with a 2-in. by 8-in. by 16-in. (51-mm x 203-mm x 406-mm) wood or concrete cap. (See Figure C-1 in Appendix C.)

3-2.6.2 Subject to the limitations of 3-2.4.6, piers between 36 in. and 80 in. (914 mm and 2032 mm) in height and all corner piers over three blocks high shall be double blocked with blocks interlocked and capped with a 4-in. by 16-in. by 16-in. (102-mm x 406-mm x 406-mm) solid concrete block, or equivalent. (See Figure C-2 in Appendix C.)

3-2.6.3 Subject to the limitations of 3-2.4.6, piers over 80 in. (2032 mm) in height shall be constructed as per 3-2.6 and they shall be laid in concrete mortar and steel reinforcing bars inserted in block cells with the block cells filled with concrete [See Figures C-3(a) and C-3(b) in Appendix C.]

3-2.6.4 Plates and Shims. A wood plate not exceeding 2 in. (51 mm) in thickness and shims not exceeding 1 in. (25.4 mm) in thickness shall be permitted to be used to fill any gap between the top of the pier and the main frame. Two-in. or 4-in. (51-mm or 102-mm) solid concrete blocks shall be permitted to be used to fill the remainder of any gap. Shims shall be at least nominal 4 in. (102 mm) wide and 6 in. (152 mm) long and shall be fitted and driven tight between the wood plate or pier and main frame.

3-2.6.5 Steel Piers. Steel piers, when used, shall be galvanized per 3-2.8.1 after fabrication to provide corrosion protection.

3-2.7 Anchoring Ties.

3-2.7.1 Number of Ties. The minimum number of ties per side for various lengths of manufactured homes in hurricane and nonhurricane zones shall be in accordance with Table 3-2.7.

Table 3-2.7
Number of Ties Required per Side of Single Section¹ Manufactured Homes²

This table is based on a minimum working load per anchor of 3,150 lb (1429 kg) with a 50 percent overload (4,725 lb (2143 kg) total).

A Length of ³ Manuf. Home (ft)*	B No. of Vertical Ties	C Hurricane Resistant			E No. of Diagonal Ties ⁴	F No. of Vertical Ties	G Nonhurricane Resistant		
		No. of Diagonal Ties ⁵	D Alternate Method ⁶				No. of Diagonal Ties ⁵	H Alternate Method ⁶	
			No. of Baling Straps	No. of Diagonal Ties ⁵		No. of Baling Straps		No. of Diagonal Ties ⁵	
up to 40	2	4	2	5	2	3	2	3	
40 to < 46	2	4	2	6	2	3	2	3	
46 to < 49	2	5	2	7	2	3	2	3	
49 to < 54	3	5	3	7	2	3	2	3	
54 to < 58	3	5	3	8	2	4	2	4	
58 to < 64	3	6	3	8	2	4	2	4	
64 to < 70	3	6	3	9	2	4	2	5	
70 to < 73	3	7	3	9	2	4	2	5	
73 to < 84	4	7	4	10	2	5	2	5	

¹Double section manufactured homes require only the diagonal ties specified in column 3 or 7.

²Except when the anchoring system is designed and approved by a registered professional engineer or architect.

³Length of manufactured home (as used in this table) means length excluding draw bar.

⁴Alternate Method. When this method is used, an approved wall reinforcement means shall be provided. If baling is used to accomplish reinforcement, the provisions of 3-2.7.6 shall apply.

⁵Diagonal ties in this method shall deviate at least 45° from a vertical direction.

⁶Diagonal ties in this method shall be 45° ± 5° from vertical and shall be attached to the nearest main frame member.

*For conversion to meters, 1 ft = 0.3048 m, rounding off the total length to zero decimal points.

3-2.7.2 Spacing of Vertical Ties. Vertical ties shall be as evenly spaced as practicable over rafters or over studs along the length of the manufactured home with not more than 8 ft (2.44 m) open-end spacing on each end.

3-2.7.3 Location of Ties. When continuous straps are provided as vertical ties, such ties shall be positioned at rafters and studs. Where a vertical tie and diagonal tie are located at the same place, both ties shall be permitted to be connected to a single ground anchor, provided that either the anchor used is capable of carrying both loadings, or that the load capacity of the total number of anchors used is equal to 3150 lbs (1429 kg) working load plus 50 percent overload (4725 lbs or 2143 kg) the number of ties specified in Table 3-2.7.

3-2.7.4 Special Ties. Clerestory roofs and add-on sections of expandable manufactured homes shall have provisions for vertical ties at the exposed ends.

3-2.7.5 Protection of Ties and Manufactured Home Roofing and Siding. Protection shall be provided at sharp corners where the anchoring system requires the use of external cables or straps. Protection shall also be provided to minimize damage to roofing or siding by the cable or strap.

3-2.7.6 Alternate Method Using Strapping. If the alternate method incorporating straps specified in Table 3-2.7 is used, the baling straps shall be wrapped completely around the manufactured home passing under the main steel frame, with both ends of each strap fastened together under tension. The straps shall be in accordance with Section 3-2.8.4. The method used to connect the ends of the strap shall not reduce the allowable working load and overload. Straps shall be installed in accordance with the requirements for ties in 3-2.7.1 through 3-2.7.5.

3-2.7.7 Other Considerations (Maintenance of Anchoring Systems; Ground Frost Heaves).

NOTE 1: Tie tension should be checked and adjusted when necessary to prevent damage to the manufactured home from settling or other unforeseen movements (such as frost heave).

NOTE 2: Frost heave can have an adverse effect on the manufactured home through displacement of the manufactured home anchoring and hooking systems. If a manufactured home is located in an area subject to frost heave, one of the following additional steps should be considered:

(a) Footings and the load-carrying portion of the ground anchors should extend below the frost line, or

(b) The manufactured home should be placed on a reinforced concrete slab as specified in 3-2.9.3(c).

3-2.8 Anchoring Equipment. Anchoring equipment, when installed, shall be capable of resisting an allowable working load equal to or exceeding 3,150 lbs (1429 kg) and shall be capable of withstanding a 50 percent overload (4,725 lbs or 2143 kg total) without failure of either the anchoring equipment or the attachment point on the manufactured home. When the stabilizing system is designed by a qualified registered professional engineer or architect, alternative working loads may be used provided the anchoring equipment is capable of withstanding a 50 percent overload. All anchoring equipment shall be listed or labelled as being capable of meeting all the requirements of this section.

3-2.8.1 Resistance to Weather Deterioration. All anchoring equipment exposed to weathering shall have a resistance to weather deterioration at least equivalent to that provided by a coating of zinc on steel of not less than 0.625 ounces per sq ft (0.19 kg/m²) on each side of the surface coated, as determined by ASTM *Standard Methods of Test for Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles* (ASTM A90-69).

NOTE: Slit or cut edges of zinc-coated steel strapping do not need to be zinc coated.

3-2.8.2 Permanency of Connections. Anchoring equipment shall be designed to prevent self-disconnection when ties are slack. Open hook ends shall not be used in any part of the anchoring system.

3-2.8.3 Tensioning Device Design. Tensioning devices such as turnbuckles or yoke-type fasteners shall be ended with a clevis or forged or welded eyes.

3-2.8.4 Ties. Strappings or other approved methods or material shall be used for ties. All ties shall be fastened to ground anchors and drawn tight with turnbuckles or other adjustable tensioning devices or devices supplied with the ground anchor.

(a) Tie materials shall be capable of resisting an allowable working load of 3,150 lbs (1429 kg) with no more than 2 percent elongation and shall withstand a 50-percent overload (4,725 lbs or 2143 kg total). Ties shall comply with the weathering requirements of 3-2.8.1.

(b) Ties shall connect the ground anchor and the main structural steel frame (I-beam or other shape) which runs lengthwise under the manufactured home. Ties shall not connect to steel outrigger beams which fasten to and intersect the main structural frame unless specifically stated in the manufacturer's installation instructions.

(c) Connection of the cable frame tie to the manufactured home I-beam or equivalent main structural frame member shall be by a 3/8-in. (16-mm) drop-forged closed eye bolt through a hole drilled in the center of the I-beam web or other approved methods. The web shall be reinforced if necessary to maintain the designed I-beam strength.

(d) Cable ends shall be secured with at least three U-bolt-type cable clamps with the U portion of the clamp installed on the short (dead) end of the cable to assure strength equal to that required by 3-2.8.4(a).

3-2.9 Ground Anchors, Concrete Slabs, or Continuous Footings. Ground anchors, including means for attaching ties, shall be located to effectively match the anchoring system instructions provided by the manufactured home manufacturer, or, if there are no instructions, in accordance with the requirements of 3-2.3 herein, and shall be designed and installed to transfer the anchoring loads to the ground.

3-2.9.1 Capacity of Anchors. Each approved ground anchor, when installed, shall be capable of resisting an allowable working load at least equal to 3,150 lbs (1429 kg) in the direction of the tie plus a 50-percent overload (4,725 lbs or 2143 kg total) without failure. Failure shall

be considered to have occurred when the point of connection between the tie and anchor moves more than 2 in. (51 mm) at 4,725 lbs (2143 kg) in the direction of the vertical tie when the anchoring equipment is installed in accordance with the manufacturer's instructions. Those ground anchors which are designed to be installed so that the loads on the anchor are other than direct withdrawal shall be designed and installed to resist an applied design load of 3,150 lbs (1429 kg) at 45° from horizontal without displacing the anchor more than 4 in. (102 mm) horizontally at the point where the tie attaches to the anchor. Anchors designed for connection of multiple ties shall be capable of resisting the combined working load and overload consistent with the intent expressed herein.

3-2.9.2 Anchor Design and Installation. Each manufactured ground anchor shall be listed and installed in accordance with the terms of its listing and the anchor manufacturer's instructions and shall include means of attachment of ties meeting the requirements of 3-2.8.4. Ground anchor manufacturer's installation instructions shall include the amount of preload required, the methods of adjustment after installation, and the load capacity in various types of soil. These instructions shall include tensioning adjustments which may be needed to prevent damage to the manufactured home, particularly damage that can be caused by frost heave.

(a) Each ground anchor shall have the manufacturer's identification and listed model identification number marked thereon so that the number is visible after installation. Instructions shall accompany each listed ground anchor specifying the types of soil for which the anchor is suitable under the requirements of 3-2.9.1.

NOTE: The following data gives information relative to soil types with blow counts and torque values:

Types of Soils	Blow Count (ASTM D1586)	Test Probe ¹ Torque Value ²
Sound hard rock	NA	NA
Very dense and/or cemented sands, coarse gravel and cobbles, pre-loaded silts, clays, and corals	40-up	more than 550 lbs in. (62 N.m)
Medium-dense coarse sands, sandy gravels, very stiff silts and clays	24-39	350-549 lbs in. (40-62 N.m)
Loose to medium dense sands, firm to stiff clays and silts, alluvial fill	14-23 ³	200 to 349 lbs in. (23-40 N.m) ³

¹The test probe is a device for measuring the torque of soils to assist in evaluating the holding capability of the soils in which the anchor is placed. The test probe has a helix on it. The overall length of the helical section is 10.75 in. (273 mm); the major diameter is 1.25 in. (32 mm); the minor diameter is 0.81 in. (21 mm); the pitch is 1.75 in. (45 mm). The shaft must be of suitable length for anchor depth.

²A measure synonymous with moment of a force when distributed around the shaft of the test probe.

³Below these values, a registered professional engineer should be consulted.

3-2.9.3 Use of Concrete Slabs or Continuous Footings. concrete slabs or continuous footings are used to

transfer the anchoring loads to the ground, the following shall be required:

(a) Steel rods cast in concrete shall be capable of resisting loads as specified in 3-2.9.1.

(b) Deadman concrete anchors may be used in place of listed anchors if they meet the requirements of 3-2.9.1.

(c) Concrete slabs may be used in place of ground anchors, provided the slab is so constructed that it provides holding strength equal to the requirements of 3-2.9.1.

3-2.9.4 Other Anchoring Devices. Other anchoring devices meeting the requirements of this section shall be permitted if acceptable to the authority having jurisdiction.

3-2.10 Anchor Installations.

3-2.10.1 Specifications for Anchors. Each type anchor suitable for this purpose shall have specification data showing the soil classification(s) for which it qualifies.

3-2.10.2 Selection of Anchors. Anchor selection shall be based on a determination of the soil class at the depth the anchor helical plate will be installed.

3-2.10.3 Depth of Anchors. All anchors shall be installed to the full depth shown in the anchor manufacturer's installation instructions.

3-2.11 Skirting.

3-2.11.1 Materials. Skirting, if used, shall be of durable materials suitable for exterior exposures.

3-2.11.2 Installation.

3-2.11.2.1 General. Skirting, if used, shall be installed in accordance with the manufacturer's installation instructions. It shall be secured, as necessary, to assure stability, to minimize vibrations, to minimize susceptibility to wind damage, and to compensate for possible frost heave. Access opening(s) not less than 18 in. (457 mm) in any dimension and not less than 3 sq ft (0.28 m²) in area shall be provided and shall be located so that any water supply and sewer drain connections located under the manufactured home are accessible for inspection. Such access panel(s) or doors(s) shall not be fastened in a manner requiring the use of a special tool to remove or open same. On-site fabrication of skirting shall meet the objectives cited herein.

3-2.12 Access to and Ventilation of Under-Floor Areas.

(a) Provisions shall be made to minimize condensation in under-floor areas through ventilation openings or other suitable means.

(b) If combustion air for heat-producing appliance(s) is taken from within the under-floor areas, ventilation shall be adequate to assure proper operation of the appliance(s). This requirement shall take precedence over the provisions of 3-2.12(a).

(c) Ventilation openings shall be provided for low-profiled manufactured homes that are installed by depressing the supporting foundation in accordance with

3-2.12(d). (See Appendix I for "Low Profile" — Ground Level Installations.)

(d) A minimum of four ventilation openings shall be provided from the under-floor space to the exterior. One shall be placed at or near each corner as high as practicable. Their total net area shall be calculated by:

$$a = (2L/100) + (A/300) \text{ where}$$

L = the perimeter of the crawl space, linear feet.

A = the area of the crawl space, square feet.

a = the total gross area of all vents, square feet.

Openings shall provide cross ventilation on at least two opposite sides. The openings shall be covered with corrosion resistant wire mesh not less than $\frac{1}{8}$ in. (3 mm) and not more than $\frac{1}{2}$ in. (13 mm) in any dimension or with screened louvered openings to retard entry of dry vegetation, waste materials, or rodents.

Chapter 4 Plumbing

4-1 Single and Multiple Manufactured Site Plumbing.

4-1.1 Need for Water-Riser Pipe. Each manufactured home stand shall be provided with a water-riser pipe and connection located and arranged to permit attachment in a workmanlike manner to a manufactured home utilizing the stand.

4-1.2 Location of Water-Riser Pipe. The water supply riser pipe shall be located within 4 ft (1.22 m) of the manufactured home stand.

Exception: All water supply riser pipes for manufactured homes located on an all-weather wood or concrete or concrete block foundation system shown in Appendix C, or on a foundation constructed in accordance with the local building code or, in the absence of a local code, with a recognized model building code. (Also see Appendix C for examples of manufactured home foundation systems.)

4-1.3 Water-Riser Pipes, Size and Protection. Water-riser pipes shall be at least $\frac{3}{4}$ in. (19 mm) nominal diameter. Water-riser pipes shall extend a minimum of 4 in. (102 mm) above ground elevation. Water-riser outlets shall be terminated with a threaded plug or cap when a manufactured home does not occupy the site. Surface drainage shall be diverted from the location of the riser pipe (see also 2-2.2).

4-1.4 Shutoff Valves. A shutoff valve shall be provided on the water-riser pipe serving each manufactured home site.

4-1.5 Protection Against Freezing. Where necessary, provisions shall be made to prevent freezing of water supply lines, valves and riser pipes, whether or not the stand

is occupied. Similarly, provisions may be required to protect risers from the heaving and thawing actions of the ground where periodic freezing weather conditions are encountered. Where ground frost conditions occur, the shutoff valve required under 4-1.4 shall be protected and shall be listed for backflow protection.

4-1.5.1 Heat Tapes. Heat tapes, when used for protection of plumbing components against freezing, shall be of the listed type.

4-1.6 Sewer Connections — General.

4-1.6.1 Need for Sewer Connection. Each manufactured home stand shall be provided with a sewer connection located and arranged to permit attachment in a workmanlike manner to a manufactured home utilizing the stand.

NOTE: For sewage collection systems in manufactured home communities, see 4-3.5. See also 4-4.3 and 4-4.4.

4-1.6.2 Location of Sewer Connection. The sewer drain inlet shall be positioned within 4 ft (1.22 m) of the manufactured home stand.

Exception: All sewage service connections for manufactured homes located on an all-weather wood or concrete or concrete block foundation system shown in Appendix C, or on a foundation constructed in accordance with the local building code or, in the absence of a local code, with a recognized model building code. (Also see Appendix C for examples of manufactured home foundation systems.)

4-1.6.3 Size of Sewer Connection Inlet. The sewer connection inlet shall have a nominal inside diameter of at least 3 in. (76 mm).

4-2 Single Manufactured Home Site Plumbing System.

4-2.1 Minimum Sustained Flow. The water supply system shall be capable of delivering a minimum sustained flow of 5 gpm (0.31 l/s).

NOTE: If a well is the source of supply, a test of at least 4 hours duration should be conducted to determine the yield and maximum drawdown.

4-2.2 Water Quality. The supplied water shall be of a quality meeting the chemical, radiological and bacteriological requirements of the health authority having jurisdiction. However, if the requirements of that health authority are not at least equal to the National Secondary Drinking Water Regulations, 40 C.F.R., Part 143 (42 U.S.C. 300 f et seq.), the National Secondary Drinking Water Regulations shall apply. Acceptable evidence of approval by the health authority shall be required in each case.

NOTE: A water analysis may be required by the authority having jurisdiction.

4-2.3 Water Distribution. The water distribution system shall comply with this standard and all applicable local plumbing codes.

4-2.4 Disinfection of Single Water Supply System. After a single water supply system is installed, the system

shall be disinfected in accordance with the recommendations of the health authority having jurisdiction. In the absence of a health authority, system cleaning and disinfection shall conform to the U.S. Environmental Protection Agency's Manual of Individual Water Supply Systems.

NOTE: Bacteriological examination of the water supply may be required by a local, state, or federal regulatory authority.

4-2.5 Wells as the Source of Supply.

4-2.5.1 Location of Wells.

(a) A well shall not be located within the boundaries of a manufactured home stand, except in arctic and sub-arctic regions.

(b) Subject to meeting the water quality provisions of 4-2.2, water which comes from any soil formation which may be polluted or contaminated, is fissured or creviced, or which is less than 20 ft (6.10 m) below the natural ground surface shall not be acceptable.

(c) All well design and construction shall be approved by the authority having jurisdiction. In the absence of local standards, nationally recognized manuals and standards shall be used (*see Appendix J*).

NOTE: Special care needs to be taken in areas where chemical soil poisoning is practiced if the overburden of soil between the ground surface and the water-bearing strata is coarse-grained sand, gravel, or porous rock, or is creviced in a manner which will permit the toxicants to be carried into the zone of saturation.

4-2.5.2 Well Construction.

(a) The well shall be constructed to allow the pump to be easily placed and to function properly.

(b) All drilled wells shall be provided with a sound, durable and watertight casing capable of sustaining the loads imposed. The casing shall extend from a point several feet below the water level at drawdown or from an impervious strata above the water level to 12 in. (305 mm) above either the ground surface or the pump room floor. The casing shall be sealed at the upper opening.

(c) Bored wells shall be lined with concrete, vitrified clay, or equivalent materials.

(d) The space between the casing or liner and the wall of the well hole shall be sealed with cement grout.

(e) The well casing shall not be used to convey water except under positive pressure. A separate drop pipe shall be used for the suction line.

(f) When sand or silt is encountered in the water-bearing formation, the well shall either be gravel-packed, or a removable strainer or screen shall be installed.

(g) The surface of the ground above and around the well shall be graded to drain surface water away from the well.

(h) Openings in the casing, cap, or concrete cover for the entrance of pipes, pump or manholes shall be made watertight.

(i) If a breather is provided, it shall extend above the highest level to which surface water may rise. The breather shall be watertight, and the open end shall be screened and positioned to prevent entry of dust, insects or foreign objects.

4-2.5.3 Well Pumps and Equipment.

(a) Each pump shall be capable of delivering the volume of water required herein under normal operating pressure within the living unit of the manufactured home. Pump capacity shall not exceed the output of the well.

(b) Pump and equipment shall be mounted to minimize vibration, flooding, pollution, and freezing.

(c) Suction lines shall terminate below maximum drawdown of the water level in the well.

(d) Horizontal segments of suction line shall be placed below the frost line in a sealed casing pipe or in at least 4 in. (102 mm) of concrete.

4-2.6 Water Storage Tanks.

(a) Each pump shall be capable of delivering the volume of water required herein under normal operating pressure within the living unit of the manufactured home. Pump capacity shall not exceed the output of the well.

(b) Pump and equipment shall be mounted to minimize vibration, flooding, pollution, and freezing.

4-2.7 Single Manufactured Home Site Sewage Disposal Systems.

4-2.7.1 General.

4-2.7.1.1 Each sewage disposal system for a single manufactured home site shall consist of a drainage system of a design approved by the authority having jurisdiction. The system shall be designed to receive all sanitary sewage (bathrooms, kitchen, and laundry) from a manufactured home but not footing or roof drainage. The system shall be designed so that all gases generated are properly vented. After the system has been constructed, the appropriate authority shall inspect the system prior to backfilling.

4-2.7.1.2 The structural design and materials used in the construction of sewage disposal systems shall be in accordance with generally accepted good structural engineering practice, providing a sound, durable structure which will safely sustain all anticipated dead and live loads.

4-2.7.1.3 The type of system shall be determined on the basis of location, topography, soil absorbency and the depth and fluctuation of the groundwater level.

4-2.7.1.4 Installation of systems in swampy areas, areas with a high water table (permanent, fluctuating, or seasonal), areas with ledge rock, or areas which are subject to flooding shall not be acceptable.

4-2.7.1.5 All design and construction of individual sewage disposal systems shall be approved by the authority having jurisdiction. In the absence of local standards, nationally recognized manuals and standards shall be used (*see Appendix J*).

4-2.7.2 Single Manufactured Home Site Sewer Piping Installations.

4-2.7.2.1 The installation of single manufactured home site sewer piping shall be approved by the authority having jurisdiction.

4-2.7.2.2 The sewer piping shall have watertight joints and shall slope not less than one percent ($\frac{1}{8}$ in. per ft; 3 mm/0.30 m). Ells or bends of 90 degrees shall be long-sweep type.

4-2.7.3 Septic Tanks.

4-2.7.3.1 The design shall provide adequate volume for settling, for sludge and scum storage, and access for cleaning. The structural design shall provide for a sound, durable tank which will sustain all loads and pressures, and resist corrosion.

NOTE: The authority having jurisdiction may require a test for watertightness and strength.

4-2.7.3.2 Liquid capacity shall be based on the number of bedrooms proposed or reasonably anticipated and shall be at least as required in Table 4-2.7.3.2. The liquid depth of the tank or a compartment thereof shall be not less than 30 in. (762 mm). A liquid depth greater than 6 ft (1.83 m) shall not be considered in determining tank capacity.

Table 4-2.7.3.2 Septic Tank Capacity

NUMBER OF BEDROOMS	MINIMUM CAPACITY	
	GAL	L
2 or less	750	2840
3	900	3410
4	1 000	3790
Each additional bedroom added	250	950

4-2.7.3.3 When multi-compartment tanks are used, the volume of the first compartment shall be equal to or greater than that of any other compartment.

4-2.7.3.4 A septic tank or compartment thereof shall not have an inside horizontal dimension less than 24 in. (610 mm). Scum storage volume shall be not less than 15 percent of the required liquid capacity.

4-2.7.3.5 Inlet and outlet connections shall be submerged or baffled. The inlet invert shall be at least 1 in. (25.4 mm) above the outlet invert.

4-2.7.3.6 Baffles, and pipe fittings used as baffles, shall extend up to a point above the normal water level, and downward to a point of 40 percent below the normal water level. Both ends (top and bottom) shall remain open. A partition wall used to subdivide the tank shall have at least a 4-in. (102-mm) opening, the midpoint of which is located 40 percent below the liquid depth.

4-2.7.3.7 Access to each compartment of the tank shall be provided by a 16-in. (406-mm) minimum manhole or removable cover. The inlet and outlet connections shall

also be accessible through properly placed manholes, handholes, or by easily removable covers.

4-2.7.3.8 A minimum of 4 in. (102 mm) of cover or soil shall be provided over the top of the septic tank. Where the top of the tank is lower than 18 in. (457 mm) below grade, manholes shall be built up to within that measurement of grade.

NOTE: Subsurface absorption fields, absorption beds, and seepage pits, where used, should be subject to the restrictions of local, state, or federal standards governing same.

4-3 Multiple Manufactured Home Site Plumbing Systems.

NOTE: See also Sections 4-1, 4-4.1, 4-4.2, and 8-1.6.

4-3.1 General Requirements. An accessible and adequate supply of potable water shall be provided in each manufactured home community. The supplied water shall be of a quality meeting the chemical, radiological, and bacteriological requirements of the health authority having jurisdiction. In no case shall the water quality be less than the intent of the National Secondary Drinking Water Regulations, 40 C.F.R., Part 143 (42 U.S.C. 300 f et seq.). Where a public supply of water of satisfactory quantity, quality, and pressure is available at or within the boundary of the community the connection shall be made thereto and its supply used exclusively. When a satisfactory public water supply is not available, an approved private system shall be provided.

4-3.2 Source of Supply.

4-3.2.1 The water supply shall be capable of supplying a minimum of 150 gal (570 L) per day per manufactured home site.

4-3.2.2 The water supply source, water treatment and/or disinfection methods, and water distribution system shall be in accordance with applicable laws and regulations of the authority having jurisdiction.

4-3.2.3 Well-casing, pumping machinery or suction pipes shall not be placed in any pit, room or space extending below ground level, nor in any room or space above ground which is walled-in or otherwise enclosed, unless such rooms, whether above or below ground, have adequate drainage to prevent surface water backflow.

4-3.3 Water Storage Facilities. All water storage reservoirs shall be covered, watertight, and constructed of impervious material. Overflows and vents of such reservoirs shall be effectively screened. Manholes shall be constructed with overlapping covers, so as to prevent the entrance of contaminated material. Reservoir overflow pipes shall discharge through an acceptable air gap to the surface of the ground in areas not subject to flood.

4-3.4 Water Distribution Systems.

4-3.4.1 All water piping, fixtures and other equipment shall be constructed and maintained in accordance with state and local regulations and requirements and shall be of a type and in locations approved by the authority having jurisdiction.

4-3.4.2 The water distribution system shall not be connected with nonpotable or questionable water supplies, and shall be protected against the hazards of backflow or back siphonage.

4-3.4.3 The water supply system shall be so designed and maintained as to provide a pressure of not less than 20 lbs per sq in. (138 kPa) under all normal operating conditions at each manufactured home stand.

NOTE: Greater design values may be required when the system is to provide fire protection.

4-3.4.4 Where static water pressure exceeds 80 psi (552 kPa), a pressure regulator shall be installed.

4-3.5 Community Sewage Systems and Treatment Facilities.

NOTE: See also 4-1.6, 4-4.3, and 4-4.4.

4-3.5.1 General Requirements. An approved sewage collection system shall be provided in all manufactured home communities for conveying and disposing of all sewage. Where a public sewage collection system is available at or within the boundary of the manufactured home community, connection shall be made to the public system. When a public system is not available, a private system shall be provided. The private system shall be approved by the authority having jurisdiction prior to construction and shall be designed, constructed, and maintained in accordance with applicable laws and regulations.

4-3.5.2 Underground Sewage Collection Lines. All underground sewage collection lines shall be located in trenches of sufficient depth to be free of breakage from surface traffic or other movements and shall be separated from the community's water supply system as specified by the appropriate authority. Sewage collection lines shall be at a grade which will ensure a velocity of 2 ft (0.61 m) per second when flowing full.

4-3.6 Pipe Sizes.

4-3.6.1 Each manufactured home drain inlet shall be assigned a waste-loading value of not less than six fixture units or as applicable to the type of manufactured home expected to be placed on the site and each community collection system shall be sized according to Table 4-3.6.1 or as provided in 4-3.6.2. Drainage laterals shall be not less than 3 in. nominal (76 mm) in diameter.

Table 4-3.6.1

Nominal Size of Drainage Pipe mm	Minimum No. of Fixture Units	Maximum No. of Fixture Units
3	6	35
4	36	180
	127	356
	152	600

Table 4-3.6.2 Minimum Grade or Slope of Drainage Pipe

Nominal Pipe Size		Slope per 100 ft (30.48 m)	
in.	mm	in.	mm
3	76	20	508
4	102	15	381
5	127	11	279
6	152	8	203

4-3.6.2 A community collection system which exceeds the fixture unit loading of Table 4-3.6.1, or in which the grade or slope of pipe does not meet the minimum specified in Table 4-3.6.2, shall be designed by a registered professional engineer.

4-3.7 Sewage Treatment Plant. If required, an approved sewage treatment plant shall be designed and installed in accordance with the regulations of the authority having jurisdiction.

4-4 Plumbing Installation.

4-4.1 Water Inlet. Each manufactured home shall be connected to the water-riser pipe outlet by semi-rigid tubing (copper tubing permitted) or by an approved flexible connector not less than 3/4 in. (19 mm) nominal in diameter.

Exception: All water riser pipe outlet connections for manufactured homes located on an all-weather wood or concrete or concrete block foundation system shown in Appendix C, or on a foundation constructed in accordance with the local building code or, in the absence of a local code, with a recognized model building code. (Also see Appendix C for examples of manufactured home foundation systems.)

4-4.2 Water System Test. The water distribution system of the manufactured home and the supply connection shall show no evidence of leakage under normal operating pressure. If water at normal operating pressure is not available, the manufactured home water distribution system shall show no evidence of leakage.

4-4.3 Sewer Drain Connector. Each manufactured home shall be connected to the site sewer inlet by means of a drain connector consisting of approved pipe not less than Schedule 40, appropriate fittings and connectors, and shall be not less in size than the manufactured home drain outlet. The fitting connected to the inlet shall be a directional fitting to discharge into the sewer inlet. A listed flexible connector may be used at each end of the pipe.

Exception: All sewer drain connections for manufactured homes located on an all-weather wood or concrete or concrete block foundation system shown in Appendix C, or on a foundation constructed in accordance with the local building code or, in the absence of a local code, with a recognized model building code. (Also see Appendix C for examples of manufactured home foundation systems.)

NOTE: See also 4-1.6, 4-3.5, and 4-4.4.

4-4.4 Drain Plumbing Test. The manufactured home drainage piping system shall be connected to the lot or site drain inlet, and tested by allowing water to flow into all fixtures and receptors, including the clothes washer standpipe, for a period of 3 minutes. If water under pressure is not available, the drainage piping system shall be tested by letting at least 3 gal (11 L) of water into each fixture and receptor. There shall be no visible evidence of leaks.

4-5 Manufactured Home Accessory Building Plumbing Installation. Plumbing equipment, materials, and installations in a manufactured home accessory building or structure shall comply with the applicable provisions of the local plumbing code or, in the absence of a local plumbing code, a nationally recognized plumbing code.

4-6 Manufactured Home Community Building Plumbing Installation. Plumbing equipment, materials and installations in a permanent building within a manufactured home community shall comply with the applicable provisions of the local plumbing code or, in the absence of a local plumbing code, a nationally recognized plumbing code.

Chapter 5 Fuel Supply

5-1 Fuel Supply.

5-1.1 General. All fuel gas piping systems serving manufactured homes, accessory buildings, or structures and communities shall be designed and constructed in accordance with any applicable provisions of NFPA 54, *National Fuel Gas Code*, and NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*, NFPA 31, *Standard for Installation of Oil Burning Equipment*, shall apply to oil fuel-burning systems and shall conform to the criteria of the authority having jurisdiction.

5-1.2 Gas Supply Connections. Gas supply connections at sites, when provided from an underground gas supply piping system, shall be located and arranged to permit attachment to a manufactured home occupying the site in a workmanlike manner. For the installation of liquefied petroleum gas storage systems, the applicable provisions of NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*, shall be followed.

5-1.3 Location of Gas Supply Connection. The gas supply to the manufactured home shall be located within 4 ft (1.22 m) of the manufactured home stand.

Exception: The above requirements do not apply to gas supply connections for manufactured homes located on an all-weather wood or concrete or concrete block foundation system shown in Appendix C, or on a foundation constructed in accordance with the local building code or, in the absence of a local code, with a recognized

model building code. (Also see Appendix C for examples of manufactured home foundation systems.)

NOTE: See also Sections 5-3 and 5-4, 5-3.2 and 5-4.5.

5-2 Single and Multiple Manufactured Home Site Fuel Supply Systems.

5-2.1 Gas Piping Installations.

5-2.1.1 Gas Supply Connections — Underground Gas Piping. Gas supply connections at sites, when provided from an underground gas supply piping system, shall be located and arranged to permit attachment in a workmanlike manner to a manufactured home occupying the site. For the installation of liquefied petroleum gas storage systems, the provisions of NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*, shall be followed.

5-2.1.2 Underground gas piping system installations shall follow, as applicable, the appropriate provisions of Section 5-3, and shall comply with the following:

(a) Gas piping shall not be installed underground beneath that portion of a manufactured home site reserved for the location of a manufactured home, a manufactured home accessory building or structure, unless installed in open-ended gastight conduit. The conduit shall conform to the following:

1. The conduit shall be a pipe approved for installation underground beneath buildings and shall be not less than Schedule 40 pipe. The interior diameter of the conduit shall be not less than ½ in. (13 mm) larger than the outside diameter of the gas piping.

2. The conduit shall extend to a point not less than 4 in. (102 mm) beyond the outside wall of the manufactured home or accessory building or structure, and the outer ends shall not be sealed. Where the conduit terminates within a manufactured home or accessory building or structure, it shall be readily accessible and the space between the conduit and the gas piping shall be sealed to prevent leakage of gas into the building.

5-2.2 Manufactured Home Site Gas Shutoff Valve. Each manufactured home site shall have a listed gas shutoff valve installed upstream of the manufactured home site gas outlet and it shall be located on the outlet riser at a height of not less than 6 in. (152 mm) above grade. Such valve shall not be located under any manufactured home. The outlet shall be equipped with a cap or plug to prevent discharge of gas whenever the manufactured home site outlet is not connected to a home.

Exception: All gas shutoff valves for manufactured homes located on a foundation constructed in accordance with the local building code or, in the absence of a local code, with a recognized model building code. (Also see Appendix C for examples of manufactured home foundation systems.)

5-2.3 Gas Meters.

5-2.3.1 Support of Meters. When gas meters are installed, they shall not depend on the gas outlet riser for support, but shall be adequately supported by a post or bracket placed on a firm footing or other means providing equivalent support.

5-2.3.2 Location of Meters. Each meter installed shall be in an accessible location and shall be provided with unions or other fittings so as to be easily removable and replaced in an upright position. Meters shall not be installed in unventilated or inaccessible locations, or closer than 3 ft (0.91 m) to sources of ignition.

NOTE: Manufactured home electrical service equipment should not be considered a source of ignition when not enclosed in the same compartment with a gas meter.

5-2.4 Meter Shutoff Valve or Cock. All gas meter installations shall be provided with a shutoff valve or cock located adjacent to and on the inlet side of the meter. In the case of a single meter installation utilizing a liquefied petroleum gas container, the container service valve may be used in lieu of the shutoff valve or cock. All gas meter installations shall be provided with a test tee located adjacent to and on the outlet side of the meter.

5-3 Multiple Manufactured Home Site Fuel Distribution and Supply Systems.

NOTE: See also Sections 5-1, 5-4, 5-3.5 and 5-4.5.

5-3.1 Manufactured Home Community Gas Distribution and Supply Systems.

5-3.1.1 Manufactured Home Community Natural-Gas Distribution Systems. All underground metallic fuel piping systems shall comply with the cathodic protection requirements of 49 C.F.R., Parts 191 and 192.

NOTE 1: Gas as referred to in the referenced title means natural gas, flammable gas, or gas which is toxic or corrosive.

NOTE 2: The Natural Gas Pipeline Safety Act of 1979 has the effect of requiring that all gas distribution system operators must adhere to the referenced title. Any master-metered gas distribution system through which a manufactured home community is supplied gas, and which, in turn, distributes the gas to the ultimate users (tenants), is defined as a gas distribution system within the context of the Federal Regulations. Owners of master-metered housing projects or manufactured home communities accordingly are defined as "gas distribution system operators."

NOTE 3: Attention is also called to 49 C.F.R., Part 191, prescribing requirements for the reporting of gas leaks that are not intended by the operator.

NOTE 4: The Code of Federal Regulations, Title 49, Transportation, Parts 100-199, revised as of October 1, 1974, is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The American Society of Mechanical Engineers (345 East 47th Street, New York, NY 10017) publishes the ASME *Guide for Gas Transmission & Distribution Piping Systems*, which contains C.F.R., Title 49, Part 192, along with other useful technical information.

NOTE 5: A *Handbook on Natural Gas Pipeline Safety in Residential Areas Served by Master Meters* is published by the Superintendent of Documents, U.S. Government Printing Office. It was developed under contract for the U.S. Department of Housing and Urban Development (HUD-PDR-124, November 1975) and is specifically aimed at providing "a timely and comprehensive safety guide for architects and engineers involved in the planning and design phases of multifamily projects and manufactured home parks."

5-3.1.2 Liquefied Petroleum Gas Supply Systems. When ten or more customers are served by one liquefied petroleum gas supply system, the installation shall be in accordance with 49 C.F.R., Part 192, Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards. For other systems and for the storage and handling of liquefied petroleum gas, NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*, shall be followed.

NOTE: See also 5-3.2.

5-3.1.3 Installation of Cathodic Protection Systems. Where required by the federal standard cited in 5-3.1.1, cathodic protection shall be installed for corrosion control of buried or submerged metallic gas piping [see also 5-3.1.6(a) and (b)].

NOTE: Gas piping systems (natural gas, manufactured gas, liquefied petroleum gas in the vapor phase, liquefied petroleum gas-air mixtures, or mixtures of these gases) owned, operated, and maintained by a public utility are exempt from the provisions of this standard but are required to conform to 49 C.F.R., Part 192 (see 5-3.1.1).

5-3.1.4 Required Gas Supply. The minimum hourly volume of gas required at each manufactured home site outlet or any section of the manufactured home community gas piping system shall be calculated as shown in Table 5-3.1.4.

Table 5-3.1.4 Demand Factors for Use in Calculating Gas Piping Systems in Manufactured Home Communities

No. of Manufactured Home Sites	Btu Per Hour Per Manufactured Home Site
1	125,000
2	117,000
3	104,000
4	96,000
5	92,000
6	87,000
7	83,000
8	81,000
9	79,000
10	77,000
11-20	66,000
21-30	62,000
31-40	58,000
41-60	55,000
Over 60	50,000

NOTE: In extreme climate areas additional capacities should be considered.

5-3.1.5 Gas Pipe Sizing and Pressure.

(a) The size of each section of a gas piping system shall be determined in accordance with NFPA 54, *National Fuel Gas Code*, or by other standard engineering methods acceptable to the authority having jurisdiction.

(b) When all connected appliances are operated at their rated capacity the supply pressure shall be not less than 4 oz per sq in. (7 in. water column) (1743 Pa). The gas supply pressure shall not exceed 8 oz per sq in. (14 in. water column) (3486 Pa).

5-3.1.6 Gas Piping Materials.

(a) *Metal.* Metal gas pipe shall be standard-weight wrought iron or steel (galvanized or black), yellow brass containing not more than 75 percent copper, or internally tinned or treated copper of iron pipe size. Galvanizing shall not be considered protection against corrosion.

Seamless copper or steel tubing may be used with gases not corrosive to such material. Steel tubing shall comply with ANSI/ASTM A539 or ANSI/ASTM A254. Copper tubing shall comply with ANSI/ASTM B88 (Type K or

L) or ANSI/ASTM B280. Copper tubing (unless tinned) shall not be used if the gas contains more than an average of 0.3 grains of hydrogen sulfide per 100 standard cubic feet of gas.

(b) *Protection Coatings for Metal Gas Piping.* All buried or submerged metallic gas piping shall be protected from corrosion by approved coatings or wrapping materials. All gas pipe protective coatings shall be approved types, machine-applied, and conform to recognized standards. Field-wrapping shall provide equivalent protection and is restricted to those short sections and fittings necessarily stripped for threading or welding. Risers shall be coated or wrapped to a point at least 6 in. (152 mm) above ground.

(c) *Plastic.* Plastic piping shall only be used underground and shall meet the requirements of ASTM D-2513, Thermoplastic Gas Pressure Pipe, Tubing, and Fittings or ASTM D-2517, Reinforced Epoxy Resin Gas Pressure Pipe and Fittings and shall meet the design pressure and design limitations of 49 C.F.R., Part 192.123 and shall otherwise conform to the installation requirements thereof.

5-3.1.7 Gas Piping Installations.

(a) *Minimum Burial Below Ground Level and Clearances.* All gas piping installed below ground shall have a minimum earth cover of 18 in. (451 mm) and shall be installed with at least 12 in. (305 mm) of clearance in any direction from any other underground utility system.

(b) *Metallic Gas Piping.*

1. *Plan Approval Required.* All metallic gas piping systems shall be installed in accordance with approved plans and specifications, including provisions for cathodic protection. Each cathodic protection system shall be designed and installed to conform to the provisions of 49 C.F.R., Part 192.

2. *When Cathodic Protection Is Designed Only to Protect Underground Gas Piping.* When the cathodic protection system is designed to protect only the gas piping system, the gas piping system shall be electrically isolated from all other underground metallic systems or installations. When only the gas piping system is cathodically protected against corrosion, a dielectric fitting shall be used in the manufactured home gas connection to insulate the manufactured home from the underground gas piping system.

3. *When Cathodic Protection is Designed to Protect All Underground Metallic Systems.* When a cathodic protection system is designed to provide all underground metallic systems and installations with protection against corrosion, all such systems and installations shall be electrically bonded together and protected as a whole.

(c) *Plastic Gas Piping.* Plastic gas piping shall only be used underground and shall be installed with an electrically conductive wire for locating the pipe. The plastic pipe-locating wire shall be copper, not less in size than No. 18 AWG, with insulation approved for direct burial. Every portion of a plastic gas piping system consisting of metallic pipe shall be cathodically protected against corrosion.

5-3.2 Liquefied Petroleum Gas Equipment. LP-Gas equipment shall be installed in accordance with the ap-

plicable provisions of NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases.*

The referenced standard, NFPA 58, includes provisions on: location of containers; installation of containers; installation of container appurtenances; regulator installations; piping system service limitations; installation of pipe, tubing, pipe and tubing fittings, valves and hose; and hydrostatic relief valve installation.

5-3.3 Oil Supply. The following three methods of supplying oil to an individual manufactured home site shall be permitted:

(a) Supply from an outside underground tank (see 5-4.6).

(b) Supply from a centralized oil distribution system designed and installed in accordance with accepted engineering practice and in compliance with NFPA 31, *Standard for the Installation of Oil-Burning Equipment.*

(c) Supply from an outside aboveground tank (see 5-4.6).

5-3.4 Minimum Oil Supply Tank Size. Oil supply tanks shall have a minimum capacity equal to 20 percent of the average annual oil consumption. [Sixty gal (230 L) ICC-5 shipping containers or drums are not recommended, except for areas with less than 1,800 degree days.]

(d) *Gas Piping System Shutoff Valve.* A readily accessible and identified shutoff valve controlling the flow of gas to the entire manufactured home community gas piping system shall be installed near the point of connection to the service piping or to the supply connection of a liquefied petroleum gas container.

5-3.5 Oil Supply Connections — General. Oil supply connections at manufactured home stands, when provided from a centralized oil distribution system, shall be located and arranged to permit attachment in a workmanlike manner to a manufactured home utilizing the stand. The installation of such facilities shall meet the provisions of NFPA 31, *Standard for the Installation of Oil-Burning Equipment*, and particularly Section 3-8 thereof.

5-4 Fuel Supply Systems Installation.

5-4.1 Flexible Gas Connector. Each gas supply connector shall be listed for outside manufactured home use, be not more than 6 ft (1.83 m) in length and have a capacity rating adequate to supply the connected load.

Exception: All gas supply connections for manufactured homes located on an all-weather wood or concrete or concrete block foundation system shown in Appendix C, or on a foundation constructed in accordance with the local building code or, in the absence of a local code, with a recognized model building code. (Also see Appendix C for examples of manufactured home foundation systems.)

NOTE: The flexible connector should be installed to provide some slack.

5-4.2 Use of Approved Pipe and Fittings of Extension. When it is necessary to extend the manufactured home inlet to permit connection of the 6-ft (1.83-m) listed connector to the site gas outlet, the extension shall be of ap-

proved materials of the same size as the manufactured home inlet and be adequately supported at no more than 4-ft (1.22-m) intervals to the manufactured home.

5-4.3 Mechanical Protection. Where subject to physical damage, all gas outlet risers, regulators, meters, valves or other exposed equipment shall be protected against accidental damage.

NOTE: Such protection may consist of posts, fencing, or other permanent barriers.

5-4.4 Special Rules on Atmospherically Controlled Regulators. Atmospherically controlled regulators shall be installed in such a manner that moisture cannot enter the regulator vent and accumulate above the diaphragm. Where the regulator vent may be obstructed due to snow and icing conditions, shields, hoods, or other suitable devices shall be provided to guard against closing the vent opening.

5-4.5 Fuel Gas Piping Test. The manufactured home fuel gas piping system shall be tested with air only before it is connected to the gas supply. The manufactured home gas piping system shall be subjected to a pressure test with all appliance shutoff valves, except those ahead of fuel gas cooking appliances, in the open position. Appliance shutoff valves ahead of fuel gas cooking appliances shall be closed.

(a) The test shall consist of air pressure at not less than 10 in. nor more than 14 in. water column (6 oz to 8 oz per sq in.) (2490 to 3486 Pa). The system shall be isolated from the air pressure source and maintain this pressure for not less than 10 minutes without perceptible leakage. Upon satisfactory completion of the test, the appliance valves ahead of fuel gas cooking appliances shall be opened and the gas cooking appliance connectors tested with soapy water or bubble solution while under the pressure remaining in the piping system. Solutions used for testing for leakage shall not contain corrosive chemicals. Pressure shall be measured with either a manometer, slope gage, or gage calibrated in either water in. or psi with increments of either one-tenth in. or one-tenth psi, as applicable. Upon satisfactory completion of the test, the manufactured home gas supply connector shall be installed, and the connections tested with soapy water or bubble solution.

WARNING: Do Not Overpressurize the Fuel Gas Piping System! Pressurization beyond the maximums specified may result in damage to valves, regulators, appliances, etc.

(b) Gas appliance vents shall be visually inspected to ensure that they have not been dislodged in transit and are securely connected to the appliance.

5-4.6 Oil Tanks. Not more than one 660 gal (2500 L) tank or two tanks of aggregate capacity of 660 gal (2500 L) or less shall be connected to one oil-burning appliance. Two supply tanks, where used, shall be cross-connected and provided with a single fill and single vent described in Appendix A of NFPA 31, *Standard for the Installation of Oil-Burning Equipment*; but when so connected, they shall be on a common slab and rigidly secured one to the other. Tanks having a capacity of 660 gal (2500 L) or less shall be securely supported by rigid

noncombustible supports to prevent settling, sliding, or lifting.

5-4.6.1 Oil supply tanks shall be installed in accordance with the applicable provisions of NFPA 31, *Standard for the Installation of Oil-Burning Equipment*. Chapter 2 of the referenced standard includes provisions on the design and construction of tanks, installation of underground tanks, outside aboveground tanks not larger than 660 gal (2500 L), and location with respect to adjacent buildings and adjoining property lines.

NOTE: These provisions do not apply to centralized oil distribution systems (see 5-3.5 and 5-6.2 of this code). See also NFPA 31, *Standard for the Installation of Oil-Burning Equipment*.

5-4.6.2 A tank not larger than 60 gal (230 L) capacity shall be permitted to be a DOT-5 shipping container (drum), and so marked, or a tank meeting the provisions of Standard UL 80, *Steel Inside Tank for Oil Burner Fuel*, 1980. Tanks other than DOT-5 shipping containers having a capacity of not more than 660 gal (2500 L) shall meet the provisions of Standard UL 80. Pressure tanks shall be built in accordance with the Code for Unfired Pressure Vessels, Section VIII of the ASME *Boiler and Pressure Vessel Code*.

5-4.6.3 Tanks as described in 5-4.6 and 5-4.6.2 may be located adjacent to buildings, but shall be located not less than 10 ft (3.05 m) from a property line which may be built upon.

5-4.6.4 Tanks not larger than 660 gal (2500 L) capacity shall be equipped with an open vent not smaller than 1½ in. (38 mm) iron pipe size; tanks with a 500 gal (1900 L) or less capacity shall have a vent of 1¼ in. (32 mm) iron pipe size.

5-4.6.5 Tanks shall be provided with a means to determine the liquid level.

NOTE: See Section 3-6 of NFPA 31, *Standard for the Installation of Oil-Burning Equipment* (ANSI).

5-4.6.6 The fill opening shall be of such size and so located as to permit ready filling in a manner which will avoid spillage.

5-5 Manufactured Home Accessory Building Fuel Supply Systems. Fuel gas supply systems installed in a manufactured home accessory building or structure shall comply with the applicable provisions of NFPA 54, *National Fuel Gas Code*, and NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*. Fuel oil supply systems shall comply with the applicable provisions of NFPA 31, *Standard for the Installation of Oil-Burning Equipment*.

5-6 Community Buildings Fuel Supply Systems.

5-6.1 Fuel Gas Piping and Equipment Installations. Fuel gas piping and equipment installations installed within a permanent building in a manufactured home community shall comply with nationally recognized appliance and fuel gas piping codes and standards adopted by the authority having jurisdiction. Where the state or other political subdivision does not assume jurisdiction,

such fuel gas piping and equipment installations shall be designed and installed in accordance with the appropriate provisions of NFPA 54, *National Fuel Gas Code*, or NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*.

5-6.2 Manufactured Home Community Oil Supply Systems.

5-6.2.1 General. Oil-burning equipment and installations within a manufactured home community shall be designed and constructed in accordance with the applicable codes adopted by the authority having jurisdiction. Where the state or other political subdivision does not assume jurisdiction, such installations shall be designed and constructed in accordance with the applicable provisions of the standard referenced in 5-3.5.

5-6.3 Oil-Burning Equipment and Installation. Oil-burning equipment and installations within a building constructed to the local building code or a nationally recognized building code in a manufactured home community shall comply with nationally recognized codes and standards adopted by the authority having jurisdiction. Where the state or other political subdivision does not assume jurisdiction, such oil-burning equipment and installation shall be designed and installed in accordance with the appropriate provisions of NFPA 31, *Standard for the Installation of Oil-Burning Equipment*.

Chapter 6 Air Conditioning (Heating and Cooling)

6-1 Exterior Air Conditioning Equipment.

6-1.1 Air conditioning equipment installed outside of a manufactured home and not attached thereto shall be mounted on a level slab not less than 3½ in. (89 mm) thick or a precast, treated or reinforced concrete slab or equivalent strength, or be mounted in accordance with the equipment manufacturer's installation instructions.

6-1.2 Air conditioning equipment installed outside shall be listed and labeled for the outside installation use intended and installed in accordance with the manufacturer's installation instructions.

6-1.3 Air conditioning equipment shall not be installed in a manner that would obstruct any means of required egress.

NOTE: Air conditioning equipment should not be installed in any window opening which is part of an occupant exiting or egress system. Said equipment should not obstruct sidewalks or other means of egress from the manufactured home.

Chapter 7 Electrical

7-1 Manufactured Home Site and Community Electrical Connections.

7-1.1 Manufactured home sites and communities provided with an electrical service shall have all electrical installations designed and constructed in accordance with the applicable provisions of NFPA 70, *National Electrical Code*[®].

7-1.2 NFPA 70, *National Electrical Code*, is divided into the Introduction and nine chapters: Chapter 1 — General, Chapter 2 — Wiring Design and Protection, Chapter 3 — Wiring Methods and Materials, and Chapter 4 — Equipment for General Use apply generally to all electrical installations and materials. Chapter 5 — Special Occupancies (which includes Article 550, Manufactured Homes and Manufactured Home Parks, for the variances from the general rules for these installations), Chapter 6 — Special Equipment (for example Article 680 — Swimming Pools), and Chapter 7 — Special Conditions, apply to special occupancies, special equipment, or other special conditions. These latter chapters supplement or modify the rules. Chapters 1 — 4 apply except as amended by Chapters 5, 6 and 7 — Special Conditions. Chapter 8 covers communication systems and is independent of other chapters except where they are specifically referenced therein. Chapter 9 consists of tables and examples to assist the user of NFPA 70, *National Electrical Code*.

NOTE 1: The purpose of NFPA 70, *National Electrical Code*, is the practical safeguarding of persons and property from hazards arising from the use of electricity. The NFPA 70, *National Electrical Code*, is not intended as a design specification nor as an instruction manual for untrained persons.

NOTE 2: Some manufactured homes are constructed to have the service equipment installed in or on the structure. The installer and the local authority having jurisdiction should be aware that these units should have the service installed in accordance with NFPA 70, *National Electrical Code*, Article 230 for service, and Article 250 for equipment and service grounding.

7-2 Manufactured Home Accessory Building Electrical Systems, General. Electrical equipment installed in a manufactured home accessory building or structure shall comply with the applicable provisions of NFPA 70, *National Electrical Code*.

7-3 Manufactured Home Community Building Electrical Installations. Electrical wiring fixtures and equipment installed in a building other than a manufactured home in a manufactured home community shall comply with the applicable provisions of NFPA 70, *National Electrical Code*.

Chapter 8 Life and Firesafety

8-1 Firesafety Considerations. Community management shall instruct its staff in the use of the fire protection equipment available and define specific duties in the event of fire. Tenants shall be instructed in applicable fire prevention and fire protection rules. (See Appendix D.)

8-1.1 Arrangement of Manufactured Homes. The arrangement of each manufactured home community shall meet the approval of the authority responsible for providing the necessary fire protection services.

A community site plan shall be supplied to the enforcement agencies having jurisdiction. The site plan shall show the numerical designation or street name and number of each manufactured home site in the community. Each manufactured home site shall be marked for identification. Such a marker shall be easily readable from the street serving the site.

8-1.2 Access To Manufactured Home For Fire Protection Services. Access to a manufactured home for fire protection services shall be such as to permit fire apparatus to approach within 100 ft (30.48 m) of each manufactured home.

8-1.3 Incinerators and Rubbish Burning:

8-1.3.1 Burning of rubbish within a community shall not be permitted unless specifically permitted by the authority having jurisdiction.

8-1.3.2 Incinerators, when permitted by the authority having jurisdiction, shall be constructed in accordance with NFPA 82, *Standard on Incinerators, Waste and Linen Handling Systems and Equipment*.

8-1.3.3 Incinerators, when permitted by the authority having jurisdiction, shall meet the applicable Standards of the Environmental Protection Agency having jurisdiction.

8-1.4 Outdoor Hazards. Care shall be taken to maintain all areas free of dry brush, leaves and weeds which might spread fires to buildings.

8-1.5 Fire Detection and Alarm Systems.

8-1.5.1 Detection Systems in Community Buildings. Fire detection and alarm systems installed in community buildings shall be installed in accordance with NFPA 72A, *Standard on Local Protective Signaling Systems*.

NOTE: See NFPA 71, *Central Station Signaling Systems*; NFPA 72B, *Auxiliary Protective Signaling Systems*; NFPA 72C, *Remote Station Protective Signaling Systems*; or NFPA 72D, *Proprietary Protective Signaling Systems*, for other suitable types of fire protective signaling systems.

8-1.5.2 Public Fire Alarm Services. Street fire alarm services for the community, when provided, shall be in accordance with NFPA 1221, *Standard on Public Fire Alarm Communications*. Where such services are not provided, alarm procedures shall be posted as required by the local fire service.

8-1.6 Water Supplies For Fire Protection — Minimum Requirements. Water supplies for fire department operations shall be as required by the authority having jurisdiction. Where there are no such requirements, water supplies shall be at least adequate to permit the effective operation of two 1½-in. (38-mm) hose streams on any fire in a building. The supply may be derived from hydrants connected to an underground water supply system, a reservoir or water supply with a source of not less than 3,000 gal (11,360 L) (accessible fire department drafting operations), or fire department apparatus equipped with a water tank(s) with a capacity of 750 gal (2840 L) and a pump capacity of 250 gpm (16 L/s) constructed in accordance with NFPA 1901, *Standard for Automotive Fire Apparatus*.

Hydrants, when provided, shall be located along the community streets or public ways readily accessible for fire department use and located within 500 ft (152.40 m) of all homes and buildings. Hydrant-hose coupling threads shall be national standard threads (see NFPA 1963, *Standard for Screw Threads and Gaskets for Fire Hose Connections*) or shall conform to those used by the local fire department if different from those specified in the referenced standard.

8-2 Single and Multiple Manufactured Home Site Firesafety Requirements.

8-2.1 Firesafety Separation Requirements.

8-2.1.1 Any portion of a manufactured home, excluding the tongue, shall not be located closer than 10 ft (3.04 m) side to side, 8 ft (2.44 m) end to side or 6 ft (1.83 m) end to end horizontally from any other manufactured home or community building unless the exposed composite walls and roof of either structure are without openings and constructed of materials which will provide a one-hour fire rating, or the structures are separated by a one-hour fire rated barrier. (See 8-4.1.)

8-2.1.2 Vertical Positioning of Manufactured Homes. Manufactured homes shall not be positioned vertically (stacked with one over the other) in whole or in part unless the structure is designed and approved for such installation and permitted by the authority having jurisdiction.

8-3 Manufactured Home and Community Firesafety Requirements.

8-3.1 Use and Maintenance of Space Under Manufactured Homes, Accessory Buildings, or Structures. The space under manufactured homes and accessory buildings and structures shall not be used for the storage of combustible materials nor for the storage or placement therein of flammable liquids, gases, or liquid-or gasoline-powered equipment.

8-3.2 Emergency Information. The requirements of this section shall be printed and posted in conspicuous places in the community and shall contain the following information. (See Appendix D.)

- (a) List the following phone numbers:
 1. Fire Department
 2. Police Department or Sheriff's Office

3. Community Office

4. The person responsible for operation and maintenance.

(b) List the following locations:

1. Nearest fire alarm box, when available
2. Nearest public telephone
3. Address of community.

8-3.3 Smoke Detectors. Current manufactured home standards (see, for instance, *Manufactured Homes Construction and Safety Standards*, 24 C.F.R., Part 3280.208, subpart C 208, and the *Standard for Mobile Homes*, NFPA 501B-1974, Section 2-21) require the installation of smoke detectors in each manufactured home. This equipment is highly recommended for any existing manufactured home not so equipped.

8-3.4 Portable Fire Extinguishers. Portable fire extinguishers, when required or installed, shall be of the type and size required by NFPA 10, *Standard for Portable Fire Extinguishers*.

NOTE: It is recommended that each building owner provide a listed portable fire extinguisher suitable for handling incipient fire in the building. A listed extinguisher labeled as suitable for class A, B, and C fires (multipurpose dry chemical type) is recommended. The provision on each site of a ¾-in. (19-mm) nominal valved water outlet designed for connecting a ¾-in. (19-mm) nominal female swivel hose connection for fire suppression use is desirable when practical and if protected against freezing.

8-4 Accessory Building or Structure Firesafety Requirements.

8-4.1 A carport, awning, ramada, or open (screened) porch shall be permitted to be located immediately adjacent to a site line when constructed entirely of materials which do not support combustion and provided that such facilities are not less than 3 ft (0.91 m) from a building, cabana, or enclosed porch on an adjacent site. A carport, awning, or ramada or open (screened) porch using combustible materials shall not be located closer than 5 ft (1.52 m) from the site line of an adjoining site.

8-4.2 Exits. Every habitable room in an accessory building or structure shall have access to at least one exterior opening directly to the outside without passing through the manufactured home. When a building or structure encloses two doors of the manufactured home or an emergency exit window, an additional exterior door shall be installed. This exterior door shall be not less than 28 in. (0.71 m) in width and 74 in. (1.88 m) in height.

8-4.3 An accessory building or structure which encloses all required means of manufactured home egress shall not be constructed. One required means of egress must be open directly to the outside.

8-5 Community Building Firesafety Requirements.

8-5.1 Life Safety From Fire. The provisions of the NFPA 101[®], *Life Safety Code*[®], regarding construction, protection, and occupancy features of community buildings to minimize danger to life from fire, smoke or panic shall be followed, as applicable, with special attention given the number, size and arrangement of exit

facilities in community buildings used as places of public assembly.

8-5.2 Portable Fire Fighting Equipment. Community buildings shall be provided with listed portable fire extinguishers in accordance with the applicable provisions of NFPA 10, *Standard for Portable Fire Extinguishers*.

Chapter 9 Manufactured Home Accessory Buildings and Structures

9-1 Cabanas.

9-1.1 General. A cabana shall be erected, constructed, occupied or maintained on a manufactured home site only as an accessory to a manufactured home.

9-1.2 Design and Construction. A cabana shall be designed and constructed as a freestanding structure. A cabana shall be permitted to be attached to a manufactured home with appropriate flashing or sealing materials to provide a weather seal. Location shall comply with the provisions of Section 8-4.

9-1.3 Design Considerations.

9-1.3.1 The height of a cabana shall not exceed one story or the height of the manufactured home, except when constructed in conjunction with a ramada.

9-1.3.2 A cabana shall have a minimum ceiling height of 7 ft (2.14 m) from the finished floor to the finished ceiling, or, if there is no finished ceiling, to the roof. If the ceiling or roof is sloped, one-half of the sloped ceiling area shall meet the minimum ceiling height. No portion of any room having a ceiling height of less than 5 ft (1.52 m) shall be considered as contributing to the minimum area prescribed in 9-1.3.4.

9-1.3.3 Habitable rooms shall be not less than 7 ft (2.14 m) in any horizontal dimension and toilet compartments shall be not less than 30 in. (762 mm) in width, and there shall be not less than 21 in. (533 mm) clear space in front of each toilet.

9-1.3.4 Each habitable room in a cabana shall have a floor area of not less than 90 sq ft (8.36 m²), excluding a toilet and bath compartment or other enclosed area.

9-1.3.5 Light and Ventilation.

9-1.3.5.1 General. Each cabana shall be provided with windows or doors having a total glazed area of not less than 10 percent of the floor area. An area equivalent to not less than 5 percent of the floor area shall be available for unobstructed ventilation.

NOTE: Glazed areas need not be openable where a mechanical ventilation system is provided and is capable of producing a change of air in the room(s) every 30 minutes with not less than ½ of the air supply taken from outside the cabana.

9-1.3.5.2 Windows and Doors Used For Light and Ventilation. Such windows and doors shall open directly to the outside.

9-1.3.5.3 Bathroom. Each bathroom shall be provided with windows or doors having a total glazed area of not less than $1\frac{1}{2}$ sq ft (0.14 m²) of full openable window except where artificial light and an approved mechanical ventilation system are provided and capable of producing a change of air every 12 minutes.

9-1.3.5.4 Cabana Windows. Required windows of a cabana shall open on a court, yard, or street either directly or through a porch or awning having a minimum clear height of not less than 7 ft (2.14 m). Such porch or awning shall be at least 50 percent open on the side opposite the windows.

9-1.3.6 Foundation. A cabana shall be permitted to be set on piers and girders in lieu of continuous footings. Piers and girders shall be designed and constructed to support the live and dead loads imposed on them in accordance with standard engineering practice and the criteria established by the authority having jurisdiction.

9-1.3.7 Floors. Floors shall be designed and constructed to support the live and dead loads to which they may be subjected in accordance with criteria established by the authority having jurisdiction.

9-1.3.8 Walls. Walls shall be designed and constructed to withstand horizontal and lateral forces in accordance with design criteria established by the authority having jurisdiction.

9-1.3.9 Roofs. Roofs of cabanas shall be designed and constructed to withstand vertical and horizontal forces to which they may be subjected in accordance with criteria established by the authority having jurisdiction.

9-1.3.10 Exits. Every room in a cabana shall have access to at least one exterior door opening directly to the outside without passing through the manufactured home. The opening shall be not less than 28 in. (.71 m) in width nor less than 74 in. (1.88 m) in height. When the cabana encloses two doors of the manufactured home, an additional exterior door shall be installed which provides an alternate route of exit in the event the other exit becomes blocked. When two exit doors are required on the cabana, the separation of the two doors shall be greater than 12 ft (3.66 m).

9-1.3.11 A cabana shall not be constructed which encloses all required means of manufactured home egress. One means of egress must be open directly to the outside. (*Also see 8-4.3.*)

9-2 Awnings and Carports.

9-2.1 General. An awning or carport shall be erected, constructed, or maintained on a manufactured home site only as an accessory to a manufactured home located on the same site. An awning shall not be enclosed with rigid materials or walls or converted for use as a habitable room or cabana unless the completed construction com-

plies with all the requirements for a cabana. (*See Section 9-1.*)

9-2.2 Location. Location as regards site line proximity shall comply with the provisions of Section 8-4 dependent upon the type of construction utilized.

9-2.3 Design Considerations.

9-2.3.1 The load imposed by an attached awning or carport, supported in part by a manufactured home, shall not exceed the load-bearing capacity of the supporting structure of the manufactured home.

9-2.3.2 A freestanding awning or carport is not limited as to width or length, except that the occupied area of a manufactured home site shall not exceed the limit imposed by Section 8-4.

9-2.3.3 Exits From Awning Enclosures. An awning with enclosures of nonrigid materials shall have at least one door in the enclosure opening directly to the outside of the enclosure. The opening shall be not less than 28 in. (.71 m) in width nor less than 74 in. (1.88 m) in height. Two such door openings shall be provided from the enclosure when the enclosure encloses two doors of the manufactured home. When two exit doors are required from the awning enclosure, the separation of the two doors shall be greater than 12 ft (3.66 m).

9-3 Ramadas.

9-3.1 General. A ramada shall be erected, constructed, or maintained on a manufactured home site only as an accessory to a manufactured home located on the same site.

9-3.2 Location.

9-3.2.1 Horizontal separation to a site line shall be in accordance with Section 8-4, dependent on the type of construction utilized.

9-3.2.2 A ramada or any portion thereof shall have a clearance of not less than 18 in. (457 mm) in a vertical direction above the top of any fuel-burning appliance vent or plumbing vent extending through the roof of a manufactured home and not less than 6 in. (152 mm) in a horizontal direction from each side of a manufactured home.

9-3.2.3 Cross braces, architectural appurtenances or structural ties shall not obstruct movement of any manufactured home.

9-3.3 Design and Construction. A ramada shall be designed and erected as a freestanding, self-supporting structure meeting structural requirements for cabanas.

9-3.4 Enclosure Prohibited. A ramada shall not be enclosed or partially enclosed on any side or end, except that one side may be enclosed when the ramada roof is continuous with the roof of a cabana constructed on one side only of the manufactured home.

