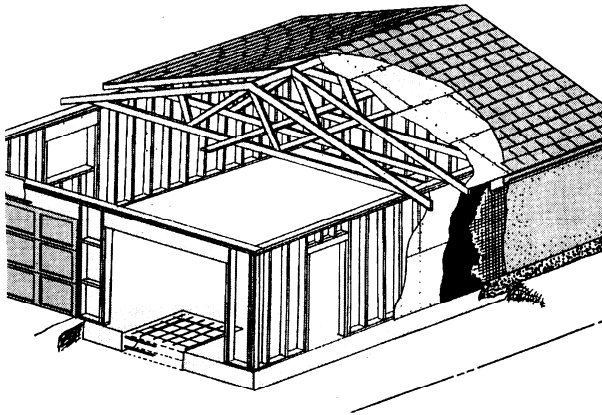


Detached Garages

**Construction requirements for detached
garages and storage sheds
for residential dwellings**



NEEPAWA & AREA PLANNING DISTRICT

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Note

The requirements and construction guidelines within this booklet are meant to assist you in designing and constructing a detached garage or storage shed which will comply with the Manitoba Building Code. However, detached garages and storage sheds vary in size and area so this booklet cannot possibly deal with every situation. If your project is different from that contained in this booklet and you are not familiar with the regulations that may be applicable, it is recommended that you contact someone who is knowledgeable in this area.

General Information

Is a Building Permit required to build a detached garage or storage shed?

Yes, a building permit is required.

This permit may be obtained by submitting the required information to Neepawa & Area Planning District. Contact information is found on the back cover of this booklet.

Exception: Storage sheds that are 10m² (108 sq. ft.) or less in area require a Zoning Permit. Any building larger than 108 sq. ft. requires Building Permit.

Do I need a Permit for a foundation slab only?

Yes and before pouring the concrete slab for your future garage or storage shed you should make sure that this slab will meet ALL applicable Building Code and Zoning By-Law regulations with respect to:

- a) allowable size
- b) appropriate thickness and reinforcing
- c) allowable distances from property lines and the dwelling

For instance, as explained in other sections of this booklet, the Building Code has special requirements concerning the foundation slab thickness if the structure is 50m² (538 sq. ft.) or larger in area.

When you decide to proceed with the construction of the garage or storage shed within one year.

Does a carport require a building permit?

Yes, a building permit is required for the construction of a carport. If the carport stands alone or is attached to a detached garage, then the Zoning and Building Code regulations in this booklet apply.

If the carport is ***attached*** to the house or to an attached garage, then it must comply with the regulations for house additions. The Zoning and Building Code regulations for house additions are different from those contained in this booklet. Please contact Neepawa & Area Planning District for more information.

What information is required for the building permit application?

You must present one copy of a Surveyor's Building Location certificate. As an alternative, a well-drawn site plan showing all property dimensions, locations of all buildings, and the location and size of the proposed structure may be acceptable.

Construction plans are required and the size of the building will determine the type and amount of information required. Foundation drawings designed by a Professional Engineer may be required. (Refer to the section on Foundations, page 6.)

Can I assume that the city sidewalk, lane pavement or neighbor's fence is the property line?

No. The only accurate way to determine your property line is with a Building Location Certificate from a Manitoba Land Surveyor.

How can I obtain a Building Location Certificate?

Check your records. Most homeowners already have this document; it usually comes with the purchase of a house. Otherwise, the services of a qualified Land Surveyor must be obtained.

How much does a building permit cost?

Please inquire at the Neepawa & Area Planning District office for the specific costs of a permit.

