



1 & 2 Family Garage / Shed Guide

City of Oshkosh Inspection Services Division

The following information in this packet is provided to help guide you through the permit application process. This packet will also provide you with information regarding approved garage locations and minimum construction requirements.

Page 2-3: Permit Application Guide

Page 4: Building Permit Application

Pages 5-6: Garage/Shed Zoning Code Requirements

Pages 7-9: Building & Electrical Requirements

Page 10: Sample Garage Bracing Layout





Permit Application Guide

City of Oshkosh Inspection Services Division

Garage/Shed Permit Guide:

This guide was developed to help direct you through the permit application process. Following the steps below will help to eliminate possible delays in obtaining your building permit.

1. Completely fill out the Attached Building Permit Application.

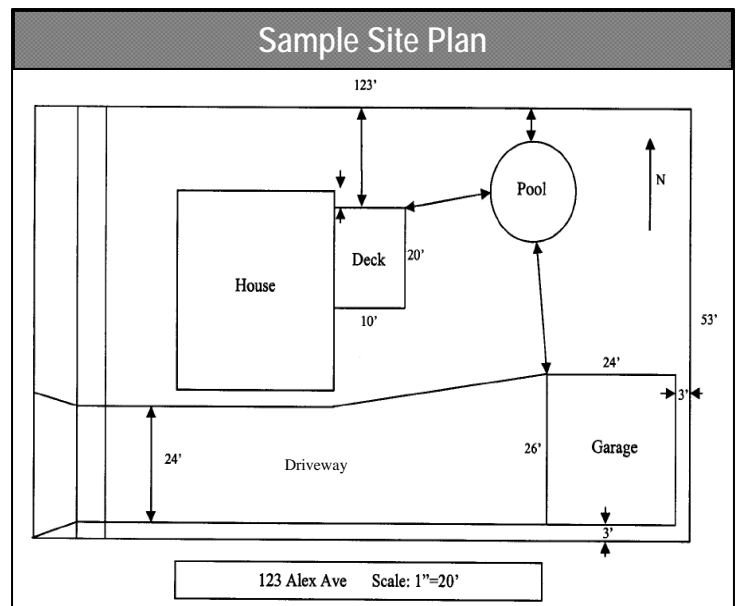
Provide a detailed description of all proposed work. Owners may obtain permits for construction projects if the house is owner occupied. All contractors shall include their Dwelling Contractor Certification and Dwelling Contractor Qualifier Certification numbers from the State of Wisconsin Safety and Buildings Division. Our office is required by the State of Wisconsin to verify these certifications prior to issuing permits to contractors for one and two family dwellings.

2. Provide 2 Site Plans.

The plans shall be drawn at 1 inch = 20 ft. or larger scale and shall include the following (see the sample site plan):

- All streets, North arrow and graphic scale.
- Exterior boundaries of the property including dimensions of property lines.
- Location of existing and proposed structures.
- Dimensions of setbacks from property lines and between structures.
- Location, dimension and purpose (i.e. water, sewer, etc.) of all easements.

NOTE: If you do not have a scaled site plan you may purchase one from the City Planning Services Division, Room 204, Monday through Friday, 8:00am-4:30pm for a nominal fee.



3. Submit 2 sets of Garage Plans Including Wall Bracing Details

The Garage Plans shall be drawn at 1/8 inch = 1 foot or larger and shall include the following information:

- An elevation and floor plan showing:
 - * The height of the garage side walls.
 - * The height of the garage to the roof ridge (peak).
 - * Door and window locations.
 - * Dimensions of the overhangs.
 - * Material and size of headers and beams.
 - * Truss plans or species, grade and size of rafters and ceiling joists.
 - * Slab Info. including grade beam size, slab thickness and re-inforcement size and locations.
 - * Note if the garage will be heated and/or if electrical will be installed.
 - * Wall bracing method being used and the panel widths and locations (see pg 10 of this handout).

