



RESIDENTIAL DETACHED STORAGE STRUCTURES (GARAGE)

*A Building permit is required for any alteration or addition to any existing building or structure. *MN State Building Code Section 1300.0120 Subpart 1*. Permit may be applied for at the Austin Building Department.

NOTE: We require contractors and homeowners to allow 15 working days for the city to review your site drawings and plans, as well as compliance to MN State Building Code. When the review process has been completed the City Building Department will contact you after the review is complete and at that time you will pay any applicable permit fees and be allowed to commence work on your project. No work shall be started without prior approval by the Building Official.

PERMIT REQUIREMENTS: Please provide the following:



1. Plot plan :draw all buildings on proper dimensions of the buildings, and the distances from the buildings to the property lines. Please also identify streets and/or alleys.
2. If you are using a contractor, you must provide us with his or her Minnesota State License number. Building permits can not be issued without this information.
3. The information on page 3 of this handout must be completely filled out and returned to the Austin Building Department before the permit will be issued.
4. If garage location is within the floodplain certain restrictions apply. Please contact the Austin Planning and Zoning or Engineering Department before making permit application.

MN STATE BUILDING CODE & MN RESIDENTIAL CODE REQUIREMENTS:

1. Minimum thickness of concrete floor slabs supported directly on the ground shall be not less than 3½". R506.1
2. Must provide ½" anchor bolts. Bolts must be embedded at least 7" into the concrete and shall be spaced not more than 6' apart. There shall be a minimum of two bolts per piece with one bolt located not more than 12" or less than seven bolt diameters from each end of the piece. R403.1.6
3. Foundation plates or sills resting on concrete slabs or curbs shall be treated wood or foundation grade redwood. R317.1
4. Fasteners for pressure-preservative and fire-retardant-treated wood shall be of hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. The coating weights for zinc-coated fasteners shall be in accordance with ASTM A 153.

- Exceptions:
1. One-half-inch (12.7 mm) diameter or larger steel bolts
 2. Fasteners other than nails and timber rivets shall be permitted to be of mechanically deposited zinc-coated steel with coating weights in accordance with ASTM B 695, Class 55 minimum.
5. Flashing and counterflashing. Exterior openings exposed to the weather shall be flashed in accordance with R703.8
 6. Engineered design required for pole barn structures.
 7. Roof framing for detached garages must be designed for minimum 50 pounds ground snow load.
 8. Manufactured trusses shall not be altered.
 9. **FIRE RESISTANCE OF WALLS (In regards to Property Lines).** Table R302.1(1) of the MN Residential Code states that any wall closer than 5' to the property line requires a firewall with a 1 hr. rating. This wall must be constructed of one layer of 5/8" type "X" rated gypsum sheathing and be applied to exterior and a single layer of 5/8" type "X" gypsum applied to the interior of the firewall. NOTE: Exterior gypsum sheathing should be used to resist moisture from entering the structure.
 10. **OPENINGS IN FIRE RATED WALLS** 3' to 5' from the property line are permitted if they do not exceed 25% of the wall area.
 11. Projections such as overhangs and eaves shall not be closer than 2' to the property line
When a fire rated wall is installed the underside of the overhang shall be fire rated with one layer of type X gypsum
 12. **FIRE RESISTANCE RATING OF EXTERIOR WALLS (REGARDING THE PROXIMITY TO EXISTING BUILDINGS).** Garages located less than 3 feet from a dwelling unit on the same lot shall be protected with no less than 1/2 inch gypsum board applied to the interior side of exterior walls that are within this area. Openings in these walls 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 20-minute fire rated doors.

