



## Building Permit Application Cover Sheet

Both regular and limited plan Building permits applications are available for the following types of building permits:

- Basement Finish
- Deck
- Residential Accessory Building

To determine which type of permit application is most applicable, please see the **“From Application to Completion”** section in attached guide to help you.

**If you choose the limited plan submission process, please see and complete the Statement of Understanding included in this packet.**

Still have questions after reviewing the guide?  
Contact us at 616-842-5988.



**GRAND HAVEN CHARTER TOWNSHIP**

13300 168<sup>th</sup> Avenue, Grand Haven, MI 49417

Phone: (616) 842-5988 | Fax: (616) 842-9419 | building@ghtmi.gov

**LIMITED PLAN BUILDING PERMIT APPLICATION**  
**Statement of Understanding**

1. The undersigned requests that a limited plan building permit be issued. It is understood that all work performed is done completely at the permit holder's own risk. Any work that is found to not comply with all codes currently in effect shall be corrected at the permit holder's expense.
2. The undersigned acknowledges receipt of the Grand Haven Charter Township construction guidebook that pertains to the project noted on this application.
3. The undersigned understands that all work must conform to the 2015 Michigan Residential Code and that separate permits are required for mechanical, electrical, and plumbing work.
4. The undersigned understands that all proposed residential projects will receive a zoning review at the building department at the time of application.
5. The undersigned understands that all residential accessory building/structures and deck building permit applications, including limited plan applications, require a detailed site plan showing the size of the lot including the location of all existing structure(s), location, size, and shape of proposed projects and distances to all adjacent property lines.

I hereby certify that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application. I, the authorized agent and the owner agree to conform to all applicable laws, rules and codes of the State of Michigan and all Grand Haven Charter Township Ordinances. All information submitted on this application is accurate to the best of my knowledge.

Section 23a of the State Construction Code Act of 1972, 1972 PA 230, MCL 125.15239, 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.

---

*Signature of Applicant*

---

*Date*



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

**Residential Basement Finish**

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

**Basement Finishes, Decks and Accessory Buildings are eligible for both regular and limited plan permits  
 See the "From Application to Completion" section of the attached guide for details**

|   |  |   |  |
|---|--|---|--|
| <b>I. Owner/ Job Location</b> <input type="checkbox"/> 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<br><input type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Township of : Grand Haven Township |  |
| Parcel #  |  | Email (REQUIRED)  |  |
| <b>II. Builder/Contractor/Licensee Information</b>  |  |   |  |
| 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) |
| <b>III. Architect or Engineer</b>   |  |   |  |
| Name  |  | Address   |  |
| City  |  | State   | Zip      Business Phone                  |
| Email   |  | State Architect or Engineering License #  | Expiration Date                          |
| <b>IV. Builder's Affidavit</b>  |  |   |  |
| <p><i>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.</i></p>  |  |   |  |
| Signature of Licensee   |  | Print Name of Licensee  | Date                                     |
| <b>V. Homeowner Affidavit</b>   |  |   |  |
| <p><i>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.</i></p> |  |   |  |
| Signature of Homeowner  |  | Print Name of Homeowner   | Date                                     |

**VI. Project Description**

**A. Type of Improvement**

|  |  |   |   |  |
|--|--|---|---|--|
| <input type="checkbox"/> NEW BUILDING<br><input type="checkbox"/> ADDITION | <input type="checkbox"/> ALTERATION<br><input type="checkbox"/> REPAIR | <input type="checkbox"/> BASEMENT FINISH<br><input type="checkbox"/> DECK | <input type="checkbox"/> FOUNDATION ONLY<br><input type="checkbox"/> PREMANUFACTURE | <input type="checkbox"/> MOBILE HOME SET-UP<br><input type="checkbox"/> SPECIAL INSPECTION |
|--|--|---|---|--|

**B. Residential Building Regulated by the Michigan Residential Code**

|  |  |                                      |
|--|--|--------------------------------------|
| <input type="checkbox"/> ONE FAMILY<br><input type="checkbox"/> TWO FAMILY | <input type="checkbox"/> ATTACHED GARAGE<br><input type="checkbox"/> DETACHED GARAGE | <input type="checkbox"/> 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             |
| 1 <sup>st</sup> Floor |          |            |       | Rear              |
| 2 <sup>nd</sup> 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 |
|   | YES       | NO |          |      |        |    |
| A. Proof of Ownership                                   | YES       | NO |          |      |        |    |
| B. Site Plan (Showing Proposed Setbacks)                | YES       | NO |          |      |        |    |
| C. Survey   | YES       | NO |          |      |        |    |
| D. Water Supply (Public / Private) <b>Circle One</b>    | YES       | NO |          |      |        |    |
| E. Septic or Sewer (Public / Private) <b>Circle One</b> | 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 |



## 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<br>(GHT Use Only) |
|--------------|---------------------|----------------|-----------------|----------------------|-------------------------------|
| Master       |                     |                |                 |                      |                               |
| Contractor   |                     |                |                 |                      |                               |
| Contractor   |                     |                |                 |                      |                               |
| Contractor   |                     |                |                 |                      |                               |
| Contractor   |                     |                |                 |                      |                               |



# **BASEMENT FINISH CONSTRUCTION**

January 2024

**Grand Haven Charter Township  
Building Department Guide  
Finishing a Basement**



**GRAND HAVEN CHARTER TOWNSHIP**

13300 168th Avenue • Grand Haven, Michigan 49417 • Phone: 616.842.5988 • Fax: 616.842.9419



# TABLE OF CONTENTS

|  |    |
|--|----|
| INTRODUCTION .....   | 3  |
| FORMS .....  | 3  |
| CODES CURRENTLY IN EFFECT .....  | 3  |
| FROM APPLICATION TO COMPLETION .....   | 4  |
| BUILDING PERMIT FEE .....  | 7  |
| INSPECTION REQUEST .....   | 9  |
| CONSTRUCTION REQUIREMENTS .....  | 10 |
| SAMPLE DRAWINGS .....  | 20 |
| <b>FIGURES</b>   |    |
| Figure 1: Emergency Escape and Rescue Opening Requirements .....                   | 11 |
| Figure 2: Window Well Requirements .....   | 11 |
| Figure 3: Framing at Headers .....   | 13 |
| Figure 4: Fireblocking with Pressure Treated Stud Wall Against Basement Wall ..... | 14 |
| Figure 5: Fireblocking at Drop Ceiling .....                                       | 14 |
| Figure 6: Fireblocking with Offset Stud Wall .....                                 | 14 |
| Figure 7: Drilling and Notching Studs .....  | 15 |
| Figure 8: Drilling and Notching Joists .....                                       | 15 |
| Figure 9: Draftstopping at Drop Ceiling .....                                      | 16 |
| Figure 10: Draftstopping at Open Web Trusses .....                                 | 16 |
| Figure 11: Airbreak at Clothes Washer Discharge .....                              | 17 |
| Figure 12: Typical Outlet Distribution .....                                       | 19 |
| <b>TABLES</b>  |    |
| Table 1: Fastening Schedule .....  | 12 |
| Table 2: Header Size .....   | 13 |
| Table 3: Minimum Drain Size .....  | 17 |
| Table 4: Branch Circuit Requirements .....   | 18 |
| Table 5: Closet Light Fixture Clearances .....                                     | 19 |

## INTRODUCTION

Grand Haven Charter Township has prepared this Guide to assist you in the process of finishing your basement. This Guide contains important information that will help you understand the Building Permit and construction process from application to completion. We have included sample drawings for areas that have generated confusion or delays in the past. The information is presented in a start-to-finish sequence to guide you as you progress through your project.

## FORMS

Building Permit Applications  
Contractor Registration

*All forms are available at  
our counter or online at:  
[www.ghc.org](http://www.ghc.org)*

This Guide contains procedures and requirements. We urge you to read through it completely. It may save you valuable time in completing your project. We hope this Guide is helpful.