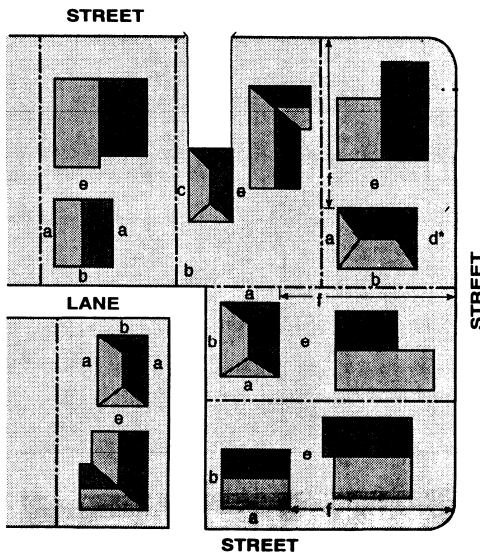
Building Location

How close can I build to the property lines?

The required setbacks for a garage or shed vary depending on where it is located, where streets are, and which way the garage door faces. Municipal approval is required when determining building locations.

See Figure 1 for a general guideline for location estimates.

FIGURE 1



- a) Interior side yard – 0.6m (2 ft.) (wall to property line), unless attached 1.6m (5 ft.)
- b) Street side yard – 4.5m (15 ft.) (wall to property line)
- c) 2 ft. overhang permitted
- d) Reverse corner side – 4.5m (15 ft.) 2 ft. overhang
- e) Rear side yard – 1.5m (5 ft.), entirely within rear yard 0.6m (2 ft.)
- f) Between garage and the principal building – 1.2m (4 ft.)
- g) Front yard – 7.6m (25 ft.)
- h) Garage door must be 3m(10 ft.) from rear property line
- i) Depending on zoning other restrictions may apply. Check with the Neepawa & Area Planning District for more information.

Foundations

What type of foundation is required for a one-story wood frame detached garage or shed?

For buildings less than 12 feet wide, there are no special Building Code requirements for the foundation. However, the structure will have to be anchored down to prevent uplift by the wind. If a concrete slab is used, it is recommended that the slab be not less than 100mm (4") thick.

For a building area of up to 65m² (700 sq. ft.) inclusive, the required foundation must be as shown in the center insert, or designed by a Professional Engineer registered in the Province of Manitoba.

For a building area greater than 84m² (900 sq. ft.), the foundation must be designed by a Professional Engineer registered in the Province of Manitoba.

The concrete used for all detached garage and storage shed slabs must have a minimum compressive strength of 20 MPa (3000 psi) after 28 days, and must have air entrainment of 5 to 8 percent.

NOTE: Precautions must be taken to avoid gas service lines from being enclosed in or under buildings as per CSA Z184 Gas Pipelines Systems Standards. Additionally, care should be taken when excavating to avoid disturbing other underground service lines including telephone cables and electrical power cables.

Call Before You Dig! Contact the MTS Cable Locate Office and Manitoba Hydro/Gas **before** proceeding with construction or any underground excavation.

Fire Protection and Framing

Do I have to fire rate the exterior walls?

You must fire-rate only those walls which are closer than 600mm (24 in.) to any property line which faces an adjoining property. If the wall faces a street or a public lane, this requirement does not apply.

NOTE: *It is possible that in some instances the Zoning By-Law may not permit a wall to come closer than 600mm (24") to a property line.*

Fire-rating of walls can be achieved by applying a layer of 15.9mm ($\frac{5}{8}$ " fire-rated (Type X) drywall or two 12.7mm ($\frac{1}{2}$ " fire-rated (Type X) drywall or equivalent to the inside face of the wall.

Can I have windows in the walls?

