

CITY OF ARNOLD BUILDING DIVISION

Decks Permit Requirements

This guide is to provide the homeowner or contractor with basic information needed to apply for a permit to build a simple deck. Within this guide are standard details that may be used as part of the required construction plans.

1. Complete and sign a permit application.
2. Pay permit fees at time of application. Fees are calculated as follows:
 - Sixty-five dollars (\$65.00) for the first one thousand dollars (\$1,000.00) of construction cost or part thereof.
 - Plus three-tenths of one (0.3) percent of construction costs exceeding one thousand dollars (\$1,000.00)
3. Submit two (2) copies of detailed construction plans drawn to scale containing the following:
 - a. Site plan showing setbacks, easements, structures, all other improvements, and storm water drainage direction.
 - b. Foundation or pier plan
 - c. Deck floor and framing plan
 - d. Sectional details, when using the attached details check the box of the ones to be used and complete any missing information
 - e. Section views through the deck in both directions
 - f. Section through the stairway
 - g. Elevation drawing
4. The attached drawings and the following information are the more common items that must be shown on the permit plans.

Guardrails a minimum of 36 inches in height must be provided around the edge of decks and along the stairs when the deck is more than 30 inches above the grade or a lower deck or patio.

Guardrail balusters (spindles) must be spaced so a 4-inch sphere cannot pass through the openings.

Stairs must be a minimum of 36 inches wide with a 7-³/₄ inch maximum riser and a 10-inch minimum tread.

The bottom of the pier must be a minimum of 30 inches below finish grade and the diameter large enough to support the loads of the deck.

All overhead utility lines (electric, telephone, cable) over and within 3 feet of the deck must be at least 10 feet above the finished deck floor. Show the location of overhead wires on the site plan.

This brochure applies to most basic types of deck design. On more complicated designs the review may indicate the need for additional information. The building commissioner will communicate this to the applicant usually by letter.

For additional information or questions about a deck permit please call us at 636-282-2378 or visit the office at 2101 Jeffco Blvd., Arnold, MO 63010. Our business hours are 8:00am to 4:45pm, Monday through Friday, excluding holidays.

City of Arnold Building Division

May 6, 2011

Policy Statement (REVISED) previous edition May 2, 2011 obsolete.

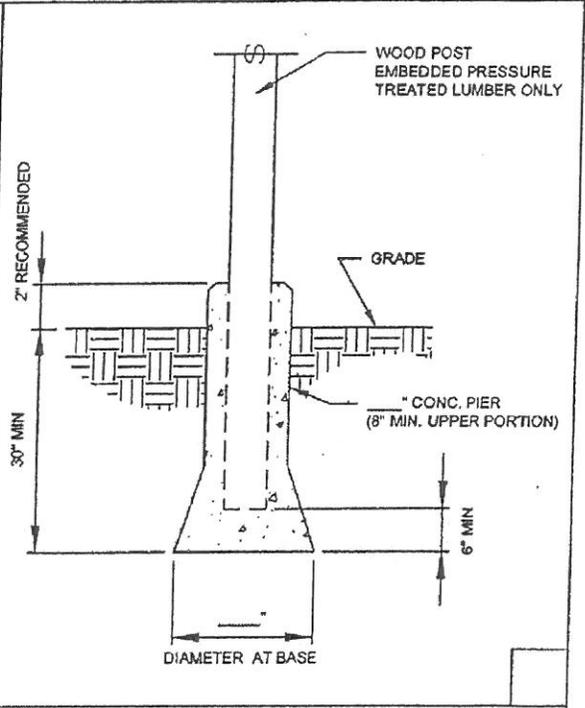
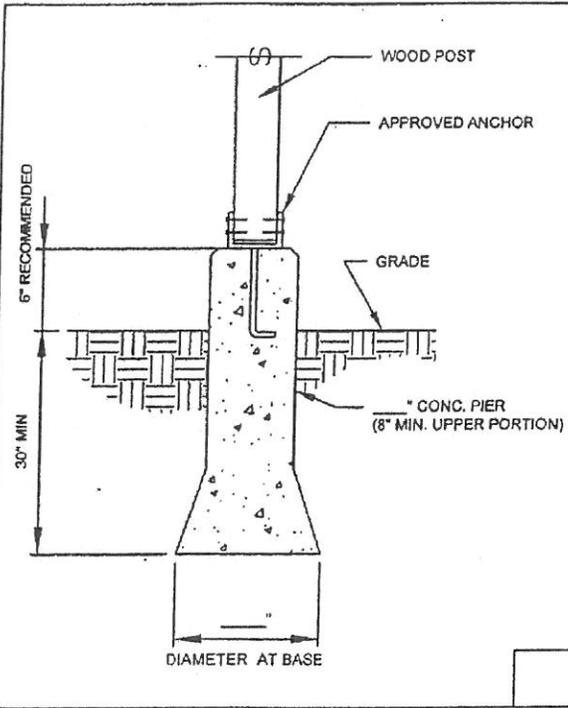
RE: Composite Deck and Railing Materials... International Code Council (ICC) Evaluation Service Research Reports, or an Architectural Testing Inc., (ATI), Code Compliance Research Report (CCCR).

Due to the unique characteristics of composite and vinyl materials used in deck and guardrail elements, it is necessary they possess a published ICC Research Report or an ATI Code Compliance Research Report for permit approval.

The Research Report, or at very least, the Report number must accompany the plans submitted for permit review and approval.

Alternate research reports issued by an entity other than ICC or ATI may be submitted provided the composite/vinyl material plans are originally sealed by a Missouri registered architect or engineer and accompanied by an originally sealed and signed letter from the same design professional, that states the material and design is in conformity with all requirements of the current City of Arnold Building Code.

