CITY OF
OAK PARK HEIGHTS
14168 Oak Park Blvd. N • Box 2007 • Oak Park Heights, MN 55082 • Phone (651) 439-4439 • Fax (651) 439-0574

DECK CONSTRUCTION REQUIREMENTS

Should you have any questions after reading the following information, please call the Building Inspection Department at 651-439-4439 to discuss the topics of concern. We will do our very best to answer your questions in a simple, easy to understand manner.

BUILDING PERMITS: Building Permits are required for all decks that are attached to the home or are constructed 30" or more above grade. Decks less than 30" above grade **and** are not attached to any other structures do not require a building permit, but do require a zoning permit and must comply with the use and setback requirements of the City's Zoning Code.

Building Permit application forms can be obtained from our web site (www.cityofoakparkheights.com) or may be filled out at the time you drop off your plans.

Gopher State One --- Call 651-454-0002 or 1-800-252-1156 at least two business days prior to digging holes for the footings. E-mail address is www.gopherstateonecall.org.

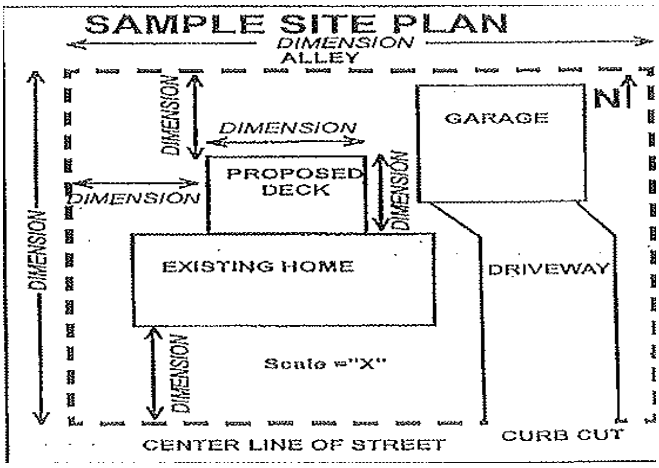
RESPONSIBILITIES OF THE PROPERTY OWNER:

1. To be sure that a Building Permit has been issued for this construction project.
2. Verify that your Contractor is licensed with the State of Minnesota.
3. To locate property corner irons for the identification of the property lot lines.
4. To make sure all required inspections have been requested, made, and approved by the City's Building Official.

INFORMATION TO BE SUBMITTED WITH THE BUILDING PERMIT APPLICATION FORM:

With the Building Permit Application you will need to submit a survey or a scale drawing of a site plan, floor plan of the deck, and an elevation plan of the deck. The following text and sample drawings show the minimum detail expected so the permit process can proceed smoothly.
Two sets of each plan is required and should have all of the information requested.

SURVEY OR SITE PLAN:
The Certificate of Survey or site plan shall be drawn to scale indicating the lot dimensions, the location and size of the existing structure(s), and the location and size of the proposed deck structure. Indicate the setbacks from the property lines of the existing and proposed deck structure (s). **NOTE: Setback requirements vary as to a deck structure or a porch structure.**