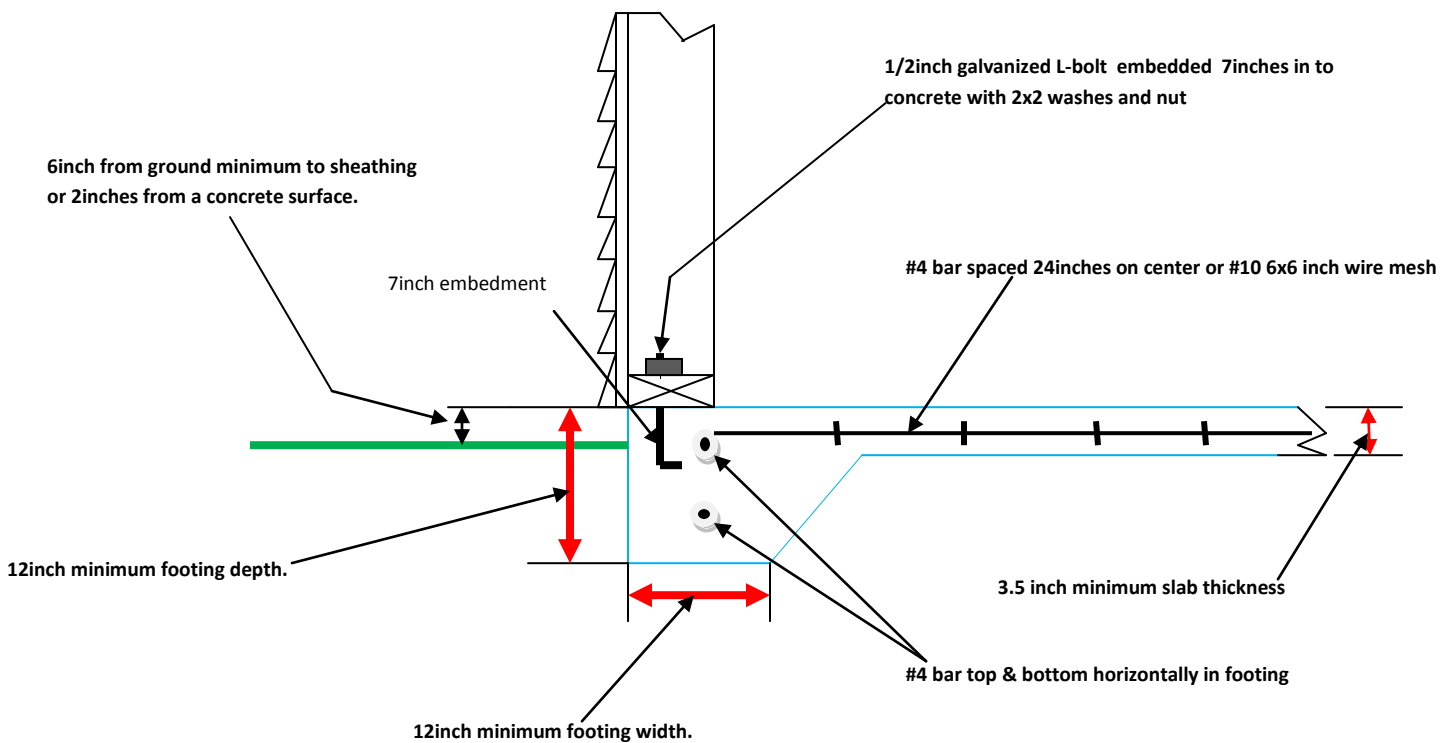
REQUIRED INSPECTIONS: Please contact the Austin Building Department at 437-9950 to schedule inspections. Prior notice of 24 hours is encouraged to insure an appointment.

1. A **footing inspection** is required after excavation is complete and the form work and reinforcement is in place. This inspection must be done before the concrete is poured.
2. A **framing inspection** is to be completed after the building is framed with roof and shingles installed, but before siding is installed.
3. A **final inspection** is to be completed after grading is finished and the building is ready to be used.

If you are doing your own wiring, you must apply for an electrical permit from the State Electrical Inspector, Aaron Goslee 507-440-1433

Zoning Ordinance Limitations of Accessory Use or Structure: The use or structure subordinate to the principal use of the land or a building on the same lot or adjoining lot and serving a purpose customarily incidental to the principal use or structure; or any structural addition to the manufactured home which includes awnings, cabanas, carports, porches, gazebos, ramadas, storage cabinets, and similar appurtenant structures. The aggregate area of accessory structures in residential districts shall not exceed 1,000 square feet for lots less than one (1) acre in size, and 1,584 square feet for lots equal to or greater than one (1) acre. The maximum number of accessory structures per lot shall be limited to two, and exterior finishes shall be similar to that of the primary structure on the property. Further, for lots less than one (1) acre in size, the maximum dimensions for an accessory structure shall be 26 feet by 38 feet with a maximum height of 20 feet; and for lots equal to or greater than one (1) acre in size, the maximum dimensions for an accessory structure shall 36 x 44 feet, with a maximum height of 25 feet. **BE ADVISED STORAGE STRUCTERS EXCEEDING 1000sqft ARE REQUIRED TO BE DESIGNED BY A STATE LICENSED DESIGN PROFESSIONAL ARCHITECT OR ENGINEER BY MN RULE CHAPER 1800 TABLE 1800.5900.** ****The Building Department encourages the builder to contact us for further clarification on any questions encountered during the construction of their project.**

