



City of Lakewood
Department of Housing
and Building

City of Lakewood, Ohio
12650 Detroit Ave.
Lakewood, OH 44107
(216) 529-6270
building.permits@lakewoodoh.gov

Requirements for Deck Submittals

- Application for Plan Review: see attached
- Application for Permit: see attached
- Waiting period for plan review may be up to 30 days
- Local zoning codes are applicable
- If your project is visible from the right of way (Front Porch) you may need Architectural Board of Review: see attached
- 2019 Residential Code of Ohio can be found here:
<https://codes.iccsafe.org/content/document/1411>
- Prescriptive Residential Wood Deck Construction Guide Based on the 2015 IRC (2019 RCO) from the American Wood Council is a good reference publication and can be found at: <https://www.awc.org/pdf/codes-standards/publications/dca/AWC-dca62015-DeckGuide-1804.pdf>

When do I need to call for inspections?

- When post holes are dug and before setting posts (42" min. depth, 36" top of footer).
- When framing is complete, if it will not be visible at completion, inspection is required before flooring or decking is installed.
- When rough-in of any electrical work is completed
- When the deck is finished
- It is the contractor's or homeowner's responsibility to call the Division of Housing & Building for inspections

Plan Submittal Examples

The applicant will need to provide a site plan and deck plan with all required information. The site plan and deck plan attached are intended to show the type of information and format recommended.

The detail sheets attached in this packet are strictly for informational purposes only. The sheets show code compliant connection, and framing methods, and other industry standards in accordance with the 2019 Residential Code of Ohio.

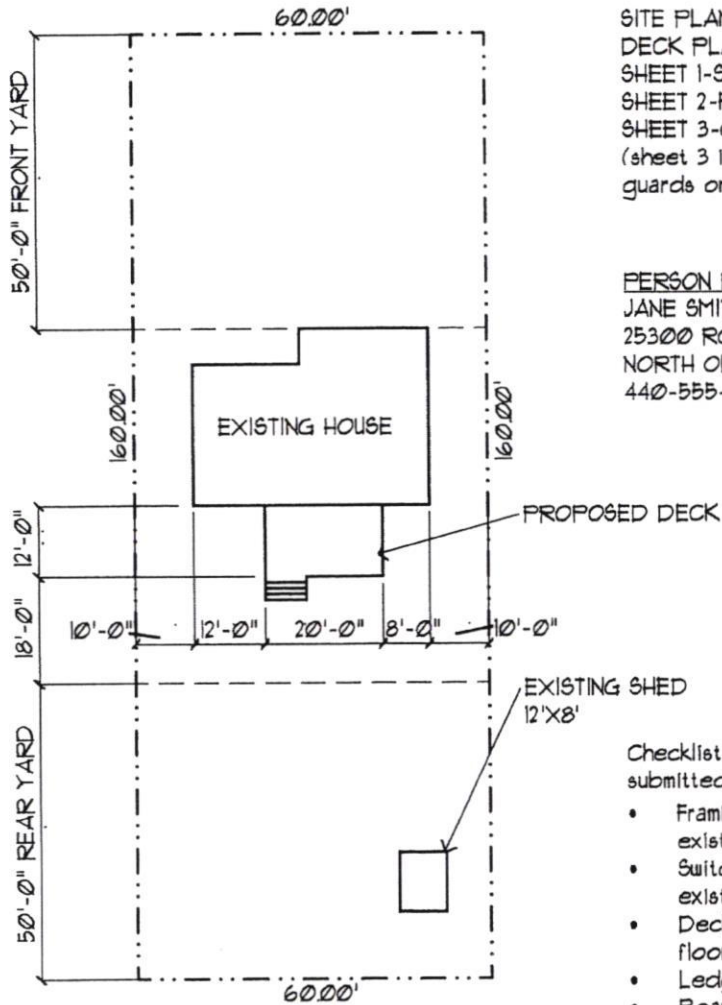
DECK FOR THE JOHNSON RESIDENCE

24201 STREET NAME
NORTH OLMSTED, OHIO 44070

INDEX OF DRAWINGS

SITE PLAN
DECK PLAN
SHEET 1-STAIRS, DETAILS, BRACING
SHEET 2-FOOTING, BEAM, LEDGER
SHEET 3-GUARDS, HANDRAILS
(sheet 3 is not required if there are no
guards or handrails.)