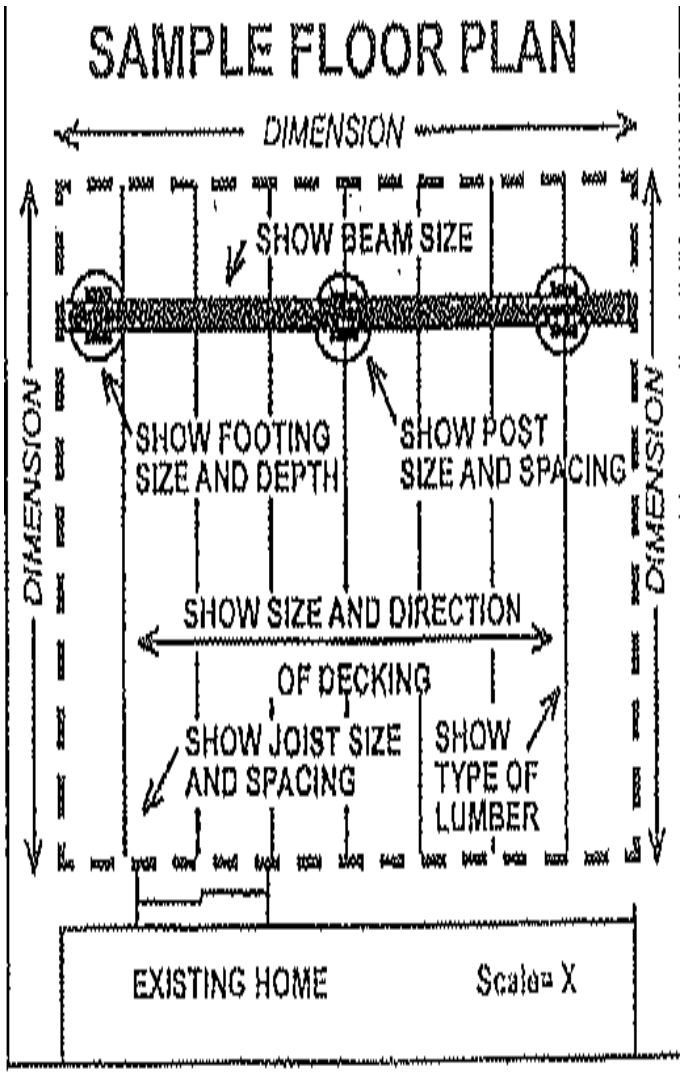


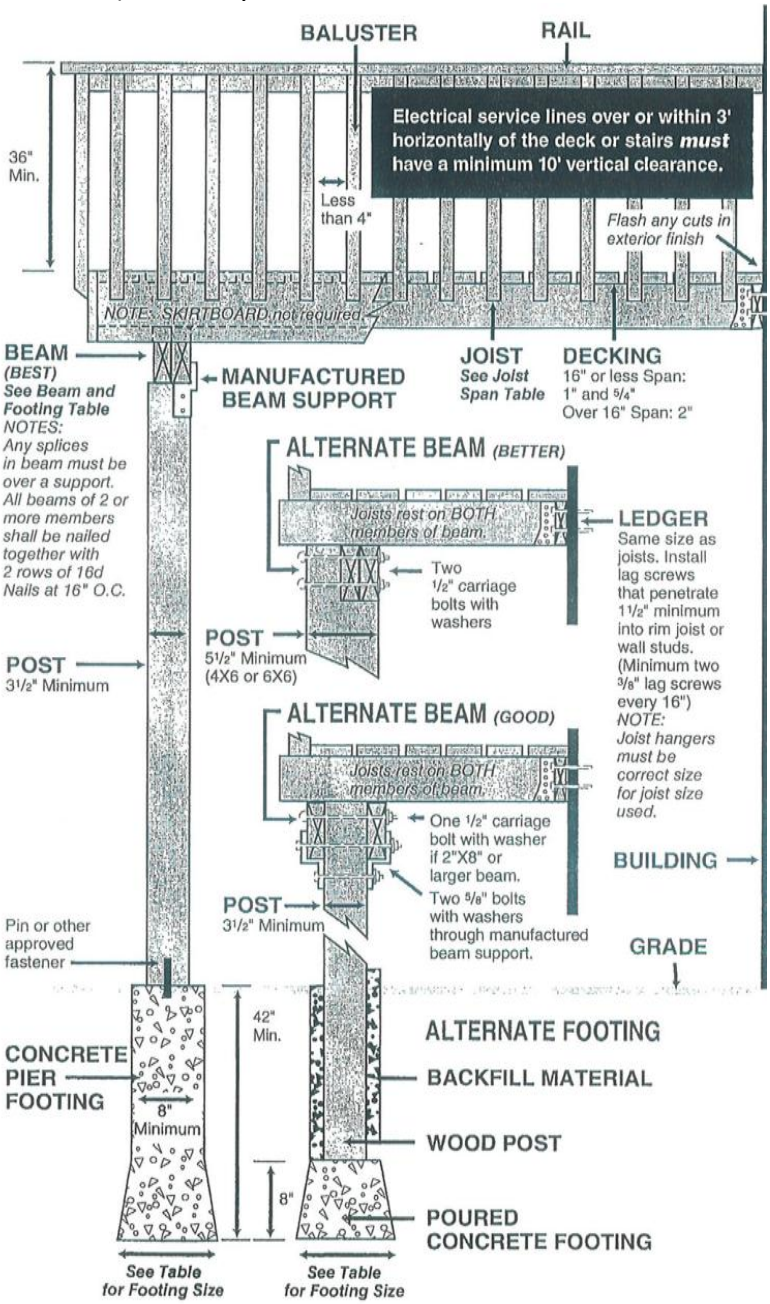
FLOOR PLAN:

