Grand Haven Charter Township
13300 168th Avenue, Grand Haven, MI 49417
Phone: (616) 842-5988 | Fax: (616) 842-9419 |
building@ghtmi.gov

Additions & Alterations

Separate Applications Must be Completed for Plumbing, Mechanical, or Electrical Work Permits

I. Owner/ Job Location ☐ Owner is Applicant (if homeowner is applicant, complete Section I and continue to Section V)

Name of Property Owner	Home Phone		Cell
Address	City	State	Zip
Job Location (if different than above)	Name of City, Village, or Township Job is located ☐ City ☐ Village ✔Township of : Grand Haven Township		
Parcel #	Email (REQUIRED)		

II. Builder/Contractor/Licensee Information

Company Name	Company Address	
Business Phone	Cell	Fax
Email (REQUIRED)		
Licensee Name	State Builder's License #	Expiration Date
Federal ID # (or reason for exemption)	Workers Comp (or reason for exemption)	UIA Employer # (or reason for exemption)

III. Architect or Engineer

Name	Address		
City	State	Zip	Business Phone
Email	State Architect or Engineering License #		Expiration Date

IV. Builder's Affidavit

Section 23a of the State Construction Code Act of 1972, 1972 PA 230, MCL 125.1523A, prohibits a person from conspiring to circumvent the licensing requirements of this state relating to persons who are to perform work on a residential building or a residential structure. Violators of Section 23a are subject to civil fines. I hereby certify that the proposed building work is authorized by the owner of record and that I have been authorizing by the owner to make this application as his/her authorized agent, and we agree to conform to all applicable laws of the State of Michigan. All information submitted on this application is accurate to the best of my knowledge.

Signature of Licensee	Print Name of Licensee	Date

V. Homeowner Affidavit

I hereby certify the work described in this permit application shall be done by myself on my own dwelling in which I am living, or about to occupy. All work shall be done in accordance with the codes and shall not be backfilled, enclosed, dry walled, covered-up, or used until it has been inspected or approved by the appropriate inspector. I understand my responsibility to arrange for the required inspections and I agree not to move anything into, or use the building in any way, until I have received written approval to do so from the appropriate inspector. I understand that for any such affidavit connected to a building permit, I (or appropriate licensed contractors) am required to obtain additional permits before installing any electrical, plumbing, heating, air conditioning, fireplace, wood stove, ventilation component, or other similar work. I understand all of the above and acknowledge that failure to comply with the above requirements may cause revocation of the building permit and/or legal action to be taken against me.

Signature of Homeowner	Print Name of Homeowner	Date

VI. Project Description

A. Type of Improvement

□ **NEW BUILDING** □ **ADDITION**	□ **ALTERATION** □ **REPAIR**	□ **BASEMENT FINISH** □ **DECK**	□ **FOUNDATION ONLY** □ **PREMANUFACTURE**	□ **MOBILE HOME SET-UP** □ **SPECIAL INSPECTION**

B. Residential Building Regulated by the Michigan Residential Code

□ **ONE FAMILY** □ **TWO FAMILY**	□ **ATTACHED GARAGE** □ **DETACHED GARAGE**	□ **OTHER** _____

C. Detailed Description of Work (REQUIRED)

_____

_____

_____

_____

_____

D. Value of Construction Project

Total value of project minus the price of lot:

$ **(Separate permits are required for Electrical, Mechanical and Plumbing work)**

E. Dimensions / Data

Square Foot Breakdown	Finished	Unfinished	Total	Building Setbacks
Basement				Front
1st Floor				Rear
2nd Floor				Side 1
Half Story				Side 2

F. Select Characteristics of Building

1. Principal type of framing:
□ Wood Frame □ Structure Steel □ Masonry □ Concrete □ Other

2. Principal type of heating fuel:
□ Gas □ Oil □ Electricity □ Hydronic □ Other _____ □ N/A

3. Type of sewage disposal:
□ Public or Private Company □ Septic System

4. Type of water supply:
□ Public or Private Company □ Private Well or Cistern

5. Will there be air conditioning:
□ Yes □ No If Yes, what type of system? □ Coil/Condenser □ Hydronic

VII. Plan Review Required

Detailed construction documents must be submitted with any application for a building permit, unless waived by the building official when code compliance can be determined based on the description in the application, and the appropriate fee(s) must be paid in full before a permit can be issued. Construction documents must be sealed and signed by an architect or professional engineer in accordance with 1980, PA 299 as amended. The seal and signature are not required for one- and two-family dwellings less than 3,500 square feet of calculated floor area and public works less than $15,000 in total construction cost. The building official also reserves the right to require architect or engineer supervision on any other construction method deemed unusual or non-typical.

