

Chesterfield County Codes Enforcement Office

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MANUFACTURED HOUSING INSTALLATION GUIDELINES FOR THE UNINCORPORATED AREAS OF CHESTERFIELD COUNTY S.C.

The inspector will be inspecting the piers, tie downs, steps and landings, water and septic tank hook-up and electric hook-up from the service pole to the manufactured home. The manufactured home must be inspected and approved by the Building Inspector prior to electrical hook-up from the electric company. A door must be unlocked or key available for inspection of inside sub-panel.

MANUFACTURED HOME SET-UP SHALL BE AS FOLLOWS:

It shall be unlawful for any person or legal entity to import any Pre-June 15, 1976 manufactured home into Chesterfield County.

Manufactured home must be registered within 15 days of moving home into Chesterfield County, and license decal must be posted in window.

SET-UP

Individual must be licensed by the Manufactured Housing Board in order to set-up a mobile home. The only licenses acceptable for the installation of manufactured homes are the *manufactured home contractor* and the *manufactured home installer* licenses. License will be verified

All property line set-backs shall be satisfied:

FOOTINGS

Footings for piers shall be a minimum of 16" x 16" x 4". Solid masonry units or other approved systems shall be permissible.

Poured concrete footings for piers shall be 12" deep x 16" wide and poured a minimum of 4" thick.

Footings for brick or block skirting shall be 12" deep X 12" wide and poured a minimum of 4" thick.

PIERS

Piers shall be designed and constructed to distribute loads evenly. Multiple section homes may have concentrated roof loads which will require special consideration. Load-bearing piers may be constructed utilizing one of the methods below. Such piers shall be considered to resist only vertical forces acting in a downward direction. They shall not be considered as providing any resistance to horizontal loads induced by wind or earthquake forces. Caps and leveling spacers may be used for leveling of the manufactured home. Spacing of piers shall be as specified in the manufacturer's installation instructions, if available or by an approved designer.

- **Piers less than 36 inches** in height may be constructed of masonry units, placed with cores or cells vertically. Piers shall be installed perpendicular to the main frame and shall have a cross-sectional area of 128 square inches. Piers shall be capped with minimum 2-inch solid masonry units or equivalent.
- **Corner Piers and all other piers greater than 36"** in height shall be at least 16 inches by 16 inches consisting of interlocking masonry units and shall be fully capped with minimum 4-inch solid masonry units or equivalent.
- **Piers over 80 inches** in height may be constructed the same as corner piers , provided the piers shall be filled solid with grout and reinforced with four continuous # 5 bars. One bar shall be placed in each corner cell of hollow masonry unit piers or in each corner of the grouted space of piers constructed of solid masonry units.
- **Cast in place concrete piers** meeting the same size and height limitation of items 1, 2 and 3 above may be substituted for piers constructed of masonry units.
- **Alternate materials and methods** of construction may be used for piers which have been designed by a design professional licensed by the state to practice as such. Prefabricated load-bearing devices must be listed and labeled for the intended use.

FRAME TIES

Only bolted or buckled ties are allowed. Anchoring equipment shall be so designed to prevent self-disconnection.

	<u>Length up to 40'</u>	<u>41' to 60'</u>	<u>61' to 82'</u>
Frame ties per side (Diagonal Ties)	3	5	6
Total number of frame Ties per home	6	10	12
Over the roof ties (If Required)	3	3	3

Septic Tanks / Sewer Lines / Plumbing

Septic tanks shall be installed, approved by DHEC and hooked to the home prior to final inspection by the Building Inspector.

Sewer lines shall be scheduled 34, 50 or better. The lines should be properly fitted and glued and strapped up with approved strapping material. Any turn or drop greater than 45 degrees shall have a screw in type clean out installed upstream of the bend.

Outside Hose Bibs (spigot) must have backflow preventer installed unless approved anti-siphonage faucet is installed.

SERVICE POLE / ELECTRICAL

Service pole installation per the utility company servicing your home. A diagram of proper installation can be obtained from your utility company. All services must comply with utility company standards. The service entrance cable to mobile homes shall be in approved conduit or be direct burial cable (DBC). All exposed cable (from service box to ground and from ground to mobile home) must be in conduit.

Aluminum service entrance cable must be 4/0 with 2/0 neutral (or larger) with # 4 aluminum ground. Aluminum service conductors must have proper amount of anti-corrosive compound or inhibitors applied to all end's at connection.

