



MONROE CHARTER TOWNSHIP BUILDING DEPARTMENT

4925 EAST DUNBAR ROAD
MONROE, MICHIGAN 48161
PHONE 734-241-5502 FAX 734-457-2677

The following are typical components needed to review an application for a permit prior to receiving a building permit....

Exterior Elevations (front, rear, left & right sides) should include:

- Floor and ceiling heights, Flood elevation certificate (NGVD benchmark) if floodplain
- Dimensions of standard windows
- Dimensions of roof overhangs
- Location of all needed flashings
- Height and location of foundation indicated in dashed lines
- Type of finishing and textures
- Dimension and height of chimney
 - Drainage patterns and heights
 - A detailed plot plan locating all structures in relationship to lot lines and easements, include driveway, fences, sanitary system, drain patterns (both existing and proposed), any natural features, and include a north arrow and scale.

Foundation plans should include:

- All exterior and interior dimensions both above and below finish grade
- Thickness of foundation walls and, if floodplain, location with sizes of all flood vents
- All the structures needed to hold the first level, columns with load applications, beam sizes, variations in floor joists and their exact location
- Location of stairwell
- Location and sizes of windows and or egress opening(s)
- Location and dimensions of footings and pier supports
 - Locate sump and pump discharge
 - Indicate waterproofing method
 - Basement wall insulation

Floor plan(s) should include:

- All interior and exterior dimensions and, if floodplain, include first floor height (NGVD)
- Location and sizes of all doors and windows
- Types of interior doors that correspond to a schedule
- Indication of the structure above (second floor or roof)
- Location of columns, beams and floor joists, including dimensions
- Indication of details that are available on other pages
 - Wall, floor, and ceiling insulation (also provide PART 10 Energy Compliance Form)

Roof plans should include:

- Location of all the different trusses or rafters needed
- The general overcharge of the roof compared to the floor footprint underneath
- Location of ridges and valleys and the lumber dimensions

Building cross-section(s) and truss details should include:

- All the different floor and ceiling heights
- Dimensions and design of trusses or rafters, include lumber size, species, spacing
- Dimensions and details of overhang including ventilation method and size (1/150th)
- Roof pitch on all roof sections (truss load data statement before permit is issued and an inspector's package of details from the supplier needed before framing inspection)

Construction details should include:

- Roof sections
- Sections of concrete wall with wood connection
- Section of walls with particulars called out
- Section of concrete porch and connection with wood frame
- Foundation particulars in the garage entrance
- Components of certain types of walls (ex: between garage and living quarters)
- Any specific details needing code or plan review

Typical wall sections should include;

All the details and components needed in the construction of a house, including window section in a typical wall, connection between floor and exterior wall with their components, type of beam(s) used, ect.

MORE FORMS & INFORMATION IS AVAILABLE ON OUR WEB SITE;

www.monroechartertownship.org

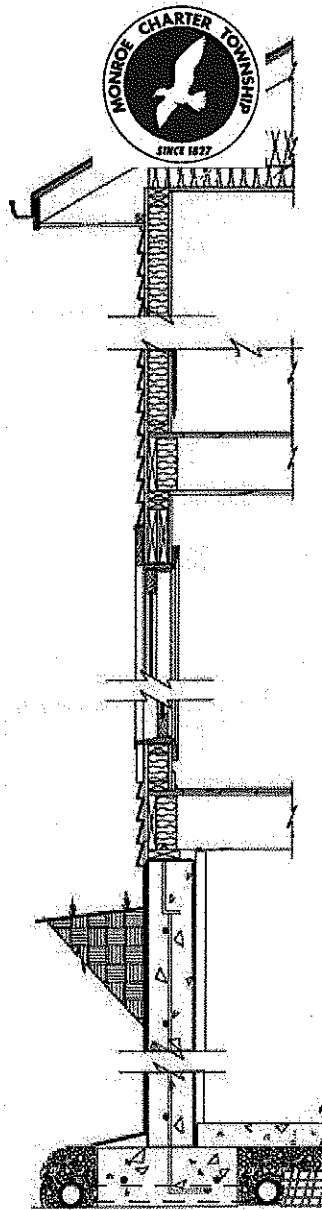
STRUCTURE USE
PART 10 ZONE 5A FORM ATTACHED_Y_N
ZONING APPROVAL?

