DECK CONSTRUCTION GUIDE

ABOUT THE GUIDE

This is a guide only. It is not intended to be used instead of current Municipal By-laws or the current building code.
Every attempt has been made to provide accurate information at the time of creation.

WHAT'S INSIDE

This guide includes sample drawings and support documents for two types of deck construction:

- An attached deck, including a portion that is covered.
- A detached deck (ex. freestanding deck / campgrounds)

CONTENTS

CONTACT US

705-538-2337 Ext 233
building@gbtownship.ca
gbtownship.ca

TOWNSHIP OF GEORGIAN BAY

PLANNING YOUR DECK BUILD

DESIGN TIPS

- All lumber must be a species of wood that is resistant to decay (e.g., Cedar), treated with a preservative to prevent decay or pressure treated.
- Minimum dimensional lumber for deck joist material is 2 x 8 (38 x 184 mm).
- A Guard is required at any point where the distance between the top of the decking and the grade is greater than 23-½ inches (600 mm).
- If the difference between grade and the top of deck boards is less than 5'- 11", (1800 mm) the minimum guard height is 2'-11½" (900 mm).
- If the difference between grade and the top of deck boards is greater than 5'-11", (1800 mm) the minimum guard height is 3'-6" (1067 mm).
- Maximum distance between pickets is 3-7/8" (100mm).
- The Building Code does not permit any guards/support members that may facilitate climbing. For example, some lattice designs can easily permit climbing and so may not be used. The "rule of thumb" is that no cross member or attachment that shall facilitate climbing can be used between 6" (150 cm) and 2'-11" (900 mm) from the top of the deck board.

ZONING CERTIFICATION

Zoning By-laws regulate the use, size, location and types of buildings permitted on a parcel of land.
Ensure that your proposed deck build is in compliance with the Township's Zoning prior to submitting for a building permit.

Planning and Zoning

Decks of any size that are attached to other structures (ex. House) require a building permit as per the Ontario Building Code.

- A free-standing deck that is over 10 square metres (107 sq feet) is considered a structure and requires a building permit. Decks smaller than 10 square metres that may not require a building permit still need to comply with the Township Zoning by-law.

PERMIT SUBMISSION

WHAT DO I NEED TO OBTAIN A BUILDING PERMIT

For this project, you will need to provide the following forms and support documents - *digital format preferred*:

1. Zoning Certification
2. Building Permit Application

An application for a building permit can be obtained from the Building Department in the Municipal Office or obtained from the Township website (www.gbtownship.ca).

In general, a building permit is required to erect, install, extend, alter or repair a building.

Note: If any of the required information is missing when the application is submitted, the permit application may not be accepted.

STANDARD DRAWINGS

With your application you will be required to submit two sets of detailed construction drawings, that is either designed by the property owner or by someone qualified. The following list of drawings should be used as a guide when preparing drawings for submission for a building permit.
The Designer that prepares the permit drawings must provide sufficient information to ensure compliance with the requirements of the Ontario Building Code.

Designers will be required to show proof of meeting the qualifications required by the Ministry of Municipal Affairs and Housing.

With your application you will be required to submit:

1. Two sets of detailed construction drawings. Sufficient information is required to establish that your project complies with the Ontario Building Code and all other applicable laws.
2. Floor Plan View (including Foundation Plan)
3. Cross Section Plan
4. Structural Drawings
5. Roof Plan (if applicable)
6. Engineering (for all applicable engineered components such as beams and trusses).

Site Plan

1. The location of all existing buildings (including septic systems)
2. The setbacks to lot lines must be clearly shown.
3. The plan should be to scale and show all property boundaries,
4. Adjacent road and water bodies. The location of site services shall be added to the site plan as well.
5. On Georgian Bay front yard setbacks. (High Water Mark 177.4 contour elevation).

Support Documents

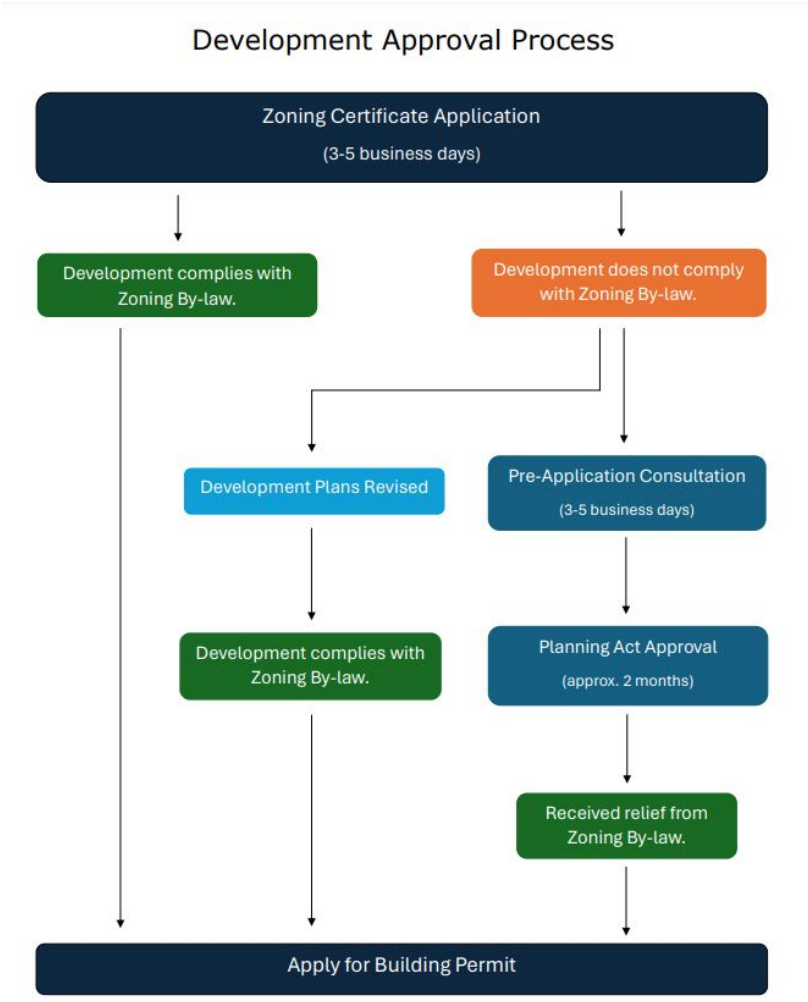
1. Letter of Authorization(from the homeowner if another individual is applying for the permit)
2. Proprietary product approval or engineering for items such as composite deck boards, Helical Piers, glass rails or other guard systems outside MMA Supplementary Standard SB7 Guards for Housing and Small Buildings.