1) Proposed deck size. (Length & Width)
2) Size and spacing of the floor joists.
3) Size and type of decking material.
4) Size, type, location, and spacing of posts.
5) Size, type, and location of beams.
6) Show footing location & diameter.

SIDE & REAR VIEW ELEVATION PLANS

1) Height of the structure from grade.
2) Diameter size & depth of footings.
3) Guard height & intermediate guard rail spacing. (If required)
4) Handrail height. (If required)
5) Stairway treads rise & run.





REQUIRED INSPECTIONS:

1. **Footings:** After the holes are dug, but ***PRIOR TO THE POURING OF CONCRETE.***
2. **Framing:** This inspection is to be made after all framing, blocking, and bracing are in place. If the deck is less than 48" above grade the inspection is required prior to the installation of the floor decking, so the framed structure is accessible and visible for an inspection.
3. **Final:** To be made upon completion of the deck and finish grading.

CALL FOR REQUIRED INSPECTIONS 24 HOURS PRIOR TO SCHEDULE APPOINTMENT TIME

Leave your name, phone number, type of inspection needed, time for the inspection, and the project address.

GENERAL BUILDING CODE REQUIREMENTS

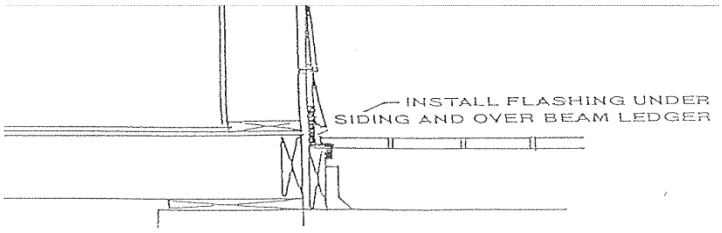
FOOTINGS: Footings are to be a minimum of 42 inches in depth and the sides are to be smooth or sauna tubes are required to prevent damage to the structure from the frost heaving the deck footings. **NOTE: CONSIDING A FUTURE PORCH? DESIGN THE FOOTINGS APPROPRIATELY.**

LIVE LOAD: Decks need to be designed for a 40-pound per square foot live load and all balconies to a 60 pound per square foot live load. Decks exposed to the weather must be constructed of approved wood with natural resistance to decay such as redwood, cedar or treated wood. Also, members which form the structural support including: horizontal members such as beams, joists, ledger boards and decking; and vertical members such as posts, poles and columns need to be so constructed. Ledger boards must be bolted or lagged to the building and all connections between the deck and dwelling must be flashed. Before using alternative building products, check with your local building official to insure products have been approved for use. Cedar or redwood posts need an 8 inch separation from ground.

