



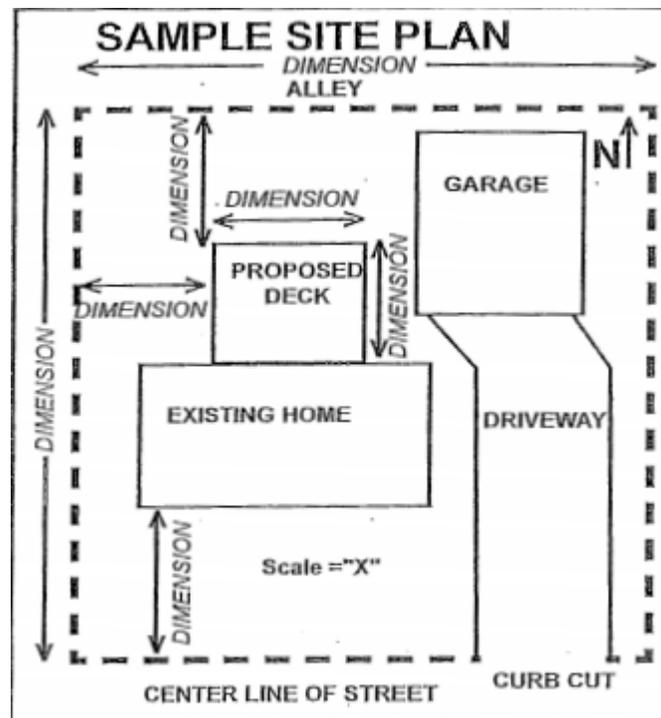
Decks

Permit

- A building permit is required for all decks that are attached to a house or are 30" or more above grade. Decks less than 30" above grade and not attached do not require a building permit, but are required to meet Mendota Heights' land use and setback requirements. Setbacks from property lines vary depending on the zoning district. Zoning questions should be directed to Nolan Wall, Mendota Heights City planner, at 651-255-1142.