Underground Utilities: Call Diggers Hotline 3 Work Days Before You Dig! #1-800-242-8511

4. Permit Fees

Submit the applicable Permit Fees. A fair market value is required to be provided on the building permit application. This value is required to include both the material and labor value even if no labor is being charged for your project. Typically if you do not have a labor value the general rule of thumb is to double the material value for the job. The fair market value is required to provide uniformity within the City for citizens that hire a Contractor vs. citizens who do their own construction.

\$25 Zoning review fee **plus**..... The Building Permit Fees noted below. ↓

\$.01 to \$ 1,000.....	\$25.00
\$ 1,000.01 to \$ 2,000.....	\$32.00
\$ 2,000.01 to \$ 3,000.....	\$39.00
\$ 3,000.01 to \$ 4,000.....	\$46.00
\$ 4,000.01 to \$ 5,000.....	\$53.00
\$ 5,000.01 to \$ 6,000.....	\$60.00
\$ 6,000.01 to \$ 7,000.....	\$67.00
\$ 7,000.01 to \$ 8,000.....	\$74.00
\$ 8,000.01 to \$ 9,000.....	\$81.00
\$ 9,000.01 to \$10,000.....	\$88.00
\$10,000.01 to \$20,000....	\$88.00 plus \$6.00 for each thousand dollar valuation
\$20,000.01 plus.....	\$148.00 plus \$3.00 for each thousand dollar valuation

****Make checks payable to the City of Oshkosh. The City of Oshkosh does not accept credit cards.****

5. Apply for the Permit

Please plan ahead and pick one of the following methods to apply for your permit. We suggest that you apply for the permit 2 weeks prior to wanting to start construction. Make sure that all of the required information listed above is included and submit it to the Inspection Services Division by one of the methods listed below:

In Person with an Inspector:

This is the best method in that you can discuss the specifics of your project with an inspector. Typically if all the required information is submitted, and the information is found acceptable, the permit can be issued at that time. Inspectors are available for consultation and permit issuance 7:30am-4:30pm Monday through Friday.

By Fax:

Fax # 920-236-5084 (Fees will need to be submitted in person or by mail to obtain the permit)

By Mail:

City of Oshkosh
Inspection Services Division
215 Church Ave
P O Box 1130
Oshkosh, WI 54903-1130

If after reading this guide you still have questions please feel free to contact the Inspection Services Division at (920) 236-5050 or (920)236-5048.

Web Site: www.ci.oshkosh.wi.us

Drop Off:

Completed applications may be dropped off at the Inspection Services Division anytime Monday through Friday from 7:30am-4:30pm. The inspectors will review your submittal and contact you if further information is required. If your submitted application is approved we will send the permit to you in the mail. No work may commence until the permit is issued and the Building Placard is posted.

This handout was developed by the City of Oshkosh Inspection Services Division as a basic plan submittal guide. It is not intended to cover all circumstances. Check with the Inspection Services Division for additional requirements that may apply to your specific project.



Building Permit Application

City of Oshkosh Inspection Services Division

Check this box if you are a contractor participating in the Permit Fee Account System and you would like this permit processed through your account.

Project Address: _____ Circle one: Single Family Duplex

Owner's Name: _____ Daytime Phone #: _____

Contractor's Name: _____ Daytime Phone #: _____

If the contractor is applying for the permit provide the following:

Dwelling Contractor # _____ Contractor Qualifier # _____

**These two credentials are required by the State of Wisconsin Safety and Buildings Division for any contractors conducting work on residential property.*

Value of the project including labor and material costs \$ _____

**The value for both materials and labor is required to ensure consistency in assessing permit fees for all applicants even if you're doing your own work. A general rule of thumb is to double the material cost or provide an estimate from a contractor.*

Full description of the work being done:

Electrical Work is being done by: _____

Any work not noted on this application will not be included on the permit!

The following documents are attached to this application:

- 2 site plans 2 Sets of Framing & Wall Bracing Plans (garage) Applicable fees

Please read the following and sign and date this application prior to applying for the building permit.

I certify the above information is complete and accurate. Any deviations from the above submitted information may require additional reviews and permits to be obtained. I acknowledge and agree to these terms.