VIII. Site Plan with Setbacks (or attach a site plan and/or survey)

Tip: use an aerial map to draw the Site Plan, go to https://gis.miottawa.org, and click Property Mapping Lite

North

West East

South

Notes:

IX. Local Government Agency to Complete This Section						
TYPE OF DOCUMENTATION	REQUIRED?		APPROVED	DATE	NUMBER	BY
A. Proof of Ownership	YES	NO				
B. Site Plan (Showing Proposed Setbacks)	YES	NO				
C. Survey	YES	NO				
D. Water Supply (Public / Private) ***Circle One***	YES	NO				
E. Septic or Sewer (Public / Private) ***Circle One***	YES	NO				
F. EGLE Permit	YES	NO				
G. Erosion Control Permit	YES	NO				
H. GHT Driveway Permit	YES	NO				
I. Ottawa County Driveway Permit	YES	NO				
J. 2 Sets of Construction Documents	YES	NO				
K. Roof Loading Data or Prelim. Truss Drawings	YES	NO				
L. Energy Code Compliance Documents	YES	NO				
M. Blower Door Testing Company Noted	YES	NO				
N. 75% High Efficacy Lighting	YES	NO				
O. HVAC Manual S and J Calculation Documents	YES	NO				
P. Whole House Mechanical Ventilation Noted	YES	NO				
Q. Cold Weather Concrete Affidavit	YES	NO				
R. Other	YES	NO				

Type of Construction	Use Group	Base Fee
Square Feet		
Approval Signature		
Title		Date

Zoning District Information	
Zoning Approval Signature	Date

REQUIRED OTTAWA COUNTY PERMITS

The following Ottawa County permits may need to be obtained prior to issuance of a Building Permit.

DRIVEWAY PERMIT

Must first obtain a DRIVEWAY permit for any new connections to any public right-of-way from:

Ottawa County Road Commission
Special Services Department
14110 Lakeshore Drive
PO Box 739
Grand Haven, MI 49417
(616) 842-5400
http://www.ottawacorc.com/
jforner@ottawacorc.com

**Please be aware that a separate driveway review and approval will also be required from the GHT Fire/Rescue Department if the driveway will be greater than 100 feet in length.

ON SITE WELL AND SEPTIC EVALUATION REPORT

Must submit OCHD evaluation report if bedrooms and/or bathrooms are being created by the proposed project.

Ottawa County Health Department
Environmental Health Division
12251 James Street, Suite 200
Holland, MI 49424
(616) 393-5645
http://www.miottawa.org/Health/OCHD/enviro.htm

EARTH CHANGE PERMIT

If you are building within 500 feet of any watercourse, or if you are disturbing more than an acre of ground must first obtain permit from:

Ottawa County Water Resources Department
Soil Erosion & Sediment Control Agency
Erosion Control Agent
(616) 994-4528
http://www.miottawa.org/Departments/Drain

DO I NEED AN EGLE PERMIT?

The District Office of EGLE receives numerous calls on whether a permit is needed for certain projects. The following is a list of some of the permits required by the Michigan Department of Environment, Great Lakes and Energy (EGLE). If you have any questions on these permits contact the EGLE office in Grand Rapids at 616-356-0500.

GREAT LAKES SUBMERGED LANDS ACT *(P.A. 346 of 1955, as amended)*

A permit is required for any filling, dredging, or construction of a permanent structure (*groin, seawall, dock*) below the ordinary high water mark of any of the Great Lakes.

FLOODPLAIN ENCROACHMENT ACT *(P.A. 167 of 1968, as amended)*

A permit is required for any filling, grading or construction of a building within the 100-year floodplain of any river, stream or lake.

AQUATIC NUISANCE CONTROL ACT *(P.A. 86 of 1977, as amended)*

A permit is required for any placement of chemicals to control aquatic nuisance plants or swimmers itch.