NOTICE REGARDING PRESSURE-TREATED WOOD: When a pressure-preservative-treated wood is used, it must comply with the American Wood Preservers Association UI Standard based on exposure and use (above ground .40 or ground contact .60). The lumber must bear the quality mark (stamp or end tag) of an approved inspection agency. Designers, builders and homeowners need to verify that proper hardware (hangers, nails brackets) are appropriate with the particular treatment of the lumber. This not only applies to decks utilizing these products, but sill plates and posts as well.

FLASHING: All connections between deck and dwelling shall be weatherproof. Cuts in exterior finish shall be flashed.

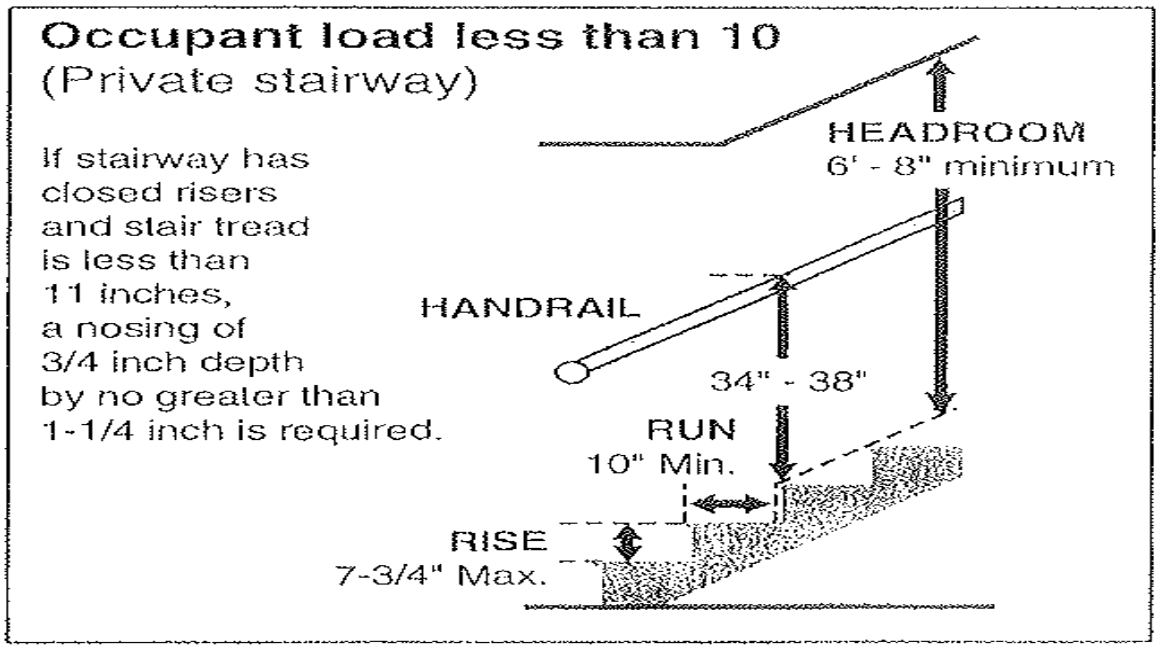
NAIL SCREWS: Use only stainless steel, high strength aluminum hot-dipped galvanized.