Foundation Construction: Detached garages or accessory structures may be constructed on floating slabs not protected from frost (monolithic slab). A monolithic slab is considered a single pour slab, it cannot be added onto for future additions unless engineering for such additions is provided by a structural engineer registered by the State of Minnesota. Monolithic garage slabs can be sawed to control cracking provided the following guidelines are adhered to: Depth of saw cuts shall be limited to $\frac{1}{4}$ " - $\frac{1}{2}$ "; reinforcement for cut slabs shall be: #4($\frac{1}{2}$ ") rebar spaced 24 o.c. each way, beginning at centerline of slab. For non cut slabs No. 10 - 6"x6" wire mesh is required.



Wall Construction:

PROTECTION OF WOOD AND WOOD BASED PRODUCTS AGAINST DECAY : These locations are typical driveway to wood framed walls on entry door stoops ect. Those locations will require a curb or special framing detail per Austin Building Dept.

R317.1 Location required. Protection of wood and wood based products from decay shall be provided in the following locations by the use of naturally durable wood or wood that is preservative-treated in accordance with AWPA U1 for the species, product, preservative and end use. Preservatives shall be listed in Section 4 of AWPA U1.

1. Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6 inches (152 mm) from the ground or less than 2 inches (51 mm) measured vertically from concrete steps, porch slabs, patio slabs, and similar horizontal surfaces exposed to the weather.

R317.4 Wood/plastic composites. Wood/plastic composites used in exterior deck boards, stair treads, handrails and guardrail systems shall bear a *label* indicating the required performance levels and demonstrating compliance with the provisions of ASTM D 7032.

R317.4.1 Wood/plastic composites shall be installed in accordance with the manufacturer's instructions.

Wall Bracing

Buildings are required to be braced in accordance to Section R602.10 through R602.12.8. The wall bracing requirements are achieved by various bracing methods. See Table R602.10.4 (attached with this handout).

A braced wall will consist of braced wall panels or other approved bracing methods spaced not more than 10' from building corner to the start of the braced wall panel R 602.10.2.2 and shall be more than 20' to start of another braced wall panel.

Minimum number of braced wall panels shall comply with R602.10.2.3. Braced wall lines with a length of 16 or less shall have a minimum of two braced wall panels of any length or one braced wall panel 48" or more. Braced wall lines greater than 16 shall have a minimum of two braced wall panels.

For code requirements bracing methods please refer to Table R602.10.4.

For minimum width of braced wall panel please refer to Table R602.10.5

For detached storage structure (or garage's) the typical exterior wall sheathing method is portal frame with hold downs (PFH), portal frame at garage (PFG), continuous sheathed wood structural panels (CS-WSP), continuous sheathed wood structural panels adjacent to garage door (CS-G) and continuous sheathed portal frame (CS-PF).

These can be found in Table R602.10.4.

Please indicate on plan sheet which braced wall will be installed.

If you have any questions feel free to call the building department at 437-9950.

R602.10.6.3 Method PFG: Portal frame at garage door openings in Seismic Design Categories A, B and C.

Where supporting a roof or one story and a roof, a Method PFG *braced wall panel* constructed in accordance with Figure R602.10.6.3 shall be permitted on either side of garage door openings.

