

Detached Garage & Accessory Building: Project Guide

Applicable to: detached garages and accessory buildings

The following items must be included in your application package:

- Site Plan
 - Property lines
 - Roads and any drainage/irrigation ditches
 - Outline of garage, home, and other buildings on property
 - Dimensions of house and garage/accessory building
 - Dimensions from all property lines to garage/accessory building
 - Location and size of windows and doors
 - Label direction of roof trusses
- Submission Details Form (Refer to page 2)
- Building Drawings
 - *Required if design outside tables below or engineered drawings required

Other requirements that may need to be included in your application package:

- Engineered drawings (stamped drawings)
 - Required when design is outside Part 9 of the National Building Code (referred to as NBC throughout document).
- Structural commitment letter for field review
 - Required for a structural design completed by an engineer.
- Energy Efficiency Compliance Form
 - Required for accessory buildings constructed as amenity spaces.

SUBMISSION DETAILS FORM

Complete the form below and submit with your application.

Dimensions of Garage: W: _____ m (ft) L: _____ m (ft)

Area of Garage: _____ m² (ft²)

Height of Garage: _____ m (ft)

Wall Height: _____ m (ft)

WALLS

Wall Framing	Wall Sheathing	Exterior Finish
<input type="checkbox"/> 2" x 4" @ 16" o.c. <input type="checkbox"/> 2" x 4" @ 24" o.c. <input type="checkbox"/> 2" x 6" @ 16" o.c. <input type="checkbox"/> 2" x 6" @ 24" o.c. <input type="checkbox"/> Other – please provide details on drawings	<input type="checkbox"/> 3/8" OSB/Plywood <input type="checkbox"/> 1/2" OSB/Plywood <input type="checkbox"/> Fibreboard (meets CAN/ULC S706.1) <input type="checkbox"/> Gypsum Sheathing (meets ASTM C 1177 or ASTM C 1396) <input type="checkbox"/> Other – provide details on drawings	<input type="checkbox"/> Vinyl Siding <input type="checkbox"/> Cement Board (e.g. hardi board) <input type="checkbox"/> Stucco <input type="checkbox"/> E.I.Fs <input type="checkbox"/> Other – provide details on drawing

Is your wall face within 0.6 m (2 ft) of property line? Yes* No

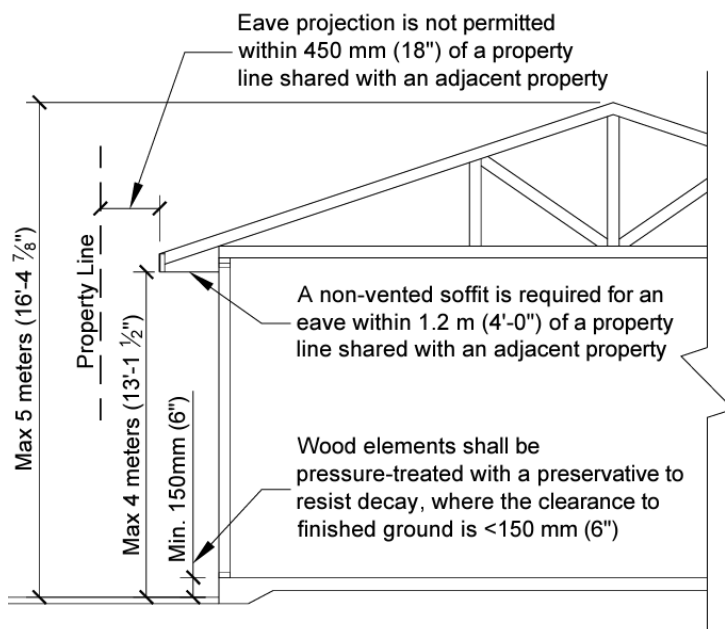
*If yes, 45 min fire resistance required on inside of face. 5/8" type X gypsum Other –provide details on drawings

ROOF

Roof Framing	Roof Sheathing	Roofing Material
<input type="checkbox"/> Pre-manufactured engineered truss <input type="checkbox"/> Other – please provide details on drawings	<input type="checkbox"/> 7/16" OSB/Plywood <input type="checkbox"/> 1/2" OSB/Plywood <input type="checkbox"/> Other – please provide details on drawings	<input type="checkbox"/> Asphalt Shingles <input type="checkbox"/> Metal Roofing <input type="checkbox"/> Other – please provide details on drawings