PERMIT SUBMISSION

Zoning Certification

Prior to obtaining a building permit, you must receive approval from the Planning Department by way of a Zoning Certificate. This process has been implemented as an effort to streamline the process of obtaining a building permit by ensuring compliance with the Zoning By-law in advance.

A Zoning Certificate will be issued once compliance with the Zoning By-law has been achieved, or a Planning Act application to seek relief from a specific provision(s) has been approved by Council or the Committee of Adjustment to facilitate the development. The Zoning Certificate process is appropriate for those who have utilized the Pre-Application Consultation process or are certain that their development complies with the Zoning By-law and have prepared the required drawings for a building permit application.
A few things you should know:



PERMIT FEES

Building permit fees are due at the time of application. They are considered part of a complete application. If you do not have the fees at the time of application, it will be returned to you.

If in the process of reviewing the application, it is found additional information is required and if we are unable to contact you by phone or email we will forward a letter to you stating specifically what is required in order for us to continue the processing.

Fees

The cost of a building permit depends on the type and size of the project. View our building fees in Schedule K of the Fees and Charges By-law. Development charges may also apply.

Development Charges Pamphlet

EXPECT THE INSPECTION

INSPECTIONS ARE REQUIRED

What type of inspections will be required for my project?

Inspections for this type of project generally include:

- Inspections of footings (before you pour),
- Framing (before you cover) and
- Final (when all work is complete).

When Helical Piers or Screw Piles are used in lieu of sonotubes, they must be installed by an individual qualified to do so and be followed by a Conformity Report, prior to framing. If any other inspections are required for your project, they will be listed on the inspection agreement. Please be aware of all prescribed inspections for this type of project according to the Building Code.

If you have hired contractors to construct the project, it is your responsibility, as the owner to ensure that they have called for the mandatory inspection. It is in your best interest to have these inspections carried out and any deficiencies identified by the inspectors corrected prior to the contractor's completion of the project.

STRUCTURAL DETAILS

The following diagrams and charts have been included to help you with sizing your sonotubes, deck beams and deck joist

Design criteria:

1-in-50-year Ground snow load Ss = 2.50 kPa 1-in-50-year Rain load Sr = 0.40 kPa

FOUNDATION/FOOTINGS:

Allowable soil bearing pressure (SLS) = 75 kPa (minimum) Floor Dead Load = 0.50 kPa Floor Live Load = 1.90 kPa

Alternate footing in the form of Helical Piers. These must be installed by a qualified individual and the installation must be followed by a Conformity Report sealed/stamped by a Professional Engineer, prior to framing.

Concrete: Piers shall consist of poured concrete with a minimum compressive strength of 2200 psi (15 MPa) after 28 days [OBC 9.3.1.6.].

Piers: Shall be not less than 8" (203mm) in diameter. Under most circumstances it may be preferable to expand the lower portion of a smaller pier to achieve the required bearing area rather than use a larger pier. Refer to the table below for minimum footing sizes. Values in table are based on a soil bearing capacity of 10.9 psi (75 kPa).

Minimum sizes must be tripled where the soil bearing capacity is affected by a high water table.

Piers and footings on bedrock: It is permitted to bear footings and piers onto sound bedrock. The footing must be properly pinned to the bedrock with a minimum of 6 inches of embedded re-bar into the rock and epoxied. The amount of re-bar shall be determined by the designer.

Note: This table is based on OBC min.75kPa (1570 psf) soil bearing capacity

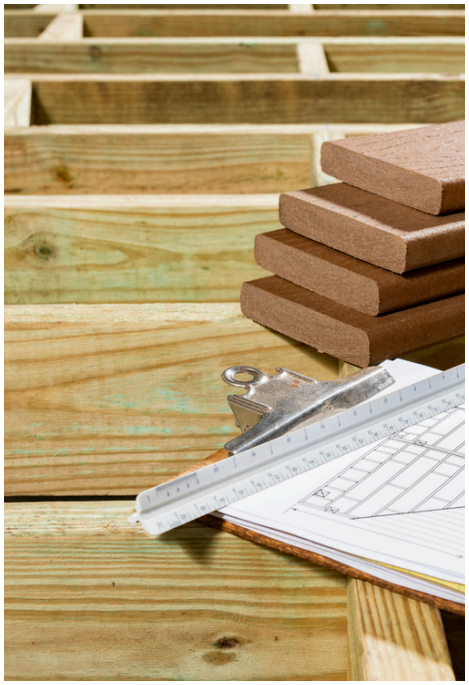
CONCRETE PIER SIZING (SONOTUBES)				
JOIST SPAN	**PIER SPACING**			
	1.2m (4'-0")	**1.8m (6'-0")**	**2.4m (8'-0")**	**3.0m (10'-0")**
1.8m (6'-0")	200mm (8")	250mm (10")	300mm (12")	350mm (14")
2.4m (8'-0")	250mm (10")	300mm (12")	350mm (14")	400mm (16")
3.0m (10'-0")	300mm (12")	350mm (14")	400mm (16")	460mm (18")
3.6m (12'-0")	300mm (12")	350mm (14")	400mm (16")	460mm (18")

* Note: This table is based on OBC min.75kPa (1570 psf) soil bearing capacity

STRUCTURAL DETAILS

FRAMING PLAN

For attached and detached decks. The following diagrams and charts have been included to help you with sizing your deck beams and joists.



Joists:

May be supported on either the top of a built-up beam or in a joist hanger
coated to prevent corrosion and installed as per the manufacturer's specifications. At no time shall the minimum bearing of joists be less than 1 ½" (38mm). Each joist bearing on a built-up beam must be mechanically fastened to the beam with two (2) galvanized framing nails 3 ¼" (82mm) in length. Refer to the table below for maximum size and spacing of joists.

JOIST SPAN				
Size	**12" o/c**	**16" o/c**	**24" o/c**	**Maximum Cantilever**
2 x 8	12'-3"	11'-6"	10'-0"	16"
2 x 10	14-6"	13'-6"	12'-6"	24"
2 x 12	16'-6"	15'-6"	14'-6"	24"

* Spans based on Spruce-Pine-Fir (SPF) Grade No1 or No2

Beams:

Built-up beams shall have not less than 3 ½" (89mm) of bearing and be fully supported over their width [OBC 9.23.8.1.]. Where individual members are butted together to form a joist, the joint must occur over a support. Built-up beams shall be nailed together with a double row of galvanized framing nails not less than 3 ½" (89mm) in length. Spacing shall not be more then 18" (450mm) apart and not more than 4" (100mm) from the end [OBC9.23.8.3.(7)]. Refer to the table below for maximum built-up beam sizes and length.

