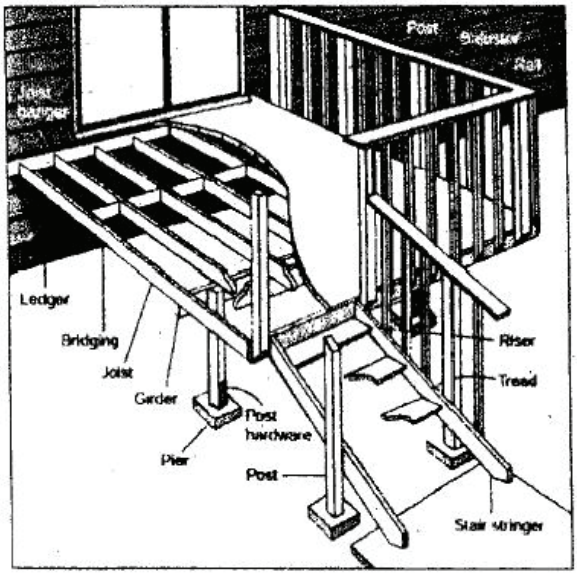
Building & Zoning Department
109 W. Bangs Street, Wauconda, IL 60084
Phone (847) 526-9609 ~ Fax (847) 526-8967
E-mail: BZ@wauconda-il.gov

Deck Permit Requirements

- **All deck permits require submittal of: (provide 3 copies)**
  - **Plat of Survey marking the placement and size of the structure to scale.**
  - **Detailed plans with a material list.**
  - **Mark any electric or plumbing on plans.**
- **Minimum setback requirements are determined by the property zoning code. Single-family homes in R1, R2, & R3 zoning have a minimum rear setback of 25 ft.**
- **All deck plans must be reviewed by Village of Wauconda staff. The review fee is based on project complexity.**
- **A permit is issued after verification of zoning code compliance and plan review.**

