

# City of Gillette



## Guide for Residential Pole Building



## Building Inspection Division

Office (307) 686-5260  
Inspection Line (307) 686-5256

City of Gillette  
 Building Inspection Division  
 Guideline to 2024 IRC Residential Construction

This booklet is provided to help answer questions you may have regarding building codes within the City of Gillette. It is **not** intended to answer all questions that may arise on any given project within the community, but to serve as a general guideline. Feel free to contact the Building Inspection Division at (307) 686-5260 if you have any questions.

**Licensing:** If you hire a contractor for your project, you need to make sure they are licensed with the City of Gillette.

**Permits:** Permits are required for any building, electrical, plumbing, or heating.

<b>BUILDING SQUARE FOOTAGE</b>	<b>PERMIT FEES</b>
0 – 500	\$30
500 – 1,000	\$60
1,000 – 2,000	\$100
2,000 – 5,000	\$150
Over 5,000	\$150+ \$.04 per square foot
Storage Building/Garage	Fee is calculated according to the Building Square Footage

<b>PLUMBING</b>	<b>PERMIT FEES</b>
Minimum permit fee	\$10
For each plumbing fixture, trap or set of fixtures on one trap (including water, drainage piping and backflow protection)	\$2

<b>MECHANICAL</b>	<b>PERMIT FEES</b>
Residential – New HVAC (Includes up to 2 heating units, A/C unit, vents, ducts, bath fans, dryer vents)	\$30
Each additional unit	\$15

<b>GAS</b>	<b>PERMIT FEES</b>
For each gas piping system of one (1) to four (4) outlets	\$10
For each gas piping system of five (5) or more per outlet	\$15

## ELECTRICAL

The fee for an electrical permit shall be computed in accordance with the following schedule. Fees are payable at the time of issuance of the electrical permit. The minimum fee for the issuance of an electrical permit is \$10.

Electrical repair, temporary construction electrical service, MH and RV hook-up, (not on a privately owned lot), services, change services, basement finish, additions, alterations, or repairs, on either primary or secondary services, are computed separately.

	<b>PERMIT FEES</b>
0 – 60 amp capacity	\$10
61 – 100 amp capacity	\$12
101 – 200 amp capacity	\$13
Each additional 100 amp capacity or fraction	\$4
Each sub-panel	\$5

In addition to the permit fees, there is also Capital Contribution Fee for new or upgrading services.

	<b>PERMIT FEES</b>
100 Amp (or upgrade from 100 to 200 Amp)	\$175
200 Amp	\$350
400 Amp	\$700
600 Amp	\$1,050

## REQUIRED INSPECTIONS

The following are required inspections and the order in which they need to be completed for new construction, alterations and additions:

**Drilled Piers**                      After Drilled & before concrete or dirt are placed in the holes.

**Foundation Location Certificate**                      A Foundation Location Certificate prepared and signed by a licensed Wyoming surveyor.

**Must be submitted to the Building Division before any further inspections are completed.**

**Rough Framing**

After the rough electrical, plumbing, mechanical and gas inspections are completed or ready for inspection at time of framing inspection, and after the roofing, all framing, and fire blocking are complete, and the structure is weather tight.

**Final**

After all building, electrical, plumbing, mechanical, and gas are completed and before anything is moved into structure.

**If any electric, plumbing, mechanical or gas are installed, they will also require an inspection.**

**INSPECTION REQUESTS  
(307) 686-5256**

Please call (307) 686-5256 and leave a message on the Inspection Line. You will need to have your permit number or address and the type of inspection you are scheduling. Please include your name and telephone number for the inspector. To receive an inspection in the same day, you need to call before 7:00 a.m. Field inspectors are generally in the office between 8:00 – 9:00 a.m. and 1:00 – 2:00 p.m. if you need to contact them. When a specific time is requested, it will be noted on the request, however all times are approximate. While the Building Inspection Division will attempt to make the inspection at the requested time, conditions in the field may not make this possible all of the time. We would request your understanding and patience if this occurs on your project.