Daniel B. Conley, CBO
Building Commissioner



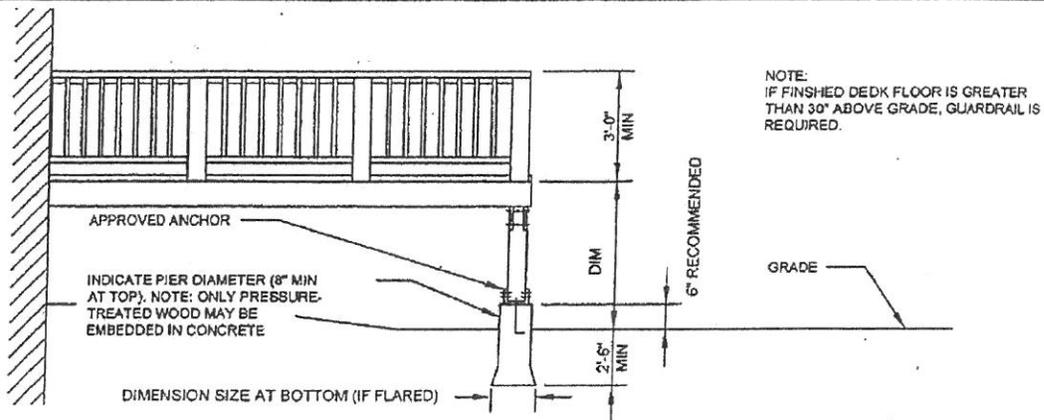
SPECIFICATIONS:

1. PIER SPACING AND SIZE MUST BE NOTED ON FOUNDATION/FRAMING PLAN.
2. POST TYPE AND SIZE MUST BE NOTED ON FOUNDATION/FRAMING PLAN.
3. PIER MUST BE 30" MIN. BELOW GRADE.
4. ONLY PRESSURE TREATED LUMBER IN EMBEDDED POST CONNECTION.

INSTRUCTIONS:

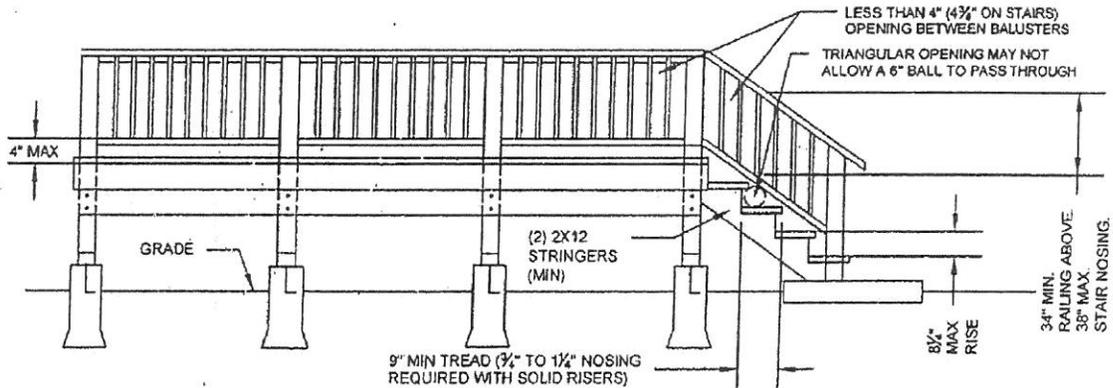
1. CHECK DRAWING TO BE USED.
2. INDICATE PERTINENT INFORMATION OF DRAWING USED.

PIER POST DETAILS



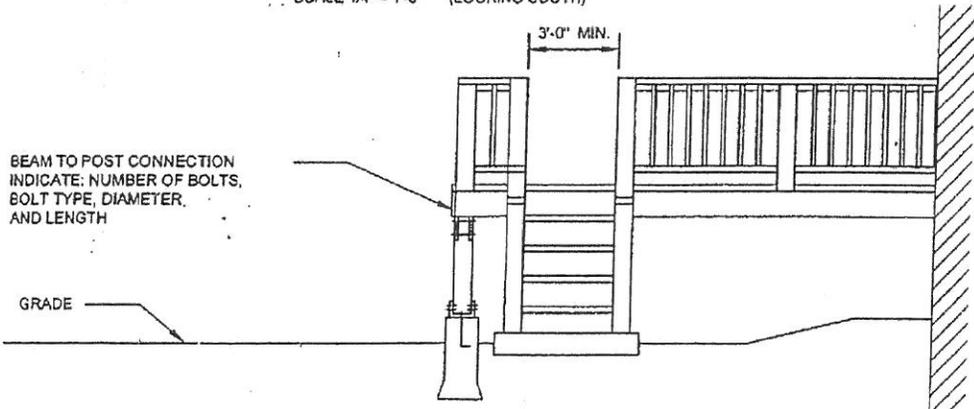
SAMPLE EAST ELEVATION

SCALE 1/4" = 1'-0" (LOOKING WEST)



