



## CITY OF AUBURN | BUILDING DEPARTMENT

1225 Lincoln Way | Auburn, Ca 95603

530-823-4211 | Fax: 530-885-5508

<https://www.auburn.ca.gov/411/Building-Inspections>

# Minimum Residential Deck Requirements

(Spa over deck condition included)

The following information is intended to provide GENERAL DECK CONSTRUCTION GUIDELINES ONLY. Alternate deck designs may be possible when accompanied by an engineered analysis and detailed plans. Use of this standard design is at the user's risk and carries no implied or inferred guarantee against failure or defects. **Note, the following conditions are considered to be beyond the scope of this guide and will require additional design from a licensed professional architect or engineer.**

1. Decks including more than one level in height.
2. Decks with walking surfaces more than ten feet above grade.
3. Deck ledgers attached to house overhang, bay window, brick, concrete block, stone, any veneer or hollow block.
4. Decks supporting large concentrated or distributed loads such as hot tubs or spas deviating in any respect from exact requirements outlined within this guide are beyond the scope of this document and shall not be allowed without design and approval from a licensed professional architect or engineer.

## **General Requirements**

(May be used for a 60 psf live load condition)

1. Deck length shall be equal to or less than overall deck width.
2. Standards denoted within this document shall only apply to single level residential wood decks attached to legally permitted existing residences.
3. Deck framing material shall be 2 inch nominal minimum dimension lumber. - pressure treated P.T. Decking material shall be attached to deck joist with (2) 16d galvanized nails or (2) #8 screws. Deck boards shall be placed 1/4 inch apart minimum and shall span over (3) deck joists minimum.
4. All Deck and Spa or tub post shall be 6x6 nominal minimum and located centered on footing below.
5. All through bolts must include washers under bolt head and nut.
6. Deck, slab, and footings shall not be constructed over existing septic system, leach field, utility lines, or enclosed meters.
7. Existing exterior house siding or existing exterior wall finish shall be removed prior to installation of new ledger board and waterproof afterwards.
8. New deck footings located less than 5'-0" to existing house footing shall be placed at the same elevation as existing footing.
9. Decks more than 30" inches above adjacent grade shall require 42" inch high guard rail measured vertically above deck walking surface.
10. All work shall comply with current California Residential Code.
11. Footing and slab concrete mix shall have a minimum compressive strength  $f'_c=3000$  psi. \*
12. Deck stairs shall be minimum 36" inch wide and have a minimum 36" inch long landing at top and bottom in direction to stair travel.
13. All fasteners, hangers, plates, and nails shall be stainless steel, hot-dipped galvanized, or of corrosive resistant protective coating. All steel shall conform to ASTM A36 ( $f_y=36$ ksi) minimum.
14. Decking material shall comply with the following:
  - a. 1/2" minimum wood deck surface thickness and / or ICC approved deck cover material.
  - b. Decking shall be protected on the underside with materials approved for one hour fire resistive construction and / or ignition resistance pursuant to CRC section 337.4
  - c. Decking shall be composed of noncombustible materials as defined in the California Residential Code or other materials approved by the responsible fire authority. (CRC Section 337.9.3)
15. All shop welding and steel fabrication shall be done in a shop approved by a special inspection agency and approved by Building Official. All field welding must be performed by a certified welder and a special inspector shall continuously inspect all field welding.

***\*\*No special inspection required. Contractor shall provide approved concrete mix design to inspector prior to concrete pour.***