Copper service entrance cable must be 2/0 with 1/0 neutral (or larger) with # 6 ground.

Your utility company can supply you with a diagram for proper wiring specifications. Meter base must be located on a pole or pedestal and not attached to the structure.

911 ADDRESS

The numbers shall be conspicuously placed immediately above, on or at the side of the property of each building so that the number can be seen clearly from the street line. Whenever the building is more than 50 feet from the street line or when the numbers at the door are not clearly visible from the street line, the number must be placed at the entrance to the building, on a mail box, gate post, fence or other appropriate place so as to be easily read from the street line.

Numbers shall not be less than four (4) inches in height, and shall be made of a durable and clearly visible material which is in contrasting color to the building.

LANDINGS AT DOORS

There shall be a floor or landing on each side of each exterior door. The width of each landing shall not be less than the stairway or door served. Every landing shall have a minimum dimension of 36 inches measured in the direction of travel.

Landing Height

- Exit Doors that **swing in** shall be no higher than 7 ¾" above the landing.
- Exit Doors that **swing out** shall be not be greater than 1 ½" above the landing.

GUARDS & HANDRAILS

GUARD RAILS:

Porches, balconies or raised floor surfaces located more than 30 inches above the floor or grade below, shall have guards not less than 36 inches in height. Open sides of stairs with a total rise of more than 30 inches above the floor or grade below, shall have guards not less than 34 inches and not more than 38 inches in height measured vertically from the nosing of the treads.

Required guards on open sides of raised floor areas, porches and steps shall have intermediate rails or ornamental closures that do not allow passage of a sphere 4 inches in diameter.

HANDRAILS:

Handrails must be graspable, returned and at least on one side of steps of 4 or more risers.

STEPS:

- **The maximum rise** of steps shall not exceed 7 ¾" and cannot vary more than 3/8" of each other.
- **The maximum width** of steps shall not be less than 10" and cannot vary more than 3/8" of each other.
- **Treads** are permitted to be **open** when landing is less than 30" above grade.
- **Treads** are required to be **closed** when landing is 30" or greater above grade.

UNDERPINNING

Underpinning must be installed with approved materials for this purpose. Metal, vinyl, masonry (brick, block, stone) or treated wood .Please leave one piece of underpinning off at the middle and ends of the home for inspection.

NOTE

Vapor barrier: Of 6-mil poly (plastic) or thicker with 100% total ground coverage shall be installed underneath the structure of all **new** mobile homes.

SMOKE DETECTORS

All manufactured homes shall have a minimum of two (2) operational smoke detectors.

REMOVAL OF DEBRIS

The under-floor grade shall be cleaned of all vegetation and organic material. All wood forms used for placing concrete shall be removed before a building is occupied or used for any purpose. All construction materials shall be removed before a building is occupied or used for any purpose.

Handrails

Graspable handrails shall be provided on at least one side of each continuous run of treads or steps with four or more risers.

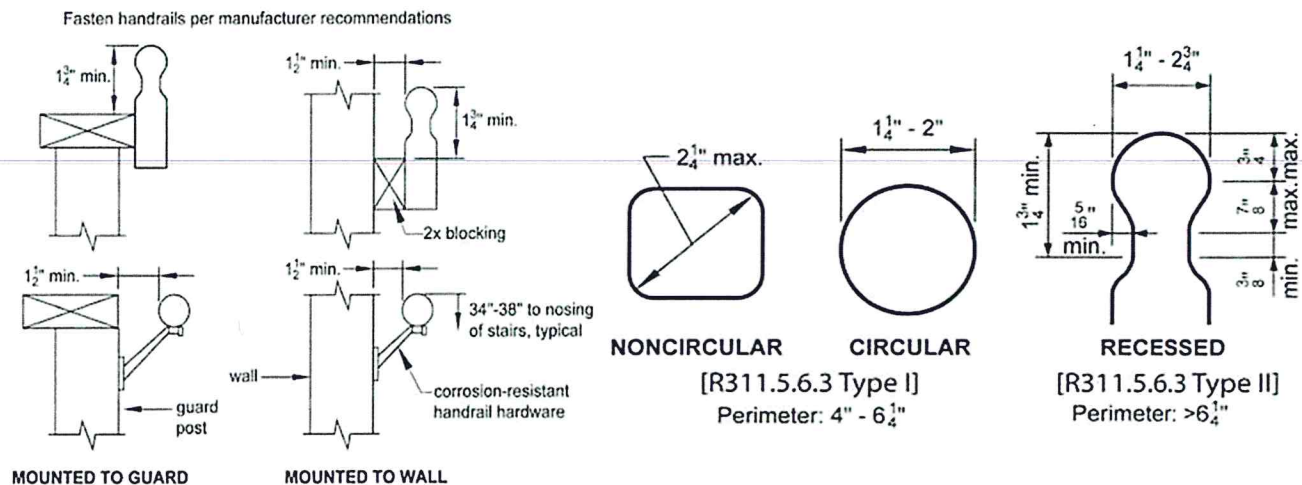
Height: Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