MONROE CHARTER TOWNSHIP
BUILDING DEPARTMENT

APPLICANT _____
DATE ____/____/20____

Roof: TRUSS_Y_N_x ____"OC= IF YES PLEASE ATTACH A DATA LOAD SHEET OR DRAWINGS.
IF NO, PLEASE COMPLETE ROOF DETAILS;
ATTIC STORAGE LOAD IF +20lbs/sq ft _____
ROOF PITCH ____/12 & IF CATHERDERAL ____/12
RAFTERS 2" x ____" & SPECIES _____
O.C. RAFTER SPACING _____"
RIDGE SPECIES _____ & 2"x ____" THICK
CEILING JOIST 2"x ____" O.C. SPACING _____"
FACIA SUB-FRAMING MATERIAL 2"x ____"
ROOF SHEETING TYPE ____" & ____" THICK
PLYWOOD CLIPS? _Y_N_
SHINGLE TYPE AND WEIGHT _____
FELT TYPE AND WEIGHT _____
ICE BARRIER SIZE AND WIEGHT _____
ROOF VENT (1/150 SQ FT) TOTAL sq ft _____
METAL DRIP EDGE _____
PART 10 CEILING RATING(MIN. R-38*)_R-_____
ATTIC ACCESS MIN. (22"X30") ____" x ____"

1ST FLOOR;
SMOKE & CARBON MONOXIDE ALARMS_Y_N_
CEILING TO FLOOR HEIGHT _____
DOUBLE TOP PLATE 2" x ____" RATED # _____
WALL STUD 2" x ____" & SPECIES _____
O.C. STUD SPACING _____"
PART 10 WALL RATING (MIN. R-13*)_R-_____
HEADER MATERIAL ____" SPECIES _____
EXTERIOR SHEETING TYPE ____" & ____" THICK
EXTERIOR FINISH _____
EXTERIOR HOUSE WRAP ____MIL THICK
INTERIOR FINISH _____
INTERIOR VAPOR BARRIOR ____MIL THICK
WINDOWS GUARDS_Y_N_ TEMPERED_Y_N_
8% LIGHT MINIMUMS_Y_N_ EGRESS_Y_N_
FLOOR TYPE ____" & ____" THICK x T&G_Y_N_
FLOOR JOIST 2"x ____" & SPECIES _____
O.C. FLOOR JOIST SPACING _____"
RIM JOIST OR BOND 2"x ____" & SPECIES _____
PART 10 BOND RATING (MIN R-19*)_R-_____
NON-FLOOD DESIGN FOUNDATION;
GRADE SLOPE (5% OR 6" MIN) ____" WITHIN 10'
FOOTING BELOW GRADE (42" MIN) _____"
(8" MIN) ____" ABOVE GRADE TO NON-TREATED
EGRESS_Y_N_ & ____sq ft & ____sq ft OF ACCESS
CRAWL ACCESS SIZE(24"x18" MIN) ____"x ____"
BASEMENT HEIGHT ____ OR CRAWL HEIGHT ____"
TREATED SILL 2"x ____" WITH SILL SEAL_Y_N_
WALL MATERIAL ____" & ____" THICK
ANCHOR BOLTS ____" x ____" LONG & ____'O.C.
FOUNDATION VENTS (1/150) TOTAL SQ _____
FOUNDATION DAMP PROOFING ____MIL THICK
PART 10 FOUNDATION RATING (R-10*)_R-_____
FOUNDATION ____"x ____" W/2pcs of ____" RE-BAR
IN AND OUT FOUNDATION DRAIN TILE ____"
____" OF # ____ GRAVEL OVER DRAIN TILE
SLAB ____" & ____" STONE & ____MIL VAPOR BARRIOR
SUMP PUMP AND CROCK TO STORM_Y_N_



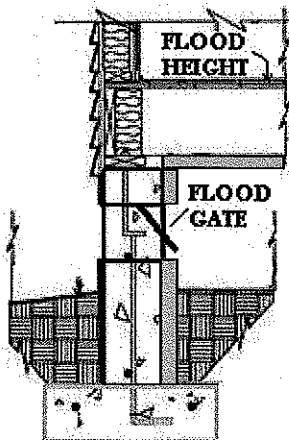
CONSTRUCTION SPECIFICATION LIST;
PROVIDED AS A HELPFUL PLAN FILL-IN.
IF NEEDED, PLEASE ATTACH TO PERMIT APPLICATION AND PRINTS, ADDITIONAL INFORMATION MAY BE REQUIRED.