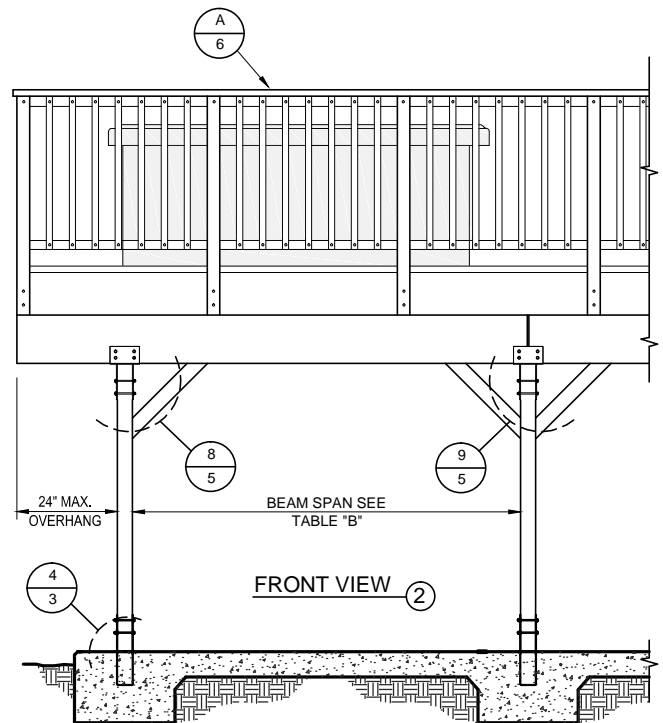
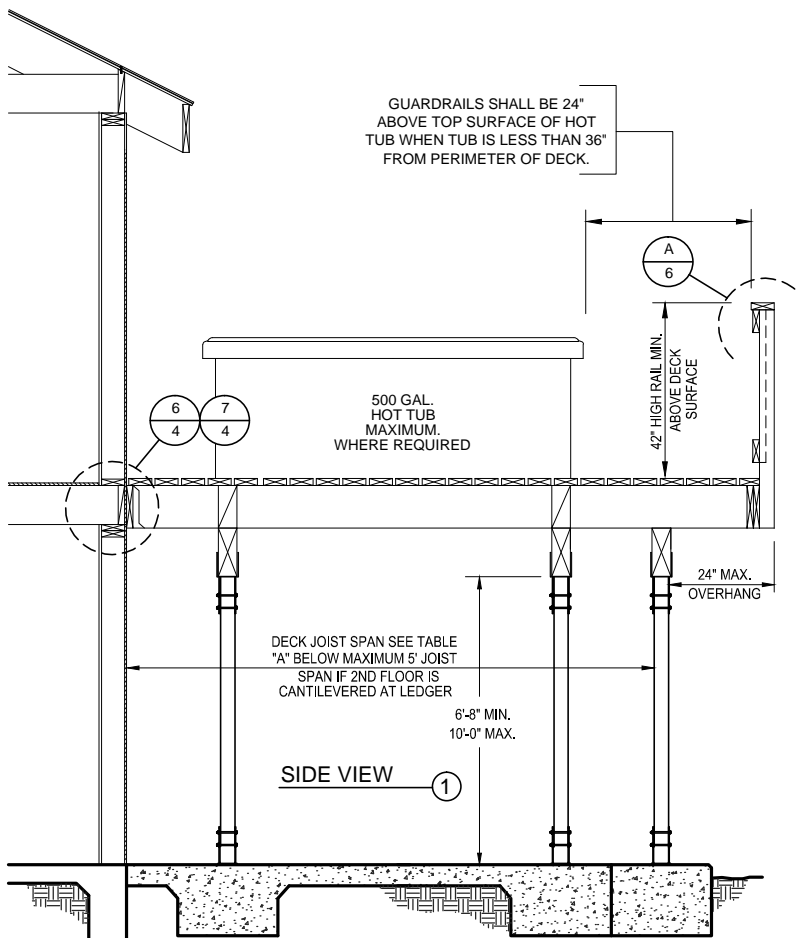
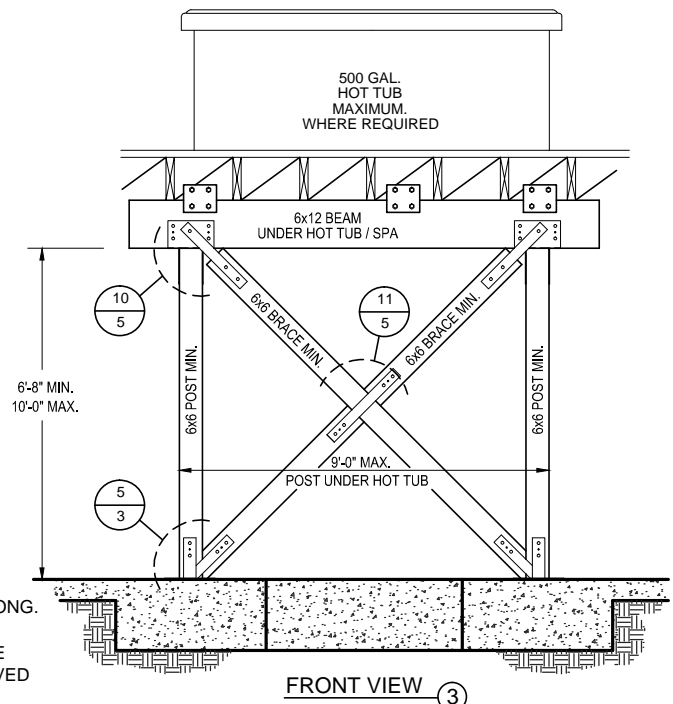