Signature: _____

Date: _____



Zoning Code Requirements

City of Oshkosh Inspection Services Division

Garage/Shed Zoning Requirements:

Maximum size is 800 square feet or 30% of the rear yard (whichever is smaller). A maximum of 1200 square feet is allowed per lot for attached garages, detached garages, sheds, gazebos, workshops, pool houses, and greenhouses.

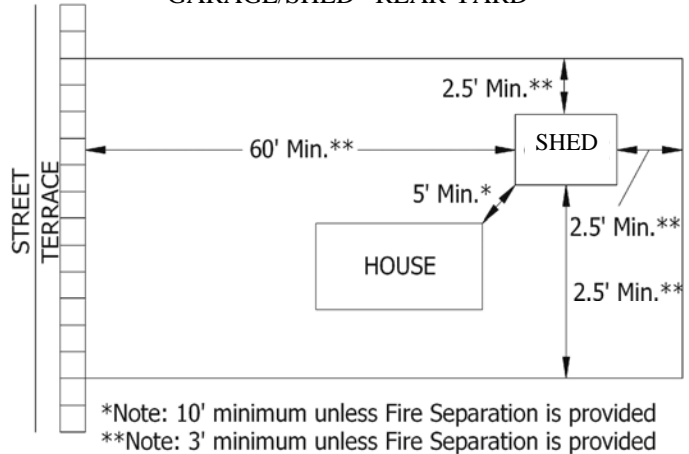
Maximum height is 18' and 1 story. The height is the vertical distance from the established grade to:

1. The highest point of a flat roof
2. The deck line of a mansard roof
3. The average height between eaves and ridge for gable, hip and gambrel roofs

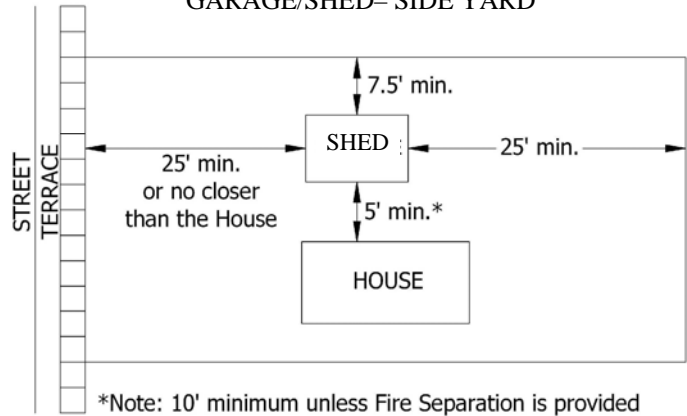
Setbacks = Refer to the following diagrams.

Fire Separation = 5/8" Type X Fire Core Drywall (see Building Code Requirements for more information)

