



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

SHELLY EDGERTON
DIRECTOR

CONSTRUCTION CODE COMMISSION
Ottawa Building, Upper Level, Conference Room #4
611 West Ottawa Street
Lansing, Michigan 48933

AGENDA
July 12, 2017
9:00 a.m.

* Due to the number of matters on the agenda, the Commission may take a recess for lunch.

1. Call to Order and Determination of Quorum W. Benoit
2. Approval of Agenda (Pages 1-2)
3. Closed Session – Consultation with Counsel T. Warren
4. End Closed Session – Public Session to start at approximately 9:30 a.m.
5. Approval of Minutes – April 12, 2017 (Pages 3-9)
6. New Business
A. Checklist for Applications to Administer and Enforce (Page 10) W. Benoit
7. Unfinished Business
A. Appeals to Commission, MCL 125.1516
 - i. Jonathan Boskovich (Charter Oaks Development/Island Lakes Development) vs. City of Taylor (Pages 11-43)
- B. Petition for Approval/Certificate of Acceptability, MCL 125.1521
 - i. Liberty Pumps Inc., Liberty Pumps ELV OilTector Elevator Sump Pump Systems (Pages 44-128)
 - ii. Northern Concrete Pipe, Inc., Precast Concrete Grease Interceptors (Pages 129-223)
 - iii. Waste Water Heat Transfer Systems, Heat Wave (Liquid to Liquid Heat Recovery Unit) (Pages 224-234)
 - iv. Huber Engineered Woods, LLC, ZIP System Roof and Wall Sheathing (Pages 235-263)
- C. Applications to Administer and Enforce, MCL 125.1508b
 - i. City of Highland Park, Building, Electrical, Mechanical and Plumbing (Pages 264-349)

The meeting site and parking is accessible. Individuals attending the meeting are requested to refrain from using heavily scented personal care products in order to enhance accessibility for everyone. People with disabilities requiring additional services (such as materials in alternative format) in order to participate in the meeting should call Sara Leiby at (517) 241-9303 at least 10 working days before the event.

- ii. Tuscola Township, Building, Electrical, Mechanical and Plumbing (Pages 350-508)
 - iii. Village of Burlington, Building, Electrical, Mechanical and Plumbing (Pages 509-532)
8. Applications to Administer and Enforce, MCL 125.1508b
- A. Village of Emmett, Building, Electrical, Mechanical and Plumbing (Pages 533-552)
 - B. City of Grand Blanc, Electrical, Mechanical and Plumbing (Pages 553-677)
 - C. Moorland Township, Mechanical (Pages 678-698)
 - D. Village of White Pigeon, Building, Electrical, Mechanical and Plumbing (Pages 699-797)
 - E. Village of Marcellus, Building, Electrical, Mechanical and Plumbing (Pages 699-789 and Pages 798-800)
 - F. Village of Centreville, Mechanical and Plumbing (Pages 699-789 and Pages 801-805)
 - G. Volinia Township, Building, Electrical, Mechanical and Plumbing (Pages 699-789 and Pages 806-810)
 - H. Township of Rollin, Mechanical and Plumbing (Pages 811-830)
 - I. City of Fenton, Electrical, Mechanical and Plumbing (Pages 831-835)
9. Appeals to Commission, MCL 125.1516
- A. Brandon Sundberg (Greenhills School) vs. State of Michigan (Pages 836-845)
 - B. David Gassen (Kalamazoo Covenant Academy) vs. State of Michigan (Pages 846-873)
10. Petition for Approval/Certificate of Acceptability, MCL 125.1521
- A. Penner Manufacturing Inc., Cascade Comfort Bathing System (Pages 874-921)
11. Bureau Report K. Lambert
12. Public Comment
13. 2017 Meeting Date – October 11, 2017
14. Adjournment



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STATE OF MICHIGAN
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LANSING

SHELLY EDGERTON
DIRECTOR

CONSTRUCTION CODE COMMISSION
Ottawa Building, Upper Level Conference Room #4
611 West Ottawa Street
Lansing, Michigan 48933

MINUTES
April 12, 2017
9:30 a.m.

MEMBERS PRESENT

Mr. William Benoit, Jr., Chairperson
Mr. Thomas Baldwin
Mr. Frederick Butters
Mr. James Cripps
Mr. Thomas Erdman
Mr. Adam Krouse
Mr. Kenneth Misiewicz
Mr. Roger Papineau
Mr. Matthew Reno
Mr. Donald Staley
Dr. Joseph Sucher

MEMBERS ABSENT

Mr. Anthony D'Ascenzo
Mr. Michael Boss
Mr. William Duffield
Mr. Daryl Gallant
Mr. Greg Pollock
Mr. Matt Zurbrick

DEPARTMENT PERSONNEL ATTENDING

Mr. Keith Lambert, Director, BCC
Ms. Alesha Gensler, Deputy Director, BCC
Ms. LeeAnn Allaire, Manager, Administrative Services Division, BCC
Ms. Dianne Barmes, Manager, Licensing & Complaints Division, BCC
Mr. Joseph Madziar, Chief, Plumbing Division, BCC
Mr. Dean Austin, Chief, Electrical Division, BCC
Mr. Kevin Kalakay, Chief, Mechanical Division, BCC
Mr. Jonathon Paradine, Assistant Chief, Mechanical Division, BCC
Ms. Tracie Pack, Department Analyst, Administrative Services Division, BCC
Ms. Sara Leiby, Secretary, Administrative Services Division, BCC

OTHERS IN ATTENDANCE

Mr. Ronald Bailey, Village of Onsted
Mr. Ronald Bellaire, Volinia Township
Ms. Cindy Carver, Carver Construction Company
Mr. Bill Denner, Assistant Attorney General
Mr. John Dobberteen, St. Joseph County
Mr. Tod Fackler, Tuscola Township

Mr. Ray Hausbeck, Saginaw Township
Mr. William Hordyk, City of Grand Rapids
Mr. Jeff Hugo, Tuscola Township
Ms. Wendy Jean-Buhrer, City of Grand Blanc
Mr. Phillip Kerns, Tuscola Township
Mr. Doug Kuhlman, St. Joseph and Cass Counties
Mr. Glenn Lindsey, SAFEbuilt, Village of Burlington
Mr. Bruce Nickel, Village of Onsted
Mr. Ron Ritchey, National Fire Sprinkler Association
Ms. Yvette Robinson, City of Highland Park
Mr. Corey Roblee, International Code Council
Mr. Randy Schmeling, St. Joseph County
Mr. Lee Schwartz, Home Builders Association of Michigan
Mr. Ted Szczepanski, City of Grand Blanc
Mr. Michael Setzer, Tuscola Township
Ms. Bethany Smith, City of Grand Blanc
Mr. Rob Thall, Tuscola Township
Mr. Jack Williams, Building Official, City of Highland Park
Mr. Pete Wood, Rooter MD

1. CALL TO ORDER AND DETERMINATION OF QUORUM

Chairperson Benoit called the meeting to order at 9:30 a.m. A quorum was present at that time.

2. APPROVAL OF AGENDA

A **MOTION** was made by Commissioner Misiewicz and **SECONDED** by Commissioner Baldwin to approve the agenda. **MOTION CARRIED.**

3. APPROVAL OF MINUTES

A **MOTION** was made by Commissioner Cripps and **SECONDED** by Commissioner Sucher to approve the minutes for the January 11, 2017 meeting. **MOTION CARRIED.**

4. ADMINISTRATION & ENFORCEMENT COMPLAINTS

A. City of Ann Arbor

The City of Ann Arbor notification of complaint requesting compliance regarding the requirements for construction code appeals and the corresponding response were presented to the Commission.

B. City of Portage

The City of Portage notification of complaint requesting compliance regarding the certification requirement for fire alarm installers and the corresponding response were presented to the Commission.

C. City of Saint Clair Shores

The City of Saint Clair Shores notification of complaint requesting compliance regarding registration fees for licensed mechanical contractors/registering mechanical contractors as electrical contractors without being properly licensed was presented to the Commission. Mr. Lambert informed the Commission that the City of Saint Clair Shores indicated the fee has been corrected to comply with the law and follow up documentation will be requested.

D. City of Troy

The City of Troy notification of complaint requesting compliance regarding the city adopting amendments to the 2012 International Fire Code (IFC) that directly conflict with the 2012 Michigan Building Code (MBC) and the corresponding response were presented to the Commission.

Chairperson Benoit requested clarification on whether the fire code can only be used in part when a specific section is referenced in the building code.

Mr. Lambert advised that the Bureau is currently requesting advice from counsel regarding reference standards and codes and whether the entire code is adopted if referenced. Per Chairperson Benoit's request, the Bureau will follow-up with the City of Troy regarding non-compliance of the amendment to Section 907.6.5.3 of the 2012 IFC.

5. RECEIPT OF APPLICATIONS TO ADMINISTER AND ENFORCE, MCL 125.1508b

The Commission accepts receipt of the following applications to administer and enforce:

- A. Village of Emmett, Building, Electrical, Mechanical and Plumbing**
- B. City of Grand Blanc, Electrical, Mechanical and Plumbing**
- C. Moorland Township, Mechanical**
- D. Village of White Pigeon, Building, Electrical, Mechanical and Plumbing**
- E. Village of Marcellus, Building, Electrical, Mechanical and Plumbing**
- F. Village of Centreville, Mechanical and Plumbing**

6. PETITION FOR APPROVAL/CERTIFICATE OF ACCEPTABILITY, MCL 125.1521

A. Huber Engineered Woods, LLC, ZIP System Roof and Wall Sheathing

Mr. Ken Hix's petition application for a certificate of acceptability from Huber Engineered Woods, LLC for ZIP System Roof and Wall Sheathing was presented to the Commission. Mr. Ken Hix was not present for the review.

Mr. Bill Denner, Assistant Attorney General, advised that there is language in the statute that may be construed as conflicting regarding the matter.

Following discussion, a **MOTION** was made by Commissioner Staley and **SECONDED** by Commissioner Erdman to postpone consideration of petition applications for product approval, such as this, to a future date based on the recommendation forthcoming from the Attorney General's Office. **MOTION CARRIED.**

7. UNFINISHED BUSINESS

A. Administration and Enforcement Complaint Responses

Mr. Lambert provided the City of Trenton's response to notification of complaint and notified the Commission that the notifications sent to the below municipalities did not solicit a response. The language in the notification will be corrected to request response by specified deadline.

- i. City of Belleville – No Response**
- ii. Village of Carleton – No Response**
- iii. City of Inkster – No Response**
- iv. City of Trenton**
- v. City of Dearborn – No Response**

B. Review of Applications to Administer and Enforce, MCL 125.1508b

i. Village of Onsted, Mechanical and Plumbing

Mr. Bruce Nickel, Building Official, and Mr. Ronald Bailey, Village President, presented the Village of Onsted's Application to Administer and Enforce to the Commission.

Following discussion, a **MOTION** was made by Commissioner Baldwin and **SECONDED** by Commissioner Misiewicz to approve the Village of Onsted's Application to Administer and Enforce effective May 1, 2017. **MOTION CARRIED.**

ii. City of Highland Park, Building, Electrical, Mechanical and Plumbing

Mr. Jack Williams, Building Official, and Ms. Yvette Robinson, Department of Community and Economic Development Director, presented the City of Highland Park's Application to Administer and Enforce to the Commission.

Following discussion, a **MOTION** was made by Commissioner Baldwin and **SECONDED** by Commissioner Misiewicz to postpone consideration of the City of Highland Park's Application to Administer and Enforce to allow time for the applicant to provide additional documentation reflecting the proposed program budget, a construction board of appeals, and applications are brought up to statutory requirements. **MOTION CARRIED.**

iii. Fawn River Township, Mechanical

Mr. Doug Kuhlman, Zoning Administrator and Code Compliance Officer, Mr. Randy Schmeling, Building Official, Mr. John Dobberteen, Plumbing Official, and Mr. Ronald Bellaire, Electrical Official, presented Fawn River Township's Application to Administer and Enforce to the Commission.

Following discussion, a **MOTION** was made by Commissioner Baldwin and **SECONDED** by Commissioner Erdman to approve Fawn River Township's Application to Administer and Enforce effective May 1, 2017. **MOTION CARRIED.**

iv. Village of Colon, Plumbing

Mr. Doug Kuhlman, Zoning Administrator and Code Compliance Officer, Mr. Randy Schmeling, Building Official, Mr. John Dobberteen, Plumbing Official, and Mr. Ronald Bellaire, Electrical Official, presented the Village of Colon's Application to Administer and Enforce to the Commission.

Following discussion, a **MOTION** was made by Commissioner Baldwin and **SECONDED** by Commissioner Erdman to approve the Village of Colon's Application to Administer and Enforce effective May 1, 2017. **MOTION CARRIED.**

v. Tuscola Township, Building, Electrical, Mechanical and Plumbing

Mr. Michael Setzer, Building Official, and Mr. Tod Fackler, Supervisor, presented Tuscola Township's Application to Administer and Enforce to the Commission. Mr. Setzer provided additional documentation at the meeting in response to the letter dated February 11, 2017.

Following discussion, a **MOTION** was made by Commissioner Baldwin and **SECONDED** by Commissioner Papineau to postpone consideration of Tuscola Township's Application to Administer and Enforce until the July 12,

2017 meeting to allow time for the Commission to review the additional documentation submitted. **MOTION CARRIED.**

vi. Village of Burlington, Building, Electrical, Mechanical and Plumbing

Mr. Glenn Lindsey, SAFEbuilt, presented the Village of Burlington's Application to Administer and Enforce to the Commission.

Following discussion, a **MOTION** was made by Commissioner Misiewicz and **SECONDED** by Commissioner Cripps to postpone consideration of the Village of Burlington's Application to Administer and Enforce until the July 12, 2017 meeting to allow time for the applicant to provide additional documentation. **MOTION CARRIED.**

8. NEW BUSINESS

A. Formal Interpretation Request

Mr. Lambert presented the Commission a formal interpretation request submitted on March 20, 2017 from Pete Wood, Rooter MD Plumbing & Heating.

Chairperson Benoit explained that Mr. Wood should direct his request to the local construction board of appeals and then can appeal the local construction board of appeals' decision to the Commission. The Bureau should be notified if a local municipality does not have a construction board of appeals as required by statute.

B. Review and Approval of Training Programs Discussion, MCL 339.6007

Mr. Lambert inquired if the Commission would like to be involved with review of content of training programs.

Following discussion, it was determined that the Commission will assist with the review when the Bureau expresses concern regarding a program.

9. BUREAU REPORT

Mr. Lambert provided information on the following:

- A. Barrier Free Design Complaint Process**
- B. Building & School Officials Letter**
- C. CE Broker Announcement**
- D. Mechanical Examination Notification**
- E. SAA Program/HUD**

10. PUBLIC COMMENT

- A. Mr. Lee Schwartz, Home Builders Association of Michigan, expressed concern that the City of Ann Arbor does not have a local construction board of appeals and requested the Bureau to investigate further.
- B. Ms. Wendy Jean-Buhrer, City of Grand Blanc, commented that she will submit additional documentation electronically for the City of Grand Blanc's Application to Administer and Enforce and will see the Commission in July.
- C. Commissioner Papineau requests for the Application to Administer and Enforce to be revised based on the concerns expressed earlier in the meeting and for a Bureau organizational chart.

11. 2017 MEETING DATES

The Commission is scheduled to meet at 9:30 a.m. at 611 W. Ottawa, Lansing, MI 48933 in Upper Level Conference Room 4 on July 12, 2017 and October 11, 2017.

12. ADJOURNMENT

A **MOTION** was made by Commissioner Erdman and **SECONDED** by Commissioner Cripps to adjourn the meeting at 12:26 p.m. **MOTION CARRIED.**

The following is a list of items that were agreed to by the State Construction Code Sub-Committee regarding applications to enforce codes:

- 1) Reason for application. This would include indicating how permit applications and inspections are currently being handled and how this will be improved by changing who is enforcing the codes.
- 2) Written documentation identifying statutory/rule/ordinance/code they wish to assume.
- 3) Identify affected parties. This would include what impact this will have on the agency currently enforcing the codes and how the change will improve the service to the end user.
- 4) Registration of governmental subdivision and enforcing agency personnel. Indicate that the Building Official is employed by the municipality and include copies of any contracts with private contractors.
- 5) Indicate makeup of Construction Board of Appeals members and provide process and forms for appeals.
- 6) List of administrative personnel and services provided including FOIA, document retention schedule and location of records/documents.
- 7) Provide drafts of all public facing documents including permits, correction/violation notices, certificate of occupancy, notice to appear or show cause and stop work orders.
- 8) Indicate your process for establishing reasonable fees.
- 9) Provide draft of proposed fees for permits, plan reviews, inspections, certificated of use and occupancy and registration of licenses.
- 10) Provide copies of draft budget for the department. If a private company is being used and a percentage of the fees collected will be returned to the municipality provide budget indicating how that money will be used.



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

SHELLY EDGERTON
DIRECTOR

April 3, 2017

Keith Boc, Director
Public Services
City of Taylor
23555 Goddard Road
Taylor, MI 48180

RE: Construction Code Commission

Dear Mr. Boc:

The Bureau of Construction Codes (BCC) received your written request for the Construction Code Commission (CCC) to re-hear the appeal submitted by Mr. Jonathan Boskovich, Infinity Construction Services. Mr. Boskovich appealed the City of Taylor's November 22, 2016, Construction Board of Appeals' denial of a variance from the requirements of the 2015 Michigan Residential Code, Section R311.3.

Your letter indicates you found discrepancies between what information the CCC based its decision on and what was part of the documentation the City of Taylor Board of Appeals utilized as a basis for its decision.

Therefore, we are requesting the City of Taylor submit, pursuant to 1972 PA 230, MCL 125.1514(4), copies of the exact documentation used by the Taylor Board of Appeals to render its decision of the November 22, 2016 appeal submitted by Mr. Boskovich. Upon receipt of the complete Taylor CBA appeal hearing record of decision you and the appellant will be notified as to the date the appeal will be heard by the State Construction Code Commission.

If you have any questions regarding the issues outlined above, please feel free to contact me at (517) 241-6479.

Sincerely,

Dianne Barmes, Administrative Manager
Licensing and Complaints Division

Providing for Michigan's Safety in the Built Environment

LARA is an equal opportunity employer
Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
P.O. BOX 30254 • LANSING, MICHIGAN 48909
www.michigan.gov/bcc • Telephone (517) 241-9302 • Fax (517) 241-9570

CONSTRUCTION BOARD OF APPEALS – MINUTES
TUESDAY, NOVEMBER 22, 2016

A special meeting of the Construction Board of Appeals meeting was held on Tuesday, November 22, 2016, at 23555 Goddard, Taylor, Michigan. Chairman Joe Bradanyi called the meeting to order at 5:25 p.m.