TABLE "A" DECK JOIST SPAN & SPACING DOUGLAS FIR #1 OR BETTER		
SIZE	SPACING	SPAN
4 x 6	12" O.C.	10'-6"
	16" O.C.	9'-0"
	24" O.C.	7'-6"
4 x 8	12" O.C.	14'-0"
	16" O.C.	12'-0"
	24" O.C.	10'-0"
4 x 10	16" O.C.	15'-0"
	24" O.C.	13'-0"
4 x 12	32" O.C.	15'-0"

TABLE "C" LEDGER BOLT SPACING (1/2" DIA. x 6" LAG BOLT - SEE NOTE 1)	
DECK JOIST SPAN	SPAN
8'-0" OR LESS	9" o.c.
8'-1" TO 10'-0"	8" o.c.
10'-1" TO 12'-0"	6" o.c.
12'-1" TO 14'-0"	6" o.c.
14'-1" TO 15'-0"	5 1/2" o.c.

TABLE "B" BEAM SIZE & SPAN DOUGLAS FIR #1 OR BETTER		
JOIST SPAN	BEAM	
	SIZE	SPAN
UPTO 8'-0"	6 x 8	6'-6"
	6 x 10	8'-6"
	6 x 12	13'-0"
8'-1" TO 10'-0"	6 x 8	6'-0"
	6 x 10	7'-6"
	6 x 12	12'-0"
10'-1" TO 12'-0"	6 x 8	5'-6"
	6 x 10	7'-0"
	6 x 12	11'-0"
12'-1" TO 15'-0"	6 x 8	5'-0"
	6 x 10	6'-6"
	6 x 12	9'-6"

- NOTES:
- LEDGER BOLTS SHALL BE 1/2" DIA. x 6" LONG. BOLTS ARE TO BE PLACED STAGGERED.
  - ALL METAL HARDWARE & SCREWS TO BE GALVANIZED OR OF OTHERWISE APPROVED CORROSION RESISTANCE.
  - MAXIMUM 5 FOOT JOIST SPAN IF 2nd FLOOR IS CANTILEVERED AT LEDGER.



## DISCLAIMER:

ALTERNATE DECK DESIGNS MAY BE POSSIBLE WHEN PROVIDED WITH AN ENGINEERED ANALYSIS. USE OF THIS STANDARD IS AT THE USER'S RISK AND CARRIES NO IMPLIED OR INFERRED GUARANTEE AGAINST FAILURE OR DEFECTS.