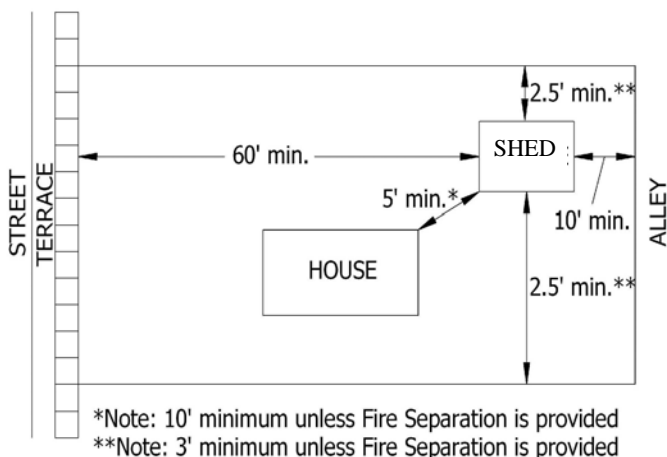
GARAGE/SHED- REAR YARD



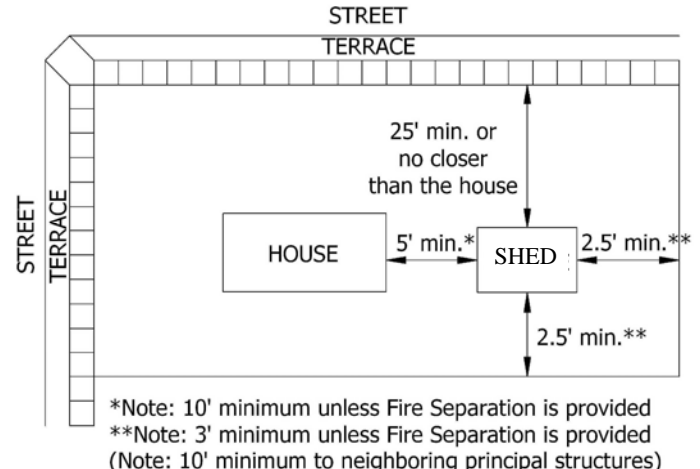
GARAGE/SHED- SIDE YARD



GARAGE/SHED WITH A REAR ALLEY



GARAGE/SHED- CORNER LOT





Zoning Code Requirements

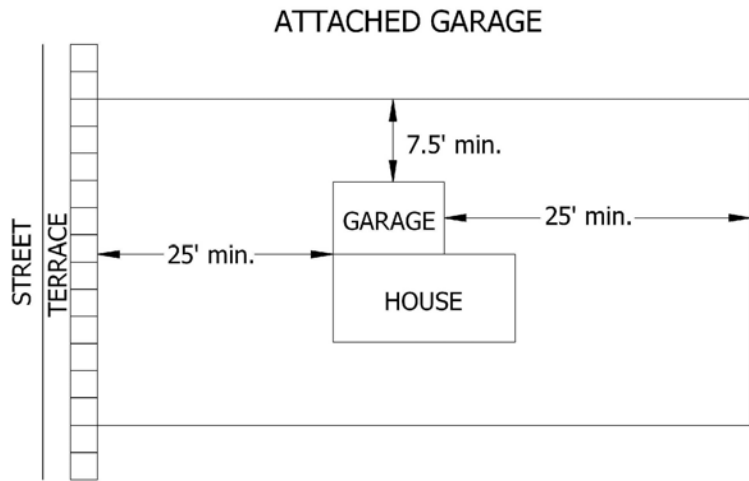
City of Oshkosh Inspection Services Division

Attached Garage:

Maximum size is 1200 square feet (combination of all detached, attached garages, sheds and accessory buildings)

Maximum height is 35'.

Setbacks = Refer to the following diagram.



Driveways Leading To Garages:

When a new driveway is provided, an existing driveway is replaced or expanded by more than 50% of the width, length, or surface area the entire driveway shall be brought into compliance with the City of Oshkosh Zoning Code Requirements pertaining to 1 and 2 family dwellings. Please refer to the driveway and off street parking guide for more information.

A few general driveway requirements are:

- Driveways shall not interfere with lot drainage or subdivision drainage plans.
- Driveways are allowed to be a maximum of 24' in width at the lot line and shall not exceed the width of the garage.
- Driveway curb cuts shall be a maximum of 29' for a 24' wide driveway.
- Generally all driveways shall be set back from the side lot line the same distance as the garage. Please refer to the driveway and off street parking guide for additional information, exceptions and requirements.
- Driveways shall be constructed within 18 months of the garage construction.

1 & 2 Family Driveway / Off Street Parking Guide

City of Oshkosh Inspection Services Division

The following information in this packet is provided to help guide you through the permit application process. This packet will also provide you with information regarding approved fence heights, locations and minimum construction requirements.

Page 2-3: Permit Application Guide

Page 4: Building Permit Application

Pages 5-8: Zoning Code Requirements





Building & Electrical Code Requirements

City of Oshkosh Inspection Services Division

Building Code Requirements:

Fire Separation:

- Any garage/shed located less than 10' from the principal structure or closer than 3' to the property line must be provided with a 3/4 hour fire separation. This requirement would be a minimum of one layer of 5/8" Type X Fire Code Gypsum applied to the inside walls of the garage that would extend from the foundation to the underside of the roof sheathing.
- Twenty-minute fire rated doors and windows may also be required.

