11155 ROBINSON DR
COON RAPIDS, MN 55433
(763)767-6476*fax (763)767-6573

RESIDENTIAL DECKS

Building Permits: A permit is **required** if the deck **is attached** to the dwelling, is **30" (or more) off the ground**, or is part of an **accessible route** (handicap ramps, etc.). A building permit application must be completed and submitted to the Inspection Department. It is necessary to allow a minimum of 5 to 10 business days for review of the plans. You will be contacted when the building permit is ready to be issued. Cost of the permit is based upon the size of the deck. With your permit, you will receive a copy of your **approved plan**. Please be aware that if you later decide to make changes to your plan, these **changes must also be approved**.

A **Permit Application Check List** outlining all application requirements is provided at the back of this handout and should be completed and submitted with your application. On the back of this checklist is the **Deck Diagram Profile**. This form must also be completed and submitted with your application.

Setbacks: Decks must be setback **5 feet** from the **side** lot line and **20 feet** from the **rear** lot line **for most dwellings.** However, some lots have more restrictive setbacks and easements. Check with the **City Zoning Department at 763- 767-6430.**

Loads: All decks shall be designed to support a **live load** (people, furniture, grills, etc.) of **40 lbs** per square foot, and a **dead load** (wood, decking, etc.) of **15 lbs** per square foot. R301.4, R301.5

Cantilevers/Overhanging Joists and Beams: **Joists** should **not overhang beams** by more than **2 feet,** and **beams** must **not overhang posts** by more than **1 foot** unless a special design is approved.

Cantilever Attachment: **DECKS CANNOT BE SUPPORTED BY CANTILEVERS** extending from the primary structure, or from another deck. Exceptions are granted only if **proof is provided** of the capability of the cantilevers to give such support.

Ledger Attachment: Different loads require different attachment. Please refer to the **Ledger Attachment Table** provided in this hand-out.

Flashing: **All connections** between deck and dwelling **shall be weatherproof**. Any cuts in the exterior finish **shall be flashed**. Flashing of the **ledger** at the point of connection to the **house** is especially **critical.** R703.8

Frost Footings: **Footings** are **required** for any deck **attached to a dwelling** or any other structure that has frost footings. The **minimum depth** to the base of the footings is **42 inches**. The **base** of a column footing **must be flared,** or extended, at least **4 inches** greater in diameter than the remainder of the column. **Cedar posts** must be protected **against direct contact** with the ground, concrete, or moisture. If the materials used for posts are not rated for ground contact, the concrete piers **must protrude** above grade a **minimum** of **6 inches**.

Posts and Beams: Posts **must be centered** on the concrete pier over the footing and **securely fastened** to the concrete so as to resist both **uplift and lateral displacement**. R502.2 **Splices** in beams **must be centered** over posts. Beams made of 2x10 (or larger) materials require **3 - ½ inch diameter bolts** connecting the beam to the posts. 2x8 (or smaller material) beams require **2 – ½ inch diameter bolts. Beams** setting **atop posts** must be **fully anchored** with appropriate fasteners to resist uplift and lateral displacement. **Each joist must be** connected to the **beam** with the proper fastening criteria using either nails or "hurricane clips". **BEAM MEMBERS SHOULD BE NAILED TOGETHER ACCORDING TO CODE SPECIFICATIONS**. R602.3 SPLIT **BEAM ATTACHMENT TO POSTS IS NOT ACCEPTABLE AND WILL REQUIRE ADDITIONAL MEANS OF SUPPORT FOR THE BEAM.**

Stairs: **Minimum width is 36 inches. Maximum riser height is 7 ¾ inches. Minimum tread depth is 10 inches**. Treads with a depth less than 11 inches must have compliant nosing. **Largest tread depth or riser height shall not exceed the smallest** by more then **3/8 inch** across the run of the stairs. **Treads shall be level**, (a slope no greater than 2% is permitted). R311.5 **Lighting** capable of illuminating the treads and landings **is required**, shall be located in the immediate vicinity of the top landing, and may be activated from inside the dwelling. R303.6

Handrails: Stairways having **4 or more risers** shall have at **least 1 handrail**. The top of the handrail **shall not be less than 34 inches or more than 38 inches above the nosing of the treads**. Handrails shall be **continuous** for the full length of the stairs shall **protrude** from the adjoining surface by at least **1 ½ inches**, but **no more than 4 ½ inches**, and the ends shall be returned or terminated into posts. **Handrails with a circular cross section** shall have an outside diameter of **not less than 1-1 ¼ inches** or **more than 2 inches**. Other handrails may be acceptable. See the specific code language to be sure your handrail does comply. R311.5.6

Guardrails: A guardrail is **required** on all decks, or any portion of a deck, more than 30 inches above grade or above a lower deck. Deck **guardrails must** be **36 inches high**. Open guardrails on decks must have intermediate rails (balusters) or an ornamental pattern that a **4 inch sphere** cannot pass through. **Guardrails on stairs** cannot have an **opening** between balusters that a **4 3/8 inch sphere** can pass through. R312.1

Landings: There shall be a **landing at the top and bottom of stairs**. Landings must be as **wide as the stairs they serve**, have a **minimum length of 36 inches** in direction of travel, and have a **slope no steeper** than **2%** (¼ inch of rise per 1 foot of run). R311.5.4

Structural Details: Header beams and joists that frame into ledgers or beams shall be supported by approved framing anchors such as joist hangers. Attachment of these framing anchors must be completed according to the manufacturer's requirements; typically special nails are applied. To be used, these anchors **must be approved** for use with **treated wood** (ie. Simpson's ZMax, or USP's TZ – triple zinc).

NOTE - DECKS MUST BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE OR BE SELF-SUPPORTING. R5022.2. **Please see drawings provided.**

Nails and Screws: Use only stainless steel, hot-dipped zinc-coated galvanized steel, silicon bronze, copper, or polymer-coated fasteners for attachment to pressure-preservative treated wood. Ask your materials supplier for an approved fastener. R319.3 **SCREWS CANNOT BE USED TO ATTACH JOIST HANGERS.**

Wood Required: All **exposed wood** must be **approved, treated** material. Grade **stamps and tags** must be **visible** to the inspector and **must meet the exposure criteria** to which they will be subjected (above ground, ground contact, etc.). R319 Untreated or landscaping-type materials will be rejected. Cedar and redwood are also approved; however **cedar cannot** be in **direct contact** with either **soil or concrete**. **OTHER DECK MATERIALS (composites, plastic, etc.) MUST BE LISTED BY AN APPROVED EVALUATION SERVICE AND APPROVED BY THE BUILDING OFFICIAL.** Ask your lumber supplier for help selecting the proper material, or the building department for a list of approved materials.