2nd FLOOR; (LEAVE BLANK FOR 1 STORY)
SMOKE & CARBON MONOXIDE ALARMS_Y_N_
CEILING TO FLOOR HEIGHT _____
DOUBLE TOP PLATE 2" x ____" RATED # _____
WALL STUD 2" x ____" & SPECIES _____
O.C. STUD SPACING _____"
PART 10 WALL RATING (MIN. R-13*)_R-_____
HEADER MATERIAL ____" SPECIES _____
EXTERIOR SHEETING TYPE ____" & ____" THICK
EXTERIOR FINISH _____
EXTERIOR HOUSE WRAP ____MIL THICK
INTERIOR FINISH _____
INTERIOR VAPOR BARRIOR ____MIL THICK
WINDOWS GUARDS_Y_N_ TEMPERED_Y_N_
8% LIGHT MINIMUMS_Y_N_ EGRESS_Y_N_
FLOOR TYPE ____" & ____" THICK x T&G_Y_N_
FLOOR JOIST 2"x ____" & SPECIES _____
O.C. FLOOR JOIST SPACING _____"
RIM JOIST OR BOND 2"x ____" & SPECIES _____
PART 10 BOND RATING (MIN R-19*)_R-_____
****FLOOD DESIGN FOUNDATION****

SEE MICHIGAN UNIFORM ENERGY CODE- PART 10

****FLOODPLAIN MAP HEIGHT @ ____' NGVD****
FIRST FLOOR FINISHED HEIGHT ____' NGVD
FOUNDATION SIZE OR SQ FT _____
FLOOD VENT TOTAL COUNT ____ & ____ SQ"
FLOOD VENT SILL HEIGHT TO LOWEST GRADE (INSIDE DIRT GRADE CANNOT BE LOWER THAN OUTSIDE DIRT GRADE) _____"
GRADE SLOPE (5% OR 6" MIN) ____" WITHIN 10'
FOOTING BELOW GRADE (42" MIN) _____"
(8" MIN) ____" ABOVE GRADE TO NON-TREATED
CRAWL ACCESS SIZE (24"x18" MIN) ____"x ____"
INSIDE CRAWL HEIGHT- DIRT TO JOISTS ____"
TREATED SILL 2"x ____" WITH SILL SEAL_Y_N_
WALL MATERIAL ____" & ____" THICK
ANCHOR BOLTS ____" x ____" LONG & ____'O.C.
FOUNDATION VENTS (1/150) TOTAL SQ _____
FOUNDATION DAMP PROOFING ____MIL THICK
PART 10 FOUNDATION RATING (R-10*)_R-_____
FOUNDATION ____"x ____" W/2pcs of ____" RE-BAR
INSIDE FOUNDATION DRAIN TILE ____"
____" OF # ____ GRAVEL OVER DRAIN TILE
____MIL VAPOR BARRIOR OVER INSIDE EARTH
SUMP PUMP AND CROCK TO STORM DRAIN_Y_N_

****FLOODPLAIN DETAIL**;**





MONROE CHARTER TOWNSHIP BUILDING DEPARTMENT

FILL IN AND ATTACH TO
PERMIT APPLICATION

Residential Garages & Accessory Structures

BUILDING OUTSIDE MEASURES ' "x ' "

Roof Pitch - "/12" & Attic Load lbs (20 lb min.)

Roof Covering - lb of

Underlayment - / " & Sheeting Type

Sub-Facia Material - 2"x "

Trusses with Data Load Sheet or Drawings-Y-N-@ "oc

If "No" Please Fill In The Following;