BEAM SPAN Based on an 11—10" support length of joist span						
Members and Plys						
2 x 8		**2 x 10**		**2 x 12**		
Ply	Max Span	Ply	Max Span	Ply	Max Span	Cantilever*
3 ply	9'	3 ply	11' 6"	3 ply	14' 3"	Maximum cantilever on any beam is 12" beyond bearing post.
4 ply	10'	4 ply	12' 9"	4 ply	15' 6"	

STRUCTURAL DETAILS

Beams Continued

Cantilever:

2x8 (38mm x 184mm) joists supporting roof loads shall not cantilever more than 16” (400mm) beyond their supports. Joist sizes larger than 2x8 shall not cantilever more than 24” (600mm) beyond their supports [OBC9.23.9.9.].

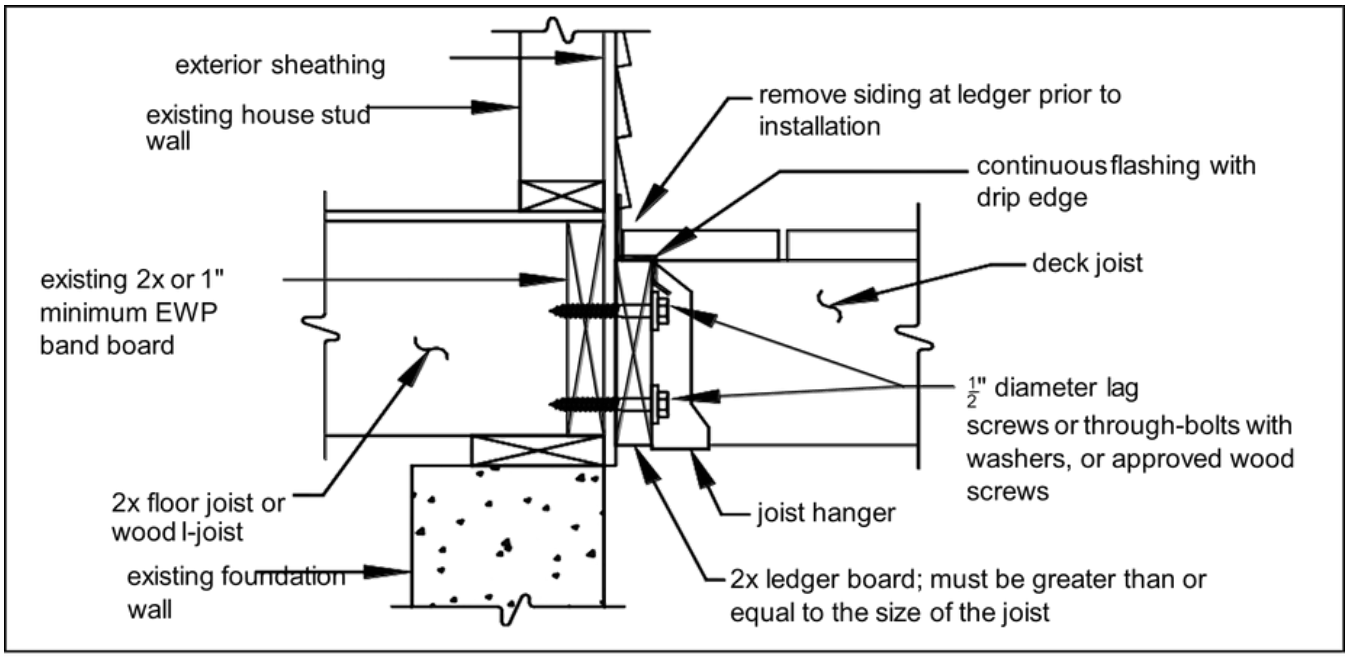
Ledger Board Attachment

Decks are usually supported on one side by a ledger attached to the house. This ledger attachment is critical to ensure the deck is safely and securely supported at this point. When the ledger is attached to the house, there are very specific requirements that must be met. Follow the diagrams closely for the proper attachment of the ledger.

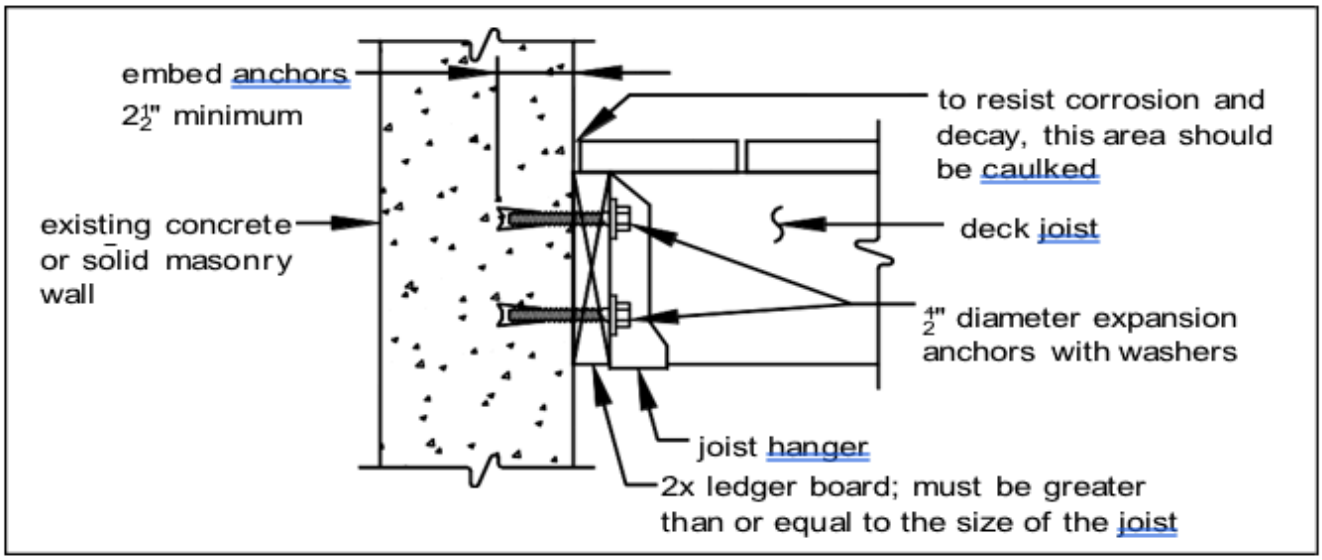
The deck ledger shall NOT be nailed to the house - it must be lagged or bolted to the structure of the house.