3 Season or Screen Porch Special Design Note: Some deck designs may not be appropriate for the placement of a screen porch or 3-season porch on the deck platform. Special design is needed; so plan ahead. **Setbacks for porches are not the same setbacks as for decks.**

INSPECTIONS: You must call for a scheduled **appointment time.** The **approved plan** must be **on site for all** inspections. **Typically 3 inspections are required:**

1. **Footings -** These will be **checked** for proper **diameter and depth**, **flare, a flat surface** at the base, and **no water** in the holes.

2. **Framing** – If your **deck surface** is **4 feet,** or closer, to the ground, you **must pass a framing inspection before the decking material** may be **applied** to the deck surface. Structural integrity and proper attachment of all connectors will be inspected.

3. **Final –** For decks that are 4 feet or greater off the ground, framing and final inspections may be completed together. A **final inspection must be completed** to be sure that the deck complies with the current Minnesota State Building Code.

DECK PERMIT APPLICATION CHECKLIST

Please complete this form and submit a copy with your permit application.

Check-off and fill-in items appropriate to your deck.

Applicant's Name: _____ **Contact Name: _____**

Project address: _____ **Phone: _____**

Fax: _____

To obtain a permit, you need the following:

- ☐ **1. Site Plan** *(example enclosed)*
- ☐ **2. Deck Plan***
- ☐ **3. Permit Application Checklist** (*This form)*
- ☐ **4. Deck Diagram Profile** *(on back)*
- ☐ **5. If you are in a development with a homeowners' association, a letter from the Board of Directors either approving the deck, or stating the Board does not have to approve the deck.**

Incomplete plans will not be reviewed. Please allow 5-10 working days for review.

Your Deck Plan must include all of the following:

- ☐ Footing depth: _____
- ☐ Footing size: _____ Column size: _____
- ☐ Post spacing: _____
- ☐ Distance between deck and ground: _____
- ☐ Dimensions of deck: length _____, width _____
- ☐ Size of beam/beams: _____
- ☐ Size of joists: _____
- ☐ Spacing of joists: _____

If your deck is 30 inches above the ground you should add:

- ☐ Height of guardrail: _____
- ☐ Size of openings in guardrail: 1. Distance between balusters: _____
  2. Distance between decking and guardrail bottom: _____

If your deck has stairs you also need:

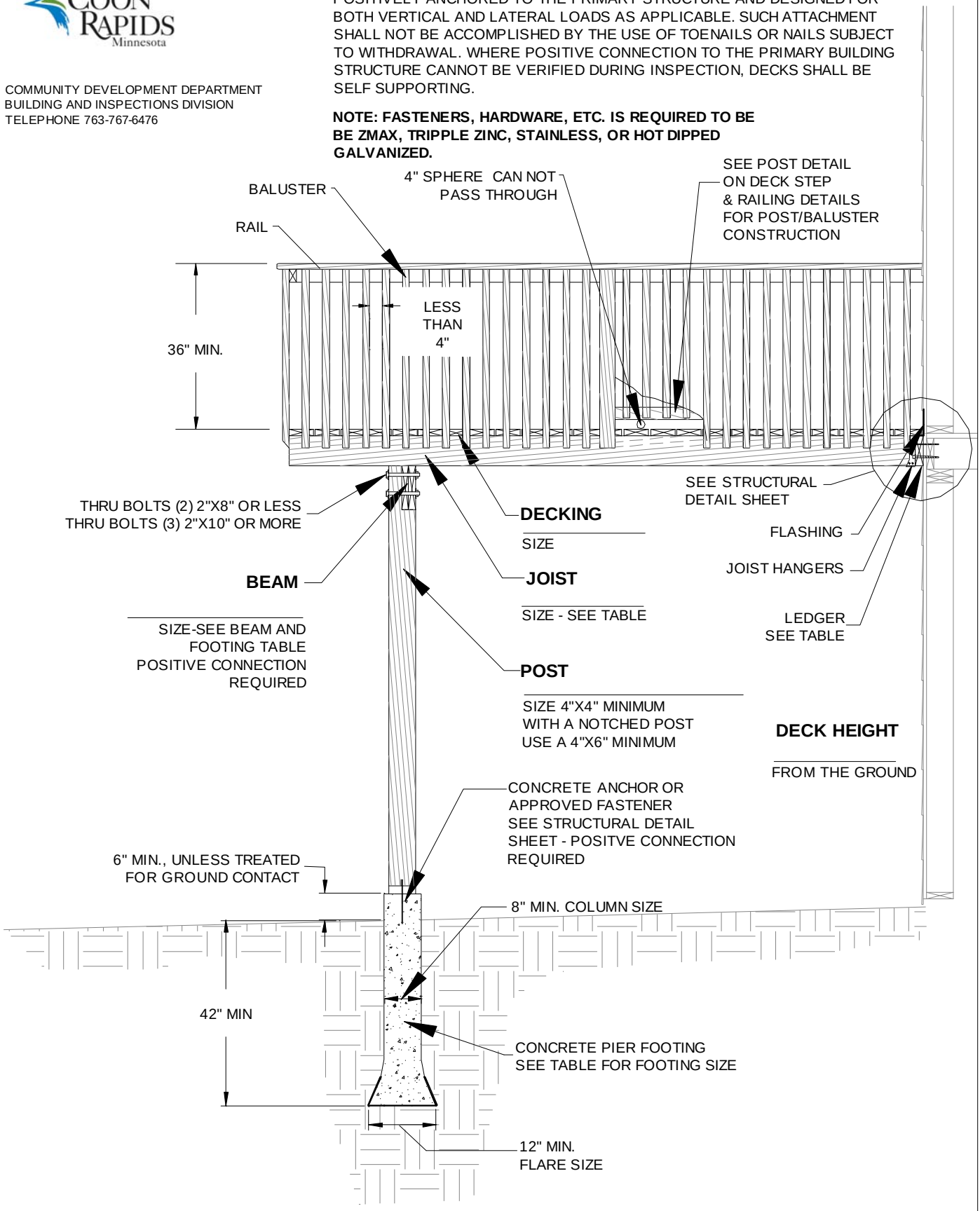
- ☐ Height of the stair riser: _____
- ☐ Depth of stair treads: _____
- ☐ Height of the handrail: _____

COON RAPIDS
Minnesota

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING AND INSPECTIONS DIVISION
TELEPHONE 763-767-6476

DECKS SUPPORTED BY ATTACHMENT TO AN EXTERIOR WALL SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE AND DESIGNED FOR BOTH VERTICAL AND LATERAL LOADS AS APPLICABLE. SUCH ATTACHMENT SHALL NOT BE ACCOMPLISHED BY THE USE OF TOENAILS OR NAILS SUBJECT TO WITHDRAWAL. WHERE POSITIVE CONNECTION TO THE PRIMARY BUILDING STRUCTURE CANNOT BE VERIFIED DURING INSPECTION, DECKS SHALL BE SELF SUPPORTING.

