Building a Deck Information Guide for Ontario

When is a building permit required for a deck in Ontario?
If the deck (new or replacement) is 24" high or greater above finished grade. 
A permit is also required if structural renovations will be made to an existing deck.

Drawing requirements for a building permit application
1. A copy of the property survey or site plan of your lot. a. Please draw on location of deck with dimensions to lot lines
2. Deck drawings (Building centre drawings or hand drawn to scale and dimensioned) 
   a.) Plan view showing posts, floor joists, beams, stairs, landings 
   b.) Side view showing height or deck and guard
The construction plans must show the overall size of the deck, the size and spacing of the beams, posts, and deck joists, the species and grade of the wood material being used, (eg. SPF #2; species – spruce, grade - #2) the type of foundation you have chosen to support the deck and the location of any stairs leading to or from the deck.

The elevation plan must show the height of the deck floor above finished ground level at its highest point and the height and type of guardrail being used around the perimeter of the deck.

Guards/Railings (for decks 24” or higher)
The Ontario Building Code permits the installation of wood guards/railings. Should you plan on installing anything other than a wood guard/railing, please submit a copy of the Pre-Engineered guard/railing details with your building permit application.
Typically you can receive this package of details from the supplier.
NOTE: Hollow plastic or vinyl guards/railing are not permitted

Required Building Inspections
1. Excavation/Footing inspection - Once the holes have been dug, but prior to concrete being poured
2. Structural Wood Frame inspection - Once the framing is complete (posts, beams, joists)
3. Final Building inspection - When the deck and guard/railing are complete
Deck Layout And Span Tables

**Deck Layout**

**Maximum 2-Ply Beam Length**

<table>
<thead>
<tr>
<th>Supported Joist Length</th>
<th>2 x 8</th>
<th>2 x 10</th>
<th>2 x 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>4'-0&quot;</td>
<td>11'-7&quot;</td>
<td>14'-10&quot;</td>
<td>17'-4&quot;</td>
</tr>
<tr>
<td>6'-0&quot;</td>
<td>9'-10&quot;</td>
<td>12'-1&quot;</td>
<td>14'-3&quot;</td>
</tr>
<tr>
<td>8'-0&quot;</td>
<td>8'-7&quot;</td>
<td>10'-6&quot;</td>
<td>12'-3&quot;</td>
</tr>
<tr>
<td>10'-0&quot;</td>
<td>7'-8&quot;</td>
<td>9'-4&quot;</td>
<td>10'-8&quot;</td>
</tr>
</tbody>
</table>

**Maximum 3-Ply Beam Length**

<table>
<thead>
<tr>
<th>Supported Joist Length</th>
<th>8'-0&quot;</th>
<th>10'-0&quot;</th>
<th>13'-0&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>8'-0&quot;</td>
<td>10'-8&quot;</td>
<td>13'-3&quot;</td>
<td>15'-1&quot;</td>
</tr>
<tr>
<td>10'-0&quot;</td>
<td>9'-0&quot;</td>
<td>11'-5&quot;</td>
<td>13'-5&quot;</td>
</tr>
</tbody>
</table>

**Maximum Floor Joist Length**

<table>
<thead>
<tr>
<th>Joint Size</th>
<th>Max. Span</th>
<th>Max. Cantilever</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x8 @ 12&quot; O.C.</td>
<td>12'-6&quot;</td>
<td>20&quot;</td>
</tr>
<tr>
<td>2x8 @ 16&quot; O.C.</td>
<td>11'-9&quot;</td>
<td>16&quot;</td>
</tr>
<tr>
<td>2x8 @ 24&quot; O.C.</td>
<td>11'-3&quot;</td>
<td>14&quot;</td>
</tr>
<tr>
<td>2x10 @ 12&quot; O.C.</td>
<td>14'-6&quot;</td>
<td>28&quot;</td>
</tr>
<tr>
<td>2x10 @ 18&quot; O.C.</td>
<td>13'-8&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>2x10 @ 24&quot; O.C.</td>
<td>12'-10&quot;</td>
<td>20&quot;</td>
</tr>
<tr>
<td>2x12 @ 12&quot; O.C.</td>
<td>16'-5&quot;</td>
<td>20&quot;</td>
</tr>
<tr>
<td>2x12 @ 16&quot; O.C.</td>
<td>15'-5&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>2x12 @ 24&quot; O.C.</td>
<td>14'-5&quot;</td>
<td>20&quot;</td>
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**Note:** All decking is to be 5/4 x 6 wood material or approved equivalent.
Guard, Post, Beam
Footings and Ledger Board