9-3.5 Roof Venting. A ventilating opening shall be installed at the highest point in the ramada roof to relieve

products of combustion from vents or ducts of fuel-burning equipment. Vent openings shall have a minimum cross-sectional area of 28 sq in. (0.018 m²). Chimneys or vents of appliances burning solid or liquid fuel shall extend through the ramada roof surface and shall terminate in an approved roof jack and cap.

9-4 Porches, Stairways and Landings.

9-4.1 General.

9-4.1.1. A porch erected, constructed or maintained on a manufactured home to be used as an exit way for the use of the occupants of the manufactured home located on the same site shall comply with all the applicable NFPA 101, *Life Safety Code* requirements herein.

9-4.1.2 Porches shall also meet all the requirements herein.

9-4.1.3 Enclosed porches shall be located as specified in Section 8-4.

9-4.2 Design and Construction.

9-4.2.1 The design and construction of all structural elements of a porch, stairs leading thereto, and rails shall be in accordance with the applicable provisions of nationally recognized dwelling codes. Live loads applicable to porch floors shall be not less than 40 lbs per sq ft (195 kg/m²).

9-4.2.2 Where a door swings outward, the floor of the exterior porch shall be not more than 8 in. (203 mm) lower than the floor level of the manufactured home and not less than 22 in. (559 mm) in clear width with the door open. The width of the porch perpendicular to the main doorway opening shall be not less than the full width of the door when open at least 90 degrees. Guardrails shall permit the main door to open at least 90 degrees.

9-4.2.3 Where a door swings inward, the doorway shall be permitted to open on the top step of a stairway or porch not more than 8 in. (203 mm) below the floor level of the manufactured home.

9-4.3 Foundation.

9-4.3.1 Porches shall be permitted to be supported on piers in lieu of continuous footings. Individual piers shall be designed and constructed to evenly distribute the loads carried to the footings. Manufactured piers shall be listed and labeled by an approved listing agency and identified as being approved.

9-4.3.2 Individual load-bearing footings for piers shall be adequate in size to withstand tributary dead and live load.

9-4.3.3 Individual load-bearing footings for piers shall be permitted to be placed on the surface of the ground, but they shall be placed on firm, undisturbed soil or compacted fill.

NOTE: Individual load-bearing footings for piers may consist of one of the following:

(a) Pressure-treated lumber not less than 2 in. (51 mm) nominal thickness;

(b) Precast or poured-in-place concrete footings not less than 3 1/2 in. (89 mm) in thickness;

(c) Other approved material providing equivalent load-bearing capacity and resistance to decay.

9-4.4 Porches Used As An Exit Way. A porch erected, constructed or maintained on a manufactured home and used as an exit way for the use of the occupants of the manufactured home located on the same site shall comply with applicable requirements of NFPA 101, *Life Safety Code*.

9-4.5 Railings. Railings shall be provided around the perimeter of porches or landings which are 36 in. (91 mm) or more above grade. Railings shall be not less than 42 in. (1067 mm) in height above the floor. Intermediate rails in open-type railings shall be spaced not more than 6 in. (152 mm) apart. Railings shall be designed and constructed to withstand a horizontal force of 20 lbs per lineal ft (292 N.m) applied at the top of the railing.

9-4.6 Stairways and Steps. The rise of every step in a stairway shall not exceed 8 in. (203 mm) and the run shall be not less than 9 in. (229 mm). The height of risers and the width of treads in any stairway shall have the same dimensions with a maximum allowable variation of 1/4 in. (6 mm). Every stairway with four or more risers shall have at least one handrail. A landing not exceeding 8 in. (203 mm) in height above grade shall be provided at the bottom of a stairway when necessary to comply with this section. No horizontal dimension of the landing shall be less than the width of the stairway. The landing shall comply with the design and construction requirements for a porch. Pressure-treated lumber or heartwood grade redwood not less than 2 in. (51 mm) nominal thickness, shall be used. Other approved material or assemblies of materials of equivalent durability and resistance to decay may be used.

9-4.6.1 A landing, at least as wide as the door, plus an additional 18 in. (457 mm) on the latch side of the door, shall be installed on all exterior stairs consisting of 4 or more risers.

9-4.6.2 Handrails. Every stairway with four or more risers or stairways serving porches having the finished floor 30 in. (762 mm) or more above grade shall be equipped with handrails. Handrails shall be not less than 30 in. (762 mm) nor more than 34 in. (864 mm) as measured vertically from the nosing of stair treads.

9-5 Storage Structures.

9-5.1 General. Not more than two individual storage structures shall be located or maintained on one manufactured home site.

9-5.2 Location. Storage structures shall be located in accordance with the provisions of Section 8-4.

NOTE: Storage structures should not obstruct openings for light and ventilation of the manufactured home, interfere with requirements for open space, or prevent inspection of manufactured home service equipment and utility connections.

9-6 Fences and Windbreaks.

9-6.1 General. If a fence or windbreak is located on a manufactured home site, it shall not exceed 6 ft (1.83 m) in height, except where such fence or windbreak is on the park property line.

9-6.2 Location. A fence or windbreak exceeding 42 in. (1067 mm) in height shall not be located closer than 3 ft (0.91 m) to any manufactured home or manufactured home accessory building or structure. A fence or windbreak shall not be used to form an enclosure of any part of an awning or carport.

NOTE: See also 2-4.2.3.

Appendix A Barrier-Free Design Aspects for the Physically Handicapped (Exterior Only)

This Appendix is not part of the requirements of this document, but is included for information purposes only.

A-1 General. The following provisions are offered as guidelines to provide some basic barrier-free design features in manufactured home communities to the extent considered desirable or needed by the operators to facilitate use by the physically handicapped. The Appendix material represents informational material only and does not comprise a part of the mandatory provisions of this standard.

NOTE 1: Dimensions herein are in US units only as they are advisory.

NOTE 2: This is a developing technology and data herein should be checked with the latest guidance from recognized authorities (see NOTE on available texts in this Appendix).

A-2 Walks. Walks should be 42 in. wide. If the slope of a walk is greater than 5 percent (1 in. rise in a 20 in. run), a handrail should be provided. The slope of a walk should not exceed 8.33 percent (1 in. rise in a 12 in. run). Walks should have a continuous common surface, not interrupted by steps or abrupt changes in level greater than $\frac{1}{2}$ in. Where walks cross driveways or parking lots they should blend to a common level by means of curb cuts, ramps, or other means. Curb cuts should have a textured nonslip surface (such as broom-finish concrete). Walks should be provided with a level area no less than 5 ft by 5 ft where they terminate at doors; in no case should such walks extend less than 1 ft beyond the side from which the door opens.

A-3 Ramps. Ramps should not have a slope greater than 1 ft within 12 ft (or 8.33 percent) and should be no less than 4 ft in. clear width; they should be structurally designed to carry a minimum of 100 lbs per sq ft live load when freestanding. If the ramp slope is greater than 5 percent and there is no dropoff, one handrail should be provided; where a ramp drops off on one or both sides, handrails should be required on both sides of the ramp. Handrails should be 32 in. in height measured from the

surface of the ramp and extend 1 ft beyond the top and bottom of the ramp or turn at right angles. The ramp should have a nonslip surface. Each ramp should have a level platform at the top which is at least 5 ft by 5 ft and this platform should extend at least 1 ft on the side from which a door opens. Each ramp should have at least 5 ft of straight level clearance at the bottom. Straight run ramps should have 3-ft minimum long intermediate level platforms at 30-ft intervals for purposes of rest and safety, and should have level platforms wherever they turn which should be at least as wide as the ramp and 5 ft long (deep).

A-4 Doors and Doorways. Each exterior and interior door should have a clear opening of not less than 32 in. when the door is open. Such a door should be operable by a single effort with one hand. The distance between two doors (e.g., outer and inner) should be a minimum of 6 $\frac{1}{2}$ ft. The floor on the inside and outside of each such double doorway should be level and clear for a distance of 5 ft. from the door and should extend 1 ft. beyond the side from which the door opens. The bottom rail of narrow stile framed glass doors should have a minimum height of 7 $\frac{1}{2}$ in. Exterior thresholds should be leveled with a maximum edge height of $\frac{3}{4}$ in. Interior thresholds should be flush with the floor or leveled at not more than 5 percent slope with a maximum edge height of $\frac{1}{2}$ in. Where door closers are used, the pressure to open a door should not exceed a maximum of 15 lbs. (The lightest possible door pressure for use by handicapped people is preferred.)

A-5 Outside Stairs. Outside stairs should not have abrupt (square) nosing; a 1-in. diameter rounded nosing is desirable. Stairs should have at least one continuous handrail, 32 in. as measured from the tread at the face of the riser. The handrail should extend at least 18 in. beyond the top step and beyond the bottom step or turned at right angles. Care should be taken that the extension of the handrails is not in itself a hazard and the extensions should be made on the side of a continuing wall where available.

A-6 Other Facilities for Assistance to the Physically Handicapped. Special designs are available for such other facilities as listed herein for the convenience of physically handicapped persons:

- (a) Campsites
- (b) Control devices for light, power, heat, ventilation windows, draperies, doors, and similar devices
- (c) Elevators
- (d) Kitchen arrangements
- (e) Swimming pool facilities
- (f) Telephone
- (g) Toilet rooms and toilet fixtures (including showers)
- (h) Water fountains.

NOTE: Available texts for further guidance are:

- (a) "Barrier Free Site Design" available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. This publication is based on research and studies conducted by the American Society of Landscape Architects Foundation under contract with the U.S. Department of Housing and Urban Development, Office of Policy Development and

Research and was issued in April 1975 (HUD-PDR-84). This publication also contains a helpful Bibliography for additional data.

(b) "An Illustrated Handbook of the Handicapped Section of the North Carolina State Building Code," issued in 1974, and available from the North Carolina Department of Insurance, P.O. Box 26587, Raleigh, NC 27611.

(c) "Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People," American National Standard A117.1-1977. This standard applies to buildings, outdoor facilities, public walks, and residential structures and is available from the American National Standards Institute, 1430 Broadway, New York, NY 10018.

(d) "Design for the Physically Handicapped," US Department of the Army, Office of the Corps of Engineers, Washington, DC 20314.

Appendix B Wind Zone, Roof Load, and Winter Climate Zone Maps

This Appendix is not part of the requirements of this document, but is included for information purposes only.

B-4 Comments on Maps.

B-4.1 The Wind Zone Map (Figure B-1). This map shows that along the Gulf and Atlantic coastlines is the Hurricane Zone where manufactured homes "Designated for Hurricane Zones" should be used. It is not feasible to show all the other areas subject to high winds in the United States, but areas where recurrent winds up to 90 miles per hour (25 psf) are experienced should use manufactured homes similarly designed. Consult the authority having jurisdiction.

B-4.2 The Roof Load Zone Map (Figure B-2). This map shows areas in the northern tier of states where it is necessary to protect against snow loads. It is not feasible to show all the other areas subject to heavy snows (as in mountain ranges) where similar precautions should be followed. Consult the authority having jurisdiction.

B-4.3 Winter Climate Zone Map (Figure B-3). This map divides the USA into three "Zones" for purposes of calculating thermal protection requirements. It is not feasible to show limited areas in some of the zones where climate conditions may vary from the generalized zones. Consult the authority having jurisdiction.

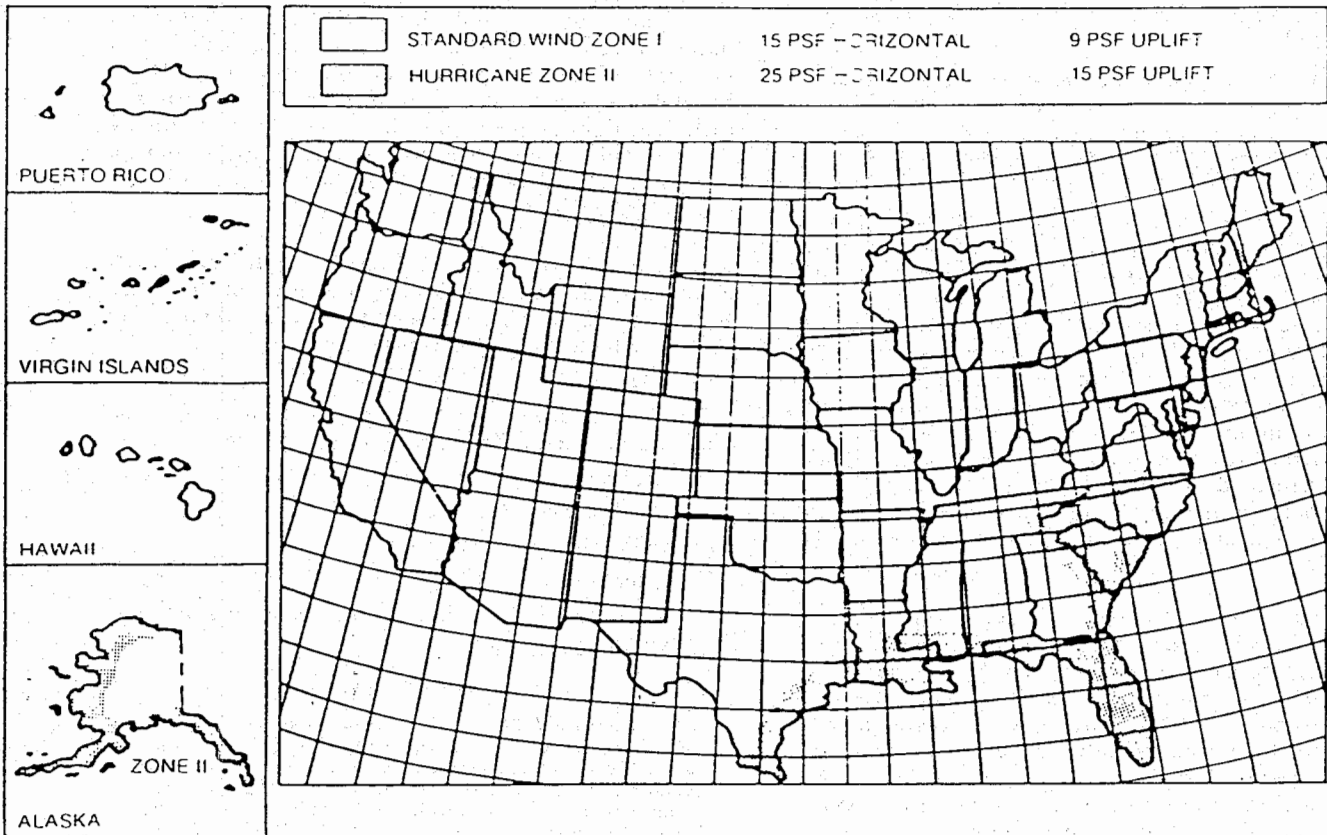


Figure B-1 Wind Zone Map

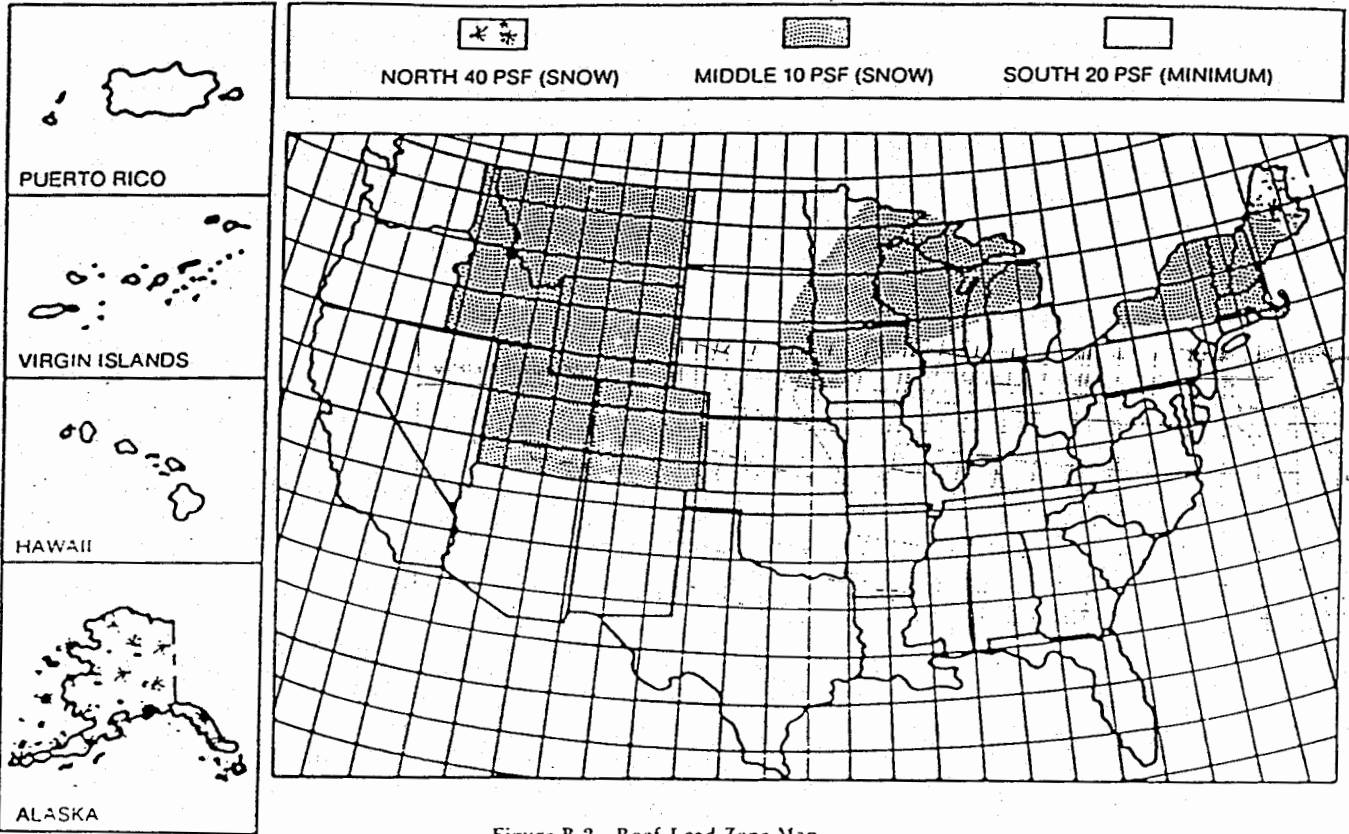
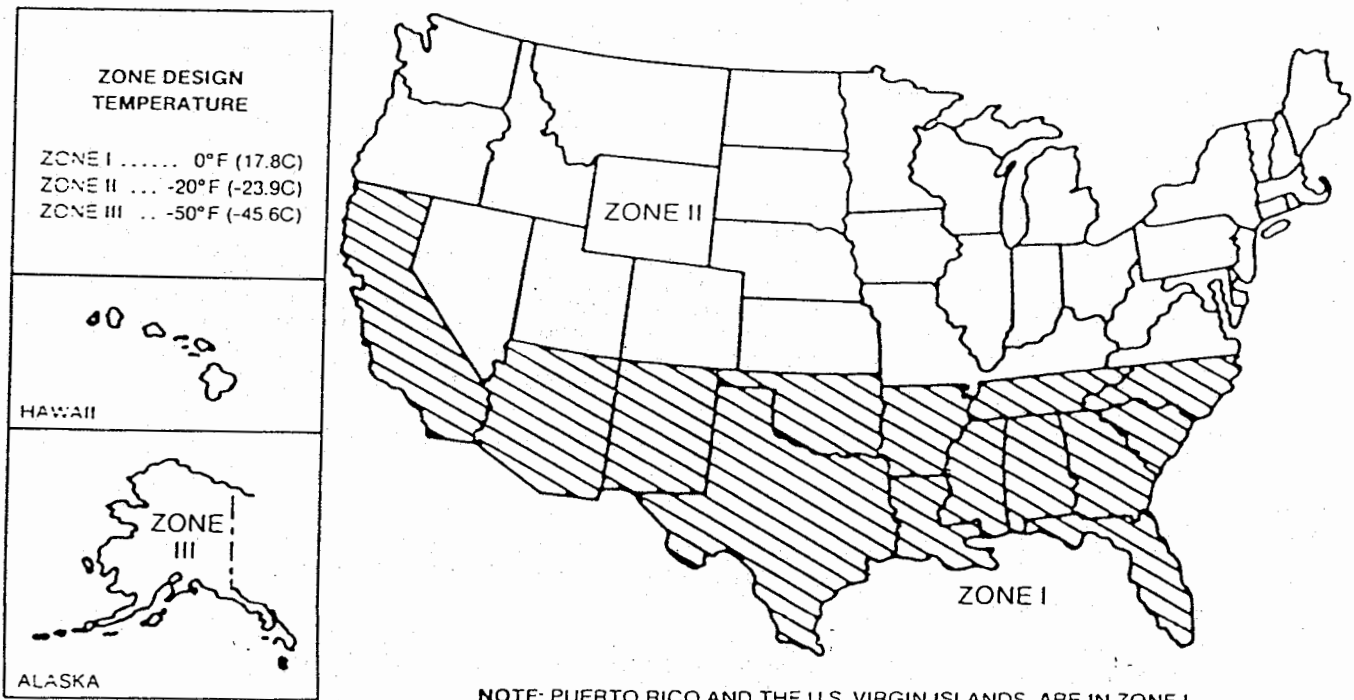


Figure B-2 Roof Load Zone Map



NOTE: PUERTO RICO AND THE U.S. VIRGIN ISLANDS ARE IN ZONE I.

Figure B-3 Winter Climate Zone Map

Appendix C Typical Designs of Piers or Load-Bearing Supports for Manufactured Homes

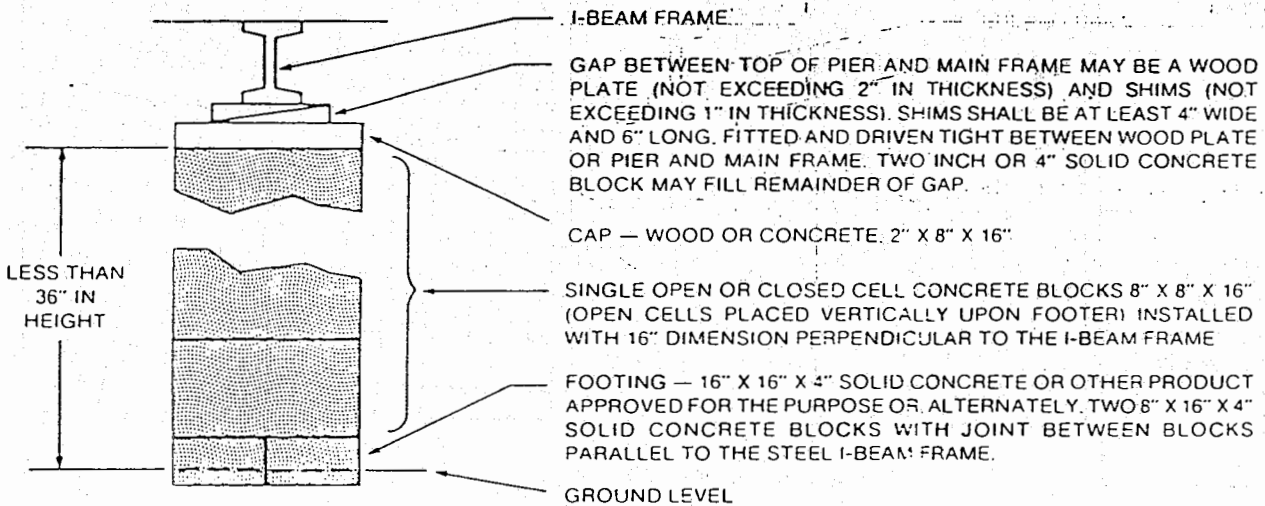
This Appendix is not part of the requirements of this document, but is included for information purposes only.

(Dimensions herein are in US units only, as they are advisory only.)

The following represent typical design arrangements followed by several producers of manufactured homes. They are illustrative examples only. It should be noted

that, in addition to these design examples, guidance is found in these typical arrangements for drainage under the manufactured home, moisture prevention, consideration of termite infestation and other critical aspects that must be taken into consideration when installing or setting-up a manufactured home. The user should consult the producer or dealer of the manufactured home in question for the actual design configuration of support, piers, etc. to be followed.

NOTE: IN AREAS SUBJECT TO FROST HEAVE, SEE 3-3.7.7.

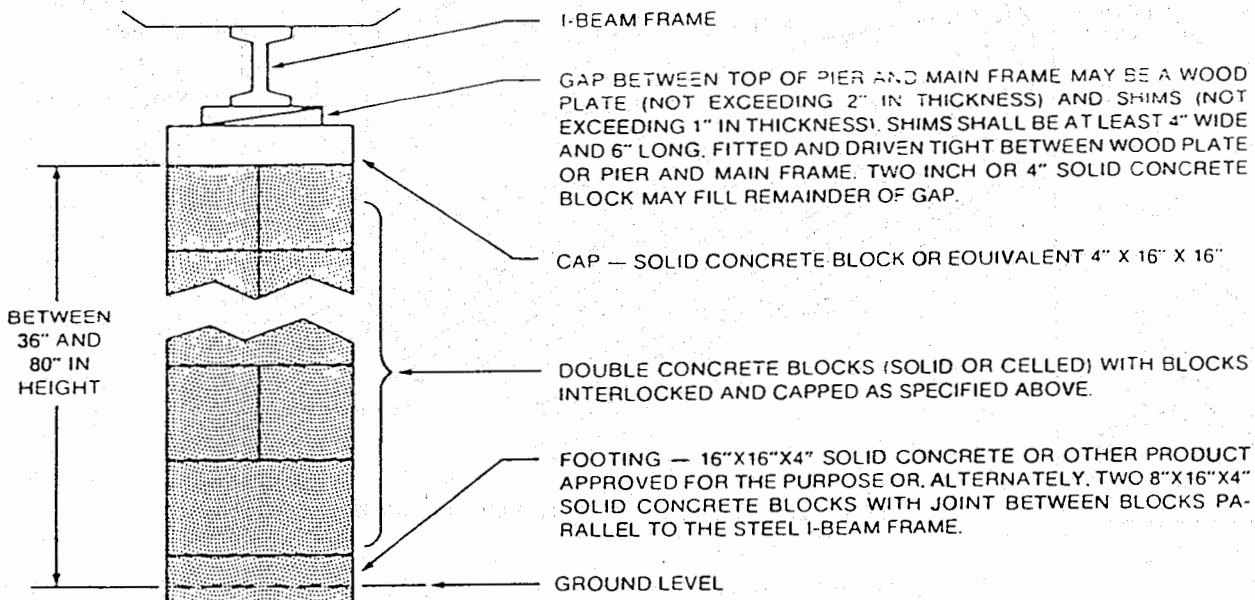


FOOTING PLACED ON FIRM UNDISTURBED SOIL OR ON CONTROLLED FILL FREE OF GRASS AND ORGANIC MATERIALS COMPACTED TO A MINIMUM LOAD-BEARING CAPACITY OF 2000 PSF.

(FOR CONVERSION TO SI UNITS 1 in. = 25.40 mm.)

Figure C-1

NOTE: IN AREAS SUBJECT TO FROST HEAVE, SEE 3-3.7.7.

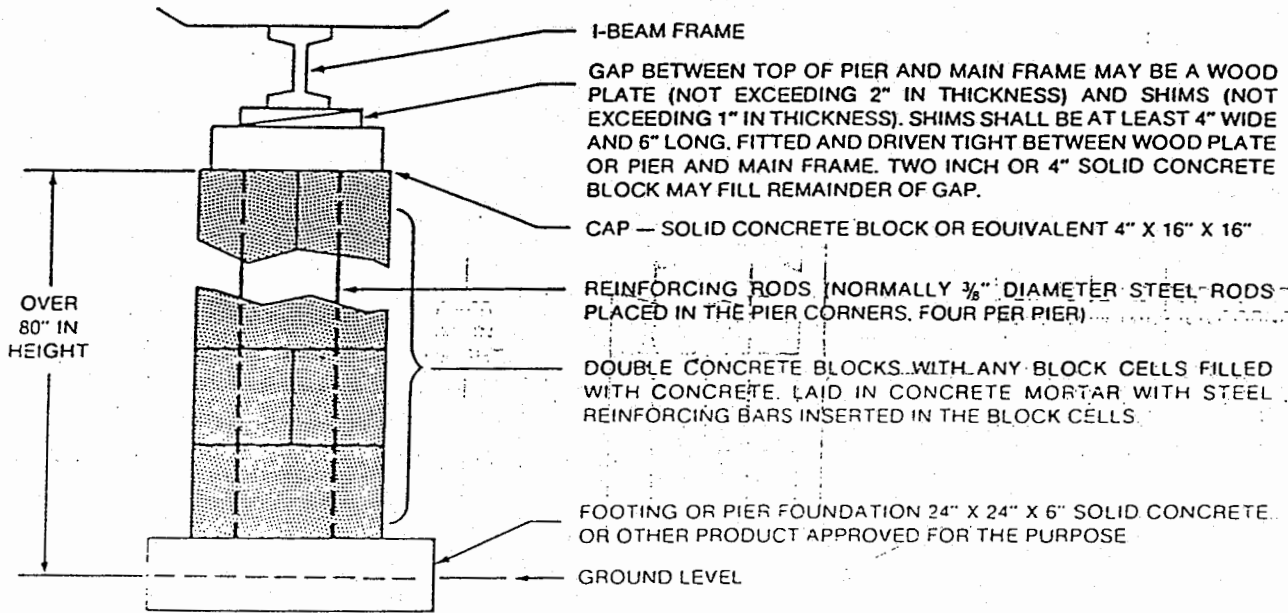


FOOTING PLACED ON FIRM UNDISTURBED SOIL OR ON CONTROLLED FILL FREE OF GRASS AND ORGANIC MATERIALS COMPACTED TO A MINIMUM LOAD-BEARING CAPACITY OF 2000 PSF.

(FOR CONVERSION TO SI UNITS 1 in. = 25.40 mm.)

Figure C-2

NOTE: IN AREAS SUBJECT TO FROST HEAVE, SEE 3-3.7.7.



(FOR CONVERSION TO SI UNITS 1 in. = 25.40 mm.)

FOOTING PLACED ON FIRM UNDISTURBED SOIL OR ON CONTROLLED FILL FREE OF GRASS AND ORGANIC MATERIALS COMPACTED TO A MINIMUM LOAD BEARING CAPACITY OF 2000 PSF.

Figure C-3(a)

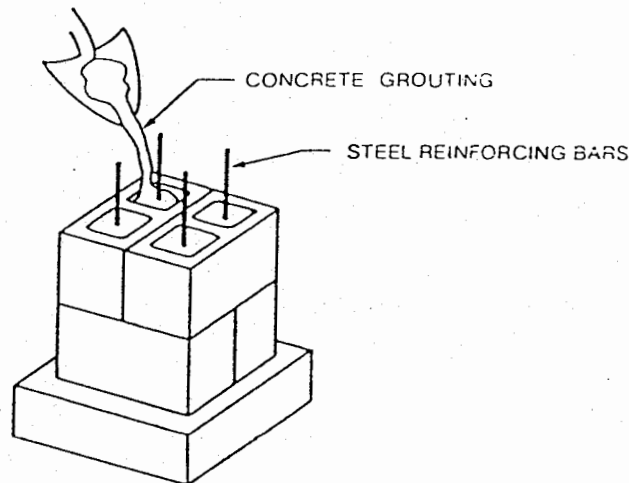
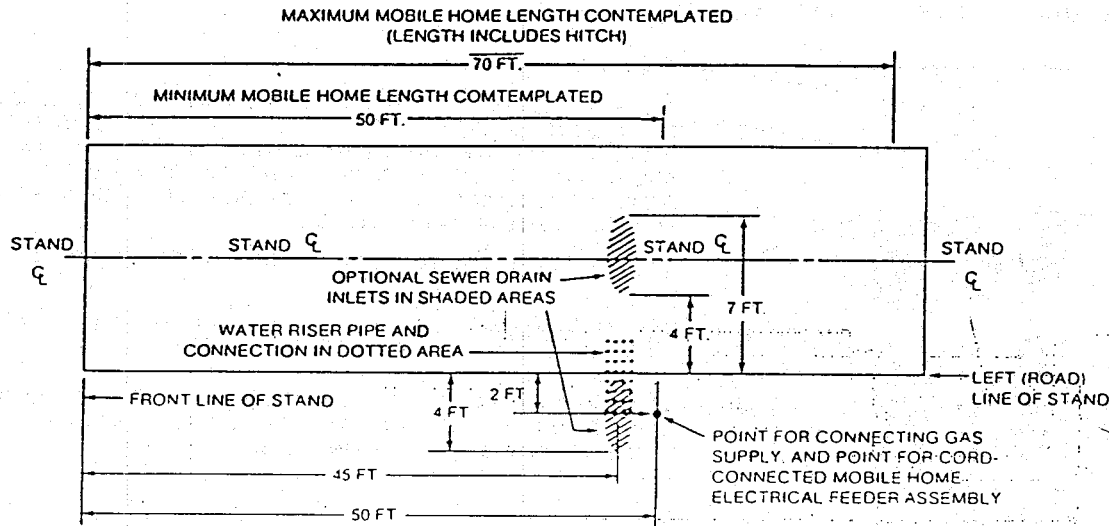


Figure C-3(b) For piers exceeding 80 in. in height the concrete blocks should be filled with concrete grouting and steel reinforcing rods utilized.



(FOR CONVERSION TO SI UNITS 1 in. = 25.40 mm)

Figure C-4 Diagram of Optimum Placement of Utility Connections Serving a Manufactured Home. The diagram illustrates suggested locations of utility connections for the convenience of users of this standard.

NOTE 1: Drainage. Underfloor areas should be drained in accordance with the requirements of the authority having jurisdiction

NOTE 2: Wood and Earth Separation. Wood joists or the bottom of perimeter joists should be a minimum of 8 in. from finished grade.

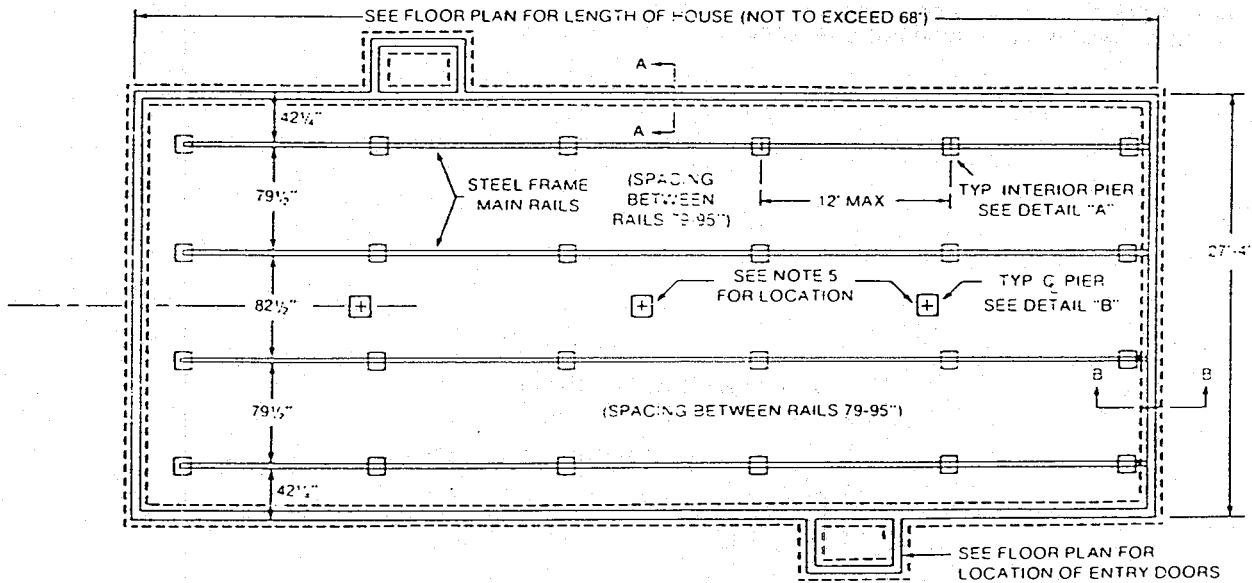
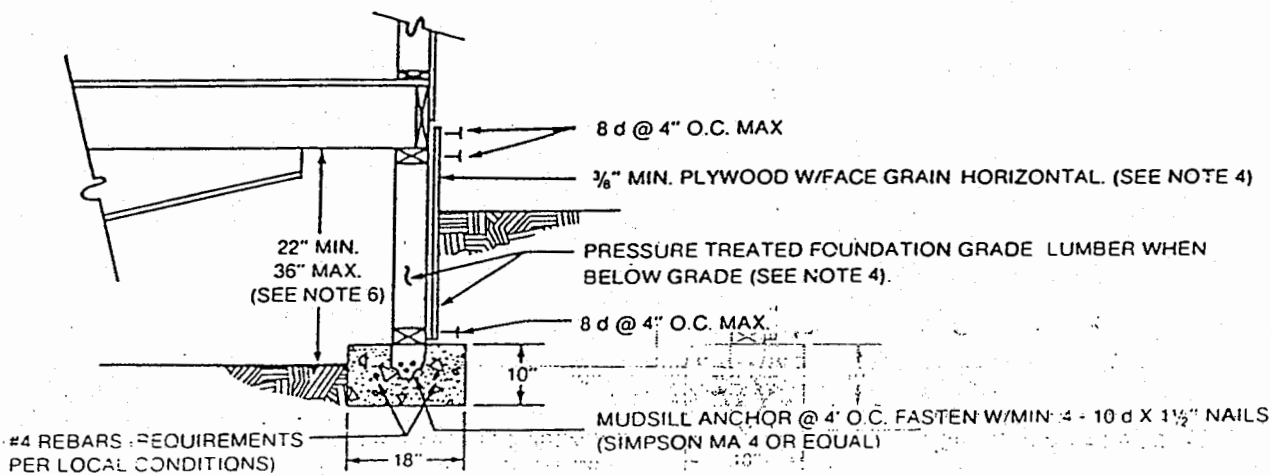


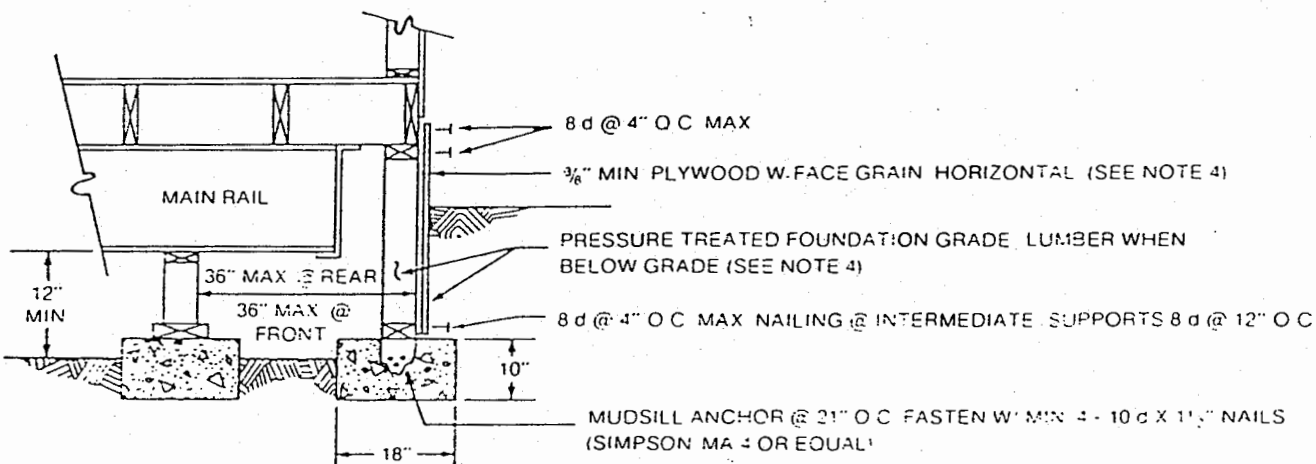
Figure C-5 All Weather Wood Foundation System

Notes:

1. Design Basis: *Uniform Building Code*, Chapter 29, 1979 Ed.
20 PSF Max. wind force
30 PSF roof live load
Seismic Zone 3
2. Foundation footing size and depth to be based on soil conditions at the site.
3. Crawl space access and ventilation to be provided per code.
4. All lumber and plywood used in the foundation system within 6 in. of earth shall be preservative treated and shall bear the FDN grade mark:
 - a. Lumber shall be stud grade Douglas Fir-Larch or Hem-Fir.
 - b. Plywood shall be minimum 3/4 in. CD with exterior glue and bearing the APA trademark.
 - c. Fasteners in preservative treated wood shall be stainless steel or hot-dipped zinc-coated steel.
5. Centerline piers to be located directly below ridge beam support posts. See floor plan for post locations shown by [2] → For applicable post numbers see floor plan.
6. When under floor clearances exceeds 36 ft., a special foundation stem wall design may be required.



SECTION "A-A" - TYPICAL SIDEWALL FOUNDATION



SECTION "B-B" - TYPICAL FRONT/REAR END WALL FOUNDATION

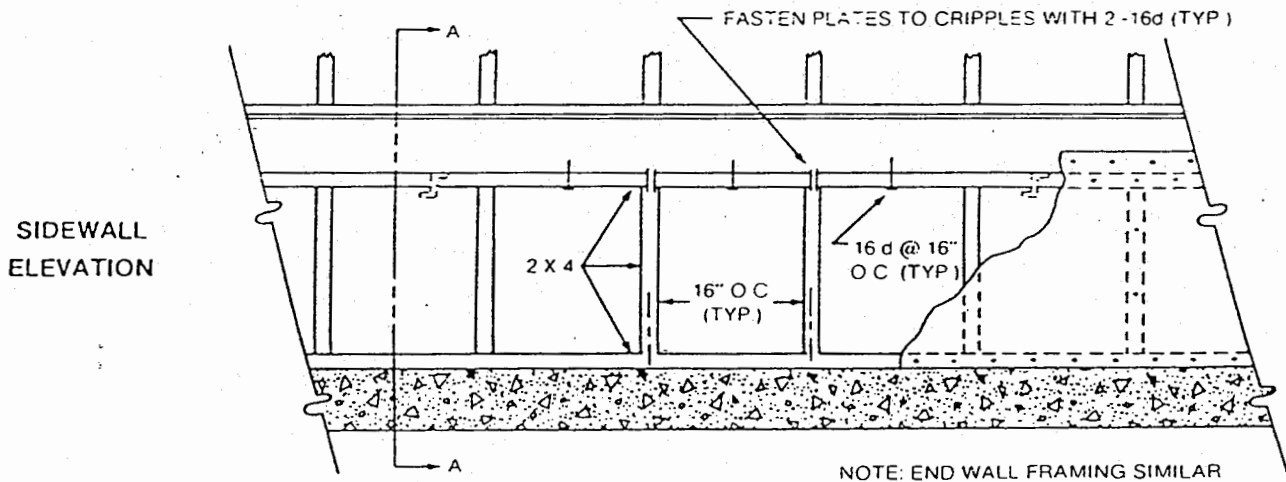
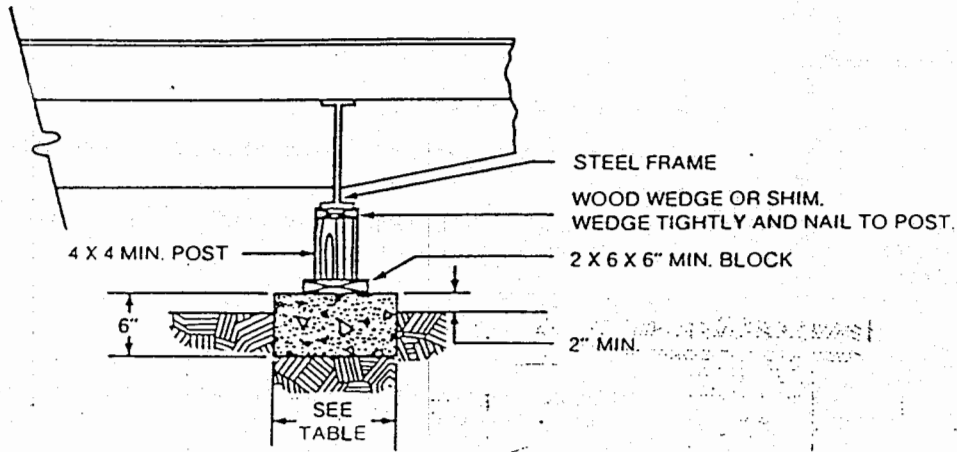
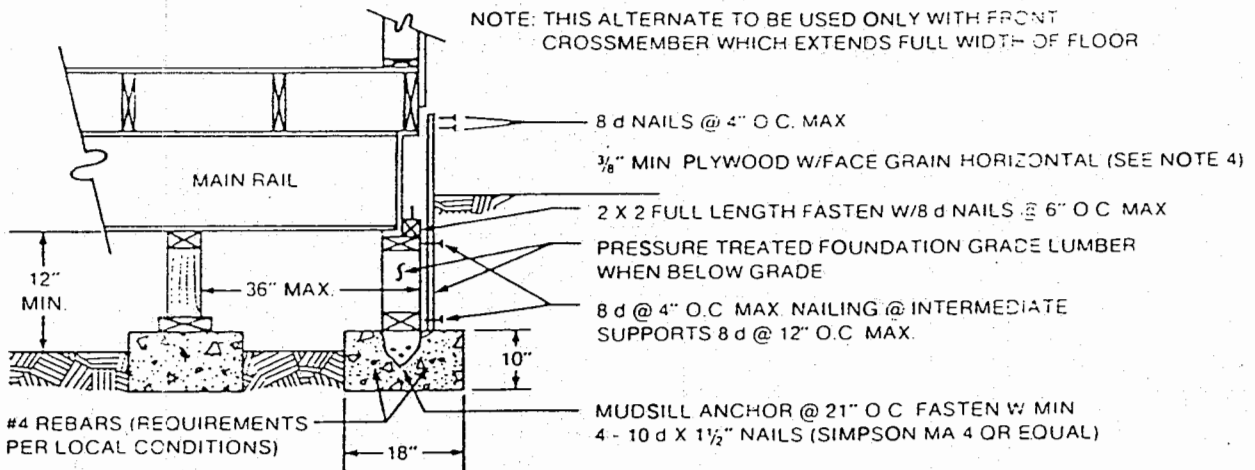


Figure C-6 All Weather Wood Foundation System



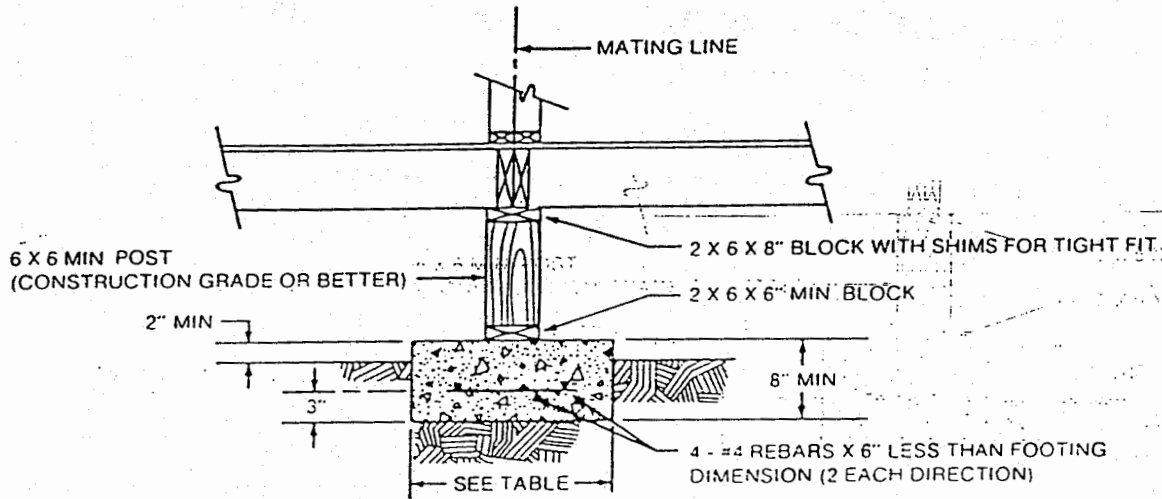
DETAIL "A" - TYPICAL INTERIOR PIER

ON-CENTER PIER SPACING	FOOTING SIZE - INTERIOR PIER		
	ALLOWABLE SOIL BEARING PRESSURE		
	1000 PSF	1500 PSF	2000 PSF
6'	18" x 18"	14" x 14"	12" x 12"
8'	20" x 20"	16" x 16"	14" x 14"
10'	22" x 22"	18" x 18"	16" x 16"
12'	25" x 25"	20" x 20"	18" x 18"



ALTERNATE SECTION "B-B" - ALTERNATE FRONT END WALL FOUNDATION

Figure C-7 All Weather Wood Foundation System



FOOTING SIZE - RIDGE BEAM PIER							
COLUMN NO.*	ALLOWABLE SOIL BEARING PRESSURE			COLUMN NO.*	ALLOWABLE SOIL BEARING PRESSURE		
	1000 PSF	1500 PSF	2000 PSF		1000 PSF	1500 PSF	2000 PSF
1	24" x 30"	20" x 20"	20" x 20"	14	30" x 36"	24" x 30"	24" x 24"
2	24" x 30"	20" x 20"	20" x 20"	15	30" x 30"	24" x 24"	24" x 24"
3	24" x 30"	20" x 20"	20" x 20"	16	30" x 30"	24" x 24"	20" x 20"
4	36" x 36"	30" x 30"	24" x 24"	17	30" x 30"	24" x 24"	24" x 24"
5	30" x 36"	24" x 30"	24" x 24"	18	36" x 42"	30" x 36"	24" x 30"
6	30" x 36"	24" x 30"	24" x 24"	19	36" x 36"	30" x 30"	24" x 24"
7	36" x 36"	30" x 30"	24" x 24"	20	30" x 30"	24" x 24"	20" x 20"
8	36" x 40"	30" x 36"	24" x 30"	21	36" x 42"	30" x 30"	24" x 30"
9	36" x 36"	30" x 30"	24" x 30"	22	30" x 30"	24" x 24"	24" x 24"
10	30" x 36"	24" x 30"	24" x 24"	23	42" x 42"	36" x 36"	30" x 30"
11	30" x 30"	24" x 24"	24" x 24"	24	36" x 42"	30" x 36"	24" x 30"
12	36" x 36"	30" x 30"	24" x 30"	25	36" x 36"	30" x 30"	24" x 24"
13	36" x 42"	30" x 36"	24" x 30"				

*SEE NOTE 5

DETAIL "B" - TYPICAL RIDGE BEAM COLUMN PIER

Figure C-8 All Weather Wood Foundation System

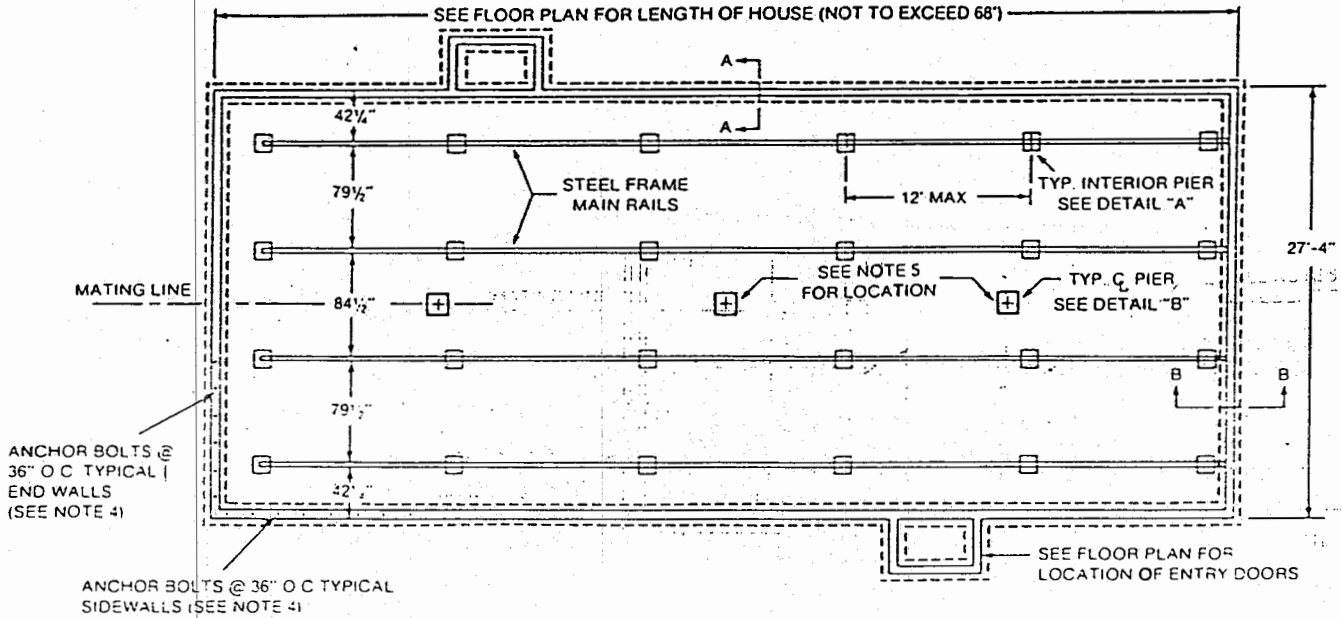
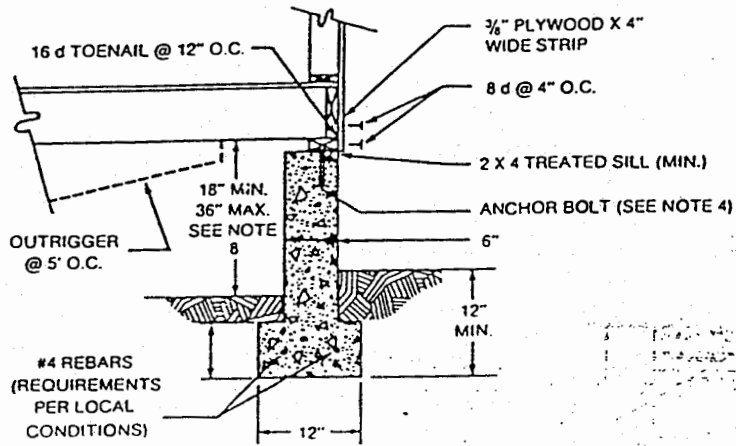


Figure C-9 Concrete or Concrete Block Foundation System

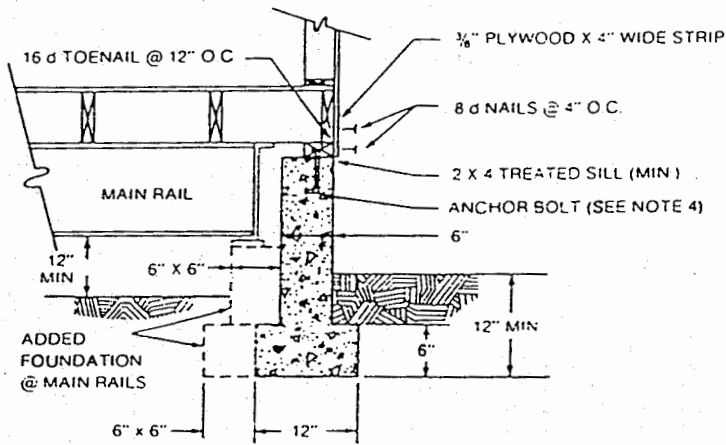
Notes:

1. Design Basis: *Uniform Building Code, Chapter 29, 1979 Ed.*
 20 PSF Max. wind force
 30 PSF roof live load
 Seismic Zone 3
2. Foundation footing size and depth to be based on soil conditions at the site.
3. Crawl space access and ventilation to be provided per code.
4. Anchor bolts to be installed within 12 in. of each end of sill and as shown on plan.

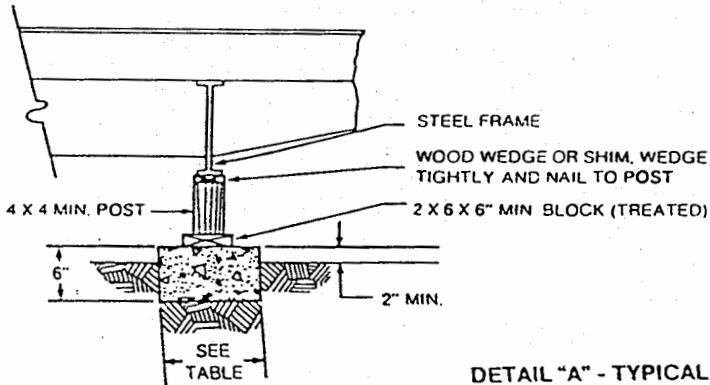
- Bolts to be $\frac{1}{2}$ in. ϕ \times 7 in. in concrete foundation. Bolts to be $\frac{1}{2}$ in. ϕ \times 15 in. in concrete block foundation.
5. Centerline piers to be located directly below ridge beam support posts. See floor plan for post locations shown by \square with arrow. For applicable post numbers see floor plan.
 6. (ASTM C-90) with 2 - 14 fully grouted in cell with anchor bolt may be used in lieu of foundation stem wall.
 7. Front and/or rear end wall stems may be built after house is placed on foundation.
 8. When under floor clearances exceeds 36 ft. a special foundation stem wall design is required.



SECTION "A-A" - TYPICAL SIDEWALL FOUNDATION



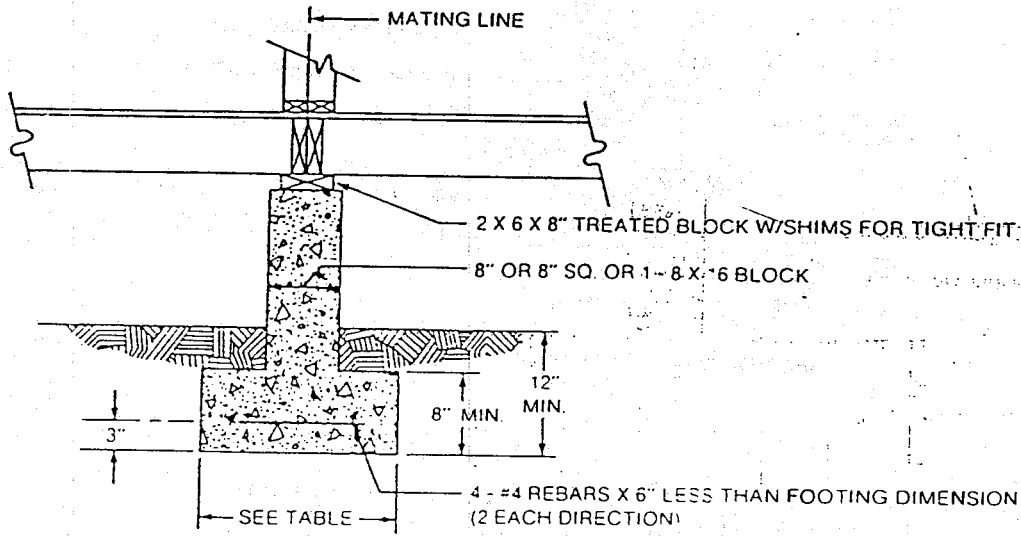
SECTION "B-B" - TYPICAL FRONT END WALL FOUNDATION



DETAIL "A" - TYPICAL INTERIOR PIER

FOOTING SIZE - INTERIOR PIER			
ON-CENTER PIER SPACING	ALLOWABLE SOIL BEARING PRESSURE		
	1000 PSF	1500 PSF	2000 PSF
6'	18" x 18"	14" x 14"	12" x 12"
8'	20" x 20"	16" x 16"	14" x 14"
10'	22" x 22"	18" x 18"	16" x 16"
12'	25" x 25"	20" x 20"	18" x 18"

Figure C-10 Concrete or Concrete Block Foundation System



FOOTING SIZE - RIDGE BEAM PIER							
COLUMN NO.*	ALLOWABLE SOIL BEARING PRESSURE			COLUMN NO.*	ALLOWABLE SOIL BEARING PRESSURE		
	1000 PSF	1500 PSF	2000 PSF		1000 PSF	1500 PSF	2000 PSF
1	24" x 30"	20" x 20"	20" x 20"	14	30" x 36"	24" x 30"	24" x 24"
2	24" x 30"	20" x 20"	20" x 20"	15	30" x 30"	24" x 24"	24" x 24"
3	24" x 30"	20" x 20"	20" x 20"	16	30" x 30"	24" x 24"	20" x 20"
4	36" x 36"	30" x 30"	24" x 24"	17	30" x 30"	24" x 24"	24" x 24"
5	30" x 36"	24" x 30"	24" x 24"	18	36" x 42"	30" x 36"	24" x 30"
6	30" x 36"	24" x 30"	24" x 24"	19	36" x 36"	30" x 30"	24" x 24"
7	36" x 36"	30" x 30"	24" x 24"	20	30" x 30"	24" x 24"	20" x 20"
8	36" x 40"	30" x 36"	24" x 30"	21	36" x 42"	30" x 30"	24" x 30"
9	36" x 36"	30" x 30"	24" x 30"	22	30" x 30"	24" x 24"	24" x 24"
10	30" x 36"	24" x 30"	24" x 24"	23	42" x 42"	36" x 36"	30" x 30"
11	30" x 30"	24" x 24"	24" x 24"	24	36" x 42"	30" x 36"	24" x 30"
12	36" x 36"	30" x 30"	24" x 30"	25	36" x 36"	30" x 30"	24" x 24"
13	36" x 42"	30" x 36"	24" x 30"				

* See Note 5

DETAIL "B" - TYPICAL RIDGE BEAM COLUMN PIER

Figure C-11 Concrete or Concrete Block Foundation System

DESIGN BASIS:

- UNIFORM BUILDING CODE, CHAPTER 29, 1979 ED.
- 15 AND 20 PSF MAXIMUM WIND FORCES
- 20, 30, 40, 60, 80 AND 120 PSF ROOF LIVE LOADS
- SEISMIC ZONE 4

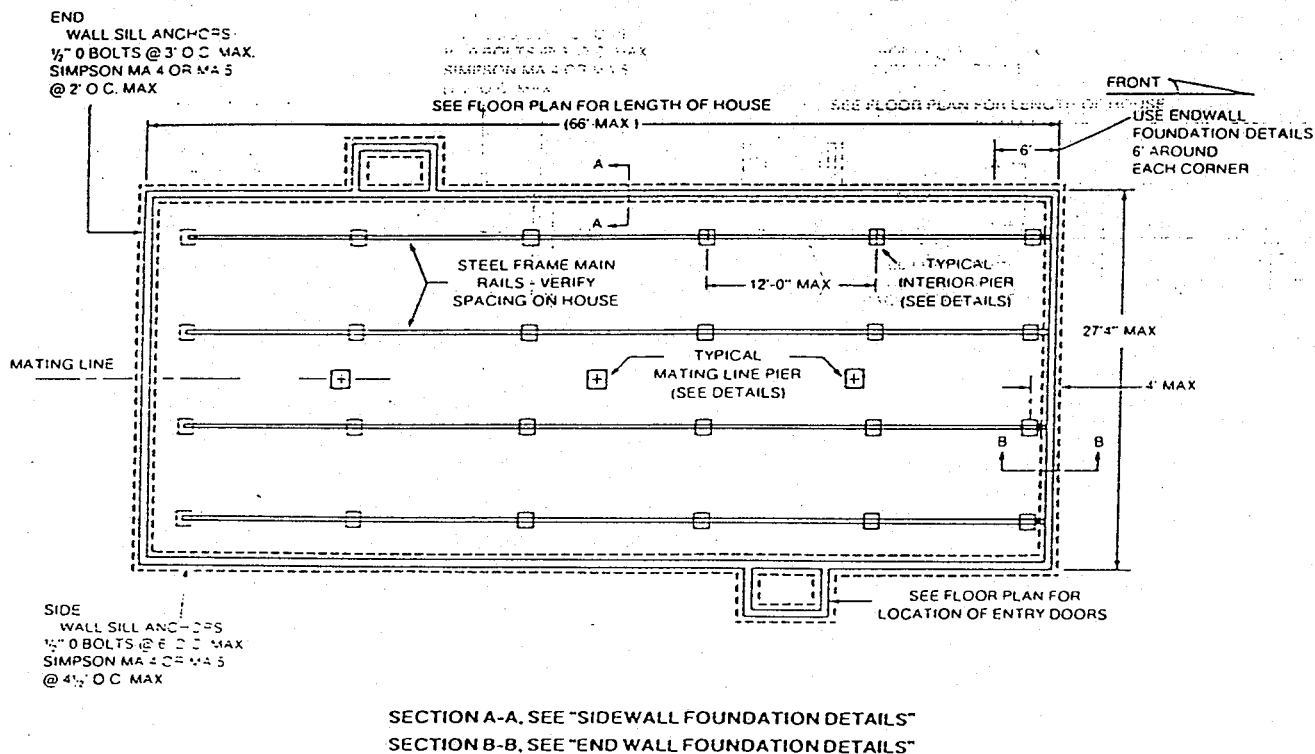
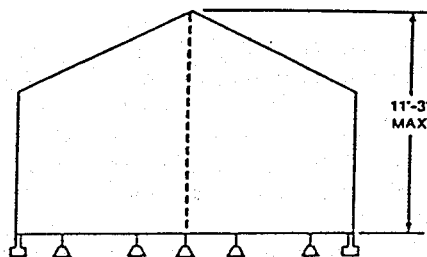


Figure C-12

Example:

The foundation plan shown is general and is to be adjusted to meet the specific home being installed. The floor plan for the home is included in the technical installation manual provided with each home. The manual, floor plan and these details must be used together to establish dimensions and loads for the foundation. Where the word "max." is used with a dimension, any distance up to but not exceeding the dimension may be used. Several alternate construction methods are shown. Any combination of alternates may be used from within those for the design loads applicable to the construction site. Foundation system details used shall be compatible with local soil conditions.

These design drawings are supplemental to the technical installation manual. Details and dimensions of other types of foundations in the manual are not applicable to this design.

General Notes:

1. Contractor shall verify site conditions and all dimensions prior to starting work. Notify owner of any discrepancies.

2. All work shall conform to the requirements of the building code adopted by the agency having jurisdiction.

3. Provide an 8 in. x 24 in. (see 3.11.2.1) access crawl hole to under-floor area. Provide under-floor area ventilation of a net area of not less than 1 1/2 sq ft for each 25 linear ft of exterior wall. Cover vent openings with corrosion-resistant wire mesh not less than 1/8 in. [see 3-3.12(d)] nor more than 1/2 in. in any dimension.

4. Mating line piers shall be located directly below ridge beam support columns. Support column locations are shown on the floor plan of the house by [N]. Column numbers are also shown on "Mating Line Pier Detail."

5. Mudsill anchors shall be installed within 12 in. of each end of sill and at spacing shown on foundation plan. Mudsill anchors may be 1/2 in. bolts or Simpson Strong Tie MA⁴ or MAS.

— Anchor bolts shall be set 7 in. into concrete.

— Anchor bolts shall be set 15 in. into concrete block stem wall.