NOTE: FASTENERS, HARDWARE, ETC. IS REQUIRED TO BE BE ZMAX, TRIPPLE ZINC, STAINLESS, OR HOT DIPPED GALVANIZED.

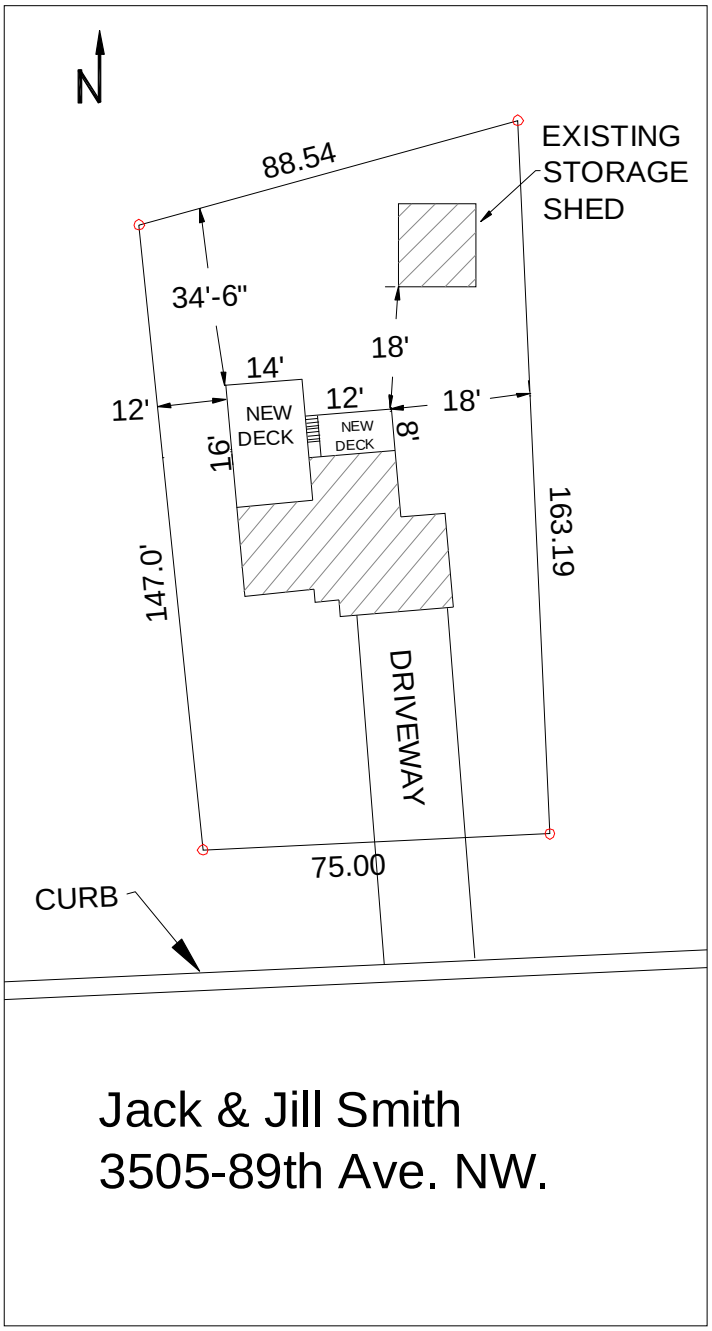


EXAMPLE SITE PLAN

PROPOSED NEW
DECK LOCATION

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING AND INSPECTIONS DIVISION
TELEPHONE 763-767-6476

USE CERTIFICATE OF SURVEY
CONTACT BUILDING DEPARTMENT



1"=20' SCALE

SHOW ON PLAN

1. LOT LINES.
2. LOT DIMENSIONS.
3. OWNERS NAME.
4. ADDRESS.
5. DRIVEWAY.
6. POND/LAKE/STREAM.
7. EASEMENTS.
8. POWER SUPPLY.
9. DIMENSIONS TO PROPOSED PROJECT AND ALL OTHER STRUCTURES.
10. SIZE OF NEW STRUCTURE.
11. DIMENSIONS TO LOT LINES.
12. DIMENSIONS TO OTHER BLDGS.
13. INCLUDE YARD SETBACKS AND EASEMENTS ON SIDE, FRONT, AND BACK YARDS.
14. LABEL ALL ADJACENT STREETS.
15. INCLUDE SCALE.

NOTE:
IF SITE PLAN IS NOT COMPLETE, THE PROCESS FOR REVIEW OF APPLICATION WILL BE HELD UP.

PROVIDE 2 COPIES OF A SITE PLAN.

GOPHER STATE 1 CALL
FOR UTILITY LOCATIONS
651-454-0002 OR 811

H:\Bldginsp\Decks_Details.dwg 11/10/ C.K.C.

INSPECTOR'S GUIDE TO LEDGER ATTACHMENT

NUMBER OF LAG SCREWS FOR DECK LEDGER (1)								
CLEAR SPAN	3/8" LAG		½" LAG		LedgerLok (A)		Simpson Strong-tie ¼" SDS (B)	
	16" O.C.	24" O.C.	16" O.C.	24" O.C.	16" O.C.	24" O.C.	16" O.C.	24" O.C.
6 FEET	2	3	2	2	1	2	1	2
8 FEET	3	4*	2	3	2	2	2	2
10 FEET	3	5*	2	3	2	3	2	3
12 FEET	4*	5*	3	4*	2	3	2	3
14 FEET	4*	6*	3	4*	2	3	3	4

(1) Southern Yellow Pine ledger and conventionally wood framed structure with sawn joists or wood trusses.