For building code details refer to:
2003 International Residential Code

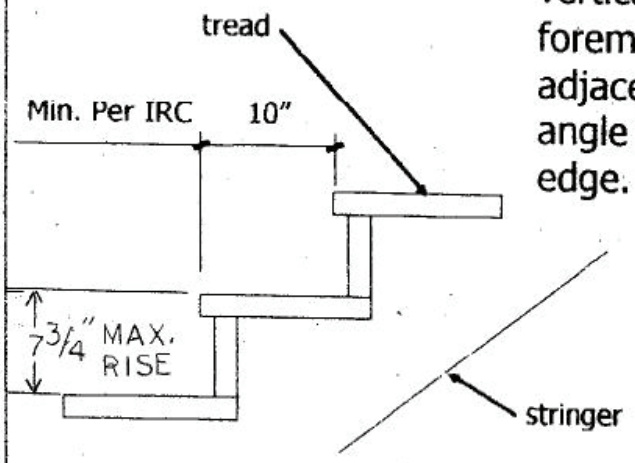
Terminology

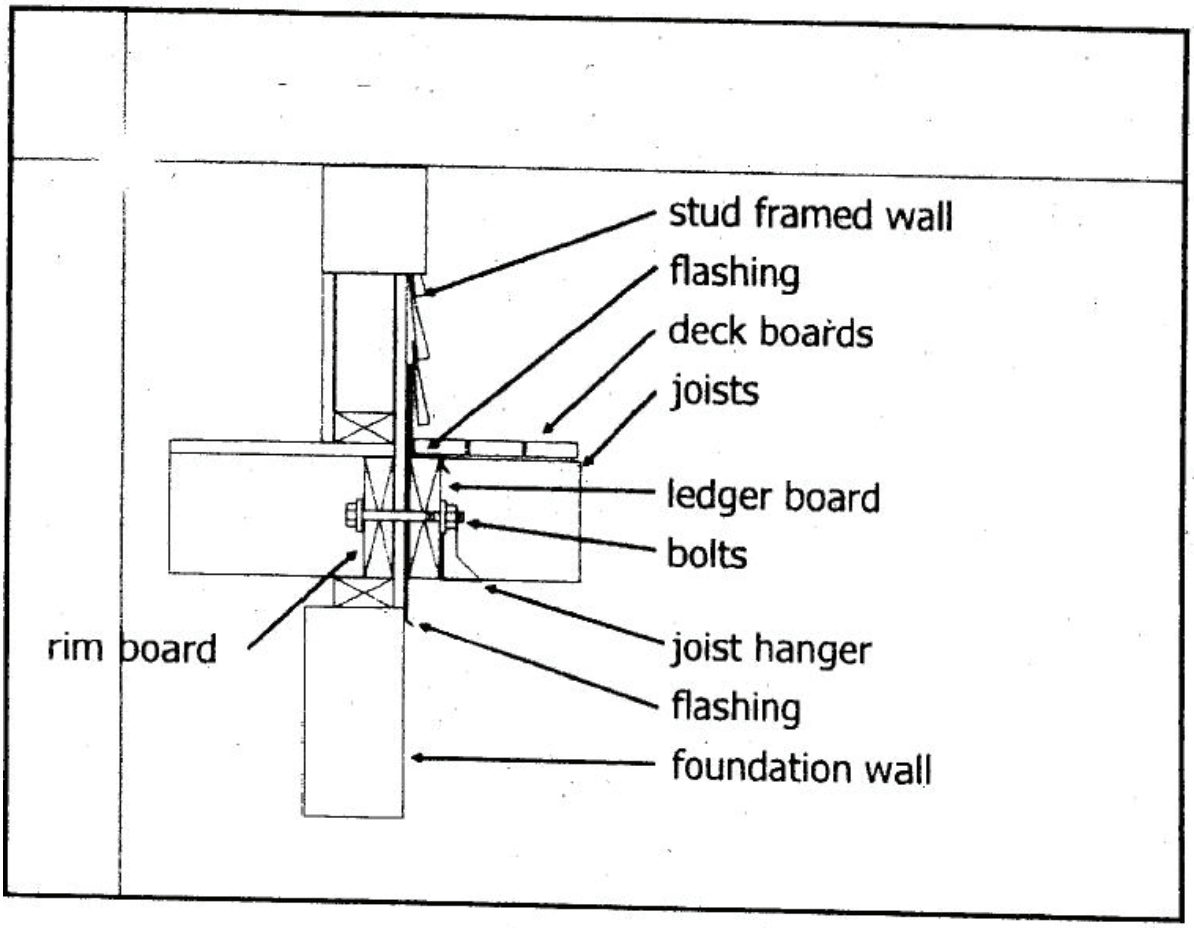


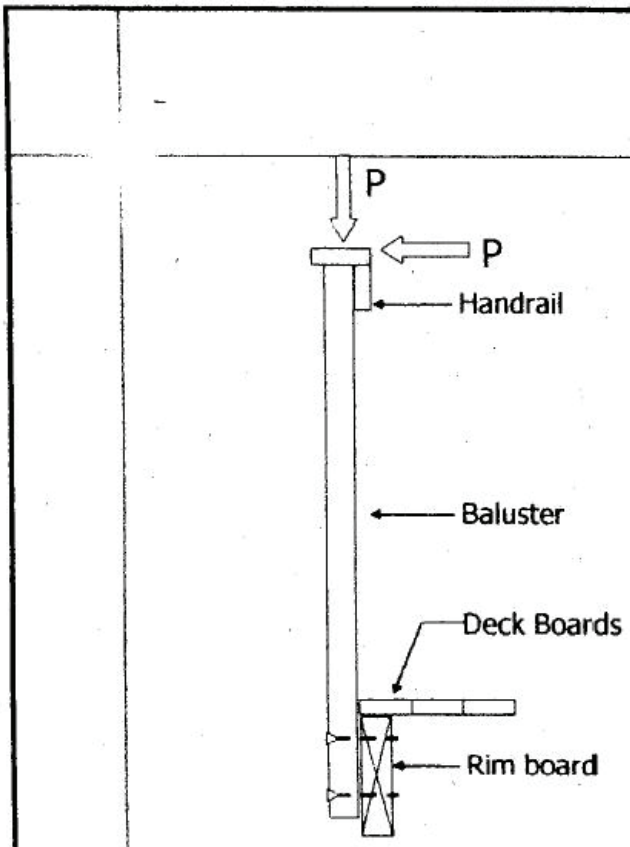
Typical Deck Components

footings	decking
columns	posts
ledger	balusters
header	railing
joists	guard rail
blocking	stringer
	stair treads