PERSON RESPONSIBLE FOR PLAN PREPARATION
JANE SMITH
25300 ROAD NAME
NORTH OLMSTED, OHIO 44070
440-555-1234

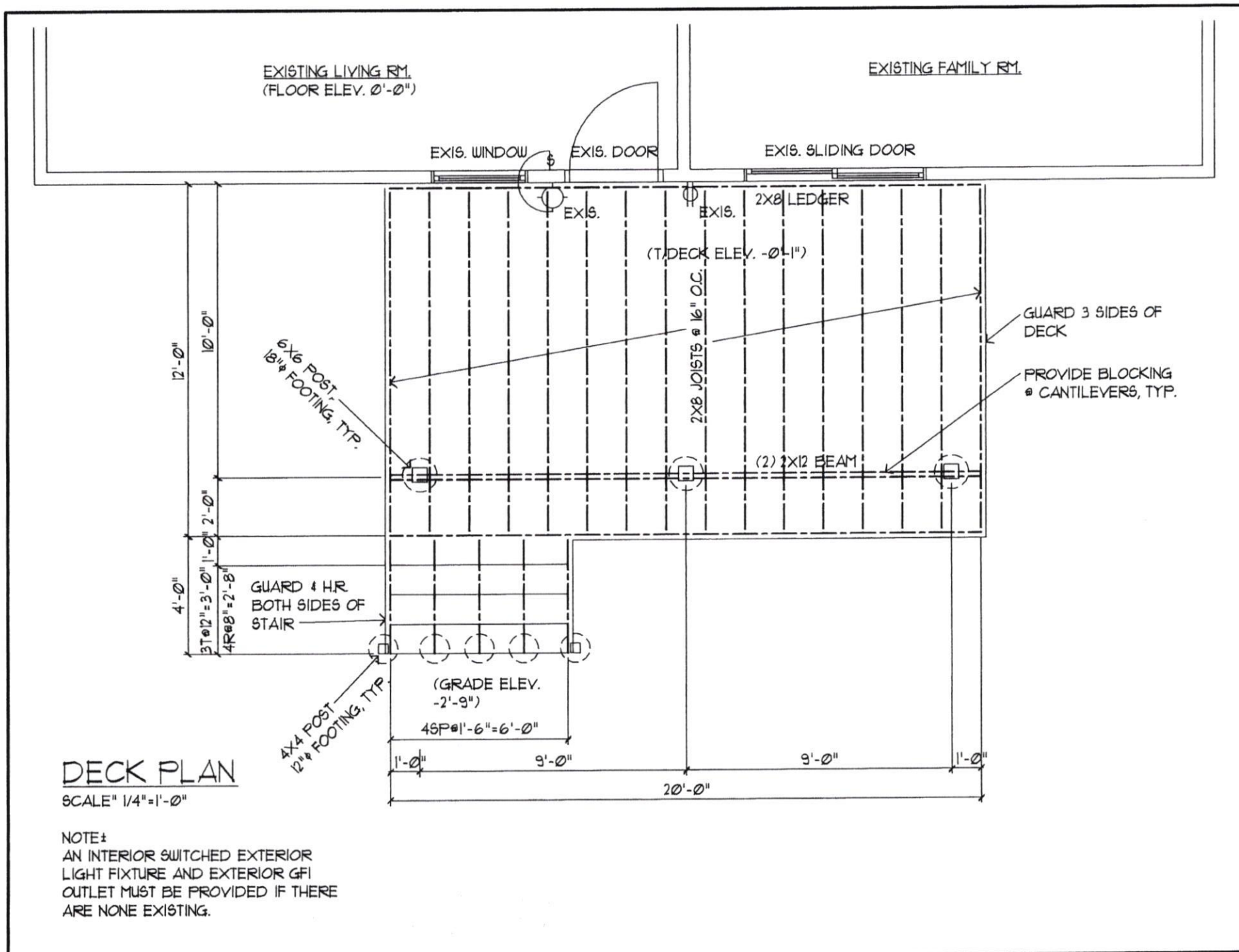


SITE PLAN

SCALE: 1"=30'