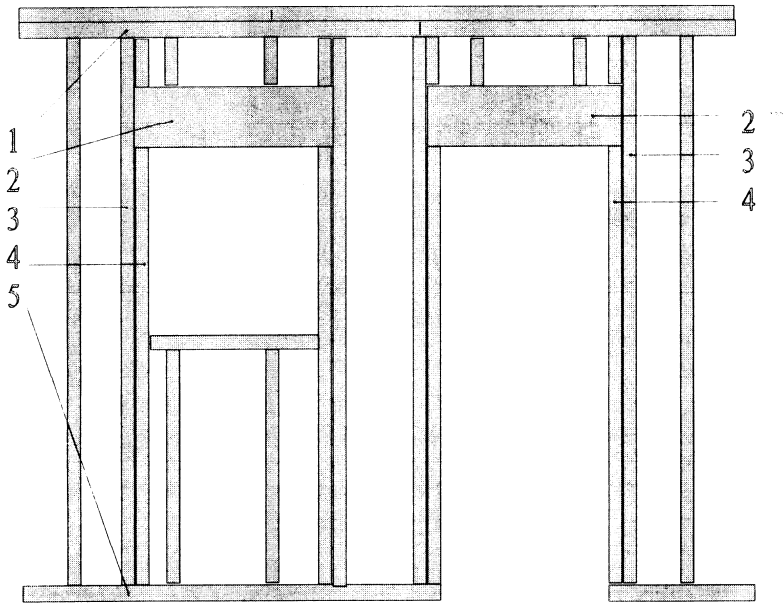
Windows and other openings, including doors, are only permitted in a wall if the wall is 1.5m (5 ft.) or more from the property line of an adjoining property. If the wall faces a street or a public lane, this requirement does not apply. There are distance restrictions between a window in a detached garage and a single family dwelling on the same lot. The above requirements for fire rating of walls and placement of windows or other openings in these walls are designed to limit fire spread between buildings on adjoining lots.

What types of framing methods are acceptable?

Framing methods must be in accordance with good construction practice. A detailed discussion of this aspect of construction is beyond the scope of this publication. However, some common framing details are indicated on the following pages. Refer to Figures 2, 3 & 4, and Tables 1 & 2.

For more detailed information refer to the book *Canadian Wood Frame House Construction*, available from Canada Mortgage and Housing Corporation (CMHC), 600-175 Hargrave St., Winnipeg 204.983.5600. This is an excellent guide to good framing methods and construction techniques. It also includes information for wall and roof sheathing requirements, exterior cladding application, roof coverings, etc.

FIGURE 2
Wall framing and lintel detail



Note:

1. **Double Top Plate:** Joints must be staggered at least one stud spacing. Joints are to be lapped or suitably tied at corners or intersecting walls.
2. **Lintel:** Refer to Table 2 to determine the size of lintel required for the opening width you select.
3. **Through Stud:** Refer to Table 2 to determine the maximum spacing and maximum unsupported height of studs.
4. **Cripple Stud:** The Building Code requires these studs to be a single full length piece of lumber extending from the underside of the lintel to the bottom plate.
5. **Single Bottom Plate:** To prevent uplift, this bottom plate should be firmly anchored down at each side of door openings, at both ends of each wall, and at intervals not exceeding 2.4m (7 ft. 10 in.).

TABLE 1

WOOD LINTEL SPANS FOR WINDOWS AND MAN DOORS			
Size of Lintels		Maximum Allowable Spans	
2 – 38 x 89mm	2 – 2 x 4	1.12m	3 ft. 8 in.
2 – 38 x 140mm	2 – 2 x 6	1.68m	5 ft. 6 in.
2 – 38 x 184mm	2 – 2 x 8	2.24m	7 ft. 4 in.
2 – 38 x 235mm	2 – 2 x 10	2.79m	9 ft. 2 in.
2 – 38 x 286mm	2 – 2 x 12	3.35m	11 ft. 0 in.

Note:

1. This table is for use with Spruce-Pine-Fir lumber grades 1 & 2.
2. Built-up lintels must be constructed of full length members. No splicing of members is permitted between supports.

TABLE 2

SIZE & SPACING OF STUDS				
Type Of Wall	Minimum Supported Loads (including dead loads)	Max. Stud Size	Max. Stud Spacing	Unsupported Height
Exterior	Roof with or without attic storage	38x64mm (2 x 3)	400mm (16 in.)	2.4m (7 ft. 10 in.)
		38x89mm (2 x 4)	600mm (24 in.)	3.0m (9 ft. 10 in.)