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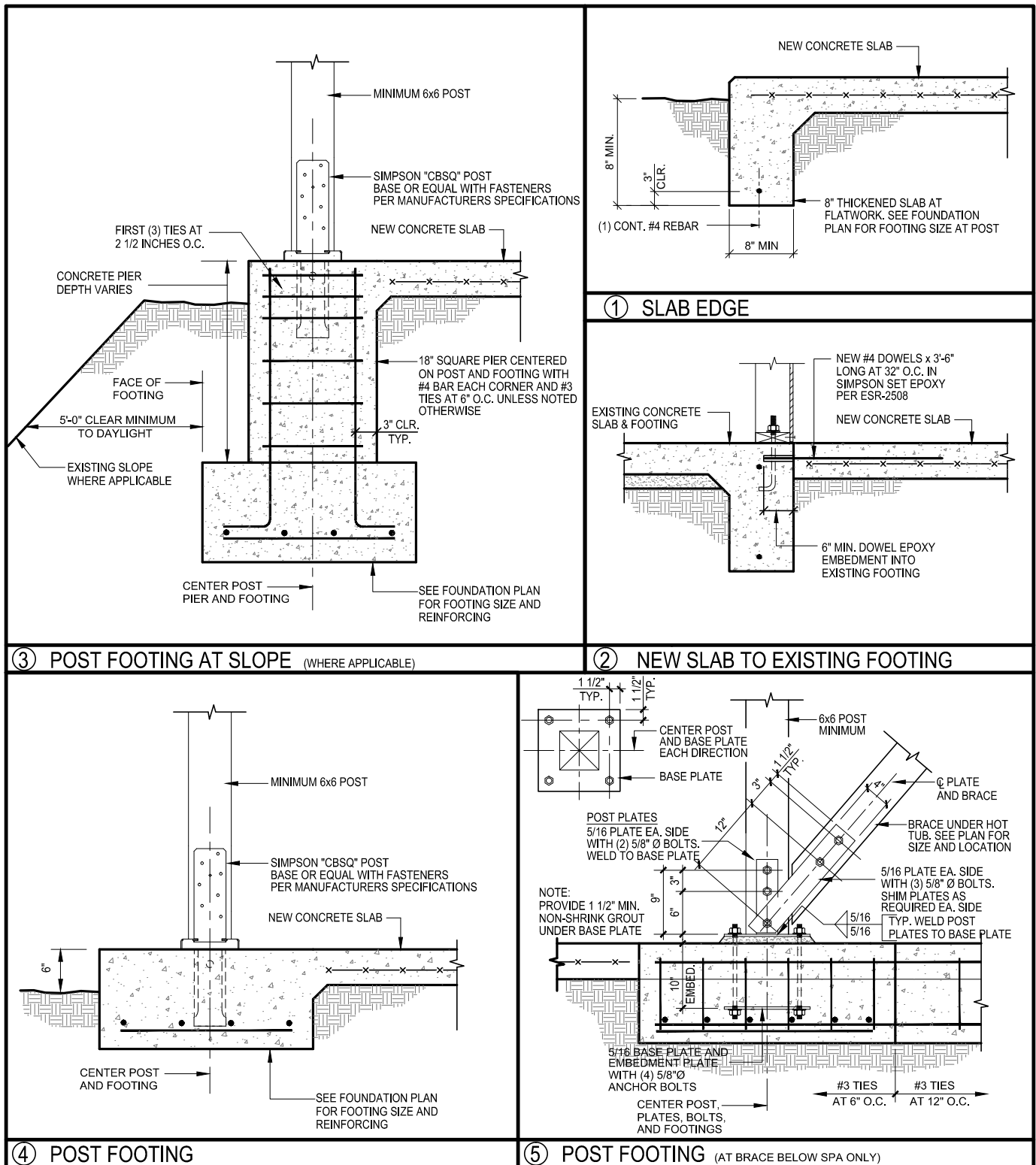
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**BALCONY / DECK STANDARD**  
(FOR MAXIMUM 100 psf SNOW AREAS TYPICAL)

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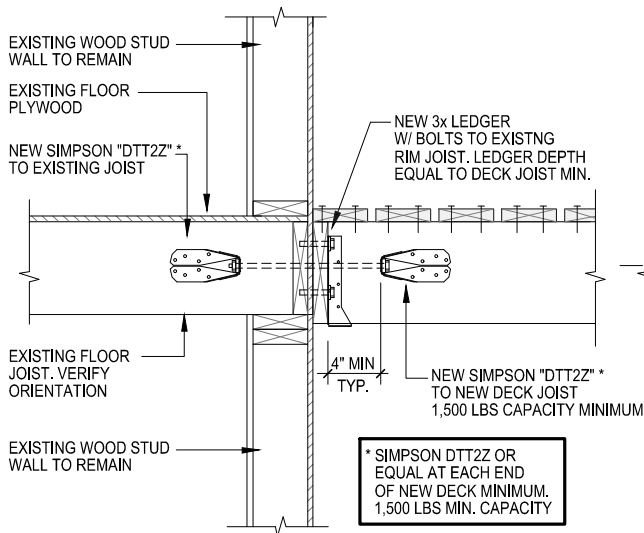
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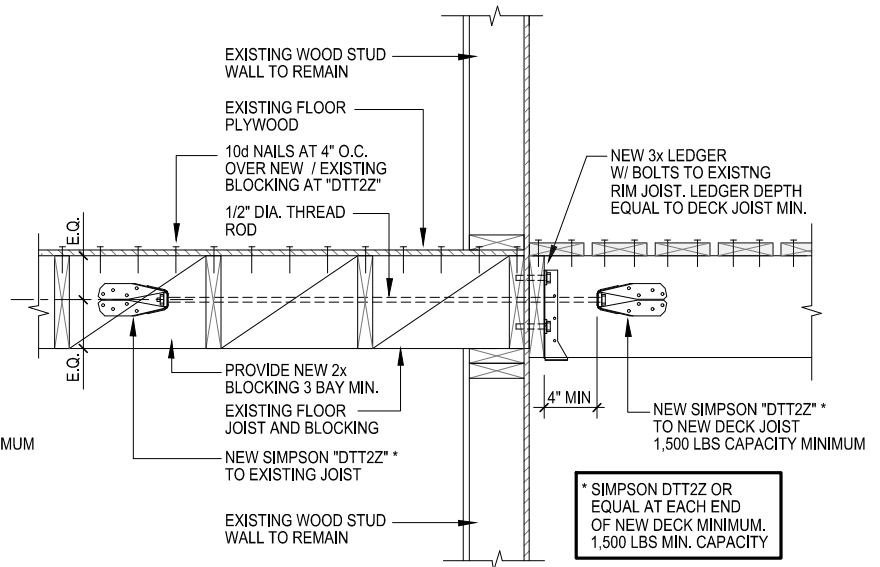
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**SECTION VIEW**  
(PARALLEL TO EXISTING FLOOR JOIST)