Continuity: Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight. Handrail ends shall be returned or shall terminate in the newel posts or safety terminals.

Handrails adjacent to a wall shall have a space of not less than 1 ½ inch (38 mm) between the wall and the handrails.

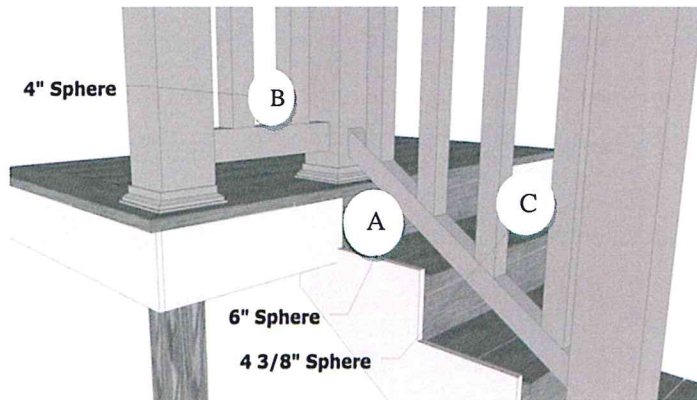
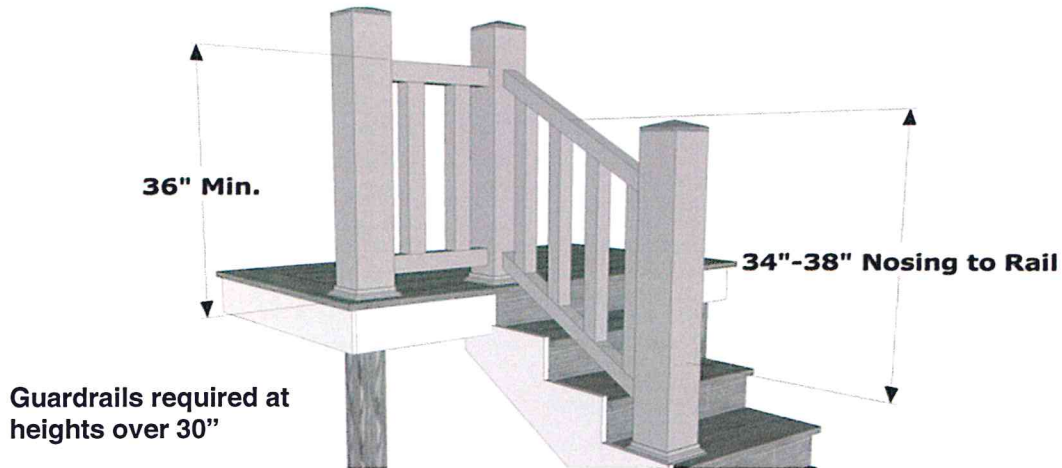
Handrail grip size. All required handrails shall be of one of the following types or provide equivalent graspability.

1. **Type I.** Handrails with a circular cross section shall have an outside diameter of at least 1 ¼ inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6 ¼ inches (160 mm) with a maximum cross section of dimension of 2 ¼ inches (57 mm).
2. **Type II.** Handrails with a perimeter greater than 6 ¼ inches (160 mm) shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin with a distance of ¾ inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least 3/8 inch (10 mm) to a level that is not less than 1 ¾ inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1 ¼ inches (32 mm) to a maximum of 2-3/4 inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).