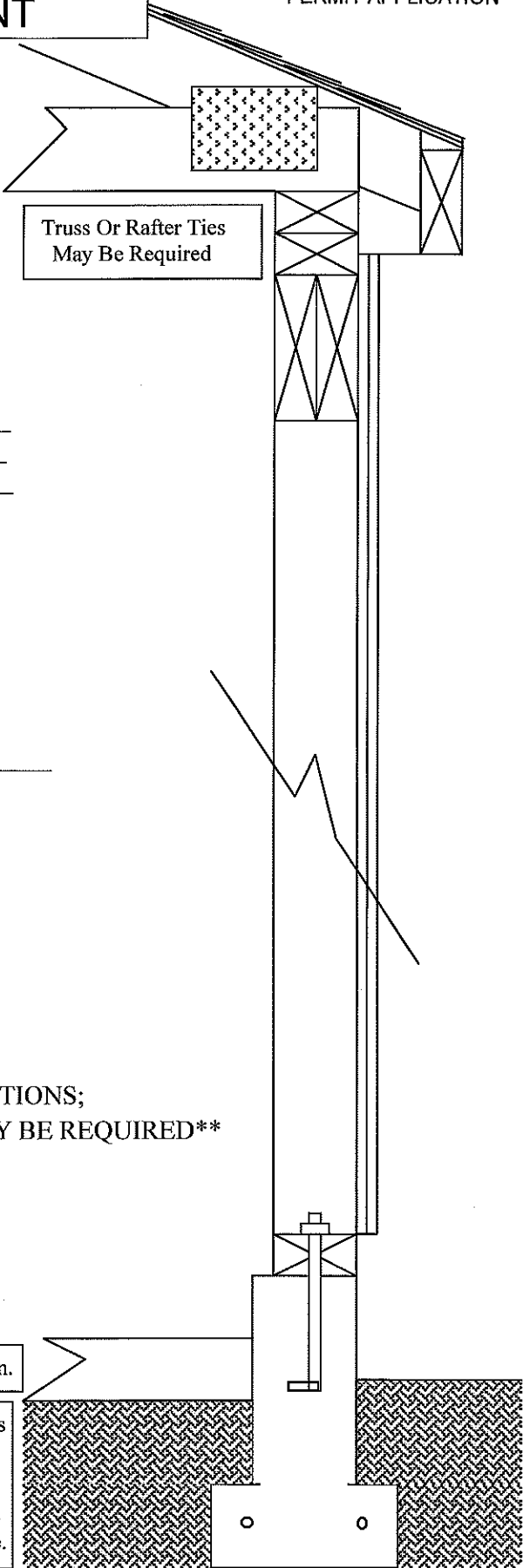
Size Of Ridge - 2"x " & Species

Size Of Rafters - 2"x "x "oc & Species

Ceiling Joists - 2"x "x "oc & Species

Ceiling Height Above Finished Floor - ' "

Mean Height - Grade to Mid-Point of Roof Rise - ' "



WALL MATERIALS;

Wall Studs -2"x "x "oc- Species

Double Top Plate- 2" x "x # Grade Lumber

Bottom Plate- 2"x "x "x # Grade Lumber

O.H. Door on Gable or Load Wall (circle)- 'x '

O.H. Door Header - "x "x ' & Species

Man Door on Gable Side or Load Sidewall (circle)

Service Door Size - "x " & Fire Rated Y N

Service Door Header - 2"x "x pcs

Window Header - 2"x "x pcs

Building to Have a Heating System Y N

Insulation -Floor =R- Walls =R- Ceiling =R-

Interior Finish - / " Material

Sidewall Sheathing - / " Material

Exterior Finish -

FOR NON-FLOOD FOUNDATIONS;

****FLOOD HEIGHTS & VENTS MAY BE REQUIRED****

Foundation Anchor - Bolt / "x " or " Straps

Foundation Anchors- 'oc & Within 1' of Openings

Foundation "x "x Block or Concrete (circle)

Treated Sill-2"x " & " Above Finished Grade

Footing "Below Grade "x " - pc " rerod

Floor " Thick With Type Reinforcement

NON-FLOOD Design-Concrete Slab-On-Ground Floors to be 3 1/2" Min.