**Plans:** Plans are required for all construction projects. A set of plans includes a plot plan, foundation plan, and construction section details. **See pages 8 & 9.** All grading requires plans or approval and shall not affect the over lot grading for the subdivision or adjacent lots. Relocated buildings shall meet all requirements for a new building.

**Plot Plans/Location on Property:** A plot plan is required for all new buildings including additions, detached buildings, decks, patios, fences and retaining walls. A plot plan is a drawing that shows the shape and size (dimensions) of the property. It also shows the location of all buildings and their distance from the property lines and each other. **Sample on page 8.**

**Setbacks Zoning:** Setbacks from property lines vary throughout the City, due to the different land-use zoning areas. To obtain specific setback requirements please contact the City Planning Division (307) 686-5281. Please be aware the setbacks from the property line are often different between those required by the Zoning Ordinance and the Building Code. The Building Code setbacks are for completely different reasons than the Zoning Code setbacks.

**Parking and Garages:** A minimum of two, 9 foot x 18 foot (not including easement), paved off-street parking spaces shall be provided for each dwelling unit. The parking spaces shall have a paved access to them. Detached garages shall have a paved access from the street or alley to the structure.

**Post Frame (Pole Barn) Construction and Metal Buildings:** These types of structures are required to be prepared and signed by a Wyoming licensed architect or engineer.

**Garages:** Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches in thickness, solid or honeycomb core steel doors not less than 1 3/8 inches thick, or have 20-minute fire-rated doors.

- **From the residence and attics** - Not less than 1/2-inch gypsum board or equivalent applied to the garage side.
- **From all habitable rooms above the garage** - Not less than 5/8-inch Type X gypsum board or equivalent applied to garage ceiling.
- **Garages located less than 3 feet from a dwelling unit on the same lot** - Not less than 1/2-inch gypsum board or equivalent applied to the interior side of exterior walls that are within this area.

**Garage Floors:** Shall be of concrete or asphalt.

**Attic Access:** Buildings with combustible ceiling or roof construction shall have an attic access opening to attic area that exceeds 30 square feet and have a vertical height of 30 inches or greater. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members. The rough-framed opening shall not be less than 22 inches by 30 inches and shall be located in a hallway or other readily accessible location. When located in a wall, the opening shall be a minimum of 22 inches wide by 30 inches high. When the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches at some point above the access measured vertically from the bottom of ceiling framing members. Attics containing appliances shall be provided with an opening and a clear and unobstructed passageway large enough to allow removal of the largest appliance, but not less than 30 inches high and 22 inches wide, and not more than 20 feet long measured along the centerline of the passageway from the opening to the appliance. The passageway shall have continuous solid flooring in accordance with Chapter 5, not less than 24 inches wide. A level service space at least 30 inches deep and 30 inches wide shall be present along all sides of the appliance where access is required. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches, large enough to allow removal of the largest appliance.

**Roof Construction:** Many roofs are constructed of engineered pre-built trusses. All trusses have installation requirements which the manufacturer provides. The trusses shall be installed to these specifications. A truss certification stamped and signed by a Wyoming licensed engineer for the specific trusses used shall be submitted to the Building Inspection Division prior to or at the time of framing inspection. A truss layout sheet shall be provided at the time of framing inspection.

## **ELECTRICAL**

**Concrete-Encased Electrode (Ufer):** A concrete-encased electrode consisting of at least 20 feet of either of the following shall be considered as a grounding electrode:

- 1.) One or more bare or zinc galvanized or other electrically conductive coated steel reinforcing bars or rods not less than 1/2-inch in diameter, installed in one continuous 20-foot length, or if in multiple pieces connected together

by the usual steel tie wires, exothermic welding, welding, or other effective means to create a 20-foot or greater length.

2.) A bare copper conductor not smaller than 4 AWG.

Metallic components shall be encased by at least 2 inches of concrete and shall be located horizontally within that portion of a concrete foundation or footing that is in direct contact with the earth or within vertical foundations or structural components or members that are in direct contact with the earth.