Permit application

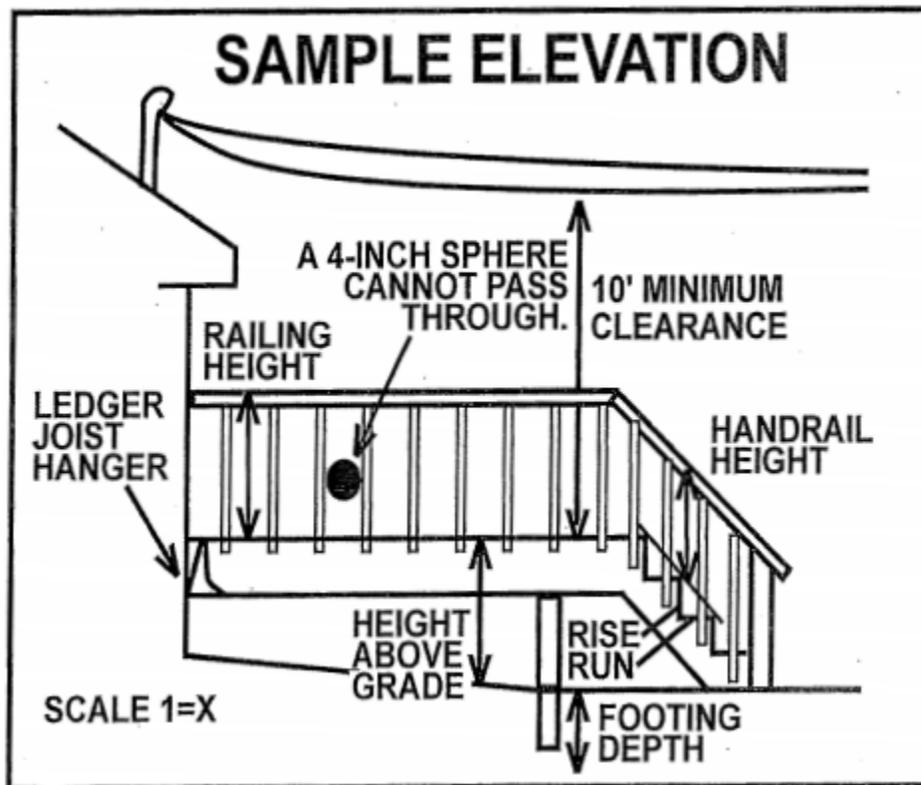
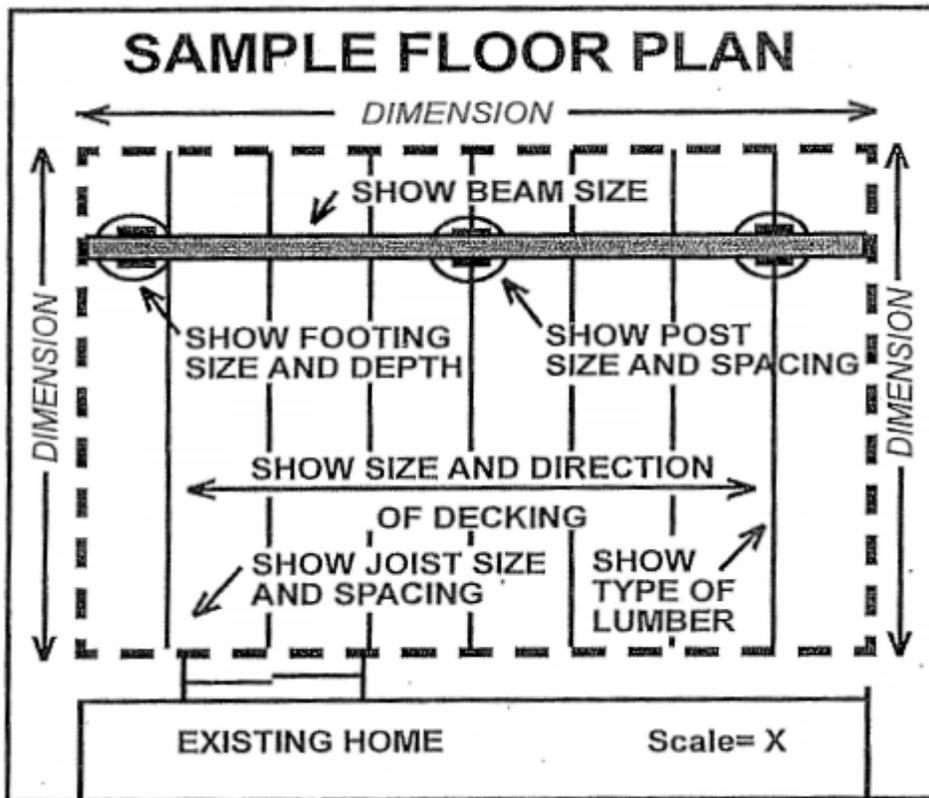
- Submit a completed building permit application to the City of Mendota Heights, available at the City's website www.mendota-heights.com or the City Hall, along with a site plan or survey and two sets of plans.
- The site plan or survey must show the distance to the property lines from the building to the new deck (see sample site plan below).



- The deck plans should include a floor plan and an elevation and indicate:
 - Deck size
 - Footing sizes and depth
 - Post and beam sizes and spacing
 - Joist sizes and spacing
 - Deck height above grade
 - Handrail details
 - Guardrail details
 - Type of decking*

*Approved plastic/composite decking

Visit the "10,000 Lakes Chapter of the international Code Council's website at www.10klakes.org to find a list of plastic/composite decking materials approved for use in the State of Minnesota. Other products may be submitted for approval by The Mendota Heights Building Official within the limitations of the International Code Council's (ICC) evaluation service report system.



Permit fees

- The building permit fee is based on the project's construction valuation and is designed to cover the cost of a plan review and the field inspections. The inspector may make notes on the plan for your use. The plan review and inspections are not designed to be a guarantee of the work, but are done to provide a reasonable degree of review and observation so the project will be successful. Actual permit costs can be obtained by calling the Building Safety Department at 651-452-1850.

Required inspections

- *Footing: After the holes are dug and before pouring the concrete.
- Framing: To be made after all framing, blocking, and bracing are in place and before covering the construction, so it is accessible for inspection. This inspection can be completed at the time of the final inspection if all parts of the framing will be visible and accessible.
- Final: To be made upon completion of the deck and finish grading.