**Note: This Guide is only intended to be a guide and is not all inclusive of the Building Code. For complete details of all requirements, please consult the Michigan Residential Code (MRC). The information in this Guide is subject to change without notice.**

## CODES CURRENTLY IN EFFECT

Grand Haven Charter Township  
March 2016

|                     |   |
|---------------------|---|
| <b>Building:</b>    | MRC 2015 (Michigan Residential Code 2015)<br>Effective February 8, 2016 |
| <b>Plumbing:</b>    | MRC 2015 (Michigan Residential Code 2015)<br>Effective February 8, 2016 |
| <b>Mechanical:</b>  | MRC 2015 (Michigan Residential Code 2015)<br>Effective February 8, 2016 |
| <b>Electrical:</b>  | MRC 2015 (Michigan Residential Code 2015)<br>Effective February 8, 2016 |
| <b>Energy Code:</b> | MEC 2015 (Michigan Residential Code 2015)<br>Effective February 8, 2016 |

Codes can be purchased by going to the Michigan Department of Labor & Economic Growth, Bureau of Construction Codes & Fire Safety, Lansing, MI 48909, or their website at: [www.michigan.gov/bcc](http://www.michigan.gov/bcc)

# FROM APPLICATION TO COMPLETION

## A General Guide through the Complete Process

A Building Permit from Grand Haven Charter Township is required prior to construction starting. Included in this Guide is a checklist of items needed for application submittal. The Building Permit Application can be found online at [www.ghc.org](http://www.ghc.org) or can be obtained at the front desk of the administration building. Once the Building Permit is issued, Electrical, Mechanical and Plumbing permits can then be obtained.

### 1. Types of Building Permit Applications available

#### a. Building Permit Application with limited plans.

- i. A Building Permit can be issued as soon as possible from the time of application. Only existing basement layout and proposed basement layout drawing are required. Please label all rooms.

#### b. Regular Building Permit Application.

- i. Full plan review of construction documents is required. This may occur if the applicant requests a full Plan Review before starting construction, or if a Plan Reviewer determines the project needs a full review due to its complexity. The Permit Applicant will be contacted when the Building Permit is ready to be picked up. Plan review time varies depending on the Building Department's work load.

### 2. Information Required For Permit Application

#### a. Building Permit Application

- i. Forms are available online at [www.ghc.org](http://www.ghc.org) or at the front desk of the administration building. Applications shall be filled out completely.

#### b. Construction Drawings – Two Sets (Regular Permit Applications ONLY)

- i. Documents that contain all necessary information and details will help expedite the plan review process. Existing basement layout and proposed basement layout drawing are required. Please label all rooms. See construction requirements on pages 10 – 21 of this guide for information and details that are required on complete construction documents.

- c. Owners may submit a Building Permit application for work on property that is or will be, upon completion, their place of residence. Owners of rental property may submit a Building Permit application to do maintenance and alterations to the rental property.

- d. Please Note: Any Contractor, hired by an Owner for a project with a total project price of \$600.00 or more, shall be licensed in accordance with the State of Michigan Residential Builders Laws.

### 3. Registration of Builder's License

- a. A Builder shall be currently registered with Grand Haven Charter Township to submit an application.

- b. Builders not currently registered can register at the time of application by providing the following:

- i. The original or a copy of the Builder's license.
- ii. Copy of Drivers license

iii. Contractor Registration form.

1. A Contractor Registration form is included with the application package, and is also available at our office or online at [www.gh.org](http://www.gh.org)

4. Plan Review and Approval

a. Building Permits Applications with limited plans

- i. Only existing basement layout and proposed basement layout drawings are required. Please label all rooms. The Basement Finish project is required to comply with the State of Michigan Residential Code (MRC).

b. Regular Building Permits Applications

- i. Existing basement layout and proposed basement layout drawing are required. Please label all rooms. See construction requirements on pages 10 – 21 of this guide for information and details that are required on complete construction documents.
- ii. Construction drawings will be reviewed for compliance with the State of Michigan Residential Codes (MRC).
- iii. Plans are reviewed in order they are received, based on the application date. Plan Review times vary depending on the Building Department's workload.
- iv. Plans that contain all the necessary information and details will help expedite the plan review process.
- v. The Permit Applicant will be notified if the plans do not meet the State of Michigan Residential Code requirements or if any additional information is required.

5. Building Permit Ready

a. Building Permits with limited plans

- i. The Building Permit will be issued as soon as possible from the time of application.

b. Regular Building Permit Applications

- i. The Permit Applicant will be notified when the Building Permit is ready to be picked up.

c. Building Permit Fees

- i. See Building Permit Fees on pages 7 and 8

d. Note

- i. All Permit fees are due at the time of Permit issuance.
- ii. Permit fees may be paid by cash, credit card, debit card or check. There is a convenience fee for payments made with credit or debit cards.
- iii. The permit shall be issued within 6 months of the application date or the application will be cancelled
- iv. Permits that have no activity for more than 6 months may be cancelled. Permit applicant may request extensions.
- v. Once the Building Permit is issued, Electrical, Mechanical and Plumbing permits can then be obtained (if applicable). Electrical, Mechanical and Plumbing permits are not included in the Building permit. Electrical, Mechanical and Plumbing permits require separate applications and permits.

**When all required permits are obtained, construction may begin. Revisions to the basement finish after issuance of the Building Permit may require re-submittal and Building Department approval.**

## 6. Inspections

Once your Building Permit has been issued, you may begin construction. **If you have received a Building Permit with limited plans, this Construction Guide provided to you shall be present on site at the time of inspections.** Your Basement Finish project will be reviewed and inspected in accordance with the requirements of the Michigan Residential Code (MRC). As your project progresses, the Building Department will need to perform the following inspections:

- a. Underground Plumbing (if applicable)
  - i. If any of the basement floor is removed to install or reconfigure piping an underground inspection is required.
- b. Rough Plumbing (if applicable)
  - i. After bathtubs, showers and all concealed piping are installed and fire-blocked.
- c. Rough Mechanical (if applicable)
  - i. After all concealed gas piping, duct work, return air, chimneys and electrical wiring are installed and fire-blocked.
  - ii. After the fireplace is installed.
- d. Rough Electrical (if applicable)
  - i. After all recessed fixtures, wires and boxes are installed with grounds and neutrals properly terminated.
- e. Rough Building
  - i. After rough Plumbing, Mechanical, Electrical and pre-fab (fireplace) inspections are approved as applicable.
  - ii. Approved plans shall be on site for all inspections.
- f. Insulation
  - i. After insulation is installed in the wall cavities.
- g. Final Plumbing (if applicable)
  - i. After all fixtures are installed and operational.
- h. Final Mechanical (if applicable)
  - i. After gas piping, furnace, duct work and return air is installed and operational.
  - ii. A gas pressure test will be required for existing gas piping if concealed by drywall.
  - iii. Furnace manufacturer's installation instructions shall be on site.
- i. Final Electrical (if applicable)
  - i. After all Electrical equipment, switches, plugs, covers and fixtures are installed and operational.
  - ii. After fireplace is installed (if pre-fab, manufacturer's instructions must be on site.)
- j. Final Building
  - i. After final Plumbing, Mechanical and Electrical inspections have been approved.

# BUILDING PERMIT FEES

1. **Building Permit Fee (Expedited and Regular Permits)**

Based on the Construction Valuation of the project excluding site work. Refer to Fee Charts below. Electrical, Mechanical and Plumbing permits are not included in the Building permit fee. Electrical, Mechanical and Plumbing permits require separate applications and fees.