Checklist of items usually required when a deck plan is submitted:

- Framing plan, to scale NLT $\frac{1}{4}"=1'-0"$ w/ portion of existing house with doors, windows, adjacent rooms.
- Switched light fixture and exterior outlet. Note if existing or new.
- Deck and grade elevations (below the adjacent floor line).
- Ledger, joist sizes and spacing.
- Beam/girder sizes.
- Footing sizes, including footings for the stairs.
- Column/post sizes.
- Locations of guards and handrails. Note: guards are N/R for decks less than 30' above grade and handrails are N/R for stairs with fewer than 4 risers.
- Dimensions in both major directions (top to bottom and left to right) showing overall and post locations, stair riser and tread dimensions.
- Site plan to scale NLT 1"=30' showing all buildings and the deck dimensioned to lot lines.
- All details: footing to column, column to beam, beam to joists, ledger, stairs, handrails, guards.



DECK PLAN

SCALE" 1/4"=1'-0"

NOTE±
AN INTERIOR SWITCHED EXTERIOR LIGHT FIXTURE AND EXTERIOR GFI OUTLET MUST BE PROVIDED IF THERE ARE NONE EXISTING.

Figure 27. Tread and Riser Detail.

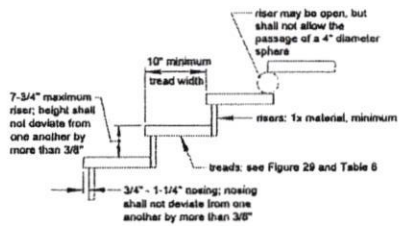


Figure 29. Tread Connection Requirements.

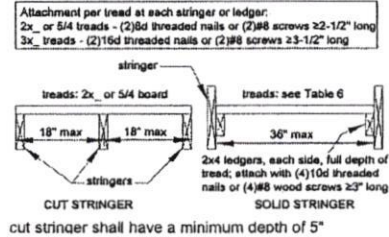


Figure 31. Stair Stringer Attachment Detail.

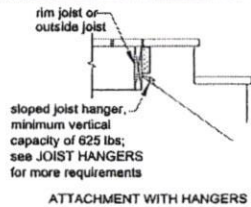
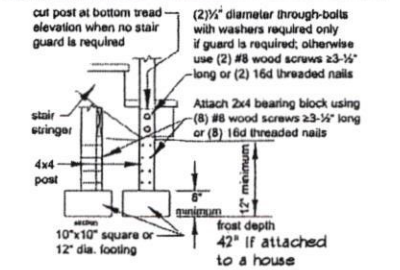


Figure 34. Stair Footing Detail.



Even if there is no guard at the stair, all stringers shall bear on a footing and post anchor.

Figure 4. Beam Assembly Details.

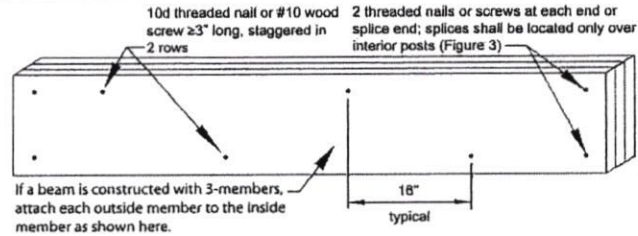


Figure 11. Rim Joist Connection Details.