DAM SAFETY ACT (P.A. 300 of 1989, as amended)

A permit is required for construction, reconstruction, repair, alteration, removal, abandonment, and operation of dams. A permit is required for any dam impounding over five acres and with a height of 6 or more feet.

SHORELANDS PROTECTION AND MANAGEMENT ACT *(P.A. 245 of 1970, as amended)*

1. Environmental Areas – a permit is required for any dredging, filling, alteration of drainage or vegetation, or construction of a structure within a designated area;
2. High Risk Erosion Areas – a permit is required for construction of any permanent structure, which will require a setback from the bluff, within a designated area;
3. Flood Risk Areas – a permit is required for construction of any permanent structure within a designated flood area.

INLAND LAKES AND STREAMS ACT *(P.A. 346 of 1972, as amended)*

A permit is required for any dredging, filling, or construction of a permanent structure below the ordinary high water mark of any inland stream, or lake greater than five acres in size. A permit is also required for dredging within 500 feet of a lake or stream.

GEOMAERE-ANDERSON WETLAND PROTECTION ACT *(P.A. 203 of 1979, as amended)*

A permit is required for any dredging, filling, draining, or construction in any wetland contiguous to a lake or stream, or any isolated wetland at least five acres in size.

SOIL EROSION AND SEDIMENTATION CONTROL ACT *(P.A. 347 of 1972, as amended)*

A permit is required for any earth changes greater than one acre in size or within 500 feet of a lake or stream. Permits are obtained from the Soil Erosion Control Agent, Rm. 201, County Building.

SAND DUNES PROTECTION AND MANAGEMENT ACT *(P.A. 146 of 1989, as amended; P.A. 147 of 1989, as amended; P.A. 222 of 1976 as amended)*

A permit is required for alteration of lands identified as Critical Dune Areas including removal of vegetation, site contour changes, and any construction activities.

GRAND HAVEN CHARTER TOWNSHIP

ALTERATION & ADDITIONS
1 OR 2 FAMILY RESIDENTIAL DWELLING
REQUIRED DOCUMENTS FOR A BUILDING PERMIT

1. **Building Permit Application –** A fully completed building permit application shall be submitted. Incomplete applications will not be processed. The applicant will be notified of the incomplete application. When a fully complete application is received the application processing will begin.

2. **Contractor Registration Form –** A fully completed contractor registration form shall be submitted by all contractors performing work in Grand Haven Charter Township. Homeowners performing work in accordance with the Home Affidavit on the Building Permit Application are not required to submit a contractor registration form. Incomplete forms will not be processed. The applicant will be notified of the incomplete form. When a fully complete contractor registration form is received the form processing will begin.

3. **Proof of Ownership** – Copy of Deed, Contract or Agreement.

4. **A Detailed and Dimension Site Plan** (*drawn to scale*) – Must show where the proposed house is to be located. Include ALL setback dimensions from each side, front and rear lot lines to the furthermost house projection. If there are any easements on the parcel, the setbacks shall be clearly provided from the EDGE of the easement(s). The driveway must be included on the site plan. Any proposed retaining walls must be shown with their locations and heights.

5. **Ottawa County Permits and EGLE Permits –** All of the required permits listed on the "Required Ottawa County Permits" and the "Do I Need an EGLE Permit?" pages shall be submitted.

6. **Michigan Energy Code Compliance –** Must show proposed compliance with the 2015 Michigan Energy Code (2015 MEC). Clearly indicate which of the 4 possible approaches are being used to demonstrate compliance. The 4 approaches are:

   a. Prescriptive,
   b. UA Trade-off,
   c. Performance, and
   d. ERI.

   All approaches must demonstrate compliance with the chosen approach requirements and mandatory requirements listed in the 2015 MEC. The construction documents shall note all thermal envelop materials, air leakage materials, lighting equipment (*at least 75% high efficiency*), and mechanical equipment to be use in the proposed project**.** ACCA manual S and manual J calculation documents shall be submitted for the proposed heating and cooling equipment. Need to submit the name and certification documentation of the independent 3rd party that will be performing the blower door testing. All new conditioned residential

structures are required to submit documentation demonstrating compliance with the air leakage requirements of the 2015 MEC.

***** *Need to note how whole house mechanical ventilation requirements will be complied with.*

7. **Roof Loading Data Sheet –** A fully completed roof loading data sheet or preliminary roof truss drawings to show the roof loading shall be submitted.