2. **Reinspection Fee**.....\$125/hour (\$75 minimum)

3. **Schedule of Fees for Basement Finish:**

| Fee Schedule |   |
|--------------|---|
| 793.40       | for the first \$100,000                         |
| 5.25         | for each additional \$1,000 (up to \$500,000)   |
| 2,893.40     | for the first \$500,000                         |
| 4.45         | for each additional \$1,000 (up to \$1,000,000) |
| 5,118.40     | for the first \$1,000,000                       |
| 3.15         | for each additional \$1,000                     |

## CONSTRUCTION VALUATION

| From      | To        | Rate      |
|-----------|-----------|-----------|
| \$ -      | \$ 500    | \$ 75.00  |
| \$ 501    | \$ 1,000  | \$ 75.00  |
| \$ 1,001  | \$ 2,000  | \$ 75.00  |
| \$ 2,001  | \$ 3,000  | \$ 75.00  |
| \$ 3,001  | \$ 4,000  | \$ 75.00  |
| \$ 4,001  | \$ 5,000  | \$ 89.25  |
| \$ 5,001  | \$ 6,000  | \$ 105.00 |
| \$ 6,001  | \$ 7,000  | \$ 120.75 |
| \$ 7,001  | \$ 8,000  | \$ 136.50 |
| \$ 8,001  | \$ 9,000  | \$ 152.25 |
| \$ 9,001  | \$ 10,000 | \$ 168.00 |
| \$ 10,001 | \$ 11,000 | \$ 183.75 |
| \$ 11,001 | \$ 12,000 | \$ 190.60 |
| \$ 12,001 | \$ 13,000 | \$ 197.45 |
| \$ 13,001 | \$ 14,000 | \$ 204.30 |
| \$ 14,001 | \$ 15,000 | \$ 211.15 |
| \$ 15,001 | \$ 16,000 | \$ 218.00 |
| \$ 16,001 | \$ 17,000 | \$ 224.85 |
| \$ 17,001 | \$ 18,000 | \$ 231.70 |
| \$ 18,001 | \$ 19,000 | \$ 238.55 |

| From      | To        | Rate      |
|-----------|-----------|-----------|
| \$ 19,001 | \$ 20,000 | \$ 245.40 |
| \$ 20,001 | \$ 21,000 | \$ 252.25 |
| \$ 21,001 | \$ 22,000 | \$ 259.10 |
| \$ 22,001 | \$ 23,000 | \$ 265.95 |
| \$ 23,001 | \$ 24,000 | \$ 272.80 |
| \$ 24,001 | \$ 25,000 | \$ 279.65 |
| \$ 25,001 | \$ 26,000 | \$ 286.50 |
| \$ 26,001 | \$ 27,000 | \$ 293.35 |
| \$ 27,001 | \$ 28,000 | \$ 300.20 |
| \$ 28,001 | \$ 29,000 | \$ 307.05 |
| \$ 29,001 | \$ 30,000 | \$ 313.90 |
| \$ 30,001 | \$ 31,000 | \$ 320.75 |
| \$ 31,001 | \$ 32,000 | \$ 327.60 |
| \$ 32,001 | \$ 33,000 | \$ 334.45 |
| \$ 33,001 | \$ 34,000 | \$ 341.30 |
| \$ 34,001 | \$ 35,000 | \$ 348.15 |
| \$ 35,001 | \$ 36,000 | \$ 355.00 |
| \$ 36,001 | \$ 37,000 | \$ 361.85 |
| \$ 37,001 | \$ 38,000 | \$ 368.70 |
| \$ 38,001 | \$ 39,000 | \$ 375.55 |

**CONSTRUCTION VALUATION CONTINUED**

| <b>From</b> | <b>To</b> | <b>Rate</b> |
|-------------|-----------|-------------|
| \$ 39,001   | \$ 40,000 | \$ 382.40   |
| \$ 40,001   | \$ 41,000 | \$ 389.25   |
| \$ 41,001   | \$ 42,000 | \$ 396.10   |
| \$ 42,001   | \$ 43,000 | \$ 402.95   |
| \$ 43,001   | \$ 44,000 | \$ 409.80   |
| \$ 44,001   | \$ 45,000 | \$ 416.65   |
| \$ 45,001   | \$ 46,000 | \$ 423.50   |
| \$ 46,001   | \$ 47,000 | \$ 430.35   |
| \$ 47,001   | \$ 48,000 | \$ 437.20   |
| \$ 48,001   | \$ 49,000 | \$ 444.05   |
| \$ 49,001   | \$ 50,000 | \$ 450.90   |
| \$ 50,001   | \$ 51,000 | \$ 457.75   |
| \$ 51,001   | \$ 52,000 | \$ 464.60   |
| \$ 52,001   | \$ 53,000 | \$ 471.45   |
| \$ 53,001   | \$ 54,000 | \$ 478.30   |
| \$ 54,001   | \$ 55,000 | \$ 485.15   |
| \$ 55,001   | \$ 56,000 | \$ 492.00   |
| \$ 56,001   | \$ 57,000 | \$ 498.85   |
| \$ 57,001   | \$ 58,000 | \$ 505.70   |
| \$ 58,001   | \$ 59,000 | \$ 512.55   |
| \$ 59,001   | \$ 60,000 | \$ 519.40   |
| \$ 60,001   | \$ 61,000 | \$ 526.25   |
| \$ 61,001   | \$ 62,000 | \$ 533.10   |
| \$ 62,001   | \$ 63,000 | \$ 539.95   |
| \$ 63,001   | \$ 64,000 | \$ 546.80   |
| \$ 64,001   | \$ 65,000 | \$ 553.65   |
| \$ 65,001   | \$ 66,000 | \$ 560.50   |
| \$ 66,001   | \$ 67,000 | \$ 567.35   |
| \$ 67,001   | \$ 68,000 | \$ 574.20   |
| \$ 68,001   | \$ 69,000 | \$ 581.05   |
| \$ 69,001   | \$ 70,000 | \$ 587.90   |

| <b>From</b> | <b>To</b>  | <b>Rate</b> |
|-------------|------------|-------------|
| \$ 70,001   | \$ 71,000  | \$ 594.75   |
| \$ 71,001   | \$ 72,000  | \$ 601.60   |
| \$ 72,001   | \$ 73,000  | \$ 608.45   |
| \$ 73,001   | \$ 74,000  | \$ 615.30   |
| \$ 74,001   | \$ 75,000  | \$ 622.15   |
| \$ 75,001   | \$ 76,000  | \$ 629.00   |
| \$ 76,001   | \$ 77,000  | \$ 635.85   |
| \$ 77,001   | \$ 78,000  | \$ 642.70   |
| \$ 78,001   | \$ 79,000  | \$ 649.55   |
| \$ 79,001   | \$ 80,000  | \$ 656.40   |
| \$ 80,001   | \$ 81,000  | \$ 663.25   |
| \$ 81,001   | \$ 82,000  | \$ 670.10   |
| \$ 82,001   | \$ 83,000  | \$ 676.95   |
| \$ 83,001   | \$ 84,000  | \$ 683.80   |
| \$ 84,001   | \$ 85,000  | \$ 690.65   |
| \$ 85,001   | \$ 86,000  | \$ 697.50   |
| \$ 86,001   | \$ 87,000  | \$ 704.35   |
| \$ 87,001   | \$ 88,000  | \$ 711.20   |
| \$ 88,001   | \$ 89,000  | \$ 718.05   |
| \$ 89,001   | \$ 90,000  | \$ 724.90   |
| \$ 90,001   | \$ 91,000  | \$ 731.75   |
| \$ 91,001   | \$ 92,000  | \$ 738.60   |
| \$ 92,001   | \$ 93,000  | \$ 745.45   |
| \$ 93,001   | \$ 94,000  | \$ 752.30   |
| \$ 94,001   | \$ 95,000  | \$ 759.15   |
| \$ 95,001   | \$ 96,000  | \$ 766.00   |
| \$ 96,001   | \$ 97,000  | \$ 772.85   |
| \$ 97,001   | \$ 98,000  | \$ 779.70   |
| \$ 98,001   | \$ 99,000  | \$ 786.55   |
| \$ 99,001   | \$ 100,000 | \$ 793.40   |

## INSPECTION REQUESTS

### To request inspections, please call:

- **Inspection Request Line** – An Inspection may be requested by calling our Inspection Request Line at (616) 842-5988 or emailing [building@ghtmi.gov](mailto:building@ghtmi.gov) and providing the following information:
  - **The Street Address of the job site.**
  - **The Permit Number.**
  - **The type of Inspection you are requesting.**

Inspection requests will be scheduled between 9:30 a.m. and 11:30 a.m. or 2:30 p.m. and 4:30 p.m. Inspections may be done earlier or later depending on the Inspector's workload. Inspections will be done Monday through Friday. Inspections need to be called in 24 hours in advance.