Attending: Joe Bradanyi, Steve Favors, Joe Vig

Excused: Tony Aday, Mark Styles

Also Attending: Jamie McCarty, Manager of Public Services, Jesse Harrington, Building Inspector, Keith Boc, Director of Public Services, Dave Greco, Legal Counsel

Motion by Favors, supported by Vig
Resolved: To approve the agenda as submitted.
Unanimously carried
11.10-16

Jon Boskovich of Infinity Homes presented his appeal to revoke the requirement to provide a stair, guard rail and landing system off the rear doorwalls of the homes under construction in the Charter Oaks Subdivision, Taylor, Michigan.


More specifically the homes located at: 11617 and 11659 Golfcrest Dr, 26632, 26626, 11889, 11935, 11977, 11848 and 11740 Lake Pointe Dr.

Interested Parties: Matt Sakalian, Infinity Homes

Motion by Favors, supported by Vig
Resolved: To deny the request to revoke the requirement to provide a stair, guard rail and landing system off the rear doorwalls of the homes under construction in the Charter Oaks Subdivision because the request doesn't comply with section R.311: Means of Egress, as stated in the 2015 Michigan Residential Code.
Unanimously carried
11.11-16

Motion by Favors, Supported by Vig
Resolved: That the meeting be adjourned.
Unanimously carried
11.12-16

The meeting was adjourned at 6:16 p.m.



Joe Bradanyi, Chairman



Cynthia A Bower, Clerk

CONSTRUCTION BOARD OF APPEALS -- AGENDA

Thursday, November 22, 2016

A special meeting of the Construction Board of Appeals will be held on Tuesday, November 22, 2016, at 5:15 p.m. at the City of Taylor Municipal Offices located at 23555 Goddard, Taylor, Michigan.

Board Members: Tony Aday, Joe Bradanyi, Steve Favors, Mark Styles, Joe Vig

Also Attending: Keith Boc, Director of Public Services, Jesse Harrington, Building Inspector, Dave Greco, Legal Counsel

1. Roll Call
2. Approval of agenda
3. Infinity Homes, Charter Oaks Subdivision

Petitioner is requesting to revoke the requirement to provide a stair, guard rail and landing system off the rear doorwalls of the home under construction in the Charter Oaks Subdivision.

4. Other Business
5. Adjournment



Construction Board of Appeals Application
Building Department
 23555 Goddard
 Taylor, MI 48180
 (734) 287-6550
 www.cityoftaylor.com

Date: 11/1/2016

Residential Filing Fee: \$100
 Commercial: \$500
 Receipt No. UBA 1001

Code under which the appeal is sought

- Building Electrical Mechanical Plumbing

Owner Information:

Name <u>INFINITY HOMES</u>			
Address <u>42400 GRAND RIVER AVE.</u>			
City <u>NOVI</u>	State <u>MI</u>	Zip <u>48375</u>	E-mail: <u>VESELOVIC@INFINITYHOMES.COM</u>
Phone 1 <u>248-449-8084</u>	Phone 2	Fax <u>248-449-8136</u>	

Applicant/Authorized Agent Information:

Name <u>INFINITY HOMES</u>			
Address <u>42400 GRAND RIVER AVE.</u>			
City <u>NOVI</u>	State <u>MI</u>	Zip <u>48375</u>	E-mail: <u>VESELOVIC@INFINITYHOMES.COM</u>
Phone 1 <u>248-449-8084</u>	Phone 2	Fax <u>248-449-8136</u>	

Location where appeal is sought:

Address <u>ALL HOMES LOCATED IN QUARTER CIRCLES UNDER CONSTRUCTION</u>
Zoning
Property ID #

Instructions for Construction Board of Appeals Application
 Application must be completed in full before applying to the Building Department.

Provide 10 Copies of the following at the time of submitting application:

- Application
- Proof of ownership
- Building Data: all information requested from your building permit
- Permit Holder: all information requested for the contractor named on your permit
- Summary of Appeal addressed to the board including the following:
 - Code: provide the code under which your appeal is sought.
 - Code: section(s), provide the code section(s) that are the subject of the appeal
 - Desired Relief: describe remedy being sought
 - Basis of Appeal: provide a statement why requested remedy should be granted

Yes, I authorize representatives of the City of Taylor to access the property for the (Initial) purpose of investigation associated with this application.

Affidavit of Petitioner

The undersigned petitioner, being duly sworn, deposes and says the statements and information herewith submitted are true and correct to the best of his or her knowledge, information and belief; further, that s/he is authorized to submit this petition.

Printed name of petitioner INFINITY HOMES
 Signature of petitioner [Signature]
 Interest of property Director of Operations

Subscribed and sworn to before me on this 1 day of December, 2016

Elizabeth Lee Card 7-27-2022
 Notary Public, County of Wayne, State of Michigan ELIZABETH LEE CARD Commission Expires
 Macomb
 11-1-16
 NOTARY PUBLIC, STATE OF MICHIGAN
 COUNTY OF MACOMB
 MY COMMISSION EXPIRES 07-27-2022
 ACTING IN THE COUNTY OF Calhoun

This section to be completed by the Construction Board of Appeals

Disposition by the City of Taylor Construction Board of Appeals



Lined area for writing the disposition.

Hearing Date: _____

Code(s) which appeal is sought: _____

Code Section(s) that are the subject of the appeal: _____

Desired Relief: _____

Approved

Denied

Signature Construction Board of Appeals

Print Name



42400 Grand River, Suite 112, Novi, MI 48375
PH: 248-449-8084 / Fax: 248-449-8136

www.Infinityhomescorp.com

MEMO

To: The City of Taylor Construction Board of **From:** Infinity Construction Services, LLC

Appeals

Fax: **Date:** 11/1/2016

Phone: **Pages:** 1

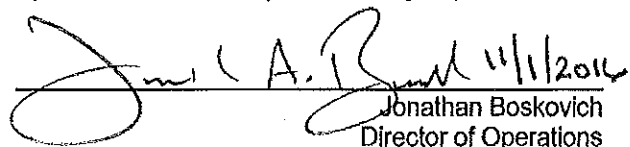
Re: Building Code R311.3-Charter Oaks of **CC:**

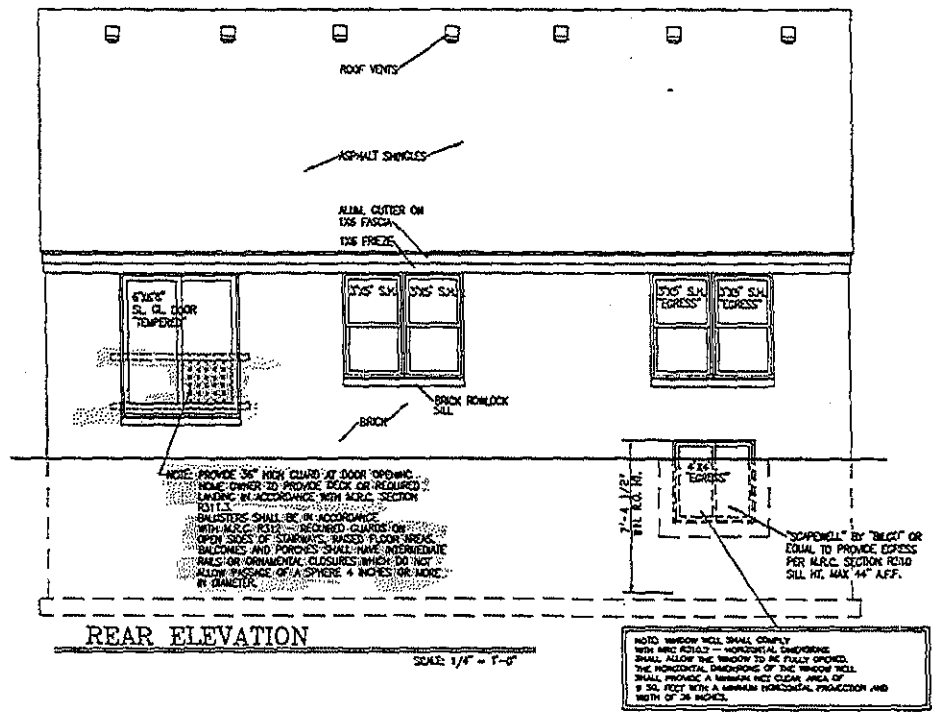
Taylor

For Urgent For Review Please Comment Please Reply

It is our understanding that the municipal code official is requiring our company to provide a stair, guard rail and landing system off the rear doorwalls of our homes resulting in unnecessary costs to the home. The code official, Jesse Harrington, is interpreting the code section R311.3 in the 2015 Michigan Residential Code to support his interpretation. Given what we have researched and discussed with several engineers, architects as well Michigan Home Builders Association, the inspectors interpretation is incorrect and doesn't have merit. The simple reasoning is that when a doorwall is barricaded or prevented from opening (i.e. installing a block in the doorwall to prevent it from opening all the way if not at all, it effectively becomes a window. Furthermore, other means egress are prevalent within the dwelling as required by the code, there is no need for a landing. It is important to note that we have been building within the city for the last four years now and after building over 30 homes in that time in the City of Taylor. It is also important to note that this is not required across any other of 14 municipalities we are currently building in.

We would like to formal make an appeal with the local construction board to have our case heard and reviewed so that some actual evidence of the code can provide a basis of why this is being requested.


Jonathan Boskovich
Director of Operations





42400 Grand River, Suite 112, Novi, MI 48375
PH: 248-449-8084 / Fax: 248-449-8136

www.Infinityhomescorp.com

MEMO

To: The City of Taylor Construction Board of **From:** Infinity Construction Services, LLC
Appeals

Fax: **Date:** 11/1/2016

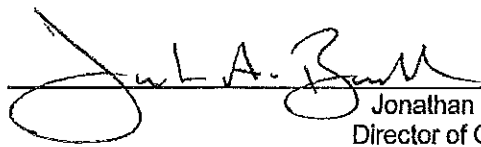
Phone: **Pages:** 1

Re: Building Code R311.3-Charter Oaks of **CC:**
Taylor

For Urgent For Review Please Comment Please Reply

Please see below the list homes sites Infinity Homes still has under construction

- Unit 46 11617 Golfcrest
- Unit 47 11659 Golfcrest
- Unit 52 26632 Lake Pointe
- Unit 53 26626 Lake Pointe
- Unit 57 11889 Lake Pointe
- Unit 58 11935 Lake Pointe
- Unit 61 11902 Lake Pointe
- Unit 63 11848 Lake Pointe
- Unit 80 11740 Golfcrest


Jonathan Boskovich
Director of Operations



Jamie McCarty <jmccarty@ci.taylor.mi.us>

RE: REVISED Construction Board of Appeals Application

1 message

Jon Boskovich <jboskovich@infinityhomescorp.com>

Tue, Nov 8, 2016 at 4:37 PM

To: Jamie McCarty <jmccarty@ci.taylor.mi.us>

Jamie,

The list of homes that we are taking to the Construction Board of Appeals is noted below,

- 11617 Golfcrest
- 11659 Golfcrest
- 26632 Lake Pointe
- 26626 Lake Pointe
- 11889 Lake Pointe
- 11935 Lake Pointe
- 11977 Lake Pointe
- 11848 Lake Ponte
- 11740 Lake Pointe

You can also use this as my approval if any of the board members need to access any of the above noted properties for investigation purposes.

Please let me know if you need anything else.

Jonathan Boskovich

Project Manager

INFINITY & CO.

42400 Grand River Ave., Suite 112

Novi MI 48375

2015

6 Alterations or repairs of existing basements. An emergency escape and rescue opening is not required where existing basements undergo alterations or repairs.

Exception: New sleeping rooms created in an existing basement shall be provided with emergency escape and rescue openings in accordance with Section R310.1.

**SECTION R311
MEANS OF EGRESS**

1 Means of egress. *Dwellings* shall be provided with a means of egress in accordance with this section. The means of egress shall provide a continuous and unobstructed path of vertical and horizontal egress travel from all portions of the dwelling to the required egress door without requiring travel through a garage. The required egress door shall open directly to a public way or to a yard or court that opens to a public way.

2 Door type and size. The required exit door shall be a hinged door not less than 3 feet (914 mm) in width and 6 feet, 6 inches (2032 mm) in height. Other exterior hinged or sliding doors shall not be less than 24 inches (609 mm) in width and 6 feet, 6 inches (1980 mm) in height.

30518

11.2.1 Interior doors. Interior doors shall be not less than 24 inches (609 mm) in width and 6 feet, 6 inches (80 mm) in height.

Exception: Doors to areas less than 10 square feet of floor area.

30518

R311.3

3 Floors and landings at exterior doors. There shall be a landing or floor on each side of each exterior door. The width of each landing shall be not less than the door served. The landing shall have a dimension of not less than 36 inches (914 mm) measured in the direction of travel. The depth of exterior landings shall not exceed 1/4 unit vertical in 3 horizontal (2 percent).

Exception: Exterior balconies less than 60 square feet (5.6 m²) and only accessible from a door are permitted to have a landing less than 36 inches (914 mm) measured in the direction of travel.

11.3.1 Floor elevations at the required egress doors. Landings or finished floors at the required egress door shall be not more than 1 1/2 inches (38 mm) lower than the top of the threshold.

Exception: The landing or floor on the exterior side shall be not more than 7/8 inches (196 mm) below the top of the threshold provided the door does not swing over the landing or floor.

Where exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

R311.3.2 Floor elevations for other exterior doors. Doors other than the required egress door shall be provided with landings or floors not more than 7/8 inches (196 mm) below the top of the threshold.

Exception: A top landing is not required where a stairway of not more than two risers is located on the exterior side of the door, provided that the door does not swing over the stairway.

R311.3.3 Storm and screen doors. Storm and screen doors shall be permitted to swing over exterior stairs and landings.

R311.4 Vertical egress. Egress from habitable levels including habitable attics and basements not provided with an egress door in accordance with Section R311.2 shall be by a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

R311.5 Construction.

R311.5.1 Attachment. Exterior landings, decks, balconies, stairs and similar facilities shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal.

R311.6 Hallways. The width of a hallway shall be not less than 3 feet (914 mm).

R311.6.4 Modular ramps. Modular ramp systems approved pursuant to the act are not required to comply with the requirements of Section R403.1.4 of the code.

R 408:30518

R311.7 Stairways.

R311.7.1 Width. Stairways shall be not less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4 1/2 inches (114 mm) on either side of the stairway and the clear width of the stairway at and below the handrail height, including treads and landings, shall be not less than 31 1/2 inches (787 mm) where a handrail is installed on one side and 27 inches (698 mm) where handrails are provided on both sides.

Exception: The width of spiral stairways shall be in accordance with Section R311.7.10.1.

R311.7.2 Headroom. The headroom in stairways shall be not less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.

Exceptions:

1. Where the nosings of treads at the side of a flight extend under the edge of a floor opening through which the stair passes, the floor opening shall be allowed to project horizontally into the required headroom not more than 4 1/4 inches (121 mm).
2. The headroom for spiral stairways shall be in accordance with Section R311.7.10.1.

2015

R311.7.12 Ships ladders. Ships ladders shall not be used as an element of a means of egress. Ships ladders shall be permitted provided that a required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at and below the handrails shall be not less than 20 inches.

R311.7.12.1 Treads of ships ladders. Treads shall have a depth of not less than 5 inches (127 mm). The tread shall be projected such that the total of the tread depth plus the nosing projection is not less than 8 1/2 inches (216 mm). The riser height shall be not more than 9 1/4 inches (241 mm).

R311.7.12.2 Handrails of ships ladders. Handrails shall be provided on both sides of ships ladders and shall comply with Sections R311.7.8.2 to R311.7.8.4. Handrail height shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

R311.8 Ramps.

R311.8.1 Maximum slope. Ramps serving the egress door required by Section R311.2 shall have a slope of not more than 1 unit vertical in 12 units horizontal (8.3-percent slope). All other ramps shall have a maximum slope of 1 unit vertical in 8 units horizontal (12.5 percent).

Exception: Where it is technically infeasible to comply because of site constraints, ramps shall have a slope of not more than 1 unit vertical in 8 units horizontal (12.5 percent).

R311.8.2 Landings required. There shall be a floor or landing at the top and bottom of each ramp, where doors open onto ramps, and where ramps change directions. The width of the landing perpendicular to the ramp slope shall be not less than 36 inches (914 mm).

R311.8.3 Handrails required. Handrails shall be provided on not less than one side of ramps exceeding a slope of one unit vertical in 12 units horizontal (8.33-percent slope).

R311.8.3.1 Height. Handrail height, measured above the finished surface of the ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

R311.8.3.2 Grip size. Handrails on ramps shall comply with Section R311.7.8.3.

R311.8.3.3 Continuity. Handrails where required on ramps shall be continuous for the full length of the ramp. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inches (38 mm) between the wall and the handrails.

**SECTION R312
GUARDS AND WINDOW FALL PROTECTION**

R312.1 Guards. Guards shall be provided in accordance with Sections R312.1.1 through R312.1.4.

R312.1.1 Where required, Guards shall be located along open-sided walking surfaces, including stairs, ramps and

landings, that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.

R312.1.2 Height. Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings shall be not less than 36 inches (914 mm) in height as measured vertically above the adjacent walking surface of the line connecting the leading edges of the treads.

Exceptions:

1. Guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
2. Where the top of the guard serves as a handrail on the open sides of stairs, the top of the guard shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) as measured vertically from a line connecting the leading edges of the treads.

R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height that allow passage of a sphere 4 inches (102 mm) in diameter.

Exceptions:

1. The triangular openings at the open side of stair formed by the riser, tread and bottom rail of a guard shall not allow passage of a sphere 6 inches (153 mm) in diameter.
2. Guards on the open side of stairs shall not have openings that allow passage of a sphere 4 1/2 inches (111 mm) in diameter.

R312.1.4 Exterior plastic composite guards. Plastic composite exterior guards shall comply with the requirements of Section R317.4.

R312.2 Window fall protection. Window fall protection shall be provided in accordance with Sections R312.2.1 and R312.2.2.

R312.2.1 Window sills. In dwelling units, where the top of the sill of an operable window opening is located less than 24 inches (610 mm) above the finished floor and greater than 72 inches (1829 mm) above the finished grade or other surface below on the exterior of the building, the operable window shall comply with one of the following:

1. Operable windows with openings that will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening where the opening is in its largest opened position.
2. Operable windows that are provided with window fall prevention devices that comply with ASTM F2090.
3. Operable windows that are provided with window opening control devices that comply with Section R312.2.2.

R312.2.2 Window opening control devices. Window opening control devices shall comply with ASTM F2090.

2009

that is not less than 1 1/4 inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1 1/4 inches (32 mm) to a maximum of 2 1/4 inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

R311.7.7.4 Exterior wood/plastic composite handrails. Wood/plastic composite handrails shall comply with the provisions of Section R317.4.

R311.7.8 Illumination. All stairs shall be provided with illumination in accordance with Section R303.6.

R311.7.9 Special stairways. Spiral stairways and bulkhead enclosure stairways shall comply with all requirements of Section R311.7 except as specified below.