Where multiple concrete-encased electrodes are present at a building or structure, only one shall be required to be bonded into the grounding electrode system. [250.52(A)(3)] **Service wire size chart on page 11.**

**Garage Electrical Service:** To run power from existing service on house to garage, see page 12.

**Sufficient Access and Work Space for Electrical Equipment, see page 10.**

**Non-Metallic Sheathed Cable (Romex):** Bored holes in framing members for wiring shall be located not less than 1 1/4 inches from the edge of the framing member or shall be protected with a minimum 1/16" steel plate or sleeve, a listed steel plate or other physical protection.

Maximum allowable on center support spacing for the wiring is 4'6". Maximum support distance in inches from box or other terminations is 12 inches.

**Neutral Conductor:** No. 6 and smaller must have white or natural gray insulation. Conductors larger than No. 6 may be identified where terminating in enclosures with a white color conductor or tape.

**Outlet, Junction Box, or Switch:** Install properly sized outlet or junction box at each outlet, switch or junction point. A junction box may be installed in an attic here there is at least 30 inches of headroom with access and not covered with insulation.

**Number of Conductors in Outlet, Device and Junction Boxes:** Each conductor that originates outside the box and terminates or is spliced within the box shall be counted once, and each conductor that passes through the box without splice or termination shall be counted once. Each loop or coil of unbroken conductor having a length equal to or greater than twice that required for free conductors shall be counted twice. The conductor fill, in cubic inches, shall be computed using figures below, no part of which leaves the box, shall not be counted.

**Exception:** An equipment grounding conductor or not more than four fixture wires smaller than No. 14, or both, shall be permitted to be omitted from the calculations where such conductors enter a box from a domed fixture or similar canopy and terminate within that box.

**VOLUME ALLOWANCE REQUIRED PER CONDUCTOR (CUBIC INCHES)**

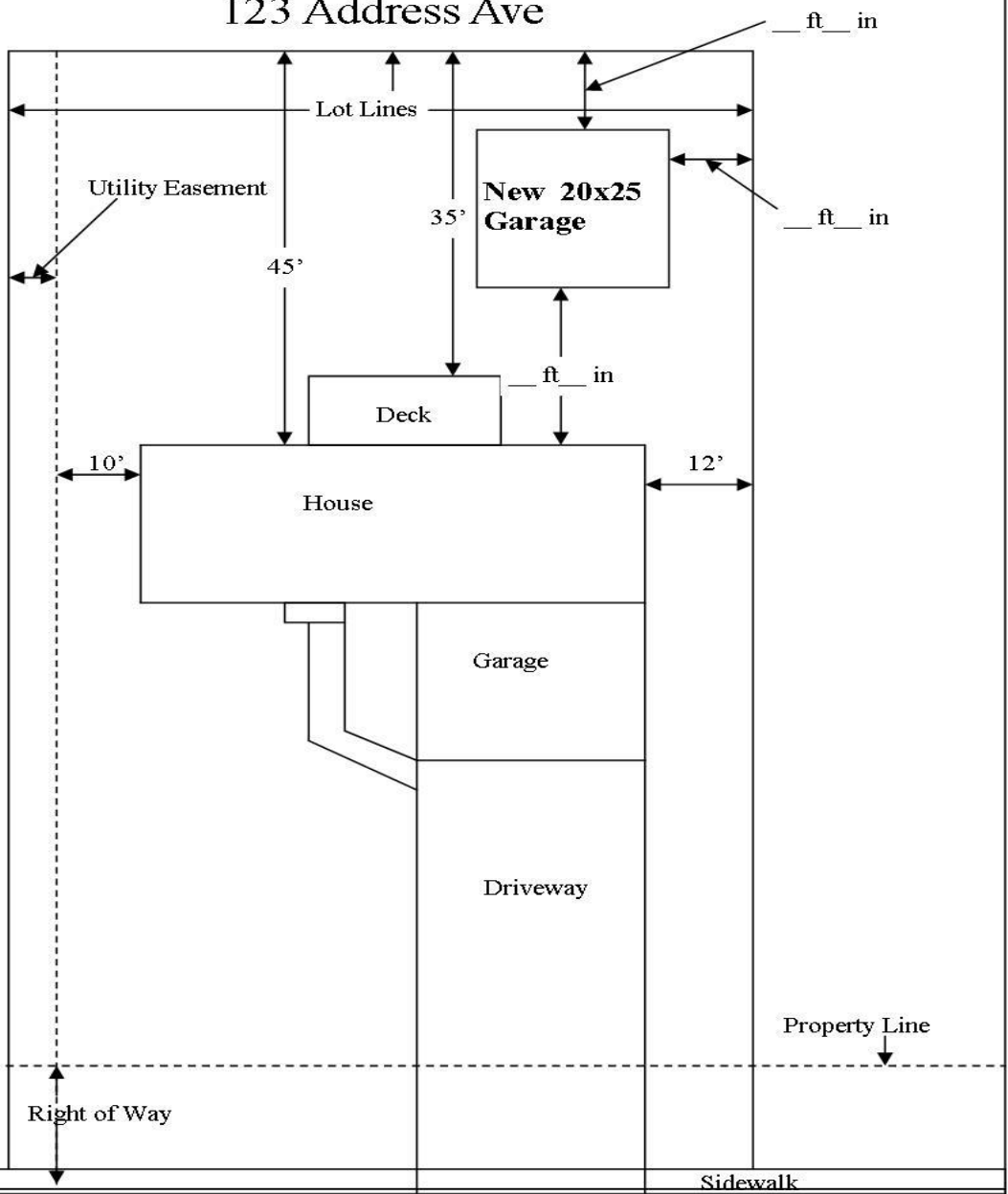
<b>SIZE OF CONDUCTOR</b>	<b>FREE SPACE IN BOX FOR CONDUCTOR</b>
18 AWG	1.50
16 AWG	1.75
14 AWG	2.00
12 AWG	2.25
10 AWG	2.50
8 AWG	3.00
6 AWG	5.00