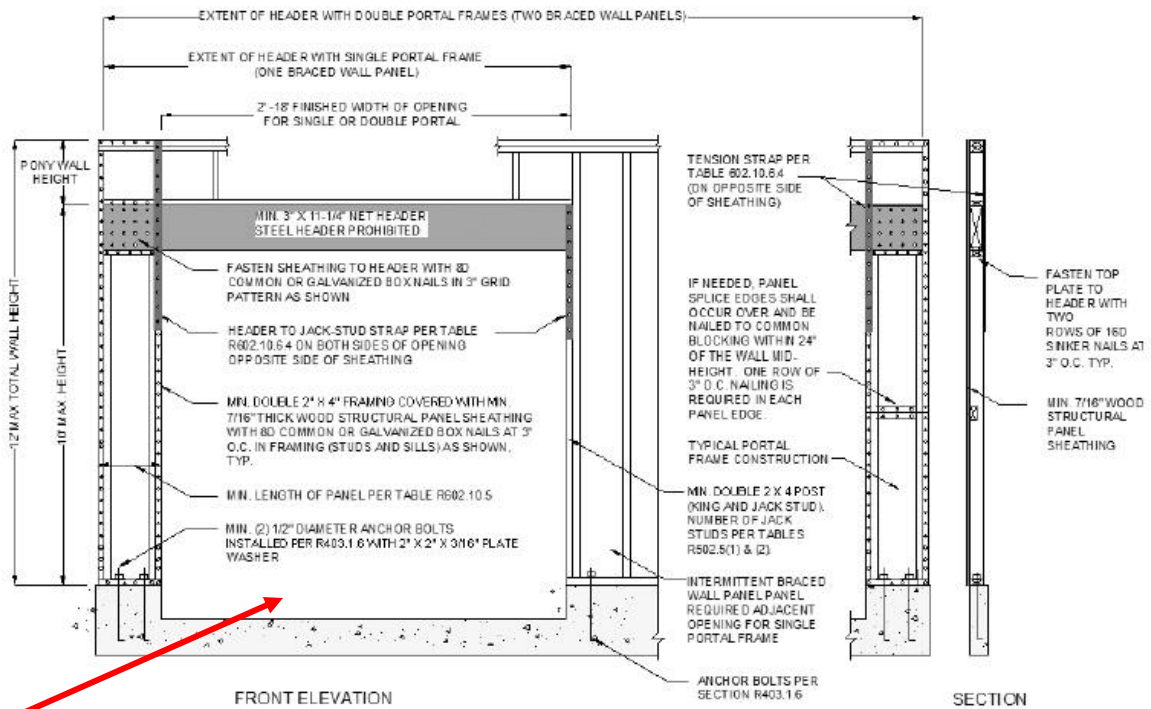
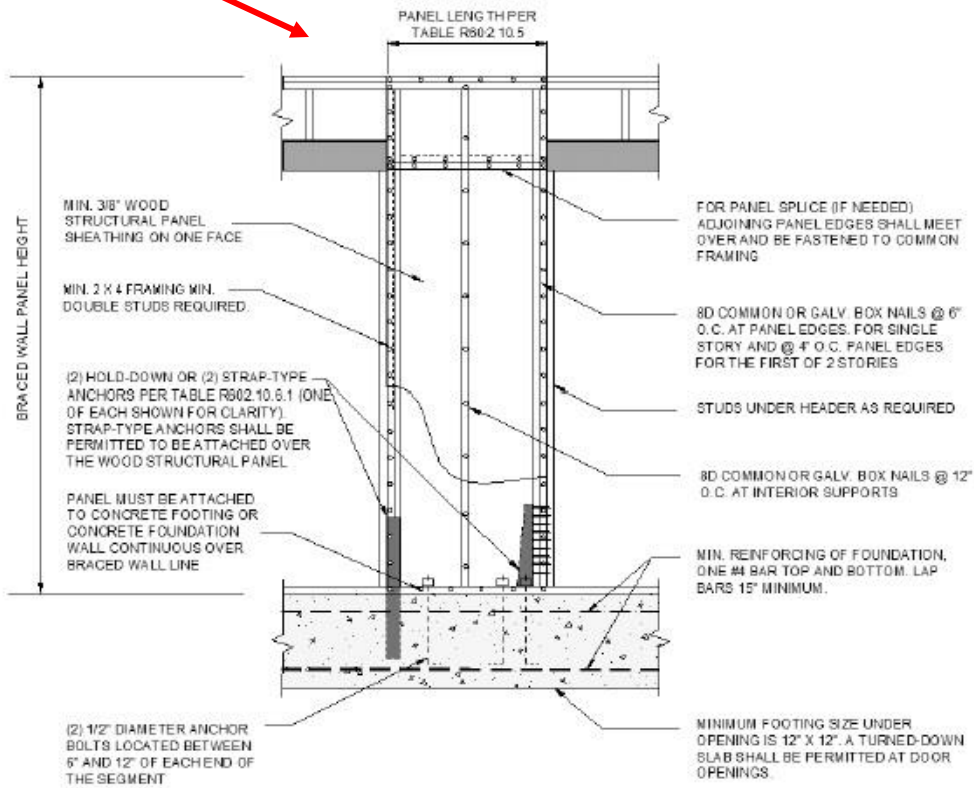
R602.10.5 Minimum length of a braced wall panel.