The size and spacing of the lag bolts (screws) are based on their capacity. Lag bolts (screws) values are assumed to be 325 pounds for 1/2-inch lag bolts (screws) and 190 pounds for 3/8-inch lag bolts (screws). The span of the floor joists determines how much load is being transferred to the ledger and thus to the lag bolts.

General Attachment of Ledger Board to House Structure



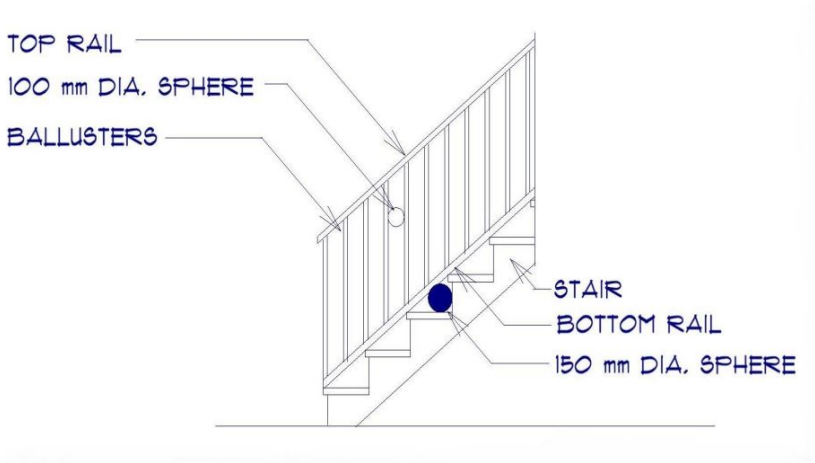
General Attachment of Ledger Board to Foundation WallBB (Concrete or Solid Masonry)



Guards & Railings

Railings: Shall conform to Supplementary Standard SB-7 of the Ontario Building Code.

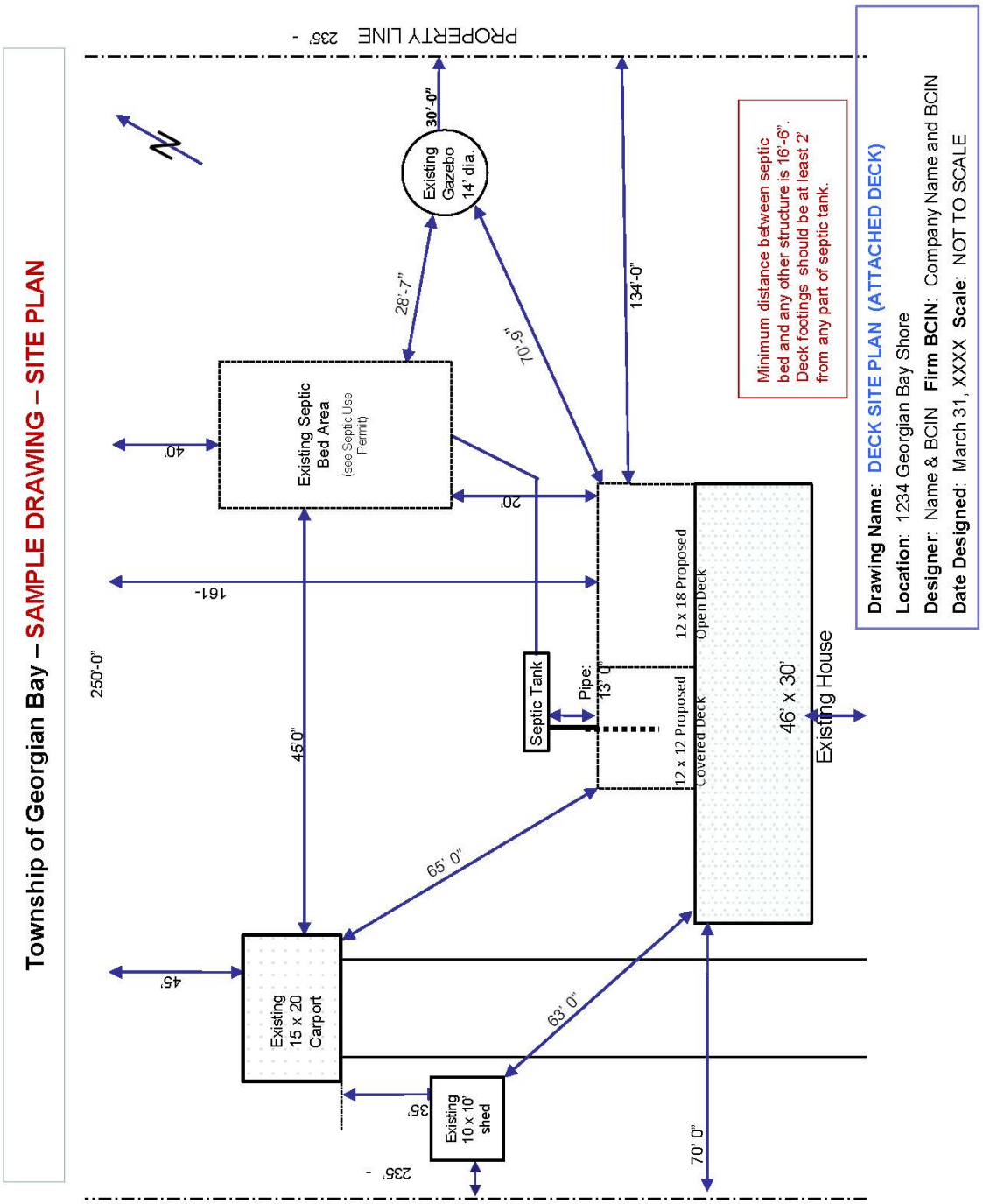
Guards: Exterior guards shall be not less that 36" (900mm) high where the walking surface served by the guard is not more than 5'-11" (1.8m) above finished grade otherwise the guard shall be not less than 42" (1070mm) high. If a bench is incorporated into the guard then the required height is measured from the bench surface [OBC 9.8.8.3.]. Opening in guard balusters shall be of a size that will prevent the passage of a spherical object having a diameter of 4" (100mm) [OBC 9.8.8.5.]. Guards shall be designed so that no member, attachment or opening will facilitate climbing [OBC 9.8.8.6.]. (refer to SB-7)