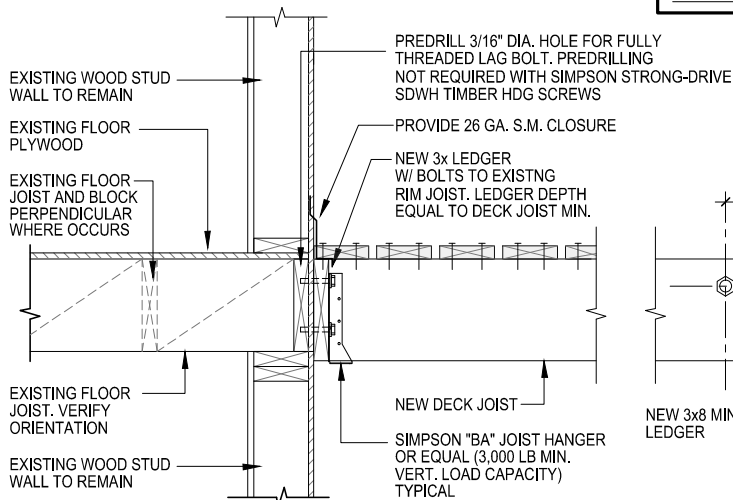


**SECTION VIEW**  
(PERPENDICULAR TO EXISTING FLOOR JOIST)

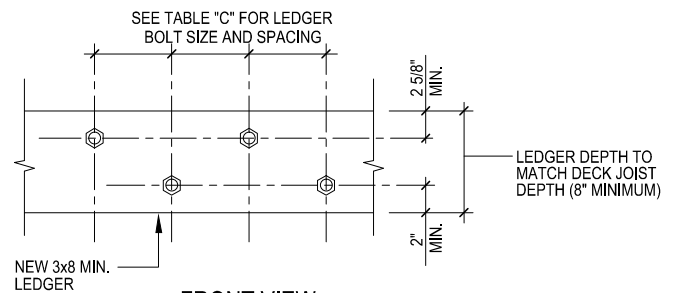
## ⑥ DECK TO EXISTING FLOOR FRAMING

### NOTE:

THIS DECK CONNECTION DETAIL IS APPLICABLE ONLY WHERE EXISTING FRAMING CONDITIONS INCLUDE 1 1/2" MIN. THICK WOOD RIM JOIST OR BLOCKING ADEQUATELY INSTALLED AT ALL EDGES OF PLYWOOD FLOOR DIAPHRAGM. WHERE OTHER FRAMING CONDITIONS EXIST SUCH AS TJI JOIST FRAMING, A SPECIAL ENGINEERED DESIGN WILL BE REQUIRED. **IT IS THE OWNER'S RESPONSIBILITY TO VERIFY EXISTING CONDITIONS PRIOR TO START OF ANY AND ALL WORK.**