(2) 40 pounds per square foot live load and 15 pounds per square foot dead load.

(A) FastenMaster® LedgerLok™ Ledger Board Fastener, see ICC, EST-1078. This evaluation report does not address fastener corrosion when the fastener is installed in chemically treated wood. http://www.olyfast.com/pdf/LedgerLok%20Ad%20HIE.pdf.

(B) Simpson Strong-drive S-series Wood Screw, see ICC ER 5268. The double-barrier coating finish provides corrosion resistance superior to hot-dip galvanization, see their web site. http://www.storntie.com/products/connectors/screws.html.

* Excessive Application of screws into the ledger board may cause deck/ledger failure, other fasters listed recommended. In a board 2X10 or less, 4 screws may be a problem.

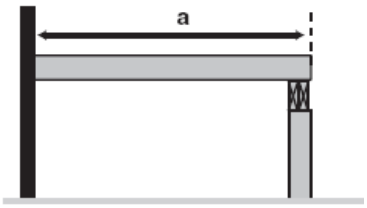
Joist span

(Design Load = 40#LL + 10#DL, Deflection= L/360)

	Ponderosa Pine or Red Pine #2			Southern Yellow Pine #2			Western Cedar #2		
	12" o.c.	16" o.c.	24" o.c.	12" o.c.	16" o.c.	24" o.c.	12" o.c.	16" o.c.	24" o.c.
2x6	8' - 9"	8' - 0"	7' - 0"	10' - 4"	9' - 4"	7' - 9"	8' - 9"	8' - 0"	7' - 0"
2x8	11' -6"	10' - 6"	8' - 9"	13' - 6"	12' - 4"	10' - 0"	11' - 5"	10' - 6"	9' - 2"
2x10	14' - 9"	13' - 3"	10' - 10"	17' - 4"	15' - 9"	13' - 0"	14' - 9"	13' - 5"	11' - 3"
2x12	17' - 9"	15' - 4"	12' - 6"	21' - 0"	18' - 8"	15' - 3"	18' - 0"	16' - 0"	13' - 0"

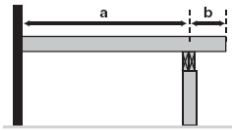
Sample calculations for using joist span, beam size and footing size tables

Case I solution:



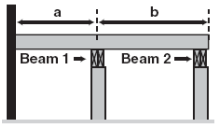
Refer to tables for joist, beam and footing size requirements.
Example: a = 12 feet; Post spacing = 8 feet
Use the **joist span** table to find the acceptable joist sizes for a 12 foot span, 2x8s at 12 inches O.C., 2x10s at 16 inches O.C. or 2x12s at 24 inches O.C. Use the **Beam and footing sizes** table and find the 8 foot post spacing column. With a 12 foot deck span, the beam may be either two 2x8s or two 2x10s, depending on wood used. Depending on the type of soil, the footing diameter at the base must be a minimum of 12 inches, 10 inches or 9 inches for the corner post and 17 inches, 14 inches or 12 inches for all intermediate posts.

Case II solution:



Use "a" to determine joist size and "a" + "2b" to determine beam and footing sizes. The length of "b" is restricted by both the length of "a" and the size of the joists.
Example: a = 8 feet, b = 2 feet, Post spacing = 10 feet
Refer to the **joist span** table. For an 8 foot joist span, either 2x8s at 24 inches O.C. or 2x6s at 16 inches O.C are acceptable. For sizing the beam, use a joist length of 12 feet (8 feet + 4 feet) and a post spacing of 10 feet. The **beam and footing sizes** table indicates that the beam may be either two 2x10s or two 2x12s, depending on wood used. Depending on the type of soil, the footing diameter at the base must be a minimum of 15 inches, 12 inches or 11 inches for the corner post and 20 inches, 17 inches or 15 inches for all intermediate posts. Note that because of the 2 foot cantilever all footing sizes were increased by 1 inch as required by footnote 2 at the end of the table.

Case III solution:



Example: a = 6 feet, b = 7 feet, Post spacing = 9 feet
Joist size is determined by using the longest span joist (7 feet). The **joist span** table indicates that 2x6s at 24" O.C. would be adequate for this span. For Beam 1 and footings, use a joist length of 13 feet (6 feet + 7 feet) and a post spacing of 9 feet. The **beam and footing sizes** table indicates that the beam may be two 2x10s or two 2x12s, depending on the wood used. Depending on the type of soil, the footing diameters for Beam 1 posts shall be 13 inches, 11 inches or 9 inches for the corner (outside) post and 19 inches, 15 inches or 13 inches for all intermediate posts. For Beam 2 and footings use a joist length of 7 feet and post spacing of 9 feet. The beam may be two 2x8s or two 2x10s, depending on wood used. Depending on the type of soil, the footing diameters for Beam 2 shall be 10 inches, 8 inches or 7 inches for the corner posts, and 14 inches, 11 inches or 10 inches for all intermediate posts.

Beam and Footing Sizes

Based on No. 2 or Better Ponderosa Pine and Southern Pine
(Treated for weather and/or ground exposure)

