Building a Deck Information Guide and Process

When is a building permit required for a deck?

- 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.
   - Please draw on location of deck with dimensions to lot lines
2. Deck drawings (Building centre drawings or hand drawn to scale and dimensioned)
   - Plan view showing posts, floor joists, beams, stairs, landings
   - Side view showing height or deck and guard
   *ask for our deck design details for assistance

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

Approved Decking Materials (for decks 24” or higher)

- 5/4” wood decking
- CWS Composite Decking
- Duradek boards
- Brite Composite Decking
- Nexwood Composite Decking
- Trex Wood-Polymer Composite Decking
- Eon Composite Decking System
- Baleboard Poly Decking
- FORMADECK vinyl deck boards
- NCP Euroboard, Enviroboard, Northern Lite Decking
- Gorilla Deck PVC Deck Boards

Where to apply for a building permit
Apply online at www.kitchener.ca/onlinepermits or bring all required drawings to the 5th floor at City Hall. City Hall is located at 200 King St W, Kitchener, Ontario.

Cost of building permit
Please see our fee schedule online for our current building permit rates. We accept cash, cheque and debit as methods of payment. This includes the review of drawings, the building permit and building inspections. Our office hours are Monday to Friday, 8:30am - 5:00pm.

Time
Once a complete permit application is made the permit will be reviewed within a maximum of 10 business days.

Required Building Inspections
Building inspections are booked through our automated phone system or online. Please schedule in advance, same day service is only available when booked before 8:00am the day of the inspection. Required inspections include;
- Excavation/Footing inspection - Once the holes have been dug, but prior to concrete being poured
- Structural Wood Frame inspection - Once the framing is complete (posts, beams, joists)
- Final Building inspection - When the deck and guard/railing are complete

Important Numbers to know

- Ontario One Call (natural gas, sewer/ water lines, KW Hydro, Rogers Cable and Bell locates)1-800-400-2255
- Electrical Safety Authority: 1-877-ESA-SAFE (1-877-372-7233)

Any Questions?
Phone: 519-741-2433
Email: building@kitchener.ca
Web: www.kitchener.ca/building
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'-0&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></th>
<th>8'-0&quot;</th>
<th>10'-8&quot;</th>
<th>13'-0&quot;</th>
<th>15'-1&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>10'-0&quot;</td>
<td>9'-6&quot;</td>
<td>11'-8&quot;</td>
<td>13'-6&quot;</td>
<td></td>
</tr>
</tbody>
</table>

**Maximum Floor Joist Length**

<table>
<thead>
<tr>
<th>Joist 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'-0&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 @ 16&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>28&quot;</td>
</tr>
<tr>
<td>2x12 @ 16&quot; O.C.</td>
<td>15'-6&quot;</td>
<td>24&quot;</td>
</tr>
<tr>
<td>2x12 @ 24&quot; O.C.</td>
<td>14'-6&quot;</td>
<td>20&quot;</td>
</tr>
</tbody>
</table>

**All decking is to be 5/4 x 6 wood material or approved equal.**

* Install solid blocking when floor joist span exceeds 6'-10". Blocking required to be of the same material and size as the floor joist and located not more than 6'-10" from each support and other rows of blocking.
MIN. GUARD HEIGHT WITH DECKS:
- 5'-11" OR LESS ABOVE GROUND = 36"
- MORE THAN 5'-11" ABOVE GROUND = 42"

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

Option A

Guard Details

Option B

Guard Post Detail

Ledger Board Detail

**NOTE: ANYTHING OTHER THAN A WOOD GUARD/RAILING, PLEASE SUBMIT A COPY OF THE PRE-ENGINEERED GUARD/RAILING DETAILS WITH YOUR BUILDING APPLICATION.**
**Deck Elevation**

- **4"x4" Post (6"x6" posts required for decks more than 4 feet above grade)**
- **Sonotube, refer to plans for sizes**

**Sonotube Sizes**

<table>
<thead>
<tr>
<th>Diameter</th>
<th>*Weight</th>
</tr>
</thead>
<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 joist length each side of post x half beam length each side of post) x 40 lbs/SF

**Stair Detail**

- **4 x 4 Guard Post Flush to Bottom of Floor Joist**
- **Min. 2 x 10 Stair Stringer**
- **3 - 2" Screws Countersunk**
- **Minimum 3 1/2" Effective and 9 1/4" Overall Depth**

**Stair Dimensions**

<table>
<thead>
<tr>
<th>Type</th>
<th>Max.</th>
<th>Min.</th>
</tr>
</thead>
<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.*

**max 1" nosing**
Residential Building Permit Process

This permit process is for miscellaneous permits for houses including but not limited to:
- Accessory structure
- Solar Panels
- Plumbing Permits
- Load bearing wall removals
- Duplex conversions
- Interior finish
- Additions
- Decks
- Carports

START

Does my project require a building permit?
Visit Kitchener.ca/building

YES

Submit complete building permit application & drawings
Visit Kitchener.ca/building or apply in person

Permit Fees collected ***

Permit will be reviewed by the plans examiner (initial review 10 business day max.)

APPROVED

Permit Issued ***
Book Pre-Construction Meeting (Optional)*
Start Construction
Schedule required Inspections*

YES

Are you making design changes?
Contact your building inspector

YES

Required to provide revised drawings to be reviewed by the plans examiner?
(Additional Fees apply)

FINISH

NOT APPROVED

Receive a status letter listing building code and applicable law deficiencies

Rebate mailed to payer (If applicable)
Final Clearance Letter sent to applicant
Final Building Inspection Passed
Construction continues

NOTES

* See building permit for applicable inspections. To request a building inspection call (519)741-2761 or login to your online account.

** Ensure compliance with all applicable laws and/or by-laws.

*** Fees may be collected at permit issuance if applied for online.

City of Kitchener
Building Division
200 King St W. 5th Floor
Kitchener ON N2G 4G7