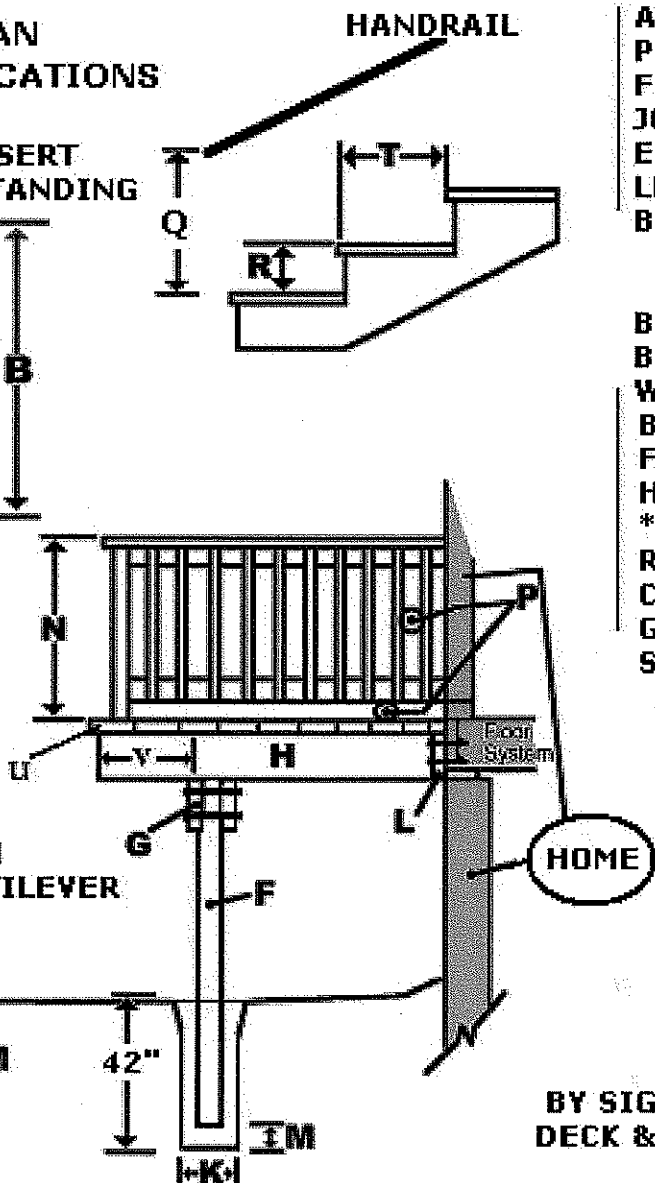
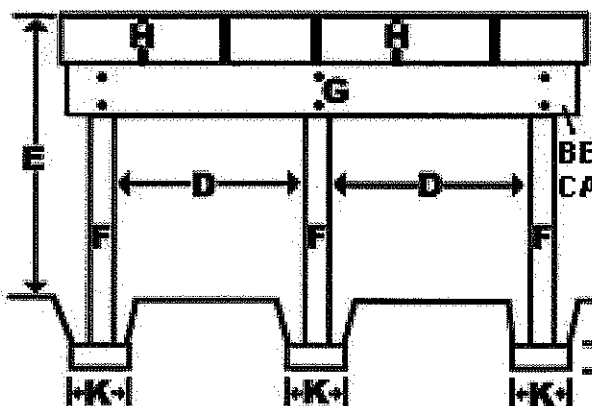
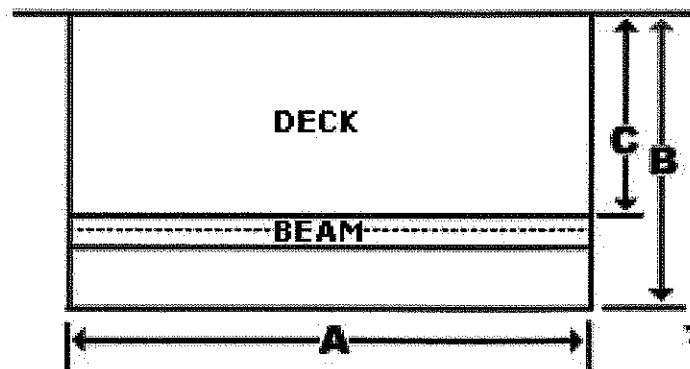
All Attached Accessory Structures & Any Detached Accessory Buildings That is ≥ 600 sq ft or Any With ≥10' Sidewalls Shall Have Foundation Systems That Extend 42" Below Finished Grade. Detached Accessory Structures < 600 sq ft & <10' Walls May Use 18" Below Grade Rat Wall Foundation System. All Untreated Material Must Begin ≥ 8" Over Grade.



**MONROE CHARTER TOWNSHIP
BUILDING DEPARTMENT**

**TYPICAL OPEN DECK PLAN
DIMENSIONS & SPECIFICATIONS**

FOR USE IF CONNECTED TO HOME OR INSERT
ADDITIONAL BEAMS IF DECK IS FREE STANDING



MATERIAL TO BE USED WILL BE _____ &
TREATED WITH A WEATHER-IZED FINISH

A= _____ B= _____ C= _____ D= _____ E= _____
POST SIZE F _____ "x _____"
FOOTING _____ "DEEP, K= _____ "M= _____"
JOIST SIZE (H) _____ "x _____ "x _____ "oc
END JOIST CANTILEVER (V) _____ "
LEDGER BOARD (L) _____ "x _____ "& WILL
BE

FASTENED WITH _____ "BOLT _____ "oc OR
INDICATE IF USING HANGERS- Y N
BEAM SIZE (G) _____ "x _____ "x _____ pcs
BEAM G WILL BE BOLTED TO POST F
WITH _____ "x _____ " BOLTS OR
BEAM END CANTILEVER TO BE _____ "
FINISHED DECK BOARDS(U) _____ "x _____ "
HANDRAIL (Q) HEIGHT(34"-38") _____ "
WITH RETURNED OR CLOSED ENDS
RESIDENT GUARDRAIL MIN. 36" HI _____ "
COMM. GUARDRAIL MIN. 42" HI _____ "
GUARDRAIL OPENINGS (P) _____ "(<4")
STAIRS- R = <8.25 MAX. T = >9" MIN.
ALL (R) TO BE _____ "
ALL (T) TO BE _____ "
NUMBER OF RISERS _____