**A request to cancel an Inspection needs to be called in to the Building Department at (616) 842-5988 or email [building@ghtmi.gov](mailto:building@ghtmi.gov) before 9:00 a.m. on the day of the requested Inspection.**

**Please make sure your project is ready for your inspection. If your project is not ready for an inspection, the inspection will not be done and a \$125.00/hr (\$75.00 minimum) re-inspection fee may be charged. The following items shall be completed or in place at the time of the inspection:**

- The Street address and lot number posted and visible from the street.
- Building Permit posted where inspector can easily locate it.
- Safe access to the job site and throughout the area to be inspected.
- Approved plans and truss drawings on site.
- The job ready for inspection

**Inspection results will be left on site after each inspection has been completed.**

### **Green Sticker on Building Permit:**

The Inspection has been approved.

### **No Green Sticker on Building Permit:**

The Inspection has not been approved. The inspector will email you a report that will contain a list of items that need to be addressed before calling for a re-inspection. This email will indicate whether a \$125/hr (\$75 minimum) re-inspection fee will be required. Inspections shall be approved before proceeding with the next phase of your construction project.

It is your responsibility as the permit holder to check the job site for the inspection results. Please read the information on all Inspection Reports. If you have any questions regarding this information, call (616) 842-5988 or email [building@ghtmi.gov](mailto:building@ghtmi.gov) between 8:00 a.m. and 5:00 p.m. and ask to speak with the Inspector that wrote the Inspector's Report.



## CONSTRUCTION REQUIREMENTS

This information is provided in a “User-friendly” format as a general guide to help you apply the common Building Code requirements to your project. It covers the most common types of projects. The actual Building Code language may contain additional requirements or exceptions that may apply if your project is beyond the scope of this Guide.

### PLEASE INCLUDE THE FOLLOWING WITH YOUR LIMITED PLANS AND REGULAR BUILDING PERMIT APPLICATION:

#### FLOOR PLAN

- Existing rooms and spaces, including names & uses of all rooms.
- Proposed rooms and spaces, including names & uses of all rooms.

#### TYPICAL BASEMENT FINISHING DETAILS

##### SECTION 1: GENERAL NOTES

1. Habitable rooms (excluding closets, hallways, laundry rooms, storage spaces and bathrooms) shall have an area of not less than 70 square feet and shall not be less than 7 feet in any direction.
2. Hallways shall not be less than 36 inches in width.
3. Basement ceiling height shall not be less than 6’8” above the finished floor. Obstructions may project up to 4 inches below the required ceiling height.
4. Bathrooms shall be equipped with a fan vented directly to the outside. A fan is not required if the bathroom contains a window with an opening of 1.5 square feet or more.
5. Enclosed and accessible spaces under stairs shall be projected with ½-inch drywall on the underside or with a non-accessible enclosure clad in ½-inch drywall.
6. Smoke alarms shall be installed in each sleeping room and outside of each separate sleeping area in the immediate vicinity of the bedroom(s). If no sleeping areas exist in the basement, a smoke alarm is required in the basement. **Please be advised, a Basement Finishing project will require the updating of smoke alarms that comply with the regulations of current Building Codes throughout your residence (R314).**
7. Carbon monoxide alarms shall be installed outside of each separate sleeping area in the immediate vicinity of bedroom(s). **Please be advised, a Basement Finishing project will require the updating of CO alarms that comply with regulations of current Building Codes, throughout your residence (R315).**
8. All basement stairs shall have a light source to illuminate all treads and landings. Lights shall be operated by a switch located at the top and bottom of the stairs.
9. A minimum of R-13 unfaced cavity insulation or R-10 continuous insulation shall be installed for the full height and length of the below grade basement walls. Above grade basement walls shall have a minimum of R-20 insulation installed. Latex or enamel paint shall be installed on the interior side of the gypsum board.

##### SECTION 2: EMERGENCY ESCAPE AND RESCUE

Regardless of the house's age, an emergency escape and rescue opening in the form of a window or door to the outside is required for:

1. All bedrooms in basements
2. Additions to basements, unless there is an emergency escape and rescue opening that is accessible from the existing basement

However, openings in basement bedroom(s) may serve the entire basement. If your basement does not currently have emergency escape and rescue openings in the locations listed above, then you must provide emergency escape and rescue openings in accordance with the options below. **Cutting openings in existing basement walls is outside the scope of these details. Therefore, a plan submission is required for the new openings only.** All other conditions of the finished basement may be taken from these details.

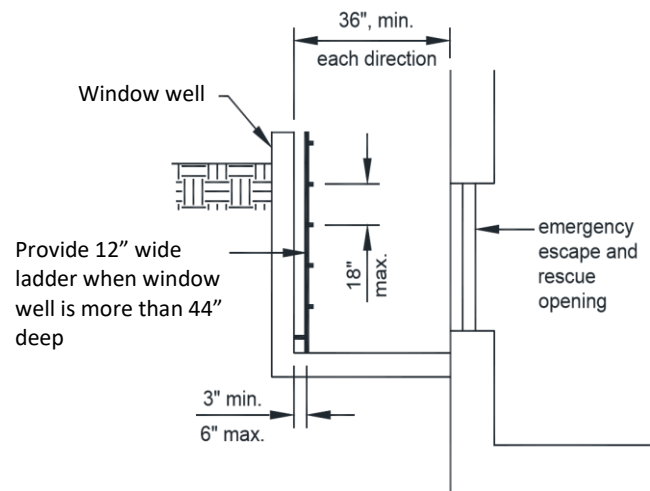
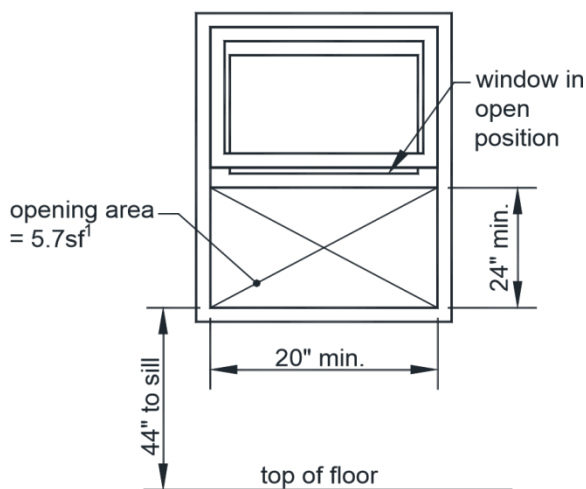
### Emergency escape and rescue options.

1. Window opening in a walk-out or daylight basement condition.
2. Window opening into a window well.
3. Door in a walk-out basement condition.
4. Door to bulkhead enclosure (Bilco door or similar).

**Opening requirements.** The emergency escape and rescue openings shall meet the requirements below.

See FIGURE 1 for typical window opening requirements.

1. Windows opening directly to the outside in a walk-out condition are permitted to have an opening area equal to or greater than 5.0 square feet.
2. All other openings shall open directly to the outside and have an opening area equal to or greater than 5.7 square feet.
3. All doors and windows must be operable from the inside without the need of a key or tool.
4. Windows must have a clear opening height of 44 inches or less above the finished floor.



**FIGURE 1: EMERGENCY ESCAPE & RESCUE OPENING REQUIREMENTS**

**FIGURE 2: WINDOW WELL REQUIREMENTS** Page | 11

**Window well requirements.** When grade conditions require the sill of the window to be below the outside grade elevation, then a window well must be constructed. The required horizontal area of a window well is a minimum of 9 square feet minimum as measured when the window is in the open position (this is important when the window is a crank-out type). See FIGURE 2.

**Window well construction.** A plan submission to the Grand Haven Charter Township is required for the construction of a new window well. If you choose to use a prefabricated window well, you must submit the manufacturer’s specification during the permit application process.

**Ladder requirements.** When a window well is deeper than 44 inches, a permanent, attached ladder or steps must be provided per FIGURE 2. If the ladder projects more than 6 inches into the required horizontal area, the size of the window well must be increased to compensate.

**SECTION 3: WALL CONSTRUCTION**

**Studs.** Studs may be utility grade or better. Walls shall have a single pressure treated bottom plate and can have a single or double top plate. Studs shall be placed at 16 inches on center, but may be increased to a 24 inches on center when applied finish material is drywall. Non-pressure treated lumber may not be in contact with concrete.