R311.7.9.1 Spiral stairways. Spiral stairways are permitted, provided the minimum clear width at and below the handrail shall be 26 inches (660 mm) with each tread having a 7/8-inch (190 mm) minimum tread depth at 12 inches (914 mm) from the narrower edge. All treads shall be identical, and the rise shall be no more than 9 1/4 inches (241 mm). A minimum headroom of 6 feet 6 inches (1982 mm) shall be provided.

R311.7.9.2 Bulkhead enclosure stairways. Stairways serving bulkhead enclosures, not part of the required building egress, providing access from the outside grade level to the basement shall be exempt from the requirements of Sections R311.3 and R311.7 where the maximum height from the basement finished floor level to grade adjacent to the stairway does not exceed 8 feet (2438 mm) and the grade level opening to the stairway is covered by a bulkhead enclosure with hinged doors or other approved means.

R311.8 Ramps.

R311.8.1 Maximum slope. Ramps shall have a maximum slope of 1 unit vertical in 12 units horizontal (8.3 percent slope).

Exception: Where it is technically infeasible to comply because of site constraints, ramps may have a maximum slope of one unit vertical in eight horizontal (12.5 percent slope).

R311.8.2 Landings required. A minimum 3-foot-by-3-foot (914 mm by 914 mm) landing shall be provided:

1. At the top and bottom of ramps.
2. Where doors open onto ramps.
3. Where ramps change direction.

R311.8.3 Handrails required. Handrails shall be provided on at least one side of all ramps exceeding a slope of one unit vertical in 12 units horizontal (8.33-percent slope).

R311.8.3.1 Height. Handrail height, measured above the finished surface of the ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

R311.8.3.2 Grip size. Handrails on ramps shall comply with Section R311.7.7.3.

R311.8.3.3 Continuity. Handrails where required on ramps shall be continuous for the full length of the ramp. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inches (38 mm) between the wall and the handrails.

**SECTION R312
GUARDS**

R312.1 Where required. Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.

R312.2 Height. Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914 mm) high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads.

Exceptions:

1. Guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
2. Where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.

R312.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height which allow passage of a sphere 4 inches (102 mm) in diameter.

Exceptions:

1. The triangular openings at the open side of a stair formed by the riser, tread and bottom rail of a guard shall not allow passage of a sphere 6 inches (153 mm) in diameter.
2. Guards on the open sides of stairs shall not have openings which allow passage of a sphere 4 1/2 inches (111 mm) in diameter.

R312.4 Exterior wood/plastic composite guards. Wood/plastic composite guards shall comply with the provisions of Section R317.4.

**SECTION R313
AUTOMATIC FIRE SPRINKLER SYSTEMS**

R313.1 Design and installation. Where installed, automatic residential fire sprinkler systems shall conform to the design and installation requirements of the national fire protection association (NFPA) standard 13D or P2904.1.

R-408.30539a

FILE COPY



CITY OF TAYLOR

BUILDING PERMIT
 Building Department
 23555 Goddard Road
 Taylor, Mi 48180



TAYLOR

MADE FOR YOU

For Inspections:
 Call (734) 374-1515
 Fax (734) 374-2732
 PERMIT MUST BE POSTED

Information: Taylor Property # 050010046000 Reference B 1008863
 Owner.....: INFINITY ACQUISITIONS LLC (000)000-0000

1. Basement/Trench Foundation (BEFORE POURING)
2. Backfill inspection.
3. Superstructure ready for rough (ALL OTHER TRADES MUST HAVE BEEN APPROVED)
4. Housewrap and brick/window flashing inspection.
5. Insulation inspection.
6. Commercial construction requires a drywall fastener inspection.
7. All flat work requires a pre-pour inspection.
8. Final inspection.

<u>Contractor & Mail Address</u>	<u>Building Address</u>
INFINITY ACQUISITIONS LLC 42400 GRAND RIVER S NOVI, MI 48375 (000)000-0000	INFINITY ACQUISITIONS LLC 11617 GOLFCREST DR TAYLOR, MI 48180
Contractor#	1

System Typ:	R Resident'l	Est. Value:	299,622	Applied On Date	8/25/2016
Zoning....:	R-1C 1 Fam Res			Issue Date	10/06/2016
Clerk.....:	TB TB	Rel. Dev.:		Assessment Date	
Work Type:	N New Const.	RD Locatn:			
Unit Type:		Assr Sts			

Name of Business	CHARTER OAKS	Description	NEW SINGLE FAMILY RESIDENTIAL
Engineering Doc	APPROVED	Inspector Notes	APPROVED
Square Footage			
LIC. REG. DATE		Approved By	HARRINGTON
LIC. EXP. DATE		Prop Owner (Ph)	248.449.8084

<u>Fees</u>			
Application Fee	40.00	Permit Fee	3,610.00
Zoning Fee	25.00		
		Total Fees:	3,675.00

PAID

OCT 18 2016

This permit conveys no right to occupy any street, alley or sidewalk or any part thereof either temporarily or permanently. Encroachments on public property not specifically permitted under the Building Code, must be approved by the City Council. Separate permits are required for Electrical and Plumbing installations. Street or alley grades as well as depth and location of public sewers may be obtained from the Building Department. The issuance of this permit does not release the applicant from the conditions of any applicable subdivision restrictions. ***FAILED INSPECTIONS \$100.00 FEE***
 * PRIOR TO OBTAINING A CERTIFICATE OF OCCUPANCY (all trades must be approved) *
 PERMIT WILL BECOME NULL AND VOID IF CONSTRUCTION WORK IS NOT STARTED WITHIN 6 MONTHS OF DATE PERMIT IS ISSUED. *** No Refunds ***
 CALL MISS DIG 3 WORKING DAYS BEFORE YOU DIG - FREE OF CHARGE 800-482-7171



CITY OF TAYLOR

BUILDING PERMIT
Building Department
23555 Goddard Road
Taylor, Mi 48180

FILE COPY



TAYLOR

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For Inspections:
Call (734) 374-1515
Fax (734) 374-2732
PERMIT MUST BE POSTED

Information: Taylor Property # 050010047000 Reference B 1008745
Owner.....: INFINITY ACQUISITIONS LLC (000)000-0000

1. Basement/Trench Foundation (BEFORE POURING)
2. Backfill inspection.
3. Superstructure ready for rough (ALL OTHER TRADES MUST HAVE BEEN APPROVED)
4. Housewrap and brick/window flashing inspection.
5. Insulation inspection.
6. Commercial construction requires a drywall fastener inspection.
7. All flat work requires a pre-pour inspection.
8. Final inspection.

Contractor & Mail Address	Building Address
INFINITY CONSTRUCTION SERVICES 37785 PEMBROKE RD LIVONIA, MI 48152 (248)449-8084	INFINITY ACQUISITIONS LLC 11659 GOLFCREST DR TAYLOR, MI 48180 11890
Contractor#	

System Typ:	R Resident'l Est. Value:	299,622	Applied On Date	4/12/2016
Zoning...:	R-1B 1 Fam Res		Issue Date	5/13/2016
Clerk....:	DD DARTY	Rel. Dev.:	Assessment Date	
Work Type:	N New Const.	RD Locatn:		
Unit Type:	Assr Sts			

Name of Busines	N/A	Description	NEW SINGLE FAMILY RESIDENTIAL HOME LOT 47
Engineering Doc	N/A	Inspector Notes	MUST COMPLY W/2015 MRC.*HARD WIRED SMOKE, FOUNDATION REQUIRED*
Square Footage	2318 SQ FT	Approved By	J HARRINGTON
LIC. REG. DATE	*4" MIN GRANULAR	Prop Owner (Ph)	248-449-8084
LIC. EXP. DATE	BASE REQ FOR CONCRET		

Fees			
Application Fee	40.00	Permit Fee	3,610.00
Zoning Fee	25.00	Total Fees:	3,675.00
PAID			
JUN 01 2016			
CITY OF TAYLOR TREASURER'S OFFICE			

This permit conveys no right to occupy any street, alley or sidewalk or any part thereof either temporarily or permanently. Encroachments on public property not specifically permitted under the Building Code, must be approved by the City Council. Separate permits are required for Electrical and Plumbing installations. Street or alley grades as well as depth and location of public sewers may be obtained from the Building Department. The issuance of this permit does not release the applicant from the conditions of any applicable subdivision restrictions. ***FAILED INSPECTIONS \$100.00 FEE***

* PRIOR TO OBTAINING A CERTIFICATE OF OCCUPANCY (all trades must be approved) *
PERMIT WILL BECOME NULL AND VOID IF CONSTRUCTION WORK IS NOT STARTED
WITHIN 6 MONTHS OF DATE PERMIT IS ISSUED. *** No Refunds ***
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CITY OF TAYLOR

BUILDING PERMIT
Building Department
23555 Goddard Road
Taylor, Mi 48180



For Inspections:
Call (734) 374-1515
Fax (734) 374-2732
PERMIT MUST BE POSTED

Information: Taylor Property # 050010052000 Reference B 1008819
Owner.....: INFINITY ACQUISITIONS LLC (000)000-0000

1. Basement/Trench Foundation (BEFORE POURING)
2. Backfill inspection.
3. Superstructure ready for rough (ALL OTHER TRADES MUST HAVE BEEN APPROVED)
4. Housewrap and brick/window flashing inspection.
5. Insulation inspection.
6. Commercial construction requires a drywall fastener inspection.
7. All flat work requires a pre-pour inspection.
8. Final inspection.

Contractor & Mail Address	Building Address
INFINITY CONSTRUCTION SERVICES 37785 PEMBROKE RD LIVONIA, MI 48152 (248)449-8084	INFINITY ACQUISITIONS LLC 26632 LAKE POINTE DR TAYLOR, MI 48180
Contractor#	11890

System Typ: R Resident'l	Est. Value: 244,572	Applied On Date 8/25/2016
Zoning....: R-1C 1 Fam Res		Issue Date 8/25/2016
Clerk.....: DD DARTY	Rel. Dev.:	Assessment Date
Work Type: N New Const.	RD Locatn:	
Unit Type:	Assr Sts	

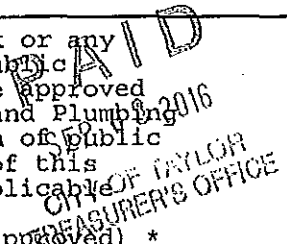
Name of Business	N/A	Description	NEW CONSTRUCTION OF A SINGLE FAMILY HOME. LOT 52
Engineering Doc	N/A	Inspector Notes	N/A
Square Footage	1688		
LIC. REG. DATE		Approved By	J HARRINGTON
LIC. EXP. DATE		Prop Owner (Ph)	248-449-8084

<u>Fees</u>			
Application Fee	40.00	Permit Fee	3,051.00
Zoning Fee	25.00		
		Total Fees:	3,116.00

This permit conveys no right to occupy any street, alley or sidewalk or any part thereof either temporarily or permanently. Encroachments on public property not specifically permitted under the Building Code, must be approved by the City Council. Separate permits are required for Electrical and Plumbing installations. Street or alley grades as well as depth and location of public sewers may be obtained from the Building Department. The issuance of this permit does not release the applicant from the conditions of any applicable subdivision restrictions. ***FAILED INSPECTIONS \$100.00 FEE***

* PRIOR TO OBTAINING A CERTIFICATE OF OCCUPANCY (all trades must be approved) *
 PERMIT WILL BECOME NULL AND VOID IF CONSTRUCTION WORK IS NOT STARTED WITHIN 6 MONTHS OF DATE PERMIT IS ISSUED. *** No Refunds ***

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FILE COPY

Reference B 1008864



CITY OF TAYLOR

BUILDING PERMIT
Building Department
23555 Goddard Road
Taylor, Mi 48180



TAYLOR

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For Inspections:
Call (734) 374-1515
Fax (734) 374-2732
PERMIT MUST BE POSTED

Information: Taylor Property # 050010053000 Reference B 1008864
Owner.....: INFINITY ACQUISITIONS LLC (000)000-0000

1. Basement/Trench Foundation (BEFORE POURING)
2. Backfill inspection.
3. Superstructure ready for rough (ALL OTHER TRADES MUST HAVE BEEN APPROVED)
4. Housewrap and brick/window flashing inspection.
5. Insulation inspection.
6. Commercial construction requires a drywall fastener inspection.
7. All flat work requires a pre-pour inspection.
8. Final inspection.

Contractor & Mail Address	Building Address
INFINITY ACQUISITIONS LLC 42400 GRAND RIVER S NOVI, MI 48375 (000)000-0000	INFINITY ACQUISITIONS LLC 26626 LAKE POINTE DR TAYLOR, MI 48180
Contractor#	1

System Typ: R Resident'l	Est. Value: 253,087	Applied On Date 8/25/2016
Zoning...: R-1C 1 Fam Res		Issue Date 10/06/2016
Clerk....: TB TB	Rel. Dev.:	Assessment Date
Work Type: N New Const.	RD Locatn:	
Unit Type:	Assr Sts	

Name of Business	CHARTER OAKS	Description	NEW SINGLE FAMILY RESIDENTIAL
Engineering Doc	APPROVED	Inspector Notes	APPROVED
Square Footage			
LIC. REG. DATE		Approved By	HARRINGTON
LIC. EXP. DATE		Prop Owner (Ph)	248.499.8136

Fees			
Application Fee	40.00	Permit Fee	3,150.00
Zoning Fee	25.00		
		Total Fees:	3,215.00

PAID
OCT 18 2016
CITY OF TAYLOR
TREASURER'S OFF

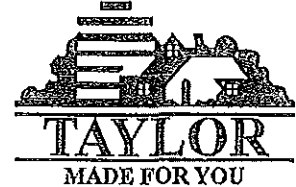
This permit conveys no right to occupy any street, alley or sidewalk or any part thereof either temporarily or permanently. Encroachments on public property not specifically permitted under the Building Code, must be approved by the City Council. Separate permits are required for Electrical and Plumbing installations. Street or alley grades as well as depth and location of public sewers may be obtained from the Building Department. The issuance of this permit does not release the applicant from the conditions of any applicable subdivision restrictions. ***FAILED INSPECTIONS \$100.00 FEE***

* PRIOR TO OBTAINING A CERTIFICATE OF OCCUPANCY (all trades must be approved) *
 PERMIT WILL BECOME NULL AND VOID IF CONSTRUCTION WORK IS NOT STARTED WITHIN 6 MONTHS OF DATE PERMIT IS ISSUED. *** No Refunds ***
 CALL MISS DIG 3 WORKING DAYS BEFORE YOU DIG - FREE OF CHARGE 800-482-7171



CITY OF TAYLOR

BUILDING PERMIT
Building Department
23555 Goddard Road
Taylor, Mi 48180



For Inspections:
Call (734) 374-1515
Fax (734) 374-2732
PERMIT MUST BE POSTED

Information: Taylor Property # 050010057000 Reference B 1008732
Owner.....: INFINITY ACQUISITIONS LLC (000)000-0000

1. Basement/Trench Foundation (BEFORE POURING)
2. Backfill inspection.
3. Superstructure ready for rough (ALL OTHER TRADES MUST HAVE BEEN APPROVED)
4. Housewrap and brick/window flashing inspection.
5. Insulation inspection.
6. Commercial construction requires a drywall fastener inspection.
7. All flat work requires a pre-pour inspection.
8. Final inspection.

Contractor & Mail Address	Building Address
INFINITY CONSTRUCTION SERVICES 37785 PEMBROKE RD LIVONIA, MI 48152 (248)449-8084	INFINITY ACQUISITIONS LLC 11889 LAKE POINTE DR TAYLOR, MI 48180
Contractor#	11890

System Typ:	R Resident'l	Est. Value:	299,622	Applied On Date	3/30/2016
Zoning....:	R-1B 1 Fam Res			Issue Date	4/21/2016
Clerk....:	DD DARTY	Rel. Dev.:		Assessment Date	
Work Type:	N New Const.	RD Locatn:			
Unit Type:		Assr Sts			

Name of Business	N/A	Description	NEW CONSTRUCTION OF A SINGLE FAMILY HOME AT CHARTER OAKS LOT 57
Engineering Doc	N/A	Inspector Notes	MUST COMPLY WITH 2015 MRC.
Square Footage	2318		
LIC. REG. DATE		Approved By	J HARRINGTON
LIC. EXP. DATE		Prop Owner (Ph)	248-449-8084

Fees			
Application Fee	40.00	Permit Fee	3,610.00
Zoning Fee	25.00		
		Total Fees:	3,675.00

This permit conveys no right to occupy any street, alley or sidewalk or any part thereof either temporarily or permanently. Encroachments on public property not specifically permitted under the Building Code, must be approved by the City Council. Separate permits are required for Electrical and Plumbing installations. Street or alley grades as well as depth and location of public sewers may be obtained from the Building Department. The issuance of this permit does not release the applicant from the conditions of any applicable subdivision restrictions. ***FAILED INSPECTIONS \$100.00 FEE***

* PRIOR TO OBTAINING A CERTIFICATE OF OCCUPANCY (all trades must be approved) *
PERMIT WILL BECOME NULL AND VOID IF CONSTRUCTION WORK IS NOT STARTED
WITHIN 6 MONTHS OF DATE PERMIT IS ISSUED. *** No Refunds ***
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CITY OF TAYLOR

BUILDING PERMIT
Building Department
23555 Goddard Road
Taylor, Mi 48180



TAYLOR
MADE FOR YOU

For Inspections:
Call (734) 374-1515
Fax (734) 374-2732
PERMIT MUST BE POSTED

Information: Taylor Property # 050010058000 Reference B 1008778
Owner.....: INFINITY ACQUISITIONS LLC (000)000-0000

1. Basement/Trench Foundation (BEFORE POURING)
2. Backfill inspection.
3. Superstructure ready for rough (ALL OTHER TRADES MUST HAVE BEEN APPROVED)
4. Housewrap and brick/window flashing inspection.
5. Insulation inspection.
6. Commercial construction requires a drywall fastener inspection.
7. All flat work requires a pre-pour inspection.
8. Final inspection.