BY SIGNING BELOW I AGREE MY COMPLETED
DECK & RAILS WILL BE CODE COMPLIANT;

ADDITIONAL INFORMATION IS AVAILABLE AT
www.monroechartertownship.org

_____/_____/20_____
(signature) (date)

STAIR REQUIREMENTS

Stairs, stair stringers, and stair guard shall meet the requirements shown in FIGURE 29 through FIGURE 36. All stringers shall be 2x12. Stair stringers shall not span more than the dimensions shown in FIGURE 30. If the stringer span exceeds these dimensions, then an intermediate landing will be required. All intermediate stair landings must be designed and constructed as a free-standing deck using the details in this package.

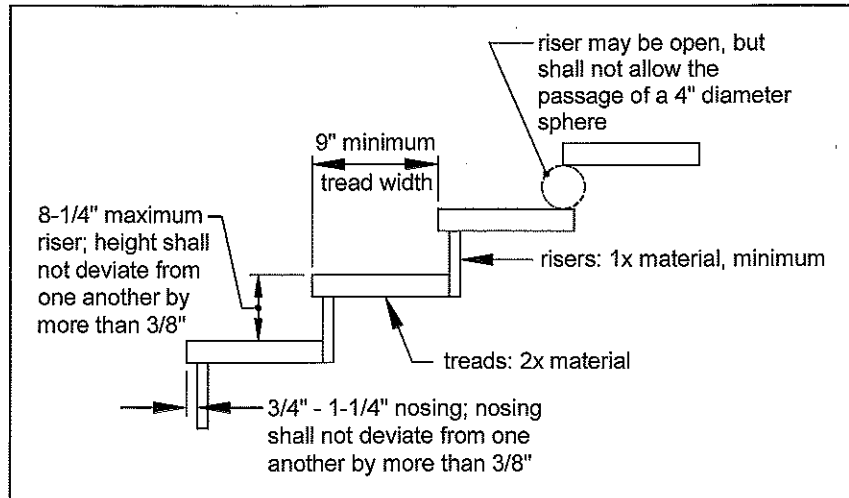


FIGURE 29: TREAD AND RISER DETAIL

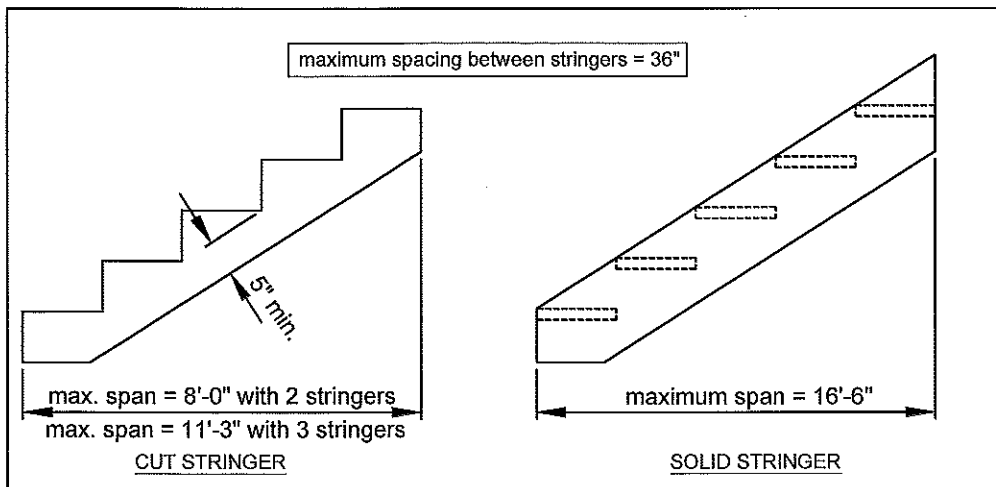


FIGURE 30: STAIR STRINGER REQUIREMENTS

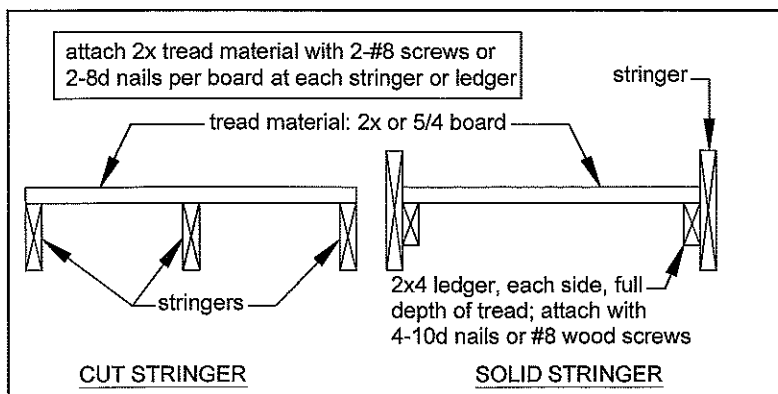


FIGURE 31: TREAD CONNECTION REQUIREMENTS



Typical Deck Details

Based on the Michigan Residential Code