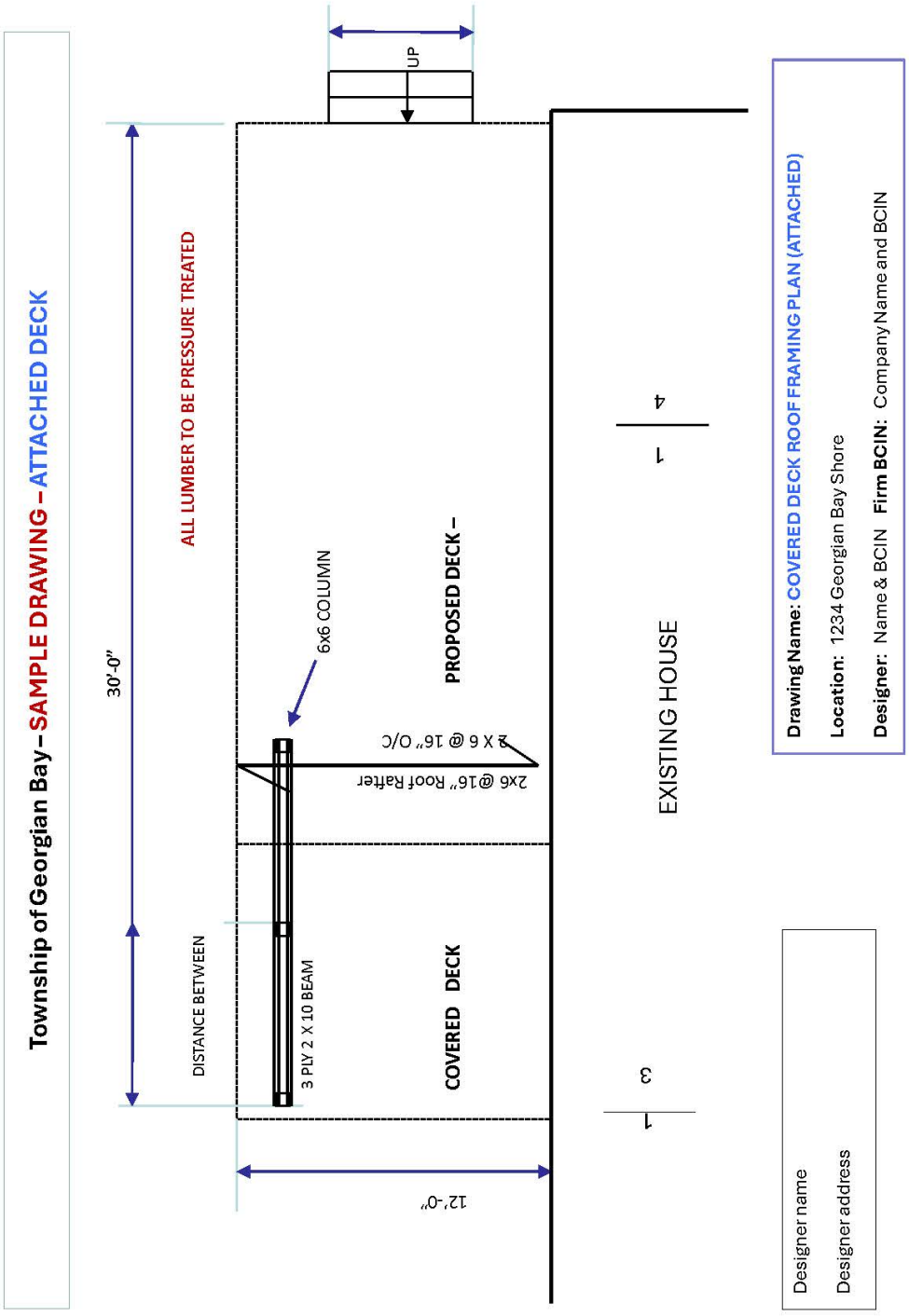


Disclaimers:
This information is based on standard minimum loading rates.
Charts are based on Tables A1, A8, and A15 from Part 9 of the 2024 Building Code.
Based on uniform loading condition with no point loads.
Individual designers are responsible for review of loading conditions prior to selections.
When selecting "joist spacing", some restrictions may occur based on the proposed type of decking material.

If utilizing a proprietary decking material, please refer to the manufacturer's approval for limitations.
Install solid blocking when floor joist span exceeds 6'-10" (2082 mm). Blocking must be of the same material and size as the floor joist and located not more than 6'-10" (2082 mm) from each support and other rows of blocking.