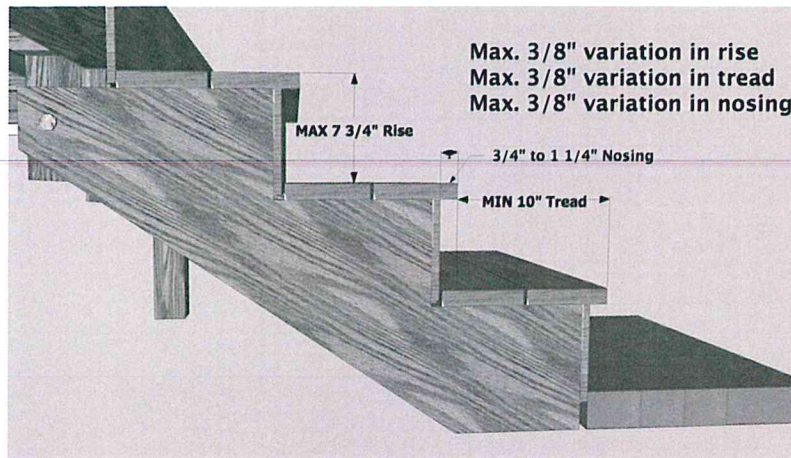
* 2 X 4's, 2 X 6's and Decking Boards
are not considered graspable

HANDRAILS, GUARDRAILS & STEPS



RAILING OPENING LIMITS:

- A – A 6" DIAMETER SPHERE CAN'T PASS THROUGH.
- B – A 4" DIAMETER SPHERE CAN'T PASS THROUGH.
- C -- A 4 3/8" DIAMETER SPHERE CAN'T PASS THROUGH



LANDINGS MUST BE:

- * Maximum 1 1/2" below threshold if door swings out
- * Maximum 7 3/4" below threshold if door swings in
- * At least the width of the door and 36" in direction of travel

- * Floor joist shall bare on ledger board or approved hangers installed per manufacturers specifications
- * Must be treated lumber for all materials exposed to weather
- * Must use galvanized nails on outside decks

R311.7.5.1 Risers

Open risers are permitted provided spacing between treads does not permit the passage of a 4" diameter sphere

Exceptions:

Opening between adjacent treads is not limited on stairs with a total rise of 30" or less

MOBILE HOME ABOVEGROUND SERVICE

WIRING SHALL MEET ALL REQUIREMENTS OF THE CURRENT ADOPTED NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LAWS

Minimum 12 feet from ground level to weather head

Minimum 100 Amp service required mobile homes

Minimum wire size:
 4 CU or 2 AL – 100 Amp
 2/0 CU or 4/0 AL – 200 Amp

Ground wire #6 CU minimum
 Insulated green or green coded
 required to run as continuous
 wire from switch box outside to
 switch box inside

Breaker size in outside switch box must
 equal main breaker size in the mobile
 home

Wire from outside switch box to the
 mobile home switch box is to be direct
 burial wire unless entire run is enclosed
 in conduit

Continuous ground wire (#6 CU minimum)
 from meter base to ground rod

Two (2) ground rods spaced a
 minimum of 6 feet apart are
 required

Ground rod shall be at least 5/8" X
 8' copper weld rod
 5/8" X 8' galvanized rod or
 3/4" X 8' galvanized pipe

Round 16 foot treated pole or a treated 6 X 6
 X 16' set in ground a minimum of 4 feet.

Weather head must not extend above top of
 pole

Wire to be extended 36 inches for connection

Conduit Straps – Minimum 2 straps between
 base and weather head

Rigid metal or gray PVC conduit

Fiber bushings to be installed on all metal
 pipe threads

Center of meter base is to
 be located not more than 5
 1/2 feet from finished grade