DECK & HANDRAIL

Sheet 15 of 19

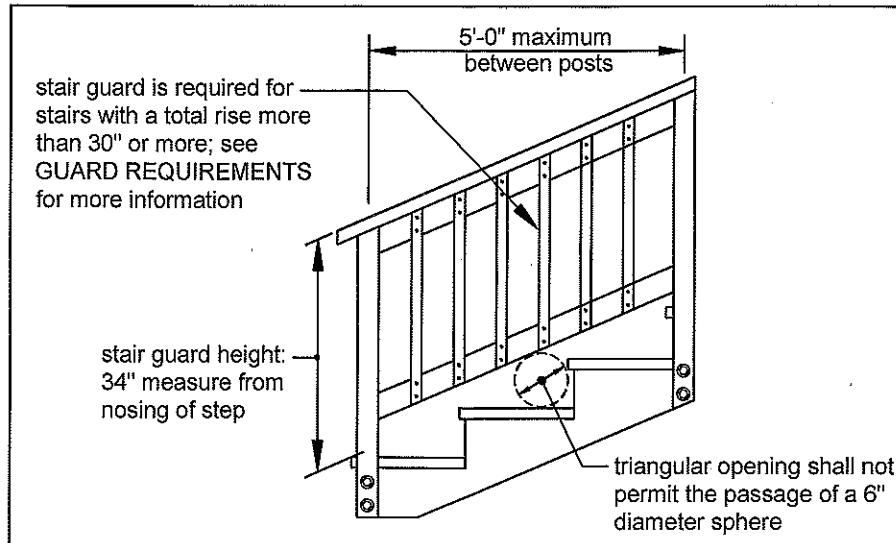


FIGURE 32: STAIR GUARD REQUIREMENTS

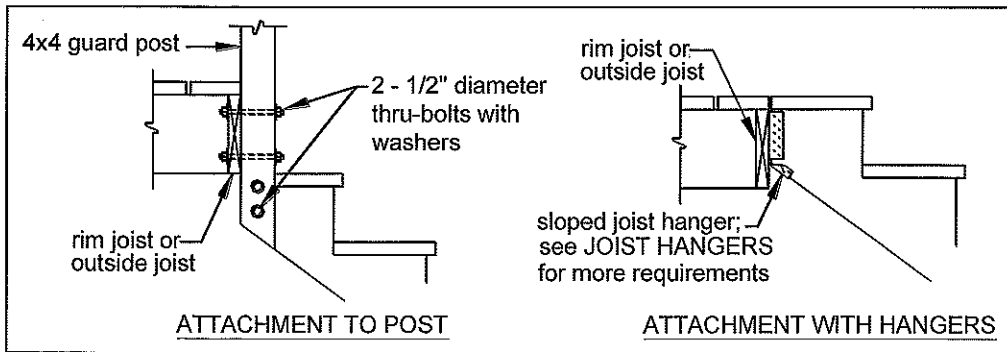


FIGURE 33: STAIR STRINGER ATTACHMENT DETAIL

STAIR HANDRAIL REQUIREMENTS

All stairs with 4 or more risers shall have a handrail on one side. See **FIGURE 34**. Handrails shall be graspable and shall be composed of decay-resistant and/or corrosion resistant material. The hand grip portion, if circular, shall be between 1-1/4" and 2-1/4" in diameter. Shapes other than circular shall have a perimeter dimension between 4" and 6-1/4" with a maximum cross sectional dimension of 2-1/4". All shapes shall have a smooth surface with no sharp corners. Handrails shall run continuously from a point directly over the lowest riser to a point directly over the highest riser and shall return to the guard at each end; see **FIGURE 35**. Handrails may be interrupted by guard posts only at a turn in the stair.