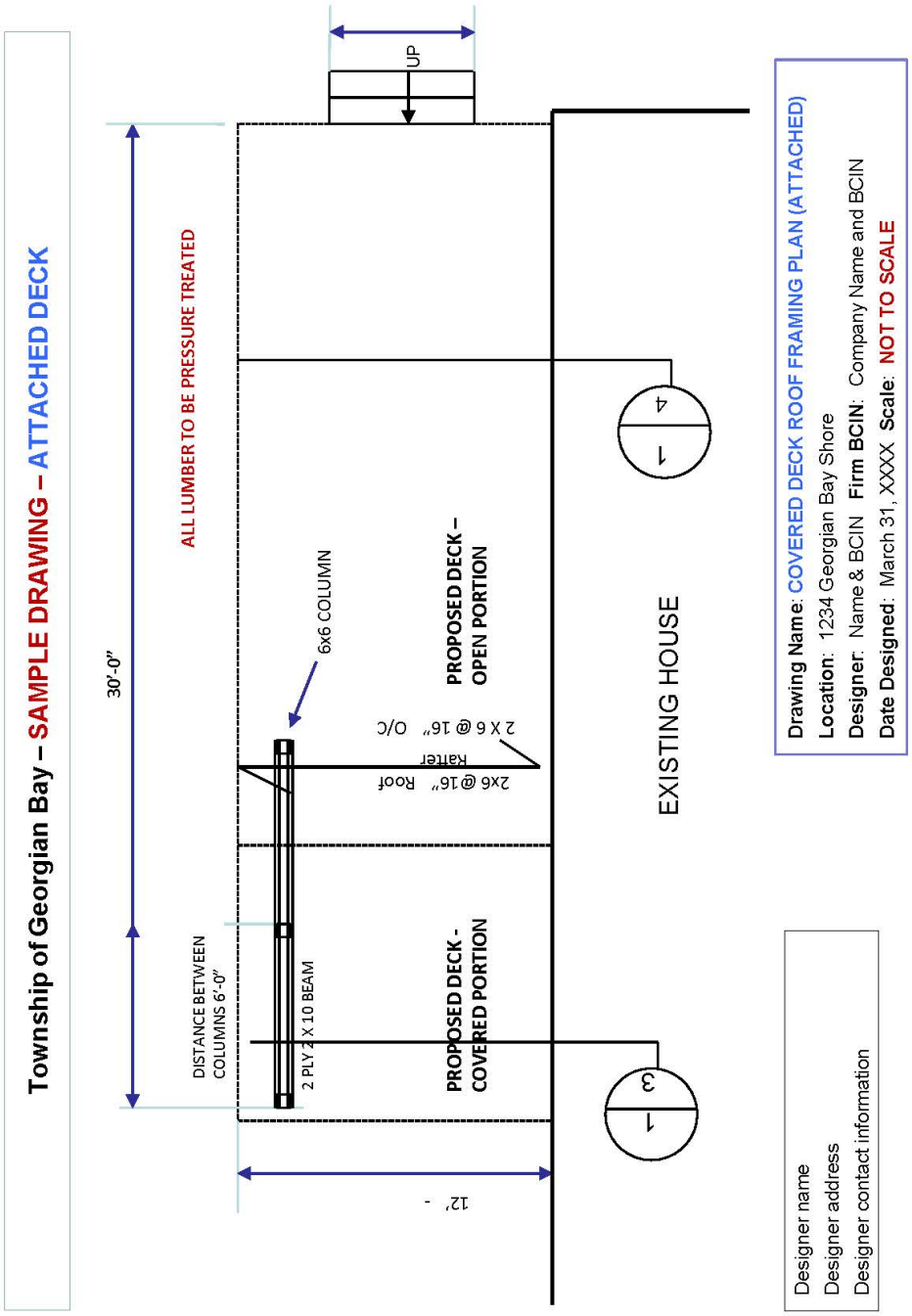
SAMPLE DRAWINGS




Township of Georgian Bay – SAMPLE DRAWING – ATTACHED DECK
ALL LUMBER TO BE PRESSURE TREATED
30'-0"
DISTANCE BETWEEN
UP
6x6 COLUMN
PROPOSED DECK –
2 X 6 @ 16" O/C
2x6 @16" Roof Rafter
3 PLY 2 X 10 BEAM
COVERED DECK
12'-0"
EXISTING HOUSE
4
1
3
1
Drawing Name: COVERED DECK ROOF FRAMING PLAN (ATTACHED)
Location: 1234 Georgian Bay Shore
Designer: Name & BCIN Firm BCIN: Company Name and BCIN
Designer name
Designer address