The minimum length of a *braced wall panel* shall comply with Table R602.10.5. For Methods CS-WSP and CS-SFB, the minimum panel length shall be based on the adjacent clear opening height in accordance with Table R602.10.5 and Figure R602.10.5. When a panel has an opening on either side of differing heights, the taller opening height shall be used to determine the panel length.

TABLE R602.10.5 MINIMUM LENGTH OF BRACED WALL PANELS

METHOD (See Table R602.10.4)	MINIMUM LENGTH ^a (inches)					CONTRIBUTING LENGTH (inches)	
	Wall Height						
	8 feet	9 feet	10 feet	11 feet	12 feet		
DWB, WSP, SFB, PBS, PCP, HPS, BV-WSP	48	48	48	53	58	Actual ^b	
GB	48	48	48	53	58	Double sided = Actual Single sided = 0.5 × Actual	
LIB	55	62	69	NP	NP	Actual ^b	
ABW	SDC A, B and C, wind speed < 110 mph	28	32	34	38	42	48
	SDC D _o , D ₁ and D ₂ , wind speed < 110 mph	32	32	34	NP	NP	

R602.10.6.1 Method ABW: Alternate braced wall panels.


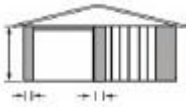


R602.10.6.3 Method PFG: Portal frame at garage door openings in Seismic Design Categories A, B and C.

R602.10.4 Construction methods for braced wall panels.

Intermittent and continuously sheathed *braced wall panels* shall be constructed in accordance with this section and the methods listed in Table R602.10.4.

TABLE R602.10.4 BRACING METHODS

METHODS, MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA ^a	
			Fasteners	Spacing
ABW Alternate braced wall	$\frac{3}{8}$ "		See Section R602.10.6.1	See Section R602.10.6.1
PFG Portal frame at garage	$\frac{7}{16}$ "		See Section R602.10.6.3	See Section R602.10.6.3

**These are 2 common methods uses for wall bracing at opening locations. Please feel free to contact building department with any questions.

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 degree = 0.0175 rad, 1 pound per square foot = 47.8 N/m², 1 mile per hour = 0.447 m/s.

- a. Adhesive attachment of wall sheathing, including Method GB, shall not be permitted in Seismic Design Categories C, D₀, D₁ and D₂.
- b. Applies to panels next to garage door opening when supporting gable end wall or roof load only. May only be used on one wall of the garage. In Seismic Design Categories D₀, D₁ and D₂, roof covering dead load may not exceed 3 psf.
- c. Garage openings adjacent to a Method CS-G panel shall be provided with a header in accordance with Table R502.5(1). A full height clear opening shall not be permitted adjacent to a Method CS-G panel.

The language & depictions in this hand out is meant as a guide for the construction code & building process and may not contain exact code language. For exact code you may go online at www.revisor.mn.gov or contact the Austin Building Department.

RESIDENTIAL DETACHED STORAGE BUILDING OVER 200SQ. FT.

Building Address: _____

Property Owner: _____

Property Owner Address: _____

Contact Phone Number: _____ E-mail: _____

Building Dimensions: Width _____ Length _____ Height _____ (measured at the roof midpoint)

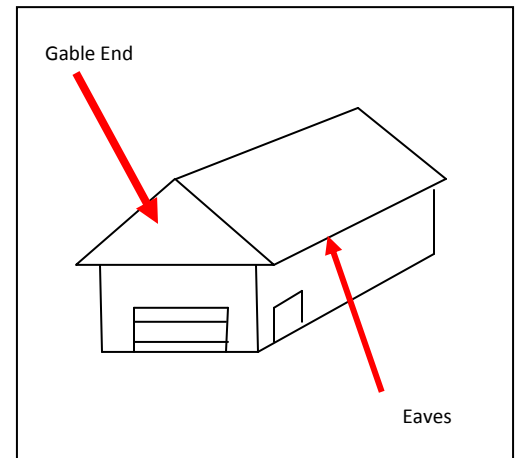
Foundation Type: Monolithic Slab Conventional footing with frost wall.