Note:

This table is for use with all species of lumber and minimum grades of standard, stud and No. 2.

FIGURE 3
Exterior Corner Detail

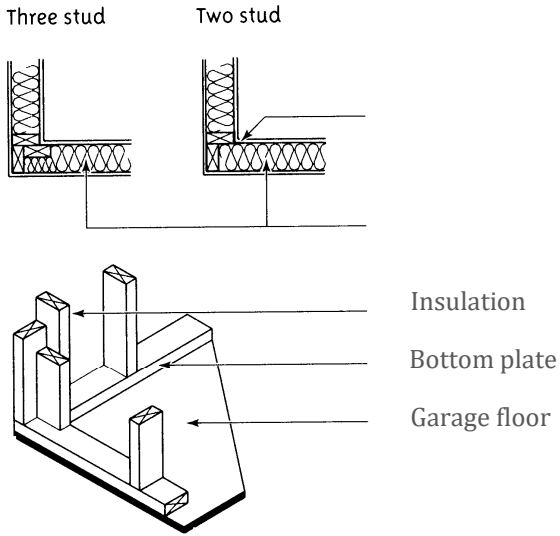
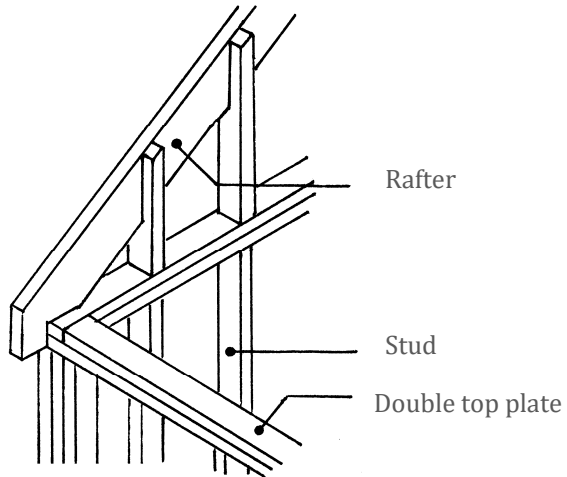


FIGURE 4
Exterior Wall Framing at Gable End



Overhead Door Lintels

What type of lintel is required for the overhead door?

The type of lintel required depends on the load which it must support which, in this case, is determined by the style of the roof. See Tables 3 & 4.

How are the tables used in determining the required overhead door lintel size?

Table 3 is used to determine the lintel size where the door opening **does not support** the roof (i.e. where the roof framing elements such as trusses or rafters run parallel to the door opening).

Table 4 is used to determine the lintel size where the door opening **supports** the roof, (i.e. where the roof framing elements such as trusses or rafters run perpendicular to the door opening).

To select a size of wood lintel, simply match the door opening size with the appropriate supported length in Table 4 to find the minimum lintel size.