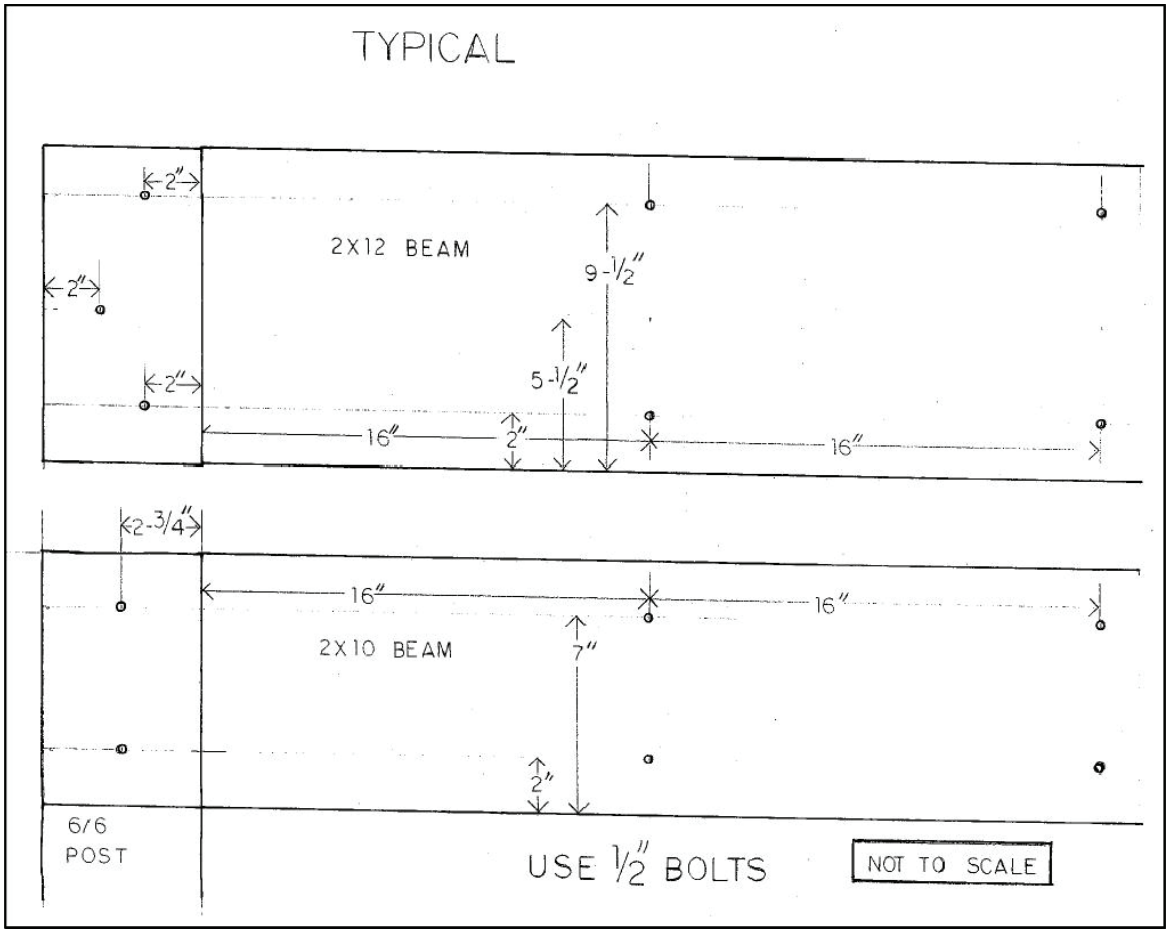
The minimum tread depth shall be 10" measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge.