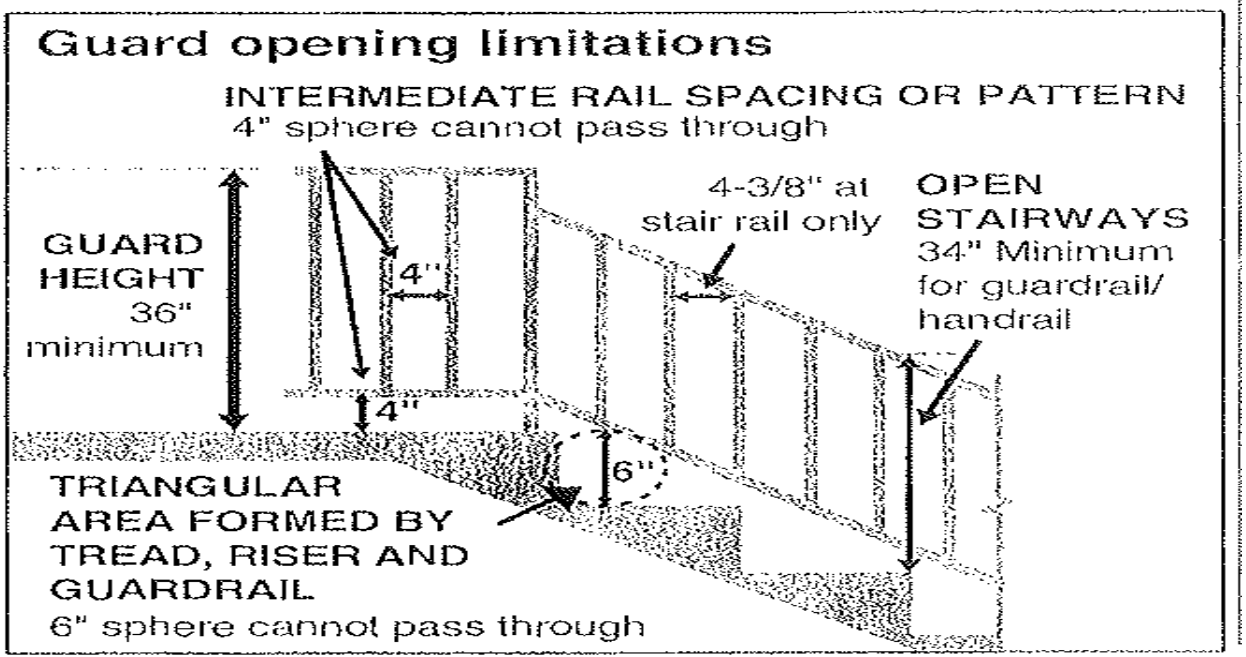
FLASHING DETAIL

CANTILEVERS: Deck joist cantilevers will be approved on a case-by-case basis, dependent upon design. Beams should not overhang support posts by more than one foot at the ends.

Stairs: Minimum width is 36 inches. Maximum rise is 7-3/4 inches, minimum rise is 4 inches. Minimum run is 10 inches. Largest tread width or riser height shall not exceed the smallest by more than 3/8 inch. A 4 inch maximum opening is required on all risers greater than 30 inches above grade.