8. **One (1) complete set of drawings for the existing structure.**

9. **Two (2) complete sets of PERMANENT DRAWINGS (no reverse drawings)** to include:
    a. **Elevations** of Front, Rear, Both Sides – showing the projected Finished Grade Lines. Show how the minimum 6" drop in the first 10' from the foundation will be achieved. Show foundation depth below final grade and foundation projection above final grade. Show height and location (*with setback dimension*) for any proposed retaining walls.
    b. **Foundation** drawing showing locations, sizes, and depths for all footings (*footings shall be sized per the 2015 MRC footing tables*), walls, brick ledges, pads, beam pockets, drains, and foundation anchor bolts. Show location, quantity, and sizes for all reinforcing rods. Show how the foundation will be waterproofed. Show the vapor barrier for under concrete floors. For masonry fireplace show complete foundation details and specifications.
    c. If using **brick, stone, or adhered Masonry Veneer** show all details including the location of flashing and weep holes, air space, waterproof membrane type, etc. For adhered masonry veneer provide the manufacturer's installation instructions, or the appropriate details from the Masonry Veneer Manufacturers Association Installation guide.
    d. **Floor Plans** of each floor with all dimensions – LABEL each room (*or space*) as to use at the time an occupancy permit will be issued (*no "FUTURE" uses, or labels like "UNFINISHED BEDROOM" etc.*).
    e. **Smoke and Carbon Monoxide Alarm** locations must be shown on the floor plans.
    f. Include details and specifications of any **decks, balconies, porches, cantilevers**, etc. Show footing sizes, footing depth below final grade, post sizes and heights, beams sizes and spans, beam to post connection details, joist sizes and spans, ledger board size and specific attachment method the house include fastener size and spacing, ledger board flashing method details, lateral restraint device details, guardrail post type, size and attachment method to structure, guardrail infill details, stairway detail including landings, guardrails, handrails, and lighting.
    g. **CROSS SECTIONAL DRAWING** shall show each specific detail and dimensions from the footings up to the roof peak(s). Include all wall heights and basement finished ceiling heights.

10. **Specifications** to include:
    a. Show and label the **attic access(s)**.

b. Show and label how the **house-garage separation** and opening protection will be achieved.

c. Show and label how the **garage floor** will be drained.

d. Show and label all **door** sizes.

e. Show and label all **landing** locations and sizes.

f. Show and label all interior and exterior **stairway** locations and details. Including landings, tread rise and run, headroom, handrail location, lighting, and guardrails.

g. Show and label all bathroom **exhaust fans**.

h. Show and label **HVAC** equipment and water heater.

i. Indicate how the whole house mechanical **ventilation** requirements will be in compliance.

j. Show and label any and all **egress windows**. If using a window well, provide all details.

k. Show and label all glazing that is required to be **safety glass**.

l. Note how **windows** with sill height more than 6' above exterior grade will comply with the window fall protection requirements.

m. Provide all **lumber sizes, species and grade**. If using engineered wood products, provide manufacturer name and specifications.

n. Provide all **header sizes, beams sizes** and jack stud or supporting post specifications.

o. Indicate what **wall bracing method** will be used on the home, also indicate what wall bracing method will be used on the wall around the garage door openings.

p. If there are any "**narrow corners**" (*less than 48" wide per 602.10*) provide complete alternative details and specifications.

q. For pre-engineered roof and floor trusses, a copy of the **truss drawings** shall be provided prior to installation and include live, and dead loads, and any special bracing requirements.

r. Any other product that is manufactured (*e.g., house wraps, cultured stones, I-joists, etc.*) shall have the specific **manufacturer installation instructions** and **code evaluation reports** provided **prior to installation**.

s. Provide type & thickness of roof, wall, and floor **sheathing**.

t. Indicate the exact type of **Weather Resistant Barrier** (*e.g., Tyvek, Typar, Green Guard, etc.*).

u. Indicate all **flashing locations** (*i.e., trim projections, stone caps, deck ledger, etc.*).

v. Provide type and locations of **roof venting**.

w. Provide roof **underlayment and shingle type**.

x. Show the location and minimum amount of **ice & water shield** to be utilized.

y. Note what type and the location of the **roof flashings** that will be used (*i.e., continuous, step, and Kickout flashing*).