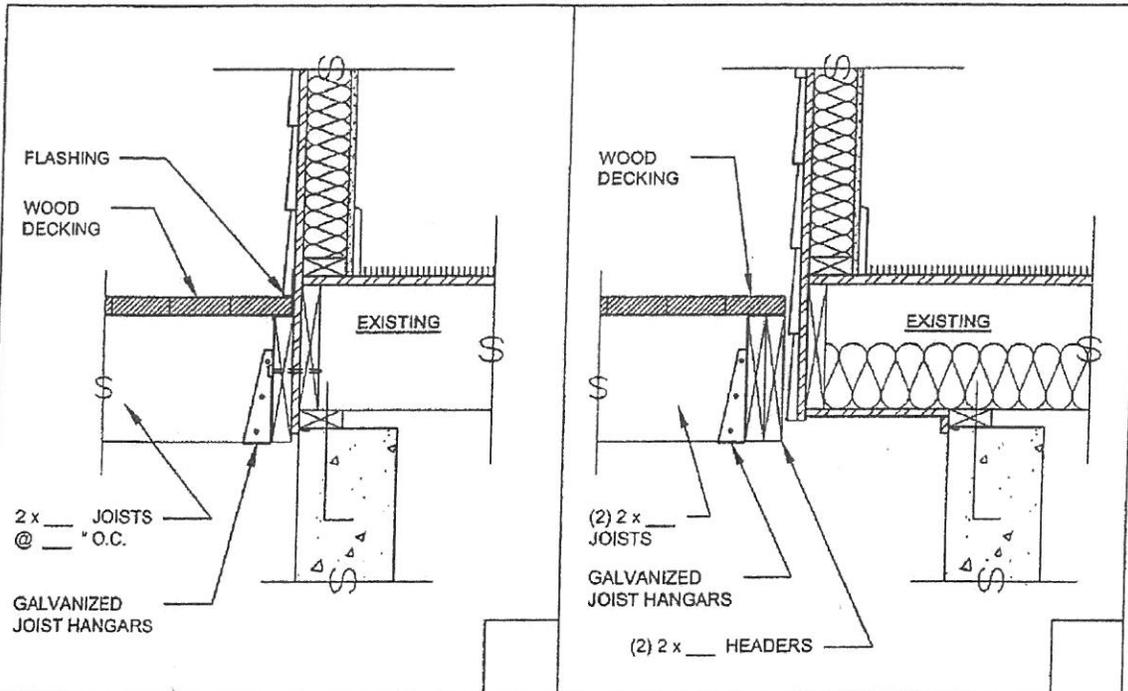
SAMPLE NORTH ELEVATION

SCALE 1/4" = 1'-0" (LOOKING SOUTH)



SAMPLE WEST ELEVATION

SCALE 1/4" = 1'-0" (LOOKING SOUTH)



SPECIFICATIONS:

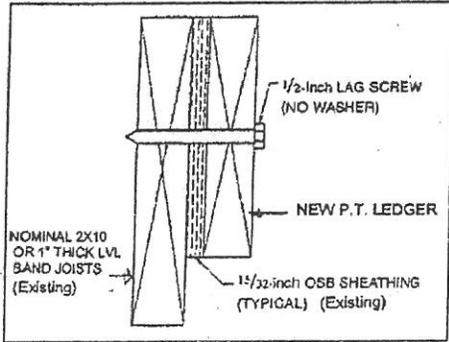
1. MUST FRAME AROUND ANY EXISTING OVERHANGS (I.E. BAY WINDOWS). NOTE: SOME DESIGNS REQUIRE ADDITIONAL POST/PIER SUPPORTS.
2. TOP OF WOOD DECKING SHOULD BE 1" BELOW FINISH FLOOR LEVEL.
3. FLASHING IS REQUIRED.
4. INDICATE TYPE, SIZE, AND SPACING OF FLOOR JOISTS ON FOUNDATION/ FRAMING PLAN.
5. JOIST HANGARS MUST BE ATTACHED WITH 16d NAILS OR APPROVED JOIST HANGAR NAILS (SCREWS NOT ALLOWED).
6. IF LEDGER IS TO BE ATTACHED TO CONCRETE OR MASONRY, PROVIDE DETAIL OF ATTACHMENT.

INSTRUCTIONS:

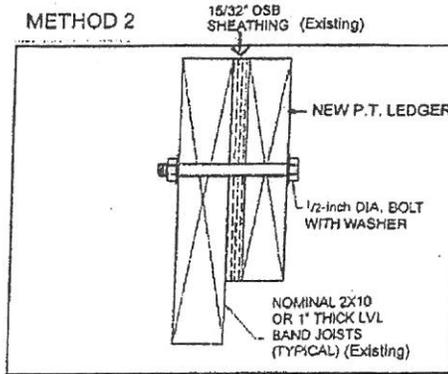
1. CHECK DRAWING TO BE USED.
2. INDICATE PERTINENT INFORMATION OF DRAWING USED.