Contractor & Mail Address	Building Address
INFINITY CONSTRUCTION SERVICES 37785 PEMBROKE RD LIVONIA, MI 48152 (248) 449-8084	INFINITY ACQUISITIONS LLC 11935 LAKE POINTE DR TAYLOR, MI 48180
Contractor#	11890

System Typ: R Resident'l Est. Value: 299,622	Applied On Date 5/17/2016
Zoning....: R-1C 1 Fam Res	Issue Date 6/27/2016
Clerk....: DD DARTY	Assessment Date
Work Type: N New Const. RD Locatn:	
Unit Type:	Assr Sts

Name of Busines	N/A	Description	NEW SINGLE FAMILY HOME
Engineering Doc	N/A	Inspector Notes	*HARD WIRED SMOKES *4"MIN GRAN BASE *FOUNDATION REQUIRED
Square Footage	2318	Approved By	J HARRINGTON
LIC. REG. DATE		Prop Owner (Ph)	248-449-8084
LIC. EXP. DATE			

Fees			
Application Fee	40.00	Permit Fee	3,610.00
Zoning Fee	25.00		
		Total Fees:	3,675.00

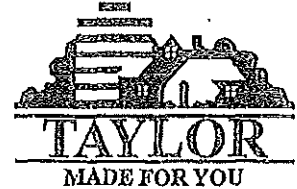
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* PRIOR TO OBTAINING A CERTIFICATE OF OCCUPANCY (all trades must be approved) *
PERMIT WILL BECOME NULL AND VOID IF CONSTRUCTION WORK IS NOT STARTED
WITHIN 6 MONTHS OF DATE PERMIT IS ISSUED. *** No Refunds ***
CALL MISS DIG 3 WORKING DAYS BEFORE YOU DIG - FREE OF CHARGE 800-482-7171



CITY OF TAYLOR

BUILDING PERMIT
Building Department
23555 Goddard Road
Taylor, Mi 48180



For Inspections:
Call (734) 374-1515
Fax (734) 374-2732
PERMIT MUST BE POSTED

Information: Taylor Property # 050010059000 Reference B 1008730
Owner.....: INFINITY ACQUISITIONS LLC (000)000-0000

1. Basement/Trench Foundation (BEFORE POURING)
2. Backfill inspection.
3. Superstructure ready for rough (ALL OTHER TRADES MUST HAVE BEEN APPROVED)
4. Housewrap and brick/window flashing inspection.
5. Insulation inspection.
6. Commercial construction requires a drywall fastener inspection.
7. All flat work requires a pre-pour inspection.
8. Final inspection.

Contractor & Mail Address	Building Address
INFINITY CONSTRUCTION SERVICES 37785 PEMBROKE RD LIVONIA, MI 48152 (248)449-8084	INFINITY ACQUISITIONS LLC 11977 LAKE POINTE DR TAYLOR, MI 48180
Contractor#	11890

System Typ: R Resident'l	Est. Value: 309,887	Applied On Date 3/30/2016
Zoning....: R-1B 1 Fam Res		Issue Date 4/21/2016
Clerk....: DD DARTY	Rel. Dev.:	Assessment Date
Work Type: N New Const.	RD Locatn:	
Unit Type:	Assr Sts	

Name of Business	N/A	Description	NEW CONSTRUCTION OF A SINGLE FAMILY HOME LOT 59 CHARTER OAKS
Engineering Doc	N/A	Inspector Notes	MUST COMPLY WITH 2015 MRC
Square Footage	2318		
LIC. REG. DATE		Approved By	J HARRINGTON
LIC. EXP. DATE		Prop Owner (Ph)	248-449-8084

Fees			
Application Fee	40.00	Permit Fee	3,710.00
Zoning Fee	25.00		
		Total Fees:	3,775.00

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CALL MISS DIG 3 WORKING DAYS BEFORE YOU DIG - FREE OF CHARGE 800-482-7171



CITY OF TAYLOR

BUILDING PERMIT
Building Department
23555 Goddard Road
Taylor, Mi 48180

FILE COPY



MADE FOR YOU

For Inspections:
Call (734) 374-1515
Fax (734) 374-2732
PERMIT MUST BE POSTED

Information: Taylor Property # 050010063000 Reference B 1008747
Owner.....: INFINITY ACQUISITIONS LLC (000)000-0000

1. Basement/Trench Foundation (BEFORE POURING)
2. Backfill inspection.
3. Superstructure ready for rough (ALL OTHER TRADES MUST HAVE BEEN APPROVED)
4. Housewrap and brick/window flashing inspection.
5. Insulation inspection.
6. Commercial construction requires a drywall fastener inspection.
7. All flat work requires a pre-pour inspection.
8. Final inspection.

Contractor & Mail AddressBuilding Address

INFINITY CONSTRUCTION SERVICES
37785 PEMBROKE RD
LIVONIA, MI 48152
(248) 449-8084

INFINITY ACQUISITIONS LLC
11848 LAKE POINTE DR
TAYLOR, MI 48180
11890

Contractor#

System Typ: R Resident'l Est. Value: 299,622 Applied On Date 4/12/2016
Zoning...: R-1C 1 Fam Res Issue Date 5/16/2016
Clerk...: DD DARTY Rel. Dev.: Assessment Date
Work Type: N New Const. RD Locatn:
Unit Type: Assr Sts

Name of Business N/A Description NEW SINGLE FAMILY HOME LOT 63

Engineering Doc N/A

Square Footage 2318 Inspector Notes MUST COMPLY W 2015 MRC

LIC. REG. DATE Approved By J HARRINGTON
LIC. EXP. DATE Prop Owner (Ph) 248-449-8084

Fees

Application Fee	40.00	Permit Fee	3,610.00
Zoning Fee	25.00		
		PAID	Total Fees: 3,675.00

JUN 01 2016

CITY OF TAYLOR
TREASURER'S OFFICE

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CALL MISS DIG 3 WORKING DAYS BEFORE YOU DIG FREE OF CHARGE 800 400 7171



CITY OF TAYLOR

BUILDING PERMIT
Building Department
23555 Goddard Road
Taylor, Mi 48180



For Inspections:
Call (734) 374-1515
Fax (734) 374-2732
PERMIT MUST BE POSTED

Information: Taylor Property # 050010080000 Reference B 1008777
Owner.....: INFINITY ACQUISITIONS LLC (000)000-0000

1. Basement/Trench Foundation (BEFORE POURING)
2. Backfill inspection.
3. Superstructure ready for rough (ALL OTHER TRADES MUST HAVE BEEN APPROVED)
4. Housewrap and brick/window flashing inspection.
5. Insulation inspection.
6. Commercial construction requires a drywall fastener inspection.
7. All flat work requires a pre-pour inspection.
8. Final inspection.

Contractor & Mail Address	Building Address
INFINITY CONSTRUCTION SERVICES 37785 PEMBROKE RD LIVONIA, MI 48152 (248)449-8084	INFINITY ACQUISITIONS LLC 11740 GOLFCREST DR TAYLOR, MI 48180
Contractor#	11890

System Typ:	R Resident'l	Est. Value:	211,355	Applied On Date	5/18/2016
Zoning...:	R-1C 1 Fam Res			Issue Date	6/27/2016
Clerk....:	DD DARTY	Rel. Dev.:		Assessment Date	
Work Type:	N New Const.	RD Locatn:			
Unit Type:		Assr Sts			

Name of Busines	N/A	Description	NEW SINGLE FAMILY HOME
Engineering Doc	N/A		
Square Footage	1504	Inspector Notes	*HARD WIRED SMOKES *4" MIN GRAN BASE *FOUNDATION REQUIRED
LIC. REG. DATE		Approved By	J HARRINGTON
LIC. EXP. DATE		Prop Owner (Ph)	248-449-8084

Fees			
Application Fee	40.00	Permit Fee	2,655.00
Zoning Fee	25.00		
		Total Fees:	2,720.00

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RICK SOLLARS
Mayor

City of Taylor

CYNTHIA A. BOWER
City Clerk

EDWARD L. BOURASSA
Treasurer

23555 GODDARD ROAD
TAYLOR, MICHIGAN 48180

PHONE: (734) 287-6550 (Menu) - FAX: (734) 374-1343
www.cityoftaylor.com

CITY COUNCIL
LINDA PARKER-CRAIG
Chairwoman
ANGELA CROFT
Chairwoman Pro-Tem
DANIEL A. BZURA
ALEX GARZA
CHARLES JOHNSON
TIMOTHY WOOLLEY
JOHN MYERS

March 20, 2017

Keith Lambert, Director, BCC
Construction Code Commission
Department of Licensing & Regulatory Affairs
PO Box 30254
Lansing, MI 48909

Re: Construction Code Commission

Dear Mr. Lambert

The City of Taylor reviewed draft minutes from the website for the Construction Code Commission meeting conducted January 11, 2017. The City of Taylor believes it is unreasonable to make a decision without the attendance of a representative from the City of Taylor to provide critical information for a variance affecting our community.

The City of Taylor was not notified of the public meeting held on January 11, 2017. An appeal was conducted by the Construction Code Commission regarding a decision made by the City of Taylor Construction Board of Appeals concerning Jonathan Boskovich of Infinity Homes Services.

When the City of Taylor contacted LeeAnn Allaire, Manager of the Administrative Services Division, to ask why we were not informed of the meeting she provided a written response saying, "no call to Taylor was documented," and "My newly created division took over all of the bureau board and commission meetings recently and we are still working out some processes. Going forward all interested parties will receive written notification." Although we appreciate what she is going to provide moving forward it does not address the decision already made without notification of the meeting to the City of Taylor.

When we reviewed the draft minutes from the January Commission meeting there were discrepancies, for instance, the minutes documented a variance by the Commission that was not part of the Taylor Board of Appeals decision that included the entire development as well as a separate development not mentioned to the Taylor CBA.

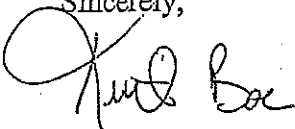
The application to the City of Taylor CBA was specific to nine (9) home addresses and the State Construction Code Commission granted a variance for two entire developments. The minutes have been corrected to reflect the nine (9) homes but that is not what was acted on by the Commission. How can your department change what was actually acted upon in the meeting by

just changing the minutes? This is suspicious and leaves us wondering what facts were presented to the Commission in the absence of the City of Taylor. The act also requires the Commission to provide the City of Taylor the reason for their decision which was not received.

The fact is the City of Taylor was not notified of the public meeting, was not provided with a reason for the decision to overturn the Taylor Construction Board of Appeals and the Construction Code Commission acted on an appeal that was not part of the Taylor appeal.

Because of these discrepancies the City of Taylor is not confident with the states procedure for open government and following their own rules. The City of Taylor is requesting the Construction Code Commission correct this problem by rescheduling this appeal with the City of Taylor being notified in writing so all parties can attend and provide the facts to the Commission so a fair legal decision can be made.

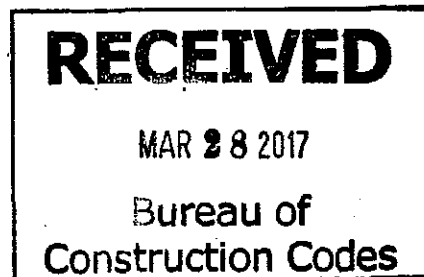
Sincerely,



Keith Boc
Director of Public Services

cc: Alesha Gensler, Deputy Director, BCC
LeeAnn Allaire, Manager, Administrative Services Division, BCC
CCC, Ottawa Building, Lansing, Michigan

Diane Barnes



Application for Construction Code Appeal
 Michigan Department of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 P.O. Box 30255, Lansing, MI 48909
 517-241-9303
 www.michigan.gov/bcc

141/116/131/99

Agency Use Only

Application Fee: \$500.00

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

Note: The applicant is responsible for all fees applicable to this application.

CODE UNDER WHICH APPEAL IS SOUGHT			
<input checked="" type="checkbox"/> Building (141)	<input type="checkbox"/> Electrical (116)	<input type="checkbox"/> Mechanical (131)	<input type="checkbox"/> Plumbing (99)

APPLICANT (Note: All correspondence will be sent to this address)				
NAME OF COMPANY Infinity Construction Services				
APPLICANT NAME Infinity Construction Services / Jonathan Boskovich			TELEPHONE NUMBER (Include Area Code) (248) 449-8084	
ADDRESS 42400 Grand River AVE STE 112	CITY Novi	STATE MI	ZIP CODE 48375	FAX NUMBER (Include Area Code) (248) 449-8136

Instructions for Application for Construction Code Appeal

Facility Information: Provide all information requested.

Building Data: Provide all information requested from the building permit or plan review.

Permit Holder: Provide the information requested for the entity named on the permit.

Building Owner: Provide the information requested for the entity that owns the building, which is the subject of the appeal.

Building Permit Authority: Provide all information requested for the enforcing agency.

Summary of Appeal: Code; provide the code under which an appeal is sought. Code Section(s); provide the code section(s) that are the subject of the appeal. Desired Relief; describe the remedy being sought. Basis of Appeal; provide a brief statement why the requested remedy should be granted.

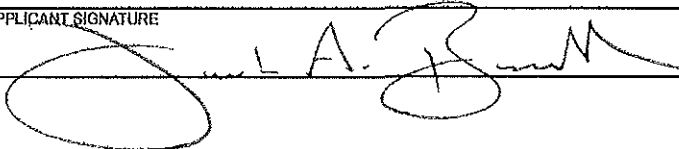
Note: If the decision being appealed is that of a local Board of Appeals, this application and the filing fee must be received in our office within 10 business days of the filing of the decision of the local board of appeals in accordance with Section 16 of 1972 PA 230.

U.S. Postal Service
 MI Dept. of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 (Address to appropriate division-
 Electrical Division, Mechanical Division
 or Plumbing Division
 Please address Building appeals to Plan
 Review Division)
 P.O. Box 30255
 Lansing, MI 48909

Courier Other Than U.S. Postal Service
 MI Dept. of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 (Address to appropriate division-Electrical
 Division, Mechanical Division or Plumbing
 Division
 Please address Building appeals to Plan
 Review Division)
 1st Floor Ottawa Bldg.
 611 W. Ottawa St.
 Lansing, MI 48933

Validation Area

TranInfo:141 21754223-1 12/09/16
 CMR: 7567 Amt: \$500.00
 ID: INFINITY CONSTRUCTION SERVICES LLC

FACILITY INFORMATION				
FACILITY NAME Charter Oaks Development / Island Lakes Development			ADDRESS	
NAME OF CITY, VILLAGE OR TOWNSHIP IN WHICH FACILITY IS LOCATED <input checked="" type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Township Of: Taylor			COUNTY Wayne	
BUILDING DATA				
GROSS FLOOR AREA <input checked="" type="checkbox"/> New Building 1900 <input type="checkbox"/> Addillon <input type="checkbox"/> Alteration <input type="checkbox"/> Repair				
CLASSIFICATION PER BUILDING CODE Building Use _____ Construction Type _____ No. of Occupants _____ Area/Floor _____ No. of Floors _____				
PERMIT HOLDER				
NAME (Company or Individual) Infinity Construction Services		CONTACT PERSON Jonathan Boskovich		TELEPHONE NUMBER (Include Area Code) (248) 449-8084
ADDRESS 42400 Grand River AVE STE 112	CITY Novi	STATE MI	ZIP CODE 48375	FAX NUMBER (Include Area Code) (248) 449-8136
BUILDING OWNER				
NAME (Company or Individual) Infinity Acquisitions		CONTACT PERSON Jonathan Boskovich		TELEPHONE NUMBER (Include Area Code) (248) 449-8084
ADDRESS 42400 Grand River AVE STE 112	CITY Novi	STATE MI	ZIP CODE 48375	FAX NUMBER (Include Area Code) (248) 449-8136
BUILDING PERMIT AUTHORITY				
ENFORCING AGENCY The City of Taylor		BUILDING OFFICIAL NAME Jesse Harrington		TELEPHONE NUMBER (Include Area Code) (734) 287-6550
ADDRESS 23555 Goddard RD.	CITY Taylor	STATE MI	ZIP CODE 48180	FAX NUMBER (Include Area Code) (734) 374-1343
SUMMARY OF APPEAL				
CODE SECTION(S) R311.3		Provide copies of the following as appropriate: <input type="checkbox"/> Statement of Facts and Reasoning <input type="checkbox"/> Copy of Enforcing Agency Determination <input checked="" type="checkbox"/> Supporting Material <input checked="" type="checkbox"/> Copy of Decision of Local Board of Appeals <input checked="" type="checkbox"/> Transcript of Local Board of Appeals Hearing		
DESIRED RELIEF (State Briefly) To be able to install a guard railing on the rear doorwall as depicted in the supporting material				
BASIS OF APPEAL (State Briefly) Our basis is that the City of Taylor has the incorrect interruption of the 2015 building code, The City of Taylor is asking us to abide by a higher code requirement than is necessary.				
APPLICANT SIGNATURE 			DATE 12/6/2016	

This section to be completed by the Construction Board of Appeals

Disposition by the City of Taylor Construction Board of Appeals



Based upon the motion petition
is denied because it's not compliant with
Means of Egress R311 of 2015 Michigan
Residential code

Hearing Date: 11-22-16

Code(s) which appeal is sought: 2015 MRC

Code Section(s) that are the subject of the appeal: 311

Desired Relief: Revoke Requirement of Section 311

Approved

Denied

Joe Bradley
Signature Construction Board of Appeals

Joe Bradley
Print Name

**CONSTRUCTION BOARD OF APPEALS – MINUTES
TUESDAY, NOVEMBER 22, 2016**

A special meeting of the Construction Board of Appeals meeting was held on Tuesday, November 22, 2016, at 23555 Goddard, Taylor, Michigan. Chairman Joe Bradanyi called the meeting to order at 5:25 p.m.

Attending: Joe Bradanyi, Steve Favors, Joe Vig

Excused: Tony Aday, Mark Styles

Also Attending: Jamie McCarty, Manager of Public Services, Jesse Harrington, Building Inspector, Keith Boc, Director of Public Services, Dave Greco, Legal Counsel

Motion by Favors, supported by Vig
Resolved: To approve the agenda as submitted.
Unanimously carried
11.10-16

Jon Boskovich of Infinity Homes presented his appeal to revoke the requirement to provide a stair, guard rail and landing system off the rear doorwalls of the homes under construction in the Charter Oaks Subdivision, Taylor, Michigan.

More specifically the homes located at: 11617 and 11659 Golfcrest Dr, 26632, 26626, 11889, 11935, 11977, 11848 and 11740 Lake Pointe Dr.

Interested Parties: Matt Sakallan, Infinity Homes

Motion by Favors, supported by Vig
Resolved: To deny the request to revoke the requirement to provide a stair, guard rail and landing system off the rear doorwalls of the homes under construction in the Charter Oaks Subdivision because the request doesn't comply with section R.311: Means of Egress, as stated in the 2015 Michigan Residential Code.
Unanimously carried
11.11-16

Motion by Favors, Supported by Vig
Resolved: That the meeting be adjourned.
Unanimously carried
11.12-16

The meeting was adjourned at 6:16 p.m.