6. Wall stems may be built after house is set.

7. Wall stems may be concrete or concrete block.

8. Concrete shall be 200 psi at 28 days.
9. Concrete blocks shall conform to ASTM C-90, special inspection not required. Blocks shall be 8 in. x L ft x height desired for site conditions.
10. Mortar mix shall be Type S, Table 24-A of UBC or 1 part Portland Cement, $\frac{1}{2}$ part hydrated lime and 4 parts sand by volume; do not use lime with plastic or waterproof cement.
11. Masonry grout shall be 1 part Portland Cement, 3 parts sand, 2 parts $\frac{3}{8}$ in. gravel, by volume, mixed to pouring consistency.
12. In concrete block stem walls, place a minimum of 2 #4 reinforcing bars in block with mudsill anchors. Fully grout each cell containing rebar.
13. Reinforcing bars for concrete or concrete block foundation shall be deformed bars meeting ASTM A-615, Grade 40. Lap all bars 24 in. minimum.
14. All lumber in contact with concrete shall be pressure preservative treated or a specie approved for use directly in contact with concrete.
15. Design loads followed shall be consistent with the roof live load, wind load, and seismic zone as established for permanent buildings within a specific local area.
16. Each piece of lumber or plywood less than 6 in. above finish grade shall be preservative treated and shall have the following information permanently affixed:

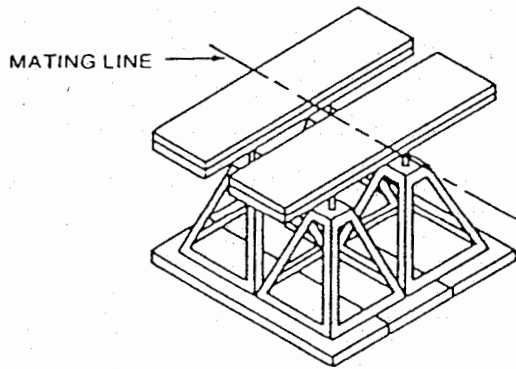
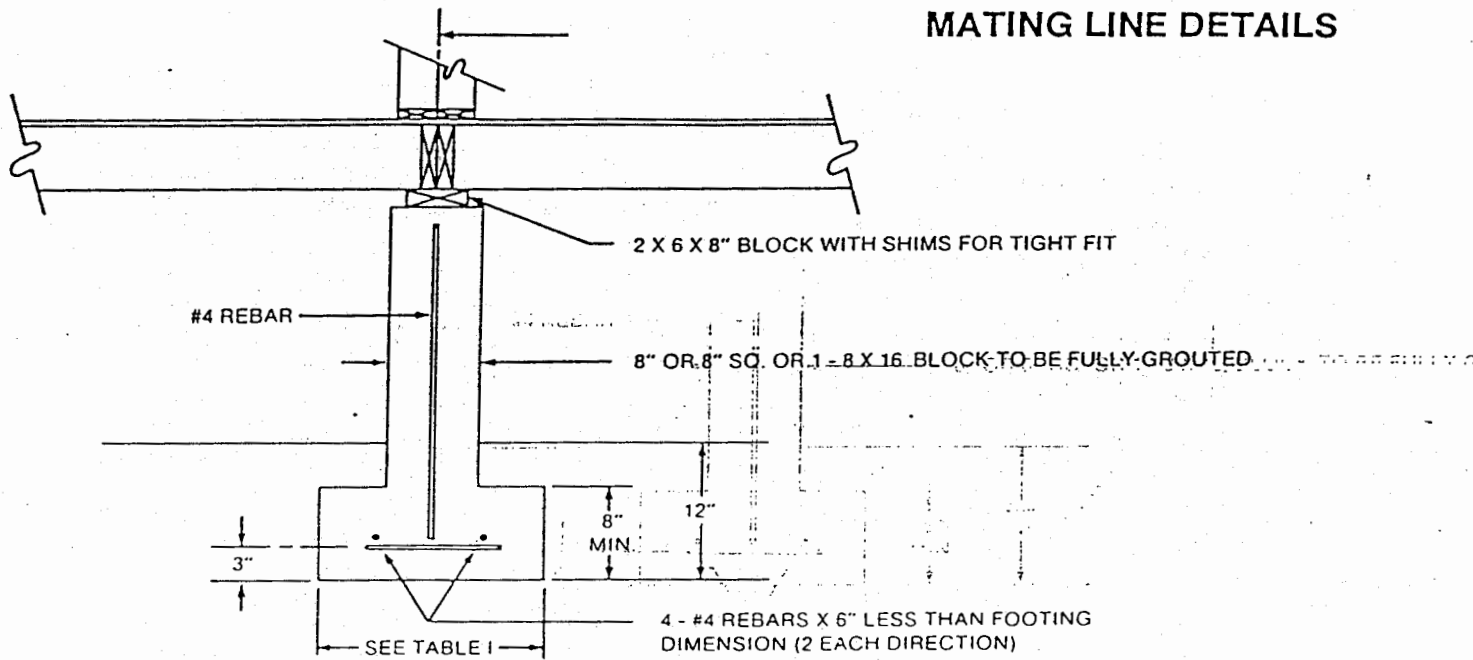
- a. Identity of company doing treatment and date of treatment (month and year).
- b. Symbol for the type of preservative used.
- c. The American Wood Preservers Bureau quality control trademark (Report No. AA-517).
- d. The letters "TSO" specifying "treatment service only," where applicable.
- e. Proper grade markings to identify the species and grade of wood for structural purposes by an approved grading agency.
- f. AWP-FON (identifies authorization under this report.)

17. Where lumber is cut after treatment, the cut surface shall be brush-coated with not less than 3% solution of the same preservative used in the original treatment; or shall be field treated in conformance with AWP standard M4-80 using a 5% solution of pentachlorophenol copper, naphthenate containing a min 2% copper metal, a 3% solution of ACA, CCA types A, B or C, or a 5% solution of FCAP or ACC; or creosote in conformance with AWP standard M4-80 paragraph 1.511.

18. Refer to the Technical Installation Manual for ridge beam pier and main rail pier locations and loads. When spacing shown in the manual is less than shown here, the manual shall be followed.

19. Drainage Provisions. The installation site must be adequately graded so that water drains away from the foundation and does not accumulate under the home.

MATING LINE DETAILS



MANUFACTURED PIERS SHALL BE LISTED AND LABELED BY AN APPROVED AGENCY

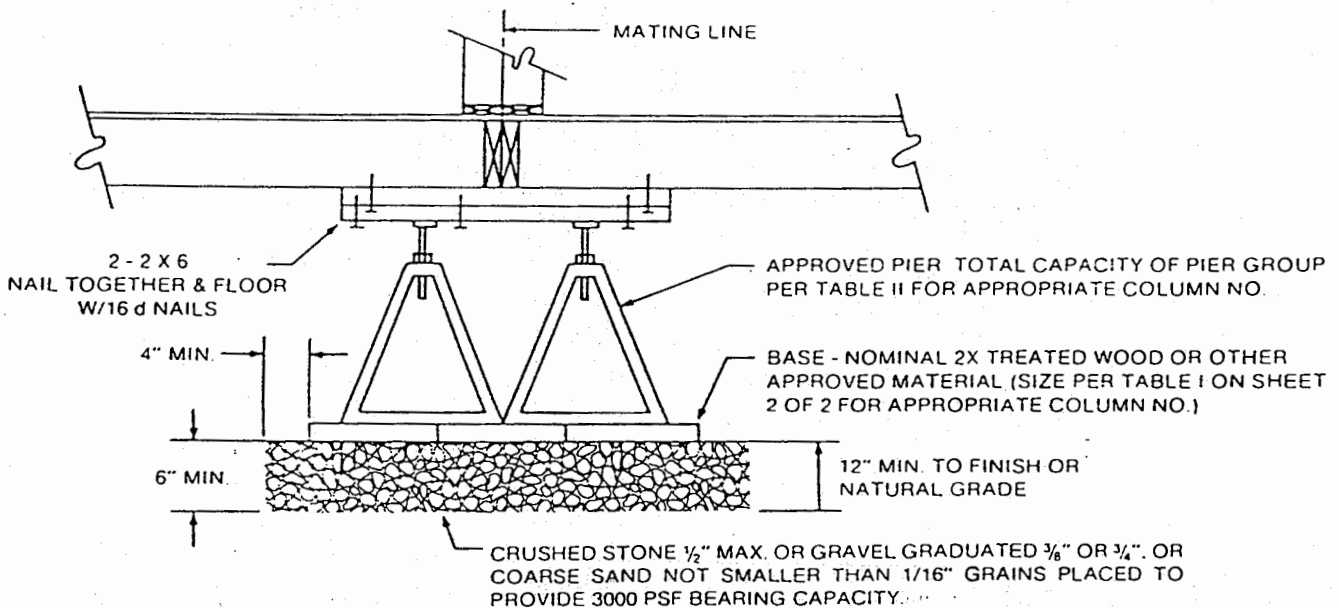


Figure C-13

TABLE I

FOOTING SIZE - RIDGE BEAM PIER							
COLUMN NO.*	ALLOWABLE SOIL BEARING PRESSURE			COLUMN NO.*	ALLOWABLE SOIL BEARING PRESSURE		
	1000 PSF	1500 PSF	2000 PSF		100 PSF	1500 PSF	2000 PSF
1	24" x 30"	20" x 20"	20" x 20"	25	36" x 36"	30" x 30"	24" x 24"
2	24" x 30"	20" x 20"	20" x 20"	26	18" x 24"	12" x 18"	12" x 15"
3	24" x 30"	20" x 20"	20" x 20"	27	42" x 42"	36" x 36"	30" x 30"
4	36" x 36"	30" x 30"	24" x 24"	28	18" x 24"	12" x 18"	12" x 15"
5	30" x 36"	24" x 30"	24" x 24"	29	NOT USED		
6	30" x 36"	24" x 30"	24" x 24"	30	20" x 24"	15" x 24"	12" x 20"
7	36" x 36"	30" x 30"	24" x 24"	31	NOT USED		
8	36" x 40"	30" x 36"	24" x 30"	32	18" x 24"	12" x 18"	12" x 15"
9	36" x 36"	30" x 30"	24" x 30"	33	18" x 24"	12" x 18"	12" x 15"
10	30" x 36"	24" x 30"	24" x 24"	34	24" x 30"	20" x 20"	20" x 20"
11	30" x 30"	24" x 24"	24" x 24"	35	30" x 30"	24" x 24"	24" x 24"
12	36" x 36"	30" x 30"	24" x 30"	36	30" x 36"	24" x 30"	24" x 24"
13	36" x 42"	30" x 36"	24" x 30"	37	20" x 24"	15" x 24"	12" x 20"
14	30" x 36"	24" x 30"	24" x 24"	38	20" x 24"	15" x 24"	12" x 20"
15	30" x 30"	24" x 24"	24" x 24"	39	30" x 36"	24" x 30"	24" x 24"
16	30" x 30"	24" x 24"	20" x 20"	40	36" x 36"	30" x 30"	24" x 24"
17	30" x 30"	24" x 24"	24" x 24"	41	24" x 30"	20" x 20"	20" x 20"
18	36" x 42"	30" x 36"	24" x 30"	42	40" x 42"	30" x 36"	30" x 30"
19	36" x 36"	30" x 30"	24" x 24"	43	30" x 30"	24" x 24"	24" x 24"
20	30" x 30"	24" x 24"	20" x 20"	44	46" x 48"	36" x 40"	30" x 36"
21	36" x 42"	30" x 30"	24" x 30"				
22	30" x 30"	24" x 24"	24" x 24"				
23	42" x 42"	36" x 36"	30" x 30"				
24	36" x 42"	30" x 36"	24" x 30"				

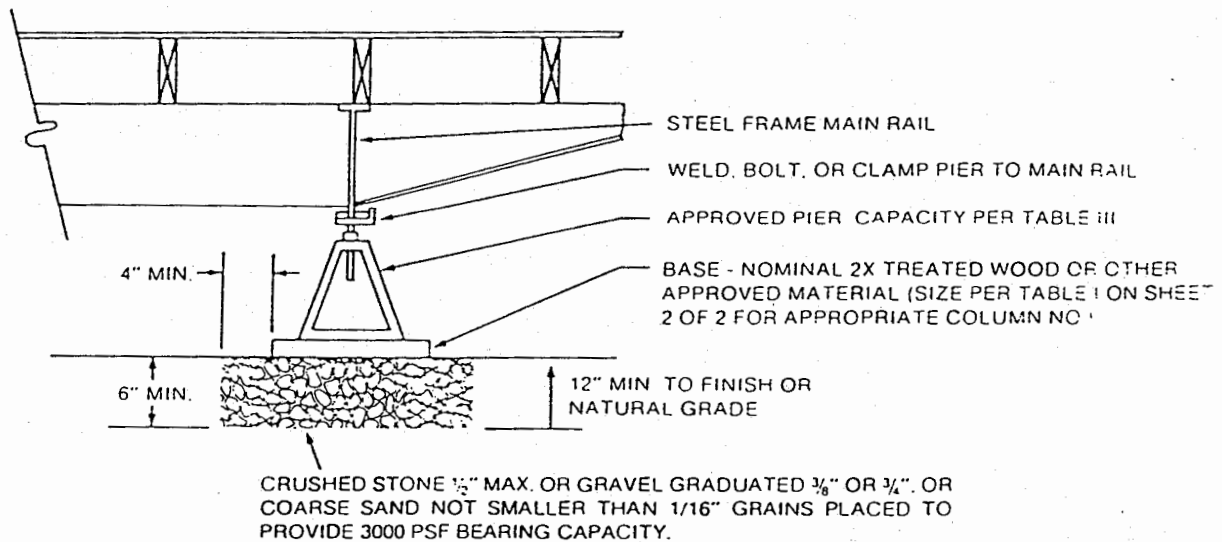
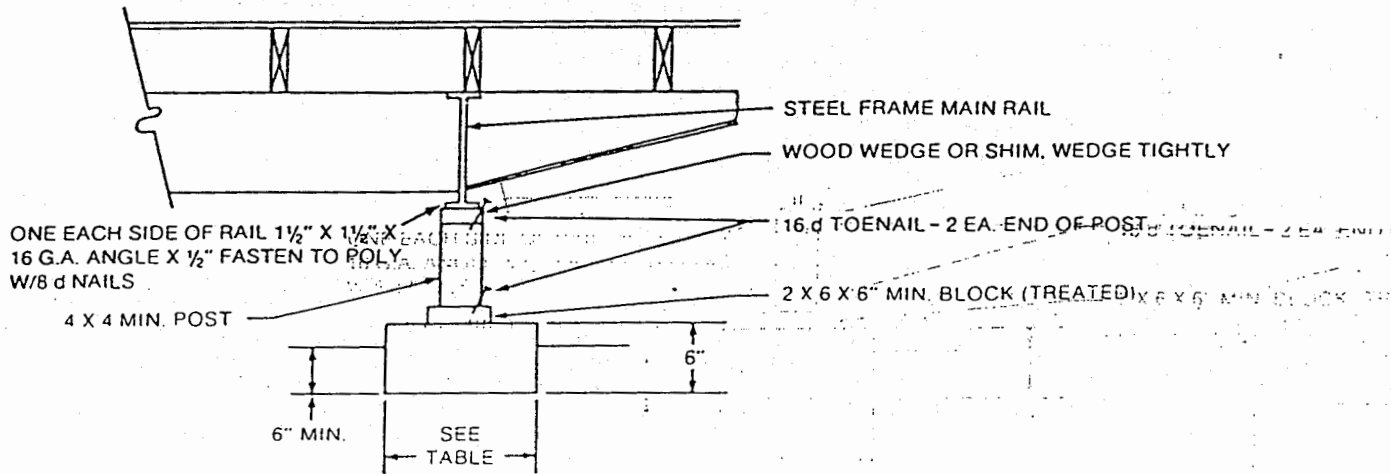
*APPLICABLE COLUMN NUMBERS ARE SHOWN ON FLOOR PLAN FOR SPECIFIC HOUSE BEING INSTALLED

TABLE II

COLUMN NO.	MINIMUM PIER CAPACITY REQUIRED
26, 28, 32, 33	2,250 lbs.
30, 37, 38	3,250 lbs.
1, 2, 3, 34, 41	5,000 lbs.
11, 15, 16, 17, 22, 35, 43	6,250 lbs.
5, 6, 10, 14, 20, 36, 39	7,500 lbs.
4, 7, 9, 12, 19, 25, 40	9,000 lbs.
8	10,000 lbs.
13, 18, 21, 24	10,500 lbs.
42	11,500 lbs.
23, 27	12,250 lbs.
44	15,250 lbs.

Figure C-14

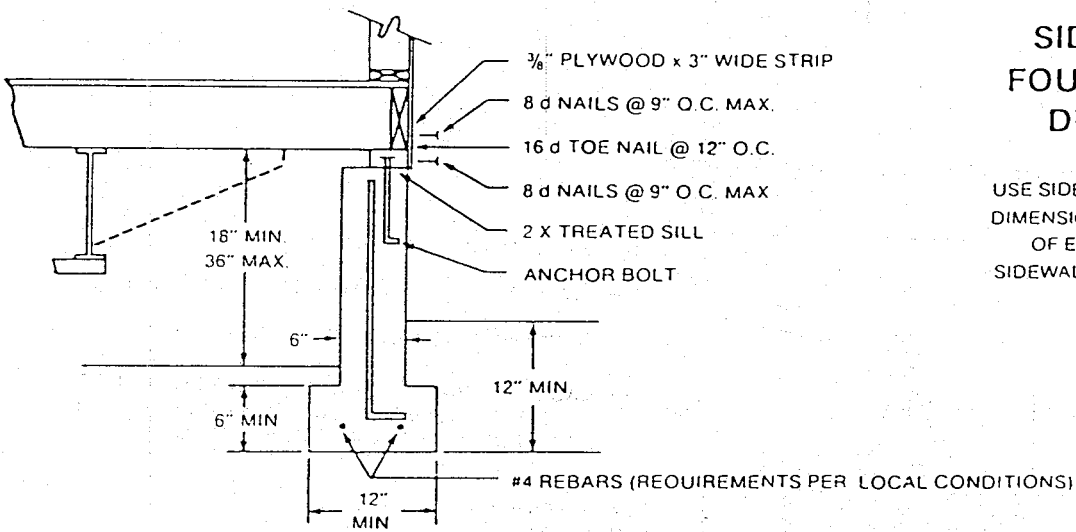
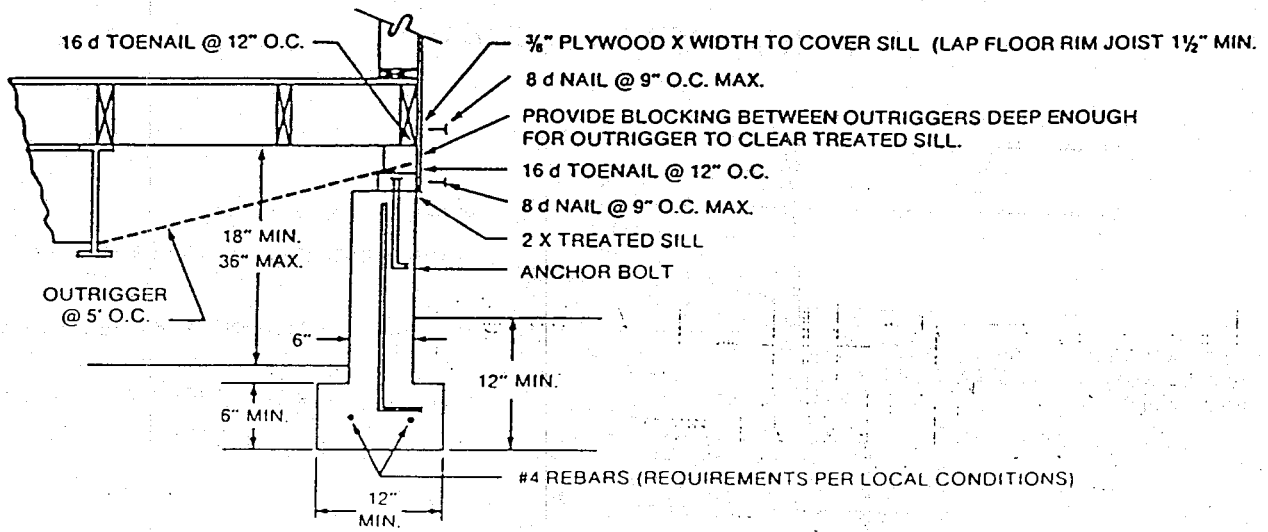
INTERIOR PIER DETAILS



FOOTING SIZE - INTERIOR PIER*				
ON-CENTER PIER SPACING	PIER LOAD	ALLOWABLE SOIL BEARING PRESSURE		
		100 PSF	1500 PSF	2000 PSF
6'	2132#	24" x 13"	12" x 18"	12" x 12"
8'	2843#	24" x 17"	24" x 12"	24" x 12"
10'	3553#	24" x 22"	24" x 15"	24" x 12"
12'	4264#	24" x 24"	24" x 18"	24" x 14"

*Footing of other dimensions with equal or greater earth contact area may be used.

Figure C-15.



SIDEWALL FOUNDATION DETAILS

USE SIDEWALL FOOTING DIMENSIONS FOR LAST 6' OF EACH END OF SIDEWALL FOUNDATION.

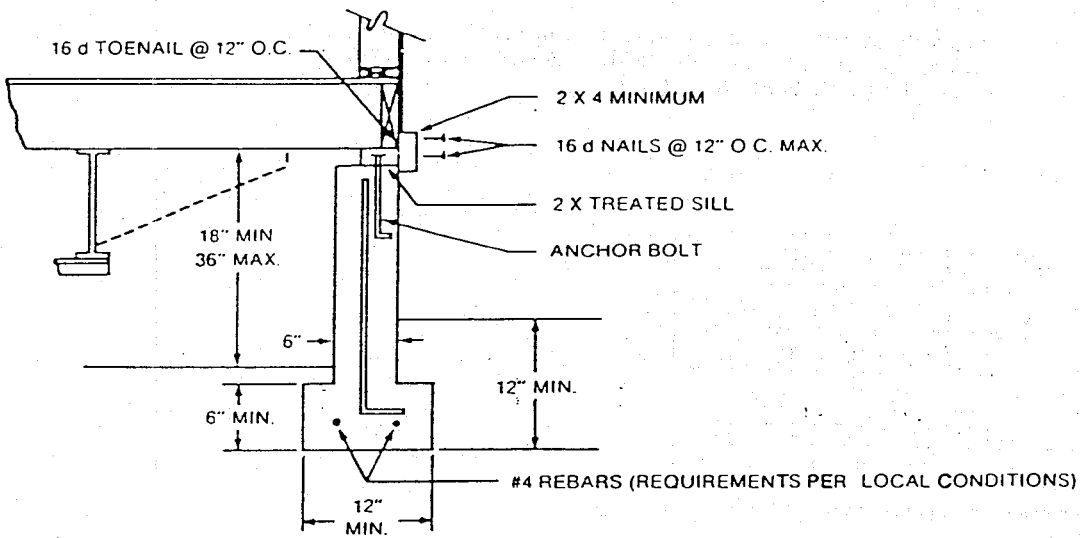


Figure C-16

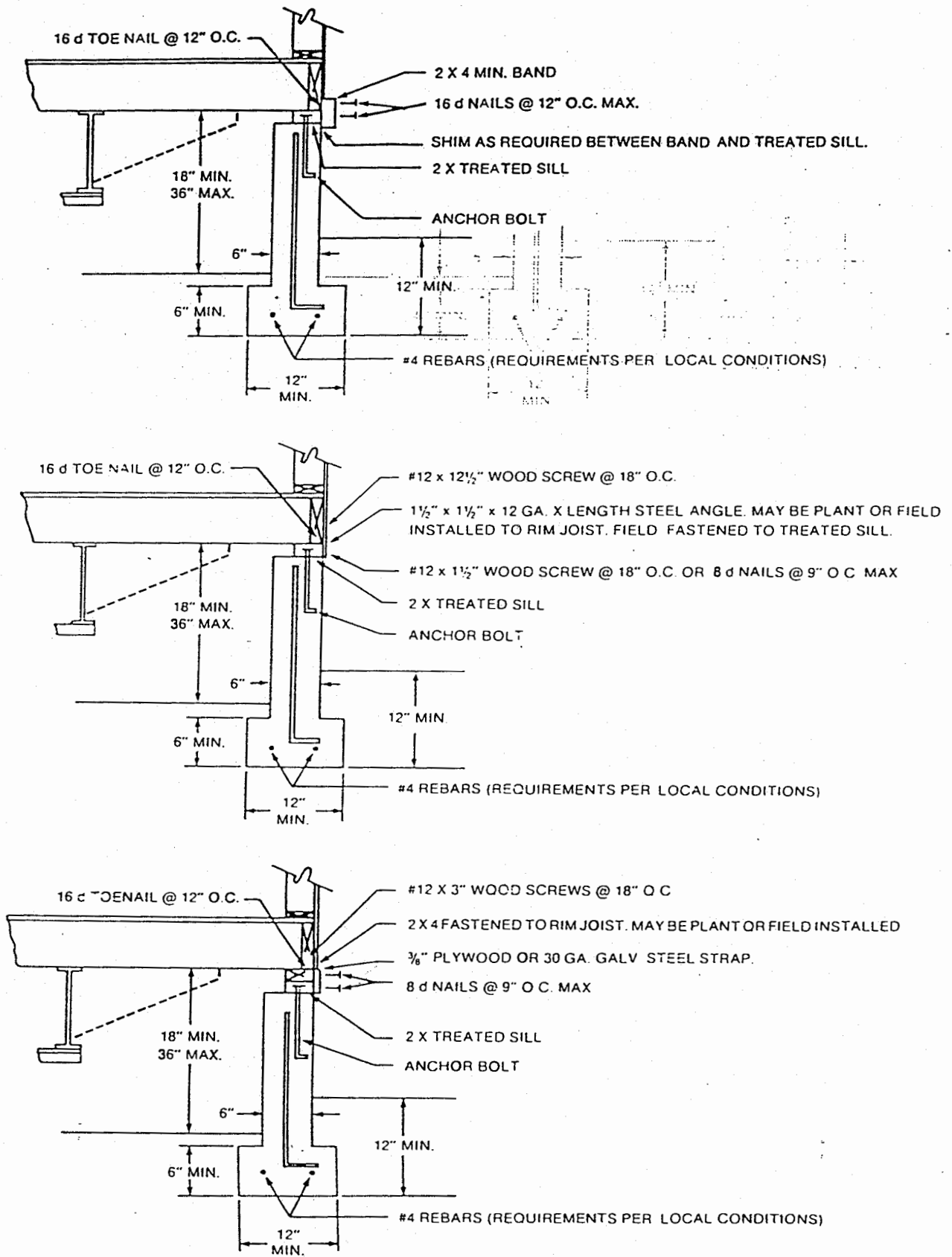


Figure C-17

END WALL DETAILS

END WALL FOOTING DIMENSIONS					
MAX. HOUSE LENGTH	WIND LOAD	ROOF LOAD	DIMENSIONS (MIN.)		
			D"	T"	W"
40'	15 PSF	20-80 PSF	12	6	12
40'	15 PSF	120 PSF	12	12	12
40'	20 PSF	20-120 PSF	12	12	12
52'	15 PSF	20-80 PSF	12	12	12
52'	15 PSF	120 PSF	16	16	12
52'	20 PSF	20-80 PSF	12	12	12
52'	20 PSF	120 PSF	16	16	12
66'	15 PSF	20-60 PSF	12	12	12
66'	15 PSF	80-120 PSF	18	18	14
66'	20 PSF	20-80 PSF	18	18	12
66'	20 PSF	120 PSF	18	18	14

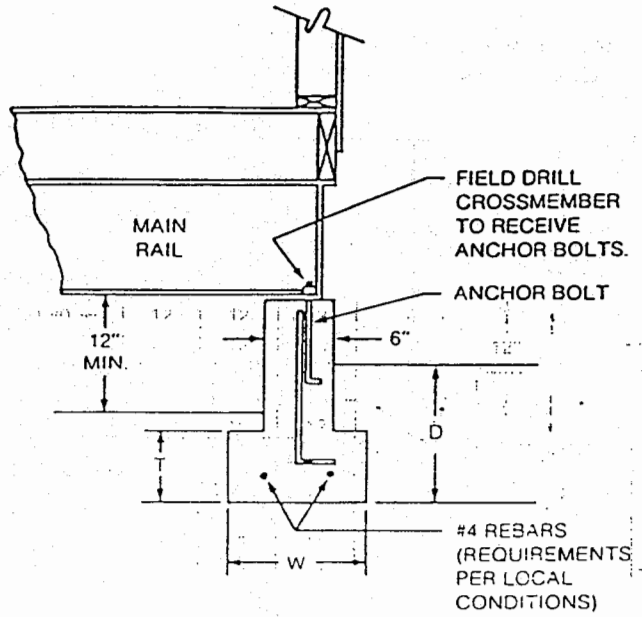


Figure C-18

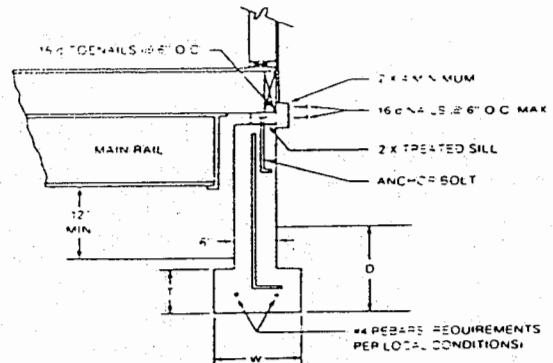
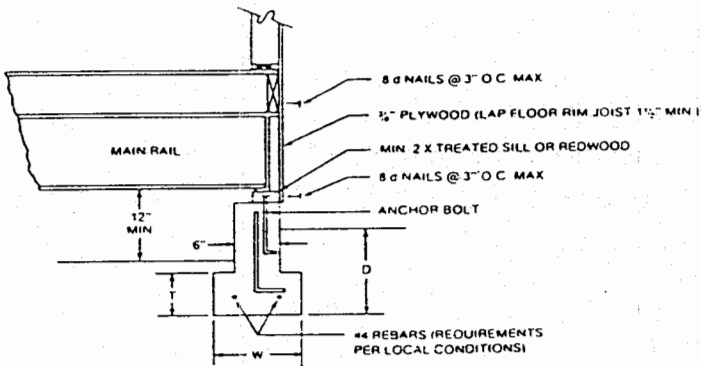


Figure C-19

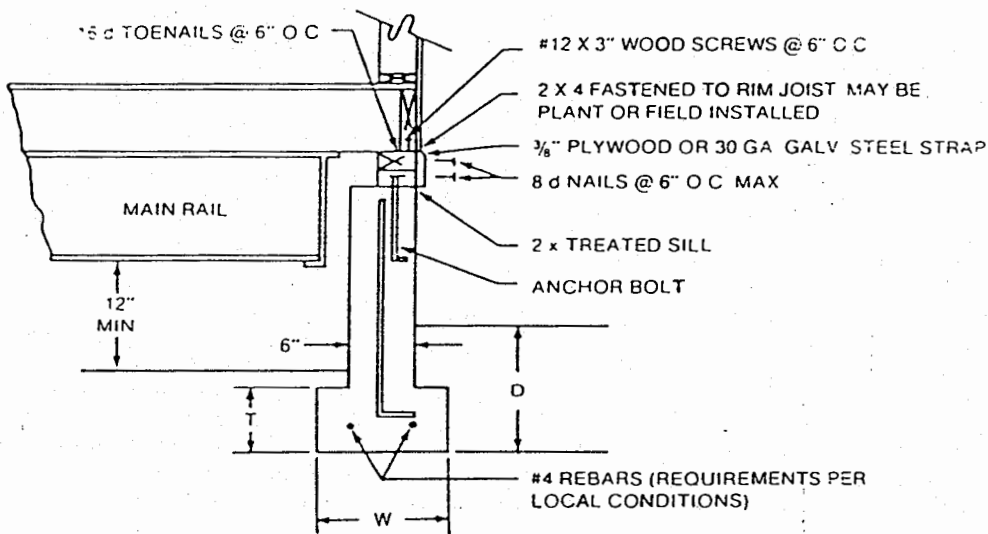
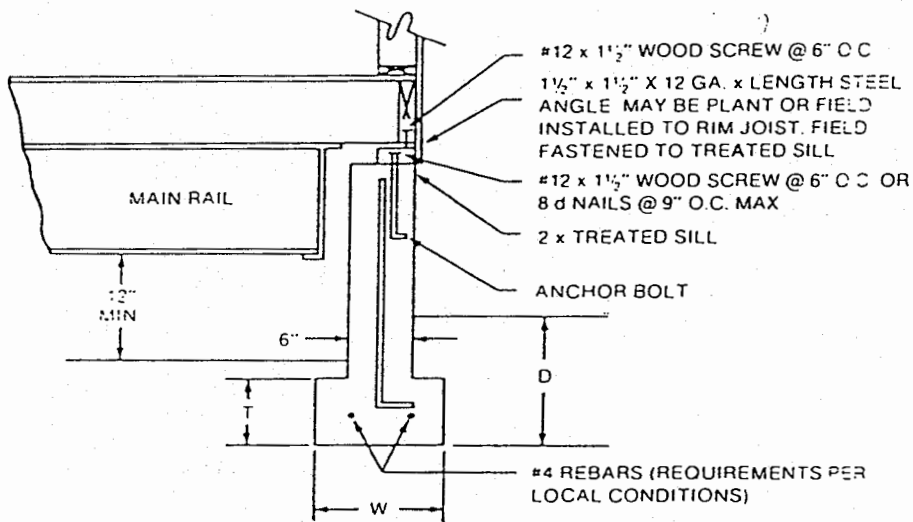
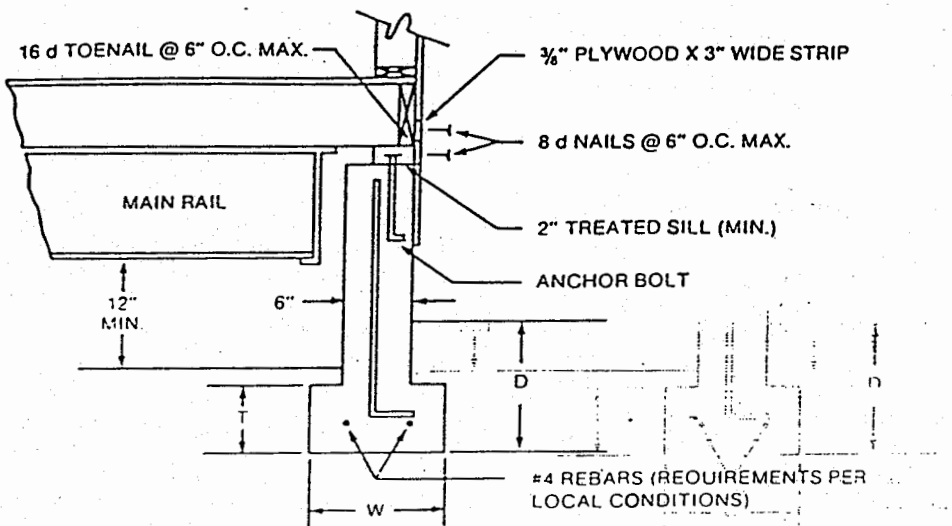


Figure C-20

Appendix D Manufactured Home Community Management Actions for Firesafety

This Appendix is not part of the requirements of this document, but is included for information purposes only.

D-1 Purpose of Appendix D. The purpose of this Appendix is to give firesafety guidance for manufactured home community management. Community management should prepare poster(s) containing the type material detailed herein with the cooperation of the responsible local fire protection authority. The objective is to give information to the community's manufactured home owners, occupants and to encourage their cooperation in the interest of protection of life and property from fire.

D-1.1 Manufactured Home Communities Management — Staff Instructions. Management should instruct the staff in the use and available locations of the fire protection equipment and define specific duties in the event of fire.

D-2 Typical Firesafety Poster Format.

Community Firesafety Information

Emergency Telephone Numbers

The telephone number of the Fire Department is.....

NOTE: Or other means for calling the Fire Department such as giving the location of the nearest fire alarm box

The telephone number of the Police Department is

The telephone number of the community office is.....

Furnish Fire Department with: Manufactured home community map showing layout of the streets, site numbers, location of fire hydrants within the community and directional data.

How to Report a Fire

Give specific instructions to owners on how to report a fire including: name of community, its location, and identification of involved manufactured home site (see Section 8-1).

Utility Services

The connecting and disconnecting of water, fuel and electrical services should be made only by authorized persons, as determined by the park management. Should these services be interrupted, telephone or notify for water, for fuel, for electrical.

Fire Fighting Equipment

Portable fire extinguishers (and/or other fire fighting equipment) are maintained on the premises and the nearest emergency equipment is located.....

NOTE: Give directions as to location.

Occupant: Maintenance, Use of Occupancy Requirements for Firesafety. Occupants should provide their own personal fire extinguishers and maintain them

in accordance with instructions on each extinguisher nameplate.

Procedures in Case of Fire

In case of fire in a manufactured home, the homeowner should do these things in the following order: (1) Get all occupants out of the manufactured home. (2) Call the Fire Department or sound the alarm. The important thing to do is to get professional fire fighters to the fire as promptly as possible.

Fire Conditions

Owners can aid the community management in keeping the area free from fire hazardous conditions by notifying the management when they recognize unsafe conditions. Constant vigilance is necessary to maintain the premises free from fire at all times. Firesafety is everyone's job.

Rubbish

Owners shall keep the area under and around their home free from an accumulation of rubbish, leaves and brush. Containers have been provided for disposing of rubbish and a collection system maintained. Burning of rubbish, if permitted, should be done only in approved incinerators.

LP-Gas Containers

In addition to mounted containers a home may have two additional vessels installed on the lot. The home may be served by either the vehicle containers or vessels on the lot but not by both at the same time. LP-Gas containers should be installed in accordance with the applicable provisions of NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*.

Charging of Vessels

Liquefied petroleum gas vessels should be charged in accordance with the applicable provisions of NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*.

Prohibited Location of Vessel

No liquefied petroleum gas vessel should be stored or located inside of or beneath any storage cabinet, cabana, awning, carport, ramada, home or any other structure in a community.

Empty LP-Gas Containers

Owners should not place empty LP-Gas containers under their manufactured homes. Empty containers should be left in place if there is more than one container. If the manufactured home's LP-Gas supply is limited to one container, and a replacement has been secured, any empty fuel container should be stored in the area designated for such storage.

Home Inspections

If you would like to have a voluntary inspection of your home, please notify the fire chief.

Traffic Regulations

Operators of vehicular equipment should observe the posted signs and should keep all designated fire lanes and access to fire hydrants open at all times.

Markings

Each home site should be marked for identification. Such a marker should be easily readable from the street servicing the site.

Appendix E Suggested Manufactured Home Community Environment and Health Guidance

This Appendix is not part of the requirements of this document, but is included for information purposes only.

(Dimensions herein are in US units only, as they are advisory only.)

E-1 Community Solid Waste Management.

E-1.1 Refuse Storage Practices. Manufactured home residents should store and dispose of all garbage and rubbish in a clean, sanitary, safe manner. All garbage cans and refuse containers should be ratproof; insectproof; watertight; structurally strong; easily filled, emptied, and cleaned; and furnished with side handles or a bail. All containers should be provided with tight-fitting covers or similar enclosures. Plastic bags may be used as garbage and refuse container liners, but should not be used without the container for on-site storage of garbage or refuse. The use of 55-gal drums should be prohibited.

E-1.1.1 The storage, collection, and disposal of refuse in the manufactured home community should be conducted so no health hazards, rodent harborage, insect breeding areas, accident or fire hazards, or air pollution problems result. Waste containers should be stored in one of the following manners: on concrete slabs, asphalt or other hard surfaced material; on fixed platforms which are at least 12 to 18 in. above the ground; or on a manufactured or movable platform.

E-1.1.2 Bulk storage containers which are used for the storage of garbage and rubbish should be placed on concrete platforms which are constructed to minimize spillage onto the adjacent areas and should be equipped with drains properly connected to an approved sewer system. In the immediate vicinity of the bulk storage container there should either be a water faucet for use in cleaning each bulk storage container at the site of storage, or there should be provided some other approved means for cleaning the container. All bulk storage containers should be equipped with self-closing lids.

E-1.2 Refuse Collection. All refuse should be collected twice weekly. Where suitable collection service is not available from municipal agencies, a private collection agency should be engaged. When neither municipal nor private agency collection services are available, the management should provide this service. All solid wastes shall be collected and transported in covered vehicles or covered containers.

E-1.3 Refuse Disposal. Where municipal or private disposal service is not available, the management should dispose of all solid waste in an approved manner at an approved site.

E-1.3.1 Refuse incinerators, when approved, should be constructed in accordance with properly prepared and approved engineering plans and specifications. (See 8-1.3.)

E-1.3.2 Incinerators should be operated only when attended by an individual authorized by the management.

E-2 Community Insect and Rodent Control

E-2.1 Grounds, buildings, and structures should be maintained free of insect and rodent harborage and infestation. Extermination methods and other measures to control insects and rodents should conform with the requirements of the authority having jurisdiction.

E-2.2 ^(Dimensions are advisory only.) The community should be maintained free of accumulations of debris which may provide rodent harborage or breeding places for flies, mosquitoes, and other pests.

E-2.3 Storage areas should be maintained to prevent rodent harborage; materials stored outside shall be stacked and elevated at least 12 to 18 in. above the ground to prevent rodent harborage. No stacking or piling of material should take place against the exterior walls of the structure.

E-2.4 In areas designated by the authority having jurisdiction as heavily infested with rodents, all exterior openings in or beneath any structure should be appropriately screened with wire mesh or other suitable materials.

All materials used for rodentproofing should be acceptable to the approving authority.

E-2.5 In designated rodent infested areas, all windows intended to be used for ventilation, and exterior doorways which might provide entry for rodents should be supplied with adequate screens or such other devices as will effectively prevent the entrance of rodents into the structure.

E-2.6 Every doorway and every window opening used for ventilation in locations not designated as infested with rodents should be supplied with properly fitted screens having at least No. 16 mesh to exclude insects. Doors should be fitted with a self-closing device.

E-2.7 The growth of bush, weeds, and grass should be controlled to prevent harborage of ticks, chiggers, and other noxious insects and for firesafety purposes. The community should be maintained to prevent the growth of ragweed, poison ivy, poison oak, poison sumac, and other noxious weeds detrimental to health. Open areas should be maintained to prevent the growth of ragweed, poison ivy, poison oak, poison sumac, and other noxious weeds detrimental to health. Open areas should be maintained free of heavy undergrowth of any description.

E-3 Storage Practices Beneath Manufactured Homes.

E-3.1 Use of Space. The space beneath any home may be used for storage only if permitted by community management. If permitted, the conditions in the following sections should apply.

E-3.2 The space should not be used for the storage of combustible materials nor for the storage or placement therein of flammable liquids or gases. Gasoline-powered lawn equipment or tools should not be stored beneath a manufactured home.

E-3.3 The storage area should be provided with a base constructed of impervious material.

E-3.4 Stored items should be so located as to not interfere with the underneath inspection of the manufactured home.

E-3.5 The storage area should be enclosed by skirting.

E-3.6 Periodic inspections of the enclosed space are recommended to assure that all utility and other connections are secure and no fire hazards exist.

E-3.7 Insulating Underfloor Enclosures. Only nonflammable and listed insulation materials should be used.

E-3.8 Occupants should keep the sites free of an accumulation of combustible materials such as rubbish, paper, leaves and brush.

E-3.9 Outside Hazards. Care should be taken to maintain the community free of dry brush, leaves and weeds which might spread fires between homes and other buildings in the community. Management should maintain the common areas.

Appendix F Use and Preventive Maintenance of Manufactured Home Installations

This Appendix is not part of the requirements of this document, but is included for information purposes only.

F-1 Responsibilities of the Community Management.

F-1.1 The community management should provide adequate supervision to maintain the community in compliance with this standard and to keep its facilities and equipment in good repair and in a firesafe condition.

F-1.2 The management should notify the community residents of all applicable provisions of this standard and inform them of their duties and responsibilities under this standard.

F-1.3 The management should maintain a register containing the names of all community residents identified

by site number or street address. Such register should be available to any public service agency servicing the community.

F-1.4 Laundry Rooms. Clothes driers should be cleaned periodically by management to remove combustible material including lint. A sign should be placed in a conspicuous place warning of the fire hazard in the placement of plastics in driers and warning against the use of flammable liquids as cleaning agents.

F-1.5 Recreation Buildings. Management should instruct their staff and community residents in the proper use of appliances in community buildings and provide a list of these instructions near each appliance.

F-1.6 The management should supervise the placement of each manufactured home on its site, including installation of its stabilizing system and the installation of utilities. Prior to breaking ground, utility companies will be notified and locate underground utility owned service lines.

F-2 Responsibilities of the Manufactured Home Resident.

F-2.1 The resident should comply with all applicable requirements of this standard and should maintain his manufactured home site, its facilities, and its equipment in good repair and in a firesafe condition.

F-2.2 Pets, if permitted in the community, should not be allowed to run at large or to create any nuisance within the limits of any manufactured home site.

F-2.3 Skirtings, porches, awnings, and other additions should be installed in accordance with the instructions of the management. When installed, they should be maintained in good repair. The space immediately underneath a manufactured home should be used for storage only if permitted by the management.

NOTE 1: Periodic inspections of the enclosed space are recommended to assure that proper ventilation is being maintained, that the area has not become infested with rodents, that adequate ground drainage is provided, and that all utility and other connections are secure.

NOTE 2: When heat tape is used to protect water or plumbing lines from freezing, periodic inspection is recommended of the heat tape and its connection to the electrical receptacle to assure that the equipment has not deteriorated in service.

F-2.4 It is the duty of each resident of a manufactured home community to give the management thereof or any proper enforcing agency access to any part of the manufactured home site (not including the manufactured home) at reasonable times for the purpose of making inspections or repairs as are necessary to effect compliance with this standard.

F-2.5 Prior to breaking ground, utility companies will be notified and locate utility owned underground service lines.

Appendix G

This Appendix is not part of the requirements of this document, but is included for information purposes only.

G-1 Availability of Utilities. Each site may have the following:

G-1.1 An approved source and continuing supply of potable water meeting the intent of the Safe Drinking Water Act of 1974 (Public Law 93-523) dated December 16, 1974, the National Primary Drinking Water Regulations, and any applicable state laws and regulations.

NOTE: See also Section 4-3.

G-1.2 An approved adequate sewage collection system for conveying and disposing of all sewage.

NOTE: See also 4-3.5.

G-1.3 A source or sources of energy designed to meet the demand of the utilization equipment installed in the manufactured home, in accessory buildings and structures, including any exterior lighting or power needs on the site.

NOTE: See also Sections 5-3 and 7-2.

Appendix H

This Appendix is not part of the requirements of this document, but is included for information purposes only.

H-1 National Flood Insurance Program. Special attention is called to the National Flood Insurance Program created by the National Flood Insurance Act of 1968, as amended. Communities meeting the eligibility requirements may take benefit from the provisions of 44 CFR, Part 59 to provide flood insurance protection and mudslide protection under the auspices of the Federal Emergency Management Agency. The term "building" as used in the National Flood Insurance Program is defined to include "Manufactured Homes" on all types of foundations. For further information contact the Federal Emergency Management Agency, Washington, D.C., 20472.

Appendix I Ground Level Installation of Manufactured Homes (Floor at Grade)

This Appendix is not part of the requirements of this document, but is included for information purposes only.

I-1 General. Ground level installations refer to manufactured homes installed over an open excavation where the supporting foundations are below finished ground level.

I-1.1 Grading Permit Requirements. Grading permits, unless exempted, should be obtained from the authority having jurisdiction, before grading and/or excavation commences.

I-1.2 Retaining Walls. Retaining walls to resist the lateral displacement of soil or other materials should be designed to resist the lateral pressure of the retained material in accordance with accepted engineering practice. Retaining walls if fastened to the manufactured home at the time of its installation should not degrade the stabilizing system of the manufactured home. When a retaining wall is not used as a foundation, it should not be attached to the manufactured home. Retaining walls should be constructed of treated foundation grade wood, concrete, masonry, other approved materials or combinations of these materials.

I-1.3 Backfill, Fill and Grading. All fill and backfill soil surrounding the manufactured home should be compacted. Grading around the manufactured home should be done in such a manner that water will drain from the unit at a slope of 1/2 ft vertical for every 12 ft horizontal.

Appendix J

This Appendix is not part of the requirements of this document, but is included for information purposes only.

J-1 Referenced Publications.

J-1.1 NFPA Standards. This standard makes reference to the following NFPA codes and standards and the year dates shown indicate the latest editions available. They are available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

- NFPA 10-1981, *Portable Fire Extinguishers*
- NFPA 31-1983, *Installation of Oil Burning Equipment*
- NFPA 54-1980, *National Fuel Gas Code*
- NFPA 58-1983, *Liquefied Petroleum Gases, Storage and Handling*
- NFPA 70-1984, *National Electrical Code*
- NFPA 71-1982, *Central Station Signaling Systems*
- NFPA 72A-1979, *Local Protective Signaling Systems*
- NFPA 72B-1979, *Auxiliary Protective Signaling Systems*
- NFPA 72C-1982, *Remote Station Protective Signaling Systems*
- NFPA 72D-1979, *Proprietary Protective Signaling Systems*
- NFPA 72E-1982, *Automatic Fire Detectors*
- NFPA 82-1983, *Incinerators, Waste and Linen Handling Systems and Equipment*
- NFPA 101-1981, *Life Safety Code*
- NFPA 1221-1980, *Public Fire Service Communications (formerly NFPA 73)*

NFPA 1901-1979, *Automatic Fire Apparatus*

NFPA 1963-1979, *Screw Threads and Gaskets for Fire Hose Connections*

J-1.2 ANSI Standards. This publication makes reference to the following ANSI standard and the year date shown indicates the latest edition available. It is available from the American National Standards Institute, 1430 Broadway, New York, NY 10018.

ANSI C73.17 - 1972, *Electrical Plugs and Receptacles*, 12/250 volts, 50 amperes, 3 pole, 4 wire, Grounding Type General Purpose

J-1.3 ASME Code. This publication makes reference to the following ASME codes. They are available from the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017.

ASME Boiler and Pressure Vessel Code - 1974

ASME Guide for Gas Transmission Distribution Piping Systems

J-1.4 ASTM Standards. This publication makes reference to the following ASTM standards and the year dates indicate the latest edition available. They are available from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

ASTM A90-69-1978, *Standard Methods of Test for Weight of Coating on Zinc-Coated (Galvanized) Iron and Steel Articles*

ASTM E380-79-1979, *Standard for Metric Practice*

ASTM D1586-67-1974, *Standard Method for Penetration Test and Split Barrel Sampling of Soils*

J-1.5 Publications of the United States of America and Its Departments.

U.S. Department of Housing and Urban Development:

Manufactured Home Construction and Safety Standards (24, Code of Federal Regulations, Part 3280 and amendments and interpretations thereto).*

National Manufactured Home Construction and Safety Act of 1974 (Title VI of the Housing and Community Development Act of 1974, Public Law 93-383, U.S.C. 5401 et seq.).

Manufactured Home Procedural and Enforcement Regulations (Title 24, Part 3282, et seq. Code of Federal Regulations) as published in *Federal Register*, May 13, 1976, volume 41, No. 94, Pages 19845 - 19877, with amendments and interpretations thereto.*

Minimum Design Standards for Manufactured Home Parks, June 1973, A HUD Handbook (4940.5).

Minimum Design Standards for Community Sewerage Systems, November 1972, A HUD Handbook (4940.3).

Minimum Property Standards for Semi-Private Swimming Pools and Wading Pools, October 1972, A HUD Handbook (4940.1).

Minimum Design Standards for Community Water Supply Systems, August 1973, A HUD Handbook (4940.2).

Barrier-Free Site Design, HUD-PDR-84, April 1975. For sale by the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

Design Guide for Home Safety, HUD-RT-17, January 1972. For sale by the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

Handbook on Natural Gas Pipeline Safety in Residential Areas Served by Master Meters, HUD-PDR-124, November 1975. For sale by the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

HUD Notice HM 75-8 (LHA): Subject: Natural Gas Pipeline Safety in Housing Projects: 2/14/65 (contains parts 191 and 192 of Title 49 of the Code of Federal Regulations. Revised as of October 1, 1973).

National Flood Insurance Program, HUD-1-54, January 1974. Available from the U.S. Government Printing Office (contains Public Laws 93-234, 91-152, and 90-448).

Guidelines for Improving Mobile Home Living Environment - Individual Sites, Mobile Home Parks and Subdivisions, HUD-PDR-H2634, August, 1977, Stock No. 023-000-00459-3, \$3.50. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

Mandatory Purchase of Flood Insurance, Docket No. N-74-240, Reprinted from *Federal Register*, Vol. 39, 26186-93, July 17, 1974.

National Flood Insurance Program, Title 44, 59 to 75, Code of Federal Regulations Parts 1909 to 1915, Revised as of April 1, 1973, Reprinted from Code of Federal Regulations.

U.S. Department of Commerce, National Bureau of Standards:

NBS Building Science Series 107: Soil and Rock Anchors for Mobile Homes - A State of the Art Report, October, 1979.

NBS Building Science Series 132: A Study of Reaction Forces on Mobile Home Foundations Caused by Wind and Flood Loads, March 1981.

NBS Building Science Series 142: Load Displacement Characteristics of Shallow Soil Anchors, May 1982.

Water-Distributing Systems for Buildings, 1941, Report BMS 79 (Building Materials and Structures). Available from U.S. Government Printing Office, Washington, DC 20402.

US Department of Health and Human Services:

Environmental Health Guide for Manufactured Home Communities, Revised 1973. Published as a public service by the Manufactured Housing Institute (formerly MHMA).

APHA* - CDC Recommended Housing Maintenance and Occupancy Ordinance, DHEW Publication No. (CDC) 75-8299, 1975 Revision. Available for sale from the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

* Copies of the *Federal Register* are available from the US Government Printing Office, Washington, DC 20402. Compliance Systems Publications (P.O. Box 53154, Atlanta, GA 30355) publishes a Complete Guide to the HUD Manufactured Home Standards Program with an updating service.

*APHA = American Public Health Association

CDC = Center for Disease Control

"Swimming Pools, Safety and Disease Control Through Proper Design and Operation," (HEW Publication No. CDC 76-8319, published by the Center for Disease Control, Atlanta, GA 30333 June 1976).

US Department of Transportation:

The Code of Federal Regulations, Title 49, Transportation. Parts 100-199 (revised as of October 1, 1974).

US Environmental Protection Agency, Office of Water Programs:

Control of Erosion and Sediment Deposition from Construction of Highways and Land Development.

September 1971. Available from Superintendent of Documents, US Government Printing Office, Washington, DC 20402.

US Small Business Administration:

Manufactured Homes and Parks, Small Business Bibliography No. 41. Small Business Administration, Washington, DC 20416.

US Federal Specifications and Other U.S. Government Publications:

Strapping, Steel and Seals, Federal Specification QQ-S-781H, 20 September 1974.

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| <p>1 Fire Prevention Code
 10 Portable Extinguishers
 10L Model Enabling Act
 11 Foam Ext. Systems
 11A Medium and High Expansion Foam Syst.
 11C Mobile Foam Apparatus
 12 Carbon Dioxide Systems
 12A Halon 1301 Systems
 12B Halon 1211 Systems
 12CT Halon 2402 Systems
 13 Sprinkler Systems
 13A Sprinkler Maintenance
 13D Sprinkler Sys., Dwellings
 13E Sprinkler Prod., F.D. Operations at
 14 Standpipe, Hose Systems
 15 Water Spray Fixed Syst.
 16 Deluge Foam-Water Systems
 16A Closed Head Foam-Water Sprinkler Syst.
 17 Dry Chem. Ext. Systems
 18 Wetting Agents
 20 Centrifugal Fire Pumps
 21 Steam Fire Pumps
 22 Water Tanks
 24 Private Fire Service Mains
 26 Supv'n, Water Supply Valves
 27 Private Fire Brigades
 291 Fire Hydrants
 295 Wildfire Control
 30 Flam. Liquids Code
 31 Oil Burning Equipment
 32 Dye-cleaning Plants
 321 Class. Flam. Liquids
 325M Prop. Flam. Liquids
 327 Cleaning Small Tanks
 328 Manholes, Sewers, Flam. Liquids and Gases in
 329 Underground Leakage, Flam. Liquid Tanks
 33 Spray Application
 34 Dipping and Coating Processes
 35 Mfg. Organic Coatings
 36 Solvent Extraction
 37 Combustion Engines
 385 Tank Vehicles
 386 Portable Shipping Tanks
 395 Farm Stg. Flam. Liquids
 40 Motion Picture Film
 40E Pyroxylin Plastic
 43A Liquid, Solid Oxidizing Materials
 43C Gaseous Oxidizing Materials
 43D Pesticides in Port. Containers
 44A Fireworks, Mfg. Trans. Stge.
 45 Labs Using Chemicals
 46 Forest Products, Storage
 48 Magnesium
 481 Titanium
 482 Zirconium
 49 Hazardous Chem. Data
 490 Ammonium Nitrate
 491M Chem. Reactions
 493 Intrinsically Safe Apparatus
 495 Explosives, Stge., Use</p> | <p>496 Purged Enclosures
 497 Class. of Class I Haz. Locations for Elec. Inst.
 497M Class of Gases, Vapors, Dusts for Elec. Equip. in Haz. (Classified) Locations
 498 Explosives, Motor Term.
 50 Bulk Oxygen Systems
 50A Gaseous Hydrogen Syst.
 50B LH-Syst., Consumer Sites
 51 Welding and Cutting
 51A Acetylene Charging Plants
 51B Welding Processes
 53M Oxy. Atmospheres
 54 Nat'l Fuel Gas Code
 56F Nonflammable Medical Gases
 56HM Home Respiratory Therapy
 58 LP-Gas Storage, Use
 59 LP-Gas, Utility Plants
 59A LN-Gas, Stg., Handling
 61A Starch, Mfg. Handling
 61B Grain Elevators
 61C Feed Mills
 61D Agricultural Commodities
 65 Aluminum Processing
 650 Pneumatic Conveying Svsts.
 651 Aluminum, Magnesium Powder
 654 Plastics, Expl. Prevent.
 655 Sulfur Fires
 664 Wood Processing, Woodworking
 68 Explosion Venting
 69 Explosion Prev. Syst.
 70 Nat'l Electrical Code¹
 70A Dwelling Electrical: Code
 70B Elect. Equip. Maint.
 70E Employee Electrical Safety
 70L Inspection of Elect. Installations
 71 Central Station Sig.
 72A Local Protective Syst.
 72B Auxiliary Sig. System
 72C Remote Station System
 72D Proprietary Sig. Syst.
 72E Auto. Fire Detectors
 72H Testing Prot. Sig. Svsts.
 74 Household Warning Equip.
 75 Electronic Computer Syst.
 77 Static Electricity
 78 Lightning Prot. Code
 79 Electrical Metalworking Machine Tools and Plastics Processing Machinery
 80 Fire Doors, Windows
 80A Exposure Fires, Prot.
 81 Fur Storage & Cleaning
 82 Incinerators, Rubbish
 85A Single Burner Boiler-Furnaces
 85B Gas Multi-Burner Boiler
 85D Oil Multi-Burner Boiler
 85E Coal Multi-Burner Boiler
 85F Pulverized Fuel Systems
 85G Implosions in Multi-Burner Boiler
 86A Ovens and Furnaces
 86B Industrial Furnaces
 86C Ind. Furn., Sp. Processing
 86D Ind. Vacuum Furnaces</p> | <p>87 Piers and Wharves
 88A Parking Structures
 88B Repair Garages
 90A Air Conditioning Syst.
 90B Warm Air Htg., Air Cond.
 91 Blower and Exhaust Syst.
 96 Vapor Removal Cooking Eq.
 97M Heating Terms, Glossary
 99 Health Care Facilities
 101* Life Safety Code²
 102 Assembly Seating, Tents, Air-Supported Structures
 110T Legally Required Emergency and Standby Power Svsts.
 120 Coal Preparation Plants
 121 Mobile Surface Mining Equip.
 130 Fixed Guideway Transit Svsts.
 150 Racetrack Stables
 172 Fire Protection Symbols for Architectural & Engineering Drawings
 174 Fire Protection Symbols for Risk Analysis Diagrams
 178 Symbols — Fire Fighting Operations
 203M Roof Coverings
 204M Smoke, Heat Venting
 206M Building Areas
 211 Chimneys, Fireplaces, Vents
 214 Water Cooling Towers
 220 Types Bldg. Construction
 224 Homes, Forest Areas
 231 Indoor General Storage
 231C Rack Storage of Mat'ls.
 231D Storage of Rubber Tires
 231E Storage of Baled Cotton
 231F Storage of Roll Paper
 232 Protection of Records
 232AM Archives Centers
 241 Bldg. Constr. Operation
 251 Fire Tests Bldg. Constr. & Mat'ls.
 252 Fire Tests Door Assem.
 253 Flooring Radiant Panel Test
 255 Burning Character, Bldg. Mat'ls.
 256 Tests Roof Coverings
 257 Window Assemblies
 258 Tests Smoke Generated
 259 Tests Heat of Bldg. Mat'ls.
 260A Cig. Ignition Resistance — Components of Furniture
 260B Cig. Ignition Resistance — Composites of Furniture
 302 Pleasure and Commercial Motor Craft
 303 Marinas and Boatyards
 306 Gas Hazards on Vessels
 312 Vessels, Constr., Repair
 402 Aircraft Rescue Proced.
 403 Aircraft Rescue Services
 406M Aircraft Resc., Fire Fighting, Using Structural Equip.
 407 Aircraft Fuel Servicing
 408 Aircraft Extinguishers
 409 Aircraft Hangars
 410 Aircraft Maintenance
 412 Testing, Foam Vehicles
 414 Rescue Vehicles
 415 Fueling Ramp Drainage
 416 Airport Terminals
 417 Loading Walkways
 418 Roof-top Heliports
 419 Airport Water Systems
 421 Aircraft Interior F. P.
 422M Aircraft Fire Investigators Manual
 423 Aircraft Engine Test Facilities
 424 Airport/Community Emerg. Planning
 501A Mobile Home Instal., Sites
 501C Recreational Vehicles
 501D Recreational Vehicle Pks.
 502 Highways, Tunnels, Bridges
 505 Powered Industrial Trucks
 512 Truck Fire Protection
 513 Motor Freight Terminals
 601 Guard Service
 601A Guard Operations
 701 Fire Tests, Textiles, Films
 702 Wearing Apparel
 703 Fire-Retardant Treatments of Bldg. Mat'ls.
 704 Ident. of Materials
 801 Radioactive Mat'l. Facil.
 802 Nuclear Research Reactors
 803 Light Water Nuclear Power Plants
 901 Uniform Coding for F. P.
 902M Field Incident Manual
 903M Property Survey Manual
 904M Investigative Report Manual
 907M Investigation of Fires of E. ec. Origin
 910 Libraries and Library Collections
 911 Museums and Museum Collections
 1001 Fire Fighter Prof. Qual.
 1002 Driver Prof. Qual.
 1003 Airport Fire Fighter Prof. Qual.
 1021 Fire Officer Prof. Qual.
 1031 Fire Inspector Prof. Qual.
 1041 Fire Instructor Prof. Qual.
 1121L Model State Fireworks Law
 1122 Unmanned Rockets Code
 1123 Fireworks, Public Display
 1201 Organization, Fire Services
 1202 Fire Dept. Organization
 1221 Public Fire Serv. Comm.
 1231 Suburban & Rural Water Supplies
 1301 Public Fire Prev. Criteria
 1401 Training Reports, Records
 1410 Initial Fire Attack
 1501 Fire Dept. Safety Officer
 1901 Automotive Fire Apparatus
 1904 Aerial Ladders & Elev. Platforms
 1921 Portable Pumping Units
 1931 Fire Dept. Ground Ladders
 1961 Fire Hose
 1962 Fire Hose Care, Use
 1963 Hose Connection Threads
 1971 Protective Clothing
 1972 Fire Fighters' Helmets
 1973 Gloves for Structural Fire Fighters
 1981 Self-Contained Breathing App.
 1982 Personal Alert Safety System for Fire Fighters</p> |
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APPENDIX F

MOLENA SIGN ORDINANCE

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ARTICLE I: GENERAL

Section 101: Short Title. This document is entitled "The Sign Ordinance of Molena, Georgia." It may also be known by and cited by the short title of Molena Sign Ordinance.

Section 102: Authority. The power of a local government to enact an ordinance such as this, which is intended to protect the public health, safety, and welfare is provided by the Home Rule provisions of the Constitution and Laws of the State of Georgia.

Section 103: Jurisdiction: This Ordinance applies to all land within the incorporated area of Molena, Georgia.

Section 104: Purpose. The purpose of this Ordinance is to safeguard the public health, safety, and welfare through providing protection to the general public from the use of signs that, by their size, motion, color, brightness, lighting, or their distracting demand for attention, endanger the physical and mental well-being of the public and create hazards to traffic.

Section 105: Content. This Ordinance provides for the following:

- A. Establishes standards for the location, size, lighting, erection, maintenance, and quality of materials of all signs and outdoor advertising structures.
- B. Defines certain terms used in this Ordinance.
- C. Provides procedures for administering and amending the Ordinance.
- D. Provides penalties for violation of this of this Ordinance.
- E. Defines the powers and duties, as they relate to this Ordinance, of the Mayor and Council, as well as such administrative Officers, bodies, and agencies as the Mayor and Council may establish for the efficient exercise of the zoning powers of Molena under the provisions specified in the Zoning Procedures Law (Ga. Code 1981, S36-66-1, enacted by Ga. L. 1985, p.1139, Sl.), paragraph 2-(b)-(1). This includes at a minimum the Administrative Officer, the Planning Commission, and the Board of Appeals.
- F. Repeals conflicting ordinances.

ARTICLE II: DEFINITIONS OF TERMS.

Section 201: Interpretation of Certain Common Terms. When used in this Ordinance, the following words and phrases have the meaning as defined in this article. Terms not defined in this article. Terms not defined here have the same meaning as is found in most dictionaries, where consistent with the context. The terms "must," "will," and "shall" are mandatory in nature, indicating that an action has to be done. The term "may" is permissive and allows discretion regarding an action. When consistent with the context, words used in the singular number include the plural, and those used in the plural number include the singular. Words used in the present tense include the future. The word "person" includes a "firm," "corporation," "co-partnership," "association," "institution," "or "person". The word "lot" includes the words "plot" and "parcel". The word "building" includes the word "structure". The words "used" or "occupied" as applied to any land or building include the words "intended," "arranged," or "designed," "to be used" or "occupied".

Section 202. General Definitions.

- A. **Advertising Device:** Any structure or device erected or intended for the purpose of displaying advertising situated upon or attached to real property.
- B. **Banner:** A sign with or without characters, letter, illustrations, or ornamentation, applied to cloth, paper, plastic, or fabric of any kind with only such material for a backing, the same being characteristically hung or displayed on buildings or suspended in mid-air across streets, passageways, or other areas visible to the general public.
- C. **Billboard:** An outdoor, off-site sign.
- D. **Building:** Any structure having a roof and intended for shelter, housing, or enclosure of persons, animals, or property of any kind.
- E. **Changeable Copy:** Any sign constructed with letters or characters whereby changes can be made of advertising price, special events, or business hours, etc.
- F. **Frontage, Building:** The width in linear feet of the front exterior wall of a particular establishment.
- G. **Frontage, Road:** The width in linear feet of each lot where it abuts the right-of-way of any public street.
- H. **Marquee:** A roofed structure attached to and supported by a building and projecting over public or private sidewalks or right-of-way.