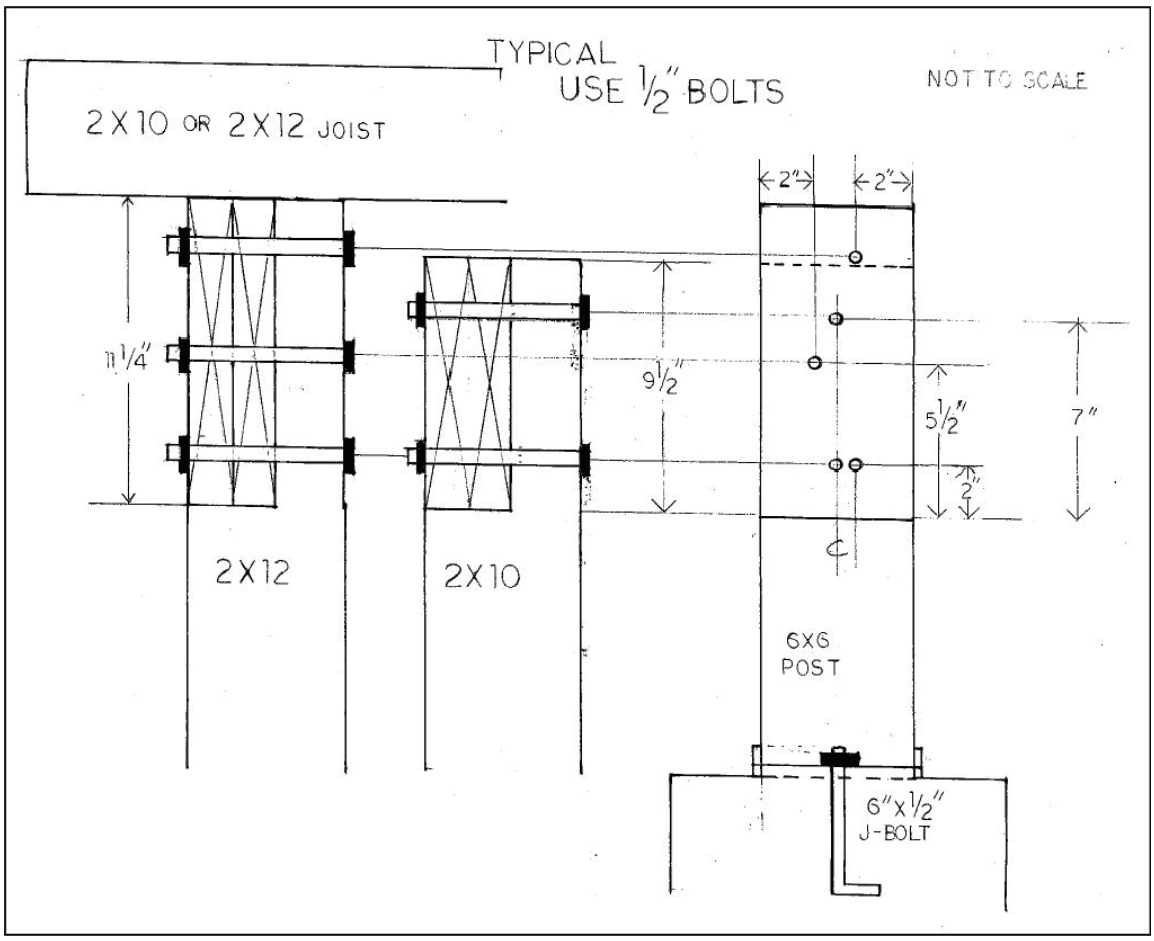


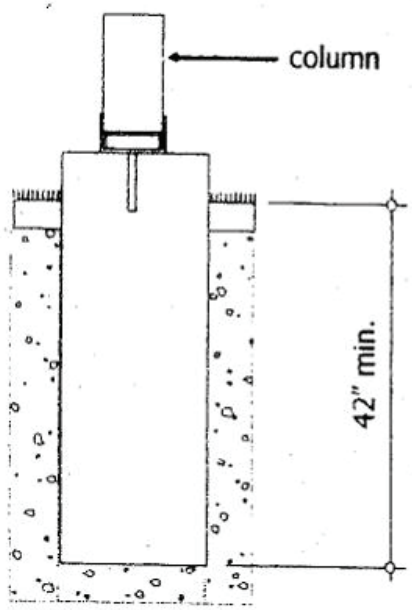




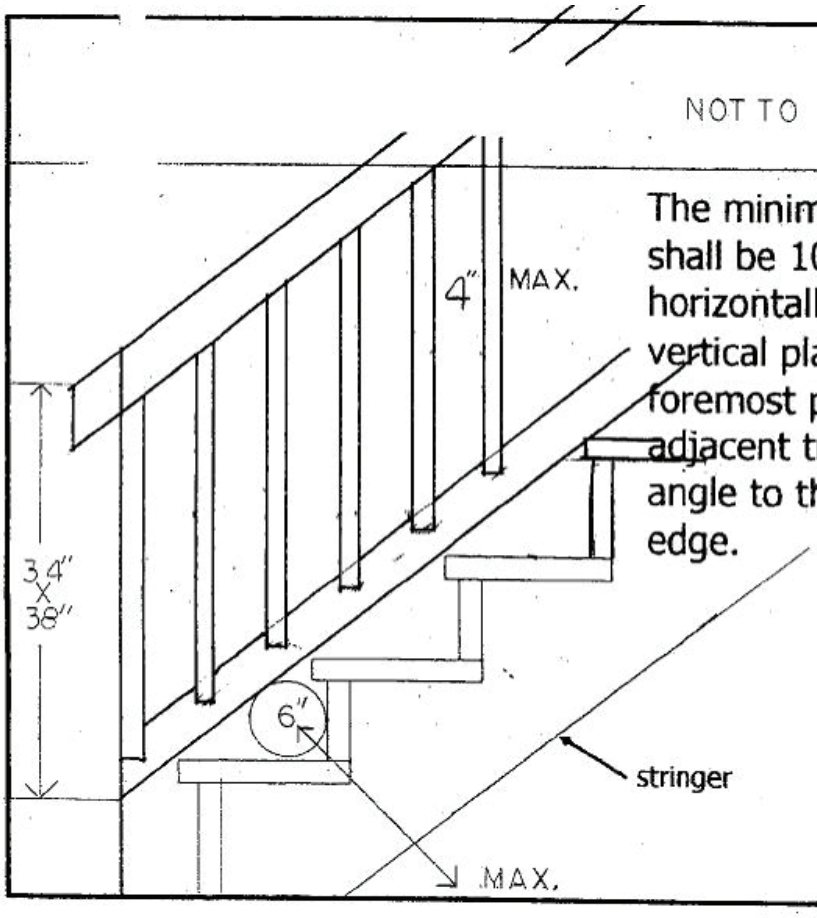
Handrail assemblies and guards shall be capable of resisting a single concentrated load of 200 pounds applied in any direction at any point along the top, and have attachment devices and supporting structure to transfer this loading to appropriate structural elements of the building. This load need not be assumed to act concurrently with linear loads specified in R316.1.2.