GRAND HAVEN CHARTER TOWNSHIP

REQUIRED INSPECTIONS
2015 MRC

The PERMIT must be posted where it can be seen from the street.
Minimum 4" Street Numbers Must Be Displayed on The Premises at All Times.

1. FOOTING FORM INSPECTION: After forms are set, re-bar (*on chairs*) is in place, and before placing concrete (*if 20' or more of re-bar, a 'grounding' inspection approval is required from the electrical inspector*).

2. WALL FORM INSPECTION: After all wall forms are set, re-bar is in place, and before placing concrete.

3. WALL DONE INSPECTION: After all forms are stripped, galv. foundation anchor bolts are in place, all waterproofing is complete and the foundation walls are sufficiently braced to prevent damage from the backfill. All straw, pcs of wood, roots, cardboard, etc must be removed. No backfilling until completely approved.

4. **WALKOUT (OR SLAB-ON-GRADE) FOUNDATION INSULATION INSPECTION: PRIOR TO ANY BACKFILLING** (*an additional inspection fee of $150 per hour [$75 minimum] will be billed for this inspection, unless an approved 3rd party firm is used*).

5. UNDER FLOOR VAPOR RETARDER INSPECTION: Before the concrete floor slabs are poured. To check the installation of the visqueen or other approved material.

6. REAL MASONRY VENEER INSPECTIONS: Shall be made before the installation of masonry veneer and after the installation of base course flashing as specified in Section R703.7.5 and weather-resistive barrier as specified in Section R703.2, and then again after the masonry construction is completed.

7. ADHERED MASONRY VENEER INSPECTIONS: Shall be made before the masonry veneer is adhered, but after the 'weep-screed' is installed as well as the 2 weather-resistive barriers, and then again after the installation is complete. Manufacturer's installation instructions and the MVMA Manual shall mandate the installation.

8. WEATHER-RESISTIVE BARRIER (HOUSE WRAP, FELT): Must be inspected and approved before the installation of any exterior siding material or cultured stone. *THE MANUFACTURERS SPECIFIC INSTALLATION INSTRUCTIONS MUST BE PROVIDED PRIOR TO THE INSPECTION for both the house wrap and the windows.*

9. ROUGH IN FRAME: After the Plumbing, Mechanical & Electrical inspections are approved and before ANY building components are concealed. All Fireblocking to be complete. DO NOT INSTALL ANY WALL OR CEILING INSULATION until the building rough-in approval is granted.

10. **ALL CAVITY AND CONTINUOUS INSULATION** (*Except Ceiling Insulation That Will Be Blown-In Later*) **SHALL BE INSPECTED AND APPROVED BEFORE ANY CONCEALMENT. IN ADDITION, ATTIC INSULATION THICKNESS 'MARKERS' MUST BE IN PLACE** (*an additional inspection fee of $150 per hour [$75 minimum] will be billed for this inspection unless an approved 3rd party firm is used*).

11. FINAL INSPECTION: After the Plumbing, Mechanical & Electrical inspections are approved, and all of the permitted work is complete and prior to occupancy.

12. **FINAL E-CODE INSPECTIONS** (*an additional inspection fee of $150 per hour [$75 minimum] will be billed for this inspection unless an approved 3rd party firm is used*).

    a. **FINAL LIGHTING INSPECTION: a minimum 75% of all lighting must be high efficacy.**

    b. **FINAL INSULATION INSPECTION:** *A Ladder Must Be Provided to Each Separate Attic Space* **The attic insulation must be inspected and measurement devices shall be visible as required. The insulation certificate shall be permanently affixed to the front of the electrical panel box.**

    c. **MANDATORY BLOWER DOOR TEST RESULTS MUST BE PROVIDED BY AN APPROVED 3rd PARTY FIRM.**

13. OTHER INSPECTIONS: In addition to the called inspections above, the building department may make or require any other inspections to ascertain compliance with this code and other laws enforced by the building department.

PROCEDURES TO ARRANGE AN INSPECTION

A. Contact the Township offices at least 1 day in advance of the needed inspection. Call (616) 842-5988 or email building@ghtmi.gov.

B. Provide: Builder name, address and permit number & type of inspection required. Indicate AM or PM (exact times cannot be specified due to many unforeseen circumstances).

C. For the initial foundation inspections, the permit must be posted in an accessible location easily seen from the street. You are to place the Window Inspection Card in the window for subsequent inspection approval stickers.