Foundation:

- Attached garages must have a minimum of 48 inches of frost protection.
- Detached garages are allowed to have a minimum of a 4-inch concrete slab with an 8 inch by 8 inch perimeter grade beam.
 - * The slab must be reinforced with a minimum of 6x6 #10 welded wire mesh, 1/2 inch re-rod @ 24 inches on center (maximum), or Fiber mesh.
 - * 1/2" anchor bolts embedded at least 7 inches into the concrete with a maximum spacing of 18" from the corners of the garage and 6' o/c.
- Sheds that are 100 square ft. or larger in size must be on a 4 inch minimum concrete slab.

NOTE: A minimum clearance of 8 inches is required from untreated wood sheathing to finished grade. The installation of flashing may be used to reduce this requirement.

Top Plates:

- Studs at bearing walls shall be capped with double top plates.
- End joints in double top plates shall be offset at least 2 stud spaces.
- Double top plates shall be overlapped at the corners and at intersections with partitions.
- Any breaks in the top plates shall be broken over a stud.

Roof Rafters:

- Where rafters meet to form a ridge, they shall be placed directly opposite each other and nailed to a ridge board of not less than 1 inch in thickness and not less in depth than the plumb cut of the rafters.
- Hip rafters may be single members.
- Valley and hip rafters shall be 2 inches deeper than jack rafters and continuous from ridge to plate.
- Collar ties of 1 inch by 6 inch (1x6) boards or better shall be installed in the upper third of the roof height to every third pair of rafters.
- Ceiling joists shall be nailed to exterior walls and to the ends of the rafters.
- Engineered straps or clips, "Hurricane Ties" are required to secure the trusses and/or rafters to the top plate.

Roof Sheathing:

- Panels 24 inches or wider should be used. For panel widths greater than 16 inches but less than 24 inches, use panel edge clips or lumber blocking at unsupported edges. The edge support is to be placed at the joint between the narrow-width panel and an adjacent full-width panel. Unless otherwise required by the building code, the support may be omitted at the edge adjacent to a ridge or valley when the opposite edge or the narrow-width panel is thus supported. When used, **two panel edge clips**,

equally spaced, shall be placed between each pair of supports. Two-by-four blocking may be used flatwise or edgewise and shall be adequately attached to roof framing. For panels greater than 12 inches but less than or equal to 16 inches, lumber blocking is required. For panel widths of 12 inches or less, lumber blocking applied to both narrow-width panel edges is required, regardless of adjacent ridge or valley.

Wall Openings:

- Headers shall be sized to carry loads imposed where doors or windows occur.
- Where the opening is less than 6 ft. in width, the header shall be supported on each end by a single common stud and shoulder stud.
- Where the opening is more than 6 ft. the header shall be supported on each end by a single common stud and two shoulder studs or as required by beam bearing calculations.

Exterior Wall Bracing (Does not apply to sheds):

Effective April 1, 2009, the State of Wisconsin Uniform Dwelling Code implemented new Wall Bracing requirements. Wall bracing had typically been accomplished by providing 4' sections of wood structural panels at the corners of the building and spacing the wall panels within each wall section at intervals not to exceed 25' on center. However, recognizing it may not be possible (or practical) to meet this requirement in all cases, the State Building Code now provides several alternative wall bracing methods.

Continuously Sheathed Braced Wall Line Method:

This is the most frequently used method to address short walls on either side of the overhead garage door or service door. When a garage has structural sheathing (osb) applied to the entire surface of the exterior walls the minimum required Braced Wall Panel width is determined by the height of the garage walls. The minimum Braced Wall Panel widths are as follows:

- For 8' high walls a minimum Braced Wall Panel Width of 24" is required.
- For 9' high walls a minimum Braced Wall Panel Width of 27" is required.
- For 10' high walls a minimum Braced Wall Panel Width of 30" is required.