TYPICAL
2X12 BEAM
2"
2"
2"
9-1/2"
5-1/2"
16"
2"
16"
2-3/4"
16"
16"
2X10 BEAM
7"
2"
6/6
POST
USE 1/2" BOLTS
NOT TO SCALE

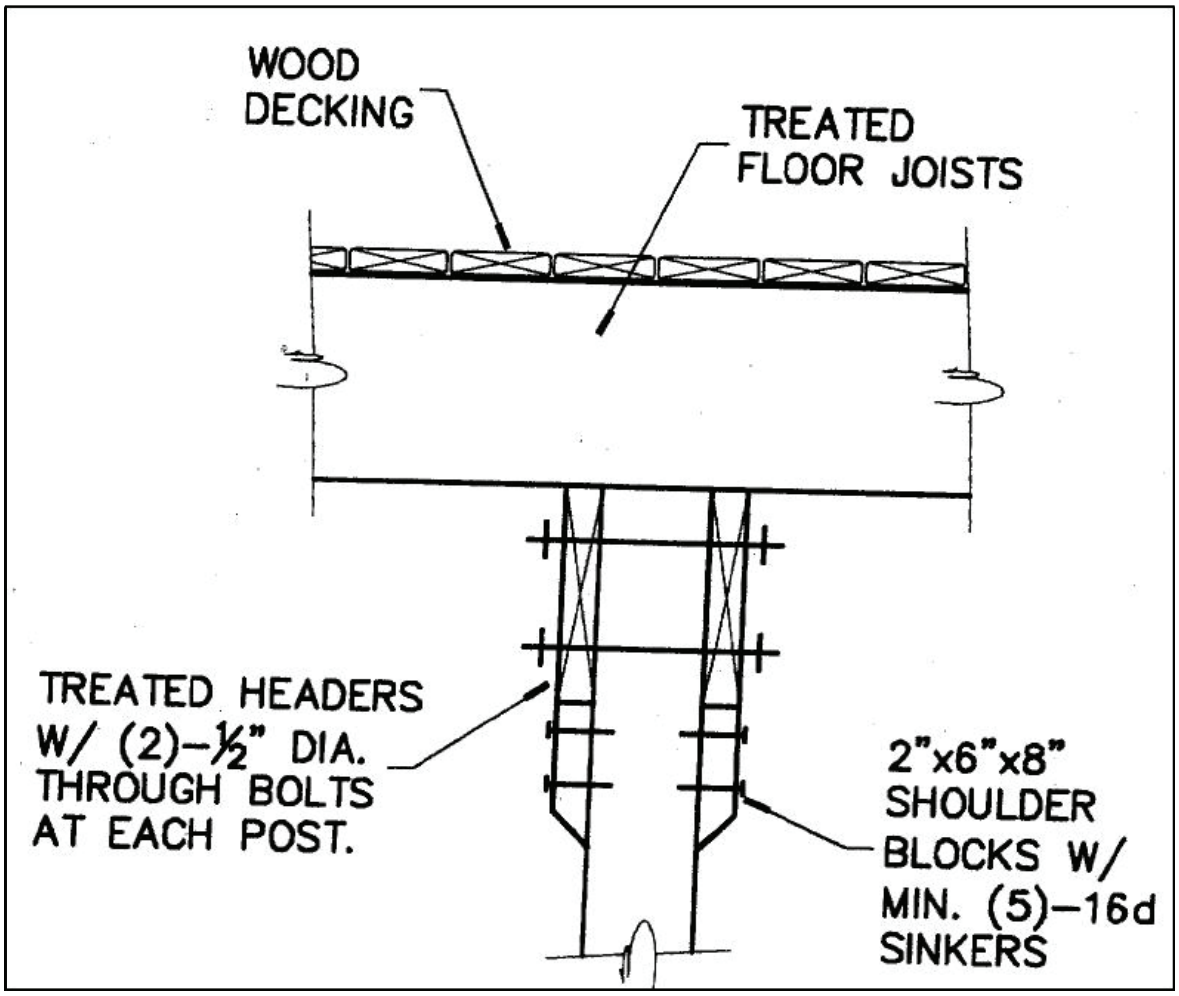

TYPICAL
USE 1/2" BOLTS
NOT TO SCALE
2X10 OR 2X12 JOIST
2"
2"
11 1/4"
9 1/2"
5 1/2"
7"
2"
2X12
2X10
6X6
POST
6"x1/2"
J-BOLT