Guard Details

Option A

MIN. GUARD HEIGHT WITH DECKS:
- 5'-11" OR LESS
- MORE THAN 5'-11"
ABOVE GROUND = 42"

3" SCREWS @ 12" O.C.
2 x 4 MIN.
2 x 6 RECOMMENDED
2 x 4
1 - 2 1/2" SCREW
MIN. 2 x 2 PICKETS
(2x2 TURNED PICKETS NOT PERMITTED)
2 - 3" SCREWS
RIM JOIST

Option B

MIN. 2 x 2 PICKETS
MATERIAL RECOMMENDED
4" MAX
MAX. 5.5" TO TOP
RIM JOIST

Guard Post Detail

4 x 4 GUARD POST
MAXIMUM 5'-1"
SPACING BETWEEN POSTS
(POST IS NOT PERMITTED TO BE NOTCHED)

2 x 4 (MIN.) WOOD BLOCKING
RIM JOIST
4 - #8 x 3" SCREWS PER SIDE
FLOOR JOIST
2 x 8 (MIN.)
4 - 3" NAILS

Ledger Board Detail

MINIMUM 3/8"D ANCHOR BOLTS @ 16" CENTERS
STAGGERED. ANCHOR BOLTS MUST BE INTO
WOOD FRAMING OR FOUNDATION WALL. DO
NOT SECURE INTO BRICK VENEER ALONE.

Post Detail

2 - 3/8"D ANCHOR BOLTS THROUGH THE
- 2 x ______ BEAM
AND PART OF 6 x 6 POST

6 x 6 POST FOR DECKS GREATER THAN 4'-6" ABOVE
GRADE.

SONOTUBE ______ "Ø

SOLID BLOCKING REQUIRED FOR BEAMS @ 18" O.C.
ADDITIONAL LATERAL BRACING MAY BE REQUIRED. CONFIRM
WITH BUILDING INSPECTOR @ FRAMING INSPECTION.
Deck

Elevation and Details

Deck Elevation

Stair Detail

Sonotube Sizes

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Weight</th>
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<tbody>
<tr>
<td>8&quot;Ø</td>
<td>1047 lbs</td>
</tr>
<tr>
<td>10&quot;Ø</td>
<td>1635 lbs</td>
</tr>
<tr>
<td>12&quot;Ø</td>
<td>2355 lbs</td>
</tr>
<tr>
<td>14&quot;Ø</td>
<td>3207 lbs</td>
</tr>
<tr>
<td>16&quot;Ø</td>
<td>4189 lbs</td>
</tr>
</tbody>
</table>

*Weight = (supported post length each side of post x half beam length each side of post) x 40 lbs/SF

Stair Dimensions

<table>
<thead>
<tr>
<th>Type</th>
<th>Max.</th>
<th>Min.</th>
</tr>
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<tbody>
<tr>
<td>Rise</td>
<td>7 7/8&quot;</td>
<td>4 7/8&quot;</td>
</tr>
<tr>
<td>Run</td>
<td>14&quot;</td>
<td>8 1/4&quot;</td>
</tr>
<tr>
<td>Tread</td>
<td>14&quot;</td>
<td>9 1/4&quot;</td>
</tr>
</tbody>
</table>

*Risers shall have a uniform height in any one flight of stairs.
*Treads shall have a uniform run and tread depth in any one flight of stairs.