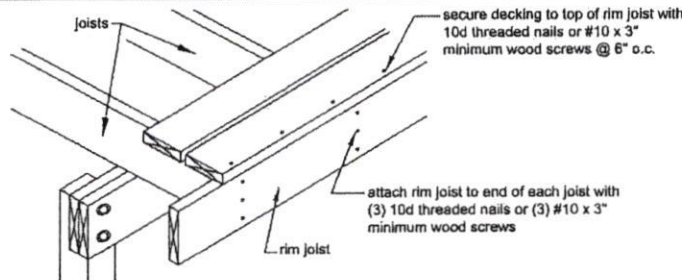


TABLE 507.3.1
MINIMUM FOOTING SIZE FOR DECKS

LIVE OR GROUND SNOW LOAD* (psf)	TRIBUTARY AREA (sq. ft.)	LOAD BEARING VALUE OF SOILS** (psf)								
		1500*			2000*			2500*		
		Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)
40	20	12	14	6	12	14	6	12	14	6
	40	14	16	6	12	14	6	12	14	6
	60	17	19	6	15	17	6	13	15	6
	80	20	22	7	17	19	6	15	17	6
	100	22	25	8	19	21	6	17	19	6
	120	24	27	9	21	23	7	19	21	6
	140	26	29	10	22	25	8	20	23	7
	160	28	31	11	24	27	9	21	24	8

NOTES:

- See Prescriptive Residential Wood Deck Construction Guide for more information.
- All lumber shall be #2 or better pressure preservative treated, rated for ground contact as required.
- Fasteners shall be 1/2 inch diameter bolts w/ washers or equivalent. Penetrate band joists 1/2 inch min.
- Fasteners shall be hot dipped galvanized or stainless steel. See RCO 507.12.3.
- Flashing shall be non-aluminum, #19 corrosion resistant metal or approved non-metal material.
- Decking shall be 2 inch nominal lumber or span rated decking.
- Ledgers shall be 2x8, min.
- Pre-engineered guards, handrails, deck and metal connectors shall be installed in accordance with the manufacturer's recommendations.
- Guards are required at any deck area 30 inches or more above the adjacent grade.
- Handrails are required whenever there are 4 or more risers.
- All risers shall be solid.

Table 6. Minimum Tread Size for Cut and Solid Stringers.¹

Species	Cut Stringer	Solid Stringer
Southern Pine	2x4 or 5/4	2x8
Douglas Fir Larch, Hem-Fir, SPF ²	2x4 or 5/4	2x8 or 3x4
Redwood, Western Cedars, Ponderosa Pine, ³ Red Pine ³	2x4 or 5/4	2x10 or 3x4

- Assumes 300 lb concentrated load, L/288 deflection limit, No. 2 stress grade, and wet service conditions.
- Incising assumed for Douglas fir-larch, hem-fir, and spruce-pine-fir.
- Design values based on northern species with no incising assumed.

Figure 10. Diagonal Bracing.

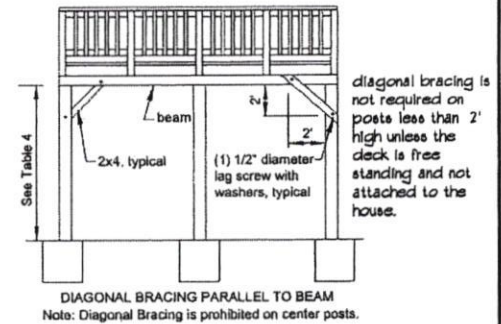


Figure 21. Non-Ledger Deck - For Resisting Vertical Loads.

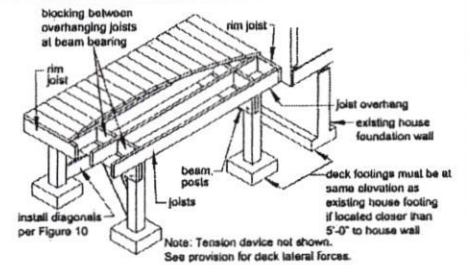


Figure 18. No Attachment to House Overhang with Ledger.



Figure 8A. Post-to-Beam Attachment Requirements.

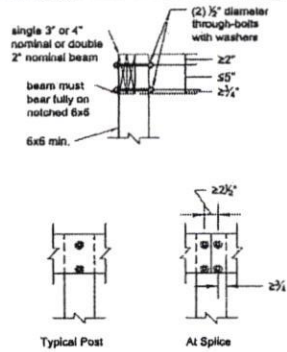


Figure 8B. Alternate Approved Post-to-Beam Post Cap Attachment.