- I. **Planned Development:** A group of retail stores, service establishments, offices, industries, or any other businesses planned to serve the public, which is in common ownership or condominium ownership.
- J. **Sign:** Any name, identification, graphic, description, illustration, or device, including the brace or amounts or other means used to erect or stabilize the same, which is affixed to or represented directly or indirectly upon a building, structure or land in view of the public which directs attention to a product, place, activity, service, person, business, or institution.
- K. **Sign, Animated:** Any sign with action, motion, changing colors, or moving characteristics which requires electrical or mechanical energy, including wind actuated elements such as flags, spinners, banners, and aerial devices.
- L. **Sign, Awning or Canopy:** A sign imposed or painted upon any roof-like structure which provides either permanent or temporary shelter for adjacent walkways or entrances to a building or property.
- M. **Sign, Bench:** any sign attached to or painted upon a bench or other seat placed in the public view and meant to be for public use or viewing.
- N. **Sign, Business:** Any notice or advertisement, pictorial or otherwise, which directs attention to goods, commodities, products, services, or entertainment sold or offered upon the premises where such a sign is located.
- O. **Sign, Community Event:** A sign announcing a community event sponsored by the City, a School, Church, or other non-profit charitable or service organization including directional sign to such an event.
- P. **Sign, Construction:** a temporary sign erected and maintained on premises during construction to identify a construction project for which a building permit has been issued.
- Q. **Sign, Digital:** Any sign erected outdoors which electronically or mechanically displays time, date, temperature, population, or other data in addition to a business advertisement.
- R. **Sign, Directly Lightly:** A sign illuminated by an internal light source.

- S. **Sign, Directory, Arcade, Mall:** A serial sign which identifies the names of businesses, offices, professionals, industries, or other entities located within a planned center.
- T. **Sign, Double-Faced:** A sign which has two display areas against each other or where the interior angle formed by the display areas is sixty (60) degrees or less, where on face is designed to be seen from one direction and the other face from another direction.
- U. **Sign, Flashing:** A sign, the lighting of which is not kept constant in intensity at all times when in use, and which exhibits marked changes in lighting effect. Illuminated signs which indicate only the time, temperature, or date must not be considered as flashing signs.
- V. **Sign, Fuel Pricing:** Any sign advertising current prices for but not limited to gasoline, diesel, kerosene, etc.
- W. **Sign, Ground:** A permanently affixed sign which is wholly independent of a building for support.
- X. **Sign, Indirectly Lighted:** A sign illuminated by an external light source directed primarily toward such sign.
- Y. **Sign, Marquee:** A business sign painted on, attached to, or hung from a marquee.
- Z. **Sign, Non-conforming:** Any sign which does not conform to the provisions of this Ordinance.
- AA. **Sign, Off-site:** Any sign or graphic not located on the premises of the business or entity indicated, advertised, or identified by said sign or any sign which advertises or calls attention to any activity, product, event, service, business, or institution where the same are not conducted, furnished, sold, or offered on the premises where such sign is located.
- BB. **Sign, Political:** Signs, identifying and urging voter support for a particular election issue, political party, or candidate for public office.
- CC. **Sign, Portable:** Any sign which is not permanently affixed, including but not limited to signs mounted on vehicles parked in such a manner as to serve the purpose of an advertising device.
- DD. **Sign, Projecting or Swinging:** A sign projecting more than twelve (12) inches from the outside wall or walls of any building or supports upon which it is located.

- EE. **Sign, Real Estate:** A temporary sign erected by the owner, or his agent, advertising real property upon which the sign is located for rent, lease, or for sale.
- FF. **Sign, Real Estate Directional:** A sign which conveys directions to a specific property being offered for sale, rent, lease, or development.
- GG. **Sign, Roof:** Any sign or graphic erected or maintained on a building any portion of which extends above the lowest horizontal line of any roof.
- HH. **Sign, Sidewalk or Sandwich:** A moveable sign not permanently secured or attached to the ground or surface upon which it is located.
- II. **Sign, Temporary:** A sign of non-permanent nature. All such signs must be removed within ten (10) days after the purpose for which the sign is intended to advertise has been accomplished.
- JJ. **Sign, Trailer:** Any sign which is mounted on any trailer or truck and may be moved from one location to another by means of being towed by a vehicle.
- KK. **Sign, Wall:** A sign applied to or mounted to the wall or surface of a building or structure, the display surface of which does not project more than twelve (12) inches from the outside wall of such building or structure. The total lettering on one side of a building or structure must constitute one wall sign.
- LL. **Sign, Area:** The area of a sign means and is computed as the entire area within a continuous perimeter enclosing the limits of writing, representation, emblem, or any figure or similar character together with any frame, other material, open space, or color forming an integral part of the display or used to differentiate such sign from the background against which it is placed. The supports, uprights, or structure on which any sign is supported must be included in determining the sign area whenever such supports are designed in such a manner as to form an integral part of the display. The sign area of painted or affixed wall signs when composed of letters only is the sum of the area of a rectangle which enclosed all of the letters. Only one faced of a double-faced sign with parallel, opposing faces 15 inches or less apart and bearing identical copy must be used in computing the area.

- MM. **Sign Face:** The part of a sign that is or can be used for advertising purposes.
- NN. **Sign Height:** The distance in vertical feet from the ground to the highest point of the sign face.

ARTICLE III. (RESERVED)

ARTICLE IV. GENERAL PROCEDURES.

Section 401: Initial Information.

- A. Article IV outlines the procedures to be followed in order to comply with the requirements of this Ordinance. The developer (See definition of "developer" in Article II), who initially may not be familiar with this Ordinance, first visits the Administrative Officer to get information concerning ordinances affecting his proposed development.
- B. The Administrative Officer will show the developer a copy of this Ordinance. The developer may either review the document in the office or he may purchase a copy for his own use.

Section 402. Compliance with Sign Ordinance Required.

- A. No sign is to be erected, used, moved, or altered in a manner that does not conform to the requirements specified in this Ordinance.
- B. The only exception to this requirement is that all signs which lawfully existed at a particular location at the time this Ordinance was adopted may be continued as "Non-Conforming Signs".

Section 403: Continuance of Non-Conforming Signs.

Invariably, at the time a sign ordinance is adopted or amended, certain signs which lawfully existed prior to the adoption or Amendment will not conform to specified regulations and development standards. These are known as non-conforming signs, and in order to feasibly adopt the ordinance and so as not to cause undue economic hardship on owners of non-conforming signs, these signs are allowed to continue under Special Conditions as outlined in the following parts of this Section:

- A. Where a non-conforming sign has ceased to be used for more than six (6) months or has changed to a permitted or conforming sign, further use of the sign must be in conformance with the standards and requirements of this Ordinance.
- B. A non-conforming sign must not be extended or altered unless the extension or alteration is in conformance with the requirements of this Ordinance.
a sign must be removed from the premises within fourteen (14) days after sale or closing of property

- C. A non-conforming sign which is altered or extended must meet applicable Molena building codes and development regulations. When an applicant seeks a Sign Permit for the extension or alteration of a non-conforming sign, the Administrative Officer will inspect the sign and determine what (if anything) is needed to bring the sign into conformance with applicable building codes and development regulations. Upon determining that the sign meets applicable building codes and development regulations, he will issue the Sign Permit for the non-conforming sign.
- D. If a non-conforming sign suffers damage which does not exceed fifty (50) percent of its assessed valuation, the sign may be reconstructed and reused as before if done within twelve (12) months from the time such damage occurred. If such damage is greater than fifty (50) percent of its assessed valuation, such a sign may only be reconstructed and used in conformity with the standards and requirements of this Ordinance.

Section 404: Sign Permit Required.

- A. The developer or other person wishing to do any of the following must first apply to the Administrative Officer for a Sign Permit:
 - 1. Excavation or filling of a lot for the construction of a sign.
 - 2. Erection, movement, extension, or enlargement of a sign.
 - 3. Work on an existing sign which increases the assessed value \$500 or more.
- B. No public utility hookup will be made available to the site of a proposed sign until a Sign Permit is secured.
- C. The Sign Permit must be applied for either by the owner of the land upon which the proposed sign or alteration is to be located, or by the contractor doing the work.
- D. The applicant may obtain a Sign Permit application from the Administrative Officer. He should submit the following information to the Administrative Officer in application for a Sign Permit:
 - 1. Completed application form.
 - 2. Plans and drawings showing the area of the sign, size of supports, height, method of attachment intended for use, vertical and horizontal

distances between the sign and the finished grade at the site of location, and horizontal distances between the sign and controlling right-of-way lines.

3. A photograph or line drawing of the sign, depicting precisely what is to be portrayed on the sign.
4. Any other documentation which the Administrative Officer may specify.

E. No application will be accepted from any person who is in violation of the Sign Ordinance. If an applicant for a Sign Permit is, at the time of such an application, determined by the Administrative Officer to be in violation of the Sign Ordinance, then the Administrative Officer will be prohibited from accepting or processing any application from that applicant until the applicant does one of the following:

1. He must voluntarily remove or change the cause of the violation and cease to be in violation. The applicant must notify the Administrative Officer that he has ceased the violation and obtain a release from the Administrative Officer as to the violation.
2. He must be tried before a Court of competent jurisdiction and acquitted of charges and present a certified copy of the Court Order to the Administrative Officer within thirty (30) days of the final order of the Court.

F. When the applicant has ceased to be in violation by either "1" or "2" above, the Administrative Officer will then accept the application for Sign Permit.

G. (Reserved).

H. An existing sign which is altered or extended must meet applicable Molena building codes and development regulations. When an applicant seeks a Sign Permit for the extension or alteration of an existing sign, the Administrative Officer will inspect the sign and determine what (if anything) is needed to bring the sign into conformance with applicable building codes and development regulations before a Sign Permit may be issued.

- I. The Administrative Officer is in charge of issuing Sign Permits. The Administrative Officer will contact the applicant at the address shown on the application. The Sign Permit will be issued if, upon review of the application and inspection of the site, the Administrative Officer is satisfied that the proposed sign will meet the requirements of this Ordinance and all her applicable ordinances. The Administrative Officer may require the submission of additional materials if he feels additional information is needed in order to determine if the proposed sign meets the requirements of this Ordinance.
- J. If the Administrative Officer feels that the proposed sign as presented in the Sign Permit application will not satisfy the requirements of this Ordinance, he will not issue a Sign Permit. He will notify the applicant in writing within ten (10) days of the submission of the application, stating reasons for the refusal. The applicant will then need to confer with the Administrative Officer to determine what he needs to do in order to comply with the Ordinance and be eligible for a Sign Permit.
- K. Construction on an approved sign must start within six (6) months from the date of issue of the Sign Permit, or the permit will become invalid and a new one must be applied for if construction of the sign is desired at a future date. If construction is begun on an approved sign and then ceases before the sign is completed, construction must be restarted within twelve (12) months from the time that it was stopped, or the permit will become invalid and a new one must be applied for if construction of the sign is desired to resume at a future date. Records of Sign Permit applications and supporting materials will be maintained by the Administrative Officer.
- L. All newly constructed signs, as well as additions, alterations, extensions, or enlargements of signs must comply with all building codes in effect in Molena. The Administrative Officer will explain the procedures and timing of inspections to determine if work meets applicable codes.

Section 405: Certificate of Final Sign Approval of Finished Sign Required.

- A. A Certificate of Final Sign Approval is required before a sign for which a Sign Permit has been issued may be used or maintained. The Sign Permit becomes the Certificate of Final Sign Approval when the

Administrative Officer signs it in the appropriate space, certifying that to the best of his knowledge all requirements of this Ordinance have been met. The owner/contractor will then receive the Certificate of Final approval to be used as confirmation that he has complied with the provisions of this Ordinance.

- B. The Administrative Officer will issue the Certificate of Final Sign Approval within ten (10) days of receiving notification from the applicant that construction of the sign has been completed, if he finds that all requirements of this Ordinance and all other applicable ordinances have been met. However, if he finds that all requirements of such ordinances have not yet been met when the owner/contractor seeks a certificate of Final Sign approval, the Administrative Officer will not issue the Certificate of Final Sign Approval. He will notify the owner/contractor within ten (10) days, stating reasons for the refusal. The owner/contractor will then need to confer with the Administrative Officer to determine what he needs to do in order to comply with the Ordinance and be eligible for a Certificate of Final Sign Approval. After the sign is constructed and in place, the applicant must notify the Administrative Officer within two (2) working days that the sign is ready for final inspection.

Section 406: Appealing an Action of the Administrative Officer or Planning Commission.

- A. If the Administrative Officer or Planning Commission executes an action which the developer or other aggrieved party believes to be contrary to law, that action may be appealed. Findings of fact, however, may not be appealed. Such an appeal must be filed within thirty (30) days of the date on which the action by the Administrative Officer or Planning Commission was taken.
- B. The Board of Appeals has jurisdiction for hearing appeals concerning actions of the Administrative Officer or Planning Commission related to this Ordinance. Applications for appeal may be obtained from and submitted to the Administrative Officer, who will transmit them to the Board of Appeals for its consideration.
- C. When an action of the Administrative Officer or Planning Commission is appealed, all construction or other activity authorized by the appealed action must be stopped immediately. In certain cases, however, the

Administrative Officer may feel that the stopping of such construction or other activity authorized by the appealed action will cause imminent peril to life or property. Then, the Administrative Officer may certify to the Board of Appeals that, by reason of facts stated in the certificate, the halting of construction or other activity authorized by the appealed action would in his opinion cause imminent peril to life or property. In such cases, the construction or other activity authorized by the appealed action is allowed to continue unless a restraining order is granted by either the Board of Appeals or a court of appropriate jurisdiction.

- D. When an application for appeal of an action of the Administrative Officer or Planning Commission is received, the Board of Appeals will set a time and place for a public hearing on the appeal. Notice of the hearing must be published in a newspaper of general circulation in Molena at least fifteen (15) days before the hearing. In addition, the parties to the appeal will be notified of the date of the hearing by the Board of Appeals by U. S. Mail at least fifteen (15) days before the hearing. Any person may appear at the hearing, or have a representative attend instead.
- E. The Board of Appeals will make a decision concerning the appeal and record the decision in the minutes for that meeting. Further appeal on points of law may be made to the Pike County Superior Court.

Section 407: Variances.

- A. A Variance is a permit, issued by the Board of Appeals, which allows use of a sign in a way that does not meet certain requirements of this Ordinance. A Variance may be granted only in an individual case where an extreme hardship would result if all of the requirements of this Ordinance were applied stringently to a particular sign. The hardship must be proven by showing beyond a doubt that reasonable use of the sign is not possible if all of the requirements of this Ordinance are to be met. The hardship cannot be self-created such as:
1. A sign purchased with knowledge of an existing restriction.
 2. A claim of hardship in terms of prospective sales of the sign.
 3. An expressed economic need requiring a Variance, when such a need can be met in other ways which would not require a Variance.

- B. Relief from the hardship--the Variance--must not cause substantial detriment to the public good or impair the purposes of this Ordinance.
- C. When a Variance is issued, the spirit of this Ordinance must be observed and the public safety and welfare secured. A Variance may be granted only for permitted signs in the zoning district in which the sign or proposed sign in question is located. (For example, a type of sign which is not permitted in an R-1 zoning District would not be allowed to be placed in a R-1 district under a Variance.)
- D. The developer or owner wishing to request a Variance must have at least fifty-one (51) percent ownership of the subject sign or be the duly authorized agent of such a person, possessing notarized authorization in writing under the owner's signature. The Planning Commission or the Mayor and Council may also propose a Variance. However, the power to approve a Variance rests with the Board of Appeals.
- E. Application for a Variance may be made with the Administrative Officer. The Administrative Officer will take the required information and transmit it to the Board of Appeals for its consideration. No application will be accepted from any person who is in violation of the Sign Ordinance. If an applicant for a Variance or any other action by the Board of Appeals is, at the time of such an application, determined by the Administrative Officer to be in violation of the Sign Ordinance, then the Administrative Officer will be prohibited from accepting or processing any application from that applicant until the applicant does one of the following:
1. He must voluntarily remove or change the cause of the violation and cease to be in violation. The applicant must notify the Administrative Officer that he has ceased the violation and obtain a release from the Administrative Officer as to the violation.
 2. He must be tried before a Court of competent jurisdiction and acquitted of charges and present a certified copy of the court order to the Administrative Officer within thirty (30) days of the final order of the Court.
- F. When the applicant has ceased to be in violation by either "1" or "2" above, the Administrative Officer will accept the application for Variance or other action by the Board of Appeals and submit it to the board in the manner prescribed.

- G. When an application for a Variance is received, the Board of Appeals will set a time and place for a public hearing on the Variance. Notice of the hearing must be published in a newspaper of general circulation in Molena at least fifteen (15) days before the hearing. Such a notice will state the application number, owner's name, sign location, its area, time, place, and subject of the hearing. At least fifteen (15) days prior to the public hearing, notice of the time, place, and subject of the hearing will be sent to the appellant or petitioner in writing by U. S. Mail to his last known address. Copies of all such letters will be maintained in the applicant file for permanent record.
- H. The Board of Appeals will make a decision concerning the Variance and record the decision in the minutes for that meeting.
- I. The Variance issued by the Board of Appeals must specify which requirements are to be varied from. It must specify alternative requirements to be met, replacing the requirements varied from.
- J. The Board of Appeals may establish performance bonds to assure compliance with any requirements it has set for granting a Variance. Where a Variance is granted for a construction activity requiring a Sign Permit, the Sign Permit must be obtained and construction begun within six (6) months of the issuance of the Variance. Otherwise, the Variance expires after six (6) months.
- K. The decision of the Board of Appeals on the application for Variance may be appealed on points of law to the Pike County Superior Court.

Section 408: (Reserved).

Section 409: (Reserved).

Section 410: Amendments.

- A. If a developer or sign owner finds that a proposed new sign does not meet the requirements of this Ordinance, he may request that this Ordinance be amended to permit his proposed sign. The developer or owner wishing to request an Amendment to the Official Map must have at least fifty-one (51) percent ownership of the subject property or be the duly authorized agent of such a person, possessing notarized authorization in writing under the owner's signature. The Planning Commission or the Mayor and Council may also propose an Amendment. However, the power to approve and enact an Amendment rests with the Mayor and Council.

- B. Application for an Amendment may be made with the Administrative Officer. The Administrative Officer will take the required information and transmit it to the Board of Appeals for its consideration. No application will be accepted from any person who is in violation of the Sign Ordinance. If an applicant for an Amendment or any other action by the Board of Appeals is, at the time of such an application, determined by the Administrative Officer to be in violation of the Sign Ordinance, then the Administrative Officer will be prohibited from accepting or processing any application from that applicant until the applicant does one of the following.
1. He must voluntarily remove or change the cause of the violation and cease to be in violation. The applicant must notify the Administrative Officer that he has ceased the violation and obtain a release from the Administrative Officer as to the violation.
 2. He must be tried before a Court of competent jurisdiction and acquitted of charges and present a certified copy of the Court order to the Administrative Officer within thirty (30) days of the final order of the Court.
- C. When the applicant has ceased to be in violation by either "1" or "2" above, the Administrative Officer will then accept the application for Amendment or other action by the Board of Appeals and submit it to the board in the manner prescribed.
- D. All applications for Amendment must first be reviewed by the Planning Commission. The Planning commission will study the proposed Amendment and determine if it meets the requirements of this Ordinance, as well as other applicable ordinances of Molena. At this time, the Administrative Officer may review the proposed Amendment and make written recommendations to the Planning Commission.
- E. The Planning Commission must then conduct a public hearing on the Amendment. The responsibility of conducting the public hearing is delegated by the Mayor and Council to the Planning Commission under provisions specified in the Zoning Procedures Law (Ga. Code 1981, S36-66-1, enacted by Ga. L. 1985, p.1139, sl, paragraph 2-(b)-(1). (See Section 105, paragraph F of this Ordinance for additional details.) Notice of the hearing must be published in a newspaper of general circulation in Molena at least fifteen (15) days but not more than forty-five (45) days before the hearing contents of Notice set forth.

- F. The following policies and procedures will be observed in conducting the required public hearing:
1. The hearing will be held in the Molena City Hall.
 2. Written comments on the subject of the hearing may be submitted by any citizen or property owner at any time prior to the adjournment of the hearing.
 3. Persons desiring to be heard orally may present their views at the hearing. The length of time of oral presentations permitted to each speaker will be governed by the Planning commission, depending upon the number of persons present and desiring to speak. Personal remarks will not be tolerated.
 4. Any person desiring a transcript of the hearing must arrange for a court reporter at their own expense.
 5. Cross-examination of persons making oral presentations will not be permitted.
 6. All questions will be addressed to the Chairman of the Planning Commission or the Planning Commission member then presiding.
 7. "Standing" to challenge an amendment decision is not conferred by being permitted to speak orally at a hearing, nor by being permitted to file statements or pleadings.
- G. (Reserved.)
- H. (Reserved.)
- I. The Planning Commission will make a written record of the comments received at the public hearing. After the public hearing, and at an official meeting of the Planning Commission, the Planning Commission will formulate its recommendations to the Mayor and Council, recording them in the minutes for that meeting. The Planning Commission will send the written record of comments received at the public hearing along with its recommendations on the proposed Amendment in writing to the Mayor and Council within thirty (30) days of the close of the public hearing, stating reasons for its recommendations. If the Planning Commission fails to send its recommendations to the Mayor and Council within thirty (30) days of the close of the public hearing, the Mayor and Council will assume that the Planning Commission approves.

- J. After reviewing the record of the public hearing and considering recommendations from the Planning Commission, the Mayor and Council will then make an official decision on the proposed Amendment. The decision may or may not concur with the recommendations to the Planning Commission.
- K. If the Mayor and Council deny a proposed Amendment, a minimum period of twelve (12) months must pass before the same Amendment proposal is again submitted for consideration.

Section 411: (Reserved).

Section 412: Appealing an Action of the Mayor and Council.

If the Mayor and Council executes an action which the developer or other aggrieved party believes to be contrary to law, that action may be appealed to the Pike County Superior Court. Findings of fact, however, may not be appealed. Such an appeal must be filed within thirty (30) days of the date on which the action of the Mayor and Council was taken.

Section 413: Penalties. Any person who violates any of the provisions of this Ordinance must face penalties. If a developer or sign owner exhausts the decision and appeals procedures contained in Article IV and is still dissatisfied with the decision, he must then comply with the final decision or face penalties. Anyone who violates any of the provisions of this Ordinance, upon conviction, will be fined no more than five hundred (500) dollars for each offense. In addition, he must pay all costs and expenses involved in the case. Each day such a violation continues constitutes a separate offense.

- A. The owner or tenant of any sign, sign premises, or part thereof, and any architect, builder, contractor, agent, or other person who commits, participates in, assists in, or maintains such a violation may each be found guilty of a separate offense and suffer the penalties provided here.

Section 414: Remedies. If any sign is used or maintained in violation of this Ordinance, anyone, including the City, who would be harmed by such a violation may initiate legal proceeding to obtain an injunction or other appropriate remedy to stop the violation or to prevent any act which would constitute such a violation. Other legal remedies are also available as provided by Georgia Law.

ARTICLE V. REQUIRED DEVELOPMENT STANDARDS.

Section 501: Signs Exempt From Specified Provisions of This Ordinance.

A. The following types of signs or advertising devices are exempt from the application process and fees specified in Section 404. However, the Administrative Officer must still inspect them and issue a Sign Permit upon finding that they meet all other standards and requirements of this Ordinance.

1. Temporary unlighted real estate or construction signs as follows:

a. Such signs must meet the following area limitations:

a'. Maximum of six (6) square feet area when located in R-1, R-2, R-3, R-4, O-1, P-M, P-R, or H zoning district. (Note that, since the H overlay district presents development standards over and above those of the zoning district which it overlays, the more smaller area limit of six (6) square feet would apply in the case of an H district overlaying a C-1 zoning district.)

b'. Maximum of thirty-two (32) square feet area when located in C-1, C-2, C-3, M-1, or M-2 zoning district.

b. Such signs must also meet the following conditions:

a'. They must be located on the lot or building for sale, lease or being constructed.

b'. They must not be located on any public right-of-way.

c'. They are limited to one (1) sign per street frontage.

c. Such signs must be removed within ten (10) days after the subject lot or building is leased, sold, or construction is completed.

2. Signs of a non-commercial nature and in the public interest, erected by, or on the order of, a public officer in the performance of his duty, such as public notices, safety signs, danger signs,

- trespassing signs, traffic and street signs, memorial plaques, signs of historical interest, and the like.
3. Signs on private property directing traffic movement meeting the following standards:
 - a. Each must not exceed three (3) square feet in area.
 - b. They must not advertise any business, service, or product.
 - c. They are not allowed on any public right-of-way.
 4. On-premises credit card identification signs meeting the following standards:
 - a. They must be no more than 432 square inches in area per card.
 - b. They must be at least ten (10) feet from the pavement of any street.
 5. Any sign not visible from public thoroughfares or any sign within a business, office, mall, or other enclosed area.
 6. Off-premises unlighted church, civic, school, hospital, or other quasi-public signs not exceeding four (4) square feet in area. However, no such sign is allowed on any public right-of-way.
 7. Signs advertising festivals, special public events, etc. meeting the following standards:
 - a. They must be set back at least ten (10) feet from any street pavement.
 - b. They must not exceed eighteen (18) square feet.
 - c. They must be approved by the Administrative Officer.
 - d. They will be approved for a maximum period of two (2) weeks, after which they must be removed.
 8. On premises model home, model apartment, sales office signs, etc. meeting the following standards:

- a. They must be located within a residential development.
 - b. They must not exceed six (6) square feet in area.
 - c. They must be set back at least ten (10) feet from the pavement of any street.
 - d. They are limited to one (1) per sales office, model, etc.
9. On-premises no trespassing, no hunting, and similar public notice type signs less than six (6) square feet in area, however, no such signs are allowed on any public right-of-way.
10. On-premises signs attached to the outside wall of any business establishment meeting the following standards:
- a. They must be designed to identify services rendered, products sold, or activities conducted on the premises.
 - b. The total area of such signs may not exceed two (2) percent of the total area of the wall on which they are affixed.
11. On-premises temporary signs relating to the initial opening or final closing of a business or service meeting the following standards:
- a. They must not exceed thirty-two (32) square feet each.
 - b. They must not be closer than ten (10) feet to the pavement of any street.
 - c. They must not be located on any public right-of-way.
 - d. Such signs must be approved by the Administrative Officer; he may approve them for a maximum period of two (2) weeks for initial opening signs and four (4) weeks for final closing signs, after which they must be removed.
- B. Signs on residential premises indicating the name or address of the resident are allowed in all zones and are exempt from all provisions of this Ordinance.

Section 502: Signs Allowed Only By Special Permit. The following types of signs or advertising devices are permitted only by issue of a special permit allowing the use of this type of advertising for a period of no more than ten (10) consecutive days. No such special permit may be issued for the same premises at less than six-months intervals. A fee as set by the Mayor and Council will be charged for each such special permit:

- A. Air-or gas-filled devices.
- B. Balloons or streamers.
- C. Flags or banners, except official flags of the United States, State of Georgia, local government, or other public service agencies.
- D. Search lights and similar devices.

Section 503: Prohibited Signs. The following types of signs or advertising devices are prohibited within Molena.

- A. Roof signs.
- B. Sidewalk, sandwich, or curb-type signs.
- C. Portable signs.
- D. Swinging or projecting signs, unless approval is granted by the Administrative Officer. In no case, however, will this type sign exceed two (2) square feet in area.
- E. Rotating or animated signs involving motion or sound.
- F. Flashing, blinking, or varying light intensity signs, except time, temperature, and date signs.
- G. Signs on public right-of-way, except signs exempt under 501.
- H. Signs which contain or are in imitation of an official traffic sign or signal or contain the words stop, go, slow, caution, danger, warning, or similar words, except for construction signs and barricades, and except when the words are incorporated in the permanent name of a business.
- I. Courtesy benches, trash cans, and similar devices on which advertising is displayed.
- J. Trailer signs.
- K. Off-premises signs, except those in accordance with Sections 501 and 506.

Section 504: Misleading Advertising On Signs.

- A. It is unlawful for a person to display false or misleading statements upon signs or other public places calculated to mislead the public as to anything sold, services to be performed, or information disseminated. The fact that any such sign or display contains words or language sufficient to mislead a reasonable or prudent person is prima facie evidence of a violation of this Section by the persons displaying at their residence, establishment, or place of business.
- B. When a business or service using an identification or business sign is discontinued, all signs and sign structures relating to that business or service must be removed within ten (10) days from the date of discontinuance.

Section 505: Maintenance and Appearance of Signs.

- A. All signs must be maintained in good condition as to present a neat and orderly appearance. The Administrative Officer may cause to be removed after due notice any sign which shows gross neglect, becomes dilapidated, or if the ground area around the sign is not well maintained.
- B. The Administrative Officer will give the owner ten (10) days' written notice to correct the deficiencies or to remove the sign or signs. If the owner refuses to correct the deficiencies or remove the sign, the building inspector will have the sign removed at the expense of the owner.

Section 506: Lighting of Signs.

- A. The light from any lighted sign must not be of an intensity or brightness which will interfere with the peace, comfort, convenience, and general welfare of residents or occupants or adjacent properties.
- B. No sign may have blinking, flashing, or fluctuating lights or other lighting devices which have a changing light intensity, brightness, or color except those depicting only time, temperature, or date.
- C. No colored lights may be used at any location or any manner so as to be confused with or construed as traffic control devices.
- D. Neither direct nor reflected light from primary light sources may create a hazard to operators of motor vehicles.

Section 507: Political Signs. Political signs must meet the following standards:

- A. They must be no more than six (6) square feet in area when located in a R-1, R-2, R-3, R-4, P-R, P-M, or H zoning district; and no more than thirty-two (32) square feet in area in other zoning districts.
- B. They must not be erected more than sixty (60) days prior to the election which the sign is intended to influence.
- C. They must be removed within ten (10) days after the final election including any runoff which the sign is intended to influence.
- D. They must be setback a minimum of ten (10) feet from the pavement of any street.
- E. They are not permitted on any public right-of-way.
- F. They may not be attached to any street sign, any sign directing or controlling traffic, any pole or post supporting such signs, any utility pole or post, tree, shrub, or plant.
- G. For political signs exceeding six (6) square feet in area, a permit from the Administrative Officer is required.
- H. Political signs may not exceed twenty (20) feet in height.
- I. Political signs of a nature prohibited by Section 502 are prohibited.
- J. Molena is empowered to remove or cause to be removed all political signs not conforming with the provisions of this Ordinance without notice to the candidate whose sign violates this Ordinance.

Section 508: Bond, Public Liability Insurance Required.

Anyone wishing to engage in the business of erecting or maintaining signs within the city must obtain a Molena business license and a certificate of insurance from an insurance company authorized to do business in the State of Georgia showing that the entity has in effect public liability and property damage insurance in the sum of \$25,000 for property damage for any one claim and public liability insurance in an amount not less than \$100,000 for injuries, including accidental death to one (1) person. The certificate of insurance must state that the insurance carrier will notify Molena thirty (30) days in advance of any termination and/or restriction of the coverage.

Section 509: Standards for Ground Signs. Ground signs are permitted in P-M, P-R, O-1, C-1, C-2, C-3, M-1, M-2, and H zoning districts. They must meet the following standards:

- A. No ground sign may have a height greater than five (5) feet above ground level.
- B. No ground sign may have an area greater than thirty-five (35) square feet.
- C. No ground sign may be located within ten (10) feet of a street right-of-way or within fifty (50) feet of any other sign, structure, or building.

Section 510: Standards for Free Standing Signs. Free Standing Signs are permitted in the P-M, O-1, C-1, C-2, C-3, M-1, M-2, and H zoning districts. They must meet the following standards:

- A. Such a sign must have a height of less than ten (10) feet above street level.
- B. Such a sign must have an area of no more than fifty (50) square feet.
- C. Supports for such signs or the sign which it supports must not project within ten (10) feet of any street right-of-way defined as the vertical line from the right-of-way upward.

Section 511: Standards for Wall Signs. Wall signs are permitted in P-M, P-R, O-1, C-1, C-2, C-3, M-1, M-2, and H zoning districts. They must meet the following standards:

- A. One (1) square foot of sign space is permitted for each linear foot of distance from building frontage to the right-of-way on which the building fronts except, where building structure is located less than ten (10) feet from street right-of-way, a maximum of twenty (20) square feet are permitted.
- B. No wall sign is permitted which is greater in area than five (5) percent of the wall upon which the sign is mounted.

Section 512: Standards for Directory, Arcade, Mall Signs. Directory, Arcade, Mall signs are permitted in P-M, P-R, O-1, C-1, C-2, C-3, M-1, and M-2 districts. They are permitted in areas in which a planned development has been approved by the Mayor and Council. Such signs must meet the following standards:

- A. They must contain the name of the center to which they refer.

- B. They must be of an area no more than sixty (60) square feet.
- C. Each tenant located in such a center is permitted an identification sign not to exceed eight (8) square feet in area.
- D. A theater within a planned center may erect one (1) sign not exceeding fifty (50) square feet in sign area, which sign shall identify the theater and its current features; however, no theater sign is permitted within fifty (50) feet of any other ground, free standing, directory, arcade, or mall sign.

Section 513: Additional Required Standards for Signs in P-M, P-R, C-1, C-2, C-3, O-1, M-1, M-2 Zoning Districts. The following standards must be adhered to for signs in C-1, C-2, C-3, O-1, M-1, and M-2, and H zoning districts. (In this Section, "business" includes "Planned Apartment Home Community" and "Planned Manufactured Home Community."):

- A. Each business shall be permitted to utilize the following combination of wall and ground signs subject to the provisions hereinafter stated:
 - 1. If the distance from the entrance of the business to the street right-of-way is fifty (50) feet or less, said business may employ any combination of wall or ground signs with a total sign area of up to fifty (50) square feet.
 - 2. If the distance from the entrance to the business from the right-of-way is fifty (50) feet or more but not greater than 100 feet from the street right-of-way, said business may employ any combination of wall or ground signs with a total sign area of up to 75 square feet.
 - 3. If the distance from the entrance to the business from the street right-of-way is greater than 100 feet, said business may employ any combination of wall and ground sign with a combined total sign area of up to one (1) square foot for each linear foot of distance from the right-of-way aforesaid. Provided further, no wall sign shall have a total sign area greater than five percent of wall area upon which it is mounted. Provided further, that subject to the same area restrictions, said business may employ as an alternative a combination of free standing and wall signs instead of a combination of wall and ground signs.

4. Businesses located in shopping centers shall be permitted one wall sign and one identification sign on a directory sign.
- B. Brand names and trademarks or a combination of brand name trademarks shall constitute a sign.
- C. One fuel pricing sign per type of fuel sold shall be permitted with a maximum sign area of four (4) square feet per fuel price, provided further the total combined area of signs shall be no greater than eighteen (18) square feet even though they are placed at different locations of the business.
- D. Signs with changeable copy shall be prohibited except on ground signs (except theatre signs), provided further changeable copy shall only be allowed thirty (30) percent of the area of the sign face.
- E. All signs with changeable copy, direct lighting, indirect lighting, and directory, arcade, and mall signs must have prior approval of the Mayor and Council of Molena before a construction permit is issued.
- F. Conforming signs which are relocated from a business site to a new business site without a change in copy shall conform to the provisions of this ordinance provided further signs which are relocated and on which copy change is required shall be considered a new sign and a permit shall be required.
- G. Directory, Arcade, Mall signs shall apply to any combination of businesses which are three (3) or more in number located within a planned center. In the event a structure or development is expanded or subleased to include businesses of three (3) or more any existing signs not complying with the provisions of this ordinance for planned centers, offices, commercial, industrial, or shopping centers shall become nonconforming. All multiple business structures housing two businesses shall only be allowed one wall sign per business and one directory sign per business constructed.

Section 514: Temporary Signs. Temporary Signs may be permitted for any zone. They must have a sign face area of no more than thirty-five (35) square feet.

**ARTICLE VI. POWERS AND DUTIES OF VARIOUS
OFFICIALS CONCERNING THIS ORDINANCE**

Section 601: Purpose. This Article formalizes the powers and duties of the Administrative Officer, the Planning Commission, the Board of Appeals, and the Mayor and Council where this Ordinance is concerned. It should also provide a convenient list of services provided by each official to aid in complying with the requirements of this Ordinance.

Section 602: Powers and Duties of the Administrative Officer.
The Administrative officer has the power and duty to provide the following services related to this Ordinance.

- A. Provide initial information about this Ordinance upon request.
- B. Advise how to contact members of the Planning Commission, the Board of Appeals, and the Mayor and Council for services provided by those bodies.
- C. Offer practical suggestions on how to comply with the requirements of this Ordinance.
- D. Maintain complete records concerning this Ordinance and related matters, and make such records available to the public upon request.
- E. Propose amendments to this Ordinance.

Section 603: (Reserved)

Section 604: Powers and Duties of the Planning Commission.
The Planning Commission has the power and duty to provide the following services related to this Ordinance:

- A. Advise the Mayor and Council on applications for amendment to this Ordinance by examining amendment applications and providing written recommendations with reasons for the recommendations to the Mayor and Council as specified in Section 410.
- B. Dispense general information about this Ordinance to the public upon request.
- C. Propose amendments to this Ordinance.
- D. Carry out an ongoing comprehensive planning program which, like the Land Use Plan (where one exists), will provide current data on which decisions regarding this Ordinance may be based that utilize sound planning principles.

Section 605: Powers and Duties of the Board of Appeals.

The Board of Appeals has the power and duty to provide the following services:

- A. Accept applications for appeal of an action of the Administrative Officer or the Planning Commission and render official decisions on them according to procedures specified in Section 411.
- B. Authorize variances according to procedures specified in Section 407.

Section 606: Powers and Duties of the Mayor and Council.

The Mayor and Council have the power and duty to provide the following services related to this Ordinance:

- A. Accept applications for amendment of this Ordinance and render official decisions on them after referring them to the Planning Commission for review and recommendations as specified in Section 413.
- B. Proposed amendments to this Ordinance.

ARTICLE VII. LEGAL STATUS PROVISIONS.

Section 701: Conflict with Other Ordinances. Portions of other ordinances that conflict with portions of this Ordinance are repealed. Non-conflicting parts of those ordinances remain in effect.

Section 702: Validity. Should any section or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, that declaration will not affect the validity of the Ordinance as a whole nor any part of it other than the part that was declared to be unconstitutional or invalid.

Section 703: Effective Date. This Ordinance takes effect on _____, the date of its adoption.

Mayor
Molena, Georgia

Approved As To Legal Sufficiency:

City Attorney
Molena, Georgia

Attest:

NFPA No.
501B
1974

File No. 1974

APPENDIX G

STANDARD FOR

MOBILE HOMES

Body and Frame Design
and Construction Requirements
Installation of Plumbing, Heating, and
Electrical Systems

Revised 1974 and sponsored by
Mobile Home Manufacturers Association
1450 Lee Road, Charlottesville, VA 22021
National Fire Protection Association
470 Atlantic Avenue, Boston, MA 02210
Trailer Coach Association
9855 E. La Palma Ave., Anaheim, CA 92806

Mobile Homes Manufacturers Association

The Mobile Homes Manufacturers Association (MHMA) is a non-profit trade organization to serve the mobile home industry and promote industry growth by providing better tools for successful operation. It is voluntarily supported by manufacturers, suppliers, and related service organizations. It has a Standards Division with field engineering personnel to visit member plants regularly, inspecting units and assisting when necessary in the correction of any deviations from the standards applicable to mobile homes. MHMA Manufacturers must comply with the provisions of this Standard as a condition of membership.

National Fire Protection Association

The National Fire Protection Association (NFPA) is a non-profit technical and educational organization to promote the science and improve the methods of fire protection. Organized in 1896, the Association has a broad-scale standards-making program to aid in its objective to reduce loss of life and destruction of property by fire. The Association publishes the standards developed under its aegis in pamphlet editions (such as this) and in what is known as the National Fire Codes (a multi-volume compilation annually updated containing over 200 NFPA Codes and Standards). For full information about the Association and for a list of its publications, write to the Association's Headquarters.

Trailer Coach Association

The Trailer Coach Association represents the manufacturers of mobile homes and recreational vehicles, dealers and suppliers in the Western States while drawing its members from all sections of the country. Founded in 1936, the Association sponsors mobile home and recreational vehicle shows in the major western cities and has research programs dedicated to advance the proper use of mobile homes and recreational vehicles. It has a Standards Department which works with the enforcing officials in the various Western States to encourage compliance with the recommendations contained in this Standard.

American National Standards Institute

The American National Standards Institute (ANSI) is the national coordinating institution for voluntary standardization in the U.S.A. through which organizations concerned with standardization may cooperate in recognizing, establishing and improving standards in this country. Approval of a standard by the Institute is based on a consensus of those essentially concerned with its scope and provisions. The Institute has a Member Body Council, a Consumer Council, and a Company Member Council. The Member Body Council is composed of non-profit technical, professional, scientific, trade, or other membership associates, societies, or organizations which are of national scope and recognition. The Mobile Homes Manufacturers Association, National Fire Protection Association, and the Trailer Coach Association are Member Bodies of the ANSI. ANSI has its headquarters at 1430 Broadway, New York, N.Y. 10017.

A119.1-1

501B-1

Standard for Mobile Homes

NFPA No. 501B — 1974

ANSI No. A119.1

This Edition of Standard on Mobile Homes

This Standard has been developed by the Sectional Committee on Mobile Homes and approved by the Correlating Committee on Mobile Homes and Recreational Vehicles. These Committees operate under the aegis of the American National Standards Institute and are sponsored jointly by the Mobile Homes Manufacturers Association, the National Fire Protection Association, the Recreational Vehicle Institute, and the Trailer Coach Association. Personnel of the Committees are listed on the following pages. It revises the last previous edition of this Standard which was adopted by the NFPA at its May 1973 meeting and by the American National Standards Institute on January 19, 1974.

This Edition was adopted by the National Fire Protection Association at its 78th Annual Meeting held in Miami Beach, Florida, May 20-24, 1974. It has been submitted to the American National Standards Institute for approval by that organization. When and if approved, the cover of the pamphlet edition of this publication will reflect the action taken.

For a listing of the portions of this standard revised in 1974, see page 501B-6.

Origin and Development of Standard on Mobile Homes

The earliest activity of the NFPA in the field of mobile homes and recreational vehicles was the formation of an NFPA Committee on Trailers and Trailer Camps in 1937. Its first standard was adopted in 1940. That edition remained unchanged until after World War II when a 1952 revision was approved. These editions were titled "Standards for Fire Prevention and Fire Protection in Trailer Coaches and Trailer Courts." In 1960 the Association acted to approve a revised version dividing the text into two parts, one designated No. 501A covering trailer courts, and the other, No. 501B, covering trailer coaches.

In 1961 a new edition of NFPA No. 501B was adopted under the title "Standard for Fire Prevention and Fire Protection in Mobile Homes and Travel Trailers," and in 1963 a revision of same was approved. Revisions of both NFPA Nos. 501A and 501B were acted upon in 1964.

In the early sixties the Mobile Homes Manufacturers Association and the Trailer Coach Association prepared, under the aegis of the American Standards Association, two standards which became known as the American Standard Installations of Plumbing, Heating and Electrical Systems in Mobile Homes (A119.1-1963) plus a similar text for Travel Trailers (A119.2-1963). These documents borrowed heavily from the NFPA texts with regard to heating and electrical systems, added new material on plumbing, and omitted material on construction.

During 1962-64 efforts were made to consolidate the NFPA and ASA activities, and these inter-organizational arrangements were consummated in 1964 by action of the Boards of Directors of the MHMA, NFPA, and TCA.

(Continued on page 2)

(Continued from page 1)

This combined project was launched under the auspices of the United States of American Standards Institute (formerly ASA and subsequently the American National Standards Institute) with the approval of the USASI as of October 16, 1964. The MHMA, NFPA and FCA were authorized to act as co-sponsors. The Recreational Vehicle Institute was added as a fourth co-sponsor of the project under an action taken by the Executive Standards Board of the USASI on September 23, 1969.

The current Committee first produced the 1968 Standard for Mobile Homes which was adopted by NFPA at its 1968 Annual Meeting and was approved by the USASI on January 27, 1969. In 1971 the Standard for Mobile Homes was revised and approved by the NFPA at its May 1971 Annual Meeting and on February 8, 1972 this edition was approved by the ANSI. In 1972 the Standard for Mobile Homes was revised again and approved by the NFPA at its 1972 Annual Meeting and by ANSI on April 19, 1973. In 1973, still another revision was prepared by the Sectional Committee and this was approved by the NFPA Annual Meeting on May 15, 1973 and by the American National Standards Institute on January 17, 1974. This current edition was approved by the NFPA at its Annual Meeting on May 21, 1974 and has been submitted to the American National Standards Institute for approval by that organization, as noted previously.

In 1970 the committee secured adoption by the NFPA of the Standard for Recreational Vehicles (NFPA No. 501C) and this standard was approved by the ANSI in 1971 (designated A119.2-1971). In 1972 NFPA revised the Standard for Recreational Vehicles at its May 1972 Annual Meeting and this edition was approved by the ANSI on April 19, 1973. In 1974, the Standard for Recreational Vehicles was revised and approved by NFPA on May 21st, and subsequently submitted to ANSI.

A Standard for Mobile Home Parks (NFPA 501A) was prepared under the auspices of the current committee organization with initial NFPA approval in 1971. Revisions were made in 1972, 1973 and 1974. ANSI approved the 1972 edition on May 8, 1973 as ANSI A177.1, the 1973 edition on December 28, 1973 as ANSI A119.3, and the 1974 edition has been submitted for the approval of that organization after being approved by NFPA on May 21, 1974.

An Electrical Standard for Recreational Vehicle Parks (NFPA 501D) was prepared under the auspices of the current committee organization with initial NFPA approval in 1971 on May 18. This text was approved by the ANSI on June 20, 1972 as ANSI A177.2 and was subsequently redesignated as ANSI A119.4. In 1974 this Standard was broadened and retitled the Standard for Recreational Vehicle Parks (NFPA 501D), was approved by NFPA on May 21, 1974, and has been submitted to ANSI for approval by that organization.

NOTE

Reference herein to the 1974 National Electrical Code, NFPA No. 70, is to that code adopted by the National Fire Protection Association on May 22, 1974 at its Annual Meeting. This code is also known as the 1975 National Electrical Code.

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Mobile Homes and Recreational Vehicles

(Listing of Personnel as of Date of Approval of this Edition)

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Artie O. Barker, Idaho State Electrical Board (rep. National Electrical Code Committee; International Association of Electrical Inspectors)

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C. P. Van Zandt, Sierra Craft, Trailer Coach Association

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Henry Omsion, Standards Director, Mobile Homes Manufacturers Association (Secretary, Sectional Committee on Mobile Homes)

Philip N. Shrunk, Standards Director, Recreational Vehicle Institute, Inc. (Secretary, Sectional Committee on Recreational Vehicles and Sectional Committee on Recreational Vehicle Parks)

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 William Earthman, Duke Power Co. (rep. Electric Light and Power Group)
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(Continued from page 1)

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Ike Burger, Day-and-Night Manufacturing Co.
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Details of 1974 Revisions to 1973 Edition

Standard for Mobile Homes

Part A — General. The definitions of the words "labeled" and "listed" were inserted here and deleted from where they formerly appeared in Parts B, C, D and E.

Part B — Body and Frame Design and Construction Requirements. Par. 4.1 was revised; a new Par. 4.3 was inserted defining "Gross Floor Area" with paragraphs renumbered thereafter in Chapter 4. Definitions appearing under old 4.10, 4.11, and 4.12 were deleted since these terms are no longer used in the text. Editorial corrections were made in 5.3 and 5.5, and 5.7 was revised. Changes were made in 6.3, 6.3.1, 6.3.2, and 6.4. A reference change was made in 6.5, new notes added to 6.5.1, and the Note to 6.5.1.4 was slightly revised. Pars. 6.7, 6.9, 6.10, and 6.11 were altered. In Chapter 7, Par. 7.3 was revised, the certificate under 7.5.4 altered, and old Par. 7.6 was moved to Part E (Par. 9.4.4). In Chapter 8, changes were made in 8.1.1, 8.3.1(c), 8.3.3, and 8.5.1; 8.5.1.1 was redesignated 8.5.2 and Table 8.5.2 (old B-2) was revised. Chapter 9 was revised in its entirety (largely to improve clarity). In the Appendix to Part B, Par. D.8 was revised; the Test Procedure for Roof Rafters or Roof Trusses revised; a new Appendix was added on Wood Product Based Wall Surfacing for Tub and Shower Enclosures, the title to the Map (old Figure B-2) was changed; and the Reference Table to Standards updated.

Part C — Plumbing Systems. Part 4 (Definitions) was altered by adding new definitions for "Anti-Siphon Trap Vent Device", "Primary Vent", "Secondary Vent" and "Vent Caps" and revisions made to "Diameter", "Grade", "Individual Vent", "Main Vent", and "Pitch". Revisions were made to 8.1.9.1 (editorial), 8.1.9.3, 8.1.9.4, 9.2.1.5, 9.2.2 (Title only), 9.2.2.1, 9.2.2.2, 9.2.2.4, 11.2.1, 11.3.1.2, 11.3.1.3, 11.4.2, 11.6.1 (old Table C-3 — editorial) 11.6.2.2, 12.2.1, 12.2.2, 12.4.1, 12.7, 13.3.1(c), 13.3.2, 13.3.5 (old Table C-2), 13.5.3 (new 13.7), and 14.1. New Par. 11.2.1.1 was inserted; old Pars. 11.3.2 and 11.3.2.1 were deleted. Pars 12.2.3, 12.2.3.1, 12.2.3.2, and 12.2.3.3 were revised into 12.2.3 and 12.2.4; old 12.2.4 was renumbered as 12.2.5. New Pars. 13.4, 13.4.1, 13.4.2 and 13.4.3 were added while old Pars. 13.4 and 13.5 and sub-paragraphs thereof were renumbered 13.5, 13.6 and 13.7, retaining the sub-paragraphs. The Reference Table for Standards in the Appendix was updated with some deletions and additions.

Part D — Heating, Cooling, and Fuel-Burning Systems. In Chapter 2, Pars. 2.2 and 2.3 were revised. New definitions were added for "Factory-Built Fireplace" and "Fireplace Stove". In Chapter 4, Pars. 4.2.4.1, 4.2.4.2(b) and 4.2.5.1 were editorially revised. In Chapter 5, Par. 5.1.2.1, Table D-2 to Par. 5.1.4, 5.1.10.2, 5.1.11 (and the Certificates), 5.1.13, 5.1.15, and 5.1.19.2 were revised. New Par. 5.1.13.1 was added along with 5.1.14.1. In Chapter 6, Par. 6.1.1 was revised; new Pars. 6.1.4, 6.1.5 and 6.1.6 added; the title to 6.2 revised; new Par. 6.2.5 added; Par. 6.3.2 revised; Par. 6.3.3.3, 6.3.3.4, 6.3.3.5, 6.3.4, 6.3.4.1, 6.3.4.2, 6.3.5 and 6.3.5.1 added; and 6.10.1.1 was revised. Table D-3 (now redesignated) to Par. 6.10.1.1 was editorially improved and Table D-4 to Par. 6.10.1.2 was redesignated. Par. 6.10.1.4, 6.10.1.5, 6.10.1.6, 6.10.1.7, and 6.10.1.8 were added. Pars. 6.10.2.2, 6.10.5, and 6.10.5.2 were revised and the Reference Table in the Appendix was updated.

Part E — Electrical Systems. This Part was completely recodified to make it consistent in format with Article 550 (Part A) of the National Electrical Code and revised in accordance with actions taken jointly by the Sectional Committee on Mobile Homes, the Intersectional Committee Electrical Task Force of the Correlating Committee on Mobile Homes and Recreational Vehicles, and Code-Making Panel No. 19 of the National Electrical Code Committee (with the approval of the National Electrical Code Correlating Committee). See Pages 501B-117 to 119 for further details.

Vertical marginal rules on the affected pages indicate the substantive revisions.

Standard for Mobile Homes

NFPA No. 501B — 1974

ANSI No. A119.1

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Official Interpretations Procedure

1. General. There is hereby established an Official Interpretations Procedure for this Standard produced under the aegis of the Correlating Committee on Mobile Homes and Recreational Vehicles and its Sectional Committees for the purpose of providing official explanations of the meaning or intent of any specific provision.

Note: This Official Interpretations Procedure does not prevent any officer or member of the Committees concerned from commenting on the meaning or intent of any provision of any such document, provided that the comment is clearly identified as not being an Official Interpretation of the Committee.

2. Nature of Official Interpretations. Two General forms of Official Interpretations shall be recognized:

(a) Those making an Interpretation of the literal text.

(b) Those making an Interpretation of the intent when the particular text was adopted.

No judgments will be rendered of engineering drawings by the Interpretations Committee regarding compliance with any provisions of this Standard.

3. Procedures for Requesting Official Interpretations. Those desiring an Interpretation shall direct their requests to the Administrative Secretary of the Correlating Committee, c/o National Fire Protection Association, 470 Atlantic Ave., Boston, MA 02210, supplying eight identical copies of a statement in which shall appear specific references to a single problem, identifying article, section or paragraph of the document with which they are concerned. Such a request shall be on the business stationery of the inquirer and shall be duly signed. When applications involve actual field situations they shall so state, and all parties involved shall be named.

4. Handling of Requests for Official Interpretations. The responsible Sectional Committee shall not be under any obligation to process requests for Official Interpretations in any specified time period, nor to issue an Official Interpretation except at its own convenience. The request for an Official Interpretation may be processed exactly the way it has been submitted, or they may rephrase the question, if desired, to clarify the intent, or they may refuse to consider the request if they find it not to be in proper form or consistent with Paragraph 2. If acceptable for consideration, the request for an Official Interpretation shall be submitted to an Interpretations Subcommittee made up of five or more individuals selected by the Sectional Committee Chairman or its Secretary (with the approval of the Chairman). In selecting those to serve the Sectional Committee Chairman or its Secretary will select Members of the Sectional Committee having jurisdiction over the question posed and may also include up to two members of the appropriate Task Group who are not Sectional Committee members, but no Member, Alternate, or Task Group representative shall be eligible for such appointment if he is directly involved in the particular case prompting the request for the Interpretation. The personnel of each Interpretations Subcommittee may be varied with each request.

5. Voting on Interpretations. In any case where there is more than 1 negative vote in the Interpretations Subcommittee, the request for Interpretation shall be referred to the Sectional Committee for a decision. Under these conditions, adoption of an Official Interpretation requires approval by a three-quarters majority vote of that Sectional Committee. Where a three-quarters

6.2.2 A clothes dryer moisture-lint exhaust duct shall not be connected to any other duct, vent or chimney.

6.2.3 The exhaust duct shall not terminate beneath the mobile home.

6.2.4 Moisture-lint exhaust ducts shall not be connected with sheet metal screws or other fastening devices which extend into the interior of the duct.

6.2.5 Gas Clothes Dryer Stub in Requirements. A mobile home may be provided with "stubbed in" equipment at the factory to supply a gas clothes dryer for future installation by the owner provided it complies with the following provisions:

(a) The "stubbed in" gas outlet shall be provided with a shutoff valve, the outlet of which is closed by threaded pipe plug or cap.

(b) The "stubbed in" gas outlet shall be permanently labeled to identify it for use only as the supply connection for a gas clothes dryer.

(c) A moisture lint exhaust duct system shall be roughed in by the manufacturer at the time of original installation. The moisture lint exhaust system shall comply with provisions of Sections 6.2.1 through 6.2.4 of this Part.

6.3 Installation of Appliances

6.3.1 The installation of each appliance shall conform to the terms of its listing and the manufacturer's instructions. The installer shall leave the manufacturer's instructions attached to the appliance. Every appliance shall be secured in place to avoid displacement.

6.3.2 All fuel-burning appliances, except ranges, ovens, illuminating appliances, clothes dryers, solid fuel-burning fireplaces and solid fuel-burning fireplace stoves, shall be installed to provide for the complete separation of the combustion system from the interior atmosphere of the mobile home. Combustion air inlets and flue gas outlets shall be listed or certified as components of the appliance. The required separation may be obtained by:

(a) The installation of direct vent system (sealed combustion system) appliances, or

(b) The installation of appliances within enclosures so as to separate the appliance combustion system and venting system from

the interior atmosphere of the mobile home. There shall not be any door, removable access panel, or other opening into the enclosure from the inside of the mobile home. Any opening for ducts, piping, wiring, etc., shall be sealed.

6.3.3 A forced air appliance and its return-air system shall be designed and installed so that negative pressure created by the air-circulating fan cannot affect its or another appliance's combustion air supply or act to mix products of combustion with circulating air.

6.3.3.1 The air circulating fan of a furnace installed in an enclosure with another fuel-burning appliance shall be operable only when any door or panel covering an opening in the furnace fan compartment or in a return air plenum or duct is in the closed position.

NOTE: This does not apply if both appliances are direct vent system (sealed combustion system) appliances.

6.3.3.2 If a warm air appliance is installed within an enclosure to conform to 6.3.2.(b), each warm-air outlet and each return air inlet shall extend to the exterior of the enclosure. Ducts, if used for that purpose, shall not have any opening within the enclosure and shall terminate at a location exterior to the enclosure.

6.3.3.3 Cooling coils installed as a portion of, or in connection with, any forced-air furnace shall be installed on the downstream side unless the furnace is specifically otherwise listed.

6.3.3.4 A cooling coil shall not be located in the air discharge duct or plenum of any forced-air furnace unless such furnace is listed for use with a cooling coil or listed for operation at not less than 0.5 inch water column external static pressure.

6.3.3.5 If a cooling coil is installed within a forced-air furnace, the coil shall be listed for use with that furnace in the manner so installed or be approved for such use.

6.3.4 Vertical Clearance Above Gas Cooking Top. Gas ranges shall have a vertical clearance above the cooking top of not less than 30 inches to combustible material or metal cabinets except the clearance may be reduced to not less than 24 inches as follows:

6.3.4.1 The underside of the combustible material or metal cabinet above the cooking top is protected with asbestos millboard at least $\frac{1}{4}$ -inch thick covered with sheet metal not lighter than No. 28 manufacturer's standard gage, or,

(ASTM B88-72), or shall comply with the specifications for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service, ASTM B280-73.

5.2.2.4 Steel tubing shall have a minimum wall thickness of 0.032 inch for diameters up to ½ inch and 0.049 inch for diameters ½ inch and larger. Steel tubing shall be constructed in accordance with the Specification for Electric-Resistance Welded Coiled Steel Tubing for Gas and Fuel Oil Lines (ASTM A539-73) and shall be externally corrosion protected.

5.2.3 Size of Oil Piping. The minimum size of all fuel oil tank piping connecting outside tanks to the appliance shall be no smaller than ⅝-inch OD copper tubing or ¼-inch IPS. If No. 1 fuel oil is used with a listed automatic pump (fuel lifter), copper tubing shall be sized as specified by the pump manufacturer.

5.2.4 Joints for Oil Piping. All pipe joints in the piping system, unless welded or brazed, shall be threaded joints which comply with American National Standard for Pipe Threads (Except Dryscal), B2.1 — 1968. The material used for brazing pipe connections shall have a melting temperature in excess of 1,000°F.

5.2.5 Joints for Tubing. Joints in tubing shall be made with either a single or double flare of the proper degree, as recommended by the tubing manufacturer, by means of listed tubing fittings, or brazed with materials having a melting point in excess of 1,000°F.

5.2.6 Pipe Joint Compound. Threaded joints shall be made up tight with listed pipe joint compound which shall be applied to the male threads only.

5.2.7 Couplings. Pipe couplings and unions shall be used to join sections of threaded pipe. Right and left nipples or couplings shall not be used.

5.2.8 Grade of Piping. Fuel oil piping installed in conjunction with gravity feed systems to oil heating equipment shall slope in a gradual rise upward from a central location to both the oil tank and the appliance in order to eliminate air locks.

5.2.9 Strap Hangers. All oil piping shall be adequately supported by galvanized or equivalently protected metal straps or hangers at intervals of not more than 4 feet, except where adequate support and protection is provided by structural members. Solid-iron-pipe oil supply connection(s) shall be rigidly anchored to a structural member within 6 inches of the supply connection(s).

5.2.10 Testing for Leakage. Before setting the system in operation, tank installations and piping shall be checked for oil leaks with fuel oil of the same grade that will be burned in the appliance. No other material shall be used for testing fuel oil tanks and piping. Tanks shall be filled to maximum capacity for the final check for oil leakage.

6. Appliances

6.1 General

6.1.1 Heat-producing appliances and vents, roof jacks and chimneys necessary for their installation in mobile homes shall be listed or certified by a nationally recognized testing agency for use in mobile homes. Air conditioning units, combination air-conditioning and heating units shall be listed or certified by a nationally recognized testing agency for the application for which the unit is intended.

6.1.2 Fuel-burning heat-producing appliances and refrigeration appliances, except ranges and ovens, shall be of the vented type and vented to the outside.

6.1.3 Fuel-burning appliances shall not be converted from one fuel to another fuel unless converted in accordance with the terms of their listing and the appliance manufacturer's instructions.

6.1.4 Gas-fired absorption comfort-cooling units shall meet all the requirements of American National Standard for Gas-Fired Absorption Summer Air Conditioning Appliances (ANSI Z21.40.1-1973).

6.1.5 Mechanical comfort-cooling units shall meet all the requirements of the Standard for Unitary Air-Conditioning Equipment (ARI Standard 210-66).

6.1.6 Direct refrigerating systems serving any air conditioning or comfort-cooling system installed in a mobile home shall employ a type of refrigerant that ranks no lower than Group 5 in the Underwriters' Laboratories, Inc. "Classification of Comparative Life Hazard of Various Chemicals."

6.2 Gas Clothes Dryers

6.2.1 Gas clothes dryers shall be exhausted to the outside by a moisture-lint exhaust duct and termination fitting listed or certified as components of the dryer.

(a) No portion of the completed installation shall project beyond the wall of the mobile home.

(b) The outlet shall be provided with an approved "quick-disconnect" device, which shall be designed to provide a positive seal on the supply side of the gas system when the appliance is disconnected. A shutoff valve shall be installed immediately upstream of the quick-disconnect device. The complete device shall be provided as part of the original installation.

(c) Protective caps or plugs for the "quick-disconnect" device, when disconnected, shall be permanently attached to the mobile home adjacent to the device.

(d) A tag shall be permanently attached to the outside of the exterior wall of the mobile home as close as possible to the gas supply connection. The tag shall indicate the type of gas and the BTUH capacity of the outlet and shall be legibly inscribed as follows:

THIS OUTLET IS DESIGNED FOR USE WITH GAS
PORTABLE APPLIANCES WHOSE TOTAL INPUT DO
NOT EXCEED _____ BTUH. REPLACE PROTEC-
TIVE COVERING OVER CONNECTOR WHEN NOT
IN USE.

5.1.14 Valves. Shutoff valves used in connection with gas piping shall be of a type designed and listed for use on LP-Gas.

5.1.14.1 A shutoff valve shall be installed in the fuel piping outside of each gas appliance but inside the mobile home structure, upstream of the union or connector in addition to any valve on the appliance. The shutoff valve shall be located within 6 feet of a cooking appliance and within 3 feet of any other appliance. A shutoff valve may serve more than one appliance if located as required above.

5.1.15 Gas Piping System Openings. All openings in the gas piping system shall be closed gas-tight with threaded pipe plugs or pipe caps.

5.1.16 Electrical Ground. Gas piping shall not be used for an electrical ground.

5.1.17 Couplings. Pipe couplings and unions shall be used to join sections of threaded piping. Right and left nipples or couplings shall not be used.

5.1.18 Hangers and Supports. All gas piping shall be adequately supported by galvanized or equivalently protected metal

straps or hangers at intervals of not more than 4 feet, except where adequate support and protection is provided by structural members. Solid-iron-pipe gas supply connection(s) shall be rigidly anchored to a structural member within 6 inches of the supply connection(s).

5.1.19 Testing for Leakage.

5.1.19.1 Before Appliances are Connected. Piping systems shall stand a pressure of at least six inches mercury or three PSI gage for a period of not less than ten minutes without showing any drop in pressure. Pressure shall be measured with a mercury manometer or slope gage calibrated so as to be read in increments of not greater than one-tenth pound, or an equivalent device. The source of pressure shall be isolated before the pressure tests are made. Before a test is begun, the temperature of the ambient air and of the piping shall be approximately the same, and constant air temperature be maintained throughout the test.

5.1.19.2 After appliances are connected, the piping system shall be pressurized to not less than 10 inches nor more than 14 inches water column and the appliance connections tested for leakage with soapy water or bubble solution.

5.2 Oil Piping Systems

5.2.1 General. The requirements of this Section shall govern the installation of all liquid fuel piping attached to any mobile home. None of the requirements listed in this Section shall apply to the piping in the appliance(s).

5.2.2 Materials. All materials used for the installation, extension, alteration, or repair, of any oil piping system shall be new and free from defects or internal obstructions. The system shall be made of materials having a melting point of not less than 1,450° F, except as provided in 5.2.4. They shall consist of one or more of the materials described in 5.2.2.1 through 5.2.2.4.

5.2.2.1 Steel or wrought-iron pipe shall comply with American National Standard for Wrought-Steel or Wrought-Iron Pipe, B36.10 — 1970. Threaded copper or brass pipe in iron pipe sizes may be used.

5.2.2.2 Fittings for oil piping shall be wrought iron, malleable iron, steel, or brass (containing not more than 75 percent copper).

5.2.2.3 Copper tubing shall be annealed type, Grade K or L conforming to the Specifications for Seamless Copper Water Tube

5.1.11 Identification of Gas Supply Connections. Each mobile home shall have permanently affixed to the exterior skin at or near each gas supply connection or the end of the pipe, a tag of 3 inches by 1 3/4 inches minimum size, made of etched, metal-stamped or embossed brass, stainless steel, anodized or alclad aluminum not less than 0.020 inch thick, or other approved material (e.g., 0.005 inch plastic laminates), which reads (as appropriate) in accordance with one of the following label designs depending upon the fuel used. The connector capacity indicated on this tag shall be equal to or greater than the total Btuh rating of all intended gas appliances.

LP-Gas System

This gas piping system is designed for use of liquefied petroleum gas only.

**DO NOT CONNECT NATURAL GAS TO THIS SYSTEM.
CONTAINER SHUTOFF VALVES SHALL BE CLOSED
DURING TRANSIT.**

When connecting to lot outlet, use a listed gas supply connector for mobile homes rated at 100,000 Btuh or more.
 250,000 Btuh

Before turning on gas, make certain all gas connections have been made tight, all appliance valves are turned off, and any unconnected outlets are capped.

After turning on gas, test gas piping and connections to appliances for leakage with soapy water or bubble solution, and light all pilots.

Combination LP-Gas and Natural Gas System

This gas piping system is designed for use of either liquefied petroleum gas or natural gas.

NOTICE: BEFORE TURNING ON GAS BE CERTAIN APPLIANCES ARE DESIGNED FOR THE GAS CONNECTED AND ARE EQUIPPED WITH CORRECT ORIFICES. SECURELY CAP THIS INLET WHEN NOT CONNECTED FOR USE.

When connecting to lot outlet, use a listed gas supply connector for mobile homes rated at 100,000 Btuh or more.
 250,000 Btuh

Before turning on gas, make certain all gas connections have been made tight, all appliance valves are turned off, and any unconnected outlets are capped.

After turning on gas, test gas piping and connections to appliances for leakage with soapy water or bubble solution, and light all pilots.