**SECTION VIEW**



**FRONT VIEW**

## ⑦ DECK TO EXISTING FLOOR FRAMING

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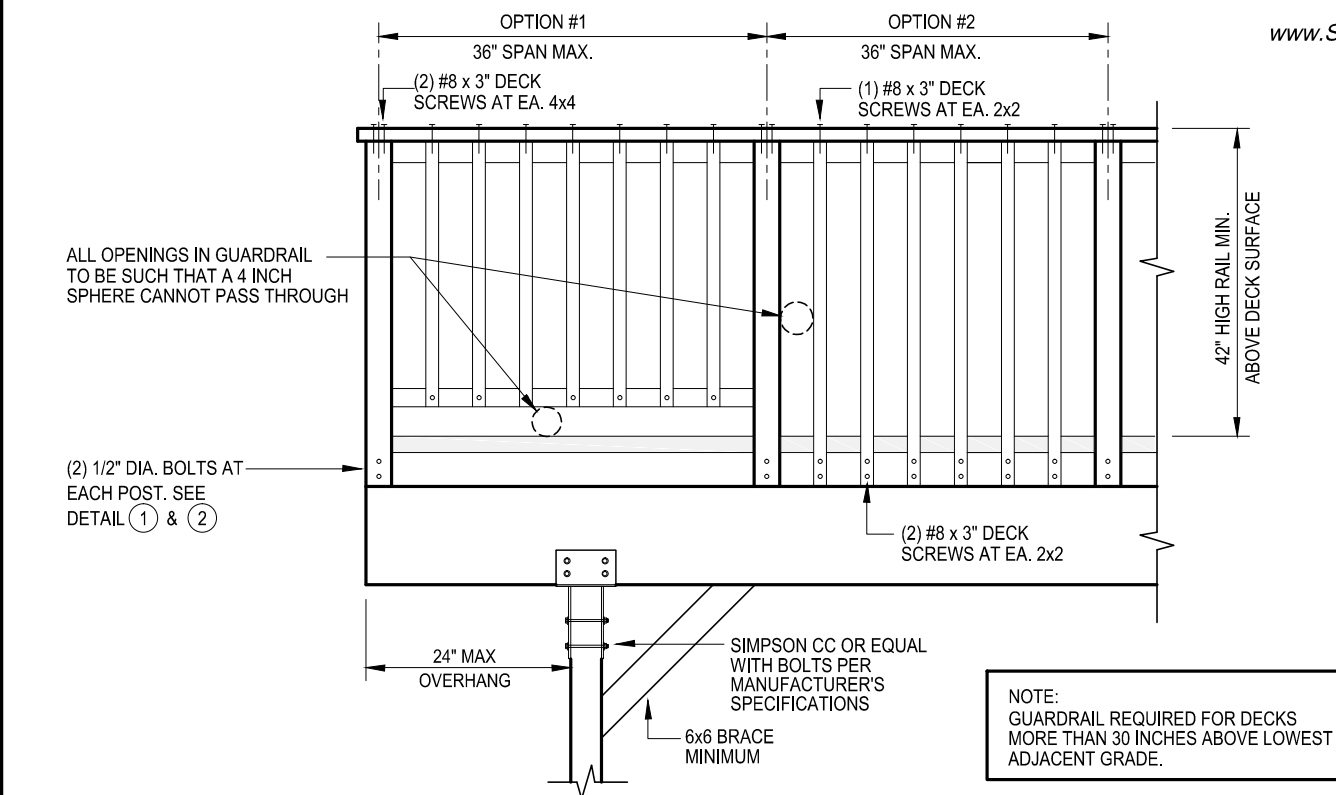