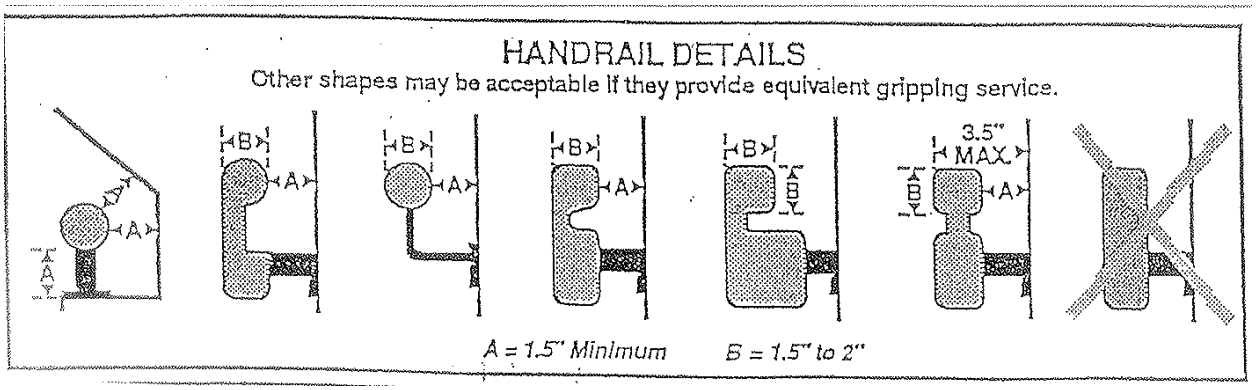


GUARDRAILS: All decks, balconies or porches, open sides of landings and stairs that are more than 30 inches above grade or a floor below must be protected by a guard not less than 36 inches in height. Guard opening limitations require guards on open sides of raised floor areas, balconies and porches shall have intermediate rails or ornamental closures which do not allow passage of a sphere 4 inches or more in diameter. **Exceptions:** (1) The triangular openings formed by the riser, tread, and bottom rail of a guard at the open side of a stairway area is permitted to be of such a size that a sphere 6 inches cannot pass through. (2) Openings for required guards on the sides of stair treads shall not allow a sphere 4-3/8 inches to pass trough.



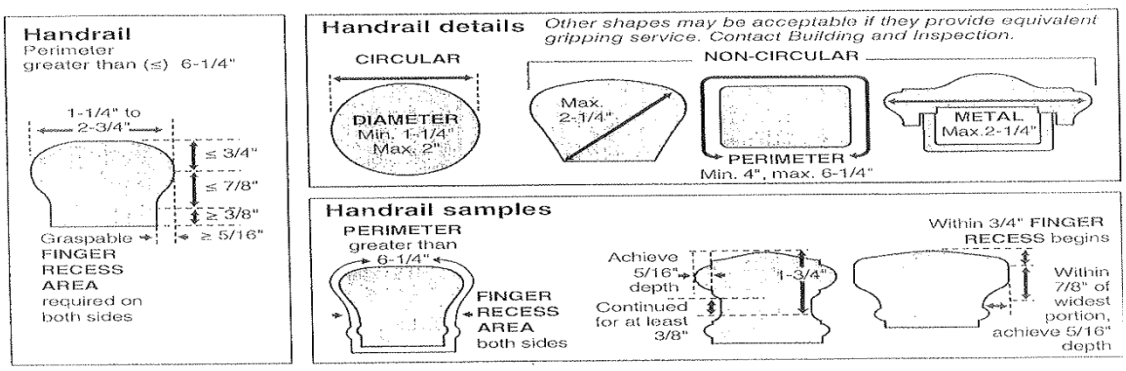
HANDRAILS. Handrails are required on all stairways having four or more risers and all required handrails shall be of the following types.

Type I. Handrails with a circular cross section shall have an outside diameter of at least 1-1/4 inches, but not greater than 2 inches in width. If the handrail is not circular it shall have a perimeter dimension of at least 4 inches and not greater than 6-1/4 inches with a maximum



cross section of dimension of 2-1/4 inches.

Type II. Handrails with a perimeter greater than 6-1/4 inches shall provide a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3/4 inch measured vertically from the tallest portion of the profile and achieve a depth of at least 5/16 inch within 7/8 inch below the widest portion of the profile. This required depth shall continue for at least 3/8 inch to a level that is not less than 1-3/4 inches below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1-1/4 inches to a maximum of 2-3/4 inches. Edges shall have a minimum radius of 0.01 inch. The top of handrail must be not less than 34 inches nor more than 38 inches above the nosing (front edge) of treads and they must be returned to a wall or post.



The electrical code requires overhead power lines to be located a minimum 10 feet above decks and platforms. Existing lines may need to be raised if a new deck is to be installed beneath them.