5.1.12 Gas Supply Connectors

5.1.12.1 LP-Gas. A listed LP-Gas flexible connector conforming to the UL Standard for Pigtails, Expansion Coils and Flexible Hose Connectors for LP-Gas (UL 1569-1973) or equal shall be supplied when the fuel gas piping system is designed for the use of LP-Gas and cylinder(s) and regulator(s) are supplied.

5.1.13 Appliance Connections. All gas burning appliances shall be connected to the fuel piping. Materials as provided in Section 5.1.2 of this Part or listed appliance connectors shall be used. Listed appliance connectors when used shall not run through walls, floors, ceilings or partitions. Connectors of aluminum shall not be used outdoors.

5.1.13.1 Exterior Appliance Connection. A mobile home containing an LPG or combination LP-natural-gas-system may be provided with a gas outlet to supply exterior appliances when installed in accordance with the following:

TABLE 5.1.4

Part I
Maximum Capacity of Different Sizes of Pipe and Tubing in Thousands of Btu's Per Hour of Natural Gas
For Gas Pressures of 0.5 P.s.i.g. or Less and a Maximum Pressure Drop of 1/2 Inch Water Column

I.D.	Iron Pipe Sizes										Tubing											
	Length in Feet										Length in Feet											
	10	20	30	40	50	60	70	80	90	100	O.D.	10	20	30	40	50	60	70	80	90	100	
1/4"	43	29	24	20	18	16	15	14	13	12	3/8"	27	18	15	13	11	10	9	9	8	8	8
3/8"	95	65	52	45	40	36	33	31	29	27	1/2"	56	38	31	26	23	21	19	18	17	16	16
1/2"	175	120	97	82	73	66	61	57	53	50	3/4"	113	78	62	53	47	43	39	37	34	33	33
3/4"	360	250	200	170	151	138	125	118	110	103	1"	197	136	109	93	83	75	69	64	60	57	57
1"	680	465	375	320	285	260	240	220	215	195	1 1/4"	280	193	155	132	117	106	98	91	85	81	81

Part II
Maximum Capacity of Different Sizes of Pipe and Tubing in Thousands of Btu's Per Hour of Undiluted Liquefied Petroleum Gas
Based on a Maximum Pressure Drop of 1/2 Inch Water Column

I.D.	Iron Pipe										Tubing											
	Length in Feet										Length in Feet											
	10	20	30	40	50	60	70	80	90	100	O.D.	10	20	30	40	50	60	70	80	90	100	
1/4"	67	46	37	31	28	25	23	21	20	19	3/8"	39	26	21	19	—	—	—	—	—	—	—
3/8"	147	101	81	70	62	56	51	48	45	42	1/2"	92	62	50	41	37	35	31	29	27	26	26
1/2"	275	189	152	129	114	103	96	89	83	78	3/4"	199	131	107	90	79	72	67	62	59	55	55
3/4"	567	393	315	267	237	217	196	185	173	162	1"	329	216	181	145	131	121	112	104	95	90	90
1"	1071	732	590	504	448	409	378	346	322	307	1 1/4"	501	346	277	233	198	187	164	155	146	138	138

5.1.5 Joints for Gas Pipe. All pipe joints in the piping system, unless welded or brazed, shall be threaded joints that comply with ANSI Standard Pipe Threads (Except Dryseal) B2.1 — 1968. Right and left nipples or couplings shall not be used. Unions, if used, shall be of ground joint type. The material used for welding or brazing pipe connections shall have a melting temperature in excess of 1,000°F.

5.1.6 Joints for Tubing. Joints on tubing shall be made with either a single or double flare of the proper degree, as recommended by the tubing manufacturer, by means of listed gas tubing fittings, or by being brazed with material having a melting point exceeding 1,000°F.

5.1.7 Pipe Joint Compound. Screw joints shall be made up tight with listed pipe joint compound, insoluble in liquefied petroleum gas, and shall be applied to the male threads only.

5.1.8 Concealed Tubing. Tubing shall not be run inside walls, floors, partitions, or roofs. Where tubing passes through walls, floors, partitions, roofs, or similar installations, such tubing shall be protected by the use of weather resistant grommets that shall snugly fit both the tubing and the hole through which the tubing passes.

5.1.9 Concealed Joints. Piping or tubing joints shall not be located in any floor, wall partition, or similar concealed construction space.

5.1.10 Location of Gas Supply Connection

5.1.10.1 For LP-Gas-only systems the supply connection shall be located at the "A" frame, container recess, or in the rear half of the total length of the mobile home and within 18 inches from the left (road) side wall, and should be as close as possible to a point 30 feet from the front of the mobile home.

5.1.10.2 For combination LP-Gas and natural gas systems, the natural gas supply connection shall be located under the rear half of the total length of the mobile home and within 24 inches of the left (road) side wall and be located as close as possible to a point 30 feet from the front of the mobile home. An additional connection, if used, shall be located at the "A" frame. The system shall be sized to provide adequate capacity from either supply connection for natural gas.

5. Piping Systems

5.1 Gas Piping Systems

5.1.1 General. The requirements of this Section shall govern the installation of all fuel gas piping attached to any mobile home. Gas delivered into the gas supply system shall be at a pressure not exceeding 14 inch water column ($\frac{1}{2}$ psi). None of the requirements listed in this Section shall apply to the piping supplied as a part of an appliance.

5.1.1.1 Rodent Resistance. All exterior openings around piping, ducts, plenums or vents shall be sealed to resist the entrance of rodents.

5.1.2 Materials. All materials used for the installation, extension, alteration, or repair of any gas piping system shall be new and free from defects or internal obstructions. It shall not be permissible to repair defects in gas piping or fittings. Inferior or defective materials shall be removed and replaced with acceptable material. The system shall be made of materials having a melting point of not less than 1,450°F, except as provided in 5.1.5 of this Part. They shall consist of one or more of the materials described in 5.1.2.1 through 5.1.2.4.

5.1.2.1 Steel or wrought-iron pipe shall comply with ANSI Standard B36.10-1970 for Wrought-Steel and Wrought-Iron Pipe. Threaded brass pipe in iron pipe sizes may be used. Threaded brass pipe shall comply with Standard Sizes and Specifications for Seamless Red Brass Pipe (ASTM B43-66).

5.1.2.2 Fittings for gas piping shall be wrought iron, malleable iron, steel, or brass (containing not more than 75 percent copper).

5.1.2.3 Copper tubing shall be annealed type, Grade K or L, conforming to the Specifications for Seamless Copper Water Tube (ASTM B88-72), or shall comply with the Specifications for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service, ASTM B280-73. When used on systems designed for natural gas, such tubing shall be internally tinned.

5.1.2.4 Steel tubing shall have a minimum wall thickness of 0.032 inch for tubing of $\frac{1}{2}$ inch diameter and smaller and 0.049 inch for diameters $\frac{1}{2}$ inch and larger. Steel tubing shall be constructed in accordance with ASTM Specification for Electric-Resistance-Welded Coiled Steel Tubing for Gas and Fuel Oil Lines (ASTM A539-73), and shall be externally corrosion protected.

5.1.3 Piping Design. Each mobile home requiring fuel gas for any purpose shall be equipped with a fuel gas piping system that

is designed for LP-Gas only or with a natural gas piping system acceptable for LP-Gas.

5.1.3.1 Where fuel gas piping is to be installed in both portions of an expandable or dual mobile home, the design and construction of the crossover shall be as follows:

(a) There shall be only one point of crossover which shall be located not more than 18 inches from either the front or rear wall and shall be readily accessible from the exterior of the mobile home.

(b) The connector between units shall be a listed type for exterior use, sized in accordance with 5.1.4 of this Part.

(c) The connection shall be made by a listed "quick disconnect" device which shall be designed to provide a positive seal of the supply side of the gas system when such device is separated.

(d) The flexible connector and "quick disconnect" device shall be provided with protection from mechanical and impact damage and located to minimize the possibility of tampering.

(e) Suitable protective coverings for the "quick disconnect" device, when separated, shall be permanently attached to the device or flexible connector.

(f) A 3 inch by $1\frac{3}{4}$ inch minimum size tag made of etched, metal-stamped or embossed brass, stainless steel, anodized or clad aluminum not less than 0.020 inch thick, or other approved material (e.g., 0.005 inch plastic laminates) shall be permanently attached on the exterior wall adjacent to the access to the "quick disconnect" device. Each tag shall be legibly inscribed with the following information using letters no smaller than $\frac{1}{4}$ inch high:

Do Not Use Tools to Separate
the "Quick-Disconnect" Device.

5.1.4 Gas Pipe Sizing. Gas piping systems shall be sized so that the pressure drop to any appliance inlet connection from any gas supply connection, when all appliances are in operation at maximum capacity, is not more than 0.5 inch water column as determined on the basis of test, or in accordance with Table 5.1.4. The natural gas supply connection(s) shall be not less than the size of the gas piping but shall be not smaller than $\frac{3}{4}$ inch nominal pipe size.

Note: For an example of how to determine the required pipe size, see the National Fuel Gas Code (NFPA No. 54-1974).

bility of their being struck if container is dropped upon a flat surface, or,

(b) By ventilated cap or collar, fastened to the container, capable of withstanding a blow from any direction equivalent to that of a 30-pound weight dropped 4 feet. Construction shall be such that the blow will not be transmitted to the valve.

4.2.4.3 Regulators shall be connected directly to the container shutoff valve outlets or mounted securely by means of a support bracket and connected to the container shutoff valve or valves with listed high pressure connections. If the container is permanently mounted, the connector shall be as required above or with a listed semi-rigid tubing connector.

4.2.5 LP-Gas Safety Devices

4.2.5.1 DOT containers shall be provided with safety relief devices as required by the regulations of the U. S. Department of Transportation. ASME containers shall be provided with relief valves in accordance with Subsection 221 of the Standard for the Storage and Handling of Liquefied Petroleum Gases (NFPA No. 58-1974; ANSI Z106.1-1974). Safety relief valves shall have direct communication with the vapor space of the vessel.

4.2.5.2 The delivery side of the gas pressure regulator shall be equipped with a safety relief device set to discharge at a pressure not less than two times and not more than three times the delivery pressure of the regulator.

4.2.5.3 Systems mounted on the "A" frame assembly shall be so located that the discharge from the safety relief devices shall be into the open air and not less than three feet horizontally from any opening into the mobile home below the level of such discharge.

4.2.5.4 Safety relief valves located within liquefied petroleum gas container compartments may be less than three feet from openings provided:

(a) The bottom vent of the compartment is at the same level or lower than the bottom of any opening into the vehicle, or,

(b) The compartment is not located on the same wall plane as the opening(s) and is at least two feet horizontally from such openings.

4.2.6 LP-Gas System Enclosure and Mounting

4.2.6.1 Housings and enclosures shall be designed to provide

proper ventilation at least equivalent to that specified in 4.2.3.2 of this Part.

4.2.6.2 Doors, hoods, domes, or portions of housings and enclosures required to be removed or opened for replacement of containers shall incorporate means for clamping them firmly in place and preventing them from working loose during transit.

4.2.6.3 Provisions shall be incorporated in the assembly to hold the containers firmly in position and prevent their movement during transit.

4.2.6.4 Containers shall be mounted on a substantial support or a base secured firmly to the vehicle chassis. Neither the container nor its support shall extend below the mobile home frame.

4.3 Oil Tanks

4.3.1 Installation. Oil tanks and listed automatic pumps (oil lifters) installed for gravity flow of oil to heating equipment shall be installed so that the top of the tank is no higher than 8 feet above the appliance oil control and the bottom of the tank is not less than 18 inches above the appliance oil control.

4.3.2 Auxiliary Oil Storage Tank. Oil supply tanks affixed to a mobile home shall be so located as to require filling and draining from the outside and shall be in a place readily available for inspection. If the fuel supply tank is located in a compartment of a mobile home, the compartment shall be ventilated at the bottom to permit diffusion of vapors and shall be insulated from the structural members of the body. Tanks so installed shall be provided with an outside fill and vent pipe and an approved liquid level gage.

4.3.3 Shutoff Valve. A readily accessible, approved manual shutoff valve* shall be installed at the outlet of an oil supply tank. The valve shall be installed to close against the supply.

4.3.4 Fuel Oil Filters. All oil tanks, except for integrally mounted tanks, shall be equipped with an approved oil filter or strainer† located downstream from the tank shutoff valve. The fuel oil filter or strainer shall contain a sump with a drain for the entrapment of water.

*Such valves are listed in Underwriters' Laboratories Gas and Oil Equipment List under the classification: Valves, Flammable Liquid Shut-Off Valves.

†Such filters are listed in Underwriters' Laboratories Gas and Oil Equipment List under the classification: Heating and Heating-Cooling Appliance Accessories, Strainers, Oil Burner.

Roof Jack. That portion of a mobile home heater flue or vent assembly, including the cap, insulating means, flashing, and ceiling plate, located in and above the roof of a mobile home.

Sealed Combustion System Appliance. An appliance which by its inherent design is constructed so that all air supplied for combustion, the combustion system of the appliance, and all products of combustion are completely isolated from the atmosphere of the space in which it is installed.

Water Heater. An appliance for heating water for domestic purposes other than for space heating.

4. Fuel Supply Systems

NOTE: See Part 9 of the Standard for Mobile Home Parks (NFPA No. 501A-1974; ANSI A119.3.)

4.1 LP-Gas System Design and Service Line Pressure

4.1.1 Systems shall be of the vapor-withdrawal type.

4.1.2 Gas, at a pressure not over 14 inches water column ($\frac{1}{2}$ psi) shall be delivered from the system into the gas supply connection.

4.2 LP-Gas Containers

4.2.1 **Maximum Capacity.** No more than two containers having an individual water capacity of not more than 105 pounds (approximately 45 pounds LP-Gas capacity), shall be installed on or in a compartment of any mobile home.

4.2.2 **Construction of Containers.** Containers shall be constructed and marked in accordance with the specifications for LP-Gas Containers of the U. S. Department of Transportation (DOT) or the Rules for Construction of Unfired Pressure Vessels, Section VIII, Division 1, ASME Boiler and Pressure Vessel Code. ASME Containers shall have a design pressure of at least 312.5 psig.

4.2.2.1 Container supply systems shall be arranged for vapor withdrawal only.

4.2.2.2 Container openings for vapor withdrawal shall be located in the vapor space when the container is in service or shall be provided with a suitable internal withdrawal tube which communicates with the vapor space in or near the highest point in the container when it is mounted in service position, with the vehicle on a level surface. Containers shall be permanently and legibly marked in a conspicuous manner on the outside to show the correct mounting position and the position of the service outlet connection. The method of mounting in place shall be such as to minimize the possibility of an incorrect positioning of the container.

4.2.3 Location of LP-Gas Containers and Systems

4.2.3.1 LP-Gas Containers shall not be installed, nor shall provisions be made for installing or storing any LP-Gas container, even temporarily, inside any mobile home except for listed, completely self-contained hand torches, lanterns, or similar equipment with containers having a maximum water capacity of not more than $2\frac{1}{2}$ pounds (approximately one pound LP-Gas capacity).

4.2.3.2 Containers, control valves, and regulating equipment, when installed, shall be mounted on the "A" frame of the mobile home, or installed in a compartment that is vaportight to the inside of the mobile home and accessible only from the outside. The compartment shall be ventilated at top and bottom to facilitate diffusion of vapors. The compartment shall be ventilated with two vents having an aggregate area of not less than two percent of the floor area of the compartment and shall open unrestricted to the outside atmosphere. The required vents shall be equally distributed between the floor and ceiling of the compartment. If the lower vent is located in the access door or wall, the bottom edge of the vent shall be flush with the floor level of the compartment. The top vent shall be located in the access door or wall with the bottom of the vent not more than 12 inches below the ceiling level of the compartment. All vents shall have an unrestricted discharge to the outside atmosphere. Access doors or panels of compartments shall not be equipped with locks or require special tools or knowledge to open.

4.2.3.3 Permanent and removable fuel containers shall be securely mounted to prevent jarring loose, slipping or rotating and the fastenings shall be designed and constructed to withstand static loading in any direction equal to twice the weight of the tank and attachments when filled with fuel, using a safety factor of not less than four based on the ultimate strength of the material to be used.

4.2.4 LP-Gas Container Valves and Accessories

4.2.4.1 Valves in the assembly of a two-cylinder system shall be arranged so that replacement of containers can be made without shutting off the flow of gas to the appliance(s). This provision is not to be construed as requiring an automatic change-over device.

4.2.4.2 Shutoff valves on the containers shall be protected as follows, in transit, in storage, and while being moved into final utilization:

- (a) By setting into a recess of the container to prevent possi-

Class 1 Air Ducts. Ducts of materials and connectors having a flame-spread rating of not over 25 without evidence of continued progressive combustion and a smoke-developed rating of not over 50.*

Class 2 Air Ducts. Ducts of materials and connectors having a flame-spread rating of not over 50 without evidence of continued progressive combustion and a smoke-developed rating of not over 50 for the inside surface and not over 100 for the outside surface.*

Clearance. The distance between the appliance, chimney, vent, chimney or vent connector or plenum and the nearest surface.

Connector-Gas Appliance. A flexible or semi-rigid connector listed as conforming to ANSI Standard Z21.24, Metal Connectors for Gas Appliances, used to convey fuel gas, three feet or less in length (six feet or less for gas ranges), between a gas outlet and a gas appliance in the same room with the outlet.

Factory-Built Fireplace means a hearth, fire chamber and chimney assembly composed of listed factory-built components assembled in accordance with the terms of listing to form a complete fireplace.

Fireplace Stove means a chimney connected solid fuel-burning stove having part of its fire chamber open to the room.

Fuel Gas Piping System. The arrangement of piping, tubing, fittings, connectors, valves and devices designed and intended to supply or control the flow of fuel gas to the appliance(s).

Fuel Oil Piping System. The arrangement of piping, tubing, fittings, connectors, valves and devices designed and intended to supply or control the flow of fuel oil to the appliance(s).

Gas Clothes Dryer. A device used to dry wet laundry by means of heat derived from the combustion of fuel gases. Dryer classifications are as follows:

(a) **Type 1.** Factory-built package, multiple produced. Primarily used in family living environment. May or may not be coin-operated for public use. Usually the smallest unit physically and in function output.

(b) **Type 2.** Factory-built package, multiple produced. Used in business with direct intercourse of the function with the public. May or may not be operated by public or hired attendant. May or

*Flame-spread and smoke-developed ratings are measured as specified in the Standard Method of Test for Surface Burning Characteristics of Building Materials (ANSI A2.5 — 1970; ASTM E84 — 1970; UL 723 — 1971; NFPA No. 255 — 1972.

may not be coin-operated. Not designed for use in individual family living environment. May be small, medium or large in relative size.

Gas Refrigerator. A gas-burning appliance which is designed to extract heat from a suitable chamber.

Gas Supply Connection. The terminal end or connection to which a gas supply connector is attached.

Gas Supply Connector. Tubing or piping connecting the mobile home to the gas supply source.

Gas Vents. Factory-built vent piping and vent fittings listed by an approved testing agency, that are assembled and used in accordance with the terms of their listings, for conveying flue gases to the outside atmosphere.

(a) **Type B Gas Vent.** A gas vent for venting gas appliances with draft hoods and other gas appliances listed for use with Type B Gas Vents.

(b) **Type BW Gas Vent.** A gas vent for venting listed gas-fired vented wall furnaces.

Heat Producing Appliance. All heating and cooking appliances and all fuel burning appliances.

Heating Appliance. An appliance for comfort heating of a mobile home or for water heating.

Liquefied Petroleum Gases. The terms "Liquefied petroleum gases," "LPG" and "LP-Gas" as used in this standard shall mean and include any material which is composed predominantly of any of the following hydrocarbons, or mixtures of them: propane, propylene, butanes (normal butane or isobutane), and butylenes.

Plenum. An air compartment which is part of an air-distributing system, to which one or more ducts are connected.

(a) **Furnace supply plenum** is a plenum attached directly to, or an integral part of, the air supply outlet of the furnace.

(b) **Furnace return plenum** is a plenum attached directly to, or an integral part of, the return inlet of the furnace.

Quick-Disconnect Device. A hand-operated device which provides a means for connecting and disconnecting a gas supply or connecting gas systems and which is equipped with an automatic means to shut off the gas supply when the device is disconnected.

Readily Accessible. Having direct access without the necessity of removing any panel, door, or similar obstruction.

Notes to Table

Abbreviations used in Table C-1 refer to standards as identified below and elsewhere in this standard.

ANSI: American National Standards Institute, 1430 Broadway, New York, N. Y. 10017.

ASTM: Standards and Tentative Standards published by the *American Society for Testing and Materials*, 1916 Race Street, Philadelphia, Pa. 19103.

FS: Federal Specifications published by the Federal Supply Service of the General Services Administration available from Specification Sales (3FRSBS), Bldg. 197, Washington Navy Yard, General Services Administration, Washington, D.C. 20407.

IAPMO: Standards and Tentative Standards designated as UPC-PS (Uniform Plumbing Code — Product Standard) and TSC (Trailer Standard) available from the *International Association of Plumbing and Mechanical Officials*, 5032 Alhambra Ave., Los Angeles, Calif. 90032.

NSF: Standards published by the *National Sanitation Foundation*, NSF Building, 3475 Plymouth Road, Ann Arbor, Michigan 48105.

PS: Product Standards available from Superintendent of Documents, Government Printing Office, Washington, D. C. 20402.

Part D

Heating, Cooling, and Fuel-Burning Systems

1. Introduction

1.1 Much of the material in Part D has been taken from, or is based on, nationally recognized standards for heat producing appliances and fuel supply systems including those of the National Fire Protection Association.

2. Scope

2.1 This Part covers the heating, cooling, and fuel-burning systems and equipment installed within or on mobile homes.

2.2 Wherever nationally recognized standards and Part D of this Standard differ, the requirements of Part D shall apply.

2.3 An Appendix to this Part lists a group of Standards covering heating, cooling and fuel-burning appliances and systems which may be referred to for guidance. Deviations from the applicable portions of these Standards shall be permitted when they meet the performance requirements specified herein.

3. Definitions

Accessible. When applied to a fixture, connection, appliance or equipment shall mean having access thereto, but which may require the removal of an access panel, door or similar obstruction.

Air Duct. Conduits or passageways for conveying air to or from heating, cooling, air conditioning or ventilation equipment, but not including the plenum.

Automatic Pump (Oil Lifter). A pump, not an integral part of the oil-burning appliance, that automatically pumps oil from the supply tank and delivers the oil by gravity under a constant head to an oil-burning appliance.

BTU. British Thermal Units. The quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit.

BTUH. British thermal units per hour.

Burner. A device for the final conveyance of fuel or a mixture of fuel and air to the combustion zone.

Class 0 Air Ducts. Ducts of materials and connectors having a fire-hazard classification of zero.

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Materials	ANSI	ASTM	FS	Other Standards
<i>Nonferrous Pipe and Fittings (Con't.)</i>				
Cast Bronze Threaded Fittings, 150 and 300 Lb.	B16.15 -1971			
<i>Plastic Pipe and Fittings</i>				
ABS Plastic Drain, Waste, and Vent Pipe and Fittings		D2661 -1973	I.P. 322B -1973	IAPMO PS 17-71 NSF-14 1970
PVC Plastic Drain, Waste and Vent Pipe and Fittings		D2665 -1973	I.P. 320B -1973	IAPMO PS 27-69 NSF-14 1970
Chlorinated Poly (Vinyl/Chloride) (CPVC) Plastic Hot Water Distribution Systems		D2846- 1973		NSF-14 1970
Polybutylene (PB) Plastic Pipe (SDR-PR)	D2662- 1973			
Polybutylene (PB) Plastic Hot Water Distribution Systems	D3309 -1974			
<i>Miscellaneous</i>				
Pipe Nipples, Threaded			WW-N. 351B(1) -1970	
Rubber Gaskets for Cast Iron Soil Pipe Fittings	C564 -1970			
Backflow Prevention Devices				IAPMO PS 31-71
Valve, Bronze, Gate 125-150 and 200 Pound			WW-V 54D'73	
Valve, Cast-Iron Gate, Threaded and Flanged			WW-V. 58B'71	
Plumbing — Fixture-Setting-Compound			HH-C- 536A'54	
Cast Brass and Tubing P-Traps				IAPMO PS 2-66
Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems	Z21.22* -1971			
Solvent Cement for ABS Plastic Pipe and Fittings		D2235 -1973		NSF-14 1970
Solvent Cements for PVC Plastic Pipe and Fittings		D2564 -1973a		NSF-14 1970
Anti-Siphon Trap Vent Device				NSF-24 1972

*With Addenda

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Materials	ANSI	ASTM	FS	Other Standards
Diversion Tees and Twin Waste Elbow				IAPMO PS 9-66
Flexible Copper Water Connectors				IAPMO PS 14-71
Dishwasher Drain Airgaps				IAPMO PS 23-68
Coated Flexible Metal Gas Connectors for Exterior Use				IAPMO TSC 9-72
<i>Plumbing Fixtures</i>				
Plumbing Fixtures for Land Use				WW-P 541D-'71
Vitreous China Plumbing Fixtures	A112.19.2 -1973			NSF-24 -70
Enameled Cast-Iron Plumbing	A112.19.1 -1973			
Porcelain Enameled Formed Steel Plumbing Fixtures				IAPMO TSC22-72
Formed Metal Porcelain-Enameled Sanitaryware				IAPMO PS 5-67
Gel-Coated Glass-Fiber Reinforced Polyester Resin Bath-tub Units	Z124.1 -1967			NSF-24 -72
Gel-Coated Glass-Fiber Reinforced Polyester Resin Shower Receptor and Shower Stall Units	Z124.2 -1967			NSF-24 -72
Stainless Steel Plumbing Fixtures — Residential Use				CS-243 -62 NSF-24 -72
Drains for Prefabricated and Precast Showers				IAPMO PS 4-66 NSF-24 -72
Cultured Marble Lavatory				IAPMO PS 18-72
Prefabricated Shower Receivers, Shower Enclosures and Non-Metallic Bathtubs				IAPMO PS 11-72 NSF-24 -72
Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings	Z97.1 -1972			

14. Test and Inspection

14.1 Water System. All water piping in the water distribution system shall be subjected to a pressure test. The test shall be made by subjecting the system to air or water at 100 psi for 15 minutes without loss of pressure:

14.2 Drainage and Vent System and Plumbing Fixtures. The waste and vent system shall be tested by one of the three following alternate methods for evidence or indication of leakage:

14.2.1. Water Test. Before plumbing fixtures are connected, all of the openings into the piping shall be plugged and the entire piping system subjected to a static water test for 15 minutes by filling it with water to the top of the highest vent opening. There shall be no evidence of leakage.

14.2.2 Air Test. After all fixtures have been installed, the traps filled with water, and the remaining openings securely plugged, the entire system shall be subjected to a 2-inch (manometer) water column air pressure test. If the system loses pressure, leaks may be located with smoke pumped into the system, or with soap suds spread on the exterior of the piping (Dubble test).

14.2.3. Flood Level Test. The mobile home shall be in a level position, all fixtures shall be connected, and the entire system shall be filled with water to the rim of the toilet bowl. (Tub and shower drains shall be plugged.) After all trapped air has been released, the test shall be sustained for not less than 15 minutes without evidence of leaks. Then the system shall be unplugged and emptied. The waste piping above the level of the toilet bowl shall then be tested and show no indication of leakage when the high fixtures are filled with water and emptied simultaneously to obtain the maximum possible flow in the drain piping.

14.3 Fixture Test. The plumbing fixtures and connections shall be subjected to a flow test by filling them with water and checking for leaks and retarded flow while they are being emptied.

14.4 Shower Compartments. Nonmetallic shower compartments and receptors shall be tested for leaks prior to being covered by finish material. Each pan shall be filled with water to the top of the dam for not less than 15 minutes.

APPENDIX TO PART C

Reference Table for Standards on Plumbing System Components

This Reference Table is not a part of this Standard but is included for information purposes.

Materials	ANSI	ASTM	FS	Other Standards
<i>Ferrous Pipe and Fittings</i>				
Cast-Iron Screwed Fittings	B16.4 -1971			
Malleable Iron Screwed Fittings	B16.3 -1971			
Special Cast-Iron Fittings				IAPMO-PS 5-66
Welded Wrought Iron Pipe	B36.2 -1969	A72 -1968		
Wrought-Steel and Wrought-Iron Pipe	B36.10 -1970			
Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe		A120 -1972a		
Welded and Seamless Steel Pipe	B125.1 -1972	A53 -1972a		
Pipe Threads (Except Dry-Seal)	B2.1 -1968			
Cast-Iron Soil Piping and Fittings	A112.5.1 -1971	A74 -72	WW-P. 401D-1969	
<i>Nonferrous Pipe and Fittings</i>				
Seamless Copper, Pipe, Standard Sizes	H26.1 -1973	B42 -1972		
Wrought Seamless Copper and Copper Alloy Tube	H23.4 -1973	B251 -1971		
Seamless Copper Water Tube	H23.1 -1973	B88 -1972		
Copper Drainage Tube (DWV)	H23.6 -1973	B306 -1973		
Wrought Copper & Bronze Solder-Joint Pressure Fittings	B16.22 -1973			
Wrought Copper and Wrought Copper Alloy Solder-Joint Drainage Fittings	B16.29 -1966			
Cast Brass Solder-Joint Pressure Fittings	B16.18 -1972			
Cast Bronze Solder-Joint Drainage Fittings—DWV	B16.23 -1969			
Cast Bronze Fittings for Flared Copper Tubes	B16.26 -1967			
Seamless Red Brass Pipe, Standard Sizes	H127.1 -1973	B43 -1972		

of venting cross section equivalent to or greater than the venting cross section of a 1½-inch diameter vent, connected to the main drain by one of the following methods:

- (a) A 1½-inch diameter (min.) individual vent pipe or equivalent directly connected to the toilet drain and extended undiminished in size through the roof,
- (b) A 1½-inch diameter (min.) continuous vent or equivalent indirectly connected to the toilet drain piping through a 2-inch wet-vented drain that carries the waste of not more than one fixture, or,
- (c) Two or more vented drains when at least one is wet-vented, or 2-inch diameter (minimum), and each drain is separately connected to the main drain.

13.3.2 Individual Vents. Unless protected with an anti-siphon trap vent device, each individually vented fixture with a 1½-inch or smaller trap shall be provided with a vent pipe equivalent in area to a 1¼-inch nominal pipe size. The main vent, toilet vent and relief vent, and the continuous vent of wet-vented systems shall have an area equivalent to 1½-inch nominal pipe size.

13.3.3 Common Vent. When two fixture traps located within the distance allowed from their vent have their trap arms connected separately at the same level into an approved double fitting, an individual vent pipe may serve as a common vent without any increase in size.

13.3.4 Intersecting Vents. Where two or more vent pipes are joined together, no increase in size shall be required; however, the largest vent pipe shall extend full size through the roof.

13.3.5 Distance of fixture trap from vent shall not exceed the values given in Table 13.3.5.

TABLE 13.3.5

Maximum Distance of Fixture Trap from Vent

Size of Fixture Drain (Inches)	Distance Trap to Vent
1¼	4 feet 6 inches
1½	4 feet 6 inches
2	5 feet 0 inches
3	6 feet 0 inches

13.4 Anti-Siphon Trap Vent.

13.4.1 Anti-Siphon Trap Vent Devices. Where an anti-siphon trap vent device is used as a secondary vent, it shall be installed in accordance with the terms of its listing and shall be accessible. The lowest point of the valve seal when in the normally closed position shall not be less than 6 inches above the fixture tee. The toilet shall be vented in accordance with Paragraph 13.3.1. Only anti-siphon trap vent devices which have been approved shall be installed.

13.4.2 Not more than two fixtures individually protected by anti-siphon trap vent devices shall be drained by a common 1½-inch drain.

13.4.3 Three or more fixtures individually protected by anti-siphon trap vent devices shall be drained by a common 2-inch drain.

13.5 Grade and Connections

13.5.1 Horizontal Vents. Each vent shall extend vertically from its fixture "T" or point of connection with the waste piping to a point not less than 6 inches above the extreme flood level of the fixture it is venting before offsetting horizontally or being connected with any other vent pipe. Vents for horizontal drains shall connect above the centerline of the drain piping ahead (downstream) of the trap. Where required by structural conditions, vent piping may offset below the rim of the fixture at the maximum angle or height possible.

13.5.2 Grade. Vents shall be level or so designed to drain back to the drainage system by gravity.

13.6 Vent Terminal

13.6.1 Roof Extension. Each vent pipe shall extend through its flashing and terminate vertically, undiminished in size, not less than 2 inches above the roof. Vent openings shall not be less than 3 feet, 0 inch away from any motor-driven air intake that opens into habitable areas.

13.6.2 Flashing. The opening around each vent pipe shall be made watertight by an adequate flashing or flashing material.

13.7 Vent Caps. Vent caps, if provided, shall be of the removable type (without removing the flashing from the roof) where required to perform the tests under Paragraph 14.2.1 and 14.2.2 or when the vent is used as a clean out.

12.5 Wet-Vented Drainage System. Plumbing fixture traps may connect into a wet-vented drainage system which shall be designed and installed to accommodate the passage of air and waste in the same pipe.

12.5.1 Horizontal Piping. All parts of a wet-vented drainage system, including the connected fixture drains, shall be horizontal except for wet-vented vertical risers which shall terminate with a 1½-inch minimum diameter continuous vent. Where required by structural design, wet-vented drain piping may be offset vertically when other vented fixture drains or relief vents are connected to the drain piping below the vertical offsets.

12.5.2 Size. A wet-vented drain pipe shall be 2 inches minimum diameter and at least one pipe size larger than the largest connected trap or fixture drain. Not more than three fixtures may connect to a 2-inch diameter wet-vented drain system.

12.5.3 Length of Trap Arm. Fixture traps shall be located within the distance given in Table 13.3.5 of this Part. Not more than one trap shall connect to a trap arm.

12.6 Offsets and Branch Fittings

12.6.1 Changes in Direction. Changes in direction of drainage piping shall be made by the appropriate use of approved or listed fittings, and shall be of the following angles: 11¼, 22½, 45, 60, or 90 degrees; or other approved or listed fittings or combination of fittings with equivalent radius or sweep.

12.6.2 Horizontal to Vertical. Horizontal drainage lines, connecting with a vertical pipe shall enter through 45-degree "Y" branches, 60-degree "Y" branches, long-turn "TY" branches, sanitary "T" branches, or other approved or listed fittings or combination of fittings having equivalent sweep. Fittings having more than one branch at the same level shall not be used, unless the fitting is constructed so that the discharge from any one branch cannot readily enter any other branch. However, a double sanitary "T" may be used when the drain line is increased not less than two pipe sizes.

12.6.3 Horizontal to Horizontal and Vertical to Horizontal. Horizontal drainage lines connecting with other horizontal drainage lines or vertical drainage lines connected with horizontal drainage lines shall enter through 45-degree "Y" branches, long-turn "TY" branches, or other approved or listed fittings or combination of fittings having equivalent sweep.

12.7. Grade of Horizontal Drainage Piping. Except for fixture connections on the inlet side of the trap, horizontal drainage piping shall be run in practical alignment and have a uniform grade of not less than ¼ inch per foot toward the mobile home drain outlet. Where it is impractical, due to the structural features or arrangement of any mobile home, to obtain a grade of ¼ inch per foot, the pipe or piping may have a grade of not less than ⅛ inch per foot, when a full size cleanout is installed at the upper end.

13. Vents and Venting

13.1 General. Each plumbing fixture trap shall be protected against siphonage and back pressure, and air circulation shall be ensured throughout all parts of the drainage system by means of vents installed in accordance with the requirements of this section and as otherwise required by this standard.

13.2 Materials

13.2.1. Pipe. Vent piping shall be standard weight steel, wrought iron, brass, copper tube DWV, listed plastic, cast iron or other approved or listed materials.

13.2.2 Fittings. Appropriate fittings shall be used for all changes in direction or size and where pipes are joined. The material and design of vent fittings shall conform to the type of piping used.

13.2.2.1 Fittings for screw pipe shall be cast iron, malleable iron, plastic, or brass, with standard pipe threads.

13.2.2.2 Fittings for copper tubing shall be cast brass or wrought copper.

13.2.2.3 Fittings for plastic piping shall be made to approved or applicable standards.

13.2.2.4 Brass adaptor fittings or wrought copper shall be used to join copper tubing to threaded pipe.

13.2.2.5 Listed rectangular tubing may be used for vent piping only providing it has an open cross section at least equal to the circular vent pipe required. Listed transition fittings shall be used.

13.3 Size of Vent Piping

13.3.1 Main Vent. The drain piping for each toilet shall be vented by a 1½-inch minimum diameter vent or rectangular vent

11.6.2.1 **Size of Branch.** Start at the most remote outlet on any branch of the hot or cold water piping and progressively count towards the water service connection, computing the total number of fixtures supplied along each section of piping. Where branches are joined together, the number of fixtures on each branch shall be totalled so that no fixture is counted twice. Following down the left-hand column of Table 11.6.1 a corresponding number of fixtures will be found. The required pipe or tubing size is indicated in the other columns on the same line.

11.6.2.2 A water heater, food waste disposal unit, evaporative cooler or ice maker shall not be counted as a water-using fixture when computing pipe sizes.

11.7 **Line Valves.** Valves, when installed in the water supply distribution system (except those immediately controlling one fixture supply) and when fully opened, shall have a cross-sectional area of the smallest orifice or opening, through which the water flows, at least equal to the cross-sectional area of the nominal size of the pipe in which the valve is installed.

12. Drainage Systems

12.1 Materials

12.1.1. **Pipe.** Drainage piping shall be standard weight steel, wrought iron, brass, copper tube DWV, listed plastic, cast iron, or other approved or listed materials.

12.1.2 **Fittings.** Drainage fittings shall be recessed drainage pattern with smooth interior waterways of the same diameter as the piping and shall be of a material conforming to the type of piping used. Drainage fittings shall be designed to provide for a $\frac{1}{4}$ inch per foot grade in horizontal piping.

12.1.2.1 Fittings for screw pipe shall be cast iron, malleable iron, brass, or listed plastic with standard pipe threads.

12.1.2.2 Fittings for copper tubing shall be cast brass or wrought copper.

12.1.2.3 Socket-type fittings for plastic piping shall comply with listed standards.

12.1.2.4 Brass or bronze adaptor or wrought copper fittings shall be used to join copper tubing to threaded pipe.

12.2 Drain Outlets

12.2.1 **Location of Drain.** Each mobile home shall have only one drain outlet which shall terminate in the rear half section.

12.2.2 **Clearance from Drain Outlet.** The drain outlet shall be provided with a minimum clearance of 3 inches in any direction from all parts of the structure or appurtenances and with not less than 18 inches unrestricted clearance directly in front of the drain outlet.

12.2.3 **Drain Connector.** The drain connector shall not be smaller than the piping to which it is connected and shall be equipped with a watertight cap or plug matching the drain outlet. The cap or plug shall be permanently attached to the mobile home or drain outlet.

12.2.4 The drain outlet and drain connector shall not be less than 3 inches inside diameter.

12.2.5 **Preassembly of Drain Lines.** Drain lines, provided by the manufacturer, located under the mobile home, designed to bring the drain system to one distribution point and which may be damaged in transit, must be designed for proper site assembly.

12.3 **Fixture Connections.** Drainage piping shall be provided with approved or listed inlet fittings for fixture connections, correctly located according to the size and type of fixture to be connected.

12.3.1 **Toilet Connection.** The drain connection for each toilet shall be 3 inches minimum inside diameter and shall be fitted with an iron, brass, or listed plastic floor flange adaptor ring securely screwed, soldered or otherwise permanently attached to the drain piping, in an approved manner and securely fastened to the floor.

12.4 Size of Drainage Piping

12.4.1 **Fixture Load.** Except as provided by Paragraphs 13.4.2, drain pipe sizes shall be determined by the type of fixture and the total number connected to each drain.

12.4.1.1 A $1\frac{1}{2}$ -inch minimum diameter piping shall be required for one and not more than three individually vented fixtures.

12.4.1.2 A 2-inch minimum diameter piping shall be required for four or more fixtures individually vented.

12.4.1.3 A 3-inch minimum diameter piping shall be required for toilets.

the upper 6 inches of the tank. It shall be set to start relieving at a pressure of 125 psi or the rated working pressure of the tank whichever is lower and at or below a water temperature of 210°F.

11.3.1.3 Relief valves shall be provided with full-sized drains which shall be directed downward and discharge beneath the mobile home. Drain lines shall be of a material listed for hot water distribution and shall drain fully by gravity, shall not be trapped, and shall not have their outlets threaded.

11.4 Materials

11.4.1 Piping Material. Water pipe shall be of standard weight brass, galvanized wrought iron, galvanized steel, Type K, L or M copper tubing, approved or listed plastic, or other approved or listed material.

11.4.1.1 Plastic Piping. All plastic water piping and fittings in mobile homes must be approved or listed for use with hot water.

11.4.2 Fittings. Appropriate fittings shall be used for all changes in size and where pipes are joined. The material and design of fittings shall conform to the type of piping used.

11.4.2.1 Fittings for screw piping shall be standard weight galvanized iron for galvanized iron and steel pipe, and of brass for brass piping. They shall be installed where required for change in direction, reduction of size, or where pipes are joined together.

11.4.2.2. Fittings for copper tubing shall be cast brass or drawn copper (sweat-soldered) or shall be listed or approved fittings for the purpose intended.

11.4.3 Prohibited Material. Used piping materials shall not be permitted. Pipe dope, solder flux, oils, solvents, chemicals, or other substances that are toxic, corrosive, or otherwise detrimental to the water system shall not be used.

11.5 Installation of Piping

11.5.1 Minimum Requirement. All piping equipment, appurtenances, and devices shall be installed in workmanlike manner and shall conform with the provisions and intent of this Standard.

11.5.2 Screw Pipe. Iron pipe-size brass or galvanized iron or steel pipe and fittings shall be joined with approved or listed standard pipe threads fully engaged in the fittings. Pipe ends shall be reamed to the full bore of the pipe. Pipe-joint compound shall be insoluble in water, shall be nontoxic and shall be applied to male threads only.

11.5.3 Solder Fittings. Joints in copper water tube shall be made by the appropriate use of approved cast brass or wrought copper fittings, properly soldered together. The surface to be soldered shall be thoroughly cleaned bright mechanically. The joints shall be properly fluxed and made with approved solder.

11.5.4 Flared Fittings. A flaring tool shall be used to shape the ends of flared tubing to match the flare of fittings.

11.5.5 Plastic Pipe and Fittings. Plastic pipe and fittings shall be joined by installation methods recommended by the manufacturer or by a listed standard.

11.6 Size of Water Supply Piping

11.6.1 Minimum Size. The size of water supply piping and branch lines shall not be less than sizes shown in Table 11.6.1.

TABLE 11.6.1

Minimum Size Tubing and Pipe for Water Distribution Systems

Number of Fixtures	Tubing (Nominal)		Pipe Iron Pipe Size (Inches)
	Din. (Inches)	Outer Din. (Inches)	
1	1/8	3/8	1/2
2	3/8	1/2	1/2
3	1/2	3/4	1/2
4	1/2	3/4	1/2
5 or more	3/4	1	3/4

*6 feet maximum length.

Exceptions to Table: 3/8 inch nominal diameter or 1/2 inch OD minimum size for clothes washing or dishwashing machines, unless larger size is recommended by the fixture manufacturer.

1/2 inch nominal diameter or 3/4 inch OD minimum size for flushometer or metering type valves unless otherwise specified in their listing.

No galvanized screw piping shall be less than 1/2 inch iron pipe size.

11.6.2 Sizing Procedure. Both hot and cold water piping systems shall be computed by the following method:

10. Hangers and Supports

10.1 **Strains and Stresses.** Piping in a plumbing system shall be installed without undue strains and stresses, and provision shall be made for expansion, contraction, and structural settlement.

10.2 **Piping Supports.** Piping shall be secured at sufficiently close intervals to keep the pipe in alignment and carry the weight of the pipe and contents.

10.3 Hangers and Anchors

10.3.1 Hangers and anchors shall be of sufficient strength to support their proportional share of the pipe alignments and prevent rattling.

10.3.2 Piping shall be securely attached to the structure by proper hangers, clamps, or brackets which provide protection against motion, vibration, road shock, torque in the chassis, or other unusual conditions.

11. Water Distribution System

11.1 Water Supply

11.1.1 **Supply Piping.** Piping systems shall be sized to provide an adequate quantity of water to each plumbing fixture at a flow rate sufficient to keep the fixture in a clean and sanitary condition without any danger of backflow or siphonage (see Table 11.6.1 page 501B — 55).

11.1.2 **Hot Water Supply.** Each mobile home equipped with a kitchen sink, and bathtub and/or shower shall be provided with a hot water supply system including a water heater.

11.2 Water Outlets and Supply Connections

11.2.1 **Water Connection.** Each mobile home with a water distribution system shall be equipped with a $\frac{3}{4}$ -inch threaded inlet connection located within the rear half of the length of the mobile home. This connection shall be tagged or marked "Fresh Water Connection" (or "Fresh Water Fill"). A matching cap or plug shall be provided to seal the water inlet when it is not in use, and shall be permanently attached to the mobile home or water supply piping.

11.2.1.1 When a mobile home includes expandable rooms or is composed of two or more units, fittings or connectors designed for such purpose shall be provided to connect any water piping. When not connected, the water piping shall be protected by means of matching caps or plugs.

11.2.2 Prohibited Connections

11.2.2.1 The installation of potable water supply piping or fixture or appliance connections shall be made in a manner to preclude the possibility of backflow.

11.2.2.2 No part of the water system shall be connected to any drainage or vent piping.

11.2.3 **Rim Outlets.** The outlets of faucets, spouts, and similar devices shall be spaced at least 1 inch above the flood level of the fixture.

11.2.4 **Appliance Connections.** Water supplies connected to clothes washing or dishwashing machines shall be protected by an approved or listed fixed air gap provided within the appliance by the manufacturer.

11.2.5 **Flushometer Valves or Manually Operated Flush Valves.** An approved or listed vacuum breaker shall be installed and maintained in the water supply line on the discharge side of a toilet flushometer valve or manually operated flush valve. Vacuum breakers shall have a minimum clearance of 6 inches above the flood level of the fixture to the critical level mark unless otherwise permitted in their approval.

11.2.6 **Flush Tanks.** Toilet flush tanks shall be equipped with an approved anti-siphon ball cock which shall be installed and maintained with its outlet or critical level mark not less than 1 inch above the full opening of the overflow pipe.

11.3 Water Heater Safety Devices

11.3.1 Relief Valves

11.3.1.1 All water heaters shall be installed with approved and listed fully automatic valve or valves designed to provide temperature and pressure relief.

11.3.1.2 Any temperature relief valve or combined pressure and temperature relief valve installed for this purpose shall have the temperature sensing element immersed in the hottest water within

9.2.1.3 Flush tanks shall be fitted with an overflow pipe large enough to prevent flooding at the maximum flow rate of the ball cock. Overflow pipes shall discharge into the toilet, through the tank.

9.2.1.4 Toilets that have fouling surfaces that are not thoroughly washed at each discharge shall be prohibited. Any toilet that might permit the contents of the bowl to be siphoned back into the water system shall be prohibited.

9.2.1.5 Floor Connection. Toilets shall be securely bolted to an approved flange or other approved fitting which is secured to the floor by means of corrosion-resistant plated screws. The bolts shall be of solid brass or other corrosion-resistant material and shall be not less than $\frac{1}{4}$ inch in diameter. A watertight seal shall be made between the toilet and flange or other approved fitting by use of a gasket or sealing compound. (See also Paragraph 6.9(b) of Part B)

9.2.2 Shower Compartments

9.2.2.1 Each compartment stall shall be provided with an approved watertight receptor with sides and back extending 1 inch above the finished dam or threshold. In no case shall the depth of a shower receptor be less than 2 inches or more than 9 inches measured from the top of the finished dam or threshold to the top of the drain. The wall area shall be constructed of smooth, non-corrosive, and nonabsorbent waterproof materials to a height not less than 6 feet above the compartment floor level. Such walls shall form a watertight joint with each other and with the receptor or shower floor. The floor of the compartment shall slope uniformly to the drain at not less than one-fourth nor more than one-half inch per foot.

NOTE: See also Appendix to Part B on Selection of Material and Installation of Wood Product Based Wall Surfacing for Tub and Shower Enclosures.

9.2.2.2 The joint around the drain connection shall be made watertight by a flange, clamping ring, or other approved listed means.

9.2.2.3 Shower doors and tub and shower enclosures shall be constructed so as to be waterproof and, if glazed, glazing shall comply with the Standard for Transparent Safety Glazing Material used in Buildings (ANSI Z97.1-1972).

NOTE: See also Part B, Section 8.5.2 and Table 8.5.2.

9.2.2.4 Prefabricated plumbing fixtures shall be approved or listed and shall comply with all applicable requirements relating to such fixtures.

9.2.3 Dishwashing Machines

9.2.3.1 Dishwashing machine shall not be directly connected to any waste piping, but shall discharge its waste through a fixed air gap installed above the machine. The drain connection from the air gap may connect to an individual trap, to a directional fitting installed in the sink tailpiece, or to the opening provided on the inlet side of a food waste disposal unit.

9.2.3.2 Drain from a dishwashing machine shall not be connected to a sink tailpiece, continuous waste line, or trap on the discharge side of a food waste disposal unit.

9.2.4 Clothes Washing Machines

9.2.4.1 Clothes washing machines shall drain either into a properly vented trap, into a laundry tub tailpiece with watertight connections, into an open standpipe receptor, or over the rim of a laundry tub.

9.2.4.2 Standpipes shall be $1\frac{1}{2}$ inches, minimum, nominal iron pipe size, or $1\frac{1}{2}$ inches outside diameter nominal brass tubing not less than No. 20 Brown and Sharpe gage. Receptors shall discharge into a vented trap or shall be connected to a laundry tub tailpiece by means of an approved or listed directional fitting. Each standpipe shall extend not less than 18 inches or more than 30 inches above its trap and shall terminate in an accessible location no lower than the top of clothes washing machine.

9.2.4.3 Clothes washing machine drain shall not be connected to the tailpiece, continuous waste, or trap of any sink or dishwashing machine.

9.3 Installation

9.3.1 Access. Each plumbing fixture shall be located and installed in a manner to provide easy access for cleaning and repair.

9.3.2 Alignment. Fixtures shall be set level and in true alignment with adjacent walls. Where practical, piping from fixtures shall extend to nearest wall.

9.3.3 Brackets. Wall-hung fixtures shall be rigidly attached to walls by metal brackets or supports without any strain being transmitted to the piping connections. Flush tanks shall be securely fastened to toilets or to the wall with corrosive-resistant materials.

8.1.9.2 Trap Arm Offset. The piping between the "P" trap and vent may change direction or be offset horizontally with the equivalent of no more than 180 degrees.

8.1.9.3 Concealed Traps. Traps with mechanical joints shall be accessible for repair and inspection.

8.1.9.4 Removability of Traps, Etc. Traps shall be designed and installed so the "U" bend is removable without removing the strainers from the fixture. Continuous waste and tail pieces which are permanently attached to the "U" bend shall also be removable without removing the strainer from the fixture.

8.2 Cleanout Openings

8.2.1 Location of Cleanout Fittings

8.2.1.1 Cleanouts shall be installed if the drainage system cannot be cleaned through fixtures, drains, or vents. Cleanouts shall also be provided when fittings of more than 45 degrees are used to affect an offset except where long turn ells are used which provide sufficient "sweep" for cleaning.

8.2.1.2 A full size cleanout shall be installed at the upper end of any section of drain piping which does not have the required minimum slope of 1/4 inch per foot grade.

8.2.1.3 A cleaning tool shall not be required to pass through more than 360 degrees of fittings, excluding removable "P" traps, to reach any part of the drainage system.

8.2.2 Access to Cleanouts. Cleanouts shall be accessible through an unobstructed minimum clearance of 12 inches directly in front of the opening. Each cleanout fitting shall open in a direction opposite to the flow or at right angles to the pipe. Concealed cleanouts that are not provided with access covers shall be extended to a point above the floor or outside of the mobile home, with pipe and fittings installed, as required, for drainage piping without sags and pockets.

8.2.3 Material. Plugs and caps shall be brass or approved or listed plastic, with screw pipe threads.

8.2.4 Design. Cleanout plugs shall have raised heads except that plugs at floor level shall have counter-sunk slots.

9. Plumbing Fixtures

9.1 General Requirements

9.1.1 Quality of Fixtures. Plumbing fixtures shall have smooth impervious finishes, be free from defects and concealed fouling surfaces, be capable of resisting road shock and vibration, and shall conform in quality and design to approved or listed standards.

9.1.2 Strainers. The waste outlet of all plumbing fixtures, other than toilets, shall be equipped with a drain fitting that will provide an adequate unobstructed waterway.

9.1.3 Fixture Connections. Fixture tailpieces and continuous wastes in exposed or accessible locations shall be not less than No. 20 Brown and Sharpe gage seamless drawn-brass tubing or other approved pipe or tubing materials. Inaccessible fixture connections shall be constructed according to the requirements for drainage piping. Each fixture tailpiece, continuous waste, or waste and overflow shall be not less than 1 1/2 inches for sinks of two or more compartments, dishwashers, clothes washing machines, laundry tubs, bath tubs, and not less than 1 1/4 inches for lavatories and single compartment sinks having a 2-inch maximum drain opening.

9.1.4 Concealed Connections. Concealed slip joint connections shall be provided with adequately sized unobstructed access panels and shall be accessible for inspection and repair.

9.1.5 Directional Fitting. An approved or listed "Y" or other directional-type branch fitting shall be installed in every tailpiece or continuous waste that receives the discharge from food waste disposal units, dishwashing, or other force-discharge fixture or appliance. (See also 9.2.3.2 of this Part.)

9.2 Fixtures

9.2.1 Toilets

9.2.1.1 Each toilet shall be designed and manufactured according to approved or listed standards and shall be equipped with a water flushing device capable of adequately flushing and cleaning the bowl at each operation of the flushing mechanism.

9.2.1.2 Toilet flushing devices shall be designed to replace the water seal in the bowl after each operation. Flush valves, flushometer valves, and ball cocks shall operate automatically to shut off at the end of each flush or when the tank is filled to operating capacity.

6.2 Specific Usage. Each of the following sections indicates specifically the type of material presently permitted for use in the various parts of the plumbing system.

7. Joints and Connections

7.1 Tightness. Joints and connections in the plumbing system shall be gastight and watertight for the pressures required under testing procedures.

7.1.1 Assembling of Pipe. All joints and connections shall be correctly assembled for tightness. Pipe threads shall be fully engaged with the threads of the fitting. Plastic pipe and copper tubing shall be inserted to the full depth of the solder cup or welding sockets of each fitting. Pipe threads and slip joints shall not be wrapped with string, paper, putty, or similar fillers.

7.1.2 Threaded Joints. Threads for screw pipe and fittings shall conform to the approved or listed standard. Pipe ends shall be reamed out to size of bore. All burrs, chips, cutting oil and foreign matter shall be removed. Pipe joint cement or thread lubricant shall be of approved type and applied to male threads only.

7.1.3 Solder Joints. Solder joints for tubing shall be made with approved or listed solder-type fittings. Surfaces to be soldered shall be cleaned bright. The joints shall be properly fluxed with noncorrosive paste type flux and made with approved or listed 50-50 solder or an approved solder having a higher melting temperature.

7.1.4 Plastic Pipe, Fittings and Joints. Plastic pipe and fittings shall be joined by installation methods recommended by the manufacturer or by a recognized, approved, or listed standard.

Note: The Appendix has a Reference Table for Standards on Plumbing System Components.

7.1.5 Union Joints. Metal unions shall have metal-to-metal ground seats.

7.1.6 Flared Joints. Flared joints for soft-copper water tubing shall be made with listed fittings. The tubing shall be expanded with a proper flaring tool.

7.1.7. Cast Iron Soil Pipe Joints. Approved or listed cast iron pipe may be joined as follows:

(a) Approved or listed hubless pipe as per the manufacturer's recommendation.

(b) Hub and plain-end soil pipe may be joined by compression fittings per the manufacturer's recommendation.

8. Traps and Cleanouts

8.1 Traps

8.1.1 Traps Required. Each plumbing fixture, except listed toilets, shall be separately trapped by approved water seal "P" traps. All traps shall be effectively vented.

8.1.2. Dual Fixtures. A two-compartment sink, two single sinks, two lavatories, or a single sink and a single lavatory with waste outlets not more than 30 inches apart and in the same room and flood level rims at the same level may be connected to one "P" trap and may be considered as a single fixture for the purpose of drainage and vent requirements.

8.1.3 Prohibited Traps. A trap which depends for its seal upon concealed interior partitions shall not be used. Full "S" traps, bell traps, drum traps, crown-vented traps, and running traps are prohibited. Fixtures shall not be double-trapped.

8.1.4 Material and Design. Each trap shall be self-cleaning with a smooth and uniform interior waterway. Traps shall be manufactured of cast iron, cast brass, or drawn brass tubing of not less than No. 20 Brown and Sharpe gage, or approved or listed plastic, or other approved or listed material. Union joints for a trap shall be beaded to provide a shoulder for the union nut. Each trap shall have the manufacturer's name stamped or cast in the body of the trap, and each tubing trap shall show the gage of the tubing.

8.1.5 Trap Seal. Each "P" trap shall have a water seal of not less than 2 inches and not more than 4 inches and shall be set true to its seal.

8.1.6 Size. Traps shall be not less than 1 1/4 inches in diameter. A trap shall not be larger than the waste pipe to which it is connected.

8.1.7 Location. Each trap shall be located as close to its vent and to its fixture outlet as structural conditions will permit.

8.1.8 Length of Tailpiece. The vertical distance from a trap to the fixture outlet shall not exceed 24 inches.

8.1.9 Installation

8.1.9.1 Grade of Trap Arm. The piping between a "P" trap and the fixture tee or the vented waste line shall be graded 1/4 inch per foot towards the vent and in no event shall have a slope greater than its diameter. The vent opening at fixture tees shall not be below the weir of the "P" trap outlet.

Water Connection. The fitting or point of connection for the mobile home water distribution system designed for connection to a water supply.

Water Connector. The removable extension connecting the mobile home water distribution system to the water supply.

Water Distribution System. The potable water piping within or permanently attached to the mobile home.

Wet Vent. A vent which also serves as a drain for one or more fixtures.

Wet Vented Drainage System. A specially designed system of drain piping that also vents one or more plumbing fixtures by means of a common waste and vent pipe.

5. General Requirements

5.1 Minimum Requirements. Any plumbing system installed in a mobile home shall conform, at least, with the provisions of this Part. Requirements for any size, weight, or quality of material modified by the terms "minimum," "not less than," "at least," and similar expressions are "*minimum standards.*"

5.1.1 Connection to Drainage System. All plumbing, fixtures, drains, appurtenances, and appliances designed or used to receive or discharge liquid waste or sewage shall be connected to the mobile home drainage system in a manner provided by this standard.

5.1.2 Workmanship. All design, construction, and workmanship shall be in conformance with accepted engineering practices and shall be of such character as to secure the results sought to be obtained by this standard.

5.1.3 Components. Plumbing materials, devices, fixtures, fittings, equipment, appliances, and accessories intended for use in or attached to a mobile home shall be listed or certified by an approved listing agency, or be specifically approved by the authority when listing by an approved listing agency is not available.

5.1.4 Prohibited Fittings and Practices

5.1.4.1 Drainage or vent piping shall not be drilled and tapped for the purpose of making connections.

5.1.4.2 Except as specifically provided elsewhere in this standard, vent pipes shall not be used as waste or drain pipes.

5.1.4.3 Fittings, connections, devices, or methods of installation that obstruct or retard the flow of sewage, or air in the drainage or

venting systems in an amount greater than the normal frictional resistance to flow shall not be used unless their use is acceptable in this standard or their use is approved as having a desirable and acceptable function of ultimate benefit to the proper and continued functioning of the plumbing system.

5.1.4.4 Cracks, holes, or other imperfections in materials shall not be concealed by welding, brazing, or soldering or by paint, wax, tar, or other leak-sealing or repairing agents.

5.1.4.5 Piping, fixtures or equipment shall be located so as not to interfere with the normal use or with the normal operation and use of windows, doors or other required facilities.

5.1.4.6 Galvanized pipe shall not be bent or welded.

5.1.5 Alignment of Fittings. All valves, pipes, and fittings shall be installed in correct relationship to the direction of flow.

5.2 Protective Requirements

5.2.1 Cutting Structural Members. Structural members shall not be unnecessarily or carelessly weakened by cutting or notching.

NOTE: See Paragraphs 6.6.1 and 6.9.1 of Part B.

5.2.2 Exposed Piping. All piping, pipe threads, hangers, and supports exposed to the weather, water, mud, and road hazard, and subject to damage therefrom, shall be painted, coated, wrapped, or otherwise protected from deterioration.

5.2.3 Road Damage. Pipes, supports, drains, outlets, or drain hoses shall not extend or protrude in a manner where they could be unduly subjected to damage during transit.

5.2.4 Freezing. All piping and fixtures subject to freezing temperatures shall be insulated or protected to prevent freezing, under normal occupancy.

5.2.5 Rodent Resistance. All exterior openings around piping and equipment shall be sealed to resist the entrance of rodents.

6. Materials — Quality and Weight

6.1 Minimum Standards. Materials, fixtures, or devices used or entering into the construction of plumbing systems in any mobile home shall be free from defects and shall conform to approved standards.

NOTE: See Appendix for Reference Table for Standards on Plumbing System Components.

Flood-Level. The level in the receptacle over which water would overflow to the outside of the receptacle.

Flooded. The condition which results when the liquid in a container or receptacle rises to the flood-level.

Flush Tank. That portion of a toilet that is designed to contain sufficient water to adequately flush the fixture.

Flush Valve. A device located at the bottom of a flush tank for flushing a toilet.

Flushometer Valve. A device which discharges a predetermined quantity of water to a fixture for flushing purposes and is closed by direct water pressure.

Grade. The fall (slope) of a pipe in reference to a horizontal plane expressed in inches per foot length.

Horizontal Branch. A drain pipe extending laterally, which receives the discharge from one or more fixture drains and connects to the main drain.

Horizontal Pipe. Any pipe or fitting which makes an angle of more than 45 degrees with the vertical.

Individual Vent. A pipe or anti-siphon trap vent device installed to vent a fixture drain.

Inlet Coupling. The terminal end of the water system to which the water service connection is attached. It may be a swivel fitting or threaded pipe end.

Main. The principal artery of the system to which branches may be connected.

Main Drain. The lowest pipe of a drainage system which receives sewage from all the fixtures within a mobile home and conducts these wastes to the drain outlet.

Main Vent. The principal artery of the venting system to which vent branches may be connected.

Offset. A combination of pipe and/or fittings that brings one section of the pipe out of line but into a line parallel with the other section.

Pitch. (See Grade.)

Plumbing Fixtures. Receptacles, devices, or appliances which are supplied with water or which receive liquid or liquid-borne wastes for discharge into the drainage system.

Plumbing System. Includes the water supply and distribution pipes; plumbing fixtures and traps; soil, waste, and vent pipes; and water-treating or water-using equipment.

Primary Vent. (See Main Vent)

Relief Vent. An auxiliary vent which permits additional circulation of air in or between drainage and vent systems.

Secondary Vent. Any vent other than the main vent or those serving each toilet.

Sewage. Any liquid waste containing animal or vegetable matter in suspension or solution, and may include liquids containing chemicals in solution.

Siphonage. The loss of water seal from fixture traps resulting from partial vacuum in the drainage system which may be of either of the following two types, or a combination of the two: (a.) Self-siphonage resulting from vacuum in a fixture drain generated solely by the discharge of the fixture served by that drain, or, (b.) Induced siphonage resulting from vacuum in the drainage system generated by the discharge of one or more fixtures other than the one under observation.

Trap. A fitting or device designed and constructed to provide a liquid seal that will prevent the back passage of air without materially affecting the flow of liquid waste through it.

Trap Arm. That portion of a fixture drain between a trap and its vent.

Trap Seal. The vertical depth of liquid that a trap will retain.

Vacuum Breaker. See Backflow Preventer.

Vent Caps. A device or fitting which protects the vent pipe from foreign substance with an opening to the atmosphere equal to the area of the vent it serves.

Vent System. That part of a piping installation which provides circulation of air within a drainage system.

Vertical Pipe. Any pipe or fitting which makes an angle of 45 degrees or less with the vertical.

Principle No. 5. The piping of the plumbing system shall be of durable material, free from defective workmanship, and so designed and constructed as to give satisfactory service for its reasonable life expectancy.

Principle No. 6. Each fixture directly connected to the drainage system shall be installed with a water seal trap.

Principle No. 7. The drainage system shall be designed to provide an adequate circulation of air in all piping with no danger of siphonage, aspiration, or forcing of trap seals under conditions of ordinary use.

Principle No. 8. The plumbing system shall be subjected to tests that will effectively disclose all leaks and defects in the work, which must then be repaired.

Principle No. 9. Toilets shall not be located in a room or compartment that is not properly lighted and ventilated.

Principle No. 10. All plumbing fixtures shall be so installed with regard to spacing as to be reasonably accessible for their intended use.

4. Definitions

Air Gap (Water Distribution System). The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, water supplied appliance, or other device and the flood level rim of the receptacle.

Anti-Siphon Trap Vent Device. A device which automatically opens to admit air to a fixture drain above the connection of the trap arm so as to prevent siphonage, and closes tightly when the pressure within the drainage system is equal to or greater than atmospheric pressure so as to prevent the escape of gases from the drainage system into the mobile home.

Backflow. The flow of water or other liquids, mixtures, or substances into the distributing pipes of a potable supply of water from any source or sources other than its intended sources.

Backflow Connection. Any arrangement whereby backflow can occur.

Backflow Preventer. A device or means to prevent backflow.

Branch. Any part of the piping system other than a riser, main or stack.

Common Vent. A vent connecting at the junction of fixture drains and serving as a vent for more than one fixture.

Continuous Vent. A vertical vent that is a continuation of the drain to which it connects.

Continuous Waste. A drain from two or more fixtures connected to a single trap.

Critical Level. The C-L or $\frac{f}{f}$ marking on a backflow prevention device or vacuum breaker is a point established by the testing laboratory (usually stamped on the device by the manufacturer) which determines the minimum elevation above the flood level rim of the fixture or receptacle served on which the device may be installed. When a backflow prevention device does not bear a critical level marking, the bottom of the vacuum breaker, combination valve, or of any such approved or listed device shall constitute the critical level.

Cross Connection. Any physical connection or arrangement between two otherwise separate systems or sources, one of which contains potable water and the other either water, steam, gas or chemical of unknown or questionable safety whereby there may be a flow from one system or source to the other, the direction of flow depending on the pressure differential between the two systems.

Developed Length. That length of pipe measured along the center line of the pipe and fittings.

Diameter. Unless otherwise specifically stated, is the nominal (inside) diameter designated commercially.

Drain. A pipe that carries waste, water, or water-borne wastes in a drainage system.

Drain Connector. The removable extension, consisting of all pipes, fittings and appurtenances, from the drain outlet to the drain inlet serving the mobile home.

Drain Outlet. The lowest end of the main or secondary drain to which a sewer connection is made.

Drainage System. All piping within or attached to the structure that conveys sewage or other liquid waste to the drain outlet, not including the drain connector.

Fixture Drain. The drain from the trap of a fixture to the junction of that drain with any other drain pipe.

Fixture Supply. The water supply pipe connecting a fixture to a branch water supply pipe or directly to a main water supply pipe.