**Make-Up Wire:** At least 6 inches of free conductor, measured from the point in the box where it emerges from its raceway or cable sheath, shall be left at each outlet, junction, and switch point for splices or the connection of luminaries or devices. Each conductor needs to be long enough to extend at least 3 inches outside the opening.

**GFCI Outlets:** All 125-volt through 250-volt receptacles installed in garage, including door opener shall have ground-fault circuit-interrupter protection for personnel. At least one (1) receptacle per car space.

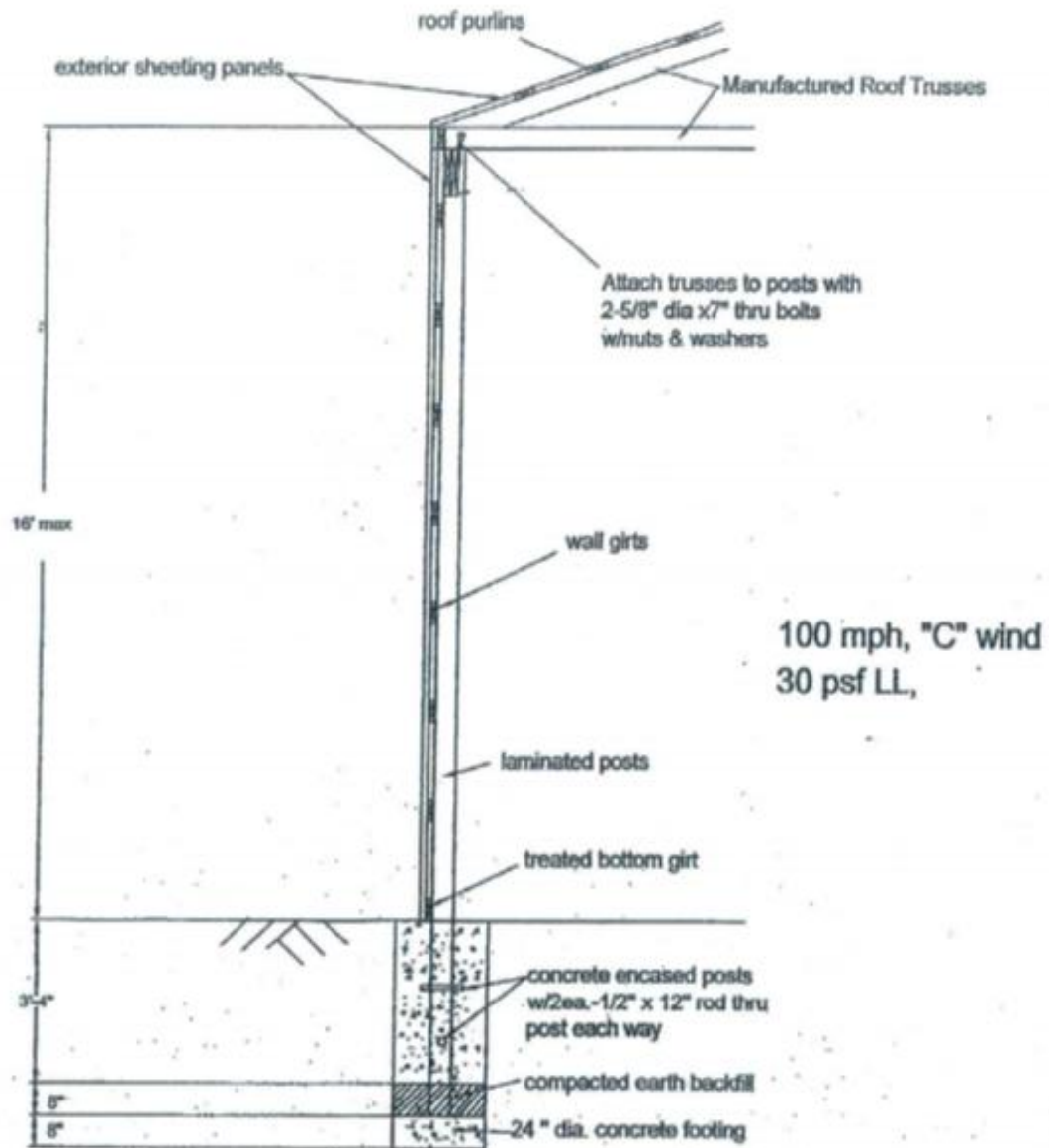
# Plot Plan Example

123 Address Ave



Street Name

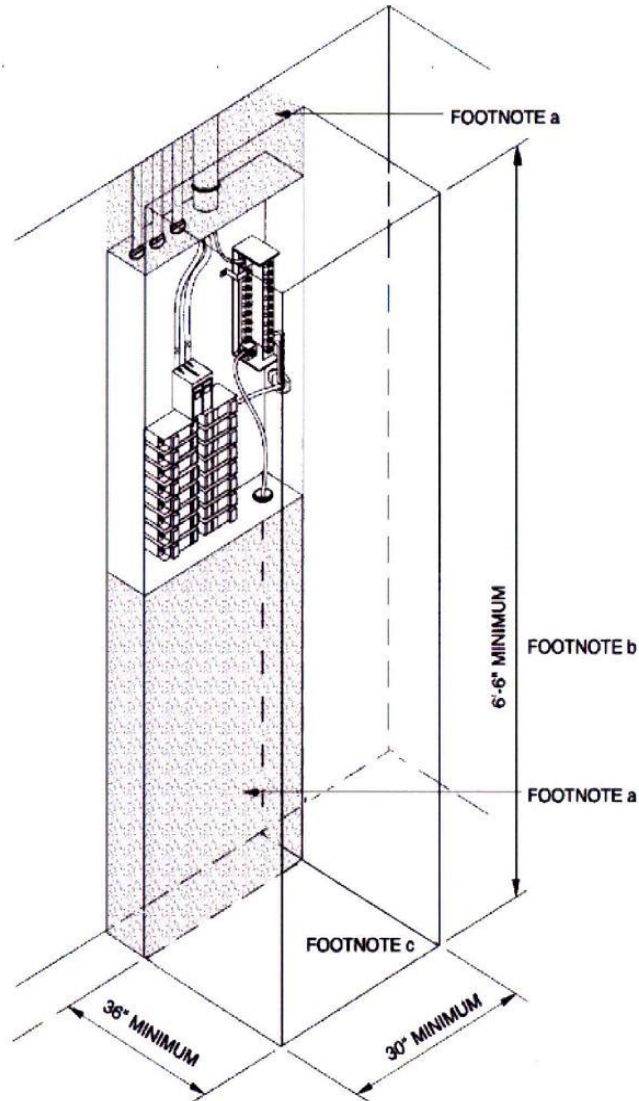
# Sample Only



**Typical Post Frame  
Footing Design  
(36' max. roof span)**

posts 8' o.c.

Sufficient access and working space shall be provided and maintained around all electrical equipment to permit ready and safe operation and maintenance of such equipment



#### WORKING SPACE AND CLEARANCES

- Equipment, piping and ducts foreign to the electrical installation shall not be placed in the shaded areas extending from the floor to a height of 6 feet above the panelboard enclosure, or to the structural ceiling, whichever is lower.