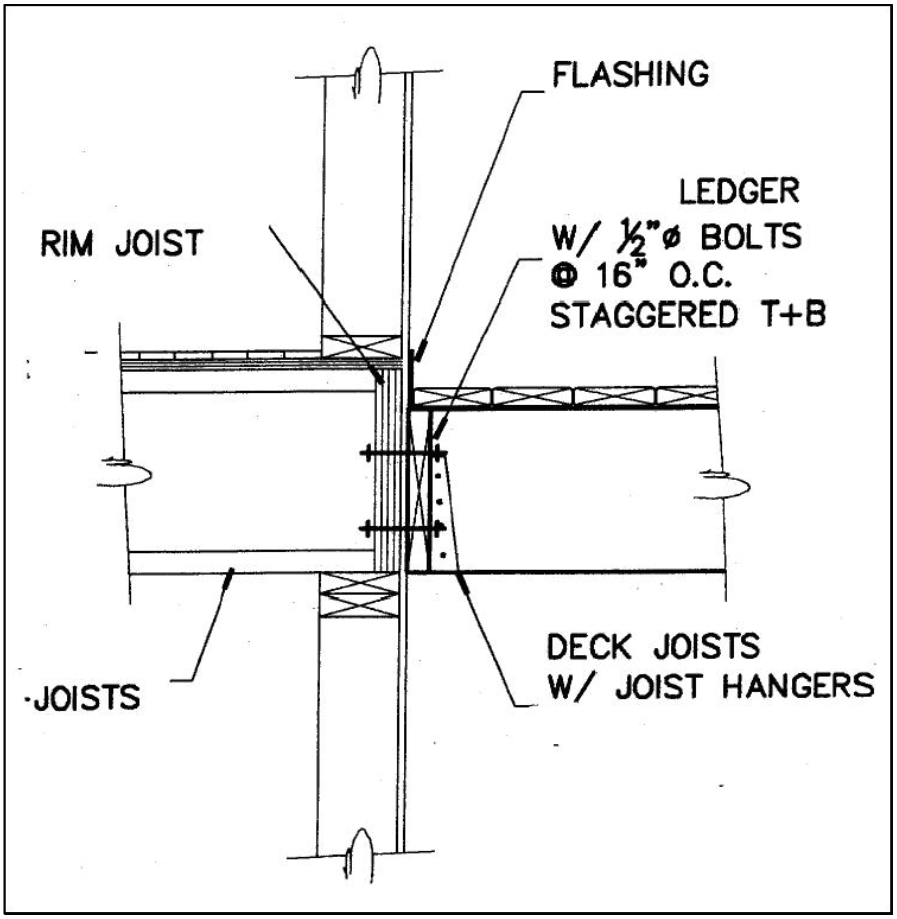


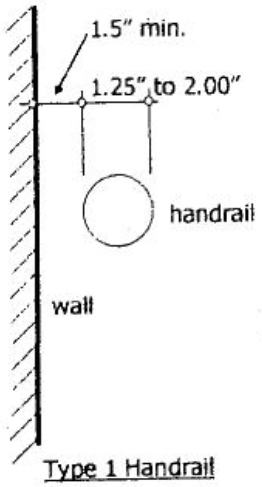
Foundation walls, piers and other permanent supports of buildings and structures shall be extended to a minimum 42" below grade.



The minimum tread depth shall be 10" measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge.


WOOD DECKING
TREATED FLOOR JOISTS
TREATED HEADERS W/ (2)–½" DIA. THROUGH BOLTS AT EACH POST.
2"x6"x8" SHOULDER BLOCKS W/ MIN. (5)–16d SINKERS

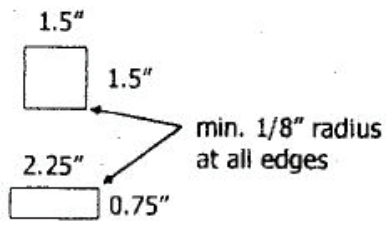

FLASHING
LEDGER W/ ½"ø BOLTS @ 16" O.C. STAGGERED T+B
RIM JOIST
JOISTS
DECK JOISTS W/ JOIST HANGERS



Type 1 Handrail

All required handrails shall be graspable

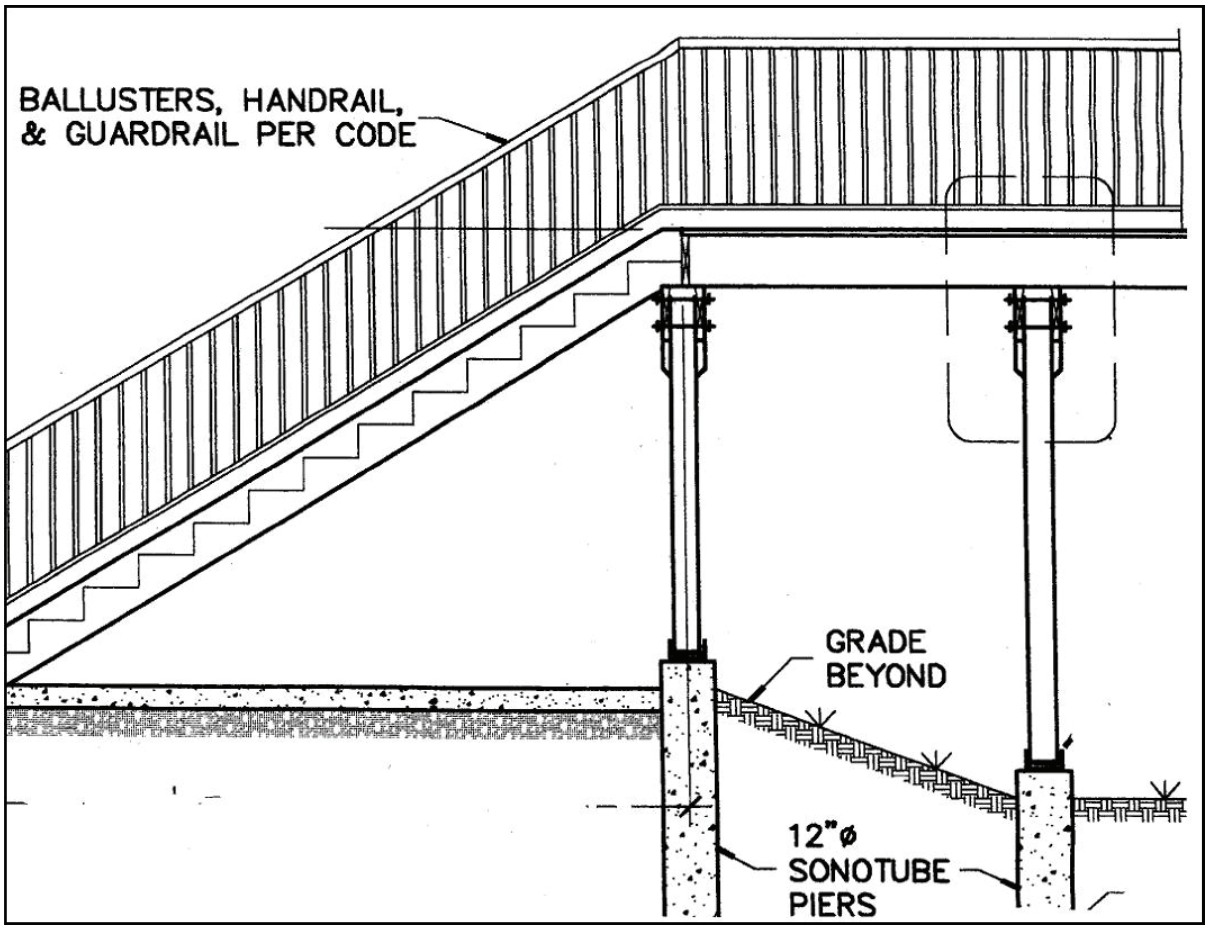
Handrails with a circular cross section shall have an outside diameter of at least 1 ¼ inches and not greater than 2 inches.