DECK-HOUSE CONNECTIONS

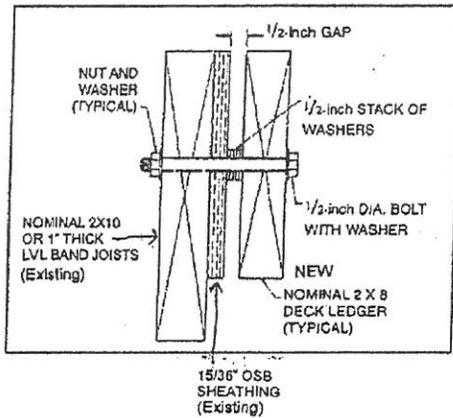
METHOD 1



METHOD 2

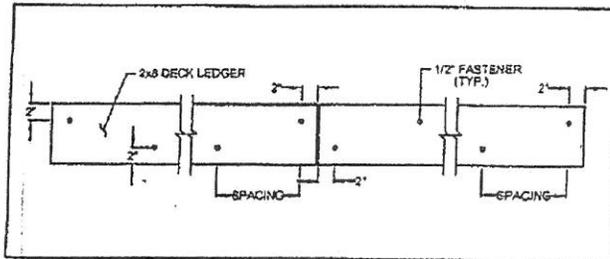


METHOD 3

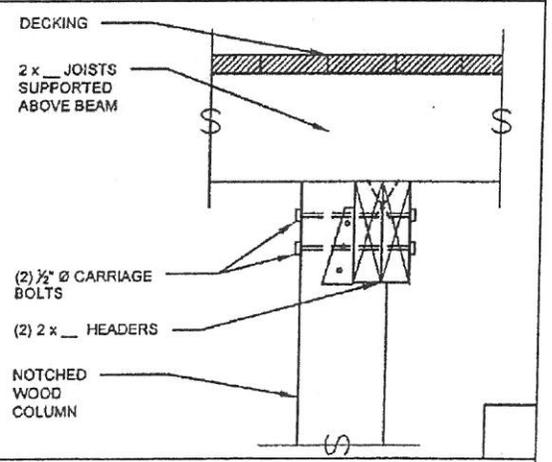
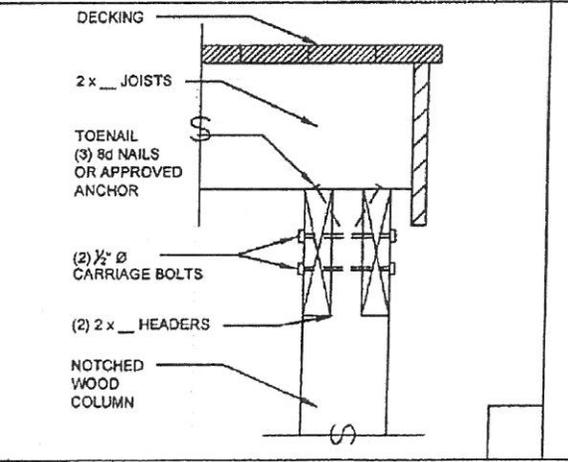
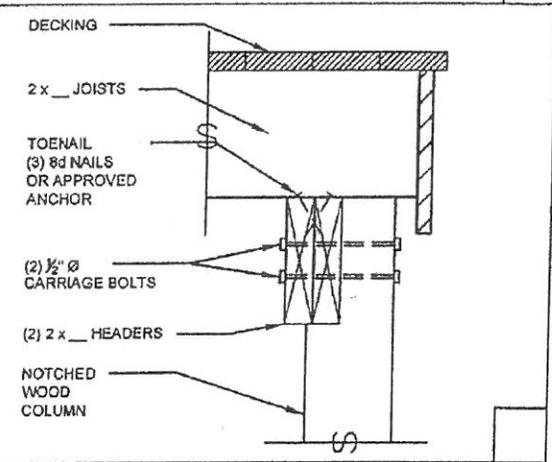
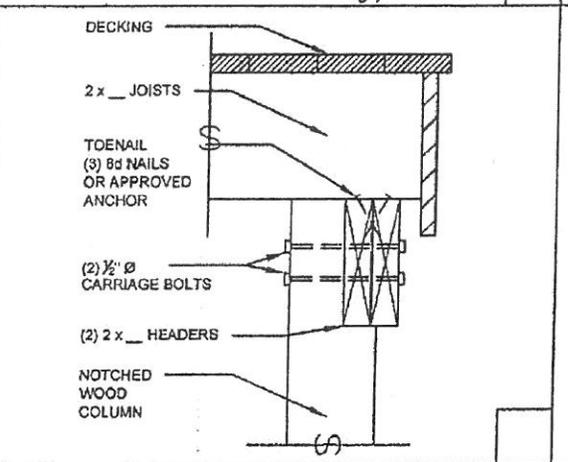
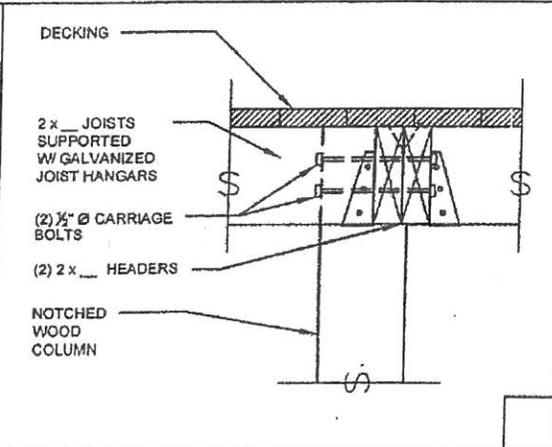
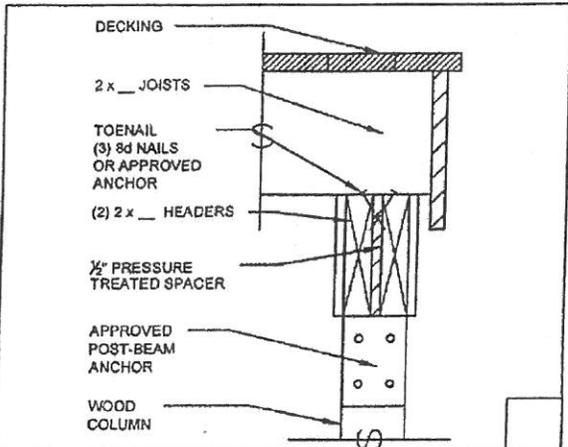


SPACING OF 1/2" ϕ " FASTENERS IN INCHES

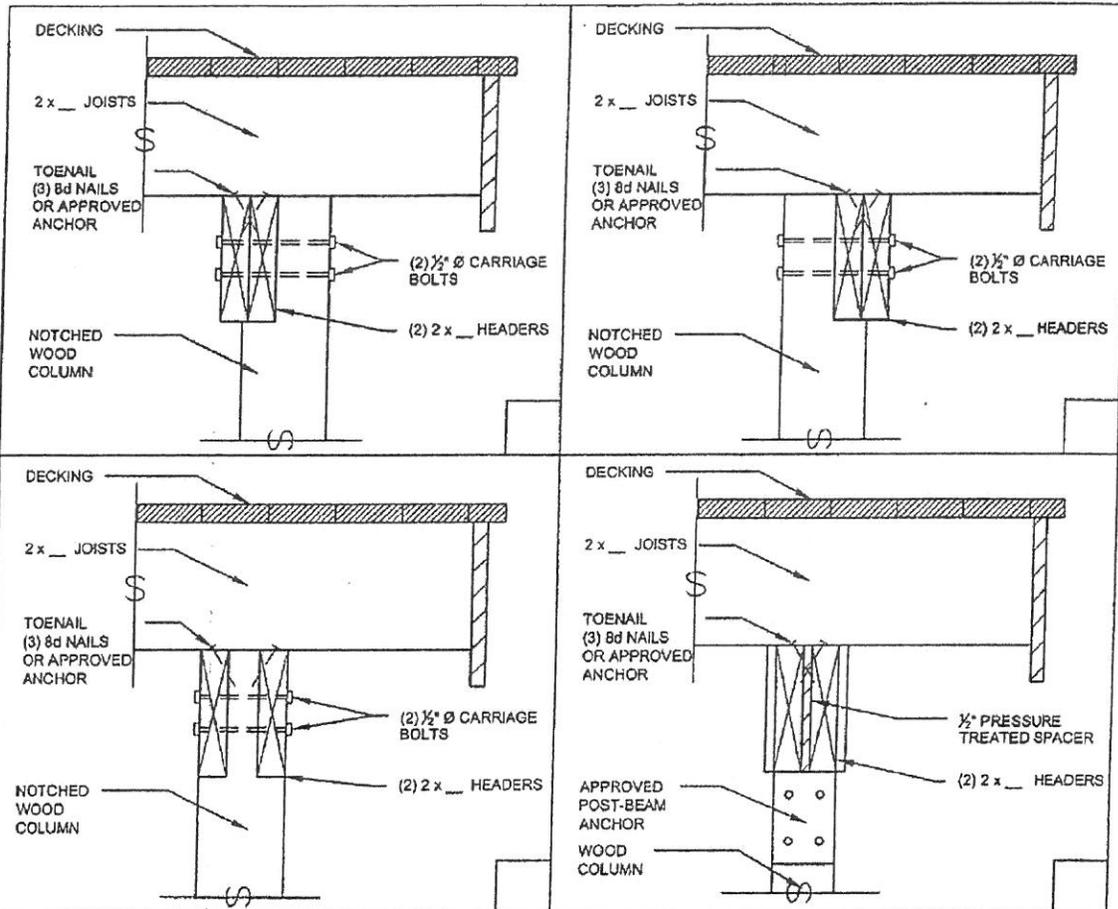
CONNECTION DETAIL	RESIDENTIAL DECK JOIST SPAN						
	6 feet	8 feet	10 feet	12 feet	14 feet	16 feet	18 feet
METHOD 1 1/2-inch lag screws with 1 1/2-inch sheathing	30	23	18	15	13	11	10
METHOD 2 1/2-inch bolt screws with 1 1/2-inch sheathing	36	36	34	29	24	21	19
METHOD 3 1/2-inch bolts with 1 1/2-inch sheathing and 1/2-inch stacked washers	36	36	29	24	21	18	16