D. All approvals are indicated by a GREEN sticker. If you do not receive a GREEN sticker by 5pm the day of your scheduled inspection, you are required to contact the building department. **DO NOT PROCEED UNTIL YOU HAVE OBTAINED THE GREEN APPROVAL STICKER.**

Please see our website for our office hours.
Normal inspections are typically performed:
mornings 9:30 – 11:30am and
afternoons 2:30 – 4:30pm.

GRAND HAVEN CHARTER TOWNSHIP

SMOKE AND CARBON MONOXIDE ALARM REQUIREMENTS
2015 MRC

SECTION R314 – SMOKE ALARMS

- **R314.1 General.** Smoke alarms shall comply with NFPA 72 and Section R314.
- **R314.1.1 Listings.** Smoke alarms shall be *listed* in accordance with UL 217. Combination smoke and carbon monoxide alarms shall be *listed* in accordance with UL 217 and UL 2034.
- **R314.2 Where required.** Smoke alarms shall be provided in accordance with this section.
- **R314.2.1 New construction.** Smoke alarms shall be provided in *dwelling units*.
- **R314.2.2 Alterations, repairs and additions.** Where *alterations*, *repairs* or *additions* requiring a permit occur, or where one or more sleeping rooms are added or created in existing *dwellings*, the individual *dwelling unit* shall be equipped with smoke alarms located as required for new *dwellings*.
    - **Exceptions:**
        - Work involving the exterior surfaces of *dwellings*, such as the replacement of roofing or siding, the *addition* or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.
        - Installation, alteration or repairs of electrical, plumbing or mechanical systems are exempt from the requirements of this section.
- **R314.3 Location.** Smoke alarms shall be installed in the following locations:
    - In each sleeping room.
    - Outside each separate sleeping area in the immediate vicinity of the bedrooms.
    - On each additional *story* of the *dwelling*, including *basements* and *habitable attics* and not including crawl spaces and uninhabitable *attics*. In *dwellings* or *dwelling units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full *story* below the upper level.
    - Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section R314.3. (NFPA 72 requirement)
- **R314.3.1 Installation near cooking appliances.** Smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required by Section R314.3.
    - Ionization smoke alarms shall not be installed less than 20 feet (6096 mm) horizontally from a permanently installed cooking *appliance*.

- Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 feet (3048 mm) horizontally from a permanently installed cooking *appliance*.
- Photoelectric smoke alarms shall not be installed less than 6 feet (1828 mm) horizontally from a permanently installed cooking *appliance*.

- **R314.4 Interconnection.** Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual *dwelling unit*. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.
  - **Exception:** Interconnection of smoke alarms in existing areas shall not be required.
- **R314.5 Combination alarms.** Combination smoke and carbon monoxide alarms shall be permitted to be used in lieu of smoke alarms.
- **R314.6 Power source.** Smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.
  - **Exceptions:**
    - Smoke alarms shall be permitted to be battery operated where installed in buildings without commercial power.
    - Smoke alarms installed in accordance with Section R314.2.2 shall be permitted to be battery powered.
- **R314.7 Fire alarm systems.** Fire alarm systems shall be permitted to be used in lieu of smoke alarms and shall comply with Sections R314.7.1 through R314.7.4.
- **R314.7.1 General.** Fire alarm systems shall comply with the provisions of this code and the household fire warning *equipment* provisions of NFPA 72. Smoke detectors shall be *listed* in accordance with UL 268.
- **R314.7.2 Location.** Smoke detectors shall be installed in the locations specified in Section R314.3.
- **R314.7.3 Permanent fixture.** Where a household fire alarm system is installed, it shall become a permanent fixture of the occupancy, owned by the homeowner.
- **R314.7.4 Combination detectors.** Combination smoke and carbon monoxide detectors shall be permitted to be installed in fire alarm systems in lieu of smoke detectors, provided that they are *listed* in accordance with UL 268 and UL 2075.

SECTION R315 – CARBON MONOXIDE ALARMS

- **R315.1 General.** Carbon monoxide alarms shall comply with Section R315.
- **R315.1.1 Listings.** Carbon monoxide alarms shall be *listed* in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be *listed* in accordance with UL 2034 and UL 217.
- **R315.2 Where required.** Carbon monoxide alarms shall be provided in accordance with Sections R315.2.1 and R315.2.2.