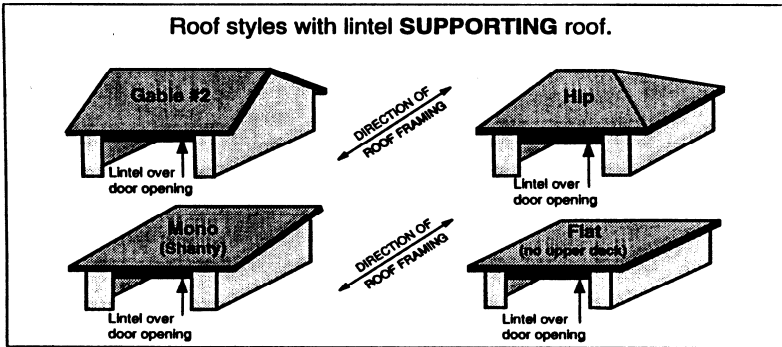
TABLE 3

WOOD LINTELS – not supporting roof loads			
Door Opening Width		Lintel – Gable Roof Only (Door in Gable End)	
2.44m	8 ft.	2 – 38 x 184mm	2 – 2 x 8
2.74m	9 ft.	2 – 38 x 184mm	2 – 2 x 8
3.05m	10 ft.	2 – 38 x 235mm	2 – 2 x 10
3.66m	12 ft.	2 – 38 x 235mm	2 – 2 x 10
4.27m	14 ft.	3 – 38 x 235mm	3 – 2 x 10
4.88m	16 ft.	3 – 38 x 235mm	3 – 2 x 10

Note: This table is for use with Spruce-Pine-Fir lumber grades 1 & 2. Built-up lintels must be constructed with full length members. No splicing of members is permitted between supports.

An Engineer-designed truss may be used as gable rafter. This may eliminate the need for a lintel above any openings located in a gable end wall.

FIGURE 5



Lintel Size Selection For An Overhead Door

Example: In order to select the correct size of lintel in cases where it is supporting the roof, three pieces of information are needed: the size of the garage, the width of the overhead door opening, and the size of the roof overhang. As an example, assume a 7.32m x 7.32m (24 ft. x 24 ft.) garage with a 2.74m (9 ft.) overhead door opening and a 600mm (2 ft.) overhang.

Begin by selecting the row for a 2.74m (9 ft.) overhead door opening. Next, knowing that the supported length will be half the distance of the roof span plus the overhang (see Figure 6), we divide the 7.32m (24 ft.) roof span distance by 2 and add the 600mm (2 ft.) roof overhang to get the total supported length of 4.27m (14 ft.).

Now looking along the table to column 4, where the supported length is 4.27m (14 ft.), we see that the proper size of lintel would be 3 - 38 x 235mm (3 - 2 x 10). If there was no roof overhang over the door opening we would look to column 3, where the supported length is 3.66m (12 ft.). The correct lintel size, in this case, would be 3 - 38 x 184mm (3 - 2 x 8).

FIGURE 6

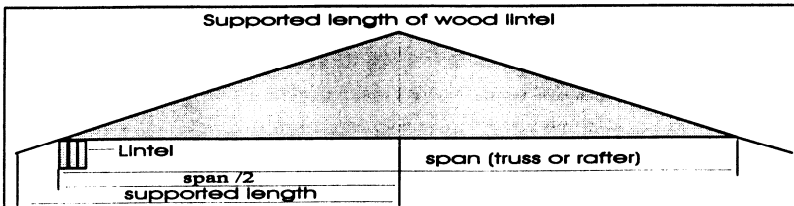


TABLE 4

WOOD LINTELS – supporting roof loads (Design Roof Snow Loads 1.5 kPa (30 psf))				
Width of opening (Lintel Span)	SUPPORTED LENGTH ⁽³⁾			
	3.05m (10 ft.)	3.66m (12 ft.)	4.27m (14 ft.)	4.8mM (16 ft.)
2.4m (8 ft.)	3 – 38x184mm (3 – 2 x 8)	3 – 38x184mm (3 – 2 x 8)	3 – 38x184mm (3 – 2 x 8)	3 – 38x235mm (3 – 2 x 10)
2.74m (9 ft.)	3 – 38x184mm (3 – 2 x 8)	3 – 38x184mm (3 – 2 x 8)	3 – 38x235mm (3 – 2 x 10)	3 – 38x235mm (3 – 2 x 10)
3.05m (10 ft.)	3 – 38x235mm (3 – 2 x 10)	3 – 38x235mm (3 – 2 x 10)	3 – 38x235mm (3 – 2 x 10)	3 – 38x286mm (3 – 2 x 12)
3.66m (12 ft.)	3 – 38x235mm (3 – 2 x 10)	3 – 38x286mm (3 – 2 x 12)	Design req'd by Engineer	Design req'd by Engineer
4.27m (14 ft.)	3 – 38x286mm (3 – 2 x 12)	Design req'd by Engineer	Design req'd by Engineer	Design req'd by Engineer
Column 1	2	3	4	5