BEAMS/LINTELS

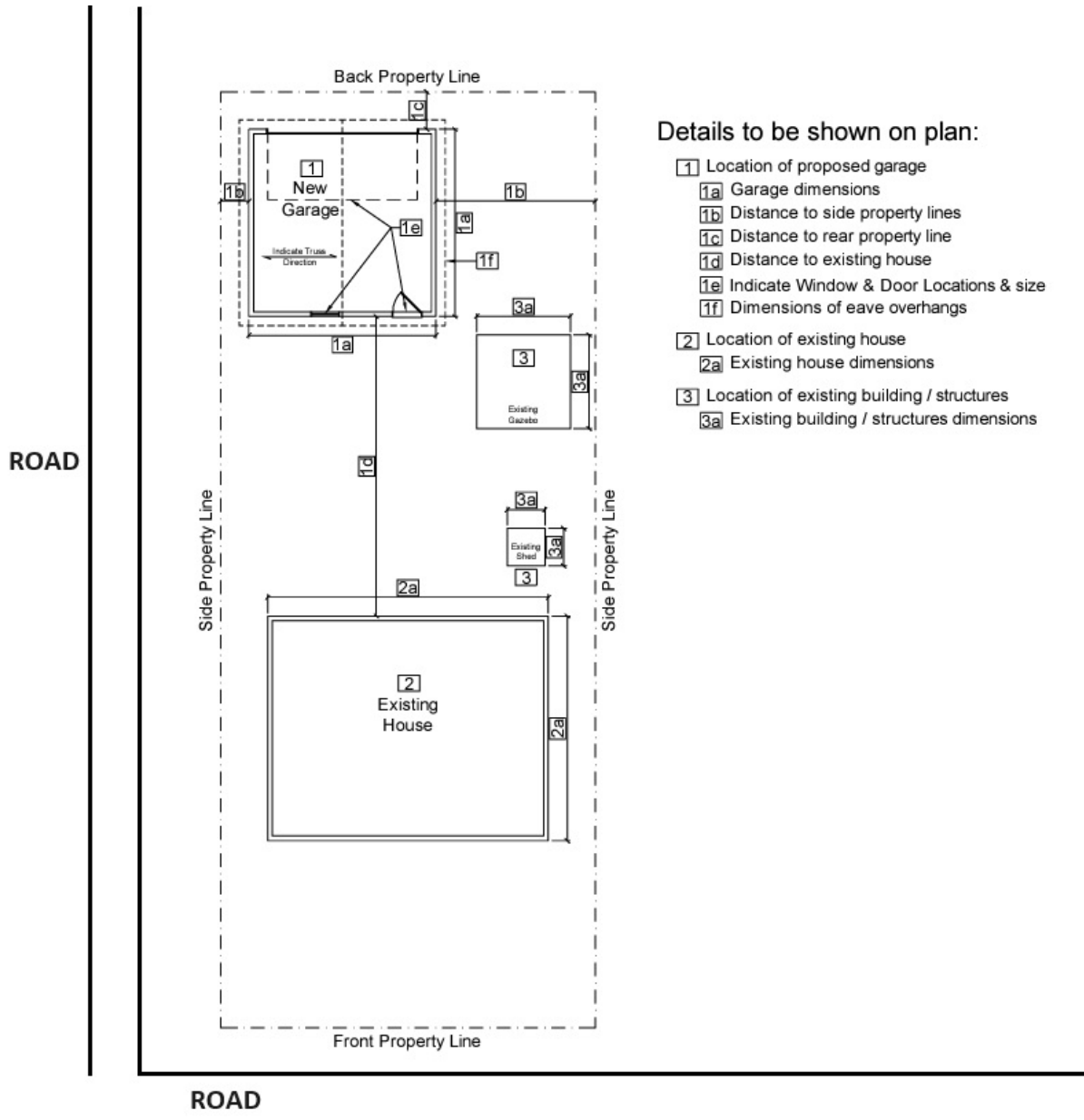
Garage Door Beam	Lintel Over Window/Doors
<input type="checkbox"/> Engineered Beam *provide shop drawings on site. <input type="checkbox"/> Built-up-beam. Lumber <input type="checkbox"/> 2" x 6" <input type="checkbox"/> 2" x 8" <input type="checkbox"/> 2" x 10" <input type="checkbox"/> 2" x 12" # of plys: _____ Length: _____	<input type="checkbox"/> Engineered Beam *provide shop drawings on site. <input type="checkbox"/> Built-up-beam. Lumber <input type="checkbox"/> 2" x 6" <input type="checkbox"/> 2" x 8" <input type="checkbox"/> 2" x 10" <input type="checkbox"/> 2" x 12" # of plys: _____ Length: _____



INFORMATION PACKAGE

To assist you in assembling your application, we have created sample site plan to reference.