Acceptable Type 1 Handrails

All required handrails shall be graspable

If the handrail is not circular it shall have a perimeter dimension of at least 4 inches and not greater than 6 ¼ inches with a maximum cross section of 2 ¼ inches.



Village of Wauconda Building, Zoning, & Planning Department

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Guidelines for Residential Decks

PLAN SUBMITTAL REQUIREMENTS (DRAWING REQUIREMENTS) *Submit 2 Copies

- ❑ Indicate proposed deck location on a copy of the Plat of Survey showing overall size and distances from the lot lines, main building, and setback distances.
- ❑ Show pier location, depth (at least 42" below grade), diameter, and dimensions from pier to pier.
- ❑ Show size, spacing, and spans of all posts, beams, joists, decking and show connection details.
- ❑ Show the height of the deck above the final grade and the height of the guardrails above the deck.

REQUIRED INSPECTIONS

- All inspections require a minimum 24 hour advance notice
- Contact JULIE before you dig, dial 811 or 1-800-892-0123
- Post Hole Inspection (Prior to pouring concrete)
- Rough Framing (Prior to installing any decking- when deck is less than 48" above grade)
- Final Framing (When job is complete)

LOCATION

- Decks located in a floodplain shall comply with the Watershed Development Ordinance (Chapter 153).
- Decks attached to principal structures shall be subject to applicable setbacks from lot lines.

GENERAL (IRC 319)

- Pressure treated or decay resistant lumber is required.
- Rust resistant hardware shall be used.
- Weed barriers are required under decks that are less than 48" above the ground with not less than 2" of gravel placed on top of weed barrier for securing

STAIRS (IRC 311.5)

- Minimum width is 36".
- Minimum of 3 stair stringers are required for a 36" wide stairway or a maximum of 18" o.c. [AFPA*]
- Maximum riser height is 7 ¾".
- Minimum tread depth is 10" plus a ¾ to 1 ¼" Nosing.

HANDRAILS (IRC 311.5)

- Handrail required on one side of steps where there are two or more risers.
- Handrail cross section is 1 ¼" to 2 5/8".
- Handrail shall be 34" to 38" above the nosing.
- See Figures A & B for specific handrail sizing & spacing

GUARDRAILS (IRC RB12)

- Required where the deck is more than 30" above grade.
- Guardrail spindles shall be spaced such that there is less than a 4" space between spindles.
- The triangular openings formed by the tread and riser of the stairs and the lower chord of the guardrail shall not allow the passage of a six-inch (6") sphere.
- The height of the guardrails shall be at least 36".
- Along the open sides of stairways that are thirty inches (30") or more in height, guardrails shall be at least 34" in height measured vertically from the nosing of the tread.

PIERS and COLUMNS (POSTS)

- Minimum pier 10" diameter, 42" minimum depth
- Minimum column/post 4"x4"; 6"x6" column/post are recommended for post heights of 8' or greater.