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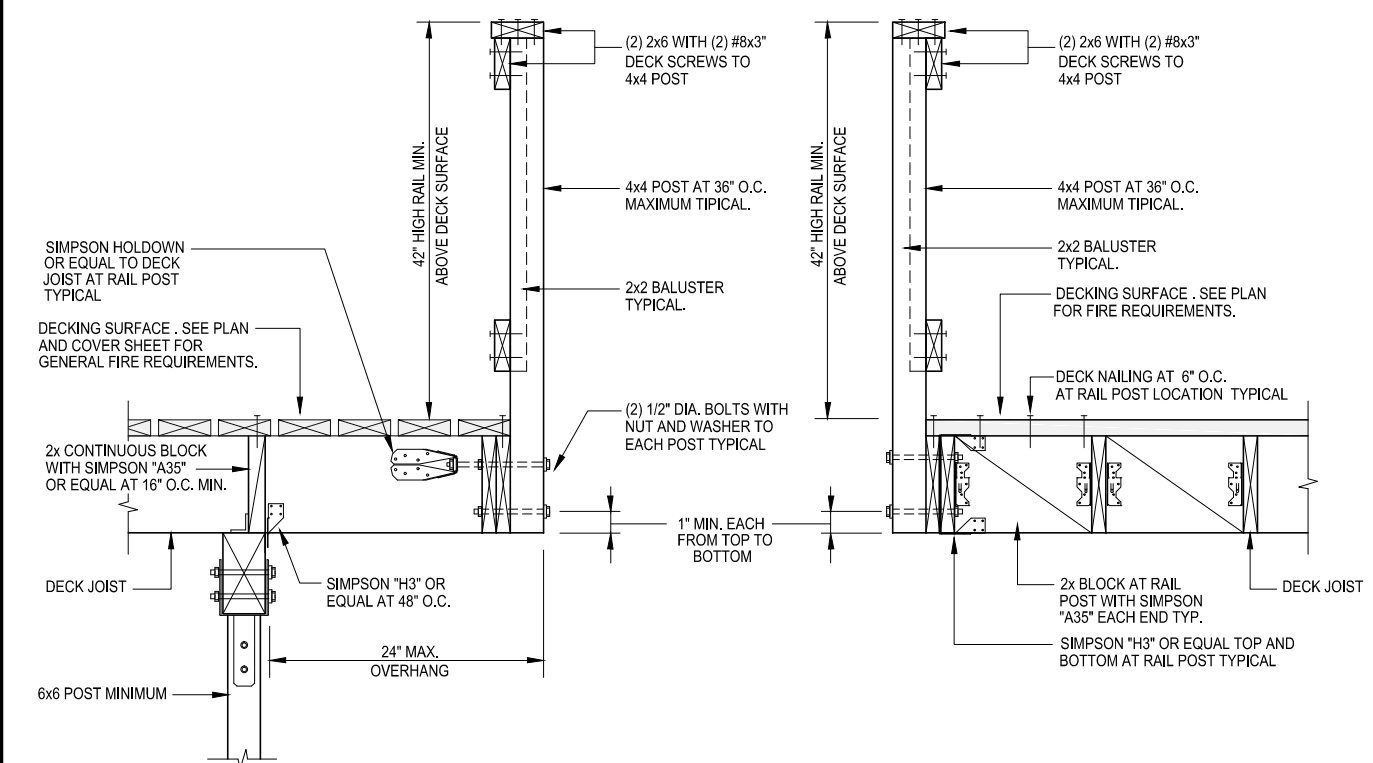
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① TYPICAL RAIL ELEVATION