Joe Bradanyi, Chairman

Cynthia A Bower, Clerk



42400 Grand River, Suite 112, Novi, MI 48375
PH: 248-449-8084 / Fax: 248-449-8136

www.Infinityhomescorp.com

MEMO

To: The City of Taylor Construction Board of **From:** Infinity Construction Services, LLC
Appeals

Fax: _____ **Date:** 10/13/2016

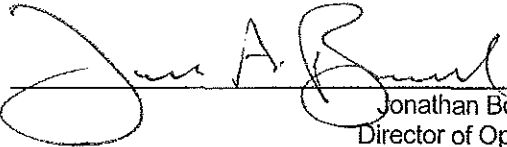
Phone: _____ **Pages:** 1

Re: Building Code R311.3-Charter Oaks of **CC:**
Taylor

For Urgent For Review Please Comment Please Reply

It is our understanding that the municipal code official is requiring our company to provide a stair, guard rail and landing system off the rear doorwalls of our homes resulting in unnecessary costs to the home. The code official, Jesse Harrington, is interpreting the code section R311.3 in the 2015 Michigan Residential Code to support his interpretation. Given what we have researched and discussed with several engineers, architects as well Michigan Home Builders Association, the inspectors interpretation is incorrect and doesn't have merit. The simple reasoning is that when a doorwall is barricaded or prevented from opening (i.e. installing a block in the doorwall to prevent it from opening all the way if not at all, it effectively becomes a window. Furthermore, other means egress are prevalent within the dwelling as required by the code, there is no need for a landing. It is important to note that we have been building within the city for the last four years now and after building over 30 homes in that time in the City of Taylor. It is also important to note that this is not required across any other of 14 municipalities we are currently building in.

We would like to formal make an appeal with the local construction board to have our case heard and reviewed so that some actual evidence of the code can provide a basis of why this is being requested.


Jonathan Boskovich
Director of Operations

2015

6 Alterations or repairs of existing basements. An egress escape and rescue opening is not required where basements undergo alterations or repairs.

Exception: New sleeping rooms created in an existing basement shall be provided with emergency escape and rescue openings in accordance with Section R310.1.

**SECTION R311
MEANS OF EGRESS**

1 Means of egress. Dwellings shall be provided with a means of egress in accordance with this section. The means of egress shall provide a continuous and unobstructed path of vertical and horizontal egress travel from all portions of the dwelling to the required egress door without requiring travel through a garage. The required egress door shall open directly to a public way or to a yard or court that opens to a public way.

2 Door type and size. The required exit door shall be a hinged door not less than 3 feet (914 mm) in width and 6 feet, 6 inches (2032 mm) in height. Other exterior hinged or sliding doors shall not be less than 24 inches (609 mm) in width and 6 feet, 6 inches (1980 mm) in height.

30518

11.2.1 Interior doors. Interior doors shall be not less than 24 inches (609 mm) in width and 6 feet, 6 inches (2032 mm) in height.

Exception: Doors to areas less than 10 square feet of floor area.

30518

R311.3

3 Floors and landings at exterior doors. There shall be a landing or floor on each side of each exterior door. The width of each landing shall be not less than the door served. The depth of each landing shall have a dimension of not less than 36 inches (914 mm) measured in the direction of travel. The depth of exterior landings shall not exceed 1/4 unit vertical in 4 units horizontal (2 percent).

Exception: Exterior balconies less than 60 square feet (5.6 m²) and only accessible from a door are permitted to have a depth of landing less than 36 inches (914 mm) measured in the direction of travel.

11.3.1 Floor elevations at the required egress doors. Landings or finished floors at the required egress door shall be not more than 1 1/2 inches (38 mm) lower than the top of the threshold.

Exception: The landing or floor on the exterior side shall be not more than 7/4 inches (196 mm) below the top of the threshold provided the door does not swing over the landing or floor.

Where exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

R311.3.2 Floor elevations for other exterior doors. Doors other than the required egress door shall be provided with landings or floors not more than 7/4 inches (196 mm) below the top of the threshold.

Exception: A top landing is not required where a stairway of not more than two risers is located on the exterior side of the door, provided that the door does not swing over the stairway.

R311.3.3 Storm and screen doors. Storm and screen doors shall be permitted to swing over exterior stairs and landings.

R311.4 Vertical egress. Egress from habitable levels including habitable attics and basements not provided with an egress door in accordance with Section R311.2 shall be by a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

R311.5 Construction.

R311.5.1 Attachment. Exterior landings, decks, balconies, stairs and similar facilities shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal.

R311.6 Hallways. The width of a hallway shall be not less than 3 feet (914 mm).

R311.6.4 Modular ramps. Modular ramp systems approved pursuant to the act are not required to comply with the requirements of Section R403.1.4 of the code.

R 408.30518

R311.7 Stairways.

R311.7.1 Width. Stairways shall be not less than 36 inches (914 mm) in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4 1/2 inches (114 mm) on either side of the stairway and the clear width of the stairway at and below the handrail height, including treads and landings, shall be not less than 31 1/2 inches (787 mm) where a handrail is installed on one side and 27 inches (698 mm) where handrails are provided on both sides.

Exception: The width of spiral stairways shall be in accordance with Section R311.7.10.1.

R311.7.2 Headroom. The headroom in stairways shall be not less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.

Exceptions:

1. Where the nosings of treads at the side of a flight extend under the edge of a floor opening through which the stair passes, the floor opening shall be allowed to project horizontally into the required headroom not more than 4 3/4 inches (121 mm).
2. The headroom for spiral stairways shall be in accordance with Section R311.7.10.1.

2015

R311.7.12 Ships ladders. Ships ladders shall not be used as an element of a means of egress. Ships ladders shall be permitted provided that a required means of egress stairway or ramp serves the same space at each adjoining level or where a means of egress is not required. The clear width at and below the handrails shall be not less than 20 inches.

R311.7.12.1 Treads of ships ladders. Treads shall have a depth of not less than 5 inches (127 mm). The tread shall be projected such that the total of the tread depth plus the nosing projection is not less than 8 $\frac{1}{2}$ inches (216 mm). The riser height shall be not more than 9 $\frac{1}{2}$ inches (241 mm).

R311.7.12.2 Handrails of ships ladders. Handrails shall be provided on both sides of ships ladders and shall comply with Sections R311.7.8.2 to R311.7.8.4. Handrail height shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

R311.8 Ramps.

R311.8.1 Maximum slope. Ramps serving the egress door required by Section R311.2 shall have a slope of not more than 1 unit vertical in 12 units horizontal (8.3-percent slope). All other ramps shall have a maximum slope of 1 unit vertical in 8 units horizontal (12.5 percent).

Exception: Where it is technically infeasible to comply because of site constraints, ramps shall have a slope of not more than 1 unit vertical in 8 units horizontal (12.5 percent).

R311.8.2 Landings required. There shall be a floor or landing at the top and bottom of each ramp, where doors open onto ramps, and where ramps change directions. The width of the landing perpendicular to the ramp slope shall be not less than 36 inches (914 mm).

R311.8.3 Handrails required. Handrails shall be provided on not less than one side of ramps exceeding a slope of one unit vertical in 12 units horizontal (8.33-percent slope).

R311.8.3.1 Height. Handrail height, measured above the finished surface of the ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).

R311.8.3.2 Grip size. Handrails on ramps shall comply with Section R311.7.8.3.

R311.8.3.3 Continuity. Handrails where required on ramps shall be continuous for the full length of the ramp. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 $\frac{1}{2}$ inches (38 mm) between the wall and the handrails.

SECTION R312 GUARDS AND WINDOW FALL PROTECTION

R312.1 Guards. Guards shall be provided in accordance with Sections R312.1.1 through R312.1.4.

R312.1.1 Where required. Guards shall be located along open-sided walking surfaces, including stairs, ramps and

landings, that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.

R312.1.2 Height. Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914 mm) in height as measured vertically above the adjacent walking surface or the line connecting the leading edges of the treads.

Exceptions:

1. Guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
2. Where the top of the guard serves as a handrail on the open sides of stairs, the top of the guard shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) as measured vertically from a line connecting the leading edges of the treads.

R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height that allow passage of a sphere 4 inches (102 mm) in diameter.

Exceptions:

1. The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a guard, shall not allow passage of a sphere 6 inches (153 mm) in diameter.
2. Guards on the open side of stairs shall not have openings that allow passage of a sphere 4 $\frac{3}{8}$ inches (111 mm) in diameter.

R312.1.4 Exterior plastic composite guards. Plastic composite exterior guards shall comply with the requirements of Section R317.4.

R312.2 Window fall protection. Window fall protection shall be provided in accordance with Sections R312.2.1 and R312.2.2.

R312.2.1 Window sills. In dwelling units, where the top of the sill of an operable window opening is located less than 24 inches (610 mm) above the finished floor and greater than 72 inches (1829 mm) above the finished grade or other surface below on the exterior of the building, the operable window shall comply with one of the following:

1. Operable windows with openings that will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening where the opening is in its largest opened position.
2. Operable windows that are provided with window fall prevention devices that comply with ASTM F2090.
3. Operable windows that are provided with window opening control devices that comply with Section R312.2.2.

R312.2.2 Window opening control devices. Window opening control devices shall comply with ASTM F2090.









LIBERTY PUMPS, INC.
Product Engineering
7000 Apple Tree Avenue
Bergen, N.Y. 14416
phone: 585-494-1817
fax: 585-494-1839
jeff.waterman@libertypumps.com
April 22, 2016

Petition Application for Certificate of Acceptability
Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes
P O Box 30255, Lansing, MI 48909

Dear Sirs,

Enclosed please find an application for a Product Approval for the Liberty Pumps ELV OilTector® pumping systems. I have enclosed catalog sheets, instruction manuals, and CSA and UL Certifications/Listings for the various components.

The ELV OilTector® systems are primarily designed for use in sumps serving elevator pits where hydraulic oil may be present and must be prevented from entering the sewer. As such, use of these systems then negate the requirement for use of an oil separator.

The design of the OilTector® control unit used in our system is unique in that the detection of oil in the pit will never prohibit the pump from functioning when needed – excess water will always be pumped out. The pump operation is controlled by the electronic probes which detect the presence of water and the pump will continue to evacuate water from the sump when the "turn-on" probe is reached, regardless of the oil alarm status.

We have three types of systems, but all utilize the OilTector® sensors. The first type is our basic ELV-Series. With this system any oil is retained in the sump and is never pumped out to the sewer. The sump must be sized to handle the maximum potential for oil leakage plus the volume of water below the "pump on" probe.

The second OilTector® system is the ELV Auto-Valve Series. With these Simplex pump systems water and oil are detected, and with the use of solenoid valves the oil can be pumped to a separate, appropriately sized holding tank as opposed to being retained in the sump.

The third OilTector® system is the ELV Duplex Series. These Duplex (twin pump) systems detect oil and water and allow for diversion of the oil to a separate tank and the water to the sewer by dedicated oil and water pumps.

Please contact me if you need additional information for the approval. I believe these systems should be approved, as they are quite similar to other products that currently have the special approval.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey G. Waterman".

Jeffrey G. Waterman
Product Engineer

PAGE 1

Petition Application for Certificate of Acceptability
 Michigan Department of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 P O Box 30255, Lansing, MI 48909
 www.michigan.gov/bcc

140/115/130/98

Agency Use Only

Application Fee: \$1,000.00 (Each Approval Requested Requires a Separate Application and Fee)

Authority 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty Failure to provide the information may result in denial of your request	

CODE UNDER WHICH APPROVAL IS SOUGHT (Limited to One Code Per Petition)

Building (140)
 Electrical (116)
 Mechanical (130)
 Plumbing (98)

APPLICANT INFORMATION (Note: All correspondence will be sent to this address)

NAME OF COMPANY
 Liberty Pumps, Inc

APPLICANT NAME
 Jeffrey G. Waterman

ADDRESS 7000 Apple Tree Ave			TELEPHONE NUMBER (include Area Code) (585) 494-1817
CITY Bergen	STATE NY	ZIP CODE 14416	FAX NUMBER (include Area Code) (585) 494-1839

Instructions for Petition Application for Acceptability

Nature of Petition: Check only one box. A component is a preassembled unit of different materials or products that will be incorporated into a building.

Code Under Which Approval is Sought: Check only one box. If there are requirements in 2 or more codes for the approval sought, an additional petition and fee must be submitted.

Name: Provide the name of the material, product, or method/manner of construction or installation.

Other Identification: Provide the model numbers.

Description: Provide a description of the material, product, method or component.

Intended Use: Give a brief description of how the product is incorporated into a building or structure and its purpose.

Laboratory Test and/or Evaluation By: List all tests performed and provide copies as listed above.

Pilot Service Experience and Conditions: Provide report of finding as listed above.

Restrictions for Use: Identify any restrictions or conditions of use.

Other: Any documentation or description necessary to demonstrate why this application should be approved.

Validation Area

U.S. Postal Service
 Michigan Dept of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 (Address to appropriate division-Electrical Division, Mechanical Division or Plumbing Division)
 Please address Building approvals to Plan Review Division)
 P O Box 30255
 Lansing MI 48909

Courier Other Than U.S. Postal Service
 Michigan Dept of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 (Address to appropriate division-Electrical Division, Mechanical Division or Plumbing Division)
 Please address Building approvals to Plan Review Division)
 1st Floor Ottawa Bldg
 611 W Ottawa St
 Lansing MI 48933

APPROVAL REQUESTED

NATURE OF PETITION (Limited to One Item Per Petition)

Material Product Method/Manner of Construction or Installation

NAME OF MATERIAL, PRODUCT OR METHOD/MANNER OF CONSTRUCTION OR INSTALLATION

Liberty Pumps ELV OilTector® Elevator Sump Pump Systems

OTHER IDENTIFICATION (Model Number)

ELV OilTector®, ELV Auto-Valve OilTector®, ELV Duplex OilTector®

DESCRIPTION (Use Additional Sheets If Necessary)

Basic ELV system will always pump water, but oil is retained in sump, AutoValve system one pump unit pumps collected oil to retention tank, Duplex dedicates one pump to water and another to pump oil to storage tank

INTENDED USE (Use Additional Sheets If Necessary)

Primary usage for pumping water collected in sumps serving elevator pits. Pumping water is guaranteed regardless of oil status. Oil is either retained in pit or diverted to storage tanks in lieu of use of oil water separator

DATA SUBMITTED

<input checked="" type="checkbox"/> Letter	Reports	<input type="checkbox"/> Product Sample or Model
<input checked="" type="checkbox"/> Manual	<input type="checkbox"/> ICC - ES	<input type="checkbox"/> Prior Approvals by Other Agencies
<input type="checkbox"/> Standards	<input type="checkbox"/> BOCA - NES	<input type="checkbox"/> Recommendations by Model Code Bodies
<input type="checkbox"/> Installation Instructions	<input type="checkbox"/> ICBO	<input checked="" type="checkbox"/> Laboratory Test/Evaluation
<input checked="" type="checkbox"/> Display Catalog	<input type="checkbox"/> SBCC	
	<input type="checkbox"/> NRB	
	<input checked="" type="checkbox"/> Other	

LABORATORY TEST AND/OR EVALUATION BY

Pumps Certified cCSAus file LR82005, Controls UL Listed file E214788, Tanks Constructed to ASTM D3753

PILOT SERVICE EXPERIENCE AND CONDITIONS (Use Additional Sheets If Necessary)

Similar to other MI approved systems, such as by Stancor/Industrial Systems (ref file 1644-PA), and Liquid Smart / See Water (ref file 1646-PA)

RESTRICTIONS FOR USE (Use Additional Sheets If Necessary)

All other aspects of the applicable plumbing, electrical, and elevator codes must be followed

SIGNATURE



DATE

4/28/2016

Liberty Pumps®

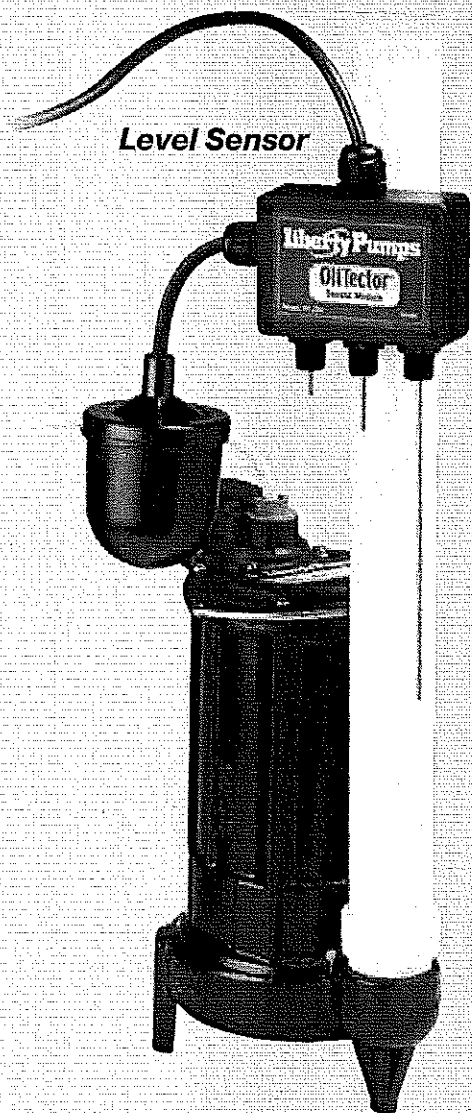
ELV-Series

Elevator Sump Pump Systems with OilTector® Control

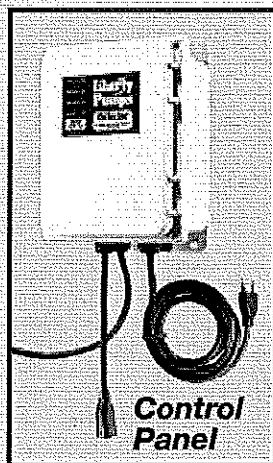
*Ideal for elevators,
garages and areas
where the discharge of
oil/hydrocarbons into the
environment is prohibited.
Compliant with ASME A17.1
and local building and
safety codes.*

Features:

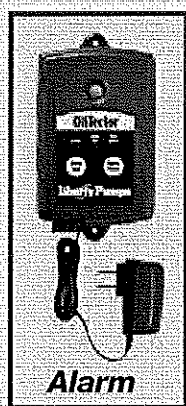
- Complete packaged system
- 1/3, 1/2 or 3/4 hp Sump Pump
 - 1-1/2" Discharge
- OilTector® Control
 - Remote Alarm
 - 115 or 230 volt models
- Easy clamp-mount installation,
with plug-in ready wiring



Level Sensor



Control
Panel



Alarm



innovate. evolve.

ELV-Series System with OilTector® Control

The OilTector® control system is designed and approved for safe operation of pumping, alarming and monitoring of elevator sump pits, transformer vaults and other applications where oil and water must be detected. The OilTector® system will activate the pump to remove water from elevator pits in accordance with ASME A17.1, and will provide pumping of only water - even if an oil condition is detected. The OilTector® cycles the pump only in the water range. Oil and other harmful substances are not discharged into the environment. An alarm is activated in the event of a high water condition or high oil condition.

OilTector® Description of Operation

On water rise, the pump will activate when the water level reaches the "start" probe. Pump will remain on until the water level is below the "off" probe. When the "off" probe no longer senses water it turns the pump off, air or oil are ignored and an oil layer (if present) will not be pumped out of the sump. If the liquid level reaches the "alarm" probe and mechanical float, the system will differentiate between water and oil and activate the appropriate alarm.