SAMPLE FLOOR PLAN



Details to be shown on plan:

- 1** Location of proposed garage
 - 1a** Garage dimensions
 - 1b** Distance to side property lines
 - 1c** Distance to rear property line
 - 1d** Distance to existing house
 - 1e** Indicate Window & Door Locations & size
 - 1f** Dimensions of eave overhangs
- 2** Location of existing house
 - 2a** Existing house dimensions
- 3** Location of existing building / structures
 - 3a** Existing building / structures dimensions

BUILDING CODE REQUIREMENTS

To assist you, we have provided National Building Code (NBC) requirements that must be met and will be inspected. Please note that this is not an exhaustive list and exceptions may apply.

Energy Efficiency (Section 9.36 of NBC)

Most garages and/or accessory buildings are not required to conform to the energy requirements in NBC.

If you are planning to build an accessory building that will service as an amenity space and is heated, Energy Efficiency requirements apply. The Energy Efficiency form shall be completed and submitted with your application.

Foundation and Anchorage

Drainage (Article 9.14.6.1) – the ground shall be sloped to drain water away from the building. Ensure new construction does not change existing surface flow.

Concrete strength (Clause 9.3.1.6.(1)(c)) – the compressive strength for concrete garage floors shall be at least 32 MPa.

Slab thickness (Sentence 9.35.3.1(2)) – Concrete floor slabs shall be at least 100mm thick.

Professional designs must be sealed by an architect or professional engineer registered in Saskatchewan. The design must be site specific and shall not be more than two years old.

If foundation is designed based on NBC Sections 9.12 and 9.15, all design information shall be provided on the drawings showing conformance to those Sections (requires excavating the foundation to the minimum depths in Table 9.12.2.2, properly sided footings, etc).

Anchorage (Article 9.35.4.3) – This Article points to the anchorage requirements in NBC Subsection 9.23.6. The anchorage requirements from Code that are commonly used for detached garages, where a 100mm thick concrete slab is permitted, are:

- Sill plate to be fastened to the foundation with anchor bolts (≥ 12.7 mm diameter), and spaced at 2.4m (8 ft) on center or less,
- Anchor bolts are to be embedded at least 100mm (4") into the foundation (note: therefore, the overall length of the bolt must be 100mm (4") embedment, plus the thickness of the sill plate, plus the thickness needed to fasten the nut and washers) and
- Must be designed to allow fastening of the nuts and washers without the anchor bolts withdrawing from the foundation.

Wood Decay Protection

Structural wood elements shall be pressure-treated where the clearance between the wood member and ground level is less than 105mm (6") (Sentence 9.3.2.9.(3)).

If wood members are not pressure treated and are supported by concrete that is in contact with the ground, they shall have a 2 mil (0.05mm) polyethylene film or Type S roll roofing in between the wood and the concrete support (Article 9.23.2.3).

Exterior Wall Construction

Construction of exposing building faces (Article 9.10.14.5)

Detached garages and accessory buildings are allowed relaxations in the NBC for the construction requirements of the exterior walls with regards to type of construction (combustible vs noncombustible), fire-resistance rating and type of cladding (combustible vs noncombustible).

The following is a summary of the requirements for detached garages and accessory buildings.

Walls of detached garage facing property line or lane,

- Limiting distance $\geq 0.6\text{m}$ (2ft); when the horizontal distance measured from the exterior wall face to the property line is greater than or equal to 0.6m, then there are no requirements for type of construction, fire-resistance rating, or for type of cladding.
- Limiting distance $< 0.6\text{m}$ (2ft); when the horizontal distance measured from the exterior wall face to the property line is less than 0.6m (2ft), then the wall shall have a fire-resistance rating of not less than 45 minutes. This rating is required to be provided for the entire face of that wall, along with any portions of wall directly above this wall that enclose an attic (if applicable). No additional requirements for type of construction or type of cladding.

Wall stud height and spacing (Article 9.23.10.1) – the size of lumber, the spacing and the height of studs shall conform to Table 9.23.10.1. Most commonly single-storey garages (only supporting the roof) are framed with:

Example Stud Size, Spacing, & Height for Simple Garages (supporting only a roof)		
Stud Size	Maximum Spacing (on centre)	Maximum Height
38 x 89 mm (2 x 4)	600 mm (24')	3.0m (9'-10 1/8")
38 x 140 mm (2 x 6)	600 mm (24')	3.0m (9'-10 1/8")
38 x 140 mm (2 x 6)	400 mm (16')	3.6m (11'-9 3/4")

Designs beyond the scope of Part 9 require a professional engineer or architect to seal the design (e.g. tall walls).