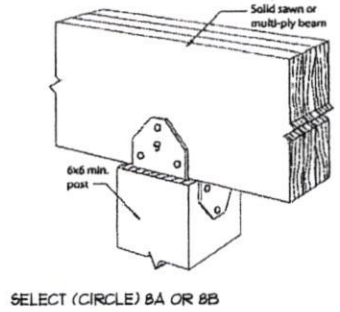
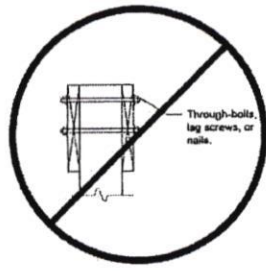


Figure 9. Prohibited Post-to-Beam Attachment Condition.



Note: Support of beams w/ fasteners only is prohibited. Beaming is required. See Figure 8A.

Figure 6. Joist-to-Beam Detail. SELECT (CIRCLE) ONE

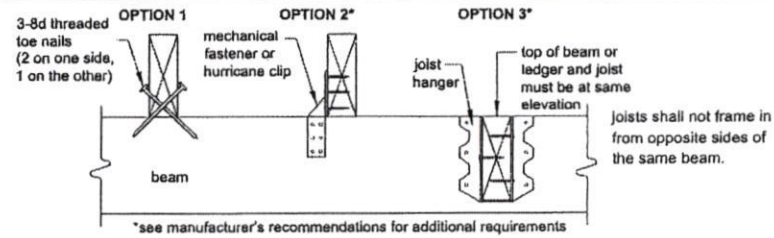


Figure 12. Typical Footing Options. SELECT (CIRCLE) ONE

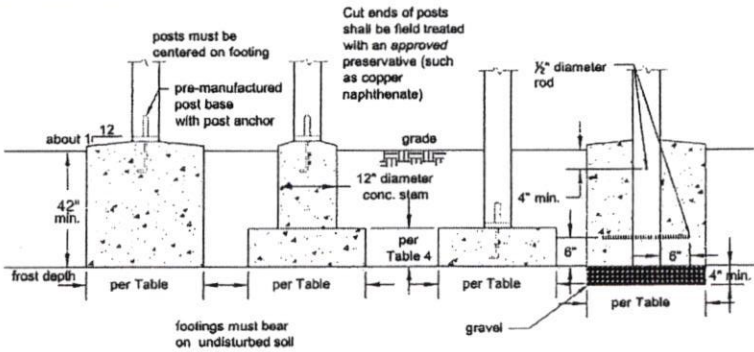


Figure 17. No Attachment to or Through Exterior Veneers (Brick, Masonry, Stone).

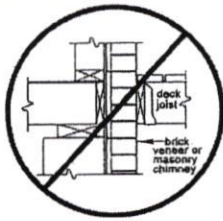


Table 5. Fastener Spacing for a Southern Pine, Douglas Fir-Larch, or Hem-Fir Deck Ledger or Band or Rim Joist and a 2-inch Nominal Solid-Sawn Spruce-Pine-Fir Band Joist or EWP Rim Joist.^{3,4,5,6,8} (Deck Live Load = 40 psf, Deck Dead Load = 10 psf)

Joist Span	Rim Joist or Band Joist	6'-0" and less	6'-1" to 8'-0"	8'-1" to 10'-0"	10'-1" to 12'-0"	12'-1" to 14'-0"	14'-1" to 16'-0"	16'-1" to 18'-0"	
Connection Details		On-Center Spacing of Fasteners							
$\frac{1}{2}$ " diameter lag screw ¹ with $\frac{15}{32}$ " maximum sheathing	1" EWP	24"	18"	14"	12"	10"	9"	8"	
	1- $\frac{1}{4}$ " EWP Lumber	28"	21"	16"	14"	12"	10"	9"	
$\frac{1}{2}$ " diameter bolt with $\frac{15}{32}$ " maximum sheathing	1" EWP	24"	18"	14"	12"	10"	9"	8"	
	1- $\frac{1}{4}$ " EWP Lumber	28"	21"	16"	14"	12"	10"	9"	
$\frac{1}{2}$ " diameter bolt with $\frac{15}{32}$ " maximum sheathing and $\frac{1}{2}$ " stacked washers ^{7,9}	1- $\frac{1}{4}$ " Lumber	36"	36"	29"	24"	21"	18"	16"	

Figure 14. General Attachment of Ledger Board to Band Joist or Rim Joist.