ELV-Series Complete Sump Pump Systems (Pump, OilTector® Control, Alarm)

Model	hp.	Volts	Wgt. lbs.
ELV250	1/3	115 v.	34
ELV280	1/2	115 v.	40
ELV280HV	1/2	230 v.	40
ELV290	3/4	115 v.	42
ELV290HV	3/4	230 v.	42

Pump Only Models

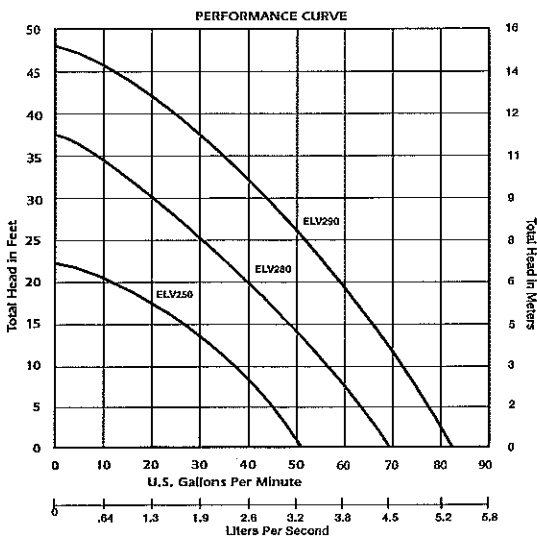
Model	hp.	Volts	Wgt. lbs.
EV250	1/3	115 v.	24
EV280	1/2	115 v.	30
EV280HV	1/2	230 v.	30
EV290	3/4	115 v.	32
EV290HV	3/4	230 v.	32

Above models supplied with standard 25' pump power cord. For 6' or 50' pump power cords add -06 or -5 respectively. Example: ELV290-06 for 6' pump power cord.

OilTector® Control and Alarm Only

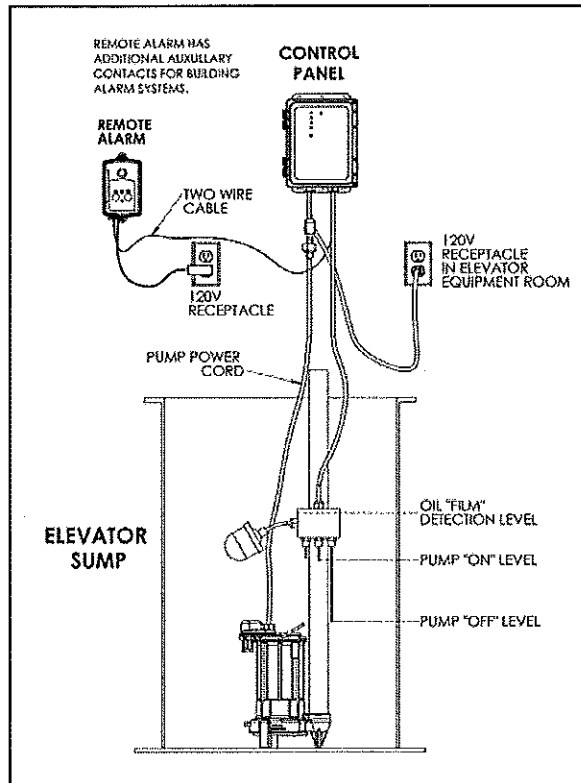
Model	Volts	Max. hp	Cord Length	Wgt. lbs.
OTC-115	115	1	25'	11
OTC-230	230	2	25'	11
OTC-115-5	115	1	50'	12
OTC-230-5	230	2	50'	12

Pump Performance Curve



Features:

- Heavy-duty 1/3, 1/2 or 3/4 hp. cast iron sump pump.
- Oil resistant SJEOOW cord, 25' standard length with both 6' and 50' lengths available.
- Easy, clamp mounted pre-set level sensor holder.
- No field adjustments required. OilTector® will turn pumps on and off, sound the high water alarm and high oil alarm with one easy installation.
- Control panel with separate pump and control circuits - Nema 1 enclosure. Height 10.0" x Width 7.5" x Depth 5.5"
- Plug-in ready pump cord and power to panel cord for quick and easy installation.
- Remote alarm with auxiliary contacts for connection to building automation or SCADA system, 24 volt AC/DC, 100 mA max switching.
- Power on, Pump Run, High water and High oil lights.
- **ASME A17.1 Compliant**



Specifications subject to change without notice.

OilTector[®]

Operation and Maintenance Manual

Liberty Pumps[®]

Introduction

Read all instructions thoroughly. Installation of the OilTector must comply with all Federal, State and Local Codes, Regulations and Practices. The OilTector must be installed by qualified personnel familiar with all applicable local electrical and mechanical codes. Refer to the National Electrical Code (NFPA 70). Failure to properly install and test this product can result in personal injury or equipment malfunction.

The OilTector control system is designed and approved for the safe operation of pumping, alarming and monitoring of elevator sump pits, transformer vaults and leachate well applications. The OilTector will activate a pump to remove water from elevator pits in accordance with ASME A17.1. The OilTector stops the pump before oil or other harmful substances enter our water supply. Indicator lights will illuminate on the control panel for the following: power, pump running, high water, high oil. The panel has a set of auxiliary contacts that activate on power loss or high Oil/Water conditions. These contacts can be connected to the OilTector remote panel which contains audio/visual alarming along with auxiliary contacts for connection to building automation system or SCADA system. The recommended minimum sump size is $\varnothing 18'' \times 30''$ high.

Safety Guidelines



1. DO NOT USE WITH FLAMMABLE OR EXPLOSIVE FLUIDS SUCH AS GASOLINE, FUEL OIL, KEROSENE, ETC. DO NOT USE IN EXPLOSIVE ATMOSPHERES. PROBE/FLOAT SWITCH SHOULD ONLY BE USED WITH WATER.
2. DO NOT HANDLE THE OILTECTOR SYSTEM WITH WET HANDS OR WHEN STANDING ON A WET OR DAMP SURFACE OR IN WATER.
3. DISCONNECT ALL ELECTRICAL SERVICE BEFORE WORKING OR HANDLING THE OIL ALERT SYSTEM.
4. INCOMING VOLTAGE MUST MATCH OILTECTOR SYSTEM VOLTAGE.
5. TO PREVENT ELECTRICAL SHOCK AND EQUIPMENT MALFUNCTION, USE ONLY WITH A PUMP SUPPLIED WITH A GROUNDING CONDUCTOR AND GROUNDING-TYPE ATTACHMENT PLUG. BE CERTAIN TO PLUG THE OILTECTOR PANEL INTO A PROPERLY GROUNDED, GROUNDING-TYPE RECEPTACLE.
6. CONTROL PANEL AND ALARM MUST BE MOUNTED INDOORS. FOR OUTDOOR APPLICATIONS CONSULT FACTORY.
7. SECURE LEVEL SENSOR ON DISCHARGE PIPE AT A LEVEL THAT GUARANTEES PARTIAL PUMP SUBMERSION WHEN WATER LEVEL IS JUST BELOW THE "OFF" PROBE (THE LONGEST PROBE). (See Figure 5 on page 3 of this manual). FAILURE TO PROPERLY MOUNT THE LEVEL SENSOR MAY CAUSE THE PUMP TO ACTIVATE EVEN WHEN OIL IS PRESENT IN THE SUMP.
8. CAUTION! REMOVE ANY FLOAT SWITCH THAT IS CURRENTLY USED OR SUPPLIED WITH THE PUMP. IF THE FLOAT CANNOT BE REMOVED, SECURE SWITCH SO THAT IT IS ALWAYS ON.

Part Numbers

OTC-115 - OilTector 115 volt Oil Sensor Control System (Control Panel, Alarm Panel, Level Sensor). NEMA 1 enclosure.

OTC-230 - OilTector 230 volt Oil Sensor Control System (Control Panel, Alarm Panel, Level Sensor). NEMA 1 enclosure.

Liberty Pumps[®]

Page 1 of 9

Manual 72350001
DWG#72350001

7000 Apple Tree Avenue, Bergen, NY 14416 Phone: (800) 543-2550-Fax: (585) 494-1839-www.libertypumps.com

Description of Operation

On water rise, level reaches pump "start" probe to start the pump. Pump will remain on until level is below "off" probe. The "off" probe senses air or oil and turns the pump off so the oil layer will not be pumped out of the sump. If the liquid level reaches alarm probe and mechanical float, the system will differentiate between water and oil and activate the remote alarm.

Installation of the Control Panel

1. It is highly recommended to mount the control panel in the same area as the sump pump to eliminate any splicing of sensor and pump wires. See "Installation of Preset Level Sensor Holder" for more information on splicing.
2. Determine mounting location for the control panel. Mount panel at the desired location making sure the mounting location of the control panel is within 6 feet of electrical receptacle.
3. Plug pump cable into control panel receptacle cable. Plug power cable into receptacle only when ready for testing. See Testing System Installation.
4. If the panel is to be installed with conduit, the cables and cord seals must first be removed. Please make note of wire locations. The incoming power (115V or 230V) is connected to L1 and L2 of the contactor, pump receptacle is T1 and T2 on the contactor. Low voltage cable from the level sensing module: green - TB1 off probe, yellow - TB2 start probe, red - TB3 alarm probe, white - TB4 float, black - TB5 float, TB 6 Shield. Low voltage auxiliary contacts are C, O & W. Do not mix low voltage probe wires or auxiliary contacts in high voltage conduits. See figure 1 and figure 3.

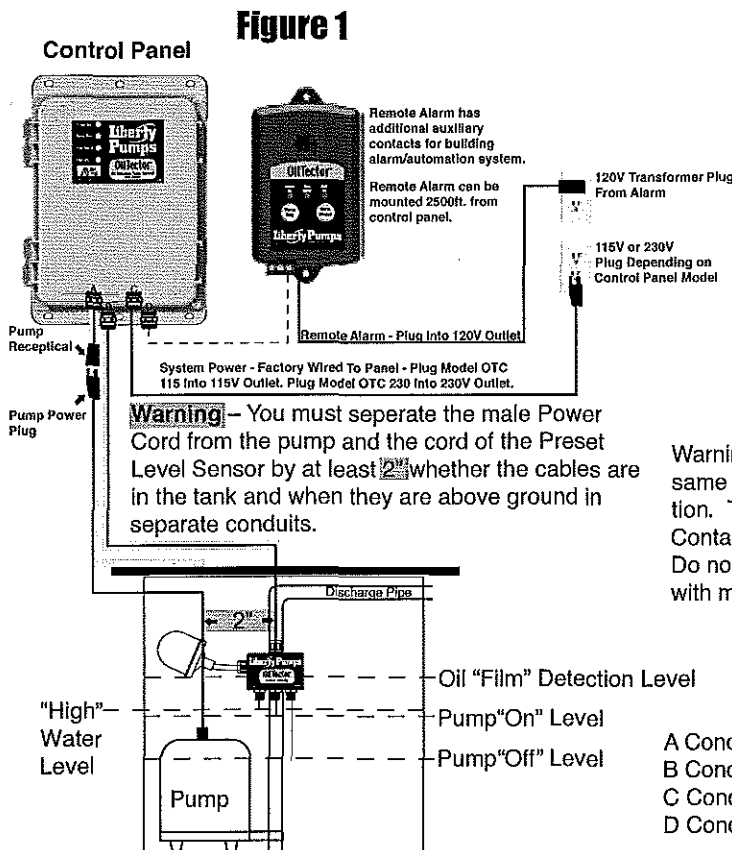


Figure 1

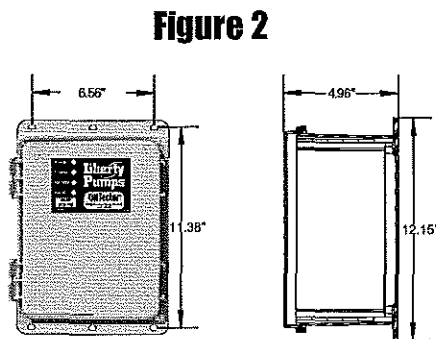
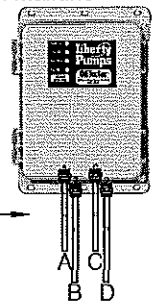


Figure 2

Figure 3



Warning – Do not mix high and low voltage wires in the same conduit, failure to do so will cause system malfunction. The Preset Level Sensor and Auxiliary Contact wires are low voltage class 2 wires. Do not install sensor cables in conduits with main power or pump cables.



- A Conduit – High Voltage Pump Cable
- B Conduit – Low Voltage Preset Level Sensor
- C Conduit – High Voltage Incoming Power Cable
- D Conduit – Low Voltage Auxiliary Contact for Remote Alarm

Installation of Preset Level Sensor Holder

1. Review figures 4, 5 and 6.
2. Attach sensor holder to discharge pipe or separate pipe (mounted to side wall) using the stainless steel pipe clamp. Make sure sensor is clear of inlet water and at least 2 inches away from any conductive material. Make sure the bottom probe (off level) is at the same height as the top of the pump or just slightly below ensuring submergence of the pump. See figure 5.
3. Route the five conductor cable to the control panel through the liquid tight cord connector and tighten compression nut.
4. Connect the wires from the level sensor to the terminal strip inside the control panel. See figure 6.
5. If splicing on sensor cable is required:
 - A. For any splicing longer than 100 feet, consult factory.
 - B. Use liquid tight junction boxes and appropriate liquid tight connectors and/or conduit.
 - C. Do not mix high & low voltage circuits in same junction box or conduit
 - D. For level sensor splice, it is recommended to use 3 pair-twisted 22 AWG shielded cable.

Figure 6
Circuit Board

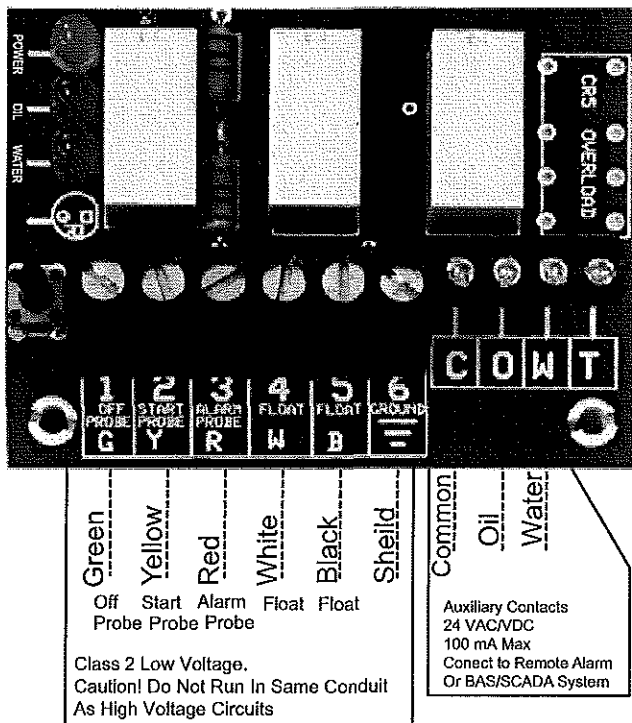


Figure 4

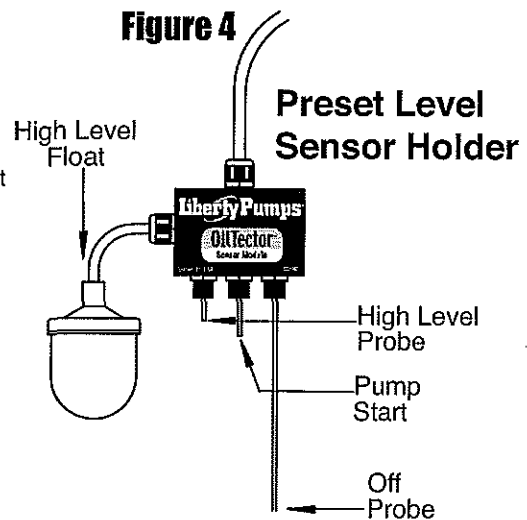
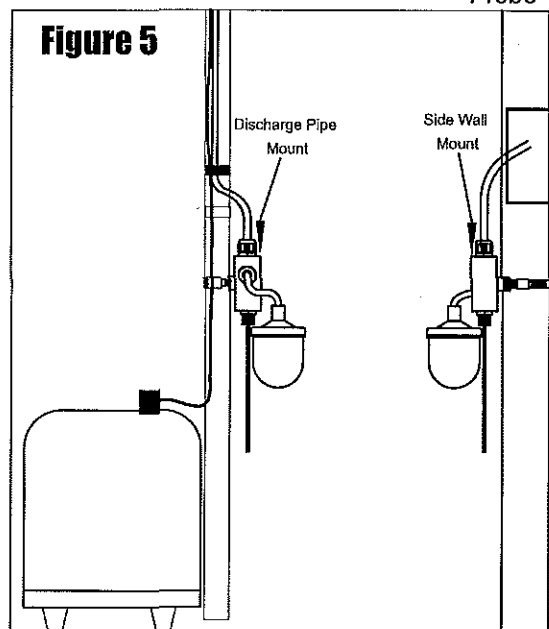
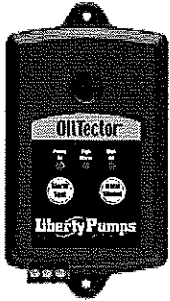


Figure 5



Introduction



Before proceeding with the installation or operation of the Oil Tector Remote Alarm, read all instructions thoroughly, as well as complying with all Federal, State and Local Codes, Regulations and Practices. The Oil Tector Remote Alarm must be installed by qualified personnel familiar with all applicable local electrical and mechanical codes. Refer to the National Electrical Code (NFPA 70). Failure to properly install and test this product can result in personal injury or equipment malfunction.

Safety Guidelines



1. DO NOT USE WITH FLAMMABLE OR EXPLOSIVE FLUIDS SUCH AS GASOLINE, FUEL OIL, KEROSENE, ETC. DO NOT USE IN EXPLOSIVE ATMOSPHERES.
2. REMOTE ALARM MUST BE MOUNTED INDOORS. FOR OUTDOOR APPLICATIONS CONSULT FACTORY.

Description of Operation

The OIL TECTOR REMOTE ALARM is powered by 120 VAC coming from standard wall outlets and is transformed to 11 VDC. Installing a 9 Volt battery provides battery back-up.

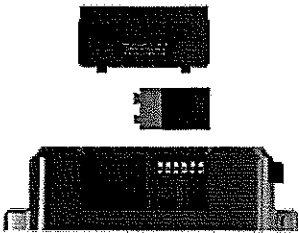
The Oil Tector Remote Alarm activates on High Oil or High Water from the control panel. Separate dry contacts for High Oil and High Water can be connected to an Auto Dialer, a BAS (building automation system) or SCADA system.