Switch box to be located
 not less than 2 feet above

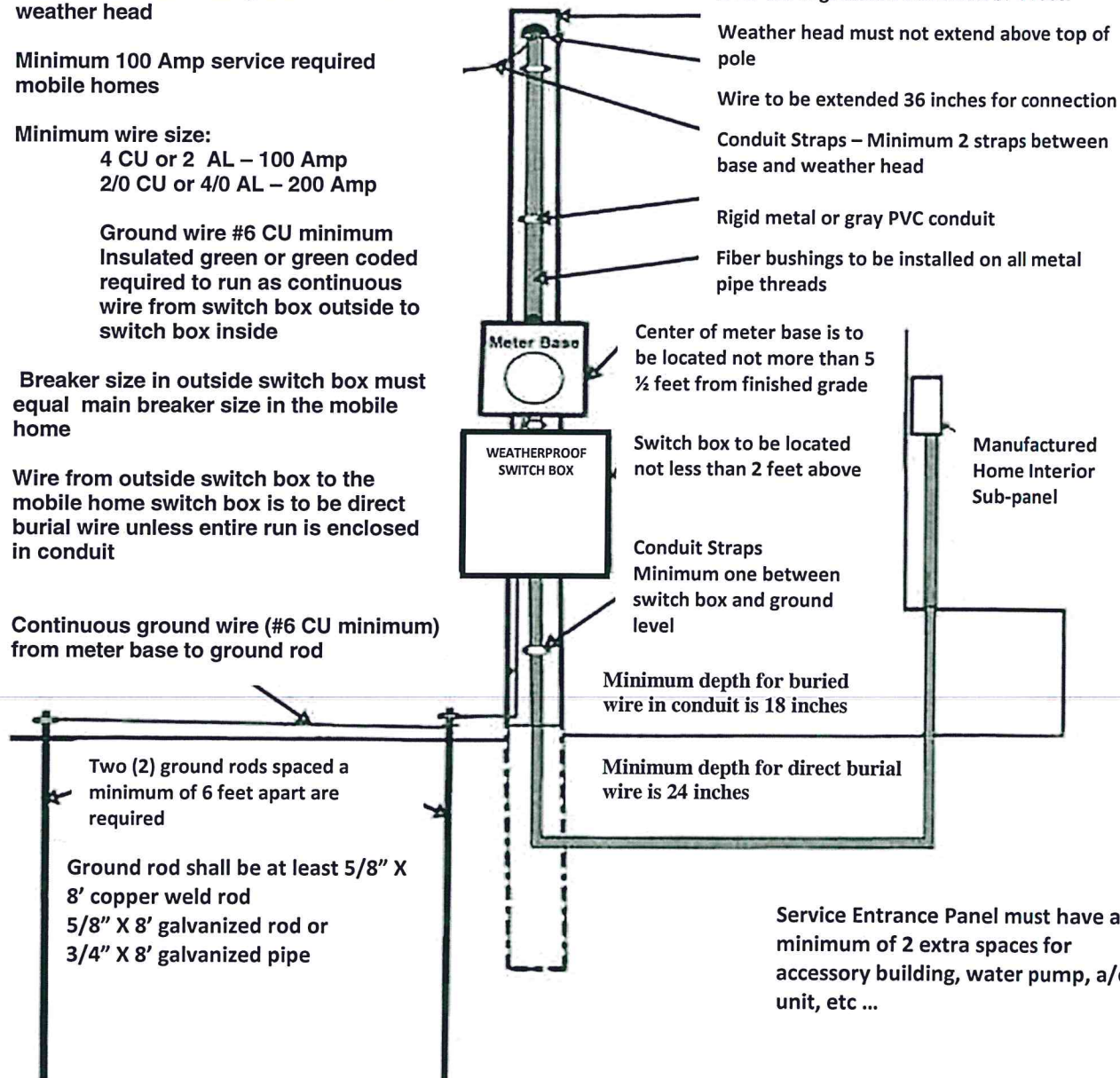
Conduit Straps
 Minimum one between
 switch box and ground
 level

Minimum depth for buried
 wire in conduit is 18 inches

Minimum depth for direct burial
 wire is 24 inches

Manufactured
 Home Interior
 Sub-panel

Service Entrance Panel must have a
 minimum of 2 extra spaces for
 accessory building, water pump, a/c
 unit, etc ...



MOBILE HOME UNDERGROUND SERVICE ENTRANCE

WIRING SHALL MEET ALL REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LAWS

MINIMUM WIRE SIZES:
 200 AMP – 2/0 CU OR 4/0 AL
 100 AMP – 4 CU OR 2 AL

FIBER BUSHINGS TO BE INSTALLED ON ALL METAL PIPE THREADS

BREAKER SIZE IN OUTSIDE SWITCH BOX MUST EQUAL MAIN BREAKER SIZE IN MOBILE HOME

Service Entrance Panel must have a minimum of 2 extra spaces for accessory building, water pump, a/c unit, etc ...