Fire Safety	
Method of Test for Surface Burning Characteristics of Building Materials	ASTM-E84-1970 NFPA No. 255-1972 ANSI A2.5-1970 UL 723-1971
Safety to Life from Fire in Buildings and Structures	NFPA No. 101-1973 ANSI A9.1-1971
Standard for the Installation, Maintenance and Use of Household Fire Warning Equipment	NFPA No. 74-1974
Windows and Glazing	
Transparent Safety Glazing Material Used in Buildings	ANSI Z97.1-1972
Window Specifications for Utilization in Mobile and Factory-Built Homes	MHMA Spec. No. 1-71-Rev. 1973
Unclassified	
ASHRAE Handbook of Fundamentals — 1972	
Building Code Requirements for Minimum Design Loads in Buildings and Other Structures	ANSI A58.1-1972
AA — The Aluminum Association, 750 Third Ave., New York, N.Y. 10017	
AHA — American Hardboard Association, 20 No. Wacker Drive, Chicago, IL	
AISC — American Institute of Steel Construction, 101 Park Ave., New York, N.Y. 10017	
AISI — American Iron and Steel Institute, 150 East 42nd St., New York, N.Y. 10017	
AITC — American Institute of Timber Construction, 333 W. Hampden Ave., Englewood, Colo. 80110	
ANSI — American National Standards Institute, 1430 Broadway, New York, N.Y. 10017	
APA — American Plywood Association, 1119 A Street, Tacoma, Wash. 98401	
ASHRAE — American Society of Heating, Refrigeration and Air-conditioning Engineers, 345 East 47th Street, New York, N.Y. 10017	
ASTM — American Society for Testing and Materials, 1916 Race St., Philadelphia, Pa. 19103	
AWS — American Welding Society 2501 NW 7th St., Miami, Fla. 33125	
MHMA — Mobile Homes Manufacturers Association, 14650 Lee Road, Chantilly, Virginia 22021	
CS — Commercial Standards — available from Sup't of Documents, U.S. Government Printing Office, Washington, D.C. 20402	
HPMA — Hardwood Plywood Manufacturers Assn., P.O. Box 6246, Arlington, VA 22206	
NFPA — National Fire Protection Assn., 470 Atlantic Avenue, Boston, MA	
(N)FPA — National Forest Products Association (formerly National Lumber Manufacturers Assn.), 1619 Massachusetts Ave., N.W., Washington, D.C. 20036	
NPA — National Particleboard Association, 2306 Perkins Place, Silver Spring, Md. 20910	
PFS — Plywood Fabricator Service, Inc., 1119 A Street, Tacoma, Wash. 98401	
PS — Product Standard — available from Sup't of Documents, U.S. Government Printing Office, Washington, D.C. 20402	
SJI — Steel Joist Institute, 2001 Jefferson Davis Highway, Arlington, Va. 22202	
TPI — Truss Plate Institute, 919 Eighteenth St. N.W., Washington, D.C. 20006	
UL — Underwriters' Laboratories, Inc., 333 Pfingsten Rd., Northbrook, Ill.	
USDC — United States Department of Commerce, Washington, D.C. 20234	

Part C

Plumbing Systems

1. Introduction

1.1 Much of the material in Part C has been taken from, or is based on, the Uniform Plumbing Code and other nationally recognized standards for plumbing materials, fixtures, fittings, and equipment. (See Appendix to this Part for Reference Table for Standards on Plumbing Systems Components.)

2. Scope

2.1 Part C of this standard covers the plumbing materials, fixtures, fittings, and equipment installed within or on mobile homes.

2.2 Wherever the Uniform Plumbing Code or other nationally recognized standards for plumbing materials, fixtures, fittings and equipment and Part C of this standard differ, the requirements of the latter shall apply.

3. Basic Principles

3.1 The following principles are enunciated as basic goals in environmental sanitation, worthy of accomplishment through properly designed, acceptably installed, and adequately maintained plumbing systems. The results desired and necessary to protect the health of the public are the same everywhere. Furthermore, as unforeseen situations arise that are not specifically covered in this Part, the principles may serve to define the intent.

Principle No. 1 Plumbing fixtures, devices, and appurtenances shall be supplied with water in sufficient volume and at pressures adequate to enable them to function satisfactorily and without undue noise under all normal conditions of use.

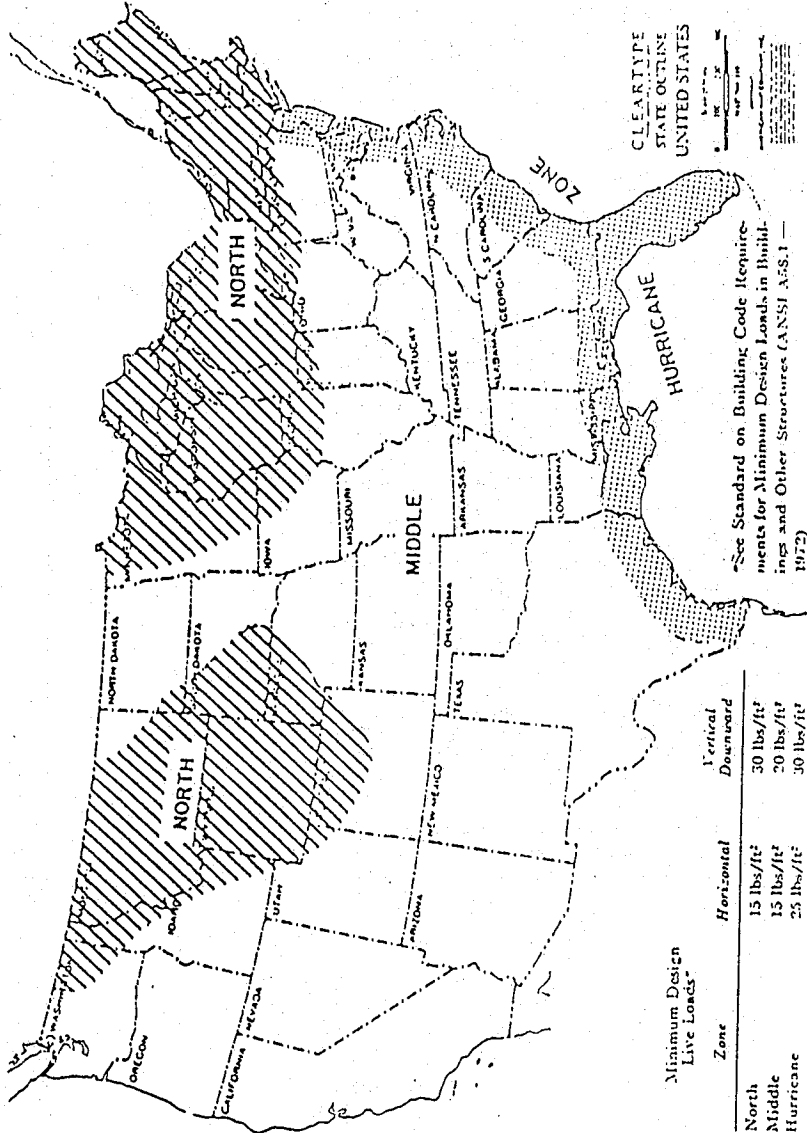
Principle No. 2. Plumbing shall be designed and adjusted to use the minimum quantity of water consistent with proper performance and cleaning.

Principle No. 3. Devices for heating and storing water shall be so designed and installed as to prevent dangers from contamination or explosion through overheating.

Principle No. 4. Plumbing fixtures shall be made of smooth non-absorbent material, shall be free from concealed fouling surfaces, and shall be located in ventilated enclosures.

Figure B-2. Load Zone Map of U.S.A.

Hurricane Zone 100 miles inland along Gulf and Atlantic Coasts as indicated by dotted areas (including all of the State of Florida).



Reference Table to Accepted Engineering Practice Standards for Part B of this Standard

This Reference Table is not a part of this Standard but is included for information purposes.

Aluminum	
Aluminum Construction Manual, Specifications for Aluminum Structures	AA-1971
Steel	
Specification for the Design, Fabrication and Erection of Structural Steel for Buildings	AISC-1969†
Specification for the Design of Cold-Formed Steel Structural Members	AISI-1968††
Specification for the Design of Light-Gage Cold-Formed Stainless Steel Structural Members	AISI-1968
Standard Specifications for Open Web Steel Joists, J- and H-Series	AISC & SJI-1970
Structural Welding Code	AWS D1.0-72
Wood and Wood Products	
Hardboard	AMA PS 58, 59, & 60-1973
Hardwood and Decorative Plywood	USPC PS 51-71
Structural Design Guide for Hardwood Plywood	HPHA-SG-71
Timber, Structural Glued Laminated — Inspection	AITC-200-1973
Timber, Structural Glued Laminated	USD PS 56-73
Softwood Plywood — Construction and Industrial	PS 1-66***
Plywood Construction Systems for Commercial and Industrial Buildings (APA)	P310-1973***
Residential Construction Guide (APA)	P450-1973***
Design Methods for Plywood-Lumber Components (V 815)	APA, 1972
Fabrication of Plywood-Lumber Components (V820)	APA 1972
Stress Grade Lumber and Its Fastenings — National Design Specifications for	(N) FPA-1973*
Structural Design Data — Wood	(N) FPA-1970
Span Tables for Joists and Rafters (PS 20-70)	(N) FPA-1970
Working Stresses for Joists and Rafters	(N) FPA-1971**
Timber Construction Standards	AITC-100-1972
Design Specifications for Light Metal Plate Connected Wood Trusses	TP1-70
Span Tables for Light Metal Plate Connected Wooden Trusses	TP1, 1972
Particleboard for Mobile Home Decking	NPA 1-73
Mat-Formed Wood Particleboard	CS 236-66

†Supplements Nos. 1 and 2, November 1, 1970 and December 8, 1971

††With Addendum No. 1 dated 11/19/70

*Supplement issued April 1973

**Supplement issued December 1972

***New Edition expected in 1974

Appendix to Part B

Selection of Material and Installation of
Wood Product Based Wall Surfacing
for Tub and Shower Enclosures

- I. Material:** The wall covering material must have an exposed surface that is impervious to water; the substrate material must be resistant to deterioration from exposure to high humidity and temporary water leakage.
- A. Strength:** The complete wall assembly, including the wall covering substrate, shall be capable of withstanding a uniform load of five pounds per square foot applied perpendicular to the surface. The deflection, under load, shall not exceed $L/180$ of the height of the wall, for the assembly; or $L/240$ the distance between framing members, for the wall covering substrate.
- B. Surface Finish:** The exposed surface must meet the minimum requirements of the American Hardboard Association Industry Standard (I.S. 1-70) Sections 3.4.1 and 3.4.2 Surface Finish Tests for Decorative Finished Interior Wall Paneling: Class 1 as certified by the panel manufacturer.
- C. Size:** The minimum thickness of the material shall be $\frac{1}{8}$ " nominal. The width to be sufficient to give continuous unbroken surface from corner to corner, or end of tub in corner installation. In an installation incorporating a shower, the unbroken surface must continue to a height of at least 6' above the floor of the shower.
- D. Type:** The substrate material shall also meet the requirements of the appropriate standard listed below:
- (1) Hardboard: of high strength and water resistance to meet Commercial Standard CS-251-63, Federal Specification LLL-B-810a or AIA I.S. 1-70 either Standard or Tempered.
 - (2) Softwood Plywood: must meet U.S. Product Standard P.S. 1-66 including exterior type glue line and Grade A face veneer "suitable for painting."
 - (3) Hardwood Plywood: must meet P.S. 51-71 Type I glue line and sound grade face veneer.
 - (4) Other Materials: not meeting the D-1, D-2, D-3 above, shall meet the requirements of this Standard and their appropriate Product Standard, Industry Standard, Commercial Standard or Federal Specification.

- II. Installation:** The material must be installed in conformance with this Standard and the application instructions provided by the material manufacturer. In case of conflict, this Appendix shall take precedence.
- A. Framing:** Wood framing shall be spaced not more than 16" o.c. Blocking shall be 1" x 3" or equal, installed horizontally at height to match rim of tub or shower pan. All corners shall have sufficient framing members for attachment of corner mouldings.
- B. Fastening:** All edges and ends of panel shall occur on framing members. Panels shall be applied to wood framing members using water resistant, non-hard setting adhesive. Adhesive shall be applied to the face of all framing members except locations where panel edges fall beneath applied mouldings. Panels may also be applied over solid backing using an adhesive. **NOTE:** Fasteners, if necessary, shall be used only in locations where they will be covered by applied mouldings and shall be used on not more than two adjacent edges. No other interior fasteners, or fixtures, other than required functional plumbing fixtures shall penetrate the face of the panel. Openings for these plumbing fixtures must be sealed with caulk.
- C. Corners and Edges:** All corners and edges must be caulked or sealed against moisture penetration. A non-hard setting sealant material must be used with applied mouldings. Fastening of mouldings to framing shall not be greater than 6" o.c.

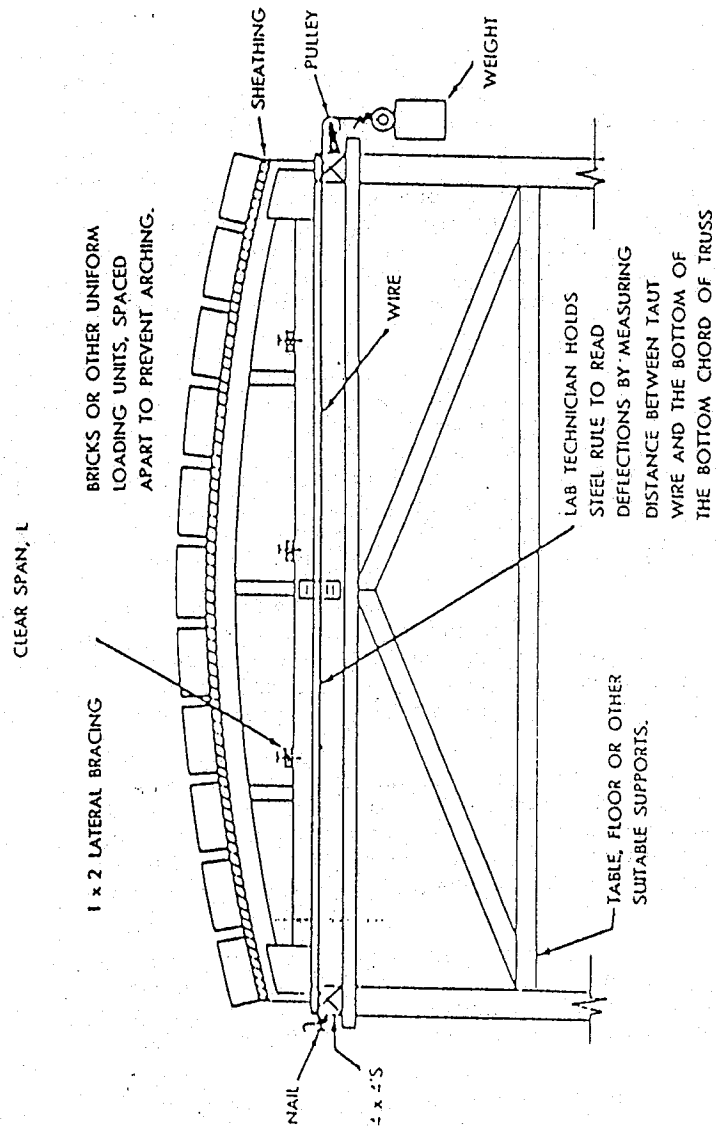


Figure B-1. Test Procedure for Roof Rafters or Roof Trusses

Appendix to Part B

Test Procedure for Roof Rafters or Roof Trusses

General:

Rafters and trusses may be tested in pairs, sheathed and mounted across supports, or tested singly in a suitable test facility. Trusses will be mounted on firm supports at least 1 1/2 inches wide (wider support may be used if the design and use specify a wider plate) and accurately positioned to give the required clear span distance (L). The top chord may be sheathed with the specified design sheathing and fastened with specified design fasteners. As an alternate the trusses may be sheathed with 1/4-inch plywood strips, no wider than 6 inches, spaced apart by at least 1/4 inch; these strips to be nailed at right angles to the truss(es) with 4d nails not closer than 6 inches on center along each top chord. The bottom chords of the two trusses laterally braced together (not cross-braced) with 1 x 2 stripping not closer than 24 inches on center nailed with only one 6d nail at each joint, or may be cross-tied in the same manner as in actual construction.

When tested in pairs the calculation of the total load to be applied shall be the desired load in pounds per square foot, multiplied by twice the design truss spacing center to center; the product multiplied by the clear span (L)

Example:

Given: Truss spacing 24 inches; twice spacing = 48 inches
Desired Loading = 30 lb/ft²; Clear span = 12 feet

$$\text{Total Load} = 30 \times \frac{48}{12} \times 12 = 1,440 \text{ pounds}$$

When tested singly the total load to be applied to the truss shall be half the load obtained by the above formula.

Rafter and truss deflections will be measured relative to a taut wire strung between the supports and weighted at one end to insure constant tension. Deflections shall be measured at the two quarter points and at midspan. Loading shall be applied to the top chord by placing masonry units, weights or similar units on the sheathing to simulate a uniformly distributed load. Load units shall be separated so that arch action does not occur. Suitable hydraulic systems may be used in testing single trusses provided the loads are applied on 12-inch centers (or less) to the top chord or its sheathing.

Test Procedure:

1. Apply load units to the sheathing to equal the full dead load of roof and ceiling.
2. Noting the drawing (B-1), measure and record initial elevation of rafter or truss in test position at dead load.
3. Maintaining the dead load, add live load in 10 lb/ft² increments at 10-minute intervals. Continue until design load is reached and maintain load for 10 minutes. The maximum deflection due to design live load (elevation measured in Step 3 minus Step 2) shall not exceed L/180, when L is the clear span measured in the same units. Duration of load factors for wind or snow loading have been considered in establishing this test method. The test loads used shall be for the appropriate zone, as specified in Section 6.4 of this Part. No reduction shall be made in the test loads for snow and wind conditions.
4. Continue to load rafter or truss to dead load plus 1.75 times the design live load. Maintain this loading for 12 hours and inspect truss for failure.
5. Remove superimposed (1.75 x design live load) and trusses or rafters not recovering to at least the L/100 position within 12 hours shall be considered as failing.

imum allowable stresses as set forth in the SAE Handbook* published by the Society of Automotive Engineers. Full recognition should be given both to operating stress and to fatigue life in determining the suitability of any spring suspension system. The capacity of the spring system should be such as to assure that under maximum load conditions sufficient clearance will be maintained between tire and wheel well to provide for unimpeded wheel and tire movement.

B.5. Axles. Axles should be manufactured in accordance with accepted standards to a degree of accuracy that will assure proper fit of bearings and brake mountings. The maximum load carried by the axle should not exceed that specified by the axle manufacturer.

B.6. Hubs and Bearings. Hubs and bearings should be provided in accordance with design load requirements. Bearings should be manufactured to specific standards so as to insure interchangeability with replacement parts. Provisions for proper lubrication with properly applied seals should be provided in accordance with good engineering practice.

B.7. Wheels and Rims. Wheels and rims should be furnished and installed in accordance with the load requirements, the recommended practices contained in the latest edition of the Year Book** of the Tire & Rim Association, and the recommendations of the wheel and rim manufacturer.

B.8. Tires. Tires installed on mobile homes should be capable of safely carrying all design loads. Tire loads should not exceed the maximums permitted in Table M11-1 published in the Year Book** by the Tire and Rim Association paying special attention to Note 3 to said Table. Where passenger car tires are used, the maximum load ratings given in Section 1 of the Tire and Rim Association Year Book** shall apply to the highest individual wheel load multiplied by a service factor of 1.10 as authorized in the Tire and Rim Association's Year Book.**

B.9. Brakes. Brakes used should be manufactured to accepted and listed standards and installed in accordance with the brake manufacturers recommendations. They should be of the proper size, type, number and design, with method of actuation to adequately meet the stopping distance performance standards herein prescribed.

*Available from the Society of Automotive Engineers, 485 Lexington Avenue, New York, N. Y. 10017.

**Available from the Tire and Rim Association, Inc., 3200 West Market Street, Akron, Ohio 44313.

B.9.1. Accepted Standards. Brakes on tractor and mobile homes should be such that the maximum stopping distance from an initial velocity of 20 MPH does not exceed 40 feet (U. S. Department of Transportation Regulations).

B.10. Low Voltage Wiring. Electrical wiring between mobile home and towing vehicle should comply with all applicable requirements of the U. S. Department of Transportation Motor Carrier Safety Regulations.

corporating a detector and an alarm sounding device in one unit, operated from a power supply either in the unit or obtained at the point of installation.

Detectors shall operate from an AC, monitored battery, or combination AC/battery power source.

9.2 Smoke Detector Location. Smoke detector(s) shall be located outside of bedrooms, in a hallway or space communicating thereto, on or near the ceiling, and shall be installed in accordance with the manufacturer's instructions. Mobile homes having bedrooms separated by any one or combination of common use areas, such as a kitchen, dining room, living room, or family room (but not a bathroom or utility room), shall have at least two detectors.

9.3 Alarm Sounding Device. Every smoke-detecting device shall cause the operation of an alarm signaling device or devices which shall be clearly audible in all bedrooms with all intervening doors closed.

9.3.1 All alarm sounding devices shall be rated not less than 85 decibels at 10 feet.

9.4 Detector Trouble Signals. Detectors requiring a light source for operation shall have an audible trouble signal on failure of the light source, but such failure shall not cause an alarm. Detectors not requiring a light source for operation shall have either a visible light to indicate operability or an audible trouble signal. Audible trouble signals shall be designed to operate at least every minute for seven consecutive days.

9.5 Testing. The mobile home manufacturer shall provide instructions (supplied by the device manufacturer) for the periodic testing of the detector(s).

10. Tests

10.1 General. Unless based on accepted engineering design (see 5.3 of this Part) for the use indicated, all new mobile home materials, equipment, systems or methods of construction not provided for in this standard, shall be subjected to the tests specified in 5.10 of this Part.

10.2 Heat Loss. Heat loss shall be determined by accepted engineering methods or tests to assure compliance with the requirements of 7.5 of this Part.

Appendix to Part B

Recommendations on Structural Design Requirements for In-transit Conditions

B.1. "A" Frame Assembly. The "A" frame assembly, which includes the "A" frame and coupling mechanism, should be rigidly constructed and securely fastened to the chassis to assure safe and adequate transfer of the maximum load between the mobile home and the "A" frame assembly.

B.2. Coupling Mechanism. The coupling mechanism, which is normally of the socket type, should be securely fastened to the "A" frame in such a manner as to assure safe and adequate transfer of maximum loads, including impact loads, between the mobile home and the hitch assembly on the towing vehicle. Couplings should be equipped with a manually operated mechanism so adapted as to prevent disengagement of the unit while in operation. In addition to this positive locking mechanism the coupling should be so designed that it can be disconnected regardless of the angle of the mobile home to the towing vehicle. With the mobile home parked on level ground, the center of the socket of the coupler should not be less than 20 inches nor more than 26 inches from the ground level.

B.3. Running Gear Assembly. The running gear assembly (which includes springs, spring hangers, axles, bearings, wheels, brakes, rims and tires with their related hardware) should be designed in accordance with accepted engineering practice to adequately sustain the designed loads consisting of the dead load plus a minimum of 3 lb/ft² floor load and the superimposed dynamic load resulting from over-the-road movement but should not be required to exceed twice the dead load. The subject assembly should transmit the mobile home load to the ground without causing unsafe deformation or internal movement of any of the mobile home structural parts. The location of the running gear assembly in relation to the over-all length of the mobile home and its total weight including all its contents should be such as to provide sufficient coupling weight to assure good and safe towing and braking qualities. The coupling weight should not be less than 12 per cent of the total weight of the mobile home nor more than 25 per cent.

B.4. Spring and Spring Hangers. Spring assemblies and hangers, shackles, bushings, and mounting bolts should not exceed the maxi-

8.3.2 Interior Privacy. Each mobile home interior door, when provided with a privacy lock, shall have a privacy lock that has an emergency release on the outside to permit entry when lock has been locked by a locking knob, lever, button, or other locking device on the inside.

8.3.3 Interior Passage. Interior doors having passage hardware without a privacy lock, or with a privacy lock not engaged, shall open from either side by a single movement of the hardware mechanism in any direction.

8.4 Room and Hallway Sizes.

8.4.1 Every mobile home shall have at least one habitable room with not less than 150 square feet of gross floor area. Rooms designed for sleeping purposes shall have a minimum gross square foot floor area as follows:

One person.....	50
Two persons.....	70
Each person in excess of two.....	50

8.4.2. No habitable room, except a kitchen, shall be less than five feet in any clear horizontal dimension.

8.4.3 Each toilet compartment shall be a minimum of 30 inches in width and have at least 21 inches of clear space in front of each toilet.

8.4.4 Hallways shall have a minimum horizontal dimension of 28 inches.

8.5 Glass and Glazed Openings

8.5.1 Windows. All windows shall meet the requirements for windows as detailed in the Window Specifications for Utilization in Mobile and Factory Built Housing, (MHMA Spec. No. 1-71-1 Rev. 1973).

8.5.2 Glazing in hazardous locations shall comply with Table 8.5.2.

TABLE 8.5.2

Glazing in the Following Specific Hazardous Locations Shall Meet the Following Requirements

Specific Hazardous Locations	Size of Individual Glazed Area	Requirements ¹
Glazing in exit and entrance doors	Over 6 sq. ft.	Each glazed area shall pass the requirements of ANSI Standard Z97.1 — 1972 if not protected by a protective grille ¹ firmly attached to stiles on each exposed side.
Glazing in storm doors	Over 2 sq. ft.	Each glazed area shall pass the requirements of ANSI Standard Z97.1 — 1972 if not protected by a protective grille ¹ firmly attached to stiles on each exposed side.
Glazing in sliding exterior doors	All Sizes	Each glazed area shall pass the requirements of ANSI Standard Z97.1 — 1972.
Glazing in all unframed doors (swinging)	All Sizes	Each glazed area shall be fully tempered glass and pass the requirements of ANSI Standard Z97.1 — 1972.
Glazing in shower doors and tub enclosures	All Sizes	Each glazed area shall pass the test requirements of ANSI Standard Z97.1 — 1972.
Other fixed glazed panels located within 12 inches on either side of exit and entrance doors	All Sizes	Each glazed area within 18 inches of the floor shall pass the requirements of ANSI Standard Z97.1-1972 unless the glazed area is protected by a barrier within 12 inches immediately in front of the glazing.

¹Shall be constructed and attached in such a manner so as to prevent human impact from being delivered to glass surface.

²Annealed glass less than single strength (SS) in thickness shall not be used. If short dimension is larger than 24 inches, annealed glass must be double strength (DS) or thicker.

9. Mobile Home Fire Warning Equipment

9.1 General. At least one listed smoke detector (which may be a single station alarm device) shall be installed in each mobile home.

NOTE: A "smoke detector" is a device which detects visible or invisible particles of combustion. A single station alarm device is an assembly in-

7.5.4 Infiltration Heat Loss. The following shall be used to estimate infiltration heat loss, or infiltration heat loss may be calculated using the method in the *ASHRAE Handbook of Fundamentals**:

Outside Design Temperature Degrees F	Infiltration Allowance Btu/hr
40.....	3330
30.....	4440
20.....	5550
10.....	6660
0.....	7770
minus 10.....	8880
minus 20.....	9990
minus 30.....	11100
minus 40.....	12210

7.5.5 Duct Heat Loss. The supply duct heat loss shall be calculated separately using the actual duct surface area and the actual thickness of insulation between the duct and outside of the mobile home. If there is an air space of $\frac{1}{2}$ inch or less, the heat duct shall be assumed in contact with the insulation. If there is an air space of over $\frac{1}{2}$ inch between the duct and the insulation, no special heat loss need be calculated — if the cavity in which the duct is located is assumed to be at 70 F. The average temperature inside the supply duct shall be assumed to be at least 130 F for the purpose of calculation.

8. Design Considerations

8.1 Light and Ventilation. Adequate provisions shall be made for light and ventilation in accordance with the following:

8.1.1 Habitable Rooms. Habitable rooms shall be provided with exterior windows or doors having a total glazed area of not less than 10 percent of the gross floor area. An area equivalent to not less than 5 percent of the gross floor area shall be available for unobstructed ventilation. Glazed areas need not be openable where a mechanical ventilation system is provided and is capable of producing a change of air in the room(s) every thirty minutes with not less than one-fifth of the air supply taken from outside the mobile home.

*See footnote on previous page.

Exception: Kitchens may be provided with artificial light and mechanical ventilation capable of producing a change of air in the room every 30 minutes. Windows and doors used for light or ventilation shall open directly to the outside of the vehicle.

8.1.2 Bathroom. Each bathroom shall be provided with artificial light and, in addition, be provided with external windows or doors having not less than $1\frac{1}{2}$ square feet of fully openable glazed area, except where a mechanical ventilation system is provided capable of producing a change of air every 12 minutes. Any mechanical ventilation system shall exhaust directly to the outside of the mobile home.

8.2 Ceiling Height. Every habitable room shall have a minimum ceiling height of not less than 7 feet, 0 inch in at least 50 percent of its required area with no portion of the required area less than 5 feet in height. Hallways shall have a minimum ceiling height of 6 feet, 6 inches.

8.3 Exit Facilities, Interior Privacy, and Interior Passage.

8.3.1 Exit Facilities.

(a) Mobile homes shall have a minimum of two exterior doors located remote from each other and so arranged as to provide a means of unobstructed travel to the outside of the mobile home.

(b) Exterior doors shall be constructed for exterior use and in no case provide less than a 28-inch-wide clear opening. Each swinging exterior door shall have a key-operated lock that has a deadlocking latch. A deadlock with a passage set installed below the deadlock may be used as an acceptable alternate for each exterior door. The locking mechanism of the lock shall be engaged or disengaged by the use of a lever, knob, button, handle, or other device from the side from which egress is to be made when the mobile home is occupied. Locks shall not require the use of a key for operation from the inside.

(c) Every room designed expressly for sleeping purposes, unless it has an exit door [see Par. 8.3.1.(b)], shall have at least one outside window which can be opened from the inside without the use of tools to provide a clear opening of not less than 22 inches in least dimension and 5 square feet in area with the bottom of the opening not more than 4 feet above the floor. Where a screen or storm window is required to be removed from this window to permit emergency egress, it shall be readily removable without requiring the use of tools.

7. Construction

7.1 Weather Resistance. Exterior covering shall be of moisture and weather resistive materials attached with corrosion resistant fasteners to resist wind and rain. Metal coverings shall be of corrosion resistant materials.

7.2 Condensation Resistance. Spaces within outside walls and ceilings shall be ventilated and/or shall be provided with corrosion resistant vapor type barriers on the warm side of the walls and ceilings or other means shall be used to avoid condensation within these spaces.

7.3 Interior Walls, Partitions, and Ceilings. The interior finish of habitable rooms and hallways (excluding molding, doors, trim, cabinets and splash panels), enclosures for furnaces and water heaters (including doors) shall be of materials whose flame spread classification shall not exceed 200 when tested by the Standard Method of Test for Surface Burning Characteristics of Building Materials (ANSI A2.5-1970; ASTM E84-70; UL723-1971; NFPA No. 255-1972). A door or doors serving a closet with an opening exceeding 21 square feet shall comply with this requirement.

7.4 Rodent Resistance. Exterior surfaces shall be sealed to resist the entrance of rodents.

7.5 Heat Loss. The total calculated heat loss of the living unit at the outdoor design temperature as certified in 7.5.1 of this Part shall not exceed 40 Btu/hr/ft² of the total floor area or 275 Btu/hr lineal ft. of the perimeter of the space to be heated to 70° F, whichever is greater. The minimum total resistance value (R), excluding framing, of the wall (less windows and doors), ceiling, and floor shall not be less than:

Wall.....	8.0
Ceiling.....	16.0
Floor.....	10.0

7.5.1 The mobile home manufacturer shall permanently affix the following "Certificate" to an interior surface of the home that is readily visible to the homeowner. The Certificate shall specify the following:

(a) The lowest outdoor design temperature (15 MPH wind) at which the mobile home heat loss complies with Par. 7.5.

(b) The lowest outdoor temperature (15 MPH wind) at which the installed heating equipment will maintain a 70° F temperature inside the home with or without storm sash.

CERTIFICATE

Home Mfr. _____ Plant Location _____

Home Model _____

The living area of this home is designed to maintain comfort heating where the outdoor temperatures are not lower than ___F when the home is equipped with storm windows and not lower than ___F when the home is not equipped with storm windows.

Heating Equipment Mfr. _____

Heating Equipment Model _____

The above heating equipment has the capacity to maintain an average 70 F temperature in this home at outdoor temperatures of ___F when home is equipped with storm windows and ___F when home is not equipped with storm windows.

The above information has been calculated assuming a maximum wind velocity of 15 MPH at standard atmospheric pressure.

7.5.2 "R" values and "U" factors shall be calculated as outlined in the latest edition of the *ASHRAE Handbook of Fundamentals*.*

7.5.3 Framing Heat Loss. In the absence of specific data, for the purpose of heat loss calculations, the following framing areas shall be assumed:

Wall.....	20% of net wall area (less windows)
Ceiling.....	5% of total ceiling area
Floor.....	10% of net floor area (less duct area)

*Thermal resistance (R) values and methods of determining corresponding thermal transmittance (U) values may be found in Chapter 20 of the 1972 ASHRAE Handbook of Fundamentals (American Society of Heating, Refrigerating and Air Conditioning Engineers, 345 East 47th Street, New York, NY 10017). Data on infiltration and ventilation are shown in Chapter 19. Outdoor winter design temperatures (99% values are recommended) are listed in Chapter 33.

coating of zinc on steel of not less than 0.30 ounces per square foot of surface coated.

Note: Type 1, Class B, Grade 1, steel strapping, 1 1/4 inches wide and 0.035 inch thick, conforming with Federal Specification QQ-S-781-F, is judged to conform with Paragraphs 6.5.1.1 and 6.5.1.4 of this Part.

6.5.1.5 The manufacturer shall provide printed instructions with each mobile home specifying the location and required capacity of stabilizing devices (tiedowns, piers, blocking, etc.) on which the design is based.

6.6 Walls. The walls shall be of sufficient strength to withstand the load requirements as defined in 6.3.1, 6.3.2, and 6.4 of this Part, without exceeding the deflections as specified in 6.10. The connections between the bearing walls, floor, and roof framework members shall be fabricated in such a manner as to provide support for the material used to enclose the mobile home and to provide for transfer of all lateral and vertical loads to the floor and chassis.

6.6.1 Drilling or Notching of Wood Wall Structural Members. Except where substantiated by engineering designs, studs shall not be notched or drilled in the middle one-third of their length.

6.7 Interior Walls. Interior walls shall be constructed with structural capacity adequate for the intended purpose and shall be capable of resisting a horizontal load of not less than five pounds per square foot.

6.8 Firestopping. Firestopping shall be provided in multi-story mobile homes to cut off all concealed draft openings in all stud walls and partitions, including furred spaces, so placed that the maximum vertical dimension of any concealed space is not over eight feet.

6.9. Floors.

(a) Floor assemblies shall be designed in accordance with accepted engineering practice standards to support a minimum uniform live load of 40 lb/ft² plus the dead load of the materials. In addition (but not simultaneously), floors shall be able to support a 200-pound concentrated load on a two-inch diameter disc at the most critical location with a maximum deflection not to exceed one-eighth inch relative to floor framing. Perimeter joists of more than six inches depth shall be stabilized against overturning from superimposed loads as follows: at ends by solid blocking not less than two-inch thickness by full depth of joist, or by connecting to a continuous header not less than two-inch thickness and not

less than the depth of the joist with connecting device; at eight-foot maximum intermediate spacing by solid blocking or by wood cross-bridging of not less than one inch by three inches, metal cross-bridging of equal strength, or by other approved methods.

(b) Wood floors or subfloors in kitchens, bathrooms (including toilet compartments), laundry rooms, water heater compartments, and any other areas subject to excessive moisture shall be moisture resistant or shall be made moisture resistant by sealing or by an overlay of nonabsorbent material applied with water-resistant adhesive.

(c) Carpeting shall not be used under a heat-producing appliance unless the appliance is listed for such use.

6.9.1 Drilling or Notching of Wood Joist Structural Members. Except where substantiated by engineering design, notches on the ends of joists shall not exceed one-fourth the joist depth. Holes bored in joists shall not be within 2 inches of the top or bottom of the joist, and the diameter of any such hole shall not exceed one-third the depth of the joist. Notches in the top or bottom of the joists shall not exceed one-sixth the depth and shall not be located in the middle third of the span.

6.10 Design Load Deflection. When a structural assembly is subjected to total design live loads, the deflection for structural framing members shall not exceed the following:

Floor	L/240
Roof and Ceiling	L/180 (See Appendix, Part B)
Headers, Beams, Girders	L/180 (Vertical Loads Only)

Where L = the clear span between supports or two times the length of a cantilever.

6.11 Structural Load Tests. Structural assemblies or subassemblies tested for qualification shall sustain the design dead load (see 6.1) plus the superimposed design live loads (see 6.2) equal to 1.75 times the required live loads for a period of 12 hours without failure, unless otherwise specified herein (see 6.5.1.1). Failure shall be considered rupture, fracture or residual deflection which is greater than the limits set in 6.10 of this Part. An assembly or subassembly to be tested shall be representative of the minimum quality of materials of the group of assemblies or subassemblies as ordinarily manufactured. Each test assembly, component or subassembly shall be identified as to type and quality or grade of material. Structural load tests or other tests based on nationally recognized standards may be approved.

6. Structural Design Requirements

6.1 **Design Dead Loads.** Design dead loads shall be the actual dead load (see 4.8.1 of this Part) supported by the structural assembly under consideration.

6.2 **Design Live Loads.** The design live loads shall be as specified in 6.3, 6.4, 6.6, 6.9, 6.10 and 6.11 of this Part and shall be considered to be uniformly distributed. The roof live load shall not be considered as acting simultaneously with the wind load and the roof and floor live loads shall not be considered as resisting the overturning moment due to wind.

6.3. Wind and Snow Loads.

6.3.1 **Standard Wind.** When a mobile home is not designated "Hurricane- and Windstorm-Resistive," the mobile home shall be designed for the following wind loads:

Horizontal	15 lb/ft ² (1 day load duration)
Vertical Upward	9 lb/ft ² (1 day load duration)
Vertical Downward	(See 6.4, Roof Loads)

6.3.2 **Hurricane Wind.** When a mobile home is designated "Hurricane- and Windstorm-Resistive," the mobile home shall be designed for the following wind loads:

Horizontal	25 lb/ft ² (1 day load duration)
Vertical Upward	15 lb/ft ² (1 day load duration)
Vertical Downward	(See 6.4, Roof Loads)

6.4. **Roof Loads.** Flat, curved and pitched roofs shall be designed to resist the following live loads, applied downward on the horizontal projection:

North Zone	30 lb/ft ² (2 months load duration)
Middle Zone	20 lb/ft ² (7 days load duration)
Hurricane Zone	30 lb/ft ² (1 day load duration)

NOTE: When engineering calculations are performed, allowable unit stresses may be increased as provided in the documents referenced in the Appendix Table to Accepted Engineering Practice Standard consistent with the load durations specified in Paragraphs 6.3 and 6.4 of this Part.

The Manufacturer's Certificate posted in the mobile home (Paragraph 7.5.1 of this Part) shall show for which structural zone(s) of the U.S.A. the mobile home has been designed and the actual design

external snow and/or wind live loads. The Certificate shall include a reproduction of the Load Zone Map shown in the Appendix to this Part, and related information. The Load Zone Map shall be not less than one-half the size illustrated.

6.5 **Fastening of Structural Systems.** Roof framing shall be securely fastened to wall framing, walls to floor structure, and floor structure to chassis to secure and maintain continuity between the floor and chassis, so as to resist wind overturning and sliding as imposed by design loads in 6.3 of this Part. (Directions for anchorage shall accompany all mobile homes.)

6.5.1 **Tiedowns.** All mobile homes shall have tiedowns with provisions for distributing the load of these tiedowns and provision for the attachment to ground anchors so as to resist wind overturning and sliding as imposed by the respective design loads of this Part.

NOTE No. 1. The provisions of Paragraphs 6.5.1.1, 6.5.1.2 and 6.5.1.3 of this Section shall be followed except when the tiedown system is designed by a Registered Professional Engineer or Architect.

NOTE No. 2. The manufacturer is only required to make provision for the connection(s) of tiedown hardware equipment but is not required to provide such equipment.

6.5.1.1 Each tiedown shall be designed to resist an allowable working load equal to or exceeding 3,150 pounds and shall be capable of withstanding a 50 percent overload without failure.

6.5.1.2 Unless the tiedown system is designed by a Registered Professional Engineer or Architect, tiedowns shall be placed as follows:

(a) **HURRICANE ZONES.** Not more than 12 feet on centers beginning from the front wall (first stud and/or first cross member). Not more than 6 feet open-end spacing shall be provided at the rear wall of the mobile home unless additional tiedowns are installed.

(b) **NONHURRICANE ZONES.** Not more than 24 feet on centers beginning from the front wall (first stud and/or first cross member). Not more than 6 feet open-end spacing shall be provided at the rear wall of the mobile home unless additional tiedowns are installed.

6.5.1.3 Provision for diagonal ties between ground anchors and the mobile home shall be made in conjunction with each vertical tiedown.

6.5.1.4 Tiedowns exposed to weathering shall be resistant to weathering deterioration at least equivalent to that provided by a

4.7 Interior Finish. The surface material of walls, fixed or movable partitions, ceilings and other exposed interior surfaces affixed to the mobile home structure including any material such as paint or wallpaper. Interior finish does not include decorations or furnishings which are not affixed to the mobile home structure.

4.8 Loads.

4.8.1 Dead Load. The weight of all permanent construction including walls, floors, roof, partition, and fixed service equipment.

4.8.2 Live Load. The weight superimposed by the use and occupancy of the mobile home, including wind load and snow load, but not including dead load.

4.8.3 Wind Load. The lateral or vertical pressure or uplift on the mobile home due to wind blowing in any direction.

4.9 Mobile Home Stand. That area of a mobile home lot which has been reserved for the placement of a mobile home.

4.10 Tiedown. Any device designed for the purpose to anchor a mobile home to ground anchors.

5. General Requirements

5.1 Minimum Requirements. The design and construction of a mobile home shall conform with the provisions of this Standard. Requirements for any size, weight, or quality of material modified by the terms of "minimum," "not less than," "at least," and similar expressions are minimum standards. The manufacturer or installer may exceed these standards provided such deviation does not result in any inferior installation or defeat the purpose and intent of this Standard.

5.2 Construction. All construction methods shall be in conformance with accepted engineering practices to insure durable, livable, and safe housing. Exposed metal structural members shall be protected to resist corrosion.

5.3 Structural Analysis. The strength and rigidity of the component parts and/or the integrated structure shall be determined by engineering analysis or by suitable load tests to simulate the actual loads and conditions of application that occur on site. (See Paragraphs 5.10 and 6.11.)

5.4 Design Approval Procedure. Approval of plans, specifications, and completed mobile homes by the authority having jurisdiction under the provisions of this Standard shall be accomplished by a

certificate of compliance from a firm or organization having a qualified engineering staff acceptable to the authority having jurisdiction, or by a registered professional engineer or architect, or by a nationally recognized testing laboratory.

5.5 Hurricane and Windstorm Resistive Design. Only mobile homes which meet the applicable requirements of Paragraphs 6.3.2, 6.4 and 6.5 may be designated "Hurricane and Windstorm Resistive." No similar designation which would imply hurricane or windstorm resistance shall be used when the home does not meet these requirements.

5.6 New Materials and Methods. Any new material or method of construction not provided for in this Standard and any material or method of questioned suitability, proposed for use in the manufacture of the structure, shall nevertheless conform in performance as outlined in 5.1 of this Part (see also Paragraph 6.11).

5.7 Acceptability of Materials. The Appendix to this Part lists a group of Accepted Engineering Practice Standards which may be referred to for guidance. Deviations from the applicable portions of these Standards shall be permitted when they meet the performance requirements specified herein.

5.8 Structural Requirements. Each mobile home shall be designed and constructed as a completely integrated structure capable of sustaining the design load requirements of this Standard and shall be capable of transmitting these loads to stabilizing devices without causing an unsafe deformation or abnormal internal movement of the structure or its structural parts.

5.9 Allowable Design Stress. The design stresses of all materials shall conform to accepted engineering practice. The use of materials not identified as to strength or stress grade shall be limited to the minimum allowable stresses under accepted engineering practice.

5.10 Alternate Test Procedures. In the absence of listed and prescribed Standards, the manufacturer shall develop or cause to be developed necessary tests to demonstrate the structural properties and the significant characteristics of the method employed. Such tests shall be made either by a recognized testing organization or by a registered professional engineer or registered architect. Copies of the test results shall be kept on file by the mobile home manufacturer.

Part B

Body and Frame Design and
Construction Requirements

1. Introduction

1.1 Much of the material in Part B has been taken from, or is based on, nationally recognized standards for construction.

2. Scope

2.1 This Part covers the minimum requirements for materials, products, equipment and workmanship needed to assure that the mobile home will provide (a) the structural strength and rigidity, (b) the protection against corrosion, decay, insects and other similar destructive forces, (c) reasonable protection against the hazards of fire and windstorm, (d) resistance to the elements, and (e) durability and economy of maintenance.

2.2 Wherever existing standards and this standard differ, the requirements of the latter shall apply.

3. Basic Principles

3.1 The following principles are given as basic goals in the construction of mobile homes, which also serve as guide lines for the understanding of this Part. These principles serve to define the intent of this Part when considerations arise which are not covered in the balance of the text.

Principle No. 1. To provide safe, healthful and comfortable living facilities with adequate storage space and economy of maintenance.

Principle No. 2. To provide adequate natural light and ventilation.

Principle No. 3. To provide structural strength and rigidity sufficient for design loads, both in transit and on site.

Principle No. 4. To provide adequate running gear and coupling for safe transportation of the mobile home.

Principle No. 5. To provide equipment designed and installed for safety of operation, ease of service, and adequate for the intended use.

Principle No. 6. To provide installed materials of adequate specification to resist deterioration.

Principle No. 7. To provide against the entrance of water and winds at all joints, connections, and openings in exterior surfaces.

Principle No. 8. To provide arrangement of habitable spaces for health and safety.

4. Definitions

4.1. Accepted Engineering Practices. Paragraph 2.1 explains the scope of this Part and Chapter 5 sets forth the General Requirements. The Appendix to this Part provides a Reference Table to Accepted Engineering Practices which is not a part of this Standard but is included for information purposes.

4.2 Diagonal Tie. Any tiedown designed to resist horizontal or shear forces and which deviates not less than 30 degrees from a vertical direction.

4.3. Gross Floor Area. To calculate the gross floor area of any room under the provisions of this Standard, all space, wall to wall, shall be counted, including recess entries and areas under built-in vanities and similar furniture. Where ceiling height is less than that specified in 8.2 of this Part, the floor area under such ceilings shall not be included.

4.4 Ground Anchor. Any device at the mobile home stand designed for the purpose of securing a mobile home to the ground.

4.5 Habitable Room. A room or enclosed floor space arranged for living, eating, food preparation, or sleeping purposes (not including bathrooms, toilet compartments, laundries, pantries, foyers, hallways, and other accessory floor spaces).

4.6 Hurricane and Windstorm Resistive Mobile Home. A mobile home which meets the added wind design load and fastening requirements of Section 6.

offered is, for the purpose intended, at least the equivalent performance of that prescribed in this Standard considering quality, strength, effectiveness, durability, safety, and protection of life and health. An enforcement authority shall require that satisfactory evidence or proof be submitted to substantiate any claims that may be made regarding the use of any such alternative.

2. Definitions Common to All Parts

2.1 The following definitions are common to all Parts of this Standard. Additional definitions, applicable to the individual Parts, are contained in each Part.

Approved. Means acceptable to the authority having jurisdiction.

Authority Having Jurisdiction. The organization, office, or individual responsible for "approving" equipment, an installation, or a procedure.

Center. The midpoint between the right and left side of a mobile home.

Certified. Means "listed" as defined herein.

Combustible Material. The term applies to materials made of, or surfaced with, wood, compressed paper, plant fibers, or other material that will ignite and burn. These materials shall be considered as combustible even though flameproofed, fire-retardant treated, or plastered.

Dwelling Unit. One or more habitable rooms which are designed to be occupied by one family with facilities for living, sleeping, cooking and eating.

Labeled. Equipment or materials to which has been attached a label, symbol or other identifying mark of a nationally recognized testing laboratory, inspection agency, or other organization concerned with product evaluation that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling is indicated compliance with nationally recognized standards or tests to determine suitable usage in a specified manner.

Length. Length of a mobile home is the distance measured from the tip of the coupler to the part farthest to the rear.

Listed. Equipment or materials included in a list published by a nationally recognized testing laboratory, inspection agency, or other organization concerned with product evaluation that maintains periodic inspection of production of listed equipment or materials, and whose listing states either that the equipment or material meets nationally recognized standards or has been tested and found suitable for use in a specified manner.

Mobile Home. A factory-assembled structure or structures equipped with the necessary service connections and made so as to be readily movable as a unit or units on its (their) own running gear and designed to be used as a dwelling unit(s) without a permanent foundation.

The phrase "without a permanent foundation" indicates that the support system is constructed with the intent that the mobile home placed thereon will be moved from time to time at the convenience of the owner.

Standard. The word "Standard" or "this Standard" shall mean these requirements which the administrative authority may adopt.

majority vote of the Sectional Committee is not received, the item shall be placed on the docket for regular processing by the Sectional Committee for subsequent possible action. If the Interpretations Subcommittee unanimously agrees or a three-quarters affirmative vote is secured from the Sectional Committee, the Correlating Committee on Mobile Homes and Recreational Vehicles shall be informed of the decision reached and shall be requested to ballot on said decision. If at least a three-quarters affirmative vote is secured, the applicant shall be informed promptly and as soon as possible the Interpretation shall be published by the sponsors in the publications each distributes to its members and announced in a suitable news release by the Administrative Secretary which shall be sent to the American National Standards Institute for their information and guidance. If the Correlating Committee does not concur by the three-quarters affirmative ballot required the question shall be returned to the Sectional Committee for regular processing and subsequent possible action.

6. **Action Following Issuance of Official Interpretations.** Following the issuance of an Official Interpretation, the Sectional Committee shall be obliged to review the item on which the Interpretation has been issued with a view to determining whether any change may be desired in the Standard to clarify or correct the condition which brought about the request for the Official Interpretation. If such a change is indicated, the Sectional Committee shall process such a change in conformance with the usual procedures established under the rules of procedure of the Committee as a whole.

7. **Time Limit on Interpretations.** Any Official Interpretation issued shall apply only to the edition of the document for which the Interpretation is made.

Note

See Appendix for Summary Rules and Suggested
Format for Requesting Official Interpretations

See Page 501B-120

Standard for Mobile Homes
Body and Frame Design and Construction Requirements
and the Installation of Plumbing,
Heating, Cooling, Fuel-Burning and Electrical Systems

NFPA No. 501B — 1974

Part A — General

1. Introduction

1.1 Members of the engineering profession and others associated with the design, manufacture, and quality control of mobile homes construction have been aware of the need for a standard providing for healthful and safe housing with complete living facilities, arranged and equipped to assure suitable living conditions. They have also recognized that because of conditions of transport and use, existing plumbing, heating, and electrical standards for permanent buildings are not completely applicable to mobile homes. This Standard has been developed with these factors in mind.

1.2 This Standard is divided into four additional Parts, as follows:
Part B — Body and Frame Design and Construction Requirements
Part C — Plumbing Systems
Part D — Heating, Cooling, and Fuel-Burning Systems
Part E — Electrical Systems

Attention is also called to the Standard for Mobile Home Parks (NFPA No. 501A-1974; ANSI A119.3).

1.3 This Standard is not intended as a design specification or an instruction manual for untrained persons. It has been prepared with the emphasis on *performance* as opposed to being a *specification* Standard.

1.4 The provisions of this Standard are not intended to prevent the use of any material, appliance, installation, device, arrangement, or method of construction not specifically prescribed herein, provided any such alternative has been approved or listed. An enforcement agency may approve any such alternative if it finds the proposed design is satisfactory for the purpose intended, and if the material, appliance, installation, device, arrangement, and method or work

6.3.4.2 A metal ventilating hood of not lighter than No. 28 manufacturer's standard gage sheet metal is installed above the cooking top with a clearance of not less than $\frac{1}{4}$ inch between the hood and the underside of the combustible material or metal cabinet and the hood is at least as wide as the range is and is centered over the range.

6.3.5 Solid fuel-burning factory-built fireplaces and fireplace stoves listed for use in mobile homes may be installed in mobile homes provided they and their installation conform to 6.3.5.1. A fireplace or fireplace stove shall not be considered as a heating facility for determining compliance with Paragraph 7.5 of Part B.

6.3.5.1 A solid fuel-burning fireplace or fireplace stove shall be equipped with integral door(s) or shutter(s) designed to close the fireplace or fireplace stove fire chamber opening and shall include complete means for venting through the roof, a combustion air inlet, a hearth extension, and means to securely attach the fireplace or the fireplace stove to the mobile home structure. The installation shall conform to the following paragraphs (a) to (h) inclusive:

(a) A listed factory-built chimney designed to be attached directly to the fireplace or fireplace stove shall be used. The chimney or the flue gas outlet of the fireplace or fireplace stove shall not include a damper.

(b) A fireplace or fireplace stove, air intake assembly, hearth extension and the chimney shall be installed in accordance with the terms of their listings and their manufacturer's instructions.

(c) The combustion air inlet shall conduct the air directly into the fire chamber and shall be designed to prevent material from the hearth dropping onto the area beneath the mobile home. The air inlet shall not include a damper or other means of closure.

(d) The fireplace or fireplace stove shall not be installed in a sleeping room.

(e) Hearth extension shall be of noncombustible material not less than $\frac{3}{8}$ -inch thick. The hearth shall extend at least 16 inches in front of and at least 8 inches beyond each side of the fireplace or fireplace stove opening. Furthermore the hearth shall extend over the entire surface beneath a fireplace stove and beneath an elevated or overhanging fireplace.

(f) The label on each solid fuel-burning fireplace and solid fuel-burning fireplace stove shall include the following wording: FOR USE WITH SOLID FUEL ONLY.

(g) The chimney shall be provided with a spark arrester securely attached to the chimney. The net free area of the arrester shall be not less than four times the net area of the chimney outlet and the vertical height of the arrester shall be not less than 1.3 times the diameter of the chimney flue. Openings shall not permit the passage of a sphere having a diameter larger than $\frac{1}{2}$ inch, nor block the passage of a sphere having a diameter of less than $\frac{3}{8}$ inch.

(h) The chimney shall extend at least three feet above the part of the roof through which it passes and at least two feet above the highest elevation of any part of the mobile home within 10 feet of the chimney. Portions of the chimney and termination that exceed an elevation of 13 $\frac{1}{2}$ ft. above ground level may be designed to be removed for transporting the mobile home.

6.4 Venting, Ventilation and Combustion Air

6.4.1 The venting as required by 6.1.2 shall be accomplished by one or more of the methods given in (a) and (b) below:

(a) An integral vent system listed or certified as part of the appliance.

(b) A venting system consisting entirely of listed components, including roof jack, installed in accordance with the terms of the appliance listing and the appliance manufacturer's instructions (see 6.3.2).

6.4.2 Venting and combustion air systems shall be installed in accordance with the following:

(a) Components shall be securely assembled and properly aligned using the method shown in the appliance manufacturer's instructions.

(b) Draft hood connectors shall be firmly attached to draft hood outlets or flue collars by sheet metal screws or by an equivalent means.

(c) Every joint of a vent, vent connector, exhaust duct and combustion air intake shall be secure and in alignment.

6.4.3 Venting systems shall not terminate underneath a mobile home.

6.4.4 Venting system terminations shall be not less than three feet from any motor-driven air intake discharging into habitable areas.

6.4.5 The area in which cooking appliances are located shall be ventilated by a metal duct which may be single wall, not less than 12.5 square inches in cross-sectional area (minimum dimension shall be two inches) located above the appliance(s) and terminating outside the mobile home, or by listed mechanical ventilating equipment that is installed in accordance with the terms of listing and the manufacturer's instructions. Gravity or mechanical ventilation shall be installed within a horizontal distance of not more than ten feet from the vertical front of the appliance(s).

6.5 Instructions. Operating instructions shall be provided with appliances.

6.6 Marking

6.6.1 Information on clearances, input rating, lighting and shut-down shall be attached to the appliances with the same permanence as the nameplate, and so located that it is easily readable when the appliance is properly installed.

6.6.2 Each fuel-burning appliance shall bear permanent marking designating the type(s) of fuel for which it is listed.

6.7 Accessibility. Every appliance shall be accessible for inspection, service, repair, and replacement without removing permanent construction. Sufficient room shall be available to enable the operator to observe the burner, control, and ignition means while starting the appliance.

6.8 Location. Heat-producing appliances shall be so located that no doors, drapes, or other such material can be placed or swung closer to the front of the appliance than the clearances specified on the labeled appliances.

6.9 Clearances. Clearances between heat-producing appliances and adjacent surfaces shall not be less than specified in the terms of their listing. Clearance spaces shall be framed in or guarded to prevent creation of storage space within the clearance specified. (See also 6.3.4.1.)

6.10 Circulating Air System

6.10.1 Supply System

6.10.1.1 Supply ducts and any dampers contained therein shall be made from galvanized steel, tin-plated steel, or aluminum, or shall be listed Class O, Class 1, or Class 2 air ducts. Class 2 air ducts shall be located at least 3 feet from the furnace bonnet or plenum. A duct system integral with the structure shall be of durable construction that can be demonstrated to be equally resistant to fire and deterioration. Ducts constructed from sheet-metal shall be in accordance with Table 6.10.1.1.

TABLE 6.10.1.1

Minimum Metal Thickness for Ducts*

Duct Type	Diameter	or	Width
	14 inches or less		over 14 inches
Round	0.013 in.		0.016 in.
Enclosed Rectangular	0.013 in.		0.016 in.
Exposed Rectangular	0.016 in.		0.019 in.

*When "nominal" thicknesses are specified, 0.003 inch shall be added to these "minimum" metal thicknesses.

6.10.1.2 Sizing of Ducts. Ducts shall be designed so that when a labeled forced-air furnace is installed and operated continually at its normal input rating in the mobile home, with all registers in full open position, the static pressure measured in the duct plenum shall not exceed that shown in Table 6.10.1.3, or exceed that shown on the label of the appliance. When an air-cooler coil is installed between the furnace and the duct plenum, the total static pressure between the furnace and the coil shall not exceed that shown on the label of the furnace. The minimum dimension of any branch duct shall be at least 1½ inches, and of any main duct, 2½ inches.

6.10.1.3 Airtightness of Supply Duct Systems. A supply duct system shall be considered substantially airtight when the static pressure in the duct system, with all registers sealed and with the furnace air circulator at high speed, is at least 80 percent of the static pressure measured in the furnace casing, with its outlets

TABLE 6.10.1.3

Maximum Allowable Static Pressures in Supply Duct Systems

Input to Forced-Air Furnace, Btu/hr	External Static Pressure Inches Water Column Measured at the Furnace Outlet	
	Temperature of Outlet Air Determined by Function of Limit Control	
	Above 165°F	165°F or Less
55,000 and under	0.10	0.20
Over 55,000 to 80,000	0.12	0.24
Over 80,000 to 100,000	0.15	0.30

sealed and the furnace air circulator operating at high speed. For the purpose of this paragraph and 6.10.2, pressures shall be measured with a water manometer or equivalent device calibrated to read in increments not greater than 1/10 inch water column.

6.10.1.4 Expandable or Multiple Mobile Home Connections:

(a) An expandable or multiple mobile home may have ducts of the heating system installed in the various units. The points of connection must be so designed and constructed that when the mobile home is fully expanded or coupled, the resulting duct joint will conform to the requirements of this Part.

(b) Installation instructions for supporting the crossover duct from the mobile home shall be provided for onsite installation. The duct shall not be in contact with the ground.

6.10.1.5 Air supply ducts that are not within mobile home insulation having an R factor of at least 4 shall be insulated.

6.10.1.6 Supply ducts within the mobile home but not within insulation described in 6.10.1.5 shall be insulated with rigid insulation having a thermal insulation (R) not less than 2.5 or flexible insulation having a thermal insulation (R) not less than 3 with a continuous vapor barrier having a perm rating of not more than 1.0.

6.10.1.7 Supply ducts exposed directly to outside air, such as under chassis crossover ducts, shall be insulated with material having a thermal insulation (R) of not less than 4.0 with continuous vapor barrier having a perm rating of not more than 1.0.

6.10.1.8 Aluminum foil used as a vapor barrier shall be at least 2 mils in thickness.

6.10.2 Return Air Systems

6.10.2.1 Return Air Openings. Provisions shall be made to permit the return of circulating air from all rooms and living spaces, except toilet room(s), to the circulating air supply inlet of the furnace.

6.10.2.2 Duct Material. Return ducts and any diverting dampers contained therein shall be in accordance with the following:

(a) Portions of return ducts directly above the heating surfaces, or closer than 2 feet from the outer jacket or casing of the furnace shall be constructed of metal in accordance with Table D-3 or shall be listed Class 0 or Class 1 air ducts.

(b) Return ducts, except as required by (a) above, shall be constructed of one-inch (nominal) wood boards (flame spread classification of not more than 200), other suitable material no more flammable than one-inch board or in accordance with 6.10.1.1.

(c) The interior of combustible ducts shall be lined with non-combustible material at points where there might be danger from incandescent particles dropped through the register or furnace such as directly under floor registers and the bottom of vertical ducts or directly under furnaces having a bottom return.

6.10.2.3 Sizing. The cross-sectional areas of the return air duct shall not be less than 2 square inches for each 1,000 Btu per hour input rating of the appliance. Dampers shall not be placed in any return air duct, except that a diverting damper may be placed in a combination fresh air intake and return air duct so arranged that the required cross-sectional area will not be reduced at all possible positions of the damper.

6.10.2.4 Permanent Unclosable Openings. Living areas not served by return air ducts or closed off from the return opening of the furnace by doors, sliding partitions, or other means shall be

provided with permanent unclosable openings in the doors or separating partitions to allow circulated air to return to the furnace. Such openings may be grilled or louvered. The net free area of each opening shall be not less than 1 square inch for every 5 square feet of total living area closed off from the furnace by the door or partition serviced by that opening. Undercutting doors connecting the closed-off space may be used as a means of providing return air area. However, in the event that doors are undercut, they shall be undercut a minimum of 2 inches and no more than 2½ inches, and no more than one half of the free air area so provided shall be counted as return air area.

6.10.3 Joints and Seams. Joints and seams of ducts shall be securely fastened and made substantially airtight. Slip joints shall have a lap of at least 1 inch and shall be individually fastened. Tape or caulking compound may be used for sealing mechanically secure joints. Where used, tape or caulking compound shall not be subject to deterioration under long exposures to temperatures up to 200°F and to conditions of high humidity, excessive moisture, or mildew.

6.10.4 Supports. Ducts shall be securely supported.

6.10.5 Registers or Grills. Fittings connecting the registers or grills to the duct system shall be constructed of metal or material which complies with the requirements of Class 1 or 2 ducts under Underwriters' Laboratories, Inc. Standard for Air Ducts, UL181-1972. Registers or grills shall be constructed of metal or conform with the following:

6.10.5.1 Be made of a material classified 94VE-0 or 94VE-1 when tested as described in Underwriters' Laboratories, Inc. Standard for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances, UL94 — 1974.

6.10.5.2 Floor register or grills shall resist without structural failure a 200 lb. concentrated load on a 2-inch diameter disc applied to the most critical area of the exposed face of the register or grill. For this test the register or grill is to be at a temperature of not less than 165°F and is to be supported in accordance with the manufacturer's instructions.

APPENDIX TO PART D

Reference Table for Standards on Heating, Cooling and Fuel-Burning Appliances, Pipe and Fittings, Systems, Etc.

(See also Standards Referenced in the Text)

This Reference Table is not a part of the Standard but is included for information purposes.

Type	ANSI	UL	Other Standards
<i>Appliances</i>			
Liquid Fuel-Burning Heating Appliances for Mobile Homes and Travel Trailers	A147.1-1969	307(A*) 1969	
Gas-Heating Appliances for Mobile Homes and Travel Trailers		307(b) 1965	
Gas Clothes Dryers	Z21.5.1-1973		
Commercial Gas-Fired and Electrically-Heated Hot Water Generating Equipment			NSF-5 1959
Gas-Fired Gravity and Forced Air Central Furnaces	Z21.47-1973		
Gas-Fired Gravity and Fan Type Floor Furnaces	Z21.48-1973		
Gas-Fired Gravity and Fan Type Sealed Combustion System Wall Furnaces	Z21.44-1973		
Commercial Cooking and Warming Equipment			NSF-4 1967
Household Cooking Gas Appliances	Z21.7-1972		
Refrigerators Using Gas-Fuel	Z21.19-1971*		
Automatic Storage Type Water Heaters with Input Less than 75,000 BTU/H	Z21.10.1-1974*		
<i>Ferrous Pipe and Fittings</i>			
Black and Hot Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Ordinary Uses			ASTM A120-72a. WW-P-406D'73
Electric-Resistance Welded Coiled Steel Tubing for Gas and Fuel Oil Lines			ASTM A539-73
Pipe Threads	B2.1-1968		
Wrought-Steel and Wrought-Iron Pipe	B36.10-1970		

*With Addenda

Type	ANSI	UL	Other Standards
<i>Nonferrous Pipe, Tubing and Fittings</i>			
Seamless Copper Water Tube			ASTM B88-72
Seamless Copper Tube for Air Conditioning and Refrigeration Field Service.....			ASTM B280-73
Metal Connectors for Gas Appliances.....	Z21.24-1973*		
Manually Operated Gas Valves	Z21.15-1969*		
Trailer Standard for Coated Flexible Metal Gas Connectors for Exterior Use..			IAPMO TSC 9-72
Wrought Seamless Copper and Copper Alloy Tube..			ASTM B251-71
Seamless Copper Pipe, Standard Sizes.....			ASTM B42-72 WW-P-377D'62
<i>Miscellaneous</i>			
Air Ducts.....		181-72	
Flame Tests of Flame-Resistant Fabrics.....		214-1971	
Tube Fittings for Flammable and Combustible Fluids and Refrigeration Service.		109-1972	
LPG Containers and Accessories.....			ASME, DOT
Pigtails, Expansion Coils, and Flexible Hose Connectors for LP-Gas.....		569-1973	
Roof Jacks for Trailer Coaches		311-71	
Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems.....	Z21.22-1971*		
Automatic Gas Ignition Systems and Components....	Z21.20-1971		
Automatic Valves for Gas Appliances.....	Z21.21-1974		
Gas Appliance Thermostats.	Z21.23-1971*		
Gas Vents.....	A131.2-1973	441-1973	
Factory-Built Chimneys....	A131.1-1971	103-1971	
Installation of Oil Burning Equipment.....	Z95.1-1974		NFPA No. 31-1974

*With Addenda

Type	ANSI	UL	Other Standards
Installation of Gas Appliances, Gas Piping in Buildings...			NFPA No. 54-1974
Resident Type Warm Air Heating and Air Conditioning			NFPA No. 90B'73
Tests for Flammability of Plastic Materials for Parts in Devices and Appliances		UL 94-1974	
Storage and Handling of Liquefied Petroleum Gas....	Z106.1-1974		NFPA No. 58-1974

Notes to Table

Abbreviations used in this Table refer to standards as identified below and elsewhere in this Standard.