SAMPLE DRAWINGS

Attached & detatched decks



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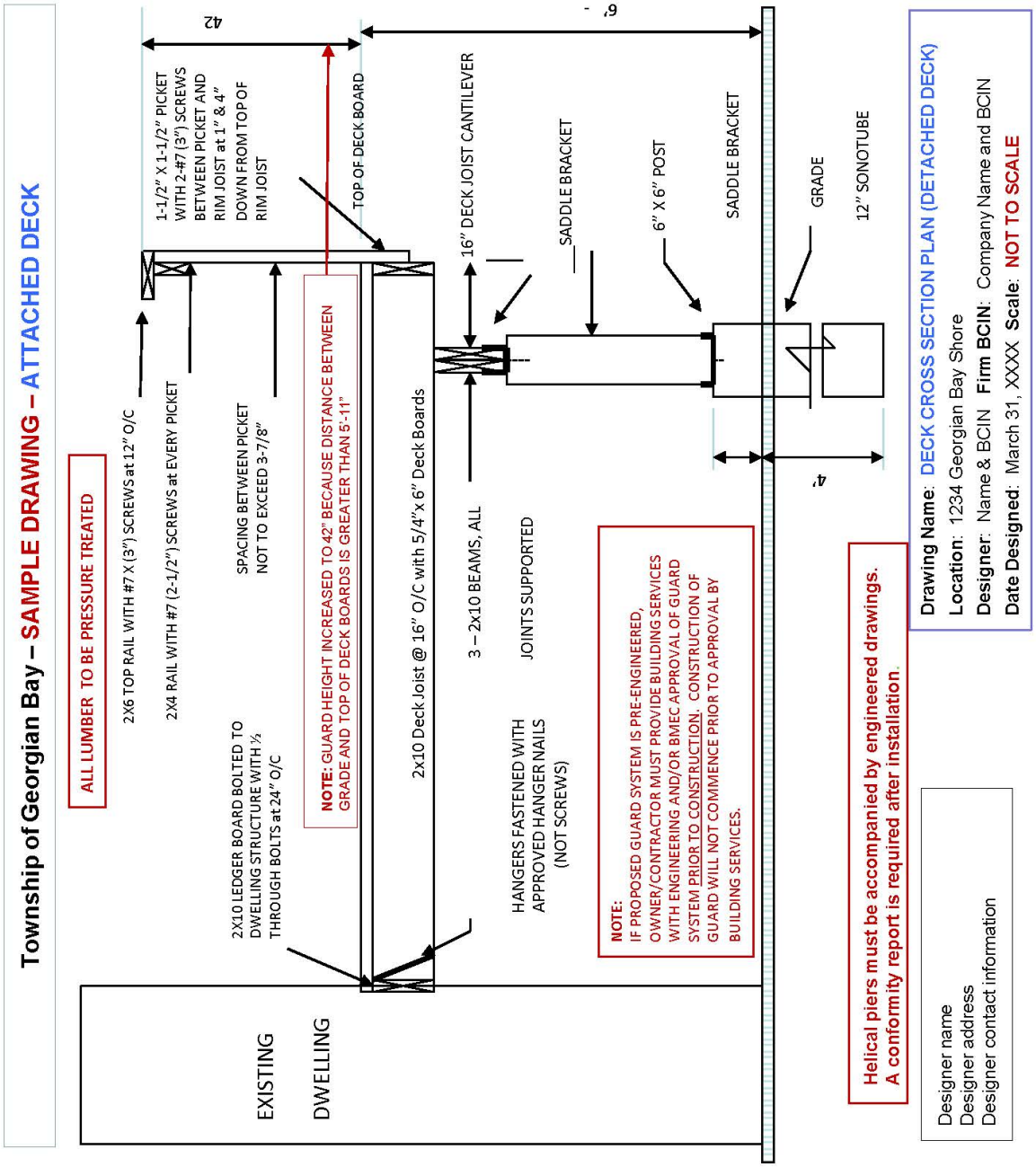
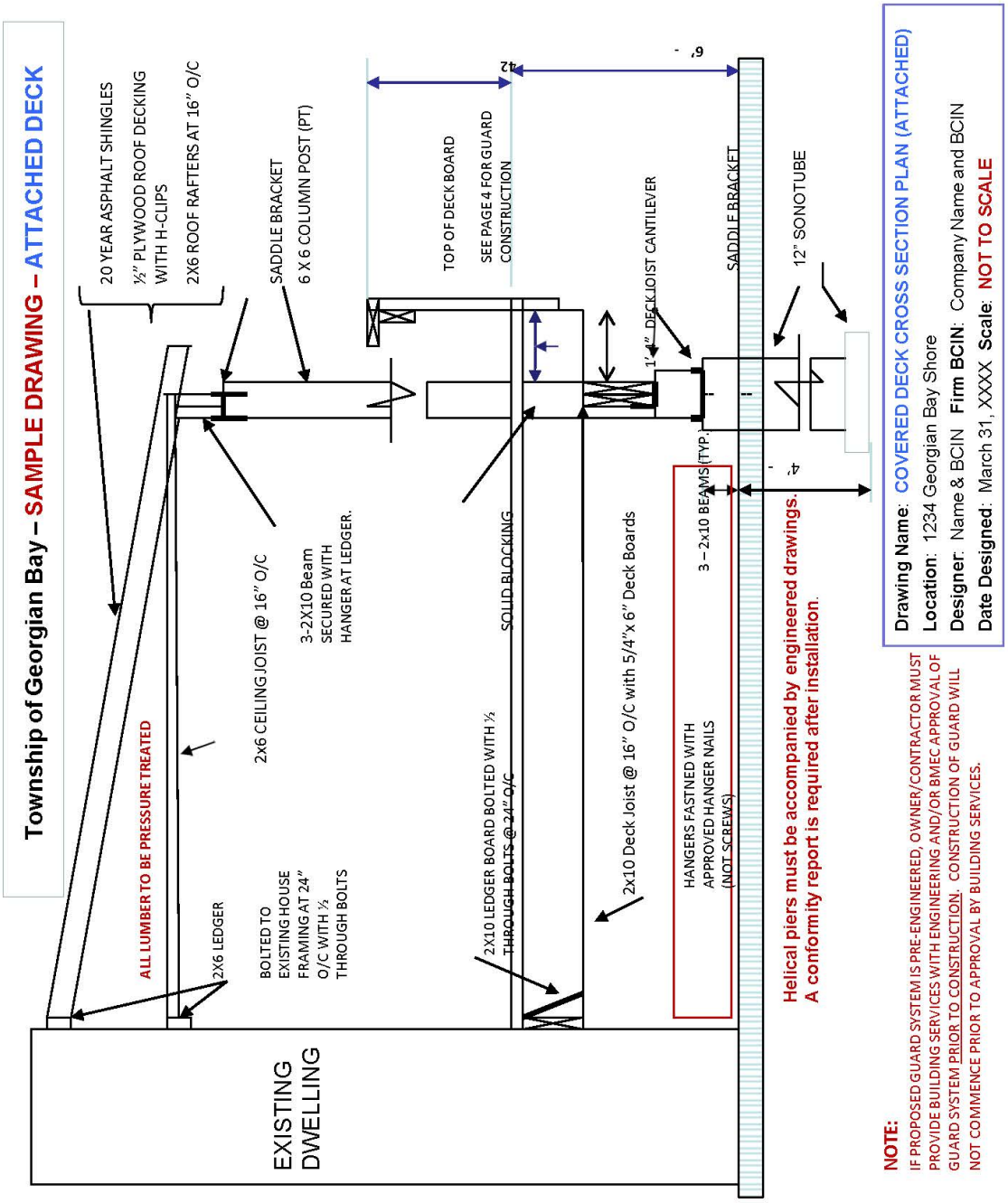
Attached & detatched decks



SAMPLE DRAWINGS

Attached & detatched decks



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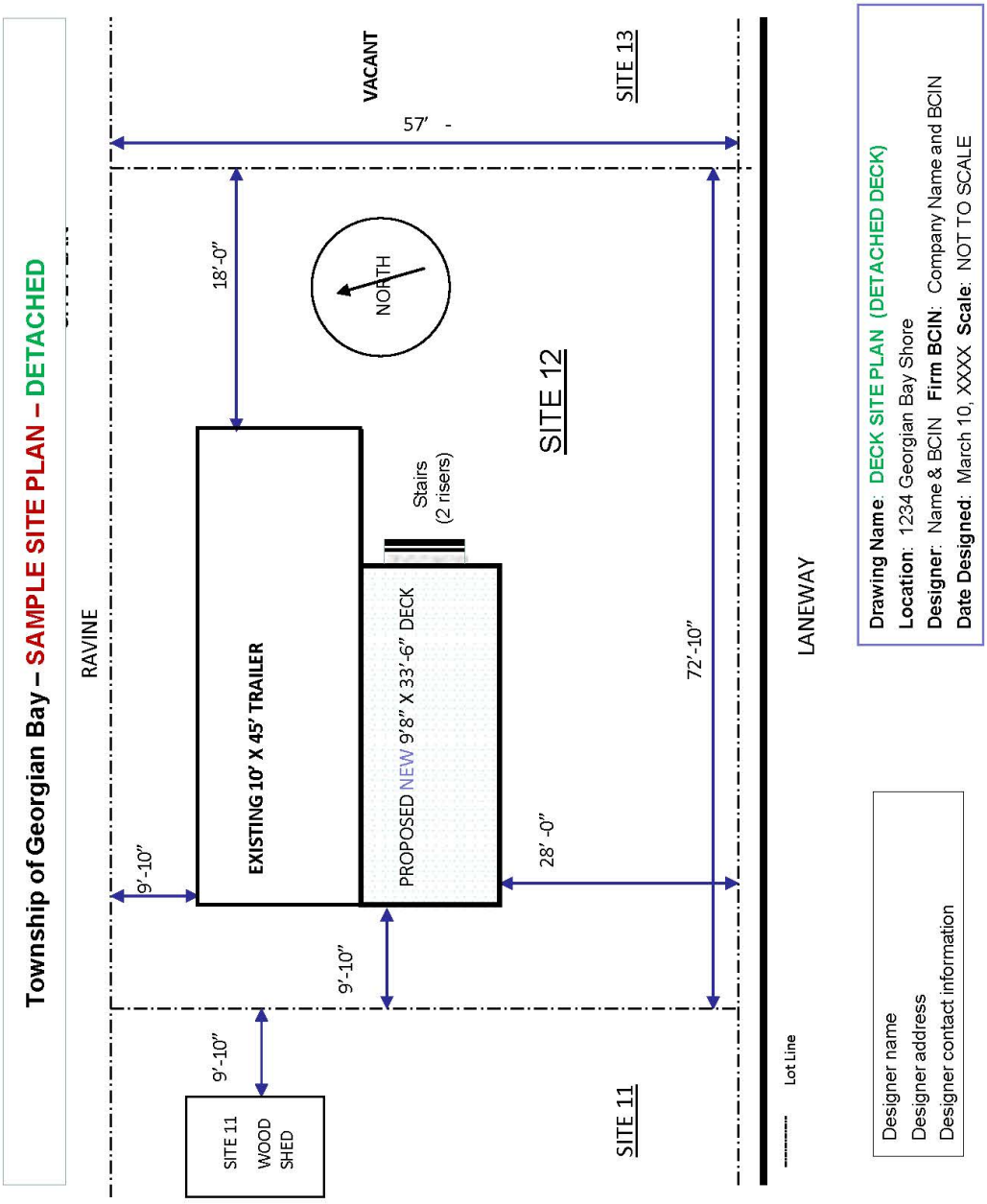