- The working space shall be clear and unobstructed from the floor to a height of 6.5 feet.
- The working space shall not be designated for storage.
- Panelboards, service equipment and similar enclosures shall not be located in bathrooms, toilet rooms, clothes closets or over the steps of a stairway.
- Such work spaces shall be provided with artificial lighting where located indoors.

**SERVICE CONDUCTOR AND GROUNDING ELECTRODE CONDUCTOR SIZING**

CONDUCTOR TYPES AND SIZES-THHN, THHW, THW, THWN, USE, RHH, RHW, XHHW, RHW-2, THW-2, THWN-2, XHHW-2, SE, USE-2 (Parallel sets of 1/0 and larger conductors are permitted in either a single raceway or in separate raceways)		SERVICE OR FEEDER RATING (AMPERES)	MINIMUM GROUNDING ELECTRODE CONDUCTOR SIZE <sup>a</sup>	
Copper (AWG)	Aluminum and copper-clad aluminum (AWG)		Maximum load (amps)	Copper (AWG)
4	2	100	8 <sup>b</sup>	6 <sup>c</sup>
3	1	110	8 <sup>b</sup>	6 <sup>c</sup>
2	1/0	125	8 <sup>b</sup>	6 <sup>c</sup>
1	2/0	150	6 <sup>c</sup>	4
1/0	3/0	175	6 <sup>c</sup>	4
2/0	4/0 or two sets of 1/0	200	4 <sup>d</sup>	2 <sup>d</sup>
3/0	250 kcmil or two sets of 2/0	225	4 <sup>d</sup>	2 <sup>d</sup>