AGA: Standards and Tentative Standards published by the *American Gas Association, Inc. Laboratories*, 8501 East Pleasant Valley Rd., Cleveland, Ohio 44131.

ANSI: American National Standards Institute, 1430 Broadway, New York, N. Y. 10017.

ASME: Standards and Tentative Standards published by the *American Society of Mechanical Engineers*, 345 East 47th Street, New York, N. Y. 10017.

ASTM: Standards and Tentative Standards published by the *American Society for Testing and Materials*, 1916 Race Street, Philadelphia, Pa. 19103.

DOT: Regulations published in the Federal Code of Regulations for the Department of Transportation. Title 49, Parts 171-190 of the FCR are applicable. Available from the U.S. Government Printing Office, Washington, D. C. 20234.

IAPMO: Standards [designated above as TSC (Trailer Standard)] published by the *International Association of Plumbing and Mechanical Officials*, 5032 Alhambra Ave., Los Angeles, Calif. 90032 [formerly *Western Plumbing Officials Association (WPOA)*].

NFPA: Standards published by the National Fire Protection Association, 470 Atlantic Avenue, Boston, Mass. 02210.

NSF: Standards published by the *National Sanitation Foundation*, NSF Building, 3475 Plymouth Road, Ann Arbor, Michigan 48105.

UL: Standards and Tentative Standards published by the *Underwriters' Laboratories Inc.*, 207 East Ohio St., Chicago, Illinois 60611.

WW-P: Standards published by the Federal Supply Service of the General Services Administration available from Specification Sales (3FRSBS), Bldg. 197, Washington Navy Yard, General Services Administration, Washington, D.C. 20407.

Part E — Electrical Systems

1. Scope

1.1 Part E of this Standard and Part A of Article 550 of the National Electrical Code (NFPA No. 70 — 1974; ANSI C1 — 1974) cover the electrical conductors and equipment installed within or on mobile homes and the conductors that connect mobile homes to a supply of electricity. The installation of electrical wiring, fixtures, equipment and appurtenances related to electrical installations within a mobile home park up to the mobile home service-entrance conductors, or, if none, the mobile home service equipment are covered in the Standard for Mobile Home Parks (NFPA No. 501A — 1974; ANSI A119.3 — 1974) or in Part B of Article 550 of the National Electrical Code (NFPA No. 70 — 1974; ANSI C1 — 1974). Mobile homes installed in other than mobile home parks shall comply with the provisions of this Part or with Part A of Article 550 of the National Electrical Code (NFPA No. 70 — 1974; ANSI C1 — 1974).

1.2 A mobile home not intended as a dwelling unit, as for example, equipped for sleeping purposes only, contractor's on-site offices, construction job dormitories, mobile studio dressing rooms, banks, clinics, mobile stores or intended for the display or demonstration of merchandise or machinery, shall not be required to meet the provisions of this Part pertaining to the number or capacity of circuits required. It shall, however, meet all other applicable requirements of this Part if provided with an electrical installation intended to be energized from a 115-volt or 115/230-volt AC power supply system.

1.3 The provisions of this Part apply to mobile homes intended for connection to a wiring system nominally rated 115/230 volts, 3-wire AC, with grounded neutral.

1.4 In addition to the requirements of this Part and Article 550 of the National Electrical Code (NFPA No. 70 — 1974; ANSI C1 — 1974), the applicable portions of other Articles of the National Electrical Code shall be followed covering electrical installations in mobile homes.

Exception: Wherever the requirements of this Part differ from Articles other than Article 550 of the National Electrical Code, this Part and Article 550 shall apply.

2. Definitions

*Accessible (As Applied to Equipment). Admitting close approach because not guarded by locked doors, elevation, or other effective means. (See "Readily Accessible.")

Accessible (As Applied to Wiring Methods). Capable of being removed or exposed without damaging the mobile home structure or finish, or not permanently closed-in by the structure or finish of the mobile home (see "Concealed" and "Exposed").

Air Conditioning or Comfort Cooling Equipment. All of that equipment intended or installed for the purpose of processing the treatment of air so as to control simultaneously its temperature, humidity, cleanliness, and distribution to meet the requirements of the conditioned space.

*Appliance. Utilization equipment, generally other than industrial, normally built in standardized sizes or types, which is installed or connected as a unit to perform one or more functions, such as clothes washing, air conditioning, food mixing, deep frying, etc.

*Appliance, Fixed. An appliance which is fastened or otherwise secured at a specific location.

Appliance, Portable. An appliance which is actually moved or can easily be moved from one place to another in normal use.

Note: For the purpose of this Standard, the following major appliances are considered portable if cord-connected: refrigerators, clothes washers, dishwashers without booster heaters, or other similar appliances.

*Appliance, Stationary. An appliance which is not easily moved from one place to another in normal use.

*Attachment Plug (Plug Cap) (Cap). A device which, by insertion in a receptacle, establishes connection between the conductors of the attached flexible cord and the conductors connected permanently to the receptacle.

*Bonding. The permanent joining of metallic parts to form an electrically conductive path which will assure electrical continuity and the capacity to conduct safely any current likely to be imposed.

*Branch Circuit. The circuit conductors between the final over-current device protecting the circuit and the outlet(s).

Note: A device not approved for branch circuit protection, such as a thermal cutoff or motor overload protective device, is not considered as the overcurrent device protecting the circuit.

*Definition identical to that appearing in the National Electrical Code.

***Branch Circuit — Appliance.** A branch circuit supplying energy to one or more outlets to which appliances are to be connected; such circuits to have no permanently connected lighting fixtures not a part of an appliance.

***Branch Circuit — General Purpose.** A branch circuit that supplies a number of outlets for lighting and appliances.

***Branch Circuit — Individual.** A branch circuit that supplies only one utilization equipment.

***Cabinet.** An enclosure designed either for surface or flush mounting, and provided with a frame, mat, or trim in which swinging doors are hung.

***Circuit Breaker.** A device designed to open and close a circuit by nonautomatic means, and to open the circuit automatically on a predetermined overload of current without injury to itself when properly applied within its rating.

Concealed. Rendered inaccessible by the structure or finish of the mobile home. Wires in concealed raceways are considered concealed, even though they may become accessible by withdrawing them. [See "Accessible (As Applied to Wiring Methods)"]

***Connector, Pressure (Solderless).** A device that establishes a connection between two or more conductors or between one or more conductors and a terminal by means of mechanical pressure and without the use of solder.

Dead Front (As Applied to Switches, Circuit-Breakers, Switchboards, and Distribution Panelboard). So designed, constructed, and installed that no current-carrying parts are normally exposed on the front.

***Demand Factor.** The ratio of the maximum demand of a system, or part of a system, to the total connected load of a system or the part of the system under consideration.

***Device.** A unit of an electrical system that is intended to carry but not utilize electrical energy.

***Disconnecting Means.** A device, or group of devices, or other means by which the conductors of a circuit can be disconnected from their source of supply.

Distribution Panelboard. A single panel or a group of panel units designed for assembly in the form of a single panel, including

*Definition identical to that appearing in the National Electrical Code.

buses, and with or without switches or automatic overcurrent protective devices or both, for the control of light, heat, or power circuits of small individual as well as aggregate capacity; designed to be placed in a cabinet placed in or against a wall or partition and accessible only from the front.

***Enclosed.** Surrounded by a case that will prevent a person from accidentally contacting live parts.

***Equipment.** A general term, including material, fittings, devices, appliances, fixtures, apparatus, and the like used as a part of, or in connection with, an electrical installation.

***Exposed (As Applied to Live Parts).** Capable of being inadvertently touched or approached nearer than a safe distance by a person. It is applied to parts not suitably guarded, isolated, or insulated. (See "Accessible" and "Concealed.")

***Exposed (As Applied to Wiring Method).** On or attached to the surface or behind panels designed to allow access. [See "Accessible (As Applied to Wiring Methods)"]

***Externally Operable.** Capable of being operated without exposing the operator to contact with live parts.

***Feeder Assembly.** The overhead or under-chassis feeder conductors, including the grounding conductor, together with the necessary fittings and equipment, or a power supply cord approved for mobile home use, designed for the purpose of delivering energy from the source of electrical supply to the distribution panelboard within the mobile home.

***Fitting.** An accessory, such as a locknut, bushing, or other part of a wiring system, that is intended primarily to perform a mechanical rather than an electrical function.

***Ground.** A conducting connection, whether intentional or accidental, between an electrical circuit or equipment and earth, or to some conducting body that serves in place of the earth.

***Grounded.** Connected to earth or to some conducting body that serves in place of the earth.

***Grounded Conductor.** A system or circuit conductor that is intentionally grounded.

***Grounding Conductor.** A conductor used to connect equipment or the grounded circuit of a wiring system to a grounding electrode or electrodes.

*Definition identical to that appearing in the National Electrical Code.

*Guarded. Covered, shielded, fenced, enclosed, or otherwise protected by means of suitable covers, casings, barriers, rails, screens, mats or platforms to remove the likelihood of approach or contact by persons or objects to a point of danger.

*Isolated. Not readily accessible to persons unless special means for access are used.

*Lighting Outlet. An outlet intended for the direct connection of a lampholder, a lighting fixture, or a pendant cord terminating in a lampholder.

*Mobile Home Accessory Building or Structure. Any awning, cabana, ramada, storage cabinet, carport, fence, windbreak or porch established for the use of the occupant of the mobile home upon a mobile home lot.

*Mobile Home Lot. A designated parcel of land designed for the accommodation of one mobile home and its accessory buildings, structures, and additional electrical equipment located in a mobile home park or on an individual lot.

Mobile Home Park. A parcel (or contiguous parcels) of land which has been so designated and improved that it contains two or more mobile home lots available to the general public for the placement thereon of mobile homes for occupancy.

*Mobile Home Service Equipment. The equipment containing the disconnecting means, overcurrent protective devices, and receptacles or other means for connecting a mobile home feeder assembly.

Mobile Home Stand. That area of a mobile home lot which has been reserved for the placement of a mobile home.

*Outlet. A point on the wiring system at which current is taken to supply utilization equipment.

Panelboard. A single panel or group of panel units designed for assembly in the form of a single panel; including buses, automatic overcurrent protective devices, and with or without switches for the control of light, heat, or power circuits; designed to be placed in a cabinet or cutout box placed in or against a wall or partition and accessible only from the front.

*Definition identical to that appearing in the National Electrical Code.

Raceway. Any channel for holding wires, cables, or busbars that is designed expressly for, and used solely for, this purpose.

NOTE: Raceways may be of metal or insulating material, and the term includes rigid metal conduit, rigid nonmetallic conduit, flexible metal conduit, electrical metallic tubing, underfloor raceways, cellular concrete floor raceways, cellular metal floor raceways, surface raceways, structural raceways, wireways, and busways.

*Raintight. So constructed or protected that exposure to a beating rain will not result in the entrance of water.

*Readily Accessible. Capable of being reached quickly for operation, renewal, or inspection, without requiring those to whom ready access is requisite to climb over or remove obstacles or to resort to portable ladders, chairs, etc. (See "Accessible.")

*Receptacle. A receptacle is a contact device installed at an outlet for the connection of a single attachment plug.

NOTE: A single receptacle is a single contact device with no other contact device on the same yoke. A multiple receptacle is a single device containing two or more receptacles.

*Receptacle Outlet. An outlet where one or more receptacles are installed.

*Utilization Equipment. Equipment which utilizes electric energy for mechanical, chemical, heating, lighting, or similar purposes.

*Voltage (of a Circuit). The greatest root-mean-square (effective) difference of potential between any two conductors of the circuit concerned.

NOTE: Some systems, such as 3-phase 4-wire, single-phase 3 wire, and 3-wire direct-current may have various circuits of various voltages.

*Weatherproof. So constructed or protected that exposure to the weather will not interfere with successful operation.

NOTE: Rainproof, raintight, or watertight equipment can fulfill the requirements for weatherproof where varying weather conditions other than wetness, such as snow, ice, dust, or temperature extremes, are not a factor.

3. Power Supply

3.1 The mobile home service equipment shall be located adjacent to the mobile home and not mounted in or on the mobile home.

*Definition identical to that appearing in the National Electrical Code.

The power supply to the mobile home shall be a feeder assembly consisting of not more than 3 mobile home power-supply cords, each rated 50 amperes, or a permanently installed circuit.

Exception: A mobile home that is factory-equipped with gas or oil-fired central heating equipment and cooking appliances shall be permitted to be provided with a mobile home power-supply cord rated 40 amperes.

3.2 If the mobile home has a power-supply cord, it shall be permanently attached to the distribution panelboard or to a junction box permanently connected to the distribution panelboard, with the free end terminating in an attachment plug cap.

3.3 Cords with adapters and pigtail ends, extension cords, and similar items shall not be attached to, or shipped with, a mobile home.

3.4 A suitable clamp or the equivalent shall be provided at the distribution panelboard knockout to afford strain relief for the cord to prevent strain from being transmitted to the terminals when the power-supply cord is handled in its intended manner.

3.5 The cord shall be of an approved type with four conductors, one of which shall be identified by a continuous green color or a continuous green color with one or more yellow stripes for use as the grounding conductor.

3.6 The attachment plug cap shall be a 3-pole, 4-wire grounding type, rated 50 amperes, 125/250 volts with a configuration as shown in Figure 3.6 and intended for use with the 50-ampere, 125/250 receptacle configuration as also shown in Figure 3.6. It shall be molded of butyl rubber, neoprene, or other approved materials which have been found suitable for the purpose, and shall be molded to the flexible cord so that it adheres tightly to the cord at the point where the cord enters the attachment-plug cap. If a right-angle cap is used, the configuration shall be so oriented that the grounding member is farthest from the cord.

Note: Complete details of the 50-ampere cap and receptacle can be found in the American National Standard Dimensions of Caps, Plugs and Receptacles, Grounding Type (ANSI C73.17 — 1972).

3.7 The overall length of a power-supply cord, measured from the end of the cord, including bared leads, to the face of the attachment-plug cap shall not be less than 21 feet and shall not exceed 36½ feet. The length of cord from the face of the attachment-plug cap to the point where the cord enters the mobile home shall not be less than 20 feet.

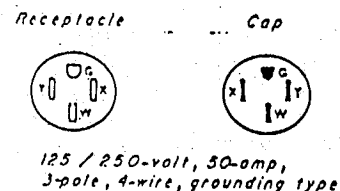


Figure 3.6. 50-ampere 125/250 volt receptacle and attachment-plug-cap configurations, 3-pole, 4-wire grounding types used for mobile home supply cords and mobile home parks.

3.8 The power-supply cord shall bear the following marking: "For use with mobile homes — 40 amperes" or "For use with mobile homes — 50 amperes."

3.9 The point of entrance of the feeder assembly to the mobile home shall be in the exterior wall, floor, or roof, in the rear third section (away from the coupler) of the mobile home.

3.10 Where a separately metered appliance is installed in the mobile home, or where the calculated load of the mobile home is between 50 amperes and 150 amperes, up to three 50-ampere power-supply cords may be installed when permitted by the authority having jurisdiction, or a feeder assembly as provided for in 3.1 and 3.11 shall be permitted. The additional power-supply cord(s) shall be located not more than 12 inches away from the point of entrance of the main power-supply cord. They shall not be interconnected on either the line side or the load side, except that the grounding means shall be electrically interconnected.

3.11 Where the calculated load exceeds 150 amperes or where a permanent feeder is used, the supply shall be by means of:

(a) One mast weatherhead installation installed in accordance with Article 230 of the National Electrical Code (ANSI C1 — 1974; NFPA No. 70 — 1974) containing four continuous insulated, color-coded, feeder conductors, one of which shall be an equipment grounding conductor; or,

(b) an approved metal raceway from the disconnecting means in the mobile home to the underside of the mobile home with provisions for the attachment of a suitable junction box or fitting to the raceway on the underside of the mobile home (with or without conductors as in 3.11 (a)).

4. Disconnecting Means and Branch-Circuit Protective Equipment

4.1 The branch-circuit equipment shall be permitted to be combined with the disconnecting means as a single assembly. Such a combination shall be permitted to be designated as a distribution panelboard. If a fused distribution panelboard is used, the maximum fuse size for the mains shall be plainly marked with lettering at least $\frac{1}{4}$ -inch high and visible when fuses are changed.

Note: See Section 110-22 of the National Electrical Code (NFPA No. 70 — 1974; ANSI C1 — 1974) concerning identification of each disconnecting means and each service, feeder, or branch circuit at the point where it originated and the type marking needed.

4.2 Plug fuses and fuseholders shall be tamper-resistant, Type "S," enclosed in dead-front fuse panelboards.

4.3 Disconnecting Means. A single disconnecting means shall be provided in each mobile home consisting of a circuit breaker, or a switch and fuses and their accessories installed in a readily accessible location near the point of entrance of the supply cord or conductors into the mobile home. The main circuit breakers or fuses shall be plainly marked "Main." This equipment shall contain a solderless type of grounding connector or bar for the purposes of grounding with sufficient terminals for all grounding conductors. The neutral bar termination of the grounded circuit conductors shall be insulated.

4.4 The disconnecting equipment shall have a rating suitable for the connected load. The distribution equipment, either circuit breaker or fused type, shall be located a minimum of 24 inches from the bottom of such equipment to the floor level of the mobile home. The main circuit breakers or switches shall be plainly marked "Main". There shall be a label attached to the panelboard stating:

This Panelboard shall be connected by a Feeder Assembly having Overcurrent Protection rated at not more than Amperes.

The correct ampere rating shall be marked in the blank space.

4.5 Where more than one power-supply cord is installed, disconnecting means shall be provided for each cord and shall be permitted to be combined in a single equipment but without electrical interconnections other than for grounding purposes.

4.6 A distribution panelboard main circuit breaker shall be rated 50 amperes and employ a 2-pole circuit breaker rated 40 amperes for a 40-ampere supply cord, or 50 amperes for a 50-ampere supply cord. A distribution panelboard employing a disconnect switch and fuses shall be rated 60 amperes and shall employ a single 2-pole, 60-ampere fuseholder with 40- or 50-ampere main fuses for 40- or 50-ampere supply cords, respectively. The outside of the distribution panelboard shall be plainly marked with the fuse size.

4.7 The distribution panelboard shall be permitted just inside a closet entry if the location is such that a clear space of 6 inches to easily ignitable materials is maintained in front of the distribution panelboard, and the distribution panelboard door can be extended to its full open position (at least 90 degrees). A clear working space at least 30 inches wide and 30 inches in front of the distribution panelboard shall be provided. This space shall extend from floor to the top of the distribution panelboard.

4.8 Branch-circuit distribution equipment shall be installed in each mobile home and shall include overcurrent protection for each branch circuit consisting of either circuit breakers or fuses.

4.9 The branch circuit overcurrent devices shall be rated:

(a) not more than the circuit conductors; and

(b) not more than 150 percent of the rating of a single appliance rated 10 amperes or more which is supplied by an individual branch circuit; but

(c) not more than the fuse size marked on the air conditioner or other motor-operated appliance.

4.10 A 15-ampere multiple receptacle shall be acceptable when connected to a 20-ampere laundry circuit.

4.11 When circuit breakers are provided for branch-circuit protection, 230-volt circuits shall be protected by 2-pole common or companion trip, or handle-tied paired circuit breakers.

4.12 A metal nameplate on the outside adjacent to the feeder assembly entrance shall read:

This Connection for 120/240 Volt,
3-Pole, 4-Wire, 60 Hertz Ampere Supply

The correct ampere rating shall be marked in the blank space.

7. Fixtures and Appliances

7.1 Electrical materials, devices, appliances, fittings, and other equipment installed, intended for use in, or attached to the mobile home shall be approved for the application and shall be connected in an approved manner when in service. Facilities shall be provided

ever, they shall be protected where they pass through 2-inch by 2-inch studs or at other studs or frames where the cable or armor would be less than $1\frac{1}{2}$ inches from the inside or outside surface. Steel plates on each side of the cable, or a tube, with not less than No. 16 MSG wall thickness shall be required to protect the cable. These plates or tubes shall be securely held in place.

8.5 Where metallic faceplates are used they shall be effectively

5. Branch Circuits Required

5.1 The number of branch circuits required shall be determined in accordance with the following:

5.1.1 Lighting. Based on 3 watts per square foot times outside dimensions of the mobile home (coupler excluded) divided by 115 volts to determine number of 15- or 20-ampere lighting area circuits, e.g.,

$$\frac{3 \times \text{Length} \times \text{Width}}{115 \times 15(\text{or } 20)} = \text{No. of 15(or 20) ampere circuits}$$

5.1.2 Portable Appliances. For the small appliance load in kitchen, pantry, family room, dining room and breakfast rooms of mobile homes, two or more 20-ampere appliance branch circuits, in addition to the branch circuit specified in Paragraph 5.1.1, shall be provided for all receptacle outlets in these rooms, and such circuits shall have no other outlets. Receptacle outlets supplied by at least two appliance receptacle branch circuits shall be installed in the kitchen.

5.1.3 General Appliances (Including Furnace, Water Heater, Range, and Central or Room Air Conditioner, etc.). There shall be one or more circuits of adequate rating in accordance with the following:

(a) Ampere rating of fixed appliances not over 50 percent of circuit rating if lighting outlets (receptacles, other than kitchen, dining area, and laundry, considered as lighting outlets) are on same circuit;

(b) For fixed appliances on a circuit without lighting outlets, the sum of rated amperes shall not exceed the branch-circuit rating for other than motor loads or 80 percent of the branch-circuit rating for air conditioning or other motor loads;

6. Receptacle Outlets

6.1 All receptacle outlets shall be:

- (a) of grounding type;
- (b) installed according to Section 210-7 of the National Electrical Code (NFPA No. 70 — 1974; ANSI C1 — 1974); and
- (c) except when supplying specific appliances, be parallel-blade, 15-ampere, 125-volt, either single or duplex.

NOTE: For ground-fault circuit interrupter requirements refer to Section 210-8.(a) of the National Electrical Code (NFPA No. 70 — 1974; ANSI C1 — 1974).

6.2 There shall be an individual outlet of the grounding type for each cord-connected fixed appliance installed.

6.3 Receptacle Outlets Required. Except in the bath and hall areas, receptacle outlets shall be installed at wall spaces 2 feet wide or more, so that no point along the floor line is more than 6 feet, measured horizontally, from an outlet in that space. Except as explained in the following, receptacle outlets are not required for wall spaces occupied by kitchen or wardrobe cabinets. In addition, a receptacle outlet shall be installed:

- (a) Over or adjacent to counter tops in the kitchen (at least one on each side of the sink if counter tops are on each side and 12 inches or over in width).
- (b) Adjacent to the refrigerator and free-standing gas-range space.
- (c) At counter top spaces for built-in vanities.

ANSI C1 — 1974) shall be permitted provided the box has been tested and approved for the purpose.

8.13 Boxes, fittings and cabinets shall be securely fastened in place.

Exception: Snap-in type boxes or boxes provided with special wall or ceiling brackets that securely fasten boxes in walls or ceilings shall be permitted.

8.14 Outlet boxes shall fit closely to openings in combustible walls and ceilings, and they shall be flush with such surfaces.

8.15 Appliances having branch-circuit terminal connections which operate at temperatures higher than 60°C (140°F) shall have circuit conductors as described in (a) and (b) below:

(a) Branch-circuit conductors having an insulation suitable for the temperature encountered shall be permitted to run directly to the appliance.

(b) Conductors having an insulation suitable for the temperature encountered shall be run from the appliance terminal connection to a readily accessible outlet box placed at least one foot from the appliance. These conductors shall be in a suitable raceway which shall extend for at least 4 feet.

9. Grounding

9.1 General. Grounding of both electrical and nonelectrical metal parts in a mobile home shall be through connection to a grounding bus in the mobile home distribution panelboard. The grounding bus shall be grounded through the green-colored conductor in the supply cord or the feeder wiring to the service ground in the service-entrance equipment located adjacent to the mobile home location. Neither the frame of the mobile home nor the frame of any appliance shall be connected to the neutral conductor in the mobile home.

9.2 Insulated Neutral

9.2.1 The grounded circuit conductor (neutral) shall be insulated from the grounding conductors and from equipment enclosures and other grounded parts. The grounded (neutral) circuit terminals in the distribution panelboard and in ranges, clothes dryers, counter-mounted cooking units, and wall-mounted ovens shall be insulated from the equipment enclosure. Bonding screws, straps, or buses in the distribution panelboard or in appliances shall be removed and discarded.

9.2.2 Connection of ranges and clothes dryers with 115/230-volt, 3-wire ratings shall be made with 4-conductor cord and 3-pole, 4-wire grounding-type plugs, or by Type AC metal-clad cable or conductors enclosed in flexible metal conduit. For 115-volt rated devices, a 3-conductor cord and a 2-pole, 3-wire grounding-type plug shall be permitted.

9.3 Equipment Grounding Means

9.3.1 The green-colored grounding wire in the supply cord or permanent feeder wiring shall be connected to the grounding bus in the distribution panelboard, or disconnecting means.

9.3.2 In the electrical system, all exposed metal parts, enclosures, frames, lamp fixture canopies, etc., shall be effectively bonded to the grounding terminal or enclosure of the distribution panelboard.

9.3.3 Cord-connected appliances, such as washing machines, clothes dryers, refrigerators, and the electrical system of gas ranges, etc., shall be grounded by means of an approved cord with grounding conductor and grounding-type attachment plug.

9.4 Bonding of Noncurrent-Carrying Metal Parts

9.4.1 All exposed noncurrent-carrying metal parts that may become energized shall be effectively bonded to the grounding terminal or enclosure of the distribution panelboard. A bonding conductor shall be connected between each distribution panelboard and an accessible terminal on the chassis.

9.4.2 Grounding terminals shall be of the solderless type and approved as pressure-terminal connectors recognized for the wire size used. The bonding conductor shall be solid or stranded, insulated or bare, and shall be No. 8 copper minimum, or equal. The bonding conductor shall be routed so as not to be exposed to physical damage.

NOTE: Protection can be afforded by the configuration of the chassis.

9.4.3 Metallic gas, water and waste pipes and metallic air-circulating ducts shall be considered bonded if they are connected to the terminal on the chassis (see 9.4.1) by clamps, solderless connectors, or by suitable grounding-type straps.

9.4.4 Any metallic roof and exterior covering shall be considered bonded if (a) the metal panels overlap one another and are securely attached to the wood or metal frame parts by metallic fasteners, and (b) if the lower panel of the metallic exterior covering

is secured by metallic fasteners at a cross member of the chassis by two metal straps per mobile home unit or section at opposite ends. The bonding strap material shall be a minimum of 4 inches in width of material equivalent to the skin or a material of equal or better electrical conductivity. The straps shall be fastened with paint-penetrating fittings (such as screws and starwashers or equivalent).

10. Electrical Testing

10.1 Dielectric Strength Test. The wiring of each mobile home shall be subjected to a 1-minute, 900-volt dielectric strength test (with all switches closed) between live parts (including neutral) and the mobile home ground. Alternatively, the test may be performed at 1,080 volts for 1 second. This test shall be performed after branch circuits are complete and after fixtures or appliances are installed.

Exception: Fixtures or appliances which are listed shall not be required to withstand the dielectric strength test.

11. Calculations

11.1 The following method shall be employed in computing the supply-cord and distribution-panelboard load for each feeder assembly for each mobile home and shall be based on a 3-wire, 115/230-volt supply with 115-volt loads balanced between the two legs of the 3-wire system.

Method No. 1

A. Lighting and Small Appliance Load

Lighting Watts: Length times width of mobile home (outside dimensions, exclusive of coupler) times 3 watts per square foot; e.g., Length X width X 3 = lighting watts.

Small Appliance Watts: Number of circuits times 1,500 watts for each 20-ampere appliance receptacle circuit (see definition of "Appliance, Portable" with note); e.g., Number of circuits X 1,500 =small appliance watts.

Total Watts: Lighting watts plus small appliance = total watts.

First 3,000 total watts at 100 percent plus remainder at 35 percent = watts to be divided by 230 volts to obtain current (amperes) per leg.

B. Total load for determining power supply is the summation of:

- (1) Lighting and small appliance load as calculated in 11.A.

- (2) Nameplate amperes for motors and heater loads (exhaust fans, air conditioners,* electric, gas, or oil heating). †

*Omit smaller of these two, except include blower motor if used as air conditioner evaporator motor.

†When an air conditioner is not installed and a 40-ampere power supply cord is provided, allow 15 amperes per leg for air conditioning.

- (3) 25 percent of current of largest motor in (2).

- (4) Total of nameplate amperes for: disposal, dishwasher, water heater, clothes dryer, wall-mounted oven, cooking units.

Where number of these appliances exceeds three, use 75 percent of total.

- (5) Derive amperes for free-standing range (as distinguished from separate ovens and cooking units) by dividing values below by 230 volts.

Nameplate Rating	Use
10,000 w X or less	80 percent of rating
10,001-12,500 w	8,000 w
12,501-13,500 w	8,400 w
13,501-14,500 w	8,800 w
14,501-15,500 w	9,200 w
15,501-16,500 w	9,600 w
16,501-17,500 w	10,000 w

- (6) If outlets or circuits are provided for other than factory-installed appliances include the anticipated load.

Note: The following example is given to illustrate the application of this Method of Calculation:

Example

A mobile home is 70 X 10 feet and has two portable appliance circuits, a 1000 watt 230 volt heater, a 200 watt 115-volt exhaust fan, a 400 watt 115 volt dishwasher and a 7000 watt electric range.

Lighting and small appliance load	
Lighting 70 X 10 X 3 =	2100 watts
Small appliance 1500 X 2 =	3000 watts
	<u>5100 watts</u>
1st 3000 watts at 100%.....	3000
Remainder (5100 - 3000 = 2100) at 35%.....	<u>735</u>
	3735
$\frac{3735}{230}$ = 16 amperes per leg	

1000 watt (heater) + 230 =
 200 watt (fan) + 115 =
 400 watt (dishwasher) + 115 =
 7000 watt (range) \times .8 + 230 =

4.4 amp
 1.7 amp
 3.5 amp
 24. amp

Lighting and appliances
 Heater (230 volt)
 Fan (115 volt)
 Dishwasher (115 volt)
 Range

Amperes per leg

A	B
4	16
16	16
4	4
2	—
—	4
24	24

Totals 46 40

Based on the higher current calculated for either leg, use one 50 ampere supply cord.

Method No. 2

C. Optional Method of Calculation for Lighting and Appliance Loads. For mobile homes served by a single 3-wire 115/230-volt set of feeder conductors with an ampacity of 100 or greater, the total load for determining the feeder ampacity may be computed in accordance with Table 11.1C instead of the method specified in 11.1A and B. Feeder conductors whose demand load is determined by this optional calculation shall be permitted to have the neutral load determined by Section 220-22 of the National Electrical Code (NFPA No. 70-1974; ANSI C1-1974). The loads identified in Table 11.1C as "other load" and as "Remainder of other load" shall include the following:

- (1) 1500 watts for each 2-wire, 20-ampere small appliance branch circuit and each laundry branch circuit specified.
- (2) 3 watts per square foot for general lighting and general-use receptacles.
- (3) The nameplate rating of all fixed appliances, ranges, wall-mounted ovens, counter-mounted cooking units, and including 4 or more separately controlled space heating units.
- (4) The nameplate ampere or kVA rating of all motors and of all low-power-factor loads.
- (5) The largest of the following: (a) air-conditioning load; (b) the 65 percent diversified demand of the central electric space heating load; (c) the 65 percent diversified demand of the load of less than four separately-controlled electric space heating units; (d) the connected load of four or more separately-controlled electric space heating units.

Table 11.1C

Optional Calculation for Mobile Homes
 with 100-Ampere or Larger Service

Load (in kW or kVA)	Demand Factor (Percent)
Air conditioning and cooling, including heat pump compressors	100
Central electric space heating	65
Less than four separately controlled electric space heating units	65
First 10kW of all other load	100
Remainder of other load	40

12. Wiring of Expandable Units and Dual Units

12.1 Expandable or dual unit mobile homes shall use fixed-type wiring methods and materials for connecting such units to each other.

12.2 Expandable or dual unit mobile homes not having permanently installed feeders and which are to be moved from one location to another, shall be permitted to have disconnecting means with branch circuit protective equipment in each unit when so located that after assembly or joining together of units the requirements of 3.10 will be met.

13. Outdoor Outlets, Fixtures, Air-Conditioning Equipment, etc.

13.1 Outdoor fixtures and equipments shall be recognized for outdoor use. Outdoor receptacles or convenience outlets shall be of a gasketed-cover type.

13.2 A mobile home provided with a receptacle outlet designed to energize heating and/or air conditioning equipment located outside the mobile home, shall have permanently affixed, adjacent to the outlet receptacle, a metal tag which reads:

This Connection Is for Air Conditioning
 Equipment Rated at Not More Than
Amperes, atVolts, 60 Hertz.

The correct voltage and ampere ratings shall be given. The tag shall be not less than 0.020 inch, etched brass, stainless steel, anodized or clad aluminum or equivalent. The tag shall be not less than 3 inches by 1 $\frac{3}{4}$ inches minimum size.

14. Painting of Wiring

14. During painting or staining of the mobile home, it shall be permitted to paint metal raceways (except where grounding continuity would be reduced) or the sheath of the nonmetallic cable. Some arrangement, however, shall be made so that no paint shall be applied to the individual wires, as the color coding may be obliterated by the paint.

15. Polarization

15.1 The identified (white) conductor shall be employed for grounded circuit conductors only and shall be connected to the identified (white) terminal or lead on receptacle outlets and fixtures. It shall be the unswitched wire in switched circuits, except that a cable containing an identified conductor (white) shall be permitted for single-pole three-way or four-way switch loops where the connections are made so that the unidentified conductor is the return conductor from the switch to the outlet. Painting of the terminal end of the wire shall not be required.

15.2 If the identified (white) conductor of a cable is used for other than grounded conductors or for other than switch loops as explained above (for a 230-volt circuit, for example), the conductor shall be finished in a color other than white at each outlet where the conductors are visible and accessible.

15.3 Green-colored wires or green with yellow stripe shall be used for grounding conductors only.

16. Examination of Equipment for Safety

16.1 The examination or inspection of equipment for safety, according to this Standard, shall be conducted under uniform conditions and by organizations properly equipped and qualified for experimental testing, inspections of the run of goods at factories, and service-value determinations through field examinations.

Appendix to Part E
Standards for Electrical Installations,
Wiring and Components

This Reference Table is not a part of this Standard but is included for information purposes.

Name of Standard	ANSI	NFPA
National Electrical Code	C1-1974	No. 70 - 1974
Standard Dimensions of Caps, Plugs, and Receptacles, Grounding Type, General Purpose 125/250 Volts, 50-Amperes, 3-Pole, 4 Wire	C73.17-1973	

Appendix to Part E

Summary of Revisions in Current Edition to Part E

Note: This listing shows in Column 1 where substantive (vs editorial) changes have been made as contrasting the last previous edition of this Standard. In Columns 2 and 3 show corresponding Section and Paragraph Numbers for this and the last previous edition of this Standard. In Columns 3 and 4 corresponding Section and Paragraph Numbers of the 1971 and current edition of the National Electrical Code are matched with the text in this Part.

Substantive Change?	1974 Edition of NFPA 501B	1973 Edition of NFPA 501B	1971 Edition of National Electrical Code	Current Edition of National Electrical Code
Yes	1.1	2.1	(not in text)	550-1 (a) and (c)
	1.2	4.4	550-1 (b)	550-1 (b)
	1.3	4.1	550-1 (c)	550-1 (d)
	1.4	1.1 and 2.2		
	Part 2	Part 3	Art. 100 and 550-2	Art. 100 and 550-2
Yes	3.1	10.1	550-3 (a)	550-3 (a)
	3.2	10.2	550-3 (b)	550-3 (b)
	3.3	10.3	550-3 (c)	550-3 (c)
	3.4	10.4	550-3 (d)	550-3 (d)
	3.5	10.5	550-3 (e)	550-3 (e)
	3.6	10.6	550-3 (f)	550-3 (f)
Yes	3.7	10.7	550-3 (g)	550-3 (g)
	3.8	10.8	550-3 (h)	550-3 (h)
	3.9	10.9	550-3 (i)	550-3 (i)
	3.10	10.10	550-3 (j)	550-3 (j)

Substantive Change?	1974 Edition of NFPA 501B	1973 Edition of NFPA 501B	1971 Edition of National Electrical Code	Current Edition of National Electrical Code
	3.11	10.11	550-3(k)	550-3(k)
Yes	4.1	9.1	550-4	550-4
	4.2	9.6	550-4	550-4
Yes	4.3	(not in text)	550-4(a)	550-4(a)
	4.4	9.2	550-4(a)	550-4(a)
Yes	4.5	(not in text)	550-4(a)	550-4(a)
	4.6	9.5	550-4(a)	550-4(a)
Yes	4.7	9.3	550-4(a)	550-4(a)
Yes	4.8	(not in text)	550-4(b)	550-4(b)
	4.9	9.8	550-4(b)	550-4(b)
Yes	4.10	7.1.3(e)	(not in text)	550-4(b)
	4.11	9.10	550-4(c)	550-4(c)
Yes	4.12	25.4	550-4(d)	550-4(d)
	5.1	7.1	550-5	550-5
	5.1.1	7.1.1	550-5(a)	550-5(a)
	5.1.2	7.1.2	550-5(b)	550-5(b)
	5.1.3(n)(b)(c)(d)	7.1.3(n)(b)(c)(d)	550-5(c)(1)(2)(3)(4)	550-5(c)(1)(2)(3)(4)
Yes (Note)	6.1	19.1	550-6(a)	550-6(a)
	6.2	19.1	550-6(b)	550-6(b)
	6.3	6.1	550-6(c)	550-6(c)
	6.4	6.2	550-6(d)	550-6(d)
	7.1	5.1	550-7(a)	550-7(a)
	7.2	20.1.2	550-7(b)(1)	550-7(b)(1)
	7.3	20.4.1	550-7(b)(2)	550-7(b)(2)
	7.4	20.4.2	550-7(b)(3)	550-7(b)(3)
	7.5	20.1.1	410-13	410-13
	7.6	5.2	550-7(c)	550-7(c)
	8.1	2.2	550-8	550-8
	8.2	11.3	550-8(a)	550-8(a)
	8.3	11.12	550-8(b)	550-8(b)
	8.4	11.7	550-8(c)	550-8(c)
	8.5	13.4	550-8(d)	550-8(d)
Yes	8.6	11.11	550-8(e)	550-8(e)
Yes	8.7	11.2	550-8(f)	550-8(f)
Yes	8.8	18.1	550-8(g)	550-8(g)
	8.9	14.2	550-8(h)	550-8(h)

Substantive Change?	1974 Edition of NFPA 501B	1973 Edition of NFPA 501B	1971 Edition of National Electrical Code	Current Edition of National Electrical Code
	8.10	12.1	550-8(i)(1)	550-8(i)(1)
	8.11	12.2	550-8(i)(2)	550-8(i)(2)
	8.12	14.1	550-8(j)	550-8(j)
	8.13	11.5	550-8(k)	550-8(k)
	8.14	11.4	370-10	370-10
Yes	8.15	(not in text)	(not in text)	550-8(l)
	9.1	23	550-9	550-9
	9.2	23.2	550-9(a)	550-9(a)
	9.2.1	23.2.1	550-9(a)(1)	550-9(a)(1)
Yes	9.2.2	23.2.2	550-9(a)(2)	550-9(a)(2)
Yes	9.3	(not in text)	550-9(b)	550-9(b)
Yes (New)	9.3.1	(not in text)	550-9(b)(1)	550-9(b)(1)
	9.3.2	23.3.1	550-9(b)(2)	550-9(b)(2)
	9.3.3	23.3.4	550-9(b)(3)	550-9(b)(3)
	9.4	23.4	550-9(c)	550-9(c)
	9.4.1	23.4.1	550-9(c)(1)	550-9(c)(1)
	9.4.2	23.4.2	550-9(c)(2)	550-9(c)(2)
	9.4.3	23.4.3 (Except.)	550-9(c)(3)	550-9(c)(3)
	9.4.4	7.6, 7.6.1, 7.6.2	550-9(c)(4)	550-9(c)(4)
	10.1	24.1	550-10	550-10
	11.1 (Method 1)	8.1	550-11(a), (b)	550-11(a), (b)
Yes (New)	11.1 (Method 2)	(not in text)	220-7	550-11(c), 220-30
	12	21	550-12	550-12
Yes	12.1	21.1	550-12(a)	550-12(a)
Yes	12.2	21.2	550-12(b)	550-12(b)
Yes	Eliminated	21.3	550-12(c)	Eliminated
	13	22	550-13	550-13
	13.1	22.1	550-13(a)	550-13(a)
	13.2	22.2	550-13(b)	550-13(b)
	14	15	(not in text)	(not in text)
	15	16	Art. 200	Art. 200
	15.1	16.1	200-6; 200-10	200-6; 200-10
	15.2	16.2	200-7	200-7
	15.3	16.3	210-5(b); 400-14	310-10(b); 400-23
	16.1	24.2	90-83	90-6

Appendix A

Summary Rules and Suggested Format for
Requesting Official Interpretations

Note

The Official Interpretations Procedures are as described in the front of this Standard. Utilization of these Procedures should be held to the minimum since they impose a considerable burden on the members of the sponsoring committee, are difficult to administer in timely fashion (as most must be handled outside the Committee's normal procedure), the results cannot be held binding on all users. Thus, whenever possible, those needful of an interpretation of a provision in the Standard should either recommend revision of the Standard to clarify its intent (to be processed through normal Committee procedures), or solicit informal guidance from the Sectional Committee Officers as very frequently questions of the Committee's intent in drafting the specific text can be explained by those who developed the same or by reference to Minutes of the Sectional Committee's Meetings. New product developments and technological innovations cannot normally be handled by using the Official Interpretations Procedures and Official Interpretations aimed at gaining recognition of same by using these Procedures may be rejected.

Summary Rules

1. Each request for an Official Interpretation shall be to a specified Part, Section and Paragraph which shall be identified.
2. An Official Interpretation shall be given only to explain or determine the meaning of the literal text or the intent of the Sectional Committee when the text was prepared. These Procedures shall not be used to effect revisions of the Standard although the Sectional Committee is obliged after rendering an Official Interpretation to review the original text with a view to determining whether any change may be desired in the Standard to clarify or correct the condition which brought about the request for the Official Interpretation.
3. An Official Interpretation shall not be rendered to approve or disapprove of a particular manufacturer's product or design based on submittals of detailed specifications or design criteria. This is a function of the testing laboratories or inspection agencies.
4. Each Official Interpretation shall be submitted in eight identical copies.
5. All parties involved in the Official Interpretation to the knowledge of the submitter shall be identified and their viewpoints shall be concisely delineated.
6. There shall be no time constraints placed on the Sectional Committee for the rendering of any requested Official Interpretation.
7. Each approved Official Interpretation shall be sent to the applicant and other identified parties (see 5 above) and shall be published by the National Fire Protection Association as the Administrative Secretariat. News Releases containing the Official Interpretation shall be sent to the American National Standards Institute and to the trade press as appropriate. These releases shall not name the parties involved but shall report verbatim the Official Interpretation as rendered.

Suggested Format

Each Official Interpretation should be drafted to result in a "Yes" or "No" answer (see below). If the request is not in that form, the Chairman of the Sectional Committee may attempt to so rephrase the question that this result is achieved. Any such rephrasing shall be checked with the applicant to assure that in the rephrasing the purpose of the original request is not altered.

Note:

The Interpretation Subcommittee may offer explanatory remarks supplementing an Official Interpretation where such action is deemed desirable. Such explanatory data need not, however, be included as a part of the published Official Interpretation on the option of the Chairman.

Recommended Format For Official Interpretations
(Request to be on the Business Stationery of the Applicant)

1. Standard Title, Numerical Designation, Year:
Standard for Mobile Homes, NFPA No. 501B-1974, ANSI A119.1-1974
2. Part, Section, and Paragraph Involved:
Part X, Section Y, Paragraph Z
3. Party Requesting the Interpretation:
Name of Individual, Title, Company or Organization, Street Address, City, State, Zip Code
4. Other Parties Involved:
Give Name(s), Title(s), Company or Organization Name(s) and Address(es)
5. Interpretation Requested:
Is it the intent of the referenced Paragraph cited above that . . . (pose the interpretation in question form to permit a "Yes" or "No" answer)
.....
6. Answer:
 Yes No
7. Supplementary Information or Explanation:
If considered desirable by the submitter, supplementary information or an explanation of the reason(s) for this request for an Official Interpretation may be offered. If it involves an enforcement agency or official, a testing laboratory or third party inspection agency, or is a question resulting or likely to result in a court case, these facts should be noted. Do not submit engineering drawings with the intent of seeking approval of a plan or device as part of an Official Interpretation.
8. Signature of Applicant with Title: _____

TIME SCHEDULE FOR 1974-1977
ACTIVITIES OF THE SECTIONAL COMMITTEE
ON MOBILE HOMES AND TASK FORCES
REPORTING TO IT

Precise Dates and Locations of Meetings should be
Verified Before Attendance
Meetings of the Sectional Committee, the Correlating
Committee and Task Forces are open only to Members
Except with Approval of the Chairman

1974 May 20, Miami Beach, Florida, Fontainebleau Hotel.

- (1) Proposed Action on 1974 Revisions by NFPA.
- (2) Approval of Sectional Committee Personnel for 1974-75 and of Existing Task Forces (Construction, Plumbing, Heating, and Intersectional Committee Electrical).
- (3) Appointment of Personnel for Special Task Force on Energy Conservation and for Intersectional Committee on Installation of Mobile Homes.

June 11-12, St. Louis, Missouri, Chase-Park Plaza Hotel. First Meeting of Special Task Force on Energy Conservation. (The Task Force will schedule future activities and Meeting dates at this time.)

June 13, St. Louis, Missouri, Chase-Park Plaza Hotel. First Meeting of Intersectional Committee on Installation of Mobile Homes. (The Intersectional Committee will schedule future activities and Meeting dates at this time.)

November 15, Deadline Date for Submittal of Recommendations on Body and Frame Design and Construction Requirements (Part B of the Standard) for consideration by the Construction Task Force at its January 7-8, 1975 meeting and for the Proposed 1976 edition.

1975 January 7-8, Houston, Texas (Loyal Coach Motor Hotel) Meeting of the Construction Task Force to review recommendations for the 1976 edition and to review Part B in its entirety. Hopefully, the Special Task Force on Energy Conservation will have a report for Proposed Revisions to Part B for the Construction Task Force's review by this date. This may require separate processing as a Tentative Interim Amendment.

Note: See May 6-7, 1975 Meeting of Heating Task Force.

If the Intersectional Committee on Installation of Mobile Homes has recommendations concerning Part B they should be available for this Meeting.

January 15, Deadline Date for Submittal of Recommendations on Plumbing Systems (Part C of the Standard) for consideration by the Plumbing Task Force at its March 18-19, 1975 Meeting and for the Proposed 1976 edition.

March 18-19, Louisville, Kentucky (Hotel to be selected). Meeting of the Plumbing Task Force to review recommendations for the 1976 edition and to review Part C in its entirety. If the Intersectional Committee on Installation of Mobile Homes has recommendations concerning Part C they should be available for action at this meeting.

March 24, Deadline Date for Submittal of Recommendations on Heating, Cooling, and Fuel-Burning Systems (Part D of the Standard) for consideration by the Heating Task Force at its May 6-7, 1975 meeting and for the Proposed 1976 edition.

May 6-7, Boston, Massachusetts (Hotel to be selected). Meeting of the Heating Task Force to review recommendations for the 1976 edition and to review Part D in its entirety. If the Special Task Force on Energy Conservation has its report for revisions to Part D for the Heating Task Force's review, it will be handled at this meeting. This may require separate processing as a Tentative Interim Amendment.

Note: If this Special Task Force can make recommendations for both the Construction and Heating Task Force by the time of the Construction Task Force Meeting, January 7-8, 1975, it may be necessary to extend the latter meeting by a day or two and have a Special Joint Meeting of the Construction and Heating Task Forces at that time. This would obviously be preferred as it would permit one T.I.A. being issued on the whole subject of Energy Conservation.

If the Intersectional Committee on Installation of Mobile Homes has recommendations concerning Part D they should be available at this meeting.

September 1, Deadline for Submittal of Proposed Revisions for the 1976 edition to the Sectional Committee on Mobile Homes from the Construction, Plumbing and Heating Task Forces.

October 6-7, St. Louis, Missouri, (Hotel to be selected). Meeting of the Sectional Committee on Mobile Homes to receive and discuss Proposed 1976 Revisions to the Standard for Mobile Homes (Parts A, B, C, and D) from the Task Forces.

December 1, Deadline date for Submittal of Proposed Revisions on Electrical Systems (Part E of the Standard and Article 550, Part A, of the National Electrical Code) for the 1977 edition. If the Intersectional Committee on Installation of Mobile Homes has recommendations concerning Part E of the Standard and Part A of Article 550, they should be available for action at this meeting.

1976, February 2, Completion of Report of the Sectional Committee on Mobile Homes for 1976 Action by NFPA at its November 1976 NFPA Fall Meeting (Houston, Texas) and for submittal to ANS1.

February 16-17, Chicago, Illinois (Hotel to be selected). Meeting of the Intersectional Committee Electrical Task Force to review Proposed Revisions of Part E of the Standard (Electrical Systems) and Article 550 (Part A) of the National Electrical Code for the 1977 edition of the Standard and the Proposed 1977 edition of the NEC. Hopefully, this can be a joint meeting with Code-Making Panel No. 19 of the National Electrical Code Committee.

March 22, Completion of Balloting by the Sectional Committee and the Correlating Committee on Mobile Homes and Recreational Vehicles on the Report of the Sectional Committee for 1976 action.

March 26, Announcement of Publication of 1976 NFPA Technical Committee Reports for the November 1976 NFPA Fall Meeting.

April 16, Deadline Date for Report to the Sectional Committee on Mobile Homes and to the Correlating Committee of the National Electrical Code Committee for Revisions of Part E of the Standard and Article 550 (Part A) of the National Electrical Code for the 1977 edition of each.

May 14, Distribution of 1976 NFPA Technical Committee Reports for the November 1976 NFPA Fall Meeting.

May 17-18, Informal Report of the National Electrical Code Committee to the NFPA Electrical Section at the NFPA's Annual Meeting (Houston, Texas) on Revisions to Article 550 (Part A) of the National Electrical Code and Part E of the Standard for Mobile Homes.

July 7, Closing Date for Public Comments on 1976 NFPA Technical Committee Reports.

July 13-14, Denver, Colorado. (Hotel to be selected). Meeting of the Sectional Committee on Mobile Homes to receive and discuss public comments on 1976 Proposed Revisions and to prepare Committee Documentation for 1976 NFPA Technical Committee Documentation (if necessary).*

July 30, Start of Circulation of the Preprint of the Proposed Amendments for the 1977 National Electrical Code.

August 6, Text of Committee Documentation finalized for publication by NFPA in 1976 Technical Committee Documentation (if necessary).*

August 18, Results of Letter Ballot by the Sectional Committee and the Correlating Committee on 1976 NFPA Technical Committee Documentation (if necessary).*

September 7-9, Boise, Idaho (Hotel to be selected). Meeting of the Inter-sectional Committee Electrical Task Force for consideration of Proposed Revisions to Part E of the Standard and Article 550 (Part A) of the NEC.

October 1, Publication of NFPA Technical Committee Documentation for the 1976 NFPA Fall Meeting (Cincinnati, Ohio).

November 16-18, NFPA Fall Meeting (Cincinnati, Ohio -- Netherlands Hilton Hotel) to receive and act on 1976 Proposed Revisions to Parts A, B, C, and D of the Standard for Mobile Homes. (No Part E Revisions).

Early December, Meeting of Code-Making Panel No. 19 of the National Electrical Code Committee to review and act on Proposed 1977 Revisions to Article 550 (Part A) of the NEC (Part E of the Standard for Mobile Homes). Hopefully, this Meeting can be a joint meeting with the Inter-sectional Committee Electrical Task Force.

1977 January 10 and half of 11, New Orleans, Louisiana (Hotel to be selected). Meeting of the Sectional Committee on Mobile Homes to receive Report of the Inter-sectional Committee Electrical Task Force for Revisions of Part E for the 1977 edition and to initiate planning for 1977-1980 activities.

February 1, Final Date for Code-Making Panel No. 19 to submit its Report to the National Electrical Code Correlating Committee for Article 550 (Part A) of the NEC (Part E of the Standard for Mobile Homes).

April 15, NFPA publishes and distributes the Proposed 1977 National Electrical Code in a Volume of the NFPA Technical Committee Reports for action at the 1977 NFPA Annual Meeting (May 16-20, Washington, D.C.). The text of Article 550, Part A, will automatically -- if jointly approved -- be inserted (with appropriate renumbering and editorial changes) in Part E.

May 16-20, Washington, D.C. (Washington Hilton Hotel). NFPA action on Proposed Revisions to Article 550 (Part A) of the National Electrical Code and Part E of the Standard for Mobile Homes for the 1977 edition. (The 1977 edition of the Standard for Mobile Homes will change only Part E.)

*"Committee Documentation" needed only if negative comments are received as result of circulation for public comment or unresolved negatives within Committee.

APPENDIX H.

(RESERVED)

APPENDIX I

STANDARD FOR
OFF-STREET PARKING AND SERVICE FACILITIES

MOLENA, GEORGIA

Section 101: Scope. This Standard covers specifications for off-street parking and service facilities in Molena. Requirements for such facilities are specified by zoning district in the Molena Zoning Ordinance. That Ordinance refers the reader to this Standard for specifications of required facilities.

Section 102: General Standards for Parking Space Design.

- A. **Parking Spaces Must Not Be Reduced:** Off-street parking spaces must not be reduced below the minimum required number for the use of facility to which they are assigned.
- B. **Drainage, Construction, and Maintenance:** All off-street parking, loading, and service areas must be drained so as to prevent damage to abutting properties and/or public streets, and must be constructed of materials which will assure a surface resistant to erosion. All such areas must be at all times maintained at the expense of the owners in a clean, orderly, and dust-free condition to the extent that it does not create a nuisance.
- C. **Separation from Walkways, Sidewalks, and Streets:** All off-street parking, loading, and service areas must be separated from walkways, sidewalks, and streets by curbing or other suitable protective device.
- D. **Parking Area Design:** Parking stalls must have a minimum width of nine and one-half (9 1/2) feet and length of eighteen (18) feet. There must be provided adequate interior driveways to connect each parking space with a public right-of-way. Interior driveways must be at least twenty-four (24) feet wide where used with ninety (90) degree angle parking, at least eighteen (18) feet wide where used with sixty (60) degree angle parking, at least twelve (12) feet wide where used with forty-five (45) degree angle parking, and at least twelve (12) feet wide where used with parallel parking. Where there is no parking, interior driveways must be at least twelve (12) feet wide for one-way traffic movement and at least twenty-four feet wide for two-way traffic movement.
- E. **Joint Parking Facilities:** Two (2) or more neighboring uses of the same or different types may provide joint

parking facilities as long as the number of off-street parking spaces are not less than the sum of the individual requirement.

- F. **Pavement markings and Signs:** Each off-street parking space must be clearly marked, and directional arrows, and signs must be properly maintained so as to ensure their maximum efficiency.

Section 103: Number of Parking Spaces Required. Off-street parking space must be provided and maintained as specified in the following schedule. For uses not specifically listed here, the parking requirements for the listed use most similar to the unlisted use in question, as determined by the Administrative Officer will apply. Parking requirements by use are as follows:

- A. **Apartment or other multi-family dwelling:** Two (2) spaces for each dwelling unit.
- B. **Auditorium, stadium, assembly hall, gymnasium, theater, community recreation center, or church:** Whichever of the following three (3) standards is the greatest:
1. One (1) space per four (4) fixed seats in largest assembly room or area, or:
 2. One (1) space for each forty (40) square feet of floor area available for the accommodation of moveable seats, or combination of fixed and moveable seats, in the largest assembly room, or:
 3. One (1) space per each one hundred fifty (150) square feet of gross floor area.
- C. **Automobile fueling station:** Two (2) spaces (in addition to service area) for each pump and grease rack, but not less than four (4) spaces.
- D. **Automobile sales and repair, service station, carwash:** Two (2) spaces (in addition to service area) for each pump and grease rack, but not less than four (4) spaces--plus--one (1) space for each five hundred (500) square feet of gross floor area of the shop or carwash.
- E. **Bowling alley:** Four (4) spaces per alley--plus--requirements for any other use associated with the establishment such as a restaurant, etc.
- F. **Club or lodge:** One (1) space for each two (2) employees plus one (1) space for each two hundred (200) square feet of gross floor area within the main assembly area--plus--additional spaces for other uses permitted within the premises.
- G. **Combined uses:** Parking spaces must be the total of the

spaces required for each separate use established by this schedule.

- H. **Commercial recreation area (indoor or outdoor) such as YMCA or similar use:** Whichever of the following two (2) standards is the greater:
1. One (1) space for each one hundred fifty (150) square feet of gross floor, building, ground area.
 2. One (1) space per each four (4) seats or other (4) facilities available for patron use.
- I. **Dance school:** One (1) space for each employee plus one (1) space per one hundred fifty (150) square feet of gross floor area--plus--adequate area for safe and convenient loading and unloading of students.
- J. **Dwelling--single-family or two-family:** Two (2) spaces for each dwelling unit. Residential driveways will satisfy this need.
- K. **Fraternity, sorority, college dormitory:** One (1) space for each two (2) residents plus one (1) space for each two (2) employees.
- L. **Golf Course:** Two (2) spaces for each hole and one (1) space for each two (2) employees--plus--requirements for any other use associated with the golf course.
- M. **Hospital, personal care home, intermediate care home, nursing home:** One (1) space for each three (3) beds plus one (1) space for each two (2) employees (nurses, attendants, etc.) plus one (1) space for each staff or visiting doctor.
- N. **Hotel:** One (1) space for each three(3) guest rooms, suites, or units plus one (1) space for each two (2) employees.
1. One (1) space for each one hundred fifty (150) square feet of gross floor, building, ground area, or combination devoted to such use, or:
 2. One (1) space for each four (4) seats or facilities available for patron use.
- O. **Kindergarten, nursery school:** One (1) space for each employee--plus--adequate area for safe and convenient loading and unloading of students.
- P. **Manufacturing activity, industry, warehouse:** Two (2) spaces for each three employees on shift of greatest employment, plus one (1) space for each vehicle used directly in the conduct of the business.

- Q. **Motel:** One (1) space for each unit plus one (1) space for each two (2) employees--plus--requirements for any other use associated with the establishment such as a restaurant, etc.
- R. **Office, professional building, or similar use:** One (1) space for each three hundred (300) square feet of gross floor area, plus one (1) space for each two (2) employees.
- S. **Personal service establishment:** One (1) space for each two hundred (200) square feet of gross floor area--but not less than two (2) spaces for each employee.
- T. **Restaurant, or place dispensing food, drink, or refreshment:** One (1) space for each three (3) seats plus one (1) space for each two (2) employees on the shift of greatest employment.
- U. **Retail store of any type not otherwise specified in this schedule:** One (1) space per two hundred (200) square feet of gross floor area.
- V. **School--elementary:** One (1) space for each teacher, plus one (1) space for each two (2) employees and administrative personnel, plus one (1) space for each classroom--plus--adequate area for safe and convenient loading and unloading of students.
- W. **School--high, trade:** One (1) space for each two (2) teachers, employees, administrative personnel, and student--plus--adequate area for safe and convenient loading and unloading of students.
- X. **Shopping center:** One (1) space for every two hundred (200) square feet of gross floor area.
- Y. **Swimming pool, public:** One (1) space for every two hundred (200) square feet of water surface--plus--requirements for any other use associated with the establishment such as a restaurant, etc.
- Z. **Wholesale establishment:** One (1) space for each employee plus sufficient spaces to accommodate vehicles used in the conduct of the business.

Section 104: Number of Loading Spaces Required. Manufacturing, industrial, wholesale, and retail operations must provide loading space as follows:

- A. **Spaces appropriate to functions:** Off-street loading spaces must be provided as appropriate to the functions and scope of operation of individual or groups of buildings and uses.

- B. **Design of loading spaces:** Off-street loading spaces must be designed and constructed so that all maneuvering to park and unpark vehicles for loading can take place entirely within the property lines of the premises. Loading spaces must be provided so as not to interfere with the free, normal movement of vehicles and pedestrians on public rights-of-way.
- C. **Ingress and Egress:** Ingress and egress to off-street loading spaces must conform to curb cut requirements specified in this Standard.

Section 105: Curb Cut Requirements. In any case in which provision for ingress and egress involves the lowering or cutting away of curbs, such a curb cut is subject to the following provisions:

- A. Only one (1) combined entrance and exit is allowed for any parcel of property with a frontage on any one (1) street of less than fifty (50) feet. No more than two (2) combined entrances and exits are allowed for any parcel of property with a frontage on any one (1) street of between fifty (50) feet and two hundred (200) feet. For parcels of property having frontage on any one (1) street of more than two hundred (200) feet, additional entrances or exits are permitted only after the developer demonstrates to the satisfaction of the Planning Commission that more curb cuts are needed for safety reasons, and such additional curb cuts are approved by the Planning Commission.
- B. At street intersections, curb cuts must be located at least twenty-five (25) feet from the intersections of the two (2) curb lines (or such lines extended) or at least fifteen (15) feet from the intersection of the two (2) intersecting property lines (or such lines extended), whichever is less.
- C. The distance between any two (2) curb cuts on the same side of the street and located on one property must be at least ten (10) feet. That distance is measured between the points at which the two curb cuts begin to deviate from the established curb line of the abutting street (in other words, between the intersections of the curb return radii and the established curb line of the abutting street).
- D. The minimum setback from all property lines for any driveway is two (2) feet.
- E. The maximum permitted width of any driveway at the right-of-way line of the abutting street is thirty-five (35) feet.

- F. The maximum permitted width of any curb cut, including the points at which the curb cut begins to deviate from the established curb line of the abutting street at either end of the curb cut (in other words, including the curb returns) is fifty (50) feet. However, the Administrative Officer may approve a specified larger width for a truckstop, if he determines that a larger curb cut is needed for safety reasons.
- G. The sum of the two curb return radii for any one curb cut must not exceed fifteen (15) feet.

APPENDIX J

(RESERVED)

APPENDIX K

**DEVELOPMENT REGULATIONS
CITY OF MOLENA, GEORGIA**

Technical Assistance Furnished by

McIntosh Trail Area Planning and Development Commission
Barnesville, Georgia

May, 1988

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ARTICLE I. GENERAL

Section 101: Short Title. This document is entitled "The Development Regulations of the City of Molena, Georgia." It may also be known by and cited by the short title of "Molena Development Regulations."

Section 102: Authority. The power of a local government to enact an ordinance such as this, which is provided by the Home Rule provisions of the Constitution and Laws of the State of Georgia.

Section 103: Jurisdiction. This Ordinance applies to all land within the City of Molena, Georgia.

Section 104: Purposes. The Development Regulations of the City of Molena, Georgia seeks to encourage the development of desirable land use patterns within the City of Molena in accordance with the Molena Land Use Plan (where one exists). The promotion of sound land use patterns is intended to reduce or eliminate the occurrence of certain conditions which can threaten the general health, safety, and welfare of the residents of Molena. This Ordinance should serve the following purposes:

- A. Encourage the development of economically sound and stable communities.
- B. Assure the provision of required streets, utilities, facilities, and services to new land development.
- C. Assure the adequate protection of safe and convenient traffic access and circulation--both vehicular and pedestrian--in new land development.
- D. Assure the provision of needed public open spaces and building sites in new land developments through the dedication or reservation of land for recreational, educational, and other public purposes.
- E. Assure in general, the wise development of new areas, in harmony with the Molena Land Use Plan.

Section 105: Content. This Ordinance provides for the following:

- A. Defines certain terms used in this Ordinance.
- B. Establishes minimum standards for lots, streets, and other facilities associated with land development.

- C. Provides procedures for administering and amending the Ordinance.
- D. Provides penalties for violation of this Ordinance
- E. Repeals conflicting ordinances.

ARTICLE II. DEFINITION OF TERMS.

Section 201: Interpretation of Certain Common Terms. When used in this Ordinance, the following words and phrases have the meaning as defined in this article. Terms not defined here have the same meaning as is found in most dictionaries, where consistent with the context. The terms "must," "will," and "shall" are mandatory in nature, indicating that an action has to be done. The term "may" is permissive and allows discretion regarding an action. When consistent with the context, words used in the singular number include the plural, and those used in the plural number include the singular. Words used in the present tense include the future. The word "developer" includes a firm, corporation, co-partnership, association, institution, or person. The word "lot" includes the words "plot" and "parcel". The word "building" includes the word "structure". The words "used" or "occupied" as applied to any land or building include the words "intended," "arranged," or "designed," "to be used" or "occupied".

Section 202: General Definitions.

- A. **Administrative Officer:** The person, officer, or official and his authorized representative, whom the Mayor and Council has designated as its agent for the administration of this Ordinance.
- B. **Buffer:** That portion of a lot established for open space purposes and intended to separate properties with different and possibly incompatible types of uses. A buffer must not be otherwise occupied with structures. A buffer must be at least ten (10) feet wide and provide reasonable visual screening of the property through the provision of one of the following:
 - 1. Planted vegetative screen at least ten (10) feet wide and six (6) feet high.
 - 2. Fence or wall at least six (6) feet high which provides visual screening.
- C. **Center Line:** The line which represents the distance a building must be set back from the boundary line of a lot, measured at the foundation of the building.
- D. **Building Line:** That line surveyed and monumented by the governing authority as the center line of a street, on if such a center line has not been surveyed, it is the line running midway between the outside curbs or ditches of the street.
- E. **Curb Cut:** The point at which vehicular access is provided to an adjoining street from a lot.

- F. **Easement:** The right or privilege of using another's property, for purposes such as constructing and maintaining sanitary sewers, water mains, electric lines, telephone lines, storm sewers, gas lines, bicycle paths, pedestrian ways, and other purposes.
- G. **Elevation, Front:** The view of a building or group of buildings as seen from directly in front of the structure.
- H. **Flood Boundary:** That area in the City of Molena threatened by possible flood under normal to severe circumstance; determined as shown on the Flood Hazard Boundary Map, published by the Federal Emergency Management Agency (FEMA), 1972.
- I. **Building Setback Line:** A line parallel to and a specified minimum distance from the front, side, or rear property lines (as specified) beyond which no foundation wall or part of the structure of any building projects with the exception of roof overhang, steps, and the subsurface projection of footings.
- J. **Block:** A piece or parcel of land entirely surrounded by by public highways or streets, other than alleys.
- K. **Land Use Plan:** Any part or element of the overall plan for development adopted by the Mayor and Council, as amended.
- L. **Construction Plan:** A plan based on the approved preliminary plat, which shows all street design and profiles, topographic information, utility construction plans, sediment and erosion control plans, and other information which may be required by the Administrative Officer. It is submitted to the Administrative Officer and requires only his approval.
- M. **Crosswalk:** A right-of-way within a block dedicated to public use, intended primarily for pedestrian use, and designed to provide access to adjacent roads and lots.
- N. **Design Standards:** The specifications to land owners or subdividers for the preparation of plats--both preliminary and final--indicating among other things the optimum, minimum, or maximum dimensions of such items as right-of-way, blocks, easements, and lots.
- O. **Final Plat:** A finished drawing or map of a subdivision, meeting all of the requirements of this Ordinance in the form required by this Ordinance, and showing completely and accurately all legal design and engineering information, and certified as required for recording.