Post Spacing

Joist Length			4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'
6		Southern Pine Beam	1-2x6	1-2x6	1-2x6	2-2x6	2-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x10	2-2x10
		Ponderosa Pine Beam	1-2x6	1-2x6	1-2x8	2-2x8	2-2x8	2-2x8	2-2x10	2-2x10	2-2x12	2-2x12	3-2x10
		Corner Footing	6 5 4	7 6 5	7 6 5	8 7 6	9 7 6	9 7 6	10 8 7	10 8 7	10 9 7	11 9 8	11 9 8
		Intermediate Footing	9 8 7	10 8 7	10 9 7	11 9 8	12 10 9	13 10 9	14 11 10	14 12 10	15 12 10	15 13 11	16 13 11
7'		Southern Pine Beam	1-2x6	1-2x6	1-2x6	2-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x10	2-2x10	2-2x12
		Ponderosa Pine Beam	1-2x6	1-2x6	1-2x8	2-2x8	2-2x8	2-2x10	2-2x10	2-2x10	2-2x12	3-2x10	3-2x10
		Corner Footing	7 5 5	7 6 5	8 7 6	9 7 6	9 8 7	10 8 7	10 8 7	11 9 8	11 9 8	12 10 9	12 10 9
		Intermediate Footing	9 8 7	10 8 7	11 9 8	12 10 9	13 11 9	14 11 10	15 12 10	15 13 11	16 13 11	17 14 12	17 14 12
8'		Southern Pine Beam	1-2x6	1-2x6	2-2x6	2-2x6	2-2x8	2-2x8	2-2x8	2-2x10	2-2x10	2-2x12	2-2x12
		Ponderosa Pine Beam	1-2x6	2-2x6	2-2x8	2-2x8	2-2x8	2-2x10	2-2x10	2-2x10	3-2x10	3-2x10	3-2x12
		Corner Footing	7 6 5	8 6 6	9 7 6	9 8 7	10 8 7	10 8 7	11 9 8	11 9 8	12 10 9	13 10 9	13 11 9
		Intermediate Footing	10 8 7	11 9 8	12 10 9	13 11 9	14 11 10	15 12 10	16 13 11	16 13 12	17 14 12	18 15 13	18 15 13
9'		Southern Pine Beam	1-2x6	1-2x6	2-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x10	2-2x12	2-2x12	3-2x10
		Ponderosa Pine Beam	1-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x10	2-2x10	3-2x10	3-2x10	3-2x12	3-2x12
		Corner Footing	7 6 5	8 7 6	9 7 6	10 8 7	10 9 7	11 9 8	12 10 8	12 10 9	13 10 9	13 11 9	14 11 10
		Intermediate Footing	10 9 7	12 10 8	13 10 9	14 11 10	15 12 10	16 13 11	17 14 12	17 14 12	18 15 13	19 15 13	20 16 14
10'		Southern Pine Beam	1-2x6	1-2x6	2-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x12	2-2x12	3-2x10	3-2x10
		Ponderosa Pine Beam	1-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x10	2-2x12	3-2x10	3-2x12	3-2x12	Eng Bm
		Corner Footing	8 6 6	9 7 6	10 8 7	10 8 7	11 9 8	12 10 8	12 10 9	13 11 9	14 11 10	14 12 10	15 12 10
		Intermediate Footing	11 9 8	12 10 9	14 11 10	15 12 10	16 13 11	17 14 12	17 14 12	18 15 13	19 16 14	20 16 14	21 17 15
11'		Southern Pine Beam	1-2x6	2-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x10	2-2x12	2-2x12	3-2x10	3-2x12
		Ponderosa Pine Beam	2-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x12	2-2x12	3-2x10	3-2x12	3-2x12	Eng Bm
		Corner Footing	8 7 6	9 7 6	10 8 7	11 9 8	12 9 8	12 10 9	13 11 9	14 11 10	14 12 10	15 12 10	15 13 11
		Intermediate Footing	12 9 8	13 11 9	14 12 10	15 12 10	16 13 11	17 14 12	17 14 12	18 15 13	19 16 14	20 16 14	21 17 15
12'		Southern Pine Beam	1-2x6	2-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x10	2-2x12	3-2x10	3-2x10	3-2x12
		Ponderosa Pine Beam	2-2x6	2-2x6	2-2x8	2-2x10	2-2x10	2-2x12	2-2x12	3-2x12	3-2x12	Eng Bm	Eng Bm
		Corner Footing	9 7 6	10 8 7	10 9 7	11 9 8	12 10 9	13 10 9	14 11 10	14 12 10	15 12 10	15 13 11	16 13 11
		Intermediate Footing	12 10 9	14 11 10	15 12 10	16 13 11	17 14 12	18 15 13	19 16 14	20 16 14	21 17 15	22 18 15	23 18 16
13'		Southern Pine Beam	1-2x6	2-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x10	2-2x12	3-2x10	3-2x12	3-2x12
		Ponderosa Pine Beam	2-2x6	2-2x6	2-2x8	2-2x10	2-2x12	2-2x12	2-2x12	3-2x12	3-2x12	Eng Bm	Eng Bm
		Corner Footing	9 7 6	10 8 7	11 9 8	12 10 8	13 10 9	13 11 9	14 12 10	15 12 10	15 13 11	16 13 11	17 14 12
		Intermediate Footing	13 10 9	14 12 10	15 13 11	17 14 12	18 15 13	19 15 13	20 16 14	21 17 15	22 18 15	23 19 16	24 19 17
14'		Southern Pine Beam	1-2x6	2-2x6	2-2x6	2-2x8	2-2x10	2-2x10	2-2x12	3-2x10	3-2x12	3-2x12	3-2x12
		Ponderosa Pine Beam	2-2x6	2-2x8	2-2x8	2-2x10	2-2x12	3-2x10	3-2x12	3-2x12	Eng Bm	Eng Bm	Eng Bm
		Corner Footing	9 8 7	10 8 7	11 9 8	12 10 9	13 11 9	14 11 10	15 12 10	15 13 11	16 13 11	17 14 12	17 14 12
		Intermediate Footing	13 11 9	15 12 10	16 13 11	17 14 12	18 15 13	20 16 14	21 17 15	22 18 15	23 18 16	24 19 17	24 20 17
15'		Southern Pine Beam	2-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x12	2-2x12	3-2x10	3-2x12	3-2x12	Eng Bm
		Ponderosa Pine Beam	2-2x6	2-2x8	2-2x8	2-2x10	3-2x10	3-2x10	3-2x12	3-2x12	Eng Bm	Eng Bm	Eng Bm
		Corner Footing	10 8 7	11 9 8	12 10 8	13 10 9	14 11 10	14 12 10	15 12 11	16 13 11	17 14 12	17 14 12	18 15 13
		Intermediate Footing	14 11 10	15 12 11	17 14 12	18 15 13	19 16 14	20 17 14	21 17 15	22 18 16	23 19 17	24 20 17	25 21 18
16'		Southern Pine Beam	2-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x12	2-2x12	3-2x10	3-2x12	3-2x12	Eng Bm
		Ponderosa Pine Beam	2-2x6	2-2x8	2-2x10	2-2x10	3-2x10	3-2x10	3-2x12	3-2x12	Eng Bm	Eng Bm	Eng Bm
		Corner Footing	10 8 7	11 9 8	12 10 9	13 11 9	14 11 10	15 12 10	16 13 11	16 13 12	17 14 12	18 15 13	18 15 13
		Intermediate Footing	14 11 10	16 13 11	17 14 12	18 15 13	20 16 14	21 17 15	22 18 16	23 19 16	24 20 17	25 21 18	26 21 18

Notes: 1. Joist length is total length of joist, including any cantilevers.