**Attachment requirements.** Wall construction shall be fastened in accordance with TABLE 1

**TABLE 1: FASTENING SCHEDULE**

| Connection                            | Nailing Method | Fastener  |
|---------------------------------------|----------------|---|
| Top plate to stud                     | End nail       | 2-16d (3½" x 0.135")                                      |
| Stud to bottom plate                  | Toe nail or    | 2-16d (3½" x 0.135") <sup>1</sup> or 3-8d (2½" x 0.113")* |
|                                       | End nail       | 2-16d (3½" x 0.135")*                                     |
| Bottom plate to floor                 | Face nail      | 16d concrete nail (3½" x 0.135") @ 16"o.c.                |
| Header to jack stud<br>(see FIGURE 3) | Toe nail       | 4-8d (2½" x 0.113") each side of header at each end       |

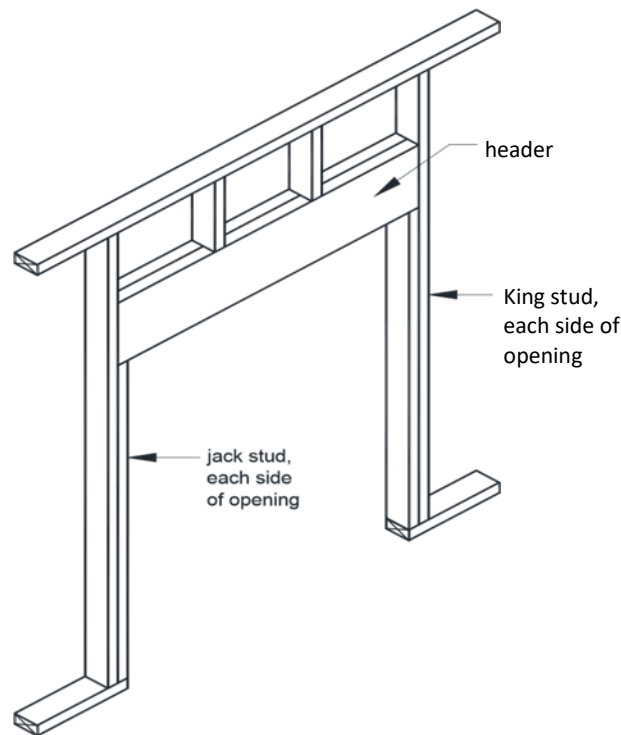
\* Fasteners are required to be hot-dipped galvanized.

**Headers.** A single flat 2x4 may be used as a header in interior nonbearing walls for openings up to 8 feet in width if the portion of the wall above the opening is not more than 24 inches in height. If the opening does not meet these conditions, the header shall be framed per FIGURE 3 and sized per TABLE 2. Two-ply headers shall be fastened together using 16d (3½" x 0.135") face nails at 16 inches on center staggered along the top and bottom edges.

**TABLE 2: HEADER SIZE\***

| HEADER SIZE | SPAN LENGTH |
|-------------|-------------|
| (2) 2 x 4   | 4 feet      |
| (2) 2 x 6   | 6 feet      |
| (2) 2 x 8   | 10 feet     |
| (2) 2 x 10  | 12 feet     |
| (2) 2 x 12  | 16 feet     |

\* Non-load bearing walls only



**FIGURE 3: FRAMING AT HEADERS**

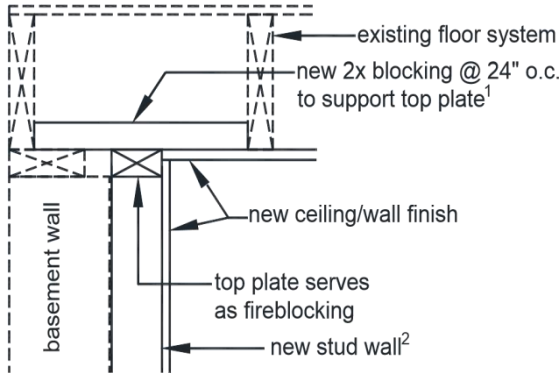
**Fireblocking.** Fireblocking shall be provided to seal off concealed spaces and to form an effective fire barrier between stories. Fireblocking shall be provided in the following locations:

- In concealed spaces of stud walls and partitions, including furred spaces at the ceiling and floor level where the top plate is attached to the underside of the floor joists. See FIGURE 4.
- At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, bulkheads, drop ceilings, etc. See FIGURE 5.
- In concealed spaces of stud walls offset from the basement wall. See FIGURE 6
- In concealed spaces between stair stringers at the top and bottom of the stair run.
- At gaps and openings around vents, pipes and ducts at the ceiling and floor level.

**Fireblocking material.** Fireblocking shall consist of one of the materials listed below:

- ½-inch gypsum board.

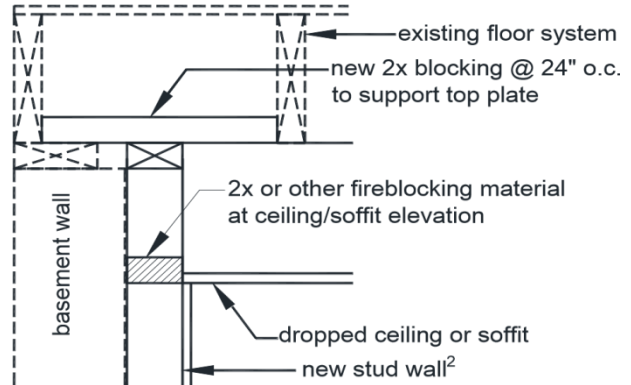
- 2x lumber (2x4, 2x6, etc.).
- Two thicknesses of 1x lumber (1x4, 1x6, etc.) with staggered joints.
- ¾-inch plywood, OSB or particleboard with joints backed by 6 inches of the same material.
- ¼-inch cement, cement/fiber board (e.g., Durock).
- At gaps 1 inch or less, batts or blankets of mineral wool or fiberglass pack tightly or approved fireblocking caulk.



<sup>1</sup> Attach top plate to underside of joists where floor framing is perpendicular to stud wall.

<sup>2</sup> Non-pressure treated lumber may not be in contact with concrete. R-13 insulation shall be provided between studs.

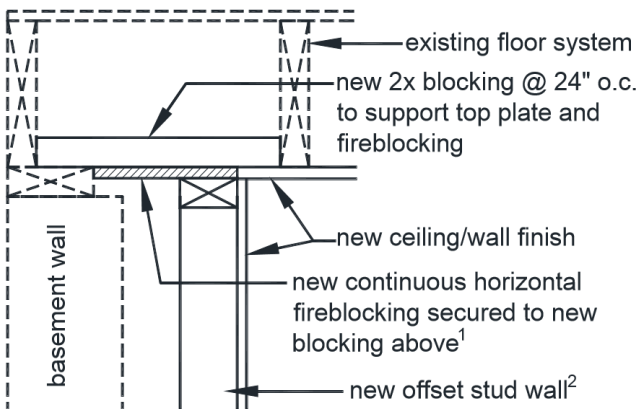
**FIGURE 4: FIREBLOCKING WITH PRESSURE TREATED STUD WALL AGAINST BASEMENT WALL**



<sup>1</sup> Attach top plate to underside of joists where floor framing is perpendicular to stud wall.

<sup>2</sup> Non-pressure treated lumber may not be in contact with concrete. R-13 insulation shall be provided between studs.