Top Plates (Articles 9.23.11.13 & 14)

In most cases, a double top plate is required, the joints in the top plates are to be staggered at least one stud space, and plates are to be lapped and fastened at corner intersections.

Wall Sheathing (Table 9.23.17.2-A)

Tye type, grade and thickness of wall sheathing shall conform to Table 9.23.17.2-A for the spacing of studs being used. Materials permitted for wall sheathing include, but not limited to, insulating fibreboard, gypsum sheathing, mineral fibre, rigid board, OSB, plywood. Ensure material meets the required material standard in Table 9.23.17.2-A.

Exterior Membrane and Cladding (Sections 9.27 and 9.28)

Sheathing membranes and cladding protect the exterior walls from precipitation. Most commonly, a sheathing membrane (“building wrap”) is installed under the chosen cladding. Refer to Sections 9.27 and 9.28 for more details as needed.

Roofing

Roof Sheathing (Table 9.23.16.7-A)

The roof sheathing type, grade, thickness and edge support (H-clips) to conform to the requirements of this table.

Roof slope and roofing type/provisions (Section 9.26)



- Roofing is to be provided to protect the building from precipitation. The type of roofing and installation shall conform to Section 9.26.
- A summary of slopes and applicable roofing types is shown in Table 9.26.3.1.

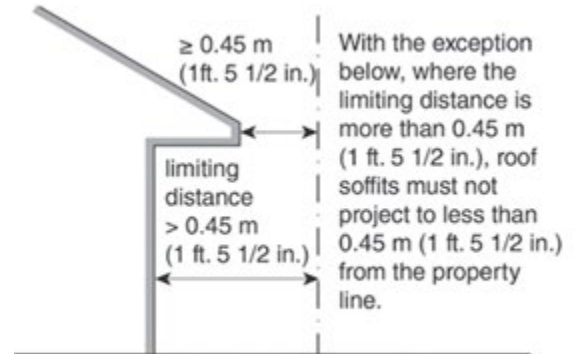
Soffits

Minimum distance from property lines (Sentences 9.10.14.5(9)-(11))

- The roof soffit is not permitted to be closer than 0.45m (18") from the property line. This means that if the garage wall is within 0.45m (18") of the property line, no roof soffit is permitted.
- Where the wall faces a lane/street, the roof soffit is permitted to extend up to the property line (but not past the property line).

Non-vented soffit requirements (Sentence 9.10.14.5(12))

- Where the roof soffit is less than 1.2 m (4 ft) from a property line or from the centerline of the lane/street, the soffit shall not have any openings. Most commonly, unvented aluminum soffit is installed (NBC also permits 12.7 mm (1/2") gypsum soffit board, 11 mm (3/8") thick plywood, 12.5 mm (1/2") thick OSB or waferboard, or 11 mm (3/8") thick lumber).



Trusses, Rafters, Lintels and Other Engineered Products

Pre-manufactured Trusses - Pre-manufactured trusses require shop drawings to be provided to the on-site inspector.

- Gable end truss of the roof requires blocking/bracing to be installed at 600 mm (24") o.c. or less.

Roof framing (rafters, joists and ridge beams – Section 9.23.14)

- All roof framing that consists of rafters, joists, and ridge beams must be detailed on the drawings.

Lintels, Built-up beams (Articles 9.23.12.3)

- Lintels to be shown to meet the Part 9 span tables of the NBC, or they are required to be engineered.
- Where lintels span more than 3 m (9 ft 10"), they shall be supported on each side by two trimmer studs (under the lintel) fastened to a king stud (beside the lintel). Spans less than 3m can be supported on each side by one trimmer fastened to a king stud.

Windows and Doors

Size of person door (Table 9.5.5.1)

- The door size shall be at least 760 mm (2ft 6 in) wide by 1980 mm (6 ft 6 in) high.

Windows and other glazing (Articles 9.10.14.4)

- The maximum allowable area of glazed openings (how many windows you can have on a building face) varies based on the area of the building face and the distance to the property line (or centerline of lane/street).
- Windows are not permitted where it will be less than 1.2 m (4 ft) from the property line (unless the property line is adjacent to a street or lane).

This project guide has no legal status and cannot be used as an official interpretation of the various codes and regulations currently in effect. Users are advised to contact the Municipal Office for assistance, as the Rural Municipality of Arborfield No. 456 accepts no responsibility for persons relying solely on this information.

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