TWO 8 FOOT TREATED POLES A MINIMUM OF 3 FOOT IN THE GROUND. CONDUIT IS REQUIRED ON MOBILE HOME POLE, CONDUIT MUST EXTEND 18" BELOW GROUND LEVEL

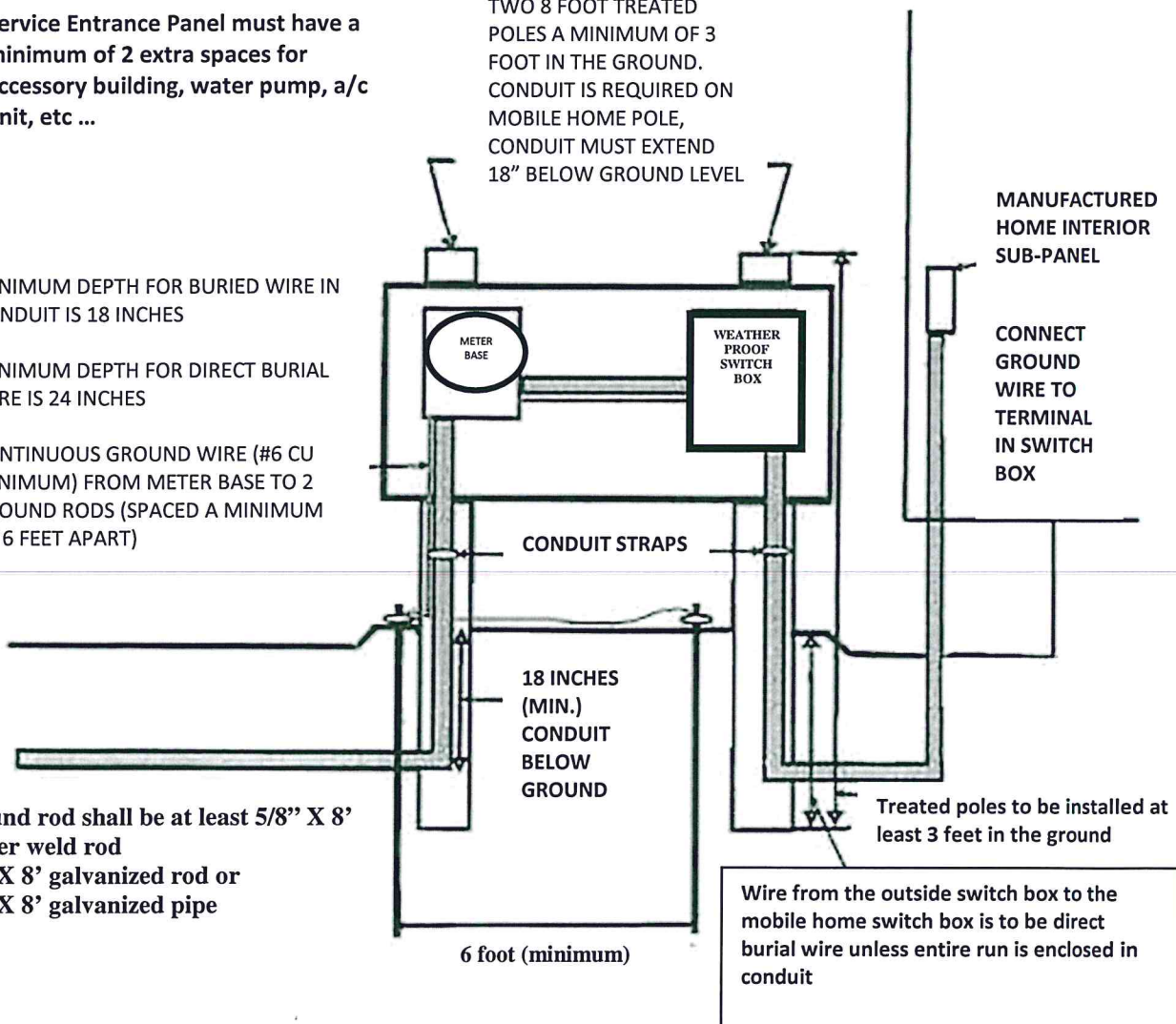
MINIMUM DEPTH FOR BURIED WIRE IN CONDUIT IS 18 INCHES

MINIMUM DEPTH FOR DIRECT BURIAL WIRE IS 24 INCHES

CONTINUOUS GROUND WIRE (#6 CU MINIMUM) FROM METER BASE TO 2 GROUND RODS (SPACED A MINIMUM OF 6 FEET APART)

MANUFACTURED HOME INTERIOR SUB-PANEL

CONNECT GROUND WIRE TO TERMINAL IN SWITCH BOX



**Ground rod shall be at least 5/8" X 8' copper weld rod
 5/8" X 8' galvanized rod or
 3/4" X 8' galvanized pipe**

Wire from the outside switch box to the mobile home switch box is to be direct burial wire unless entire run is enclosed in conduit