DECK HOUSE CONNECTIONS (continued)



POST-BEAM CONNECTIONS



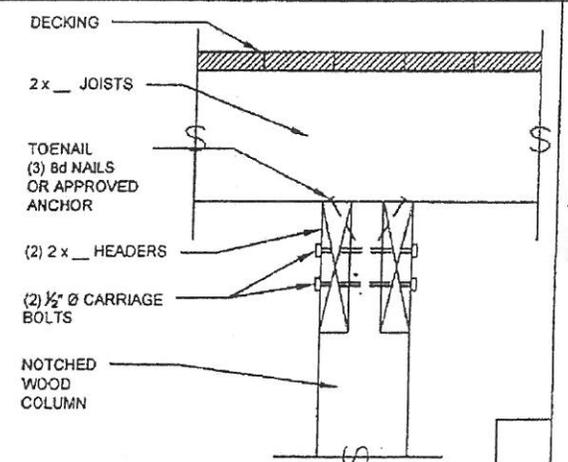
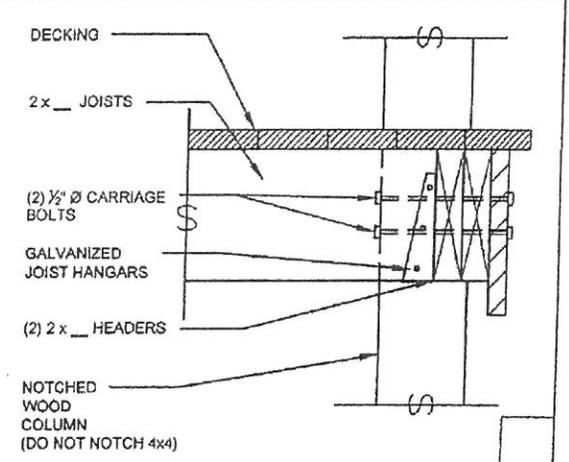
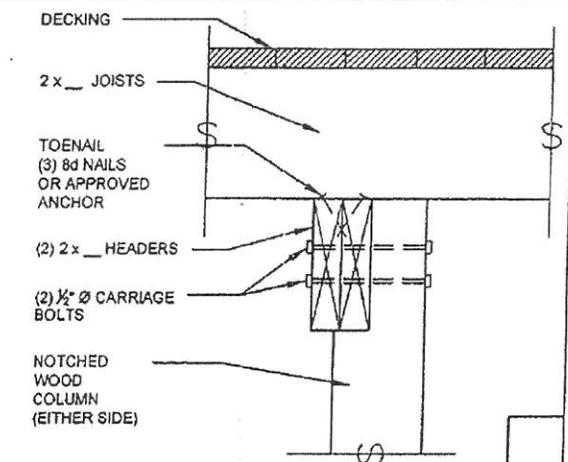
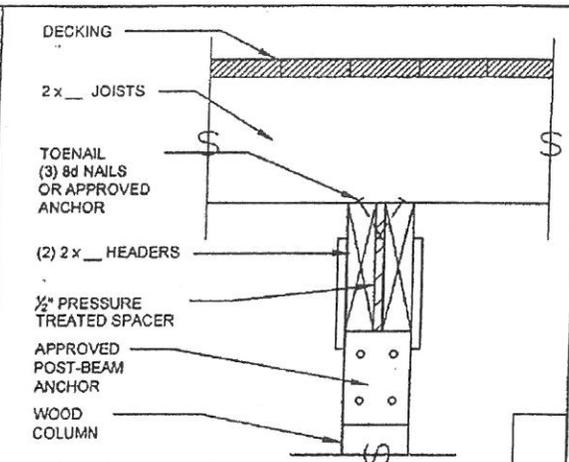
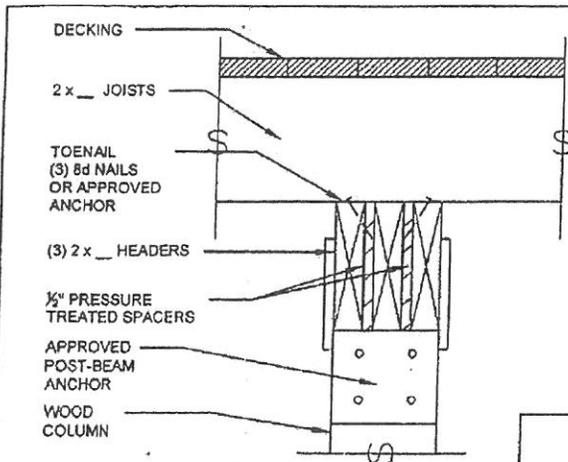
SPECIFICATIONS:

1. 2'-0" MAXIMUM CANTILEVER RECOMMENDED. DEPENDENT UPON SIZE AND SPACING OF FLOOR JOISTS, TYPE AND GRADE OF WOOD, AND OVERALL DECK DESIGN.
2. 1/2" Ø CARRIAGE BOLTS RECOMMENDED FOR CONNECTION.