Beam and Footing Sizes

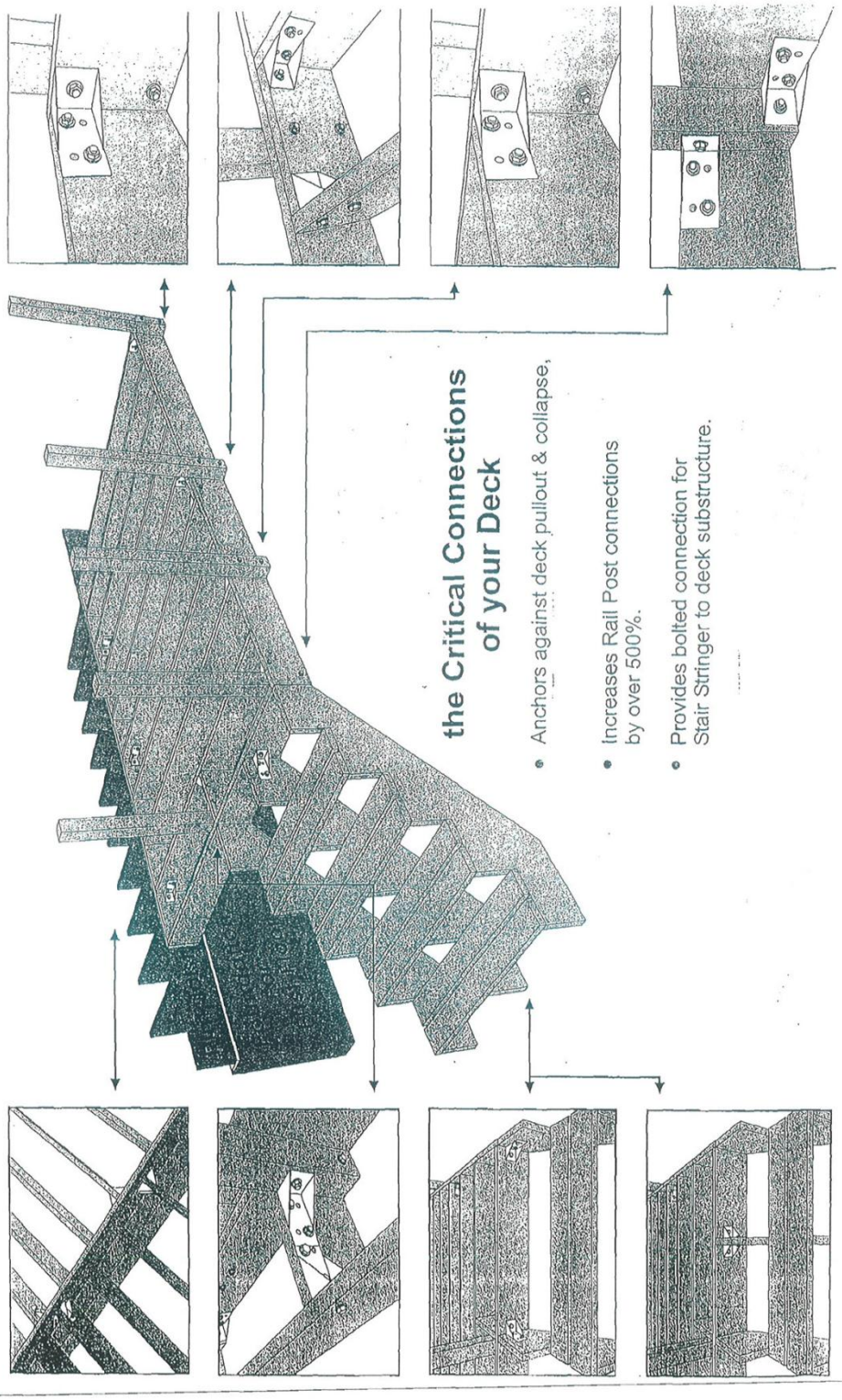
Based on No. 2 or better Ponderosa Pine and Southern Pine (Treated for weather and/or ground exposure)