Notes:

1. The lintels in this table are Spruce-Pine-Fire lumber grades 1 & 2.
2. Building up lintels must be constructed of full length members. No splicing of members is permitted between supports.
3. Supported length means half the span of trusses, roof joists or rafters supported by the lintel plus the length of the overhang beyond the lintel (see Figure 6).
4. If the supported length is between the sizes shown, use the column with the great depth. For garages or storage sheds with a door width or supported length greater than shown on the tables, consult a Professional Engineer.
5. The spans shown in the table are the clear spans between the load bearing supports at each end of the lintel. The find the total length of lintel needed, add the two bearing lengths of the support to the clear span.
6. The minimum bearing length of the support at each end of the lintel must be 89mm (3½”).
7. Lintel sizes smaller than those shown on these tables may be used, provided the lintel has been designed by a Professional Engineer and the lintel design and calculations are submitted and accepted.
8. The above-noted lintels are not designed to carry masonry or floors above the overhead door. For these types of applications consult a Professional Engineer.
9. The deflection limit for lintels was set at a maximum 15mm (0.6”) to ensure proper closure of garage doors.
10. In most cases nowadays the lintel supporting a roof load is “designed” and commonly sent out with the roof trusses. (LVL –Laminated veneer lumber)

What roof framing choices are there?

In wood framing, there is basically one method for framing roofs and that is to frame with pre-manufactured trusses.

There are several truss manufacturers and suppliers listed in the Yellow Pages under both Lumber and Retail and Trusses. These firms can provide detailed information regarding the proper installation of their products.

Note: *When using trusses or rafters at 600mm (24") spacing with panel-type roof sheathing of less than 12.7mm (½") thickness, support must be provided to all edges of each roof sheathing panel including those that meet at the ridge. This can be accomplished with the use of "H" clips and/or solid blocking under the joint.*

For roof designs on storage sheds less than 12 feet in width, contact the Development Officer/Building Official at the Neepawa & Area Planning District.