Tools, Supplies and Requirements for Installation (Not Included)

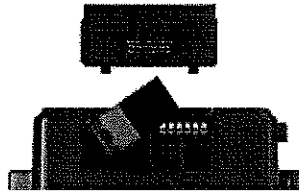
- #1. Phillips screw driver
- #2. (Qty 2) #6 self tapping screws
- #3. Access to 120 VAC power receptacle.
- #4. Optional \ plastic anchor if mounting to sheet rock
- #5. Optional 9V battery (used for battery back up if power goes out)
- #6. Optional Wire stripper (used if you need to strip wire to connect to a BAS or SCADA system)
- #7. Optional needle nose pliers if using aux contacts

Installation of the Oil Tector Remote Alarm Continued

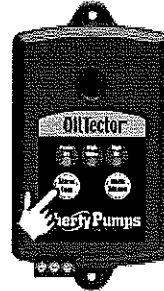
1. To install/replace the battery for the backup power feature, remove the access cover (Fig. 1) and install 9 VDC battery (Fig. 2). After installing battery, press the test button (Fig. 3) to activate the alarm to make sure the battery works properly. The power indicator, high oil indicator and high water indicator light should illuminate and the buzzer should annunciate. If using the auxiliary contacts, leave cover off until step 3 is completed. If you are not using them, replace the access cover (Fig 4).



(Fig. 1)



(Fig. 2)

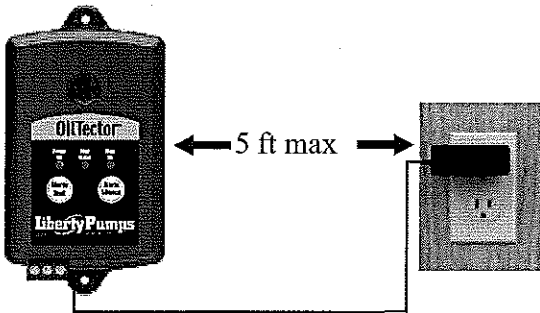


(Fig. 3)



(Fig. 4)

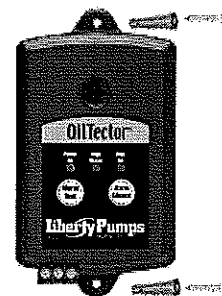
2. Determine mounting location for the Oil Tector Remote Alarm. Make sure power outlet is within 5 feet of the alarm (Fig. 5). Make sure the outlet is in on a separate circuit breaker from any other device and not on a switched receptacle to maintain power integrity. Mount the alarm using two #6 self tapping screws (not included) (Fig. 6). Use #8 plastic anchor if mounting to sheet rock. (Fig. 7).



(Fig. 5)



(Fig. 6)



(Fig. 7)

Installation of the ALARM UNIT Continued

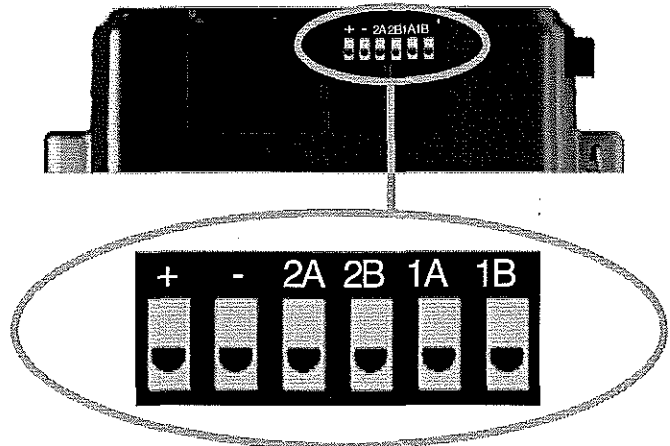
3. Continued. If connecting to existing alarm security system or (BAS) system leave terminals + & - open and use 18 gauge 2 conductor wire to connect the existing product to terminals 2A,2B, 1A,1B (Fig. 9). When connected, replace the access cover and pull the wire through the knockouts on the access cover (See Step #4) . **Caution!** - When installing wires, route all wires away from sharp objects & internal components.

Terminals 1A & 1B
High Oil

Terminals 2A & 2B
High Water

Class 2, 24 VDC/VAC (50/60 HZ)
100 Milliamps **MAXIMUM**

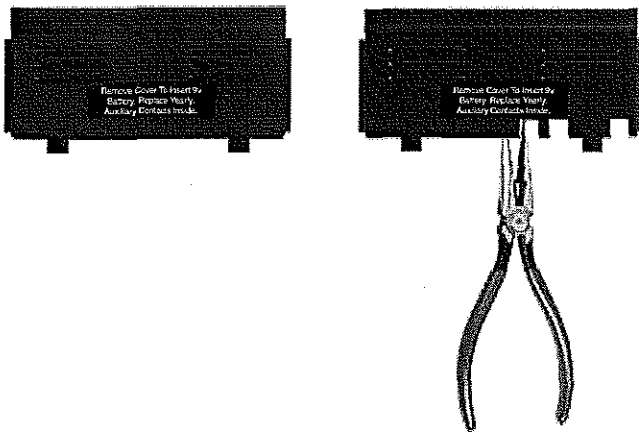
(Fig. 9)



NOTE: The Auxiliary Contacts on the Oil Tector Remote Alarm are Normally Open only.

4. Use a needlenose pliers to remove the desired "break away tabs" from the access cover (Fig. 10). Lightly pull and twist off tab (s). Replace access cover and run wires through the "break aways" (Fig. 11)

(Fig. 10)

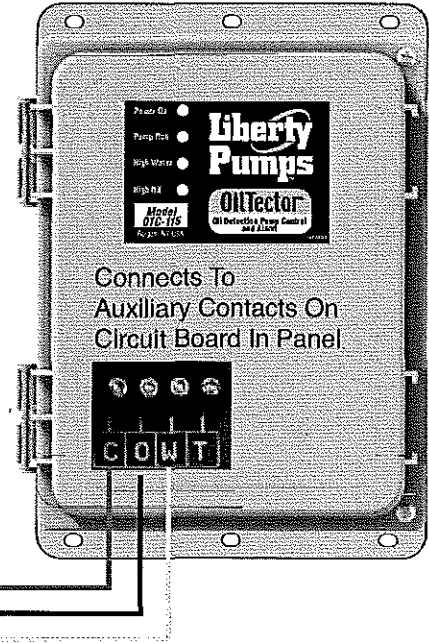
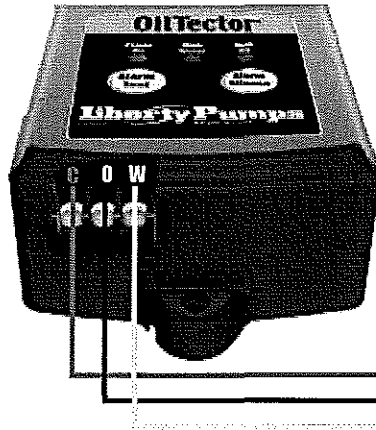


(Fig. 11)

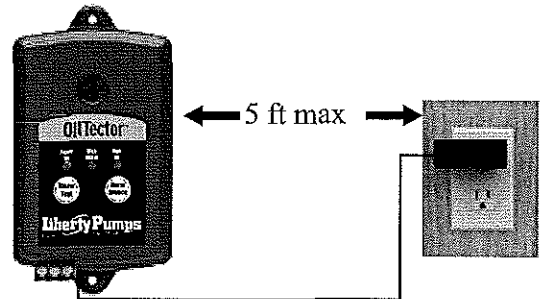


Installation of the Oil Tector Remote Alarm Continued

6. Connect the Oil Tector Remote Alarm to the auxiliary contacts marked C, O & W in the control panel. C on the alarm to C in the panel. O on the alarm to O in the panel. W on the alarm to W in the panel. Use 18 awg, 3 conductor cable. **CAUTION:** The auxiliary contacts are low voltage wires and cannot be run in a conduit with High voltage wires.



6. Plug in the power supply into a 120VAC, 50/60 HZ standard wall outlet. The green "Normal" light should come on.



7. Test the system by pressing the "Alarm Test" button. The buzzer, the red "High Water" light & the red "High Oil" light will be "on". Release the "Alarm Test" button and the alarm buzzer and indicator lights will automatically reset. Test product weekly to ensure system integrity.

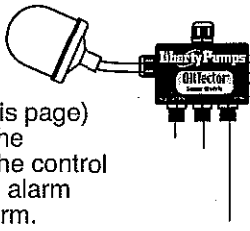


Testing the complete system Upon complete installation of controls, pump and piping, test the complete system.

1. Test high oil circuit by lifting the float switch with the sump empty of water. Oil is non conductive like "air", and when the float is lifted only the HIGH OIL indicator will be illuminated. The auxiliary contacts in the control panel and the remote alarm will activate.
2. Test a pump cycle by slowly filling tank with water. Stop filling tank with water when the level touches middle probe. When the water touches the middle probe, pump should start and pump down to the bottom probe at which time the pump will stop. Check discharge plumbing for leaks and make sure discharge is going to the correct area.
3. Test high water circuit. Slowly fill the tank until the water level just touches the upper probe. When the water touches all probes, the HIGH WATER indicator will be illuminated. The auxiliary contacts in the control panel and the remote alarm will activate.
4. Test the remote alarm for power loss. Unplug the power cord on the control panel. The auxiliary contacts "C & W" will close and the remote alarm will activate.

Testing panel - Using 5 gallon pail. If it is not possible to test the complete system outlined above, then test the panel operation using a 5 gallon pail filled with water.

1. Before lowering the sensor probe into the pail, lift the float switch, the HIGH OIL indicator (Fig. 1 on this page) will be illuminated. The auxiliary contacts in the control panel and the remote alarm will activate for oil alarm.



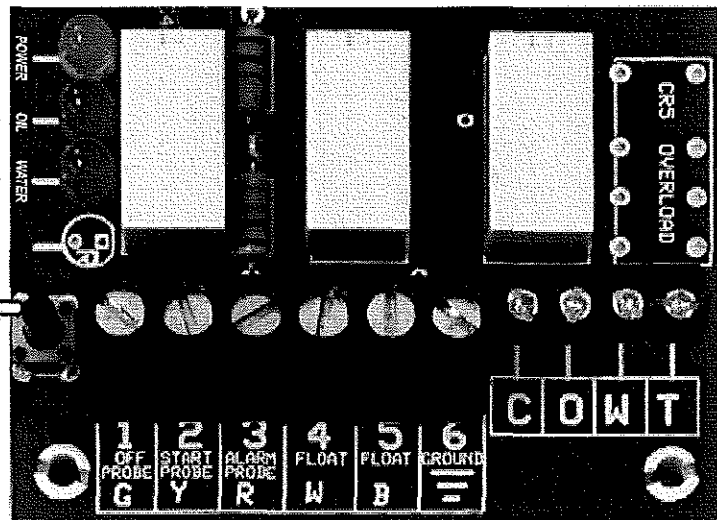
2. (Press down and hold the tact switch on the circuit board - Fig. 2) while lowering the sensor into the bucket so the bottom and middle probes touch the water (Fig 3), the pump should activate. While the pump is activated, slowly remove the sensor probe out of the water until the longest probe is no longer in the water (Fig 4), then let go of the tact switch (Fig 2) and the pump should turn off. Repeat a couple of times for quality assurance.

3. Press down and hold the tact switch on the circuit board (Fig. 2) while lowering the sensor probe into the bucket of water slowly so that the longest probe and the middle probe are immersed in water (Fig. 3) the pump will activate. Continue to lower sensor probe so that water touches the shortest probe (Fig 5), the HIGH WATER indicator will be illuminated (Fig 6). The auxiliary contacts in the control panel and the remote alarm will activate.

(Fig. 1) →

(Fig. 6) →

(Fig. 2) →



(Fig. 3)



(Fig. 4)



(Fig. 5)

Maintenance

1. The preset level control must be kept clean and free of rust, mud, soap or any conductive material.
2. Every year clean probes keeping them free of debris, calcium or iron deposits.
3. Fuses in control panel are 5mm X 20mm 1 amp for F1
(Spare fuses are included for your convenience)
4. Every year replace 9 Volt Battery in Remote Alarm.

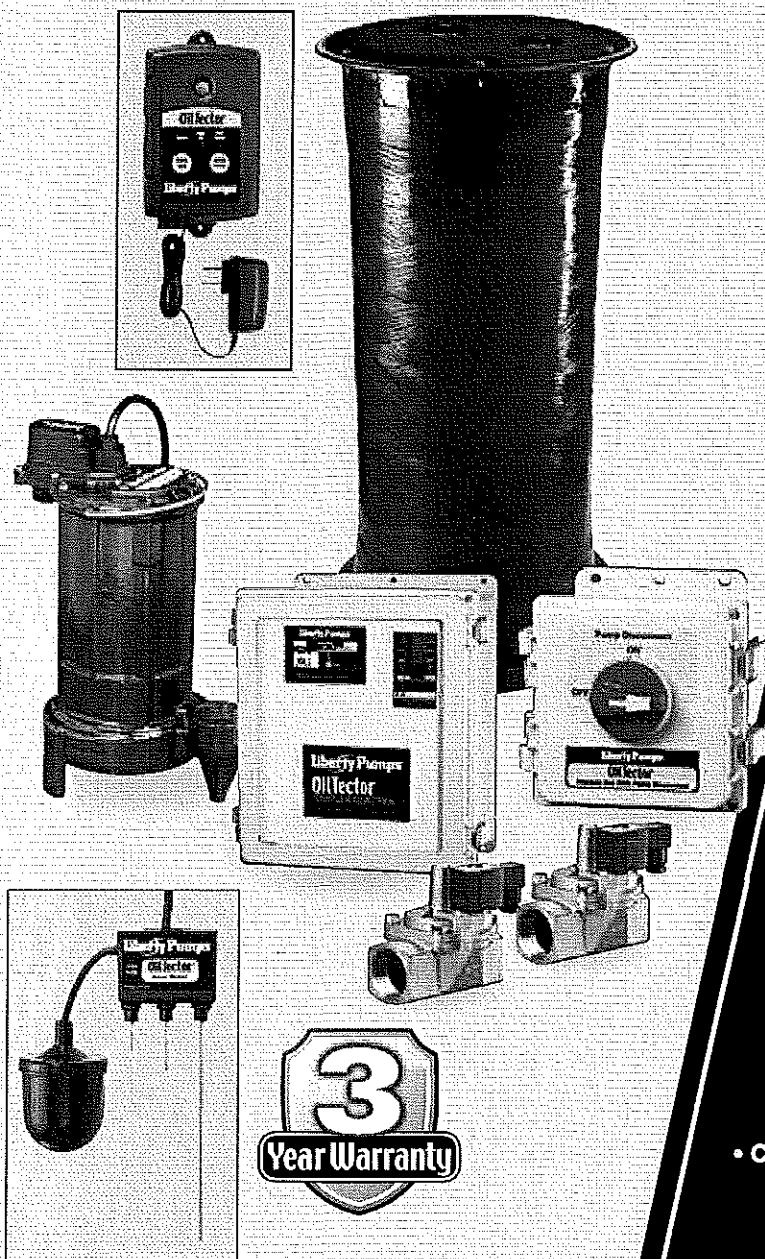
Trouble Shooting

Symptom	Possible Cause	Action
Pump does not run	Panel Power Cord Unplugged Pump not plugged into panel Defective Contactor Loose level sensor wires Pump failure	Plug in Outlet, Check Power Plug pump to panel plug Replace Contactor Tighten connections Replace pump
Pump turns off before bottom probe	Poor pump ground or system ground	Check grounding system
Pump Runs Continuously	Make Sure the Preset Level Sensor cable and the power cord from the pump are separated by at least 2" in the tank and 2" apart running into the control panel.	

Liberty Pumps®

OilTector®

ELV Auto-Valve Series



Simplex pump system detects oil and water - allowing for diversion of oil to a separate tank via automatic electronic valves.

For use in elevator pits, vaults and other areas requiring the control of oil discharge from sump water.

Features:

- Pumps available in 1/2 hp, 3/4 hp and 6/10 hp
- Flow rates to 95 GPM and heads to 65' (depending on model)
- Single and three-phase pump models available
- Complete system ships with control panel, remote alarm, level sensor, solenoid valves, junction box with disconnect, 2 reducer couplings, check valves and pump. (Systems with oil holding tank also available!)
- OilTector® control features advanced touch screen display and programming
- Remote alarm can be mounted up to 2,500' from panel
- Preset level sensor for easy installation
- Advanced system monitors/verifies the amount of fluid pumped and that it was pumped to the correct location
- Controls are available with optional BACnet Gateway for integration with building automation and control systems. Please contact Liberty Pumps for more information

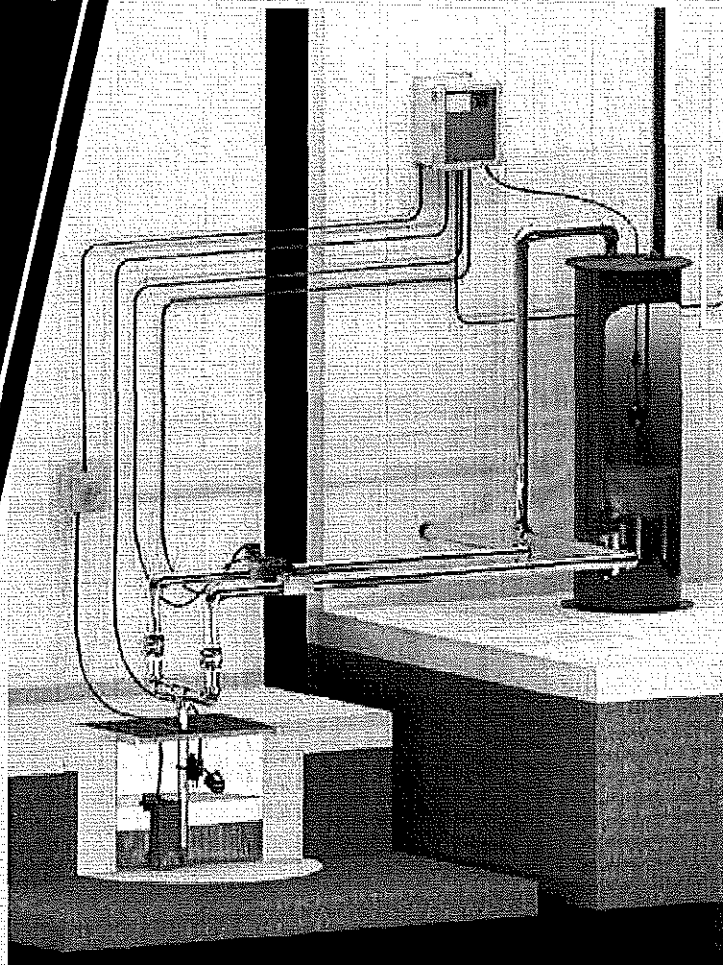
innovate. evolve.

OilTector® ELV Auto-Valve Series

Features and Operation:

The OilTector® ELV auto-valve system pairs an advanced controller with solenoid valves to control and eliminate unwanted water from elevator sumps, garages, vaults and other areas where the discharge of oil to the environment is prohibited. The system features a heavy-duty Liberty submersible pump with oil resistant components.