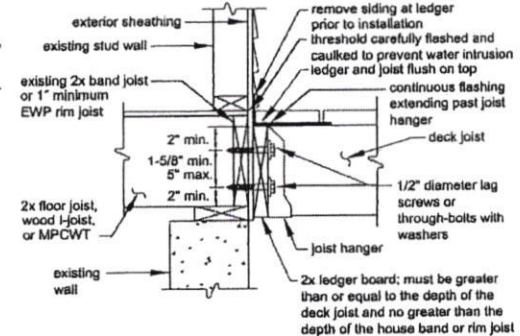


Figure 19. Ledger Board Fastener Spacing and Clearances.

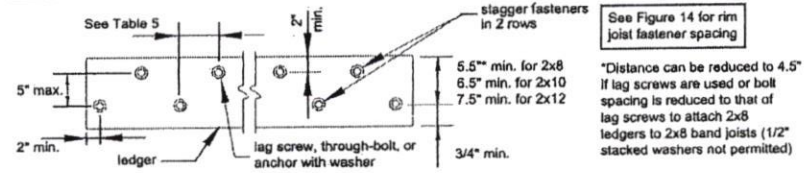


Figure 24. Example Guard Detail.

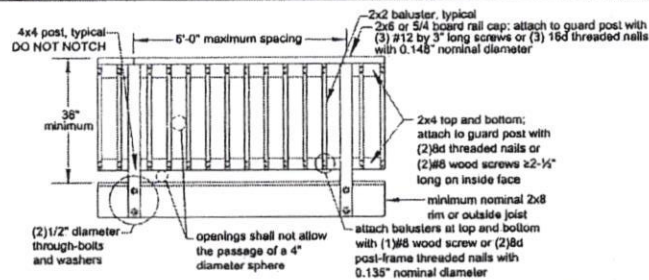


Figure 25. Guard Post to Outside-Joist Example.

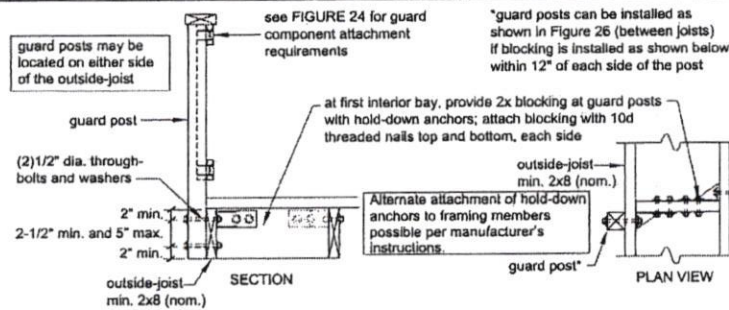


Figure 26. Guard Post to Rim Joist Example.

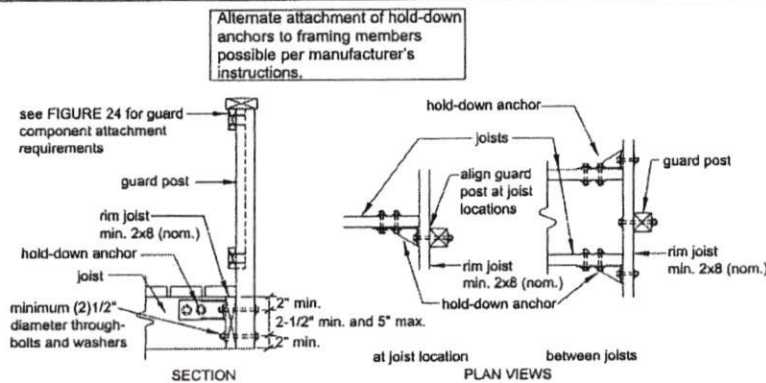


Figure 30. Stair Guard Requirements.