INSTRUCTIONS:

1. CHECK DRAWING TO BE USED.
2. INDICATE PERTINENT INFORMATION FOR DRAWING USED.

CANTILEVER POST-BEAM CONNECTIONS



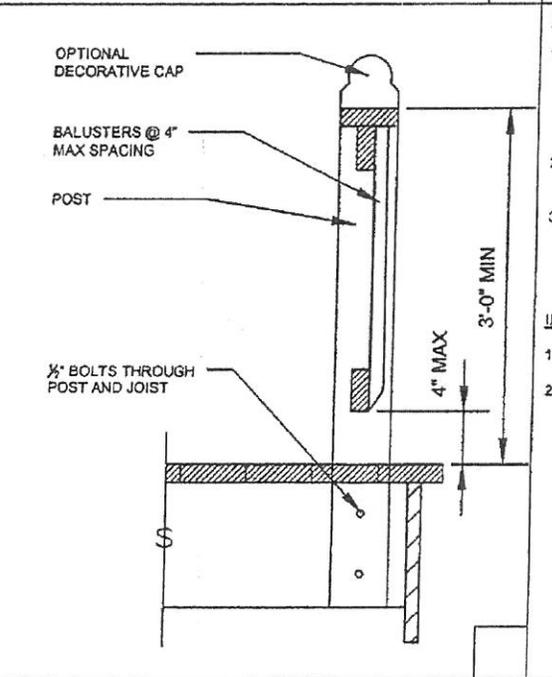
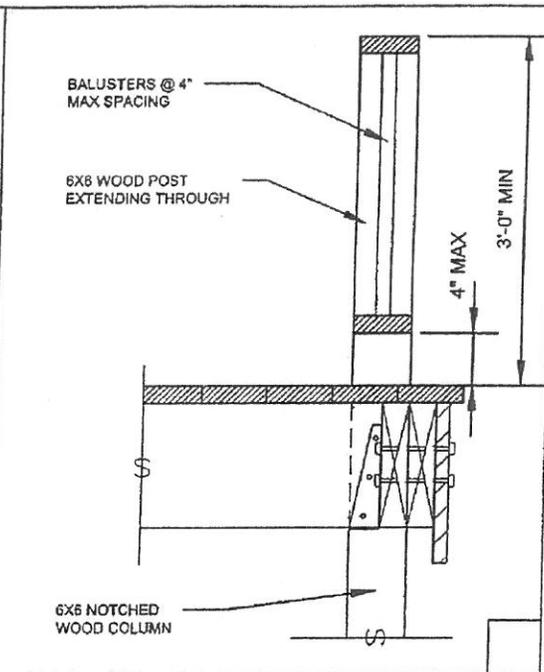
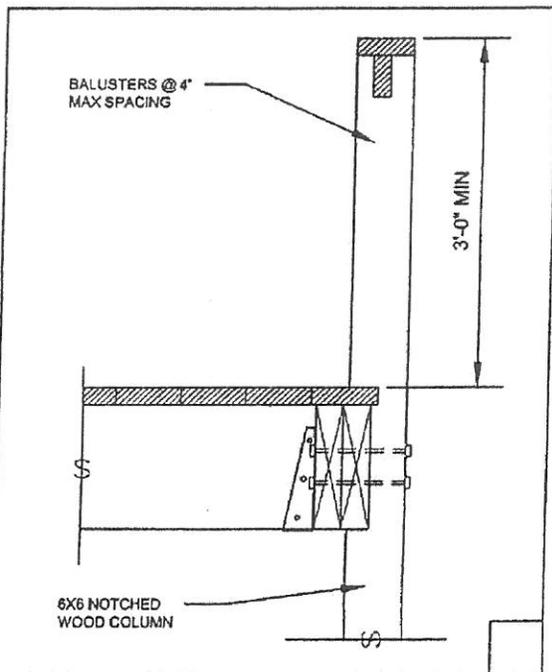
SPECIFICATIONS:

1. 1/2" Ø CARRIAGE BOLTS RECOMMENDED FOR CONNECTION.

INSTRUCTIONS:

1. CHECK DRAWING TO BE USED.
2. INDICATE PERTINENT INFORMATION FOR DRAWING USED.

CENTER BEAM CONNECTIONS



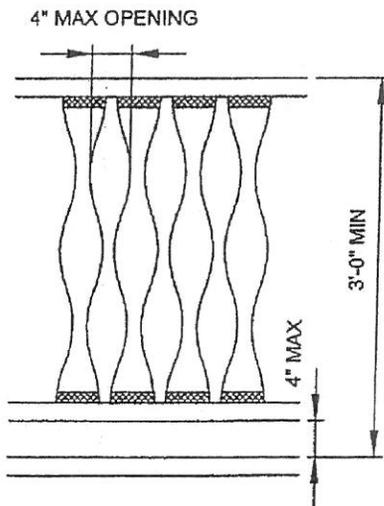
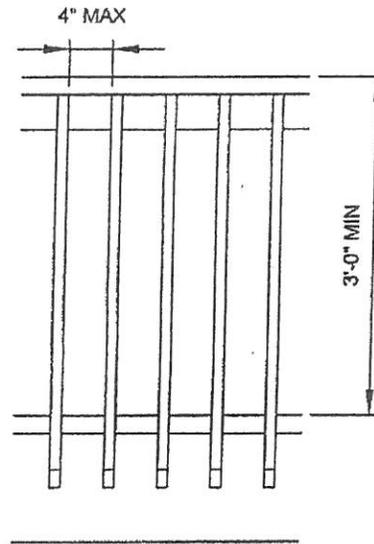
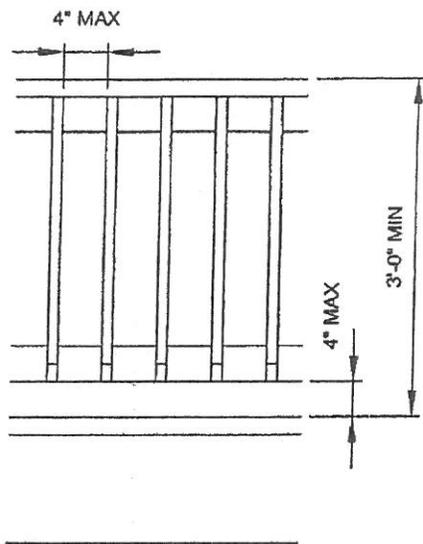
SPECIFICATIONS:

1. FOR DECK FLOORS MORE THAN 30" ABOVE GRADE OR LOWER DECK LEVELS, GUARDRAILS MUST BE PROVIDED AROUND THE PERIMETER OF THE UPPER DECK A MINIMUM OF 36" IN HEIGHT. A 42" HIGH GUARD IS REQUIRED FOR A DECK SERVING A DWELLING UNIT IN A BUILDING WITH VERTICALLY STACKED DWELLING UNITS (R-2 USE).
2. 4" MAXIMUM OPENING AT ANY POINT BETWEEN VERTICAL BALUSTERS AND ALSO BETWEEN DECKING AND BOTTOM RAIL.
3. JOIST HANGARS MUST BE ATTACHED WITH 16d NAILS OR APPROVED JOIST HANGAR NAILS (SCREWS NOT ALLOWED).

INSTRUCTIONS:

1. CHECK DRAWING TO BE USED.
2. INDICATE PERTINENT INFORMATION FOR DRAWING USED.

GUARDRAIL SECTIONAL DETAILS



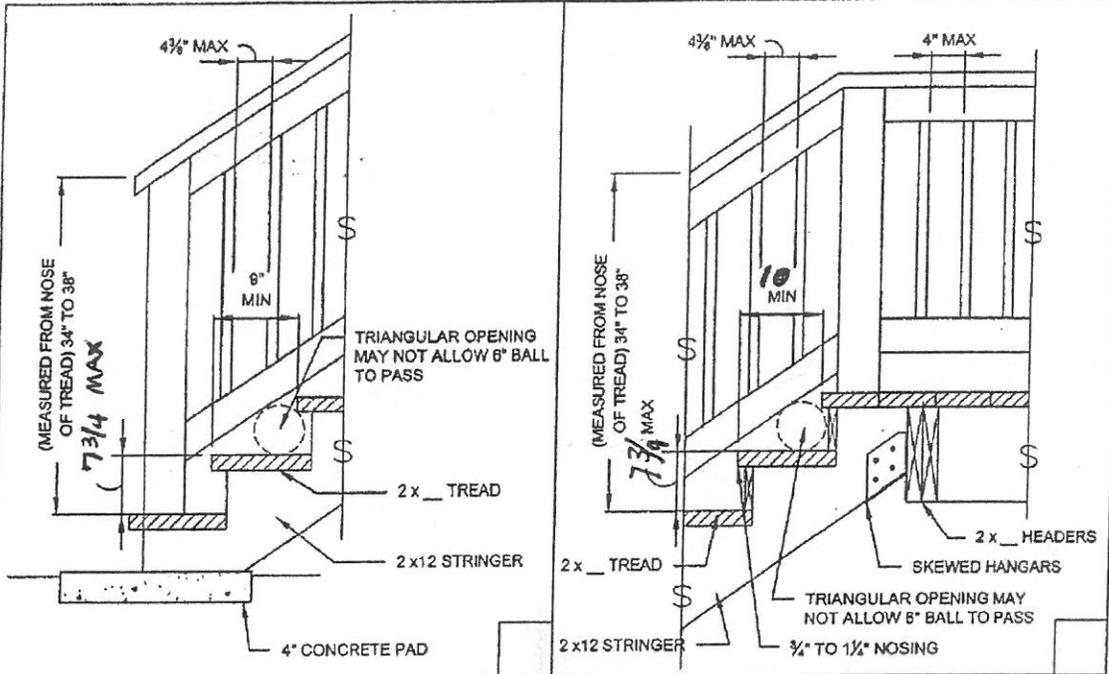
SPECIFICATIONS:

1. FOR DECK FLOORS MORE THAN 30" ABOVE GRADE OR LOWER DECK LEVELS, GUARDRAILS MUST BE PROVIDED AROUND THE PERIMETER OF THE UPPER DECK A MINIMUM OF 36" IN HEIGHT. A 42" HIGH GUARD IS REQUIRED FOR A DECK SERVING A DWELLING UNIT IN A BUILDING WITH VERTICALLY STACKED DWELLING UNITS (R-2 USE).
2. 4" MAXIMUM OPENING AT ANY POINT BETWEEN VERTICAL BALUSTERS AND ALSO BETWEEN DECKING AND BOTTOM RAIL.
3. PLASTIC RAILINGS AND GUARDS MAY ONLY BE APPROVED IF THE PRODUCT HAS A VALID ICC-EVLATUATION REPORT (ICC-ES) AND THE APPLICATION OF THE MATERIAL IS LIMITED TO CONDITIONS LISTED IN THE REPORT.