4/0 or two sets of 1/0	300 kcmil or two sets of 3/0	250	2 <sup>d</sup>	1/0 <sup>d</sup>
250 kcmil or two sets of 2/0	350 kcmil or two sets of 4/0	300	2 <sup>d</sup>	1/0 <sup>d</sup>
350 kcmil or two sets of 3/0	500 kcmil or two sets of 250 kcmil	350	2 <sup>d</sup>	1/0 <sup>d</sup>
400 kcmil or two sets of 4/0	600 kcmil or two sets of 300 kcmil	400	1/0 <sup>d</sup>	3/0 <sup>d</sup>

- An 8 AWG grounding electrode conductor shall be protected with metal conduit, nonmetallic conduit, and electrical metallic tubing or cable armor.
- Where not protected, 6 AWG grounding electrode conductor shall closely follow a structural surface for physical protection. The supports shall be spaced not more than 24 inches on center and shall be within 12 inches of any enclosure or termination.
- Where the sole grounding electrode system is a ground rod as covered in 2023 NEC 250.52(5) – 8’ length, and 250.53(B) – 6’ apart, the grounding electrode conductor shall not be required to be larger than 6 AWG copper. Where the sole grounding electrode system is the footing steel the grounding electrode conductor shall not be required to be larger than 4 AWG copper conductor.

# General Electrical Diagram