Compliance

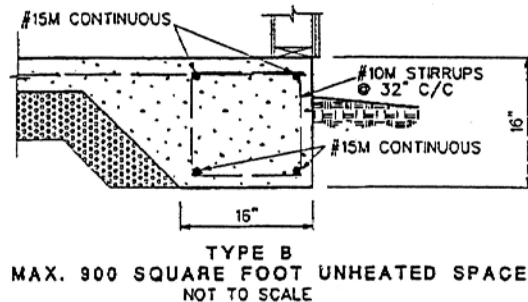
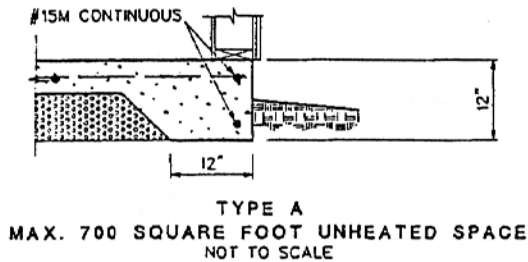
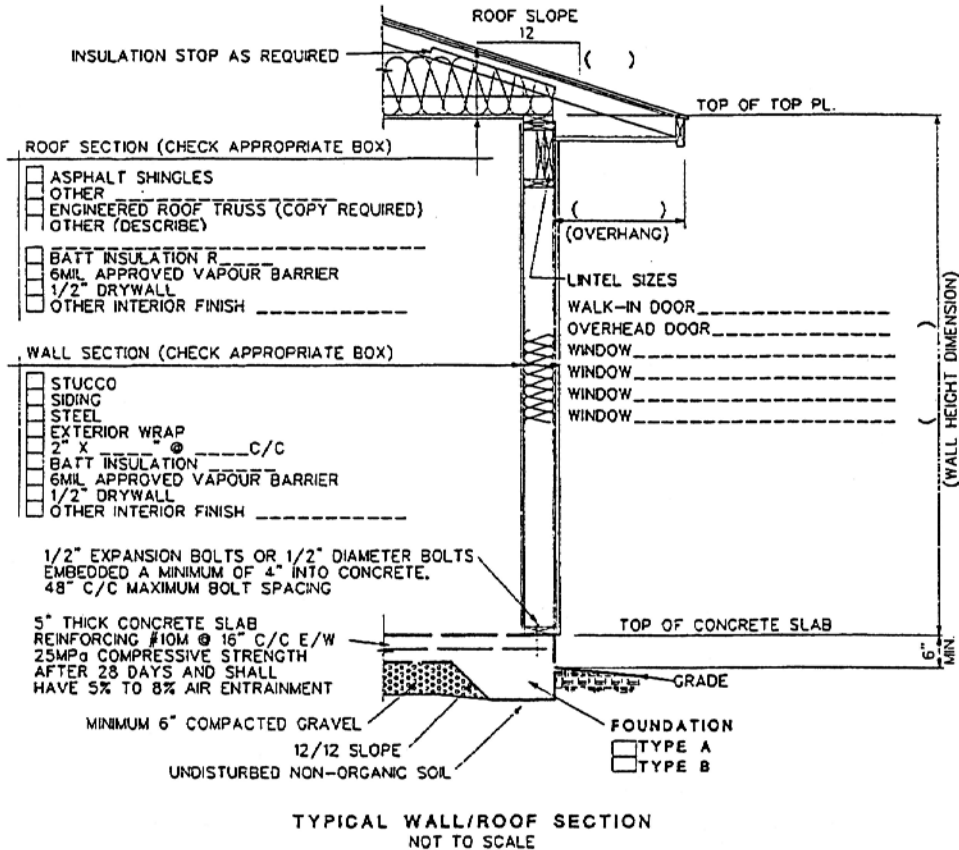
Who enforces all of these requirements?

The Development Officer/Building Official for Neepawa & Area Planning District is assigned the responsibility of monitoring construction for compliance with various Building Codes and By-Laws. This monitoring is carried out by means of the permit approval process and periodic site inspections.

Is there any way that compliance with a certain aspect of the Building Code can be waived?

The Development Officer/Building Official does not have the authority to waive the requirements, but does have the authority to accept equivalencies which meet the intent of the Building Code. If you feel that you can satisfy a Building Code requirement by using an equivalent material or construction method, contact the Development Officer/Building Official for the Neepawa & Area Planning District.

SECTION FOR A MAXIMUM 700 AND 900 SQUARE FOOT
DETACHED GARAGE FOR A RESIDENTIAL OCCUPANCY



Notes:

- This plan shall not be used unless the plan has been approved by the Building Authority having jurisdiction.
- A copy of the prefabricators certified roof truss drawings shall be supplied.
- These foundation details may not be suitable for all soil conditions. If the soil bearing is in question, it is the responsibility of the Building Authority having jurisdiction to request that the slab be designed and certified by an Engineer.
- The reference to "P.T." means material approved for Wood Foundations, CAN/CSA-S405.
- The reinforcing shall be free from rust, mud, oil, or other coats that would reduce the bond between the concrete and the reinforcing.
- All reinforcing shall be new billet deformed bars that conform to CSA standards.
#10m = 300KPa and #15 or larger = 400KPa.
- All reinforcing shall have a minimum of 2" of concrete cover.

Contact Us

Neepawa & Area Planning District

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Or contact the member jurisdictions of Neepawa & Area
Planning District:

Town of Neepawa

275 Hamilton St
Neepawa, MB R0J 1h0
Phone: 204-476-7600

Rural Municipality of Rosedale

282 Hamilton St
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Phone: 204-476-5414

Municipality of Glenella-Lansdowne

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