INSTRUCTIONS:

1. CHECK DRAWING TO BE USED.
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GUARDRAIL ELEVATIONS



SPECIFICATIONS:

1. DECK FLOORS 30" OR LESS ABOVE GRADE HAVING STAIRS WITH 4 OR MORE RISERS NEED A CONTINOUS HANDRAIL ON ONLY ONE SIDE OF THEM. THE STAIR 34" TO 38" IN VERTICAL HEIGHT ABOVE THE TREAD NOSING.
2. COMBINATION HAND AND GUARDRAIL (WITH VERTICAL BALUSTERS) 34" TO 38" VERTICAL FROM TREAD NOSING IS REQUIRED ON SIDES OF STAIRS WHERE THE TOTAL RISE OF THE STAIR EXCEEDS 30" ABOVE THE FLOOR OR GRADE BELOW.
3. 4 3/8" MAXIMUM HEIGHT BETWEEN VERTICAL BALUSTERS.
4. 7 3/4" MAXIMUM RISER HEIGHT
5. 10" MINIMUM TREAD HEIGHT
6. TRIANGULAR OPENING BETWEEN STAIRS AND GUARDRAIL MAY NOT ALLOW 6" BALL TO PASS THROUGH (AS DRAWN).
7. MINIMUM OF 2-2x12 STRINGERS REQUIRED FOR STAIRS UP TO 3" WIDE
3-2x12 STRINGS FOR STAIRS 3' TO 4' WIDE.
8. JOIST HANGARS MUST BE ATTACHED WITH 16d NAILS OR APPROVED JOIST HANGAR NAILS. (SCREWES NOT ALLOWED).
9. CLOSED RISERS ARE REQUIRED FOR STAIRS SERVING THE PRIMARY MEANS OF EGRESS (MAIN ENTRY DOOR) 3/4" TO 1 1/4" TREAD NOSING IS REQUIRED ON CLOSED RISERS.

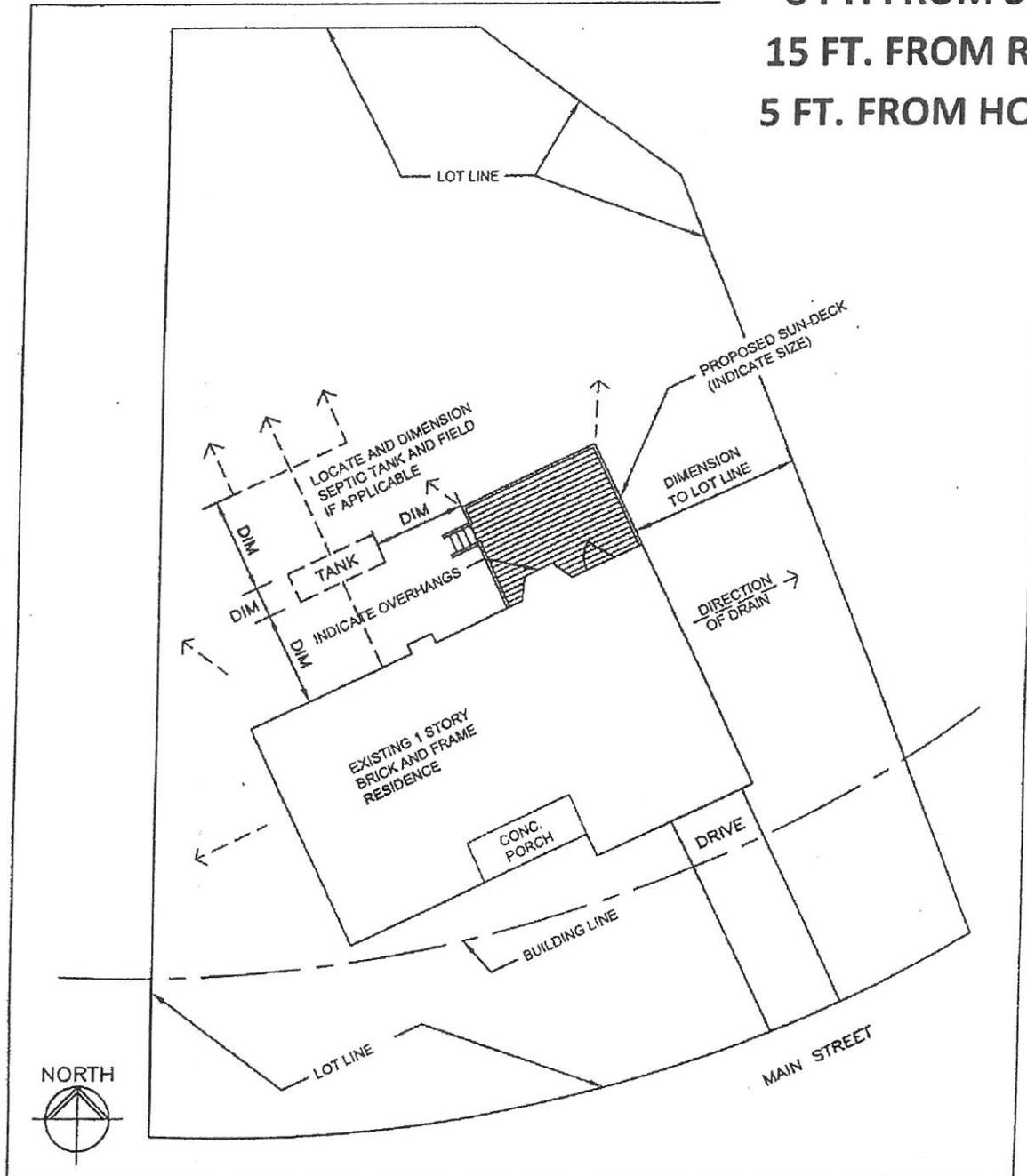
INSTRUCTIONS:

1. CHECK DRAWING TO BE USED.
2. INDICATE PERTINENT INFORMATION FOR DRAWING USED.

STAIR DETAILS

SETBACKS

8 FT. FROM SIDE
 15 FT. FROM REAR
 5 FT. FROM HOUSE



TYPICAL PLOT PLAN		OWNER:	
FOR: SUN-DECK		ADDRESS:	
SCALE: 1"=20'-0"	SUBDIVISION:	LOT NO.:	