JOIST SPAN INFORMATION

- Joist Span Capabilities for #2 Southern Yellow Pine (Treated) at 16” o.c. [IRC Table 502.3.1(2)]
  - 2x6 = 9’9”
  - 2x8 = 12’10”
  - 2x10 = 16’1”
  - 2x12 = 18’10”
- Joist Span Capabilities with a 25% Cantilever for #2 Southern Yellow Pine (Treated) at 16” o.c. F&PA*]
  - 2x6 = N.A.
  - 2x8 = 10’9”
  - 2x10 = 15’6”
  - 2x12 = 18’0”

BEAM SUPPORT / SPAN INFORMATION

Beam Support Spacing								
Beam Size	**Joist Span>**	Up to 6'	Up to 8'	Up to 10'	Up to 12'	Up to 14'	Up to 16'	Up to 18'
2- 2X6	SYP	**7’-1”**	**6’-2”**	**5’-6”**	**5’-0”**	**4’-8”**	**4’-4”**	**4’-1”**
2- 2X8	SYP	**9’-2”**	**7’-11”**	**7’-1”**	**6’-6”**	**6’-0”**	**5’-7”**	**5’-3”**
2- 2X10	SYP	**11’-10”**	**10’-3”**	**9’-2”**	**8’-5”**	**7’-9”**	**7’-3”**	**6’-10”**
2- 2X12	SYP	**13’-11”**	**12’-0”**	**10’-9”**	**9’-10”**	**9’-1”**	**8’-6”**	**8’-0”**
3- 2X6	SYP	**8’-7”**	**7’-8”**	**6’-11”**	**6’-3”**	**5’-10”**	**5’-5”**	**5’-2”**
3- 2X8	SYP	**11’-4”**	**9’-11”**	**8’-11”**	**8’-1”**	**7’-6”**	**7’-0”**	**6’-7”**
3- 2X10	SYP	**14’-4”**	**12’-10”**	**11’-6”**	**10’-6”**	**9’-9”**	**9’-1”**	**8’-7”**
3- 2X12	SYP	**17’-5”**	**15’-1”**	**13’-6”**	**12’-4”**	**11’-5”**	**10’-8”**	**10’-1”**

- Beam Spans Above Assume Joists From One Side Only (Spanning From House To Beam)
- Supporting Joists From Both Sides, Double The ‘**Joist Span**’ Distance Above
- SYP = #2 Southern Yellow Pine

JOIST CONNECTIONS (IRC R502)

- Joists sitting on bearing points shall have hurricane clips or rafter ties holding the joist down.
- Joists connected to the face of other joists/beams/ledgers are required to utilize joist hangers.

LEDGER BOARD ATTACHMENT

- Ledger Board shall be a minimum of 2x8 nominal lumber. [AF&PA*]
- Ledger board shall be flashed throughout its length. (Under siding & house wrap, over top of ledger- See Figure ‘C’, Note 6). [IRC R703.8]
- For joist spans up to 18’-0”, ½” lag bolts into 2” nominal Southern Pine Rim/Band Board shall be 16” o.c. staggered high/low, 2” from the edge of the ledger. (See Figure ‘D’ Below) [AF&PA*]
- For joist spans up to 18’-0”, ½” lag bolts into 1” Engineered Wood Product shall be 8” o.c. staggered high/ low, 2” from the edge of the ledger. (See Figure ‘D’ Below) [AF&PA*]

Figure A: Handrail Mounting

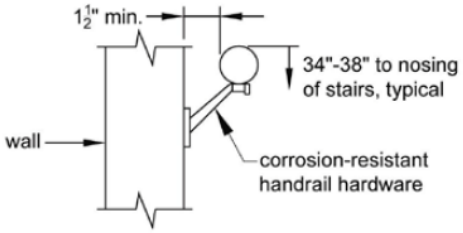

Figure B: Handrail Grip Size

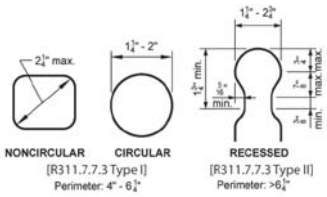

Figure C: Ledger Board

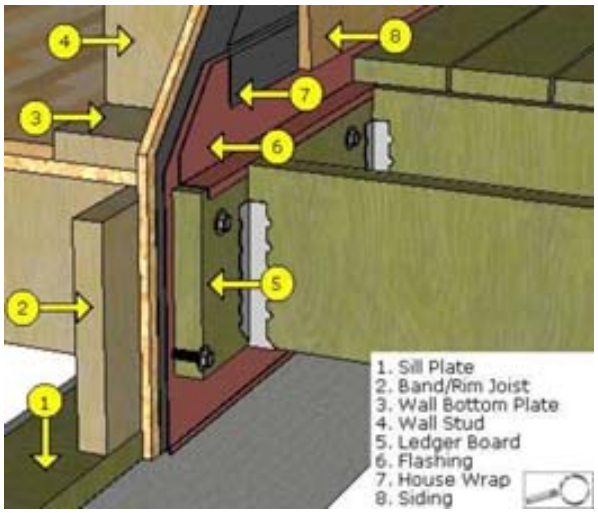
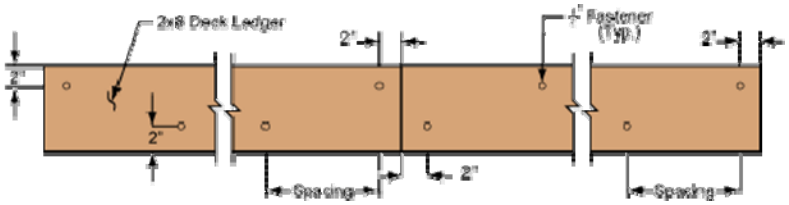
Figure D: Joist Span