① TYPICAL RAIL SECTION (PERPENDICULAR TO JOIST)

② TYPICAL RAIL SECTION (PARALLEL TO JOIST)

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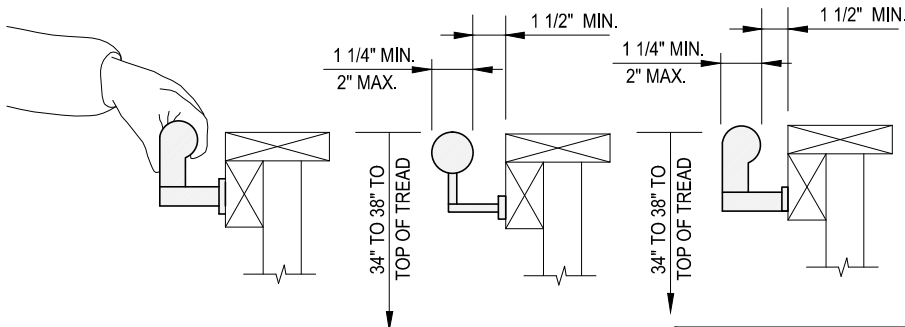
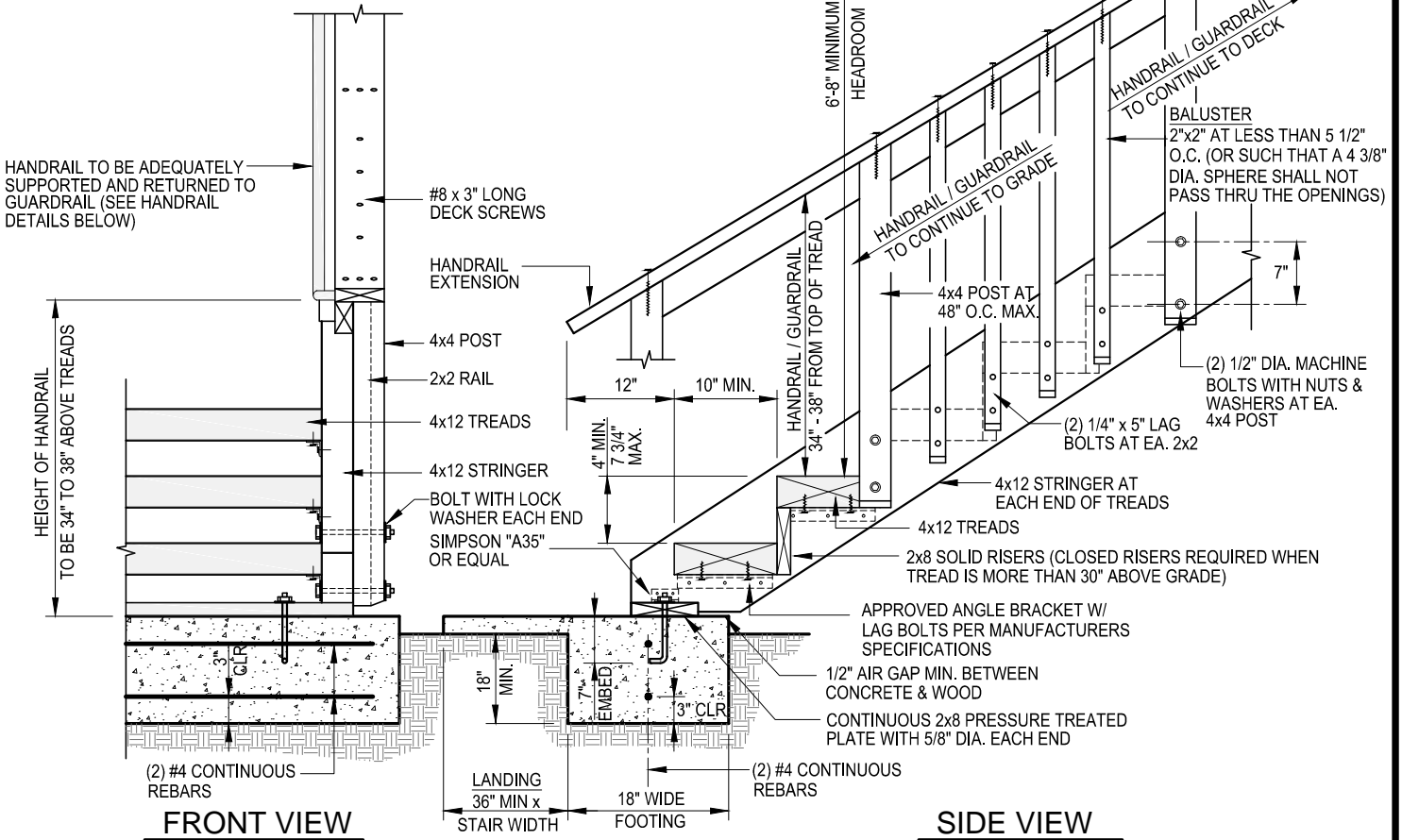
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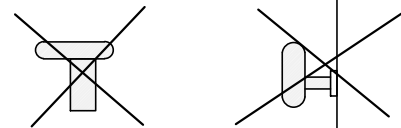
# OPTIONAL EXTERIOR STAIRWAY

## NOTES:

1. THE TOLERANCE BETWEEN THE LARGEST AND SMALLEST TREAD DEPTH OR BETWEEN THE LARGEST AND SMALLEST RISER HEIGHT SHALL NOT EXCEED 3/8" IN THE STAIRWAY.
2. STAIRWAY WIDTH SHALL BE 36" MIN TO 48" MAX.
3. TREADS MUST HAVE APPROVED SLIP RESISTANT SURFACE.
4. ALTERNATE STAIRWAY DESIGNS MAY BE ACCEPTABLE PENDING BUILDING DEPARTMENT APPROVAL.
5. LIGHTING LEVEL AT ALL STAIR TREADS TO BE A MINIMUM OF 1 FOOT CANDLE.



NOTE:  
OTHER HANDRAIL SHAPES MAY BE ACCEPTABLE IF THEY PROVIDE AN EQUIVALENT GRIPPING SURFACE.



THESE HANDRAIL DESIGNS ARE NOT ACCEPTABLE

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