2. When joist extends (cantilevers) beyond support beam by 18 inches or more, add 1 inch to footing dimensions shown.

3. Requirements for future 3-season porches or screen porches:

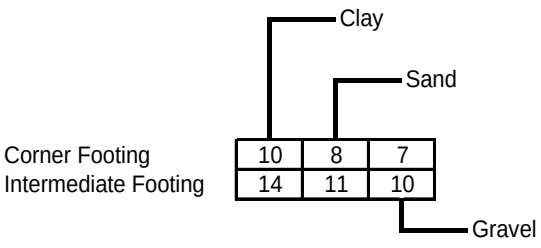
a. Increase corner footing size shown by 90%.

b. Increase center footing size shown by 55%.

c. Locate all footings at extremities of deck (no cantilevers.)

d. Beam sizes indicated need not be altered.

4. All footing sizes above are base diameters (in inches) and are listed for THREE SOIL TYPES:



	Clay	Sand	Gravel
Corner Footing	10	8	7
Intermediate Footing	14	11	10

STRUCTURAL DETAILS

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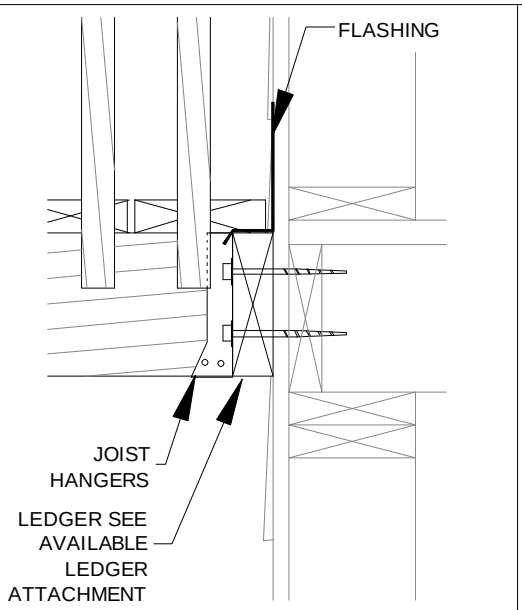
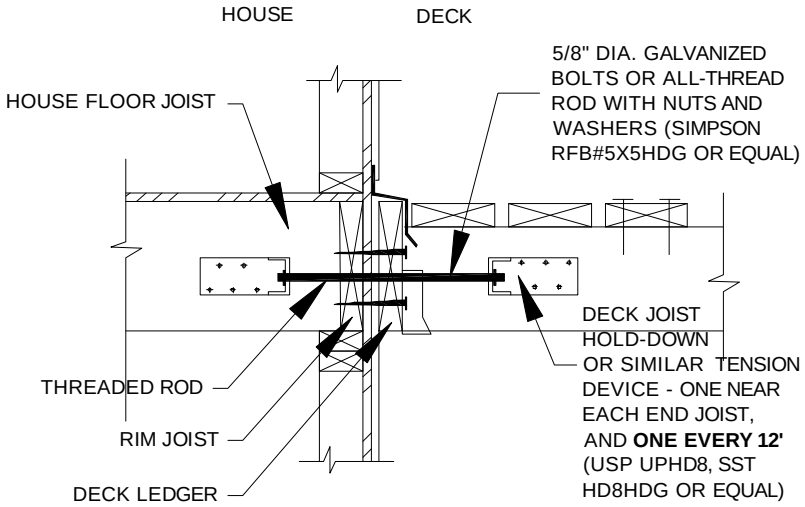
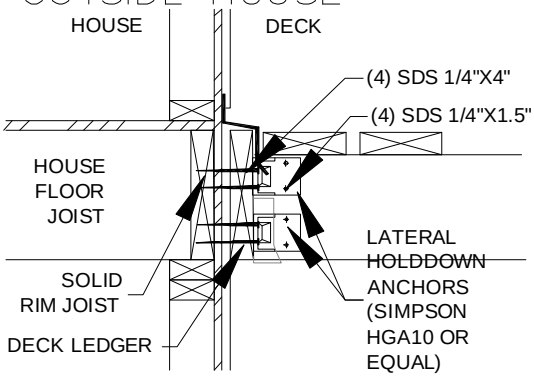