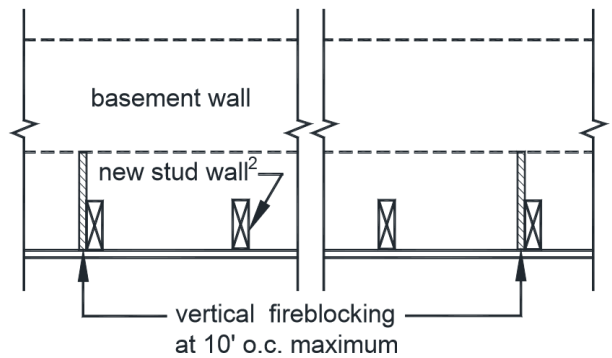
**FIGURE 5: FIREBLOCKING AT DROP CEILING**



<sup>1</sup> Attach top plate and fireblocking to underside of joists where floor framing is perpendicular to stud wall

<sup>2</sup> If cavity between basement wall and new stud wall does not contain existing insulation, R-13 insulation shall be installed

**FIGURE 6: FIREBLOCKING WITH OFFSET STUD WALL**



**Interior finishes.** Wall and ceiling finish materials must meet the requirements listed below.

- Materials must have a flame spread classification no greater than 200 and a smoke density classification no greater than 450. This does not apply to trim, molding, handrails and doors.
- Cement or fiber-cement board (e.g., Durock) must be installed on walls of site built bathtub and shower spaces and finished with a non-absorbent surface.
- Wood veneer or hardboard paneling less than 1/4-inch shall not be permitted.
- Gypsum board must be 1/2-inch minimum.

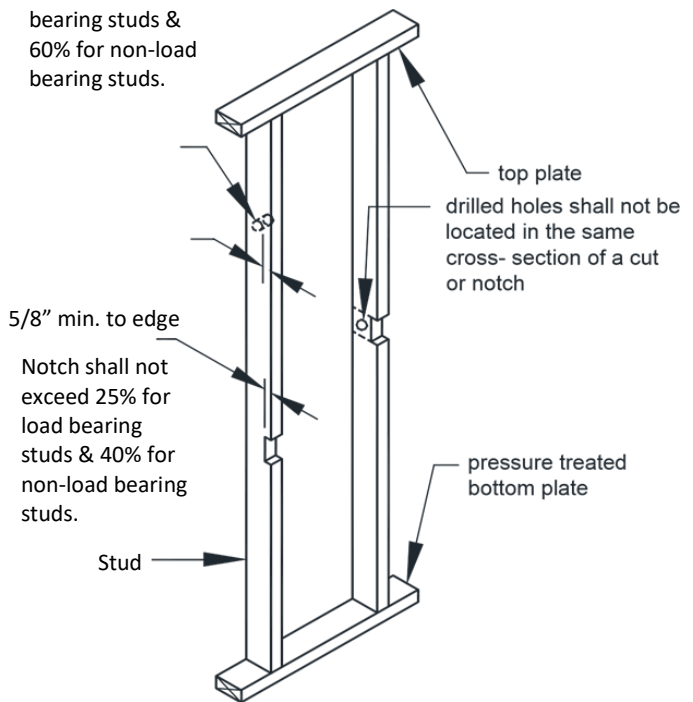
## SECTION 4: DRILLING AND NOTCHING

**Studs.** Studs in walls may be notched or drilled in accordance with FIGURE 7. If studs are over bored or notched they shall be repaired with the appropriate stud shoe installed per the manufactures installation instructions.

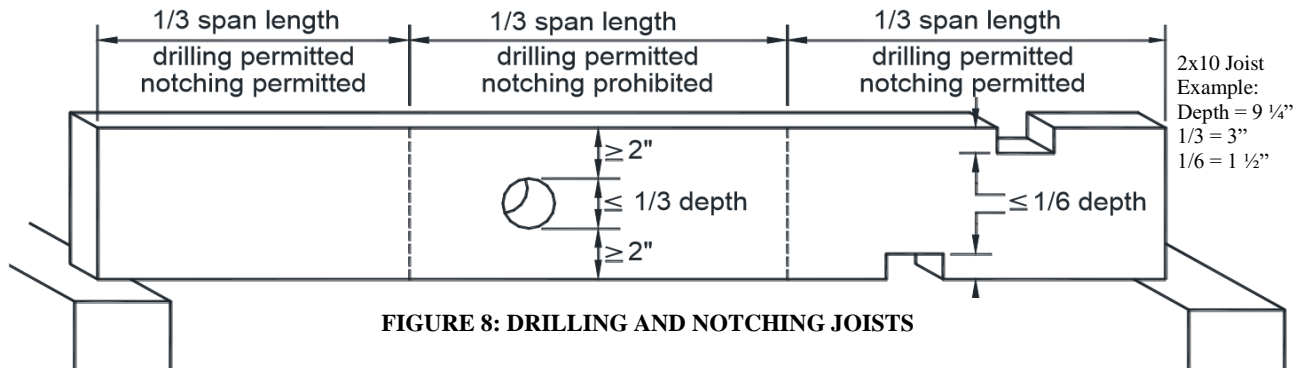
Hole diameter shall not exceed 40% for load bearing studs & 60% for non-load bearing studs.

**Joints and/or beams.** Drilling and notching of existing wood joists or beams shall meet the requirements below:

- Drilling and notching 2x lumber shall be in conformance with FIGURE 8. Cantilevered (overhanging) joists cannot be notched.
- Drilling and notching of manufactured wood I-joists, LVL or other engineered wood products shall be per the manufacturer’s instructions.
- Drilling and notching of open web floor trusses is prohibited without submitted calculations performed by a registered design professional licensed in Michigan.



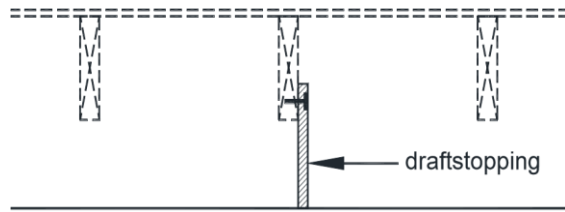
**FIGURE 7: DRILLING AND NOTCHING STUDS**



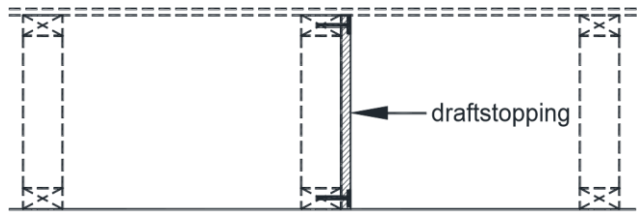
**FIGURE 8: DRILLING AND NOTCHING JOISTS**

## SECTION 5: FLOOR/CEILING CONSTRUCTION

**Draftstopping.** When a ceiling is not directly attached to the underside of the floor joists above or when the floor joists are comprised of open web trusses, draftstopping must be provided. Install draftstopping to create equal-sized concealed areas not exceeding 1,000 square feet. Draftstopping shall be installed parallel to the floor framing members. See FIGURE 9 and FIGURE 10.



**FIGURE 9: DRAFTSTOPPING AT DROP CEILING**



**FIGURE 10: DRAFTSTOPPING AT OPEN WEB TRUSSES**

**Draftstopping material.** Draftstopping shall consist of ½-inch minimum gypsum board, 3/8 inch minimum wood plywood/OSB or 3/8 inch minimum particleboard, Type 2-M-W.

## SECTION 6: MECHANICAL

**Required heating.** Every *dwelling unit* shall be provided with heating facilities capable of maintaining a minimum room temperature of 68°F (20°C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in all habitable rooms.

**Appliance access.** Furnaces, water heaters and other appliances must be accessible without removing permanent construction and shall meet the following minimum criteria.

- 30 inches x 30 inches clear floor space at front/control side.
- Doors to furnace rooms shall be 24 inches minimum and be of sufficient size to remove the largest appliance.

**Combustion air.** Furnace rooms with fuel-fired appliances must be provided with two permanent openings to adjacent spaces: one within 12 inches of the top and one within 12 inches from the bottom of the adjoining wall. Each opening must have a minimum free area equal to 1 square inch per 1,000 Btu per hour input rating of all appliances in the furnace room, but not less than 100 square inches. The openings are not required if a louvered door is provided or the furnace room area is greater than 50 cubic feet per 1,000 Btu per hour input rating of all appliances installed in the room.

## SECTION 7: PLUMBING

**Showers.** Showers and shower compartments must meet the following requirements.

- Shower compartments must have a minimum total area of 900 square inches and a minimum dimension of 30 inches in any direction.
- Shower compartments may have a minimum dimension of 25 inches provided it maintains a cross sectional area of 1,300 square inches.
- Hinged shower doors must open outward.
- All glass which encloses a shower must be safety glazed.
- Shower control valves must be scald resistant (in accordance with ASSE/ANSI 1016) with a hot water limit of 120 degree F.