- **R315.2.1 New construction.** For new construction, carbon monoxide alarms shall be provided in dwelling units where either or both of the following conditions exist.
    - The *dwelling unit* contains a fuel-fired *appliance.*
    - The *dwelling unit* has an attached garage with an opening that communicates with the dwelling unit.

- **R315.2.2 Alterations, repairs and additions.** Where *alterations*, repairs or *additions* requiring a permit occur, or where one or more sleeping rooms are added or created in existing *dwellings*, the individual *dwelling unit* shall be equipped with carbon monoxide alarms located as required for new *dwellings*.
    - **Exceptions:**
        - Work involving the exterior surfaces of *dwellings*, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, is exempt from the requirements of this section.
        - Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.

- **R315.3 Location.** Carbon monoxide alarms in *dwelling units* shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning *appliance* is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

- **R315.4 Combination alarms.** Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.

- **R315.5 Power source.** Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.
    - **Exceptions:**
        - Carbon monoxide alarms shall be permitted to be battery operated where installed in buildings without commercial power.
        - Carbon monoxide alarms installed in accordance with Section R315.2.2 shall be permitted to be battery powered.

- **R315.6 Carbon monoxide detection systems.** Carbon monoxide detection systems shall be permitted to be used in lieu of carbon monoxide alarms and shall comply with Sections R315.6.1 through R315.6.4.

- **R315.6.1 General.** Household carbon monoxide detection systems shall comply with NFPA 720. Carbon monoxide detectors shall be *listed* in accordance with UL 2075.

- **R315.6.2 Location.** Carbon monoxide detectors shall be installed in the locations specified in Section R315.3. These locations supersede the locations specified in NFPA 720.

- **R315.6.3 Permanent fixture.** Where a household carbon monoxide detection system is installed, it shall become a permanent fixture of the occupancy and owned by the homeowner.

- **R315.6.4 Combination detectors.** Combination carbon monoxide and smoke detectors shall be permitted to be installed in carbon monoxide detection systems in lieu of carbon monoxide detectors, provided that they are *listed* in accordance with UL 2075 and UL 268.

GRAND HAVEN CHARTER TOWNSHIP

ROOF-CEILING CONSTRUCTION
ROOF LOADING DATA SHEET
FIGURE 802.10.1

Print

Clear Form

Authority: 1972 PA 230
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.

Completion:

Jurisdictional information should be included in this space	
Township	County
Grand Haven Charter	Ottawa

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 load, 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, TCLL1. 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 Factor C_e

Exposure		**Fully Exposed[1]**		**Partially Exposed[2]**		**Sheltered[3]**	
A	Large city center with at least ½ the buildings exceeding 70 ft. in height.	N/A		1.1		1.3	
B	Urban and suburban areas, wood 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 1 of the 9 boxes under the Exposure Factor with an "X." Do not mark "X" in grayed out boxes.

[1] Fully Exposed: Roofs exposed on all sides with no shelter by terrain, higher structures, or trees.
[2] Partially Exposed: All roofs except those designated as "fully exposed" or "sheltered."
[3] Sheltered: 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 buildings or storage buildings.	1.2	
Continuously heated greenhouse with a roof R value of 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

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.

Clear Form

Print

GRAND HAVEN CHARTER TOWNSHIP

CONTRACTOR REGISTRATION APPLICATION

Are there other applications on file for this company OR one of its licensees? ❑ Yes ❑ No ❑ Unknown

Company Name _____

Street Address _____

City/State/Zip _____

Name of Owner _____

Business Phone _____ Business Fax _____

Cell Phone _____

Company Email _____

Federal ID# (*if applicable*) _____ ***No Social Security Numbers please**

Company Type ❑ Sole Proprietor ❑ Corporation ❑ LLC ❑ Partnership

Contractor Type ❑ Building ❑ Electric ❑ Manufactured Housing ❑ Mechanical ❑ Plumbing ❑ Repairs

Workers Compensation Carrier _____

UIA Employer Number _____

LICENSEE INFORMATION

A PHOTO ID AND COPIES OF ANY LICENSES LISTED WILL BE REQUIRED TO COMPLETE THE REGISTRATION

License Type	License Holder Name	License Number	Expiration Date	License Holder Email	Verified By (GHT Use Only)
Master					
Contractor					
Contractor					
Contractor					
Contractor					