The below requirements must be met when using the above method:

- The length of the braced wall panels in any wall must be equal to at least 16% of the length of the wall for 1 story garages.
- Each corner must have a minimum of a 2' braced wall panel return at each corner.
- The structural sheathing must be applied to the full height of the wall (including both top/bottom plates).
- All vertical panel joints shall occur over common studs and all horizontal joints shall be blocked with 2x material for all required braced wall segments.
- Braced wall panels adjacent to door openings shall meet the following nailing requirements:
 - 8d common nails @ 3" o.c. on the panel edges
 - 8d common nails @ 12" o.c. for framing members not at panel edges
- Braced wall panels not adjacent to door openings shall meet the following nailing requirements:
 - 8d common nails @ 6" o.c. on the panel edges
 - 8d common nails @ 12" o.c. for framing members not at panel edges.

Nailing Requirements:

Building code requirements specify that common nails are to be installed for wall bracing. It is rare for a contractor to install common nails. Please refer to the charts below for the required spacing for gun nails and staples.

The following can be substituted for 6d common nails:

6d Common Nail	Spaced 3" o/c	Spaced 6" o/c	Spaced 12" o/c
2-3/8" x .113 Gun Nail	3"	6"	12"
16 Gage Staple (7/16" crown)	2"	4"	8"

The following can be substituted for 8d common nails:

8d Common Nail	Spaced 3" o/c	Spaced 6" o/c	Spaced 12" o/c
2-3/8" x .113 Gun Nail	2"	4"	8"
16 Gage Staple (7/16" crown)	1.5"	3"	6"

NOTE: When installing fasteners into treated plates make sure you are using fasteners that have been approved for corrosion resistance.

Permanent Weather Resistant Finish:

The exterior walls of the garage are required to be covered with a permanent weather resistant finish. There is a misconception in the construction industry that vinyl siding is a permanent weather resistant finish. However the vinyl siding does not protect the osb sheathing from getting wet and is actually constructed with holes in it to let the water shed out due to the fact that it is not weather resistant. Most vinyl siding manufacturers require a weather barrier under the siding such as tar paper or house wrap. Please also note that osb is not an exterior finish material and it shall not be exposed to the elements for longer than required during construction even if it is painted. When installing house wrap and/or tar paper please remember to properly lap it so that the water sheds from the top of the structure to the bottom.

Electrical Code Requirements:

Wiring Requirements:

- All service doors and their required landings are required to be illuminated by a wall switch-controlled light.
- At least one wall switched light and one receptacle is required for garages with electric power.
- All garage receptacles are required to be GFCI protected.
- Romex (type NM cable) shall be supported within 8 inches of a plastic box and 12 inches of a metal box and every 4¹/₂ ft. thereafter.
- Metallic boxes are to be grounded.
- Mechanically secure all ground wire splices (green wire nuts, crimps, pigtails with wire nuts, etc.)
- All devices are to be grounded including switches, receptacles, light fixtures, etc.
- All receptacles shall be of the Tamper Resistant type.
- Underground wiring shall be approved for direct burial and shall be placed:
 - * 18" (to the top of the pipe) below finished grade and 24" under any driveway.
 - * 24" below finished grade for direct burial cable in all locations.
 - * 12" below finished grade for a 120 volt, 20 amp or less GFCI protected single circuit.