**Fixture clearances.** Toilets, sinks, showers and tubs shall have the minimum clearances listed below.

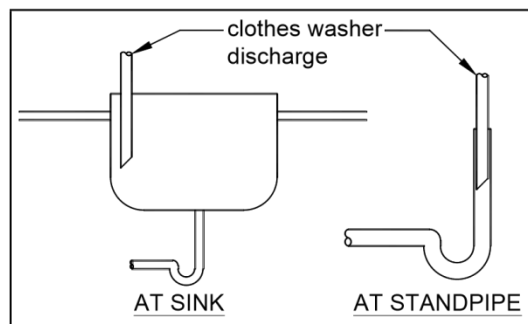
- 21 inches in front of sinks and toilets.
- 24 inches in front of shower stall opening.
- 15 inches clearance from a toilet's centerline to any adjacent side wall, partition, cabinet or fixture.
- 15 inches clearance from a sinks centerline to any adjacent side wall, partition, cabinet or fixture.
- 30 inches center to center between adjacent fixtures.

**Drain size.** Fixture drain size must meet the dimensions below and must be equipped with a strainer and stopper.

**TABLE 3: MINIMUM DRAIN SIZE**

| Fixture                             | Diameter |
|-------------------------------------|----------|
| Bathroom sink                       | 1¼"      |
| Bathtubs                            | 1½"      |
| Sinks (other than bathroom)         | 1½"      |
| Laundry tubs                        | 1½"      |
| Shower                              | 1½"      |
| Clothes Washer Discharge Stand Pipe | 2"       |

**Clothes washer discharge.** The discharge of a clothes washer must be through and air break as shown in FIGURE 11.



**FIGURE 11: AIRBREAK AT CLOTHES WASHER DISCHARGE**



## SECTION 8: ELECTRICAL

**Panelboard (circuit breaker box).** Panel boards must meet the requirements listed below.

- A workspace 30 inches wide and 36 inches deep from floor to the ceiling with a minimum height of 6.5 feet shall be provided in front of the panel boards.
- Panel board workspace must not be used for storage at any time.
- Panel boards must not be located in clothes closets or bathrooms.
- A light shall be provided for the panel board workspace.
- Pipes or ducts cannot be located above the panelboard.

**Branch circuits.** Branch circuits must meet the requirements listed below. See TABLE 4 for more information.

- Use a 15- to 20-ampere rated branch circuit for general use purposes such as lighting and outlets.
- One “plugged-in” electrical device shall not exceed 80 percent of the circuit rating.
- Hardwired appliances or equipment may be included in a general use circuit provided its rating does not exceed 50 percent of the circuit rating.
- A dedicated 20-ampere minimum branch circuit must be provided to serve laundry room outlets only.
- A dedicated 20-ampere branch circuit must be provided to serve the bathroom receptacles.
- Branch circuits which serve bedroom outlets must have circuit breakers equipped as combination arc fault/over current circuit interrupters.

**TABLE 4: BRANCH CIRCUIT REQUIREMENTS**

| Circuit Element        | Circuit Rating |          |        |
|------------------------|----------------|----------|--------|
|                        | 15 amp         | 20 amp   | 30 amp |
| Minimum conductor size | 14             | 12       | 10     |
| Maximum breaker size   | 15             | 20       | 30     |
| Outlets rating         | 15             | 15 or 20 | 30     |
| Maximum load           | 15             | 20       | 30     |

**Lighting requirements.** Lights must meet the requirements listed below.

- At least one switched light shall be provided in each room and hallway. A switched outlet may be substituted except in bathrooms and hallways. A switched outlet cannot count towards a required outlet, see “Outlets” section.
- At least one switched or pull chain light must be provided in each storage area and at or near heating and air conditioning appliances and equipment.
- Lighting fixtures must not be installed within 3 feet horizontally and 8 feet vertically of a bathtub rim or shower stall threshold. A light fixture may be installed above a shower area if it is constructed so that water cannot enter or accumulate in wiring areas and the lighting fixture is marked “suitable for wet locations.”

**Outlets.** Outlets must meet the requirements listed below.

- Outlets shall be tamper resistant.
- Outlets shall be placed in accordance with FIGURE 12.
- The minimum wall length which requires an outlet is 2 feet.
- Kneewalls, built-in bars and other fixed room dividers must be included for outlet spacing.
- Hallways more than 10 feet long must have a minimum of one outlet.
- Outlets installed for specific appliances must be within 6 feet of the appliance location.
- Bathrooms must have at least one outlet located on a wall adjacent to each basin and within 36 inches of the bathroom sink. All bathroom outlets must have ground fault circuit interrupter (GFCI) protection.
- At least one outlet must be provided to serve laundry appliances and sinks.
- Each unfinished portion of the basement is required to have at least one outlet that is GFCI protected.
- An outlet must be provided within 25 feet of heating and air conditioning appliances and equipment.

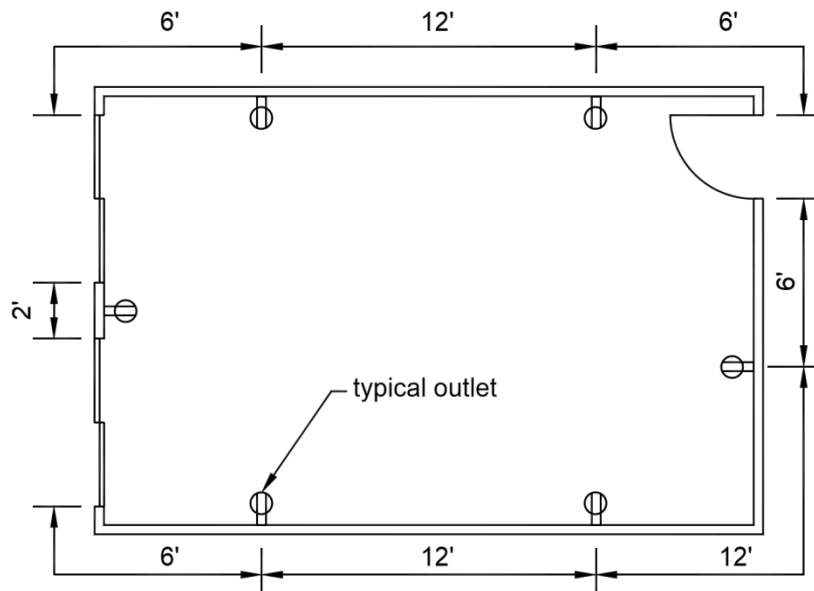


FIGURE 12: TYPICAL OUTLET DISTRIBUTION

**Light fixtures in closets.** Fixtures installed in clothes closets shall be limited to surface mounted or recessed incandescent fixtures with completely enclosed lamps and surface mounted or recessed fluorescent fixtures. See TABLE 5 for clearance requirements.