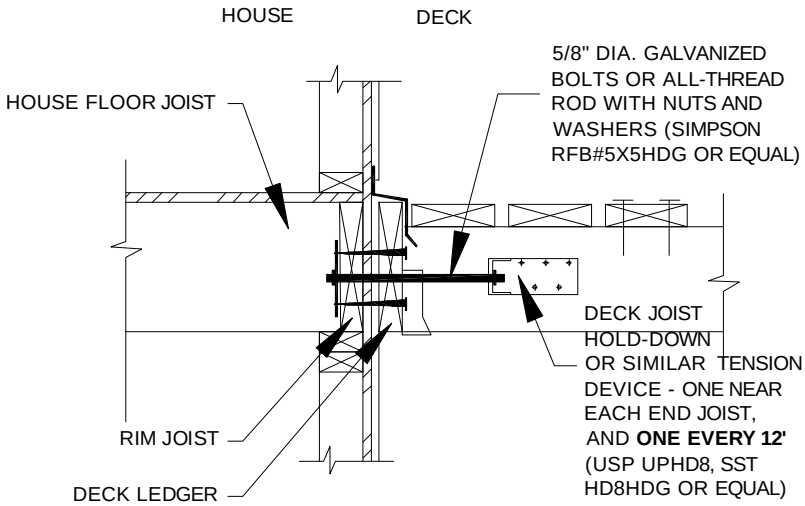
LEDGER DETAIL



DECK ATTACHMENT FOR LATERAL LOADS/HOLDDOWNS ON INTERIOR JOIST

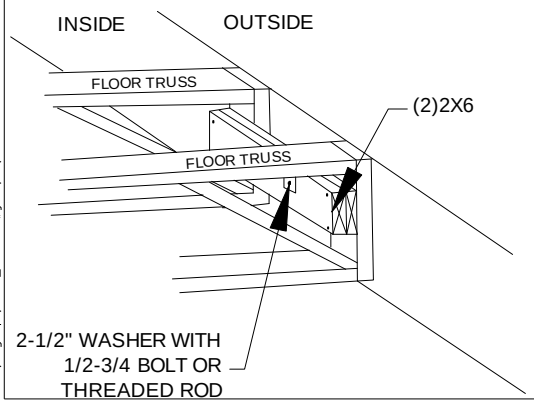
DECK ATTACHMENT FOR OUTSIDE HOUSE



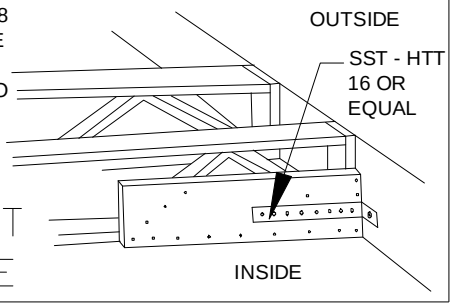


DECK ATTACHMENT FOR LATERAL LOADS/HOLDDOWNS BETWEEN INTERIOR JOISTS

DECK ATTACHMENT FOR INSIDE HOUSE



WITH FLOOR TRUSSES, ATTACHE 2X8 (OR LARGER) MATERIAL TO THE SIDE OF THE TRUSS. USE A MINIMUM OF - (12) 16d NAILS. ATTACH HOLDOWN TO 2X MATERIAL.



DECK ATTACHMENT FOR INSIDE HOUSE

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STRUCTURAL DETAILS

COMMUNITY DEVELOPMENT DEPARTMENT
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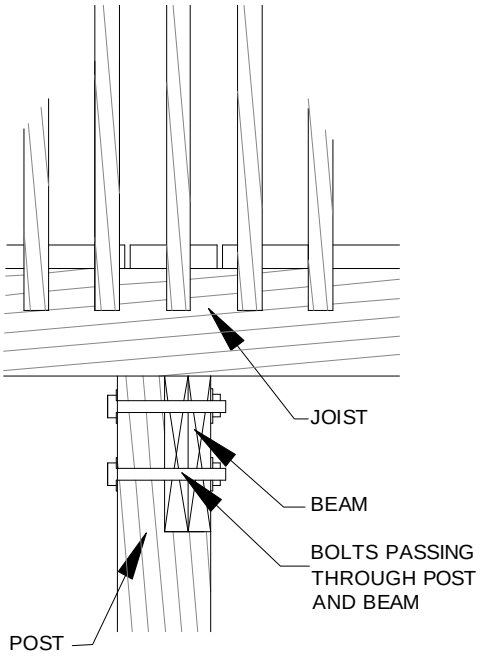
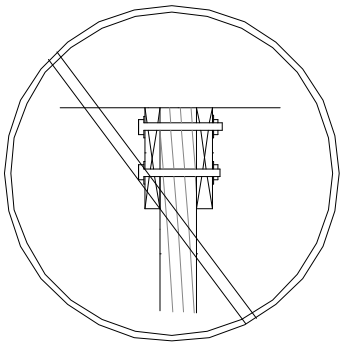
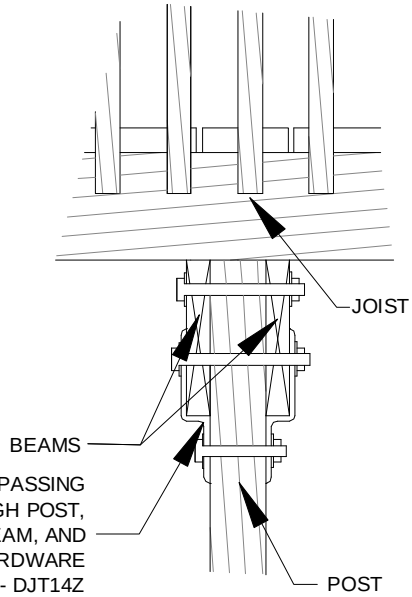


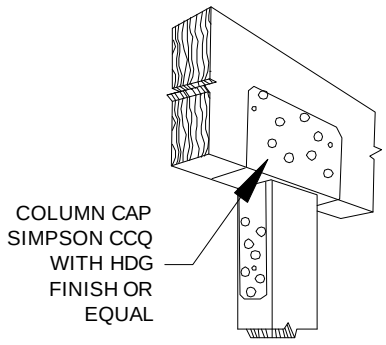
BEAM/POST CONNECTION USING NOTCHED POST



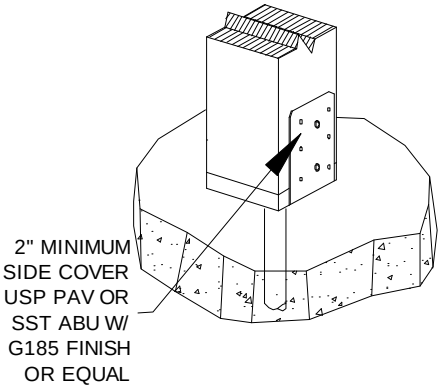
SPLIT BEAM CONNECTION WITHOUT HARDWARE NOT ACCEPTABLE



SPLIT BEAM CONNECTION USING HARDWARE/BRACKETS

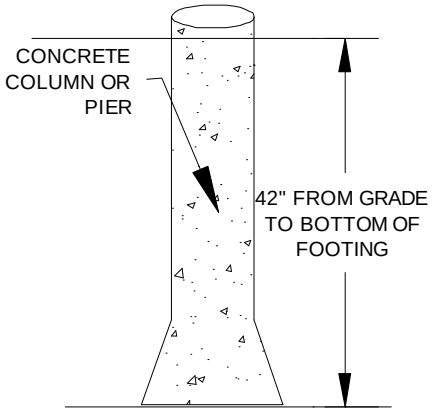


BEAM/POST CONNECTION USING COLUMN CAP



POST ANCHOR USP–PAU OR EQUAL

FOOTINGS MUST HAVE FLARE OR BE WIDER THAN THE COLUMN OR PIER BY MINIMUM OF 4" (2" ALL THE WAY AROUND)