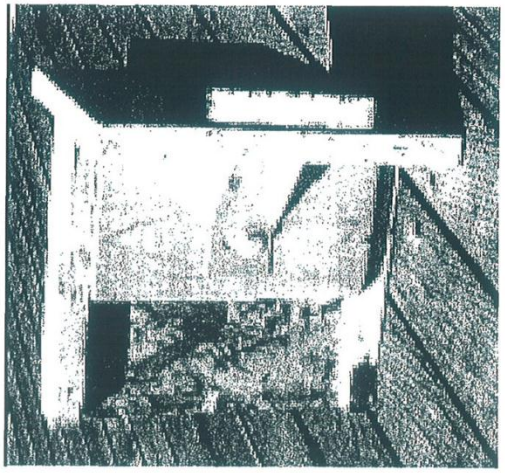
Joist Length		Post Spacing 4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'
6'	Southern Pine Beam	1-2x6	1-2x6	1-2x6	2-2x6	2-2x6	2-2x6	2-2x8	2-2x8	2-2x10	2-2x10	2-2x10
	Ponderosa Pine Beam	1-2x6	1-2x6	1-2x8	2-2x8	2-2x8	2-2x8	2-2x10	2-2x10	2-2x12	2-2x12	3-2x10
	Corner Footing	6 5 4	7 6 5	7 6 5	8 7 6	9 7 6	9 7 6	10 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	1-2x6	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

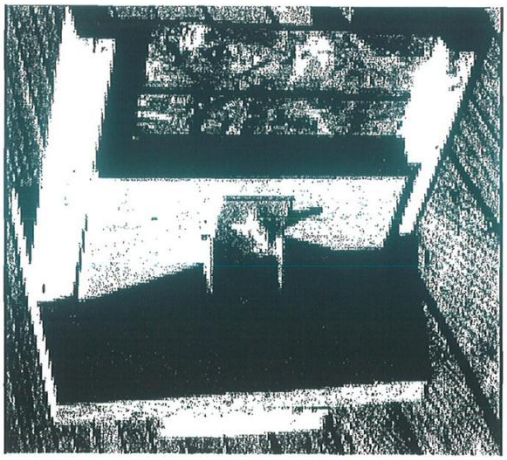
Notes:

1. Joist length is total length of joist, including any cantilevers.
2. When joist extends (cantilevers) beyond support beam by 18" or more, add 1" 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


the Critical Connections of your Deck
Anchors against deck pullout & collapse,
Increases Rail Post connections by over 500%.
Provides bolted connection for Stair Stringer to deck substructure.





Example of positive attachment method to insulated rim joists for decks/porches

CITY OF
OAK PARK HEIGHTS
14168 Oak Park Blvd. N • Box 2007 • Oak Park Heights, MN 55082 • Phone (651) 439-4439 • Fax (651) 439-0574

DECK BUILDING PERMIT APPLICATION

Contractor:_____
Address:_____
City / State / Zip:_____
Phone #:_____ Fax #_____
State License #:_____ City License #_____
Lead Certification #_____ E-Mail_____
Project Supervisor: _____
Phone #:_____ E-Mail_____

Owner:_____
Address:_____
City / State / Zip:_____
Phone Number:_____ E-Mail_____

INFORMATION SUBMITTED WITH PERMIT APPLICATION:

_____ Survey _____ Site Plan _____ Building Plans (2 sets if larger than 11X17)
Size of Deck ___X___ Footings _____ Beams ___X___ Posts ___X___ Stairs yes/no
Distance of structure to the property line:
____ ft. Front Yard____ ft. Rear Yard ____ ft. Side Yard ____ ft. Side Yard _____

This permit becomes null and void if work or construction authorized has not commenced within 180 days, or if work is suspended or abandoned for a period of 180 days. I hereby certify that I have read and examined this application and know the same to be true and correct. All provisions of laws and ordinances governing this type of work will be complied with whether specified herein or not. The granting of a permit does not presume to give authority to violate or cancel the provisions of any other state or local law regulating construction or the performance of construction.

_____**Date:**_____
Applicant's Signature

Project Address _____ **Valuation** _____

FOR OFFICIAL USE ONLY

Building Permit $_____ Plan Review $_____ State Surcharge $_____
Investigation Fee $_____ Other Fees $_____
TOTAL PERMIT FEE $_____