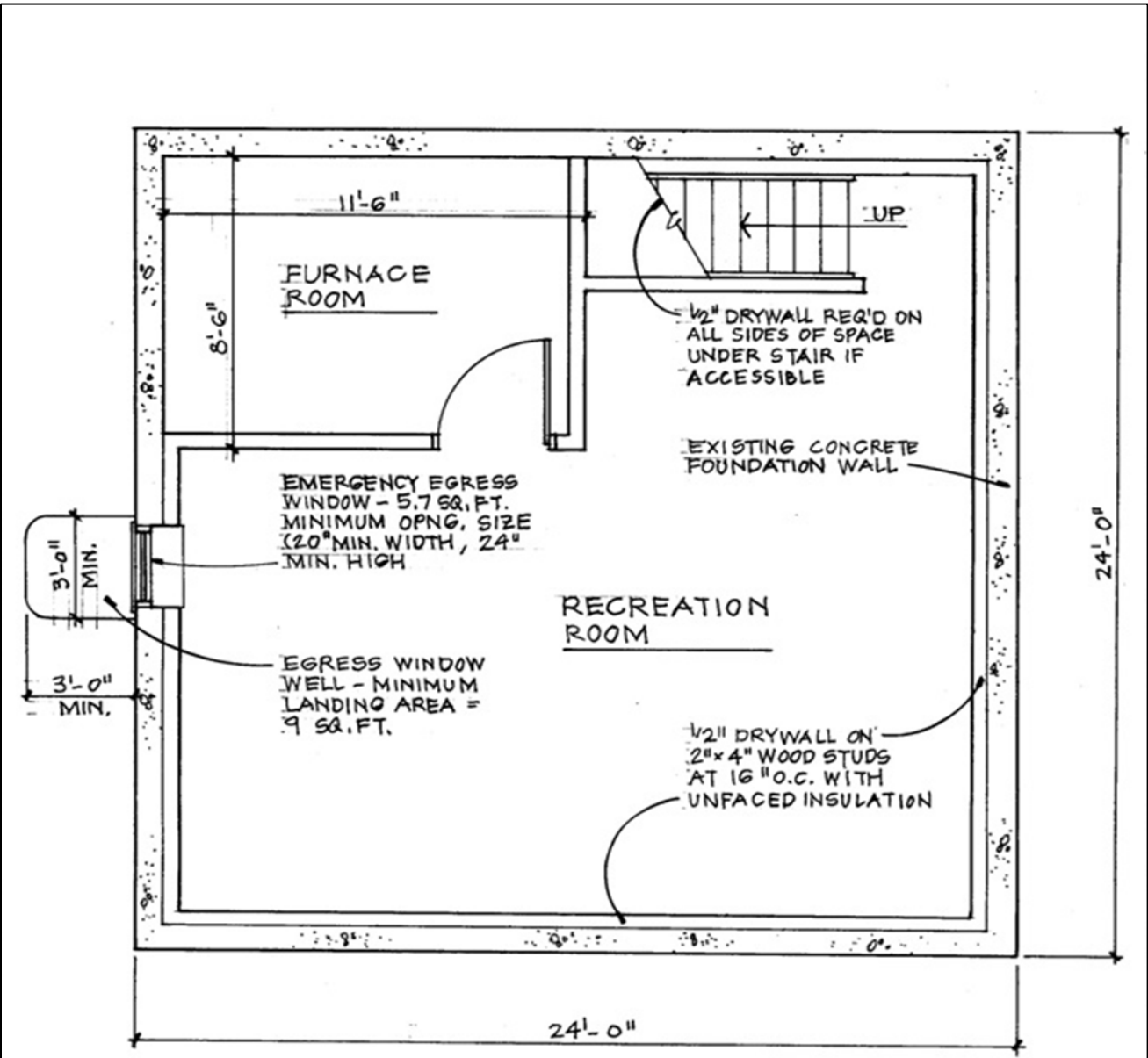
TABLE 5: CLOSET LIGHT FIXTURE CLEARANCES<sup>1</sup>

| Fixture Type    | Fluorescent Bulb <sup>2</sup> | LED Bulb <sup>2</sup> |
|-----------------|-------------------------------|-----------------------|
| Surface mounted | 6"                            | 12"                   |
| Recessed        | 6"                            | 6"                    |

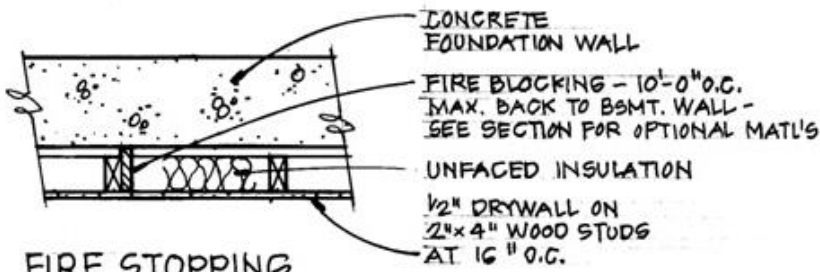
<sup>1</sup> Incandescent bulbs are prohibited

<sup>2</sup> Fluorescent and LED are permitted in storage area when identified for this use

## SAMPLE DRAWINGS

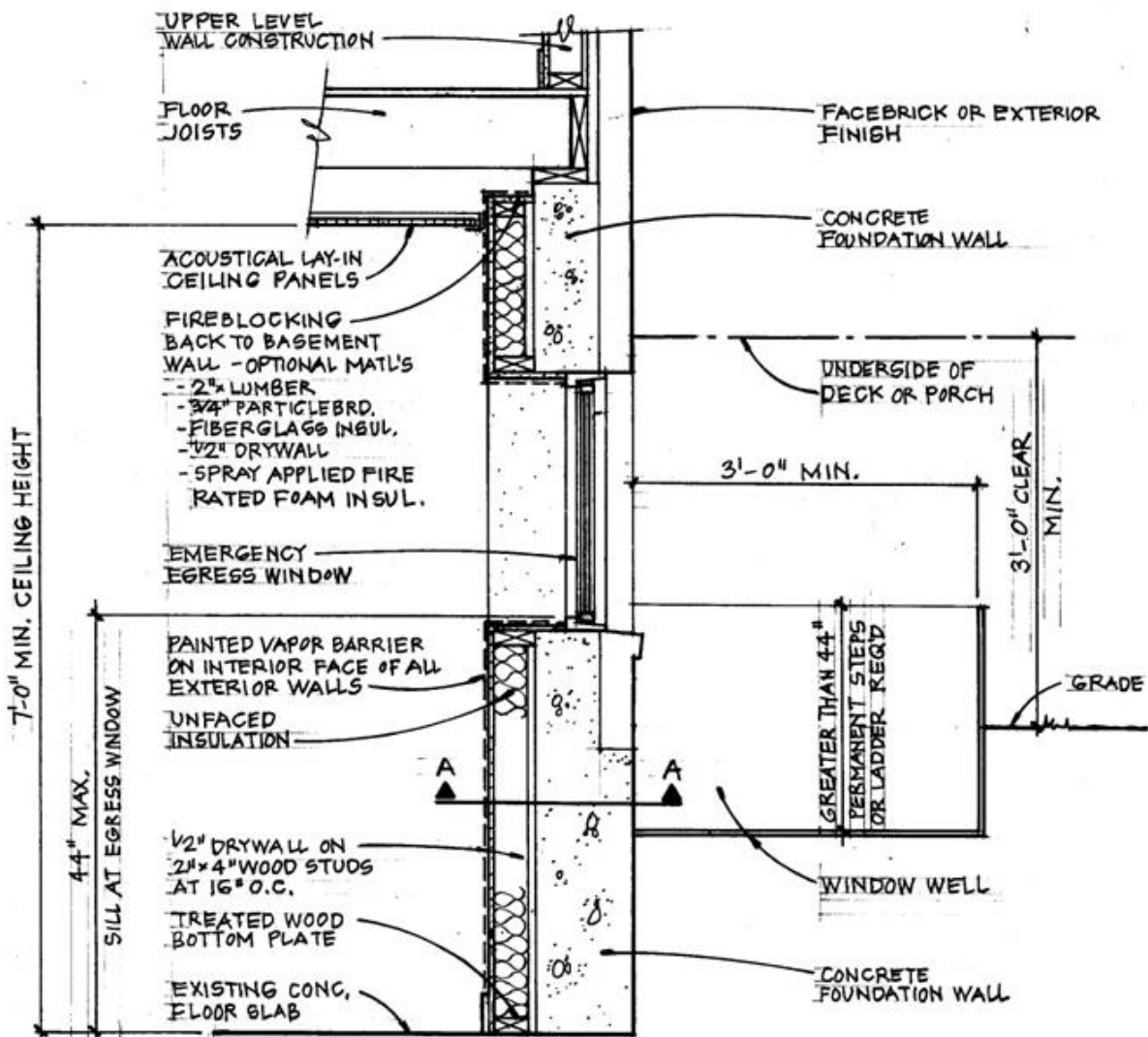


**BASEMENT PLAN**  
 1/4" = 1'-0"



**FIRE STOPPING  
DETAIL A-A**

3/4" = 1'-0"



**WALL SECTION**

3/4" = 1'-0"