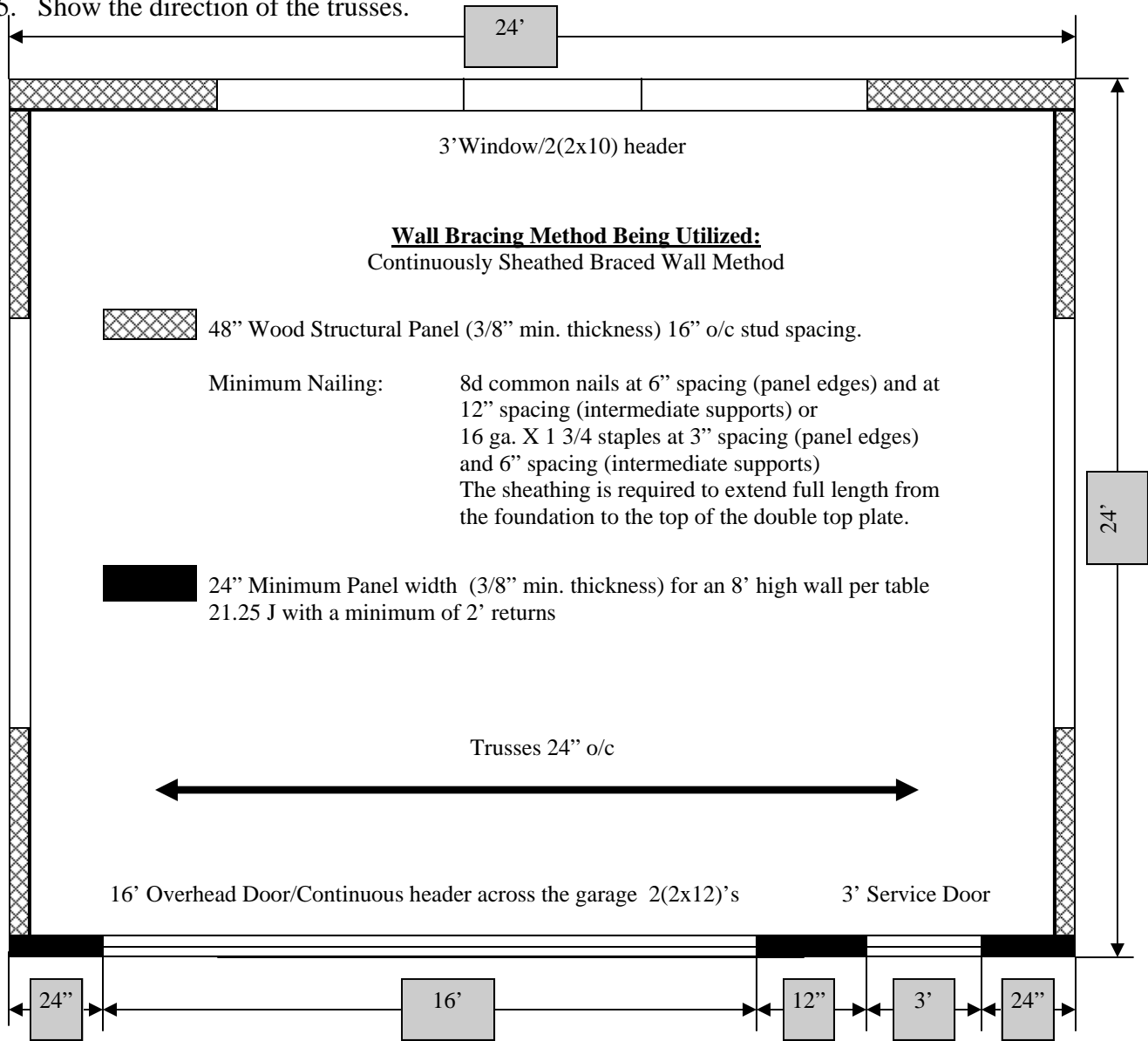


Sample Wall Bracing Plan

City of Oshkosh Inspection Services Division

Effective 4/1/09 the State of WI Uniform Dwelling Code changed to include new standards for the construction of wall bracing and foundation requirements for all structures. The diagram below is a sample of what is required to be submitted to show compliance with the State of Wisconsin Wall Bracing Requirements for a garage. The following information is required when submitting your plans:

1. Note the bracing method being utilized.
2. Garage dimensions. Label the size and location of all windows, service doors and overhead doors.
3. Show all header sizes.
4. Show bracing panel locations, dimensions and the total braced wall percentage for each wall.
5. Show the direction of the trusses.



Braced Wall Percentage (front wall): $24' \text{ wall} \times 12''/1 \text{ ft} \times 16\% = 46.08''$ of wall is required to be braced.
 $24'' \text{ panel} + 24'' \text{ panel} = 48''$ (Passed! ...needed 46.08'')

The other walls pass due to the other wall sections having 96'' of braced wall length