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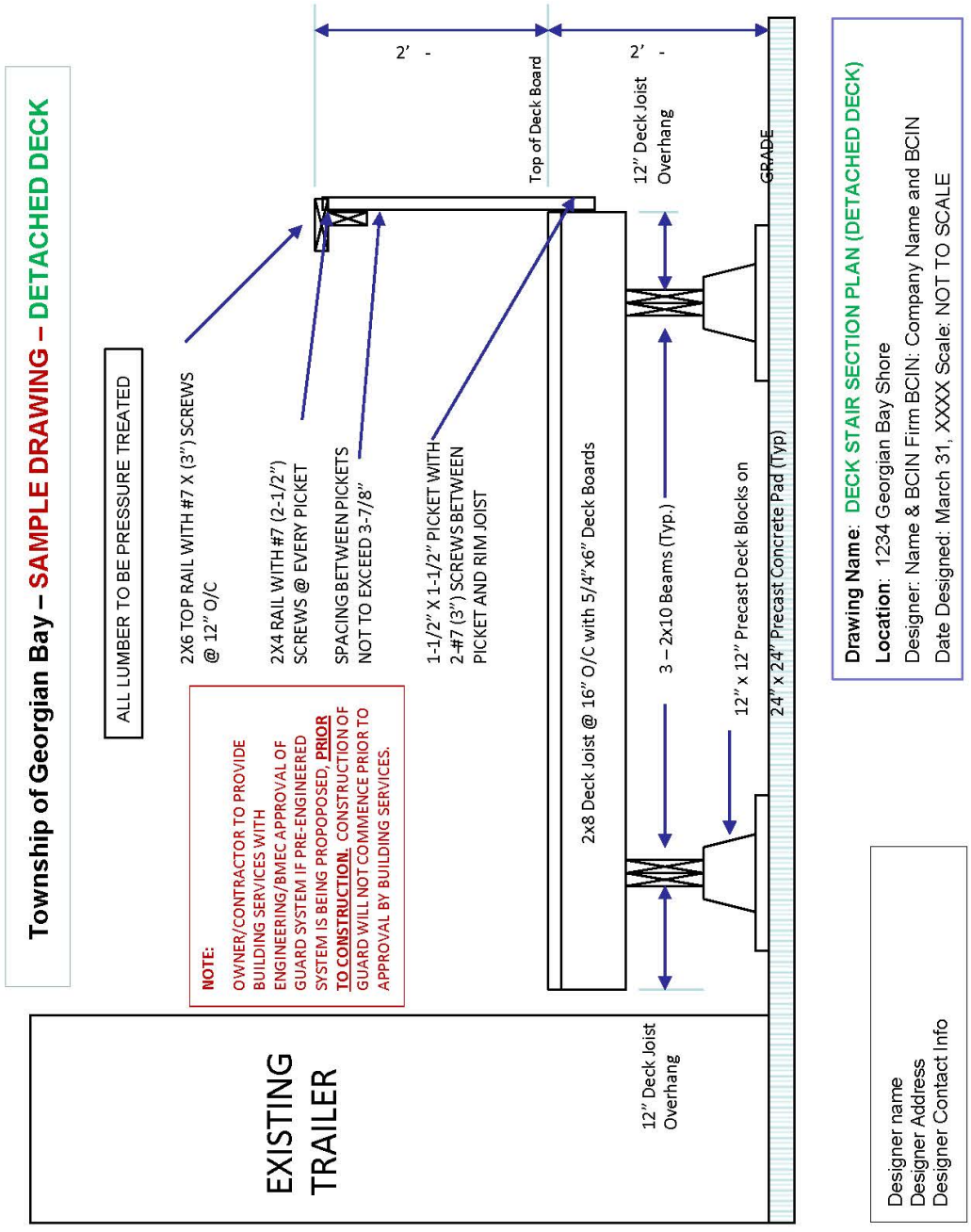
Attached & detatched decks



GENERAL INFORMATION

If you have any questions or concerns with Permit requirements, you may obtain information by contacting the Township Office.

Building Staff are available to assist you between the hours of 8:30 a.m. to 4:30 p.m. Monday to Friday.

Building Department	705-538-2337 Ext. 233 building@gbtownship.ca
Planning Department	705-538-2337 Ext. 263 planning@gbtownship.ca

OTHER LINKS

Fees & Charges Bylaw
https://www.gbtownship.ca/en/business-and-development/development-charges-and-fees.aspx

Online Payment Form
https://forms.gbtownship.ca/Payment-Processing-Form

Book an Inspection
https://forms.gbtownship.ca/Building-Inspection

Planning Information
https://www.gbtownship.ca/en/business-and-development/planning-and-zoning.aspx

Building Guide
For general information and answers to Frequently Asked Questions about buildingBBBB permits and the building permit process, please review our Building FAQ's, guide.