CONCRETE FOOTING WITH FLARE

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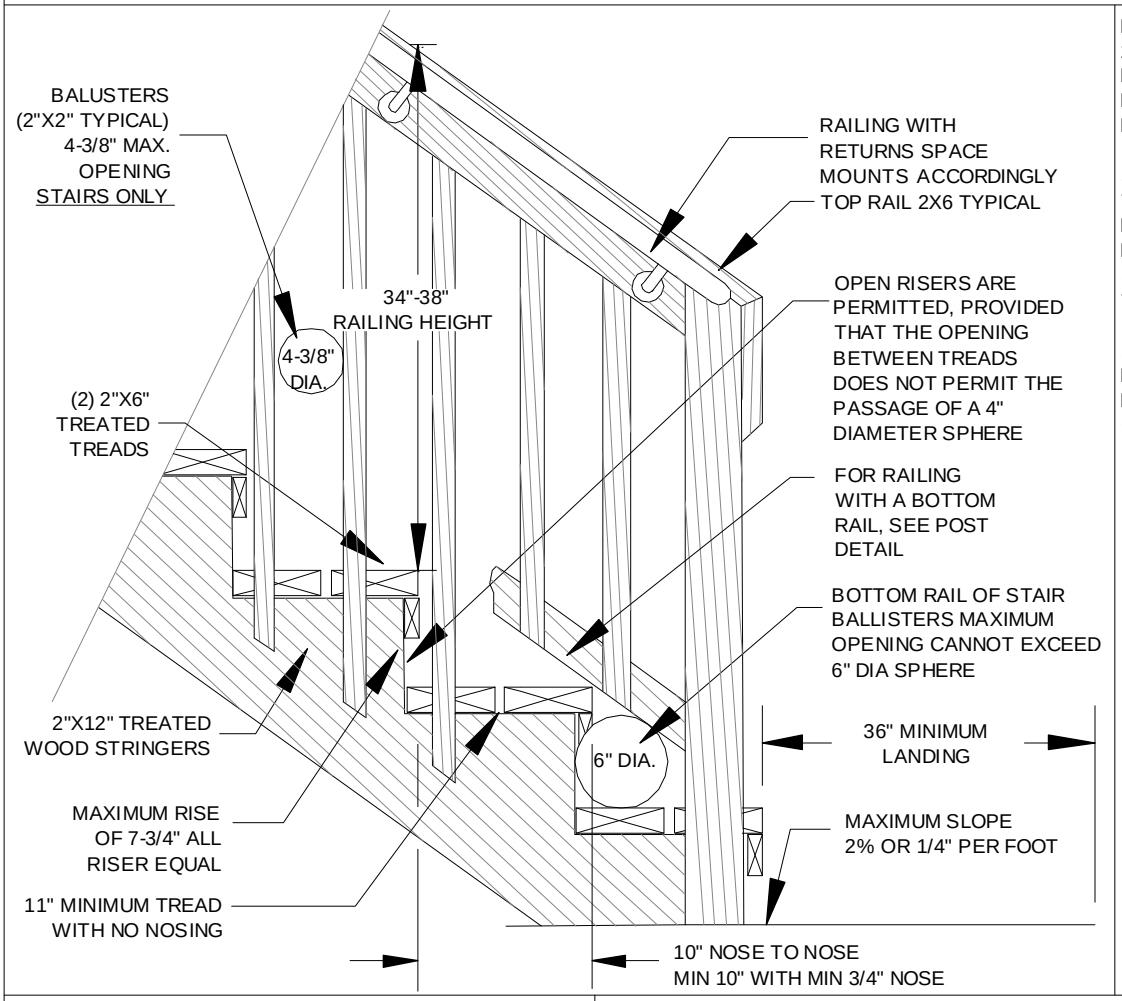
DECK STEP & RAILING DETAILS

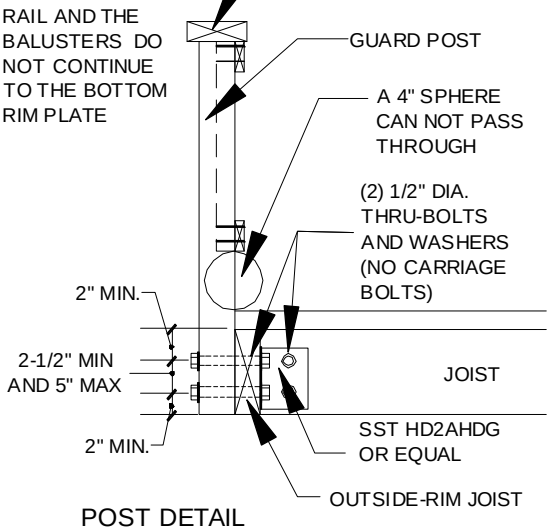
COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING AND INSPECTIONS DIVISION
TELEPHONE 763-767-6476



NOTES:
1.THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8". THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8".

2. ALL REQUIRED HANDRAILS SHALL BE PROVIDED EQUIVALENT GRASPABILITY.

NOTE: THIS DETAIL ONLY APPLIES IF THERE IS A BOTTOM RAIL AND THE BALUSTERS DO NOT CONTINUE TO THE BOTTOM RIM PLATE



POST DETAIL

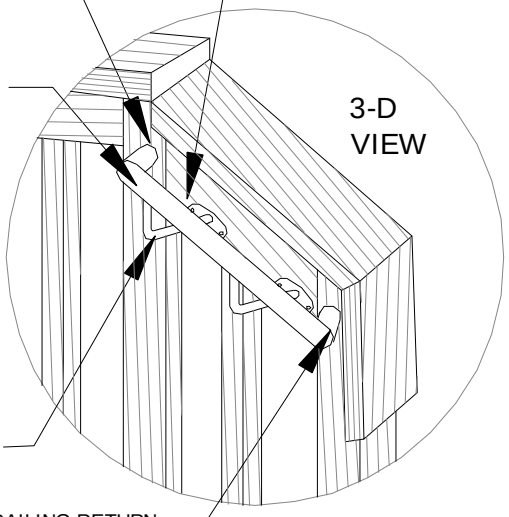
PROVIDE RAILING RETURN

TYPE 1, HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF ATLEAST 1-1/4" AND NOT GREATER THAN 2". IF THE HANDRAIL IS NOT CIRCULAR IT SHALL HAVE A PERMITER DIMENSION OF AT LEAST 4" AND NOT GREATER THAN 6-1/4" WITH A MAXIMUM CROSS SECTION DIAMETER OF 2-1/4"

RAILING MOUNT BRACKETS (SPACE ACCORDINGLY)

PROVIDE RAILING RETURN

1-1/2" CLEARANCE BETWEEN HANDRAIL AND OPPOSING SURFACE



RAILING DETAIL

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