Wall Framing:

1. Stud width: 2x4 2x6 other _____
2. Wall height (measured from top of concrete to bottom of roof truss): _____
3. Wall Sheathing: Plywood: ___ in. OSB: ___ in. Other: _____
4. Exterior Finish: Vinyl / Steel Siding Other: _____

Roof Assembly:

1. Roof system: Hand framed Pre-engineered roof trusses
2. Sheathing for roof: _____
3. Roof covering: Asphalt shingles Other: _____
4. Overhangs: Gable end: _____ Eaves: _____



Structural: Length of gable end: _____ Length of eave: _____

1. Overhead door locations: Gable end Eave end
2. Overhead door size: Length: _____ Height: _____ Please list header material and size: _____
3. Window locations: Gable end Eave end
4. Window size: _____ x _____ Please list header material and size: _____
5. Entry door location: Gable end Eave end
6. Entry door size: _____ x _____ Please list header material and size: _____
7. Please list which wall bracing method will be used: _____ (Table R602.10.4)
8. Length of braced wall panels: _____ (Table R602.10.5)

Additional Notes:

1. Provide diagonal bracing on both gable ends which extends from plate to plate and fastens into bottom cord.
2. Sever weather underlayment to extend to a point 24 inches above inside wall line.
3. Diagonal braced wall panels required at each corner and every 25 feet of wall. For structures with Attic space.
4. Provide positive drainage away from building – minimum 6 inches of fall for the first 10 feet.

****The Building Department encourages the builder to contact us for further clarification on any questions encountered during the construction of their project.**

PLOT PLAN

ADDRESS: _____

LEGAL DESCRIPTION: _____

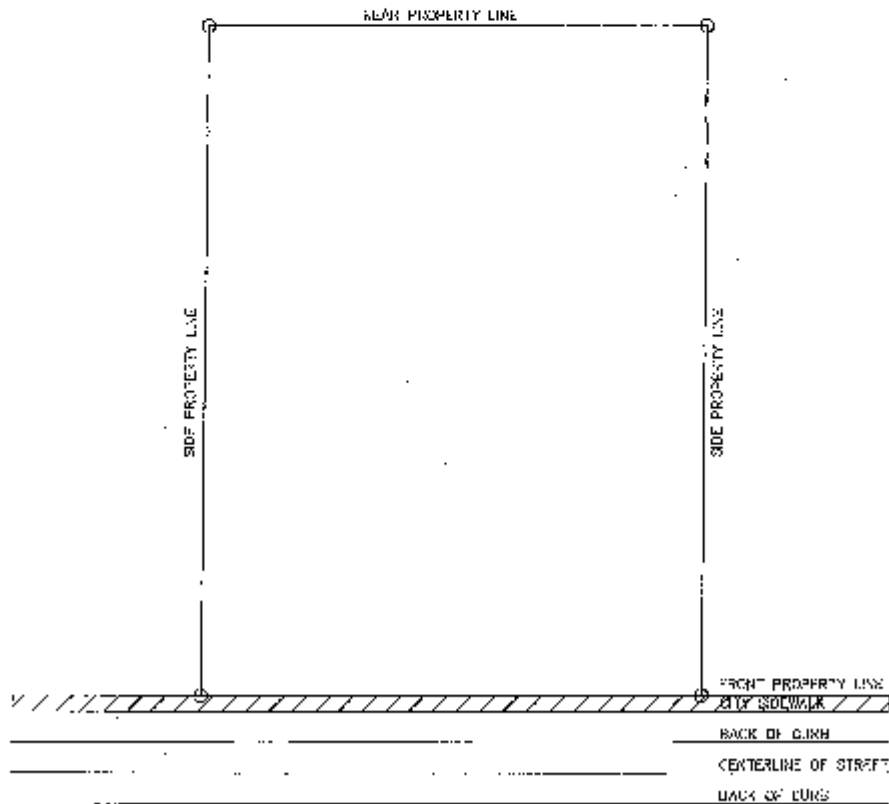
LOT BLOCK ADDITION

SITE AREA: _____ SQ. FT. AREA OF SITE OCCUPIED BY BUILDING: _____ SQ. FT.

INSTRUCTIONS TO APPLICANT: _____ COVERAGE PERCENTAGE: _____ %

FOR NEW BUILDINGS AND BUILDING ADDITIONS THE FOLLOWING INFORMATION MUST BE PROVIDED IN THE SPACE BELOW:

- 1) Location of proposed construction and existing improvements.
- 2) Show buildings (square footage) and setback distances of existing buildings and new structures.
 - a) How far the new building will be away from the front property line.
 - b) How far the new building will be away from the side property line.
 - c) How far the new building will be away from the rear property line.
 - d) How far the new building will be away from existing structures.
- 3) Show easements.
- 4) Indicate whether property is a corner lot.
- 5) Show street and avenue location.



SIGNATURE OF OWNER OR AUTHORIZED REPRESENTATIVE: _____