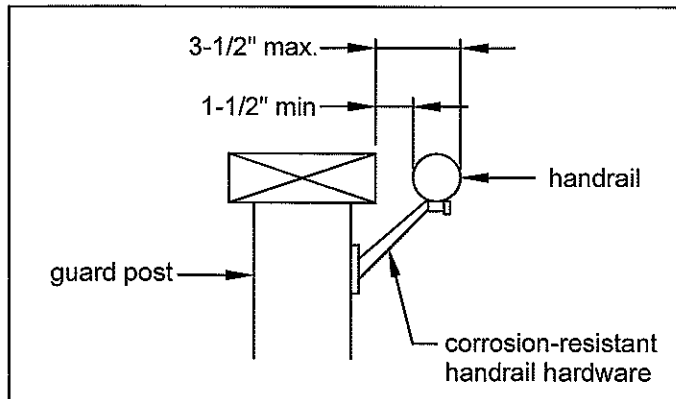


FIGURE 34: HANDRAIL REQUIREMENTS



Typical Deck Details

Based on the Michigan Residential Code

DECK & HANDRAIL

Sheet 16 of 19

Roof Loading Data Sheet

Authority: 1972 PA 230

Completion:

This form is to be completed and given to the building official with the application for plan review and building permit. The applicant shall give a copy of the completed form to the truss manufacturer.

Jurisdictional information should be included in this space

		Township		County	
Applicant's Name:		Date:			
Applicant's Address:		Permit Number:			
City:		State:		Zip:	
Applicant's Signature:					
Job Location:					
Address:					
Township/Village/City:				County:	

Where prescriptive design is used, the ground snow load, P_g , from Table R301.2(1) shall be used as the design roof snow except, where section R802.10.2.1 applies the design roof snow load shall be $.7P_g$. Additional unbalanced loads for drifting across the ridge are not required. Where engineered design is used, this form is to be completed by the permit applicant or design professional. The flat roof snow load, P_f is defined as: $P_f = .7P_g(C_e)(C_t)(I)$. For factors C_e , C_t and I , place an "X" in the appropriate box below that best describes the structure and the particular jobsite and substitute the corresponding values in the formula above. The result is the flat roof snow load and is applied as the truss top chord live load, TOLL1. All live loads and snow loads, including unbalanced loads and minimum loads, are to be applied per ASCE 7, chapters 4 and 7 and this code.

Ground Snow Load, P_g = _____ From Figure R301.2(5) or MRC Table R301.2(5)

Exposure		Exposure Factor C_e			
		Fully Exposed ¹	Partially Exposed ²	Sheltered ³	
A	Large city center with at least 1/2 the buildings exceeding 70 ft. in height.	N/A	1.1	1.3	
B	Urban and suburban areas, wooded areas or other terrain with closely spaced objects having the size of single-family dwellings or larger.	0.9	1	1.2	
C	Open terrain with scattered obstructions having heights less than 30 ft. (flat open country)	0.9	1	N/A	
D	Flat unobstructed areas exposed to wind flowing over open water for a distance of at least 1 mile. (i.e. Great Lakes.)	0.8	0.9	N/A	

Mark only one of the 9 boxes under the exposure factor with an "X". Do not mark "X" in grayed out boxes.

¹Fully Exposed: Roofs exposed on all sides with no shelter by terrain, higher structures, or trees.

²Partially Exposed: All roofs except those designated as "fully exposed" or "sheltered."

³Sheltered: Roofs located tight among conifers that qualify as obstructions.

Thermal Factor C_t

Thermal Condition ⁴	C_t
All structures except as listed below	1
Structures kept just above freezing and those with cold, ventilated roofs with an R factor of 25 or greater between the ventilated and heated spaces, such as attics	1.1
Unheated structures and those intentionally kept below freezing, such as seasonal building or storage buildings	1.2
Continuously heated greenhouse with a roof R Value less than 2 and having an interior temperature maintained at about 50 degrees 3 ft above the floor during winter months and a temperature alarm system or an attendant to warn of a heating failure.	0.85

Mark only 1 of the 4 boxes under the Thermal Factor with an "X".

Importance Factor (I)

Category	I
I Building and other structures representing low hazard to human life, i.e.: Agricultural, Temporary, and Minor Storage Facilities.	0.8
II All buildings except those listed in Categories III and IV.	1
III Building and other structures representing substantial hazard to human life in the event of failure.	1.1
IV Buildings and other structures designated as essential facilities.	1.2

Mark only 1 of the 4 boxes under the importance Factor with an "X"

Note: All roof trusses have additional live (storage) loads applied to the bottom chord where required per Table R301.5.