- P. **Hearing:** An unadvertised but official session of the Molena Planning Commission or the Mayor and Council held to afford a subdivider or his agent an opportunity to present and confer on a subdivision plat with the Planning Commission or the Mayor and Council.
- Q. **Lot:** A parcel of land occupied or capable of being occupied by one or more buildings and customarily incidental accessory buildings or uses, including such open spaces as are required by this Ordinance.
- R. **Lot, Corner:** A lot located at the intersection of two or more streets.
- S. **Lot, Double Frontage:** A lot, other than a corner lot, which has frontage on more than one street.
- T. **Lot Width:** The distance between side lot lines measured at the front building line. If a corner lot, the distance between lot lines measured along the front building line which parallels or more nearly parallels the rear lot line.
- U. **Mayor and Council:** The Mayor and Council of the City of Molena, Georgia.
- V. **Lot of Record:** A lot which is part of a subdivision, the plat of which has been recorded in the Office of the Clerk of the Superior Court of Pike County, Georgia; or a parcel of land described by metes and bounds, the plat or description of which has been recorded in said office. If a portion of a parcel has been conveyed at the time of the adoption of this Ordinance, the remaining portion of the lot or parcel will be considered a lot of record.
- W. **Lot Remnant:** Any portion or portions of a lot not suitable for building upon because of size of topography and remaining after the transfer of other portions of the lot to adjoining lots.
- X. **Owner(s) or Record:** The owner(s) of property as specified on the deed of the lot of record.
- Y. **Parks and Playgrounds:** Public or community land, open spaces, or recreation areas represented on a subdivision plat as dedicated, reserved, or intended to be reserved, for recreational purposes.
- Z. **Pedestrian Way:** Crosswalk or other areas designed and marked specifically for pedestrian traffic.
- AA. **Percentage of Grade:** Measured down the street centerline, the distance vertically (up and down) from the horizontal in feet and tenths of a foot for each

the radius of a curve where the tangent meets the curve.

NN. Subdivider: Any individual, firm, association, syndicate, co-partnership, corporation, trust, or other legal entity having sufficient proprietary interest in the land sought to be subdivided to commence and maintain proceedings to subdivide the same under this Ordinance.

OO. Subdivision:

A. The division of a lot of record at the time of enactment of this Ordinance into three (3) or more lots, building sites, or other divisions for the purpose--whether immediate or future--of sale, legacy, or building development. This definition includes all of the following:

1. All divisions of land involving a new street.
2. All divisions of land involving a change in existing streets.
3. Any resubdivision of land.
4. The process of subdividing.
5. Any land or area subdivided.

B. This definition does not include the following:

1. The combination or recombination of portions of previously platted lots where the total number of lots is not increased and the resultant lots are equal to the standards set forth in this Ordinance.
2. The transfer of property by the owner to a member of the immediate family (parent, spouse, or child).
3. The transfer of unsubdivided land or the transfer of a lot or parcel of land established by deed or plat recorded in the Office of the Clerk of the Superior Court of Pike County prior to the initial effective date of this Ordinance.
4. The division of land among heirs by judicial decree.
5. The division of land into parcels of three (3) or more acres where no new street is involved.

PP. City: The City of Molena, Georgia.

ARTICLE III. ESTABLISHMENT OF DISTRICTS.

Section 301. Districts Established.

A. **Districts:** For the purposes of this Ordinance, Molena is divided into districts as follows:

1. (Reserved)
2. R-1 Single - Family Residential - Low Density
3. (Reserved)
4. (Reserved)
5. R-4 General Residential
6. (Reserved)
7. (Reserved)
8. P-R Planned Development - Residential
9. (Reserved)
10. O-1 Office-Residential
11. (Reserved)
12. C-2 Commercial - General/Highway
13. C-3 Commercial - Intensive/CBD
14. M-1 Manufacturing - Light
15. (Reserved)

B. **Overlay Districts:** In addition, overlay districts apply additional standards to specific areas which may lie within any of the above districts. Those districts are as follows:

1. S-1 Sensitive Land-Flood Hazard
2. S-2 Sensitive Land-Watershed Protection
3. (Reserved)

Section 302: Districts Explained.

- A. Districts are areas of land within Molena to which different development requirements and standards are applied. These differences are intended to promote the separation of incompatible uses, encourage sound land use patterns, and retain the character of the community. Although this Ordinance establishes the locations of district boundaries, as indicated on the Official Map, the boundaries may be amended in the future in order to meet changing needs if facts are presented and accepted in support of such an Amendment.

- B. This may be done, however, only if the proposed change is in conformance with the Molena Land Use Plan (where one exists). (This does not necessarily mean a one-to-one correspondence.) If conditions have changed to the point that a genuinely needed change in a district boundary is not in conformance with the Molena Land Use Plan (where one exists), then the Molena Land Use Plan (where one exists) must first be amended to address the changing needs.

- C. In making the decision to amend the boundary of a district, the points contained in Section 410 must be considered by the Planning Commission as well as the Mayor and Council.

ARTICLE IV. GENERAL PROCEDURES.

Section 401: Initial Information.

- A. Article IV outlines the procedures to be followed in order to comply with the requirements of this Ordinance. The subdivider (See definition of "subdivider" in Article II), who initially may not be familiar with this Ordinance, first visits the office of the Molena Administrative Officer to get information concerning ordinances affecting his proposed development.
- B. The Administrative Officer will show the subdivider a copy of this Ordinance. The subdivider may either review the document in the office or he may purchase a copy for his own use.

Section 402: Compliance with Development Regulations Required.

- A. **Approval of Subdivision Plats:** Any "person" proposing to subdivide land within the corporate limits of the City of Molena must submit to the city plats of the proposed subdivision which conform to all regulations set forth in this Ordinance. Application for approval of the plats must be made to the Administrative Officer under procedures contained in this Article.
- B. **Platting Authority:** The Planning Commission is the official platting authority of the City of Molena. No subdivision plat may be recorded in the Office of the Clerk of the Superior Court of Pike County unless it has been approved by the Planning Commission. The filing or recording of a subdivision plat without the approval of the Planning Commission as required by this Ordinance is a violation of this Ordinance and is punishable as provided by this Article.
- C. **Physical Development:** No "subdivider" or "person" may proceed with any construction work on a proposed subdivision before obtaining Preliminary Plat Approval.
- D. **Use of Plat:** The transfer of, sale, agreement to sell, or negotiation to sell land by reference to, exhibition of, or other use of a subdivision plat that has not been given a Final Certificate of Approval by the Planning Commission and recorded in the Office of the Clerk of the Superior Court of Pike County is prohibited. The description by metes and bounds in the instrument of transfer or other documents does not exempt the transaction from this prohibition.
- E. **Opening and Improving Streets:** The Mayor and Council

may locate, construct, and accept a street if the proposed street is first submitted to the Planning Commission for its review and recommendations. Land designated, reserved, proposed, or dedicated as a street by a subdivider on a subdivision plat will be accepted, opened, or improved by the City of Molena only if one (1) of the following conditions exists:

1. The street corresponds in its location and lines with a public or private street shown on a Final Plat approved by the Planning Commission.
 2. The street corresponds in its location and lines with a public or private street shown on a Final Plat made and adopted by the Planning Commission.
 3. The street has been accepted as, opened as, or otherwise received the legal status of a public street prior to the adoption of this Ordinance.
 4. The Mayor and Council accepts the street after soliciting review and recommendation on the proposed street by the Planning Commission.
- F. **Erection of Building:** No building permit will be issued, no building may be erected, and no factory-manufactured building may be installed on any lot in any subdivision unless the street giving access to the lot has been approved by the Mayor and Council as meeting the standards of a public street in accordance with this Ordinance, or unless such a street has attained the status of a public street prior to the effective date of this Ordinance.

Section 403: General Overview of Subdivision Plat Review and Approval Procedures.

- A. **Introduction:** The procedure for the formal review and approval of a subdivision plat consists of one (1) recommended stage and six (6) required stages. These are as follows:
1. Preapplication Review (Recommended).
 2. Preliminary Plat acceptance by the Planning Commission (Required).
 3. Construction Plan approval by the Administrative Officer (Required).
 4. Final Plat acceptance by the Planning Commission (Required).
 5. Recording and Dedication (Required).

- B. **Exception for Minor Subdivisions:** Subdivisions which do not involve the platting, construction, or opening of new streets, sewers, or water facilities, and subdivisions which do not involve improvement to existing streets are defined as minor subdivisions. They are subject only to the requirements of the Final Plat Stage and the Recording and Dedication Stage. Subdivisions so defined will be accepted by the Planning Commission and the Mayor in the form of a Final Plat, and the Final Plat must comply in all respects to the requirements of this Ordinance.
- C. **Preapplication Review Stage:** Whenever the subdivision of a tract of land is proposed, the subdivider is urged to consult early and informally with the Planning Commission. The subdivider may submit sketch plans and data showing existing conditions within the site and in its vicinity, and the proposed development layout of the subdivision. The purpose of the preapplication review stage is to facilitate the clarifying matters relating to the proposed subdivision, and the Development Regulations.
- D. **Preliminary Plat Stage:** The subdivider must submit to the Planning Commission for approval a Preliminary Plat of the proposed subdivision prepared in accordance with the provisions of this Ordinance. The subdivider must also furnish copies of such a Preliminary Plat to all utility companies serving the area. Approval of the Planning Commission will be indicated on the face of the Preliminary Plat.
- E. **Construction Plan Stage:** Prior to making any street improvements or installing any utilities or other improvements, the subdivider must submit to the Administrative Officer construction plans of the proposed subdivision prepared in accordance with the provisions of this Ordinance. The design presented in the Preliminary Plat that was approved by the Planning Commission. The construction plans must show all street design profiles, topographic information, utility construction plans, sediment and erosion control plans, and other information as may be requested by the Administrative Officer. The Construction Plan Stage requires the review and approval of only the Administrative Officer.
- F. **Final Plat Stage:** After completion of the physical development or arrangements for physical development acceptable to the Planning Commission, of all or part of the area shown on the Preliminary Plat as approved by the Planning Commission, and before selling any lots, a Final Plat together with the required certificates must be submitted to the Planning

Commission for approval. The subdivider must also furnish copies of the approved Final Plat to all Utility companies serving the area.

- G. **Recording and Dedication:** After the Final Plat is approved by the Planning Commission, the Final Plat and appropriate documents become the instrument to be recorded in the Office of the Clerk of the Superior Court of Pike County, Georgia. After recording, the appropriate deeds and documents must be presented to the appropriate local government agency for dedication and acceptance.

Section 404: Submission and Approval of Preliminary Plat.

- A. **Preliminary Plat Submission:** At least fifteen (15) days before the regularly scheduled monthly meeting of the Planning Commission at which the subdivider desires Planning Commission action, the subdivider must submit the following:
1. A letter requesting review and approval of a Preliminary Plat and giving the name and address of a person to whom the notice of hearing and action on the Preliminary Plat is to be sent.
 2. Three (3) copies of the Preliminary Plat and supporting data. At this time, the Planning Commission may direct the subdivider to furnish additional copies to the review agencies having appropriate technical expertise or proper authority for review and comment.
- B. **Official Date of Submission:** The official date of submission of the Preliminary Plat will be the date of the next regularly scheduled monthly meeting of the Planning Commission.
- C. **Preliminary Plat Review:** The Planning Commission will review the Preliminary Plat for conformance to this Ordinance and other relevant regulations and will consider the comments or suggestions of the appropriate review agencies requested to review the Preliminary Plat. The Planning Commission will indicate on the Preliminary Plat, or by a written memorandum attached to the Preliminary Plat any comments or suggested changes that are necessary to meet the intent of this Ordinance or to serve the best interests of the City of Molena.
- D. **Public Hearing:** Before acting on the Preliminary Plat, the Planning Commission will schedule a public hearing on the Preliminary Plat. Notice of the time and place of the public hearing will be sent by first class mail at least five (5) days before the date of the public

hearing.

- E. **Action of the Planning Commission:** No more than forty-five (45) days after the official date of submission of the Preliminary Plat, the Planning Commission will either approve the plat, conditionally approve the plat (noting the conditions of approval on the plat), or not approve the plat. Action may be taken on the entire Preliminary Plat or any portion of it.
- F. **Failure of Planning Commission to Take Action:** If the Planning Commission fails to act within forty-five (45) days of the official date of submission of the Preliminary Plat, the Preliminary Plat will be automatically approved by the Planning Commission.
- G. **Approval of Preliminary Plat:** Approval of a Preliminary Plat is only tentative, pending submission of the Final Plat, and is effective and binding upon the Planning Commission for a period of no more than two (2) years. After two (2) years, only the work on the subdivision that has been completed in conformance with the Preliminary Plat may be approved by the Planning Commission a request in writing for an extension of time. If the Planning Commission grants such an extension, work on the remainder of the subdivision may continue within the limits of the extension.

Section 405: Specifications for Preliminary Plat. The Preliminary Plat must meet the minimum standards of design set forth in this Ordinance and must include the following:

A. **General:**

- 1. **Title Block** including:
 - a. Proposed name of subdivision and name of former subdivision, if any or all of proposed subdivision has been previously subdivided.
- 2. **Plat Key** including:
 - a. Name and address of person in charge of plat preparation.
 - b. Date of plat preparation with space for revision dates.
 - c. Graphic scale of one (1) inch equals 200 feet or larger.
 - d. North point, identified as magnetic, true, or grid north.

- e. Area of proposed subdivision in acres.
- f. Appropriate legend of symbols used on plat.
3. Location Sketch Map locating the subdivision in relation to the immediately surrounding area and showing generally:
 - a. Well known landmarks such as railroads, highways, bridges, creeks, etc.
 - b. Zoning district classification(s) of land to be subdivided and adjoining properties.
 - c. Government jurisdictional boundaries and land lot lines, if applicable.
4. Entire Tract: The subdivider may and is encouraged to submit a Preliminary Plat of his entire tract, even though his present plans may call for the actual development of only a small portion of the property. Regardless of the area covered by the Preliminary Plat, any unit divisions or phasings of unit divisions intended in the preparation of the Final Plat must be represented on the Preliminary Plat.
5. Resubdivision: In the case of resubdivision, a copy of the existing plat with the proposed resubdivision superimposed on it must be provided.
6. Elevations: All elevations must refer to Mean Sea Level Datum.
7. Sheet Size must be no larger than thirty-six (36) inches wide and twenty-four (24) inches long. A margin two (2) inches wide must be on the left side for binding purposes, and margins of one-half (1/2) inch must be on the other three sides. If the complete plat cannot be shown on one sheet of this size, it may be shown on more than one sheet with an index map on a separate sheet of the same size.

B. Features of Site to Be Shown on Plat:

1. Location and estimated dimensions of all property boundary lines of the subdivision.
2. Where requested by the Planning Commission, topography by contours at vertical intervals of no more than five (5) feet as determined by a field survey or accurate aerial survey (where deemed necessary).

3. Location of natural features--including streams and water courses with direction of flow and acreage of the drainage area affecting the proposed subdivision, water bodies, swamps, flood plains, tree line of wooded areas, individual trees with a trunk diameter of eighteen (18) inches or more, and orchards and other agricultural groves.
4. Location and size of existing cultural features on or adjacent to the proposed subdivision including:
 - a. Right-of-ways, pavement widths, and names of existing and platted streets.
 - b. Railroads and railroad right-of-ways.
 - c. Bridges, buildings, and other structures.
 - d. All surface utility lines within easements or right-of-ways on or adjoining the tract (showing the location of towers or poles.
 - e. (Existing sewers, water mains, drains, culverts, and other underground facilities or utilities within easements or right-of-ways on or adjoining the tract (grades and invert elevation of sewer must also be shown).
 - f. All other easements and right-of-ways.

C. Proposed Conditions and Facilities:

1. Layout of all streets and other accessways with right-of-way and pavement widths, as well as proposed street names.
2. Such street cross-sections, grades, and centerline profiles as may be required.
3. Layout of all lots, including building setback lines; scaled dimensions on lots; utility easements with width and use; block numbers; and lot numbers.
4. Provisions for sewage disposal systems (individual, community, or public), with approval by Pike County Health Department shown by type of system proposed.
5. Provisions for water supply systems (individual, community, or public), with approval by Pike County Health Department shown by type of system proposed.

6. Provisions for proper drainage.
7. Such soil erosion and sediment control plans (or evidence of official approval of such plans) separately attached to the plat, as are required by local ordinances.
8. Designation of lands to be reserved or dedicated to public use.
9. All land uses, including areas to be used for uses other than single-family dwellings.
 - a. Multi-family residential.
 - b. Commercial.
 - c. Industrial.
 - d. Recreation, open space, and areas for other such uses.

D. **Certificate of Tentative Approval:** A Certificate of Tentative Approval of the Preliminary Plat by the Planning Commission will be inscribed on the plat.

Section 406: Submission and Approval of Construction Plans.

- A. **Construction Plan Submission:** After the Preliminary Plat of the proposed subdivision has been given approval by the Planning Commission, the subdivider may, within two (2) years of that approval, submit Construction Plans to the Administrative Officer.
- B. **Format:** Three (3) copies of the Construction Plans must be submitted to the Administrative Officer. The scale on the Construction Plans must be at least two hundred (200) feet to the inch.
- C. **Approval of Construction Plans:** Approval of Construction Plans constitutes authorization to proceed with the installation of any required improvements, subject to the approval of agencies having the proper authority over such individual improvements, and the preparation of the Final Plat, or unit division or phase of unit division.

Section 407: Specifications for Construction Plans. The Construction Plans must conform to all specifications required for the Preliminary Plat, and include the following:

- A. Topography by contours at vertical intervals of no more than five (5) feet as determined by a field survey or accurate aerial survey.

- B. Provisions for proper drainage.
- C. Such soil erosion and sediment control plans (or evidence of official approval of such plans) separately attached to the plat, as are required by local ordinances.
- D. Such street profiles, cross-sections and details as may be necessary to illustrate proposed street construction standards.
- E. Any utility plans as may be required.
- F. Any tree planting plans, stormwater retention plans, or other landscaping plans.

Section 408: Submission and Approval of Final Plat.

- A. **Final Plat Submission:** After the Preliminary Plat of the proposed subdivision has been given tentative approval by the Planning Commission, Construction Plans have been approved by the Administrative Officer, and required improvements have been completed (or arrangements for required improvements acceptable to the Administrative Officer have been made), the subdivider may, within two (2) years from the date of the Preliminary Plat approval, apply for Final Plat approval. The subdivider must submit to the Planning Commission at least fifteen (15) days prior to the Planning Commission's regular monthly meeting at which the subdivider desires Planning Commission action, the following:
 - 1. A letter requesting review and approval of a Final Plat and giving the name and address of the person to be notified of the action of the Final Plat.
 - 2. Three (3) paper copies of the Final Plat and other documents, as may be specified, and the original tracing or reproducible print of the original print of the original tracing drawn in permanent ink or equivalent on drafting cloth or film. The scale of the plat must be at least 200 feet to the inch.
- B. **Official Date of Submission:** The official date of submission of the Final Plat will be the date of the next regularly scheduled monthly meeting of the Planning Commission.
- C. **Final Plat Review:** The Planning Commission will review the Final Plat for conformance with the tentatively approved Preliminary Plat as well as with this Ordinance and other relevant regulations.

- D. **Public Hearing:** Before acting on the Final Plat, the Planning Commission will schedule a public hearing on the Final Plat. Notice of the time and place of the public hearing will be sent by first class mail at least five (5) days before the date of the public hearing.
- E. **Action of the Planning Commission:** No more than forty-five (45) days after the official date of submission of the Final Plat, the Planning Commission will either issue a Certificate of Approval for Recording, conditionally approve the plat (noting the conditions of approval on the plat), or disapprove the plat. If the Final Plat is disapproved, the Planning Commission will notify the subdivider in writing, stating the reasons for the disapproval. One (1) copy and the original of the plat will be returned to the subdivider, and one (1) copy will be made a part of the records of the Planning Commission. Action may be taken on the entire Final Plat or any portion of it.
- F. **Failure of Planning Commission to Take Action:** If the Planning Commission fails to act within forty-five (45) days of the official date of submission of the Final Plat, the Final Plat will be automatically approved by the Planning Commission.
- G. **Approval of Final Plat:** Approval of the Final Plat authorizes the subdivider to proceed with the Recording and Dedication procedures.

Section 409: Specifications for Final Plat. The Final Plat must meet the minimum standards of design set forth in this Ordinance and must include the following:

A. **General:**

1. **Title Block** including:
 - a. Name and address of owner(s) of record.
 - b. Proposed name of subdivision and name of former subdivision, if any or all of proposed subdivision has been previously subdivided.
2. **Plat Key** including:
 - a. Name and address of person in charge of plat preparation.
 - b. Date of plat preparation with space for revision dates.
 - c. Graphic scale of one (1) inch equals 200 feet or larger.

- d. North point, identified as magnetic, true, or grid north.
 - e. Area of proposed subdivision in acres.
 - f. Appropriate legend of symbols used on plat.
3. Location Sketch Map locating the subdivision in relation to the immediately surrounding area and showing generally:
- a. Well known landmarks such as railroads, highways, bridges, creeks, etc.
 - b. Zoning district classification(s) of land to be subdivided and adjoining properties.
 - c. Government jurisdictional boundaries and land lot lines, if applicable.
4. Elevations: All elevations must refer to Mean Sea Level Datum.
5. Sheet Size must be no larger than thirty-six (36) inches wide and twenty-four (24) inches long. A margin two (2) inches wide must be on the left side for binding purposes, and margins of one-half (1/2) inch must be on the other three sides. If the complete plat cannot be shown on one sheet of this size, it may be shown on more than one sheet with an index map on a separate sheet of the same size.

B. Features of Site to be Shown on Plat:

1. Exact boundary lines of the tract, to be indicated by a heavy line, giving distances to the nearest one-tenth (0.1) foot and angles to the nearest minutes, which must be balanced and closed with an error of closure not to exceed one to five thousand (1:5,000). The error of closure must be stated.
2. Topography by contour at vertical intervals of no more than five (5) feet as determined by a field survey or accurate aerial survey (where lots are less than 40,000 square feet in area).
3. Location of natural features--including streams and water courses with direction of flow and acreage of the drainage area affecting the proposed subdivision, water bodies, swamps, flood plains, tree line of wooded areas, individual trees with a trunk diameter of eighteen (18) feet or more, and orchards and other agricultural

groves.

4. Location of adjoining property lines and the names of owner(s) of record and/or the location of adjoining subdivision lines and names.
5. All existing buildings and structures to be maintained within the proposed subdivision.
6. Exact locations, widths, and names of all streets and public accessways within and immediately adjoining the platted property.
7. Street centerlines showing angles of deflection, angles of intersection, radii, length of tangents and arcs, and degree of curvature with basis of curve data.
8. Lot lines with dimensions to the nearest one hundredth (0.01) foot area, necessary internal angles, arcs, chords, tangents, and radii or rounded corners.
9. Building setback line with dimensions.
10. Lot width at the building line, for each specific lot of which the side lot lines are at angles other than ninety (90) degrees.
11. Lots or sites numbered in numerical order and blocks lettered alphabetically.
12. Location, dimensions, and purpose of all drainage structures and of any easement--including slope easements, if required--and public service utility right-of-way lines; any areas to be reserved, donated, or dedicated to public use; any sites for other than single-family residential use, with designations stating purpose or proposed use, area, any use limitations; any areas to be reserved by deed covenants for common use of all property owners.
13. Any private covenants to be recorded with the plat attached.

C. Certifications:

1. The following certifications must be in form and substance approved by the Planning Commission and inscribed directly on the Final Plat:
 - a. An Engineer's or Surveyor's Certification.
 - b. An Owner's Certificate.

- c. A Certificate of Approval for Recording by the Planning Commission.
2. The following certificates or statements must be attached to the Final Plat when applicable:
 - a. Certificate(s) or Statement(s) of Guaranty to Dedicate.
 - b. Certificate or Statement of Approval of Streets, whether or not the streets are to be dedicated to the public.
 - c. Certificates or statements of Approval of the Sewage Disposal System in the proposed subdivision obtained from the City of Molena, the Pike County Health Department, and the Environmental Protection Division of the Georgia Department of Natural Resources, as applicable.
 - d. Certificates or Statements of Approval of the Water System in the Proposed subdivision obtained from the City of Molena, the Pike County Health Department, and the Environmental Protection Division of the Georgia Department of Natural Resources, as applicable.
 - e. A Certificate or Statement of Approval of the Drainage Provisions within the proposed subdivision.

Section 410: Recording and Dedication.

- A. **Recording of Final Plat:** Upon approval of a Final Plat, the subdivider must have the Final Plat recorded in the Office of the Clerk of the Superior Court of Pike County. The subdivider will be responsible for the payment of the recording fee at the time of recording of the Final Plat.
- B. **Dedication of Platted Streets, Other Public Spaces, and Utilities:** Final Plat approval by the Planning Commission does not constitute acceptance of any dedications to the public. After Final Plat approval by the Planning Commission, the subdivider must prepare appropriate documents and plans as constructed, if required, and request the City of Molena and other appropriate authorities to accept dedicated streets, other public spaces, and utilities.

Section 411: Appealing an Action of the Administrative Officer or the Planning Commission.

- A. If the Administrative Officer or Planning Commission executes an action which the developer or other aggrieved party believes to be contrary to law, that action may be appealed. Findings of fact, however, may not be appealed. Such an appeal must be filed within thirty (30) days of the date on which the action by the Administrative Officer or Planning Commission was taken.
- B. The Board of Appeals has jurisdiction for hearing appeals concerning actions of the Administrative Officer or Planning Commission related to this Ordinance. Applications for appeal may be obtained from and submitted to the Administrative Officer, who will transmit them to the Board of Appeals for its consideration.
- C. When an action of the Administrative Officer or Planning Commission is appealed, all construction or other activity authorized by the appealed action must be stopped immediately. In certain cases, however, the Administrative Officer may feel that the stopping of such construction or other activity authorized by the appealed action will cause imminent peril to life or property. Then, the Administrative Officer may certify to the Board of Appeals that, by reason of facts stated in the certificate, the halting of construction or other activity authorized by the appealed action would in his opinion cause imminent peril to life or property. In such cases, the construction or other activity authorized by the appealed action is allowed to continue unless a restraining order is granted by either the Board of Appeals or a court of appropriate jurisdiction.
- D. When an application for appeal of an action of the Administrative Officer or Planning Commission is received, the Board of Appeals will set a time and place for a public hearing on the appeal. Notice of the hearing must be published in a newspaper of general circulation in the City of Molena at least fifteen (15) days before the hearing. In addition, the parties to the appeal will be notified of the date of the hearing by the Board of Appeals by First Class mail at least fifteen (15) days before the hearing. Any person may appear at the hearing, or have a representative attend instead.
- E. The Board of Appeals will make a decision concerning the appeal and record the decision in the minutes for that meeting. Further appeal on points of law may be made to the Superior Court of Pike County.

Section 412: Variances:

- A. A variance is a permit, issued by the Board of Appeals, which allows development of a parcel of land in a way that does not meet certain requirements of this Ordinance. A variance may be granted only in an individual case where an extreme hardship would result if all of the requirements of this Ordinance were applied stringently to a particular piece of property. The hardship must be proven by showing beyond a doubt that reasonable use of the land is not possible if all of the requirements of this Ordinance are to be met. The hardship cannot be self-created such as:
1. A lot purchased with knowledge of an existing restriction.
 2. A claim of hardship in terms of prospective sales.
 3. An expressed economic need requiring a variance, when such a need can be met in other ways which would not require a variance.
- B. Relief from the hardship--the variance--must not cause substantial detriment to the public good or impair the purpose of this Ordinance.
- C. When a variance is issued, the spirit of this Ordinance must be observed and the public safety and welfare secured.
- D. Application for a variance may be made with the Administrative Officer. The Administrative Officer will take the required information and transmit it to the Board of Appeals for its consideration.
- E. When an application for a variance is received, the Board of Appeals will set a time and place for a public hearing on the variance. Notice of the hearing must be published in a newspaper of general circulation in Molena at least fifteen (15) days before the hearing. In addition, the parties to the application for variance will be notified of the date of the hearing by the Board of Appeals by a First Class letter at least fifteen (15) days before the hearing. Any person may appear at the hearing, or have a representative attend instead.
- F. The Board of Appeals will make a decision concerning the variance and record the decision in the minutes for that meeting.
- G. The variance issued by the Board of Appeals must specify which requirements are to be varied from. It must specify alternative requirements to be met,

replacing the requirements varied from.

- H. The Board of Appeals may establish performance bonds to assure compliance with any requirements it has set for granting a variance. Where a variance is granted for a construction activity requiring a building permit, the building permit must be obtained and construction must begin within six (6) months of the issuance of the variance. Otherwise, the variance expires after six (6) months.
- I. The decision of the Board of Appeals on the application for variance may be appealed on points of law to the Pike County Superior Court.

Section 413: Amendments.

- A. If a developer finds that a proposed new subdivision of his land does not meet the requirements of this Ordinance, he may request that this Ordinance be amended to permit his proposed use. The Planning Commission or the Mayor and Council may also propose an amendment rests with the Mayor and Council.
- B. All applications for amendment must first be reviewed by the Planning Commission. The Planning Commission will send its recommendations in writing to the Mayor and Council within thirty (30) days, stating reasons for its recommendations. If the Planning Commission fails to send its recommendations to the Mayor and Council within thirty (30) days, the Mayor and Council will assume that the Planning Commission approves.
- C. Before enacting an amendment to this Ordinance, the Mayor and Council must conduct a public hearing on the amendment. Notice of the public hearing must be published in a newspaper of general circulation in Molena at least fifteen (15) days but not more than forty-five (45) days before the public hearing:
 - 1. The public hearing will be held in the Molena City Hall.
 - 2. Written comments on the subject of the public hearing may be submitted by any citizen or property owner at any time prior to the adjournment of the hearing.
 - 3. Persons desiring to be heard orally may present their views at the public hearing. The length of time of oral presentations permitted to each speaker will be governed by the Mayor and Council, depending upon the number of persons present and desiring to speak. Personal remarks will not be tolerated.

4. Any person desiring a transcript of the public hearing must arrange for a court reporter at their own expense.
 5. Cross-examination of persons making oral presentations will not be permitted.
 6. All questions will be addressed to the Mayor or Council member then presiding.
 7. "Standing" to challenge a decision is not conferred by being permitted to speak orally at a public hearing, nor by being permitted to file statement or pleadings.
- D. After conducting the public hearing and considering recommendations from the Planning Commission, the Mayor and Council will then make an official decision on the proposed amendment. The decision may or may not concur with the recommendations of the Planning Commission.
- E. If the Mayor and Council denies a proposed amendment, a minimum period of twelve (12) months must pass before the same amendment proposal is again submitted for consideration.

Section 414: Appealing an Action of the Mayor and Council.

If the Mayor and Council executes an action which the developer or other aggrieved party believes to be contrary to law, that action may be appealed to the Pike County Superior Court. Findings of fact, however, may not be appealed. Such an appeal must be filed within thirty (30) days of the date on which the action of the Mayor and Council was taken.

Section 415: Penalties. Any person who violates any of the provisions of this Ordinance must face penalties. If a developer or landowner exhausts the decision and appeals procedures contained in Article IV and is still dissatisfied with the decision, he must then comply with the final decision or face penalties. Anyone who violates any of the provisions of this Ordinance, upon conviction, will be fined no more than five hundred (500) dollars for each offense. In addition, he must pay all costs and expenses involved in the case. Each day such a violation continues constitutes a separate offense.

- A. The owner or tenant of any building, structure, premises, or part thereof, and any architect, builder, contractor, agent, or other person who commits, participates in, assists in, or maintains such a violation may each be found guilty of a separate offense and suffer the penalties provided here.

Section 416: Remedies. If any building or land is used or maintained in violation of this Ordinance, anyone, including the City of Molena, who would be harmed by such a violation may

initiate legal proceedings to obtain an injunction or other appropriate remedy to stop the violation or to prevent any act which would constitute such a violation. Other legal remedies are also available as provided Georgia Law.

TO
FROM
RE
DATE
BY
TITLE

ARTICLE VI. POWERS AND DUTIES OF VARIOUS

OFFICIAL CONCERNING THIS ORDINANCE.

Section 601: Purpose. This Article formalizes the powers and duties of the Administrative Officer, the Planning Commission, the Board of Appeals, and the Mayor and Council where this Ordinance is concerned. It should also provide a convenient list of services provided by each official to aid in complying with the requirements of this Ordinance.

Section 602: Powers and Duties of the Administrative Officer. The Administrative Officer has the power and duty to provide the following services related to this Ordinance:

- A. Provide initial information about this Ordinance upon request.
- B. Advise how to contact members of the Planning Commission, the Board of Appeals, and the Mayor and Council for services provided by those bodies.
- C. Offer practical suggestions on how to comply with the requirements of this Ordinance.
- D. Maintain complete records concerning this Ordinance and related matters, and make such records available to the public upon request.
- E. Propose amendments to this Ordinance.

Section 603: (Reserved)

Section 604: Powers and Duties of the Planning Commission. The Planning Commission has the power and duty to provide the following services related to this Ordinance:

- A. Advise the Mayor and Council on applications for amendment to this Ordinance by examining amendment applications and providing written recommendations with reasons for the recommendations to the Mayor and Council as specified in Section 413.
- B. Dispense general information about this Ordinance to the public upon request.
- C. Propose amendments to this Ordinance.
- D. Maintain and update the City of Molena Land Use Plan (where one exists) so that it may provide a current data base with which decisions on proposed amendments to this Ordinance may be made that utilize sound planning principles.
- E. Carry out an ongoing comprehensive planning program

which, like the Land Use Plan (where one exists), will provide current data on which decisions regarding this Ordinance may be based that utilize sound planning principles.

- F. Authorize variances according to procedures specified in Section 412.

Section 605: Powers and Duties of the Board of Appeals.

The Board of Appeals has the power and duty to provide the following services:

- A. Accept applications for appeal of an action of the Administrative Officer of the Planning Commission and render official decisions on them according to procedures specified in Section 411.
- B. Authorize variances according to procedures specified in Section 412.

Section 606: Powers and Duties of the Mayor and Council.

The Mayor and Council have the power and duty to provide the following services related to this Ordinance:

- A. Accept applications for amendment of this Ordinance and render official decisions on them after referring them to the Planning Commission for review and recommendations as specified in Section 413.
- B. Propose amendments to this Ordinance.

ARTICLE VII. LEGAL STATUS PROVISIONS.

Section 701: Conflict with Other Ordinances. Portions of other ordinances that conflict with portions of this Ordinance are repealed. Non-conflicting parts of those ordinances remain in effect.

Section 702: Validity. Should any section or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, that declaration will not affect the validity of the Ordinance as a whole nor any part of it other than the part that was declared to be unconstitutional or invalid.

Section 703: Effective Date. This Ordinance takes effect on _____, the date of its adoption.

Witnessed by

Mayor

ARTICLE VI. R-1 SINGLE-FAMILY RESIDENTIAL -
LOW DENSITY

Section 601: Purpose. R-1 zoning districts are intended to establish and preserve quiet, relatively low-density neighborhoods of single-family residences as desired by large numbers of people. These districts are free from other uses which are incompatible with single-family homes.

Section 602: Determining if an Area is Suitable for Inclusion Within an R-1 District. The factors contained in Section 410 of this Ordinance must be thoroughly considered by the Planning Commission as well as the Mayor and Council when determining in which zoning district an area of land is to be placed. This will assure that rational comprehensive planning principles are the basis upon which the decision is made. Land use decisions which are based on sound planning principles encourage the development and preservation of land use patterns that provide healthful and safe living conditions for the residents of Molena.

Section 603: Boundaries of R-1 Districts. The Official Map (Section 2301 of this Ordinance) shows the boundaries of all R-1 Districts within Molena. Article XXIII also contains additional information concerning interpreting district boundaries, amending boundaries, etc.

Section 604: Permitted Uses.

- A. The following **Principal Uses** are permitted in R-1 districts:
1. Site-built single-family detached dwelling with a floor area of at least ~~1,200~~ ^{1,500} square feet.
 2. Industrialized home with a floor area of at least ~~1,200~~ ^{1,300} square feet.
 3. Local, State, or Federal government building.
 4. Family Personal Care Home.
 5. Publicly owned and operated park or recreation area.
 6. Subdivision recreation area owned, operated, and maintained by a homeowner's association exclusively for the use of residents and their guests.

7. Agriculture.
8. Utility substations meeting the following development standards:
 - a. Structures must be placed at least thirty (30) feet from all property lines.
 - b. Structures must be enclosed by a wovenwire fence at least eight (8) feet high with bottom of fence either flush with the ground or with a masonry footing.
 - c. No vehicles or equipment may be stored on the lot.
 - d. A buffer must be maintained along the side and rear property lines.

B. The following **Principal Uses** are permitted as **Special Exceptions** in R-1 districts:

1. **None.**

C. The following **Accessory Uses** are permitted in R-1 districts:

1. Private garage or carport not to exceed the storage capacity of three (3) automobiles per dwelling unit.
2. Structure for the storage of equipment and supplies used in maintaining the principal building and its grounds.
3. Structure for a children's playhouse and the storage of children's play equipment.
4. Private swimming pool and bath house or cabana meeting the following development standards:
 - a. All such swimming pools which are at least three (3) feet deep must be completely enclosed by a fence that is at least four (4) feet high.
5. Private tennis court and/or basketball facilities; if lighted, lights must be designed so that they do not intrude upon adjacent lots. Such a court may be surrounded by a fence up to ten (10) feet high.

*M-1-1
Should
be
Second
Priority
if attached
to
lot*

6. Non-commercial garden, including a greenhouse and other customary garden structures not over eight (8) feet high.
7. Deck, patio, barbecue grill, or other such facility.
8. Fence, wall, exterior lighting fixture, or other general landscaping and site development facility.
9. Antenna--satellite, television, radio, etc.
10. Temporary building for storage of materials meeting the following development standards:
 - a. Permitted only in conjunction with construction of a building;
 - b. Allowed either on the same lot where construction is taking place or on adjacent lots;
 - c. Such a use must be terminated upon completion of construction.
11. The parking of one (1) unoccupied travel trailer, motor coach, or pleasure boat.
12. Sign as permitted by the Molena Sign Ordinance. (Appendix F).
13. Home Occupation, excluding Public Garage and Repair Garage.

D. The following **Accessory Uses** are permitted as **Special Exceptions** in R-1 districts:

1. Manufactured home for temporary use in case of Certified hardship meeting the following development standards:
 - a. A person having a Certified hardship shown according to the procedure contained in this section and meeting any one (1) of the following conditions may apply to the Board of Appeals for this Special Exception Permit.
 - a'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and is 65 years of age or older.

*Look at
ex exceptions?*

Age limit?

- b'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit; at least one (1) member of his family who will reside in the unit is 65 years of age or older.
- c'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and is physically disabled and requires frequent attendance by others for medical or physical care.
- d'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and at least one (1) member of his family is physically disabled and requires frequent attendance by others for medical or physical care.
- e'. The applicant for the Special Exception is not to be the owner and occupant of the temporary unit but at least one (1) of the residents of the unit is a member of the applicant's family and is 65 years of age or older.
- f'. The applicant for the Special Exception is not to be the owner and occupant of the temporary unit but at least one (1) of the residents of the unit is a member of the applicant/owner's family and is physically disabled and requires frequent attendance by others for medical or physical care.
- b. In order to determine if the need for the Special Exception Permit presented by the applicant is a certified hardship, the Board of Appeals will require a doctor's certificate currently dated, attesting to the health of the person who is asserted to be physically disabled and also attesting to the need for frequent attendance upon such a person by other people. The certificate will be requested by the Board of Appeals directly from the doctor in attendance upon the person who is asserted to be disabled. The applicant will be required to sign a release to the doctor for such information to be

supplied to the Board of Appeals prior to any action by the Board of Appeals to obtain the certificate from the doctor and any possible subsequent issuance of the Special Exception Permit.

- c. The procedure for applying for a Special Exception Permit for a temporary manufactured home for certified hardship is as follows:
 - a'. Application should be made to the Board of Appeals for the Special Exception Permit for a temporary manufactured home for certified hardship.
 - b'. The Board of Appeals will explain to the applicant all conditions and limitations attached to such a permit and will secure the written certification of the applicant that he understands and will abide by those conditions if issued the Special Exception Permit.
 - c'. The Board of Appeals will consider such applications, and upon determining that all requirements have been met for such a permit, will issue the Special Exception Permit.
- d. Upon being granted a Special Exception Permit to allow a temporary manufactured home for certified hardship, the applicant must then apply to the Administrative Officer for a Building Permit for the installation of the temporary manufactured home. The procedure is as follows:
 - a'. Plans for a water/well and sewage/septic system suitable for the temporary manufactured home proposed to be installed on the site must be submitted to the Pike County Health Department for its review and approval.
 - b'. Upon securing concurrence of the Pike County Health Department of the proposed water and sewage systems to serve the proposed temporary manufactured home, the owner should present evidence of such approval to the

Administrative Officer and apply for a Building Permit for installation of the proposed temporary manufactured home, including the water and sewage systems.

- c'. Upon approval of the Administrative Officer and receipt of the Building Permit, the owner should proceed with installation of the proposed temporary manufactured home, including water and sewage systems. The Administrative Officer will provide required inspections of these systems during and upon completion of construction.
- e. The following conditions apply to Special Exception Permits issued for temporary use of a manufactured home for hardship:
 - a'. It is temporary and valid only for a specific period of time.
 - b'. A development plan must be submitted showing the proposed locations of the principal building, the water and sewage systems, and the temporary manufactured home. That development plan must be approved by the Board of Appeals before issuing the temporary Special Exception Permit.
 - c'. During its period of approval, the temporary manufactured home must be connected to the approved water and sewage systems.
 - d'. The temporary manufactured home must be removed within thirty (30) days of either the expiration of the Special Exception Permit for the temporary manufactured home or upon finding of the Board of Appeals, upon its own application or that of any aggrieved party and after giving due notice to all concerned parties and granting full opportunity for a hearing, that the conditions for which the Special Exception was granted no longer exist--whichever is earlier.
 - e'. The temporary manufactured home must be either a Class B or Class C manufactured home.

f'. No more than one (1) such unit is permitted per lot.

g'. The unit must be located entirely within the rear yard of the principal dwelling, as shown on the approved development plan.

E. All accessory uses must meet the following standards:

1. They must be located in the rear yard.
2. They may not be located closer than five (5) feet from any property line.
3. They may not be located in any front or side yard.
4. Accessory buildings and structures not attached to the principal building must be located at least twelve (12) feet from the principal building on the lot.

F. All uses not permitted within R-1 districts by this Section are specifically prohibited.

Section 605: Development Standards for R-1 Districts. In addition to the development standards contained in Article IV of this Ordinance, the following standards are required within R-1 districts:

A. **Minimum Floor Area per Dwelling Unit:**

1,200 square feet.

B. **Minimum Lot Area:**

1,600

1. **Unsewered Areas:**

As specified by the Pike County Health Department, but in no case less than 43,560 square feet 1 (acre); however, a lot of record lawfully existing at the time of passage of this Ordinance and having an area of less than 1 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-1 district if approved by the Pike County Health Department.

2. **Sewered Areas:**

43,560 square feet (1 acre); however, a lot of record lawfully existing at the time

of passage of this Ordinance and having an area of less than 1 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-1 district.

- C. **Minimum Lot Width:** 150 feet.
- D. **Minimum Front Yard:**
1. **Arterial Street/Roads:** 80 feet. The front of all buildings must be at least 35 feet from the front property line.
 2. **Collector Streets/Roads:** 65 feet. The front of all buildings must be at least 35 feet from the front property line.
 3. **Other Streets/Roads:** 55 feet. The front of all buildings must be at least 35 feet from the front property line.
- E. **Minimum Side Yard:** 15 feet.
- F. **Minimum Rear Yard:** 40 feet.
- G. **Maximum Bldg. Height:** 35 feet; however, this height limit does not apply to projections not intended for human habitation--except for satellite, television, and radio antennas, to which this limit does apply. For buildings and structures with such projections, the minimum required yards must be increased one (1) foot for every two (2) feet (or part of two (2) feet) of height greater than 35 feet.
- H. **Maximum Lot Coverage by Building:** 25 percent.

- I. **Sight Distance:** In order to assure maintenance of adequate sight distances at intersections, no fence, wall, shrubbery, or other obstruction to vision between the heights of three (3) feet and fifteen (15) feet above the ground is permitted within twenty (20) feet of the intersection of the right-of-ways of streets or of streets and railroads.
- J. **Applicability to Land, Buildings, and Open Space:** No building, structure, land, or open space may be used or occupied--and no building or structure or part of a building or structure may be erected, constructed, reconstructed, moved, or structurally altered--unless in conformity with all of the regulations specified for the district in which it is located.
- K. **Every Use Must Be on a Lot:** No building or structure may be erected or use established unless upon a lot as defined by this Ordinance.
- L. **Only One Principal Building Per Lot:** Only one (1) principal building and its accessory buildings may be erected on any lot, except for planned developments or as otherwise provided.
- M. **Open Space Not to Be Encroached Upon:** No open space may be encroached upon or reduced in any manner except in conformity with the yard, setback, off-street parking spaces, and other such required development standards contained in the Ordinance. Shrubbery, driveways, retaining walls, fences, curbs, and buffers are not considered to be encroachments of yards. Open space areas as required by this Ordinance must be permanently maintained as open space in accordance with the requirements of this Ordinance.
- N. **Reduction of Yards or Lot Area:** Except as otherwise provided in this Ordinance, no lot existing at the time of passage of this Ordinance may not be reduced, divided, or changed so as to produce a tract of land which does not comply with the minimum dimension or area requirements of this Ordinance for the district in which it is located unless that reduction or division is necessary to provide land which is needed and accepted for public use.
- O. **Lots with Multiple Frontage:** In case of a corner lot or double frontage lot, front yard setback requirements apply to all lot lines abutting a street.
- P. **Landlocked Lots:** In the case of a landlocked lot (a lot without direct access to a public street or road) lawfully existing as of the effective date of this Ordinance, the property owner is entitled to one

(1) Building Permit, as long as all of the following requirements are met:

1. No other principal building exists or is being constructed on the property.
2. No other valid Building Permit has been issued prior to the effective date of this Ordinance and is currently valid.
3. The property was and continues to be under single ownership since the effective date of this Ordinance.
4. The property owner has acquired a thirty (30) foot easement to a City-, County-, or State-maintained street or road, and the easement has been duly recorded and made a part of the property deed.
5. In the event the property is divided, no additional permits will be issued.

Q. **Street Frontage:** No principal building may be erected on any lot which has less than (30) feet of immediate frontage on at least one (1) public street.

R. **Yards and Other Spaces:** No part of a yard, other open space, off-street parking, or loading space required for another building may be included as a part of the yard, off-street parking, or loading space required for another building, except as specifically provided for in this Ordinance.

S. **Substandard Lots:** Any lot existing at the time of the adoption of this Ordinance, which has an area or a width which is less than required by this Ordinance, is subject to the following exceptions and modifications:

1. **Adjoining Lots in Same Ownership:** When two (2) or more adjoining and vacant lots within a non-approved development with continuous frontage are in a single ownership at the time of application and such lots have a frontage or lot area less than is required by the district in which they are located, such lots must be replatted or re-parcelled so as to create one or more lots which conform to the minimum frontage and area requirements of the district.
2. **Single Lot:** When a lot has an area or frontage which does not conform with the requirements of the district in which it is located, but was a lot at the effective date of this Ordinance, such a lot may be used for any use allowed in the zoning

district in which it is located as long as all other requirements of this Ordinance are met.

- T. **Encroachment on Public Rights-of-Way:** No building, structure, service area, required off-street parking, or loading/unloading facility is permitted to encroach on public rights-of-way.
- U. **Physical Design Standards:** Minimum design standards for driveways, loading areas, and other such physical site improvements are contained in applicable development regulations of Molena. Consult the Administrative Officer for specific requirements.
- V. **Off-Street Parking and Service Requirements:** Minimum standards for Off-Street Parking and Service Requirements are contained in the Pike County Standard for Off-Street Parking and Service Facilities (Appendix I).
- W. **Other Applicable Development Regulations:** Information concerning any other applicable development regulations may be obtained by consulting the Administrative Officer.
- X. **Signs:** Minimum design and location standards are contained in the Pike County Sign Ordinance (See Appendix F). Consult that document for specific requirements.

ARTICLE VII. (RESERVED)

ARTICLE VIII. (RESERVED)

Begin

ARTICLE IX. R-4 GENERAL RESIDENTIAL

Section 901: Purpose. R-4 zoning districts are intended to establish and preserve quiet, medium-density neighborhoods with a variety of types of dwellings--as well as some non-residential uses which are compatible if proper design controls are maintained. These districts are free from other uses which are incompatible with or would detract from permitted uses. When permitted uses are developed within an R-4 district, they are protected from the detrimental effects of intrusion by incompatible land uses. Diverse neighborhoods that are both stable and attractive may therefore be established and preserved.

Section 902: Determining if an Area is Suitable for Inclusion Within an R-4 District. The factors contained in Section 410 of this Ordinance must be thoroughly considered by the Planning Commission as well as the Mayor and Council when determining in which zoning district an area of land is to be placed. This will assure that rational comprehensive planning principles are the basis upon which the decision is made. Land Use decisions which are based on sound planning principles encourage the development and preservation of land use patterns that provide healthful and safe living conditions of the residents of Molena.

Section 903: Boundaries of R-4 Districts. The Official Map (Section 2301 of this Ordinance) shows the boundaries of all R-4 districts within Molena. Article XXIII also contains additional information concerning interpreting district boundaries, amending boundaries, etc.

Section 904: Permitted Uses.

- A. The following **Principal Uses** are permitted in R-4 districts:
 - 1. Site-built single-family attached dwelling with a floor area of at least 950 square feet.
 - 2. Garden Apartment dwelling with a floor area per dwelling unit of at least 950 square feet.
 - 3. Two-family dwelling with a floor are per dwelling unit of at least 950 square feet.
 - 4. Cluster dwelling with a floor area of at least 950 square feet.

5. Patio dwelling with a floor area of at least 950 square feet.
6. (Reserved)
7. Industrialized home with a floor area of at least 950 square feet.
8. Class A manufactured home with a floor area of at least 950 square feet.
9. Class B manufactured home with a floor area of at least 950 square feet.
10. Local, State, or Federal government building.
11. Family Personal Care Home.
12. Group Personal Care Home.
13. Congregate Personal Care Home.
14. Intermediate Care Home.
15. Club or lodge meeting the following development standards:
 - a. Must be located on an Arterial Street/Road.
 - b. All buildings must be placed at least fifty (50) feet from any property lines.
 - c. A buffer must be maintained along the side and rear property lines.
16. Boarding or rooming house.
17. Nursery school or kindergarten meeting the following development standards:
 - a. Must have at least 150 square feet of outdoor play area for each child.
 - b. The outdoor play area must be enclosed by a woven wire fence at least four (4) feet high, the bottom of which must be either flush with the ground or with a masonry footing.
18. Clinic.
19. Hospital meeting the following development standards:
 - a. Must be located on an Arterial Street/Road.

- b. All buildings must be placed at least fifty (50) feet from any property lines.
 - c. A buffer must be maintained along the side and rear property lines.
20. Nursing Home meeting the following development standards:
- a. Must be located on an Arterial Street/Road.
 - b. All buildings must be placed at least fifty (50) feet from any property lines.
 - c. A buffer must be maintained along the side and rear property lines.
21. School, public or private.
22. Local, State, or Federal government building.
23. Publicly owned and operated park or recreation area.
24. Subdivision recreation area owned, operated, and maintained by a homeowner's association exclusively for the use of residents and their guests.
25. Agriculture.
26. Utility substation meeting the following development standards:
- a. Structures must be placed at least thirty (30) feet from all property lines.
 - b. Structures must be enclosed by a wovenwire fence at least eight (8) feet high with bottom of the fence either flush with the ground or with a masonry footing.
 - c. No vehicle or equipment may be stored on the lot.
 - d. A buffer must be maintained along the side and rear property lines.
- B. The following **Principal Uses** are permitted as **Special Exceptions** in R-4 districts:
- 1. None.

C. The following **Accessory Uses** are permitted in R-4 districts:

1. Private garage or carport not to exceed the storage capacity of three (3) automobiles per dwelling unit.
2. Structure for the storage of equipment and supplies used in maintaining the principal building and its grounds.
3. Structure for a children's playhouse and the storage of children's play equipment.
4. Private swimming pool and bath house or cabana meeting the following development standards:
 - a. All such swimming pools which are at least three (3) feet deep must be completely enclosed by a fence that is at least four (4) feet high.
5. Private tennis court and/or basketball facilities; if lighted, lights must be designed so that they do not intrude upon adjacent lots. Such a court may be surrounded by a fence up to ten (10) feet in height.
6. Non-commercial garden, including a greenhouse and other customary garden structures not over eight (8) feet in height.
7. Deck, patio, barbecue grill, or other such facility.
8. Fence, wall, exterior lighting fixture, or other general landscaping and site development facility.
9. Antenna--satellite, television, radio, etc.
10. Temporary building for storage of materials meeting the following development standards:
 - a. Permitted only in conjunction with construction of a building.
 - b. Allowed either on the same lot where construction is taking place or on an adjacent
 - c. Such a use must be terminated upon completion of construction.
11. The parking of one (1) unoccupied travel trailer, motor coach, or pleasure boat.

12. Sign as permitted by the Molena Sign Ordinance (Appendix F).
 13. Home Occupation, excluding Public Garage and Repair Garage.
- D. The following **Accessory Uses** are permitted as **Special Exceptions** in R-4 districts:
1. Manufactured home for temporary use in case of Certified hardship meeting the following development standards:
 - a. A person having a Certified Hardship shown according to the procedure contained in this Section and meeting any one (1) of the following conditions may apply to the Board of Appeals for the Special Exception Permit.
 - a'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and is 65 years of age or older.
 - b'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit; at least one (1) member of his family who will reside in the unit is 65 years of age or older.
 - c'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and is physically disabled and requires frequent attendance by others for medical or physical care.
 - d'. The applicant for the Special Exception is to be the owner and occupant of the temporary unit and at least one (1) member of his family is physically disabled and requires frequent attendance by others for medical or physical care.
 - e'. The applicant for the Special Exception is not to be the owner and occupant of the temporary unit but at least one (1) of the residents of the unit is a member of the applicant's family and is 65 years of age or older.

f'. The applicant for the Special Exception is not to be the owner and occupant of the temporary unit but at least one (1) of the residents of the unit is a member of the applicant/owner's family and is physically disabled and requires frequent attendance by others for medical or physical care.

b. In order to determine if the need for the Special Exception Permit presented by the applicant is a certified hardship, the Board of Appeals will require a doctor's certificate currently dated, attesting to the health of the person who is asserted to be physically disabled and also attesting to the need for frequent attendance upon such a person by other people. The certificate will be requested by the Board of Appeals directly from the doctor in attendance upon the person who is asserted to be disabled. The applicant will be required to sign a release to the doctor for such information to be supplied to the Board of Appeals prior to any action by the Board of Appeals to obtain the certificate from the doctor and any possible subsequent issuance of the Special Exception Permit.

c. The procedure for applying for a Special Exception Permit for a temporary manufactured home for certified hardship is as follows:

a'. Application should be made to the Board of Appeals for the Special Exception Permit for a temporary manufactured home for certified hardship.

b'. The Board of Appeals will explain to the applicant all conditions and limitations attached to such a permit and will secure the written certification of the applicant that he understands and will abide by those conditions if issued the Special Exception Permit.

c'. The Board of Appeals will consider such applications, and upon determining that all requirements have been met for such a permit, will issue the Special Exception Permit.

- d. Upon being granted a Special Exception Permit to allow a temporary manufactured home for certified hardship, the applicant must then apply to the Administrative Officer for a Building Permit for the installation of the temporary manufactured home. The procedure is as follows:
 - a'. Plans for a water/well and sewage/septic system suitable for the temporary manufactured home proposed to be installed on the site must be submitted to the Pike County Health Department for its review and approval.
 - b'. Upon securing concurrence of the Pike County Health Department of the proposed water and sewage systems to serve the proposed temporary manufactured home, the owner should present evidence of such approval to the Administrative Officer and apply for a Building Permit for installation of the proposed temporary manufactured home, including the water and sewage systems.
 - c'. Upon approval of the Administrative Officer and receipt of the Building Permit, the owner should proceed with installation of the proposed temporary manufactured home, including water and sewage systems. The Administrative Officer will provide required inspections of these systems during and upon completion of construction.
- e. The following conditions apply to Special Exception Permits issued for temporary use of a manufactured home for hardship:
 - a'. It is temporary and valid only for a specific period of time. Must be renewed every 12 months.
 - b'. A development plan must be submitted showing the proposed locations of the principal building, the water and sewage systems, and the temporary manufactured home. That development plan must be approved by the Board of Appeals before issuing the temporary Special Exception Permit.

- c'. During its period of approval, the temporary manufactured home must be connected to the approved water and sewage systems.
- d'. The temporary manufactured home must be removed within thirty (30) days of either the expiration of the Special Exception Permit for the temporary manufactured home or upon finding of the Board of Appeals, upon its own application or that of any aggrieved party and after giving due notice to all concerned parties and granting full opportunity for a hearing, that the conditions for which the Special Exception was granted no longer exist--whichever is earlier.
- e'. The temporary manufactured home must be either a Class B or Class C manufactured home.
- f'. No more than one (1) such unit is permitted per lot.
- g'. The unit must be located entirely within the rear yard of the principal dwelling, as shown on the approved development plan.

E. All accessory uses must meet the following standards:

1. They must be located in the rear yard.
2. They may not be located closer than five (5) feet to any property line.
3. They may not be located in any front or side yard.
4. Accessory buildings and structures not attached to the principal building must be located at least twelve (12) feet from the principal building on the lot.

F. All uses not permitted within R-4 districts by this Section are specifically prohibited.

Section 905: Development Standards for R-4 Districts. In addition to the development standards contained in Article IV of this Ordinance, the following standards are required within R-4 districts:

A. **Minimum Floor Area per Dwelling Unit (for residential) or for buildings (for non-residential):** 950 square feet.

B. **Minimum Lot Area:**

1. Unsewered Areas:

a. With Jointly-Owned Common Areas:

As specified by the Pike County Health Department, but in no case less than 43,560 square feet (1 acre); however, a lot of record lawfully existing at the time of passage of this Ordinance and having an area of less than 1 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-4 district if approved by the Pike County Health Department.

b. Without Jointly-Owned Common Areas:

As specified by the Pike County Health Department but in no case less than 43,560 square feet (1 acre); however, a lot of record lawfully existing at the time of passage of this Ordinance and having an area of less than 1 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-4 district if approved by the Pike County Health Department.

2. Sewered Areas:

a. With Jointly-
Owned Common
Areas:

1/2 acre; however, a lot of record lawfully existing at the time of passage of this Ordinance and having an area of less than 1/2 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-4 district if approved by the Pike County Health Department.

b. Without Jointly-
Owned Common
Areas:

1/2 acre; however, a lot of record lawfully existing at the time of passage of this Ordinance and having an area of less than 1/2 acre (non-conforming) may nevertheless be developed with a use which is permitted within an R-4 district if approved by the Pike County Health Department.

C. **Minimum Lot Width:**

80 feet.

D. **Minimum-Front-Yard:**

1. Arterial Streets/
Roads:

80 feet. The front of all buildings must be at least 35 feet from the front property line.

2. Collector Streets/
Roads:

50 feet. The front of all buildings must be at least 35 feet from the front property line.

3. Other Streets/
Roads:

50 feet. The front of all buildings must be at least 35 feet from the front property line.

E. **Minimum Side Yard:**

Total for both side yards of twenty (20) feet (for example, side yards of 10 feet and 10 feet, or side yards of 5 feet and 15 feet, or side yards of

20 feet and 0 feet). A fire wall is required for side yards of ten (10) feet or less. If side lot line adjoins an R-1 or R-2 district, minimum required side yard is thirty (30) feet, regardless of the type of wall.

F. Minimum Rear Yard:

None. A fire wall is required for rear yards of ten (10) feet or less. If rear lot line adjoins an R-1 or R-2 district, minimum required side yard is forty (40) feet, regardless of the type of dwelling unit on the lot.

G. Maximum Bldg. Height:

35 feet; however, this height limit does not apply to projections not intended for human habitation--except for satellite, television, and radio antennas, to which this limit does apply. For buildings and structures with such projections, the minimum required yards must be increased one (1) foot for every two (2) feet (or part of two (2) feet) of building height greater than thirty-five (35) feet.

H. Maximum Lot Coverage by Building:

35 percent.

I. Sight Distance: In order to assure maintenance of adequate sight distances at intersections, no fence, wall, shrubbery, or other obstruction to vision between the heights of three (3) feet and fifteen (15) feet above the ground is permitted within twenty (20) feet of the intersection of the right-of-ways of streets or of streets and railroads.

J. Applicability to Land, Buildings, and Open Space: No building, structure, land, or open space may be used or occupied--and no building or structure or part of a building or structure may be erected, constructed, reconstructed, moved, or structurally altered--unless in conformity with all of the regulations specified for the district in which it is located.

- K. **Every Use Must Be on a Lot:** No building or structure may be erected or use established unless upon a lot as defined by this Ordinance.
- L. **Only One Principal Building Per Lot:** Only one (1) principal building and its accessory buildings may be erected on any lot, except for planned developments or as otherwise provided.
- M. **Open Space Not to Be Encroached Upon:** No open space may be encroached upon or reduced in any manner except in conformity with the yard, setback, off-street parking spaces, and other such required development standards contained in the Ordinance. Shrubbery, driveways, retaining walls, fences, curbs, and buffers are not considered to be encroachments of yards. Open space areas as required by this resolution must be permanently maintained as open space in accordance with the requirements of this Ordinance.
- N. **Reduction of yards or Lot Area:** Except as otherwise provided in this Ordinance, no lot existing at the time of passage of this Ordinance may not be reduced, divided, or changed so as to produce a tract of land which does not comply with the minimum dimension or area requirements of this Ordinance for the district in which it is located unless that reduction or division is necessary to provide land which is needed and accepted for public use.
- O. **Lots with Multiple Frontage:** In case of a corner lot or double frontage lot, front yard setback requirements apply to all lot lines abutting a street.
- P. **Landlocked Lots:** In the case of a landlocked lot (a lot without direct access to a public street or road) lawfully existing as of the effective date of this Ordinance, the property owner is entitled to one (1) Building Permit, as long as all of the following requirements are met:
1. No other principal building exists or is being constructed on the property.
 2. No other valid Building Permit has been issued prior to the effective date of this Ordinance and is currently valid.
 3. The property was and continues to be under single ownership since the effective date of this Ordinance.

4. The property owner has acquired a thirty (30) foot easement to a City-, County-, or State-maintained street or road, and the easement has been duly recorded and made a part of the property deed.
 5. In the event the property is divided, no additional permits will be issued.
- Q. **Street Frontage:** No principal building may be erected on any lot which has less than (30) feet of immediate frontage on at least one (1) public street.
- R. **Yards and Other Spaces:** No part of a yard, other open space, off-street parking, or loading space required for another building may be included as a part of the yard, off-street parking, or loading space required for another building, except as specifically provided for in this Ordinance.
- S. **Substandard Lots:** Any lot existing at the time of the adoption of this Ordinance, which has an area or a width which is less than required by this Ordinance, is subject to the following exceptions and modifications:
1. **Adjoining Lots in Same Ownership:** When two (2) or more adjoining and vacant lots within a non-approved development with continuous frontage are in a single ownership at the time of application and such lots have a frontage or lot area less than is required by the district in which they are located, such lots must be replatted or reparcelled so as to create one or more lots which conform to the minimum frontage and area requirements of the district;
 2. **Single Lot:** When a lot has an area or frontage which does not conform with the requirements of the district in which it is located, but was a lot at the effective date of this Ordinance, such a lot may be used for any use allowed in the zoning district in which it is located as long as all other requirements of this Ordinance are met.
- T. **Encroachment on Public Rights-of-Way:** No building, structure, service area, required off-street parking, or loading/unloading facility is permitted to encroach on public rights-of-way.
- U. **Physical Design Standards:** Minimum design standards for driveways, loading areas, and other such physical site improvements are contained in Appendix A, Molena Subdivision Regulations. Consult that document for specific requirements.

- V. **Off-Street Parking and Service Requirements:** Minimum standards for Off-Street Parking and Service Requirements are contained in the Molena Standard for Off-Street Parking and Service Facilities (Appendix I).
- W. **Other Applicable Development Regulations:** Information concerning any other applicable development regulations may be obtained by consulting the Administrative Officer.
- X. **Signs:** Minimum design and location standards for signs are contained in the Molena Sign Ordinance (See Appendix F). Consult that document for specific requirements.
- Y. **Length of Townhouse Row:** More than four (4) attached dwelling units must be arranged in adjacent sets of dwellings, each set having a front foundation line offset of at least ten (10) feet from the foundation line of the adjacent set of dwelling units.
- Z. **Fire Walls:** All side and rear walls of attached dwelling units which are less than ten (10) feet from the lot line must be fire walls. (See Georgia Building Code for construction standards.)

ORDINANCE 16

AN ORDINANCE OF THE CITY OF MOLENA RELATING TO JUNK

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF MOLENA:

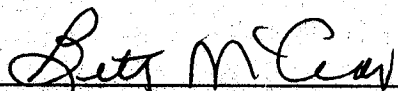
SECTION 1:

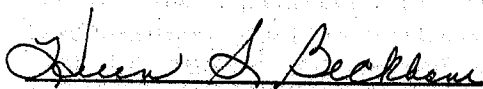
(a) In order to eliminate unsightly, unhealthy or dangerous situations, and in order to protect property values and to enhance the beauty of the City, it shall be unlawful for any person to own, rent, lease or be in possession of any premises, dwelling, dwelling unit or other structure, place or vacant lot wherein are kept dilapidated furniture, appliances, machinery or equipment, including automobiles, which are either in a wholly or partially wrecked, junked, dismantled or inoperative condition and which are not completely enclosed within a building.

(b) Should the police chief determine that any person is violating the terms of this section, he shall give the offending party 14 day's notice within which to eliminate the unsightly, unhealthy or dangerous situation. This notice shall be in writing and shall be a prerequisite to the bringing of charges against an offender. Should the person to whom the notice is directed fail to comply with the request made therein within the 14 day period, the law enforcement officers of the city shall be authorized to proceed with the bringing of charges as for the violation of any city ordinance. Each day the unsightly, unhealthy or dangerous situation exists shall be deemed a separate offense.

(c) Furniture, appliances, machinery or equipment including automobiles, as hereinabove defined, which remain on the same property for a period of 30 days after either a plea or a finding of guilty shall be presumed to be abandoned and subject to being removed from the property by the police chief and shall be disposed of by destruction or sale.

SECTION 2: All ordinances in conflict with this ordinance are hereby repealed.


MAYOR, CITY OF MOLENA


CLERK, CITY OF MOLENA

First reading: June 7, 1994

Adopted at
second reading: July 5, 1994