*Call before you dig. Call Gopher State One Call at 651-454-0002 for protection against underground utility damage. Call 48 hours before you intend to dig to receive locations of underground utilities. www.gopherstateonecall.org

General building code requirements

- Footings must extend to frost depth, a minimum of 42" below any grade.
- 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 wood with natural resistance to decay such as redwood, cedar, treated or composite material.
- Ledger boards must be bolted or lagged to the building and all connections between the deck and the dwelling must be flashed and made water tight (R507.2).
- Columns and posts in contact with the ground or embedded in concrete, earth or masonry must be pressure treated wood approved for ground contact (.40 treated minimum).
- Decks should not overhang beams by more than 2' and beams should not overhand posts by more than a foot at the ends without engineering.
- All decks, balconies or porches, open sides of landings and stairs that are more than 30" above grade or a floor below must be protected by a guard not less than 36" in heights. Open guards and stair rails require intermediate rails of an ornamental pattern such that a sphere 4" in diameter cannot pass through.
- When a stairway is provided, it must be not less than 36" in width. Stairways must be constructed having a 7 ¾" maximum rise (height) and a 10" minimum run (length). The largest tread rise or tread run may not exceed the smallest rise or run by more than 3/8". If the tread is less than 11" in length a nosing of between ¾" and 1 ¼" must be added.
- Stairway illumination is required.
- Safety glazing may be required in existing windows adjacent to new stairs and landings.
- Handrails are required on all stairways having 4 or more risers. Handrails may not be less than 1 ¼" or more than 2 ¾" in diameter.
- Handrails must be installed not less than 34" or more than 38" above the nosing (front edge) of treads and they must be returned to a wall or post.
- Do not attach a deck rim to a cantilevered floor unless the floor system was designed to carry the deck load.
- When using treated lumber, use fasteners and hardware approved for use with ACQ treated lumber.
- The electrical code requires overhead power lines to be located a minimum of 10' above decks and platforms. Existing lines may need to be raised.
- When locating a deck, care must be given to the location of existing gas and electric meters. These may need to be relocated to allow for construction o the deck.

No. 2 Grade Wood Members and "I" Joists Span Tables

Floor joists	40#LL + 10#DL									L/360		
	2 x 6			2 x 8			2 x 10			2 x 12		
	12"OC	16"OC	24"OC	12"OC	16"OC	24"OC	12"OC	16"OC	24"OC	12"OC	16"OC	24"OC
Douglas Fir-Larch	10-9	9-9	8-1	14-2	12-7	10-3	17-9	15-5	12-7	20-7	17-10	14-7
Hem-Fir	10-0	9-1	7-11	13-2	12-0	10-2	16-10	15-2	12-5	20-4	17-7	14-4
Ponderosa Pine	9-2	8-4	7-0	12-1	10-10	8-10	15-4	13-3	10-10	17-9	15-5	12-7
Southern Pine	10-9	9-9	8-6	14-2	12-10	11-0	18-0	16-1	13-5	21-9	19-0	15-4
S-P-F	10-3	9-4	8-1	13-6	12-3	10-3	17-3	15-5	12-7	20-7	17-10	14-7
S-P-F (South)	9-6	8-7	7-6	12-6	11-4	9-6	15-11	14-3	11-8	19-1	16-6	13-6
Western Cedars	9-2	8-4	7-3	12-1	11-0	9-2	15-5	13-9	11-3	18-5	16-0	13-0
TJI® /15	Flange Width = 1 1/2"						18-9	17-2	15-1	22-4	20-5	15-1
TJI® /25	Flange Width = 1 3/4"						19-7	17-11	15-9	23-4	21-4	18-4
LPI™ 32	Flange Width = 2 1/2"						19-0	18-6	15-11	23-9	22-0	18-10

Beam and footing sizes

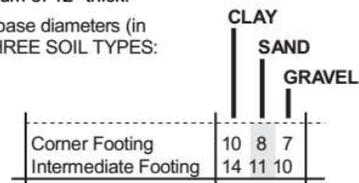
Based on No. 2 or better pressure treated Southern Pine with 40 lb live load and 15 lb dead load

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

Notes:

- Joist length is total length of joist, **including** any cantilevers.
- When joist extends (cantilevers) beyond support beam by 18 inches or more, add 1 inch to footing dimensions shown.
- Requirements for future 3-season porches or screen porches:
 - Increase corner footing size shown by 90%.
 - Increase center footing size shown by 55%.
 - Locate all footings at extremities of deck (no cantilevers).
 - Beam sizes indicated may need to be altered.

- Footing sizes may need to be adjusted depending on project.
- Footings must be a minimum of 12" thick.
- All footing sizes above are base diameters (in inches) and are listed for THREE SOIL TYPES:



Call the City of Mendota Heights' Department of Building Safety at 651-452-1850 if you have questions, to request a permit or to schedule an inspection (8:00-4:30 M-F).