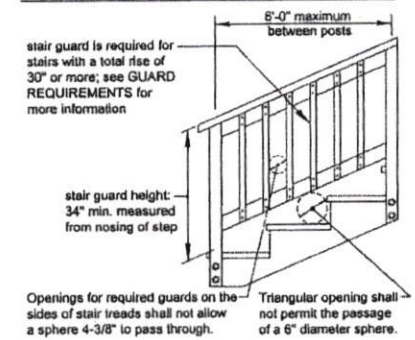


Figure 32A. Handrail Mounting Examples.

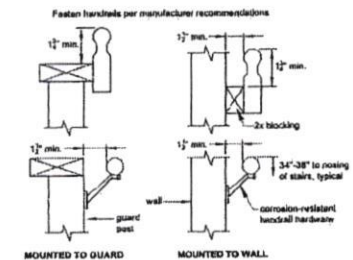
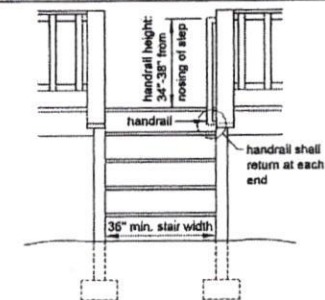


Figure 33. Miscellaneous Stair Requirements.





City of Lakewood
Department of Housing
and Building

Case #:

Building Permit Application

12650 DETROIT AVENUE • LAKEWOOD, OH 44107 • (216) 529-6270 • Fax: (216) 529-5930

building.permits@lakewoodoh.gov

PROJECT ADDRESS:

Suite/Unit #

or **PERMANENT PARCEL NUMBER:**

PROPERTY CLASSIFICATION:

1, 2 or 3 Family

OR

Commercial (includes multifamily and condominiums)

Who is performing the work?

Homeowner

OR

Contractor

PERMIT TYPE:

Building

*Plumbing

*Mechanical

*Electrical

*(complete reverse side)



SCOPE OF PERMIT (Check all that apply):

New Primary Structure	Addition	Alteration	Repair	Equip. Replacement	Commercial Sign
Tent or Temporary	Rear Deck	Shed	Pool/Hot Tub	Water Controlling	Waterproofing
Commercial Hood	Fire Suppression		Fire Alarm	Storm Sewer	Refrigeration
Demolition	Paving	Drain	No Drain	Fence __ New or __ Existing	

Other (Please specify): _____

Generator

Manufacturer _____

Model _____

No. of BTU's _____

***VALUATION: (cost of the work) \$**

***PROJECT SIZE: (in square feet)**

BRIEF DESCRIPTION OF WORK: (Include scope, dimension, location)

DRAIN IN WORKSPACE (NEW REPLACEMENT EXISTING)

PROPERTY OWNER NAME:

*Phone:

Business Name (if applicable)

*Email:

Mailing Address:

City:

State:

Zip:

CONTRACTOR CO. NAME:

*Phone:

CONTRACTOR NAME:

*Email:

Mailing Address:

City:

State:

Zip:

ARCHITECT/ENGINEER:

Phone:

Mailing Address:

City:

State:

Zip:

I hereby certify all information contained in this application is true, accurate and complete to the best of my knowledge. Furthermore, I am the property owner of record; or an authorized representative of the contractor registered with the city of Lakewood listed above and authorized by the property owner to perform the work described. I am primarily responsible for the work described and agree to abide by the applicable provisions of law and building codes adopted by the state of Ohio and the City of Lakewood. All subcontractors working under my direction shall be registered with the City of Lakewood. Perpetuation of fraud or misrepresentation including contractors or property owners obtaining permits on behalf of an unregistered contractor is a violation of LCO §1306.69 and punishable by fines, jail time and revocation of contractor registration.

Anticipated Completion Date: _____

SIGNATURE OF CONTRACTOR / OWNER

DATE