The OilTector® controller incorporates a programmable touch screen with a see-through door display - allowing maintenance personnel to easily view real-time system performance. A pre-set level sensor and float switch send level signals from the pit to the controller. When water collects in the sump pit and contacts both the lowest and the middle probe, the water solenoid valve opens and the pump will discharge the water until the level is below the lowest probe. If the water level increases to the highest probe, the high water alarm will sound signifying a high inflow condition or faulty pump.

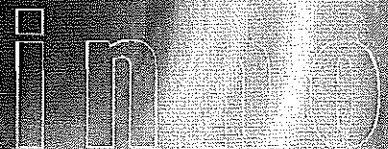


Alarm
located
up to
2,500'
from
panel

In the event of an oil leak, the spilled oil will collect in the sump and float on the surface of the water. Once the layer is thick enough to trip the high oil float, the pump will eliminate the oil and water in the sump; the water will be pumped to the drain and then the oil will be routed to the waste oil storage tank preventing unwanted contamination.

The OilTector® controller additionally provides a means for manual pump and valve operation, dry contacts for alarm conditions and data logging to document all operational activity.

Specifications are
subject to change
without notice.



Simplex Control Panel Features:

Easy-to-use touch screen programming with adjustable display brightness.

Clear cover panel with locking hasp.

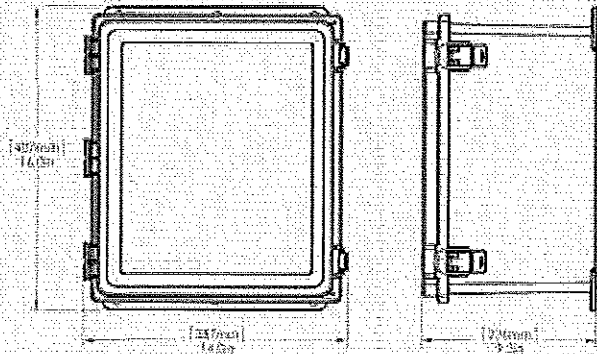
Logic in the panel monitors how much water and/or oil is pumped and verifies that it is pumped to correct location.

The Simplex program is designed to run 1 pump with two solenoid valve controls. Valves open and close depending on input from the OilTector® pre-programmed sensor. An oil storage display is time-based using the pump's gallon-per-minute rating and dimensions of the holding tank as input by the user.

Data logging allows export of events to Excel® spreadsheet for expanded analysis and documentation.

Controls are available with optional BACnet Gateway for integration with building automation and control systems. Please contact Liberty Pumps for more information.

Control Panel Dimensional Data



Control Panel Specifications:

Control input volts 120V, 60 Hz
(Single phase only)

Pump input volts 120/230 Single phase or
230/460V 3-phase, 60 Hz

Panel enclosure rating NEMA 4X

Maximum pump amps 15A Single phase
4-6.3A 3-phase

Pump Off/Auto switch

Pump elapsed time meter

Pump run counter

Pump off/delay time: adjusts pumps run-time
when oil is detected

Pump status light GREEN=ON, RED=STOP

Oil storage level indicator

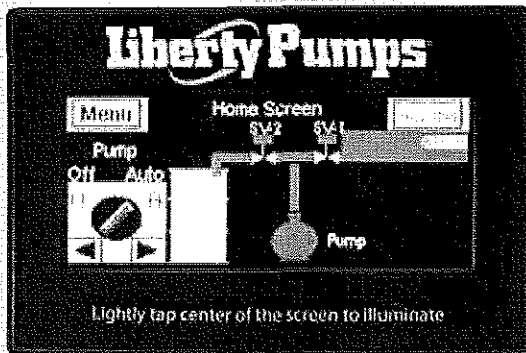
Display alarm banners for:
• Fail • High Water • Oil Alarm • Power Fail

Solenoid valve status indicator
GREEN=Open, RED=CLOSED

Preset level sensor with 25' of cord

Remote mount alarm (indoor) can be
mounted up to 2,500' from panel

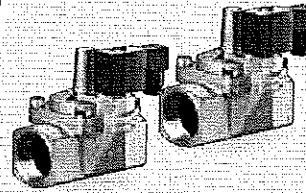
Float switch for oil level sensing in storage
tank included with control system



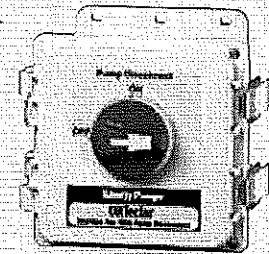
Data Event Log Records

- Pump ETM*
- Pump ETM Minutes*
- Maintenance Clock*
- Pump Run Count*
- Pump Cycle Time*
- HOA Status*
- Amp Status*
- Oil Status*
- Valve 1 / Valve 2 Status*
- Previous Count Cycle Time*

OilTector® ELV Auto-Valve Series



(2) 2" FNPT Bronze
Solenoid Valves Included



Junction Box with
Pump Disconnect NEMA 4X

Complete system - includes pump, control panel, level sensor, solenoid valves, junction box with disconnect, check valves, reducer couplings and remote alarm (no holding tank)

Models	HP	Volts	Phase	Holding Tank	Wgt Lbs
ELV280-VS	1/2	120	1	No	90
ELV280HV-VS	1/2	230	1	No	90
ELV290-VS	3/4	120	1	No	90
ELV290HV-VS	3/4	230	1	No	90
ELVFL63-VS	6/10	230	3	No	122

Complete systems as above with 59 gallon oil holding tank

ELV280-VST	1/2	120	1	YES	155
ELV280HV-VST	1/2	230	1	YES	155
ELV290-VST	3/4	120	1	YES	155
ELV290HV-VST	3/4	230	1	YES	155
ELVFL63-VST	6/10	230	3	YES	187

Oil Tank
included
with these
systems

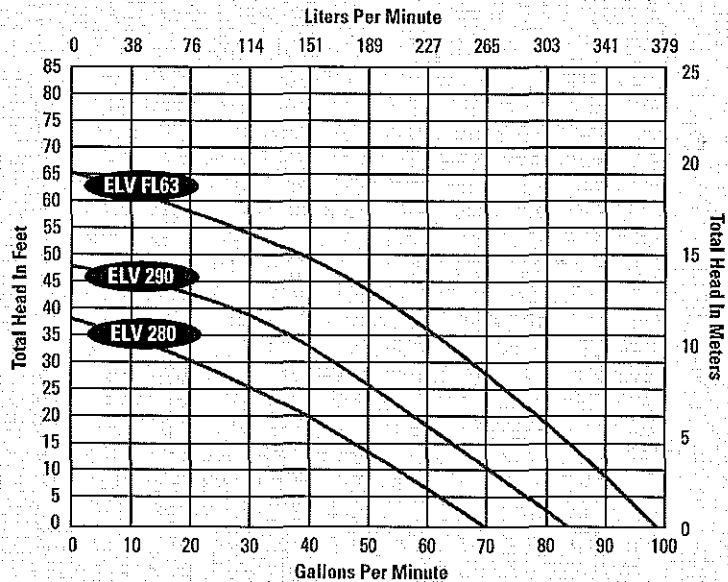
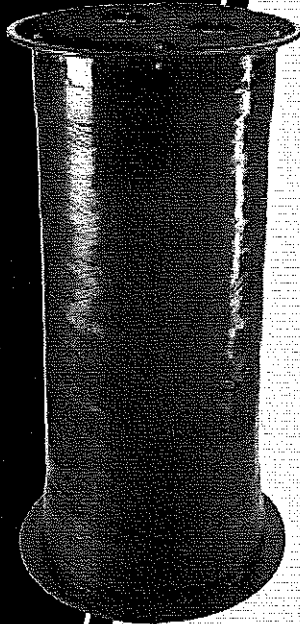
OilTector® Control System Only (No pumps or tank)

Models	Volts	Phase	Max Amps.	Panel Style	Style	Wgt. Lbs.
OTC-120/230-VS	120/230	1	15	NEMA 4X	Touch Screen	61
OTC-230-3-VS	230	3	4-6.3	NEMA 4X	Touch Screen	61

Above OTC control systems include control panel, remote alarm, level sensor, solenoid valves and junction box with disconnect. Controls are available with optional BACnet Gateway for integration with building automation and control systems.

Oil Waste
Holding Tank
18" X 54"
59 Gallons

Other sizes
available
consult
factory



www.
libertypumps
.com

Liberty Pumps • 7000 Apple Tree Avenue • Bergen, New York 14416
Phone 800-543-2550 Fax (585) 494-1839

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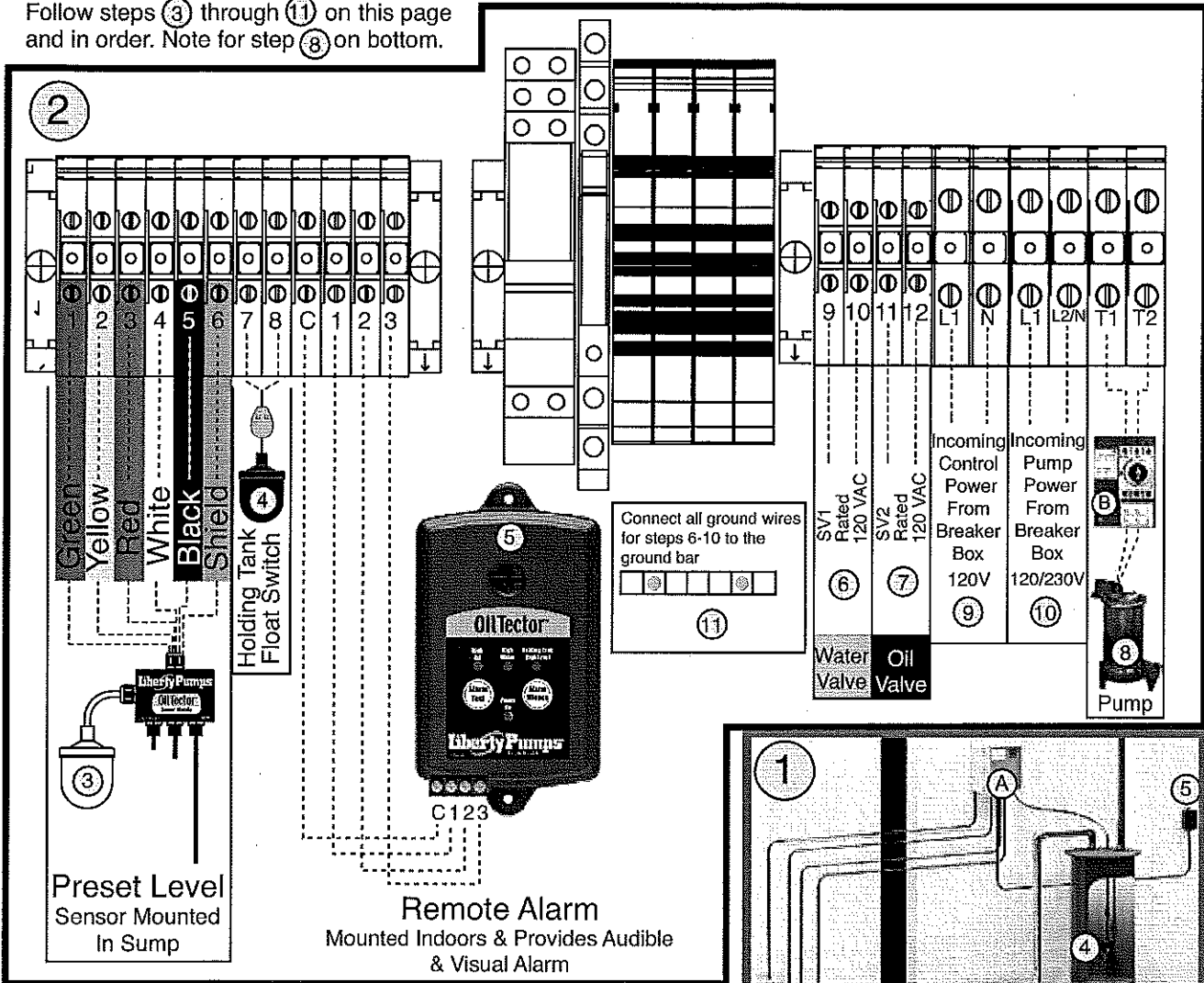
OilTector[®]

Quick Start
1 Phase Simplex Auto-Valve

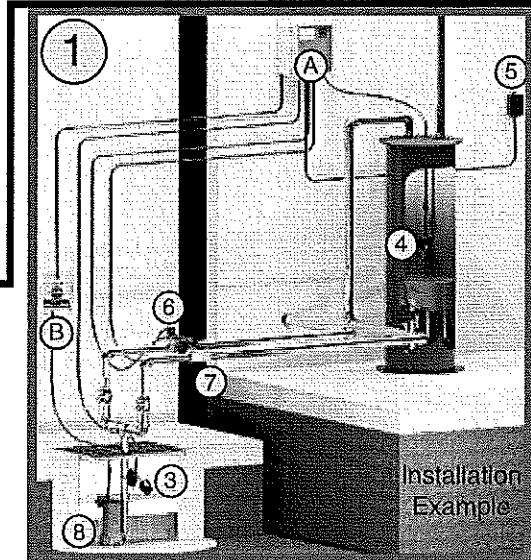
Liberty Pumps[®]

Use the (Installation Example) diagram **1** on the bottom right of this page as a reference to match up each component included in this system to the correct terminal blocks inside the control panel **A** shown in diagram **2**

Follow steps **3** through **11** on this page and in order. Note for step **8** on bottom.



Note: The pump **8** is wired to the bottom of the disconnect switch in the junction box **B** then the top of the disconnect switch in the junction box is wired to the control panel **A** Terminals T1 & T2.



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Page 1 of 3
Manual 6963000A
DWG# 6963000A

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OilTector[®]

Quick Start
1 Phase Simplex Auto-Valve

Liberty Pumps[®]

QUICK START

USE PAGE 2 FOR ROUND SHAPED HOLDING TANKS (Follow Steps A-0)

USE PAGE 3 FOR RECTANGLE OR SQUARE SHAPED HOLDING TANKS (Follow Steps A-0)

A. Turn On Power To The Control Panel

B. Press (Configure Oil Tank)

Home | Today's Date & Time Display | Next

Pump Elapsed Time | Alarms

Pump Run Count | Reset Faults

Configure Oil Tank

C. Press (Enter Pump GPM)

Back | Select Oil Storage Tank Type & Enter Dimensions and GPM. | Home

Round Tank | Round Dimensions | Enter Pump GPM

Rectangle Tank | Rectangle Dimensions | 123

D1. Enter Pump Gallons Per Minute From Pump Nameplate.
D2. Press ENT

1234567890

7	8	9	CLR
4	5	6	CAN
1	2	3	ENT
0	+/-		

E1. Press (Round Tank)
E2. Press (Round Dimensions)

Back | Select Oil Storage Tank Type & Enter Dimensions and GPM. | Home

Round Tank | Round Dimensions | Enter Pump GPM

Rectangle Tank | Rectangle Dimensions | 123

F1. Press (Diameter Inches) Button. F2. Enter Oil Tank Diameter. Press ENT. Repeat For Depth.

Diameter Inches | 12.3

Depth Inches | 12.3

G1. Press (Back) Button On Round Tank Screen

Back | Round Tank Dimensions | Home

Diameter Inches | Depth Inches | Total Tank Gallons

12.3 | 12.3 | 1234.5

G2. Press (Back) On Select Oil Storage Tank Screen

Back | Select Oil Storage Tank Type & Enter Dimensions and GPM. | Home

Round Tank | Round Dimensions | Enter Pump GPM

Rectangle Tank | Rectangle Dimensions | 123

G3. Press (Next) On Today's Date Screen

Home | Today's Date & Time Display | Next

Pump Elapsed Time | Alarms

Pump Run Count | Reset Faults

Configure Oil Tank

H. Press (Maintenance Menu) Button

Back | Menu #2 Screen | Home

Maintenance Menu | Set Date / Time

Input/Output Status | Screen Contrast

I1. Enter Password (1001) as shown below.

Password

Level 1

ABCDEF GHIJKL M
NOPQRSTU VWXYZ
0 1 2 3 4 5 6 7 8 9

BS CLR OK

J. Press Pump / Valve To Verify Position Of Switches.
Note: Off Delay Is Preset To 10 Seconds.

Back | Maintenance Screen | Home

Pump Off-Delay Time | Reset Fault Counters

Maint. Punch Clock | Reset Pump Counters

Pump / Valve Control | Reset Data Log

N1. Place All Switches In Auto
N2. Press Home Button

Back | Home

Pump Hand Auto | Sol. Valve #1 Hand-Off-Auto | Sol. Valve #2 Hand-Off-Auto

O. Place Pump HOA'S into Auto Mode And Do The Bucket Test (See Page 20 Of Main Manual)

Menu | Home Screen | Alarms

Pump Off Auto | Power Loss

Pump Failed

After completing step **O** you have finished the quick start and are on the Home Screen

- Back** Will Always Take You To The Previous Screen
- Home** Will Always Take You To The Home Screen

OilTector[®]

Quick Start

1 Phase Simplex Auto-Valve

Liberty Pumps[®]

QUICK START - FOLLOW STEPS A-O IF USING A SQUARE OR RECTANGLE TANK

A. Turn On Power To The Control Panel

B. Press (Configure Oil Tank)

C. Press (Enter Pump GPM)

D1. Enter Pump Gallons Per Minute From Pump Nameplate.
D2. Press ENT

E1. Press (Rectangle Tank)
E2. Press (Rectangle Dimensions)

F1. Press (Length Inches) Button. **F2.** Enter Length. Press ENT. Repeat For Width & Depth.

G1. Press (Back) Button On Square/Rectangle Screen

G2. Press (Back) On Select Oil Storage Tank Screen

G3. Press (Next) On Today's Date Screen

H. Press (Maintenance Menu) Button

I1. Enter Password (1001) as shown below.
I2. Press Arrow Keys Until 1 is Highlighted
I3. Press ENT (1st * appears)
I2. Press Arrow Keys Until 0 is Highlighted
I3. Press ENT (2nd * appears)
I2. Press Arrow Keys Until 0 is Highlighted
I3. Press ENT (3rd * appears)
I2. Press Arrow Keys Until 1 is Highlighted
I3. Press ENT (4th * appears)
I2. Press Arrow Keys Until OK is Highlighted
I3. Press ENT (You Will Be On Screen J)

J. Press Pump / Valve To Verify Position Of Switches.
Note: Off Delay Is Preset To 10 Seconds.

N1. Place All Switches In Auto
N2. Press Home Button

O. Place Pump HOA'S into Auto Mode And Do The Bucket Test (See Main Manual)

After completing step **O** you have finished the quick start and are on the Home Screen

- Back** Will Always Take You To The Previous Screen
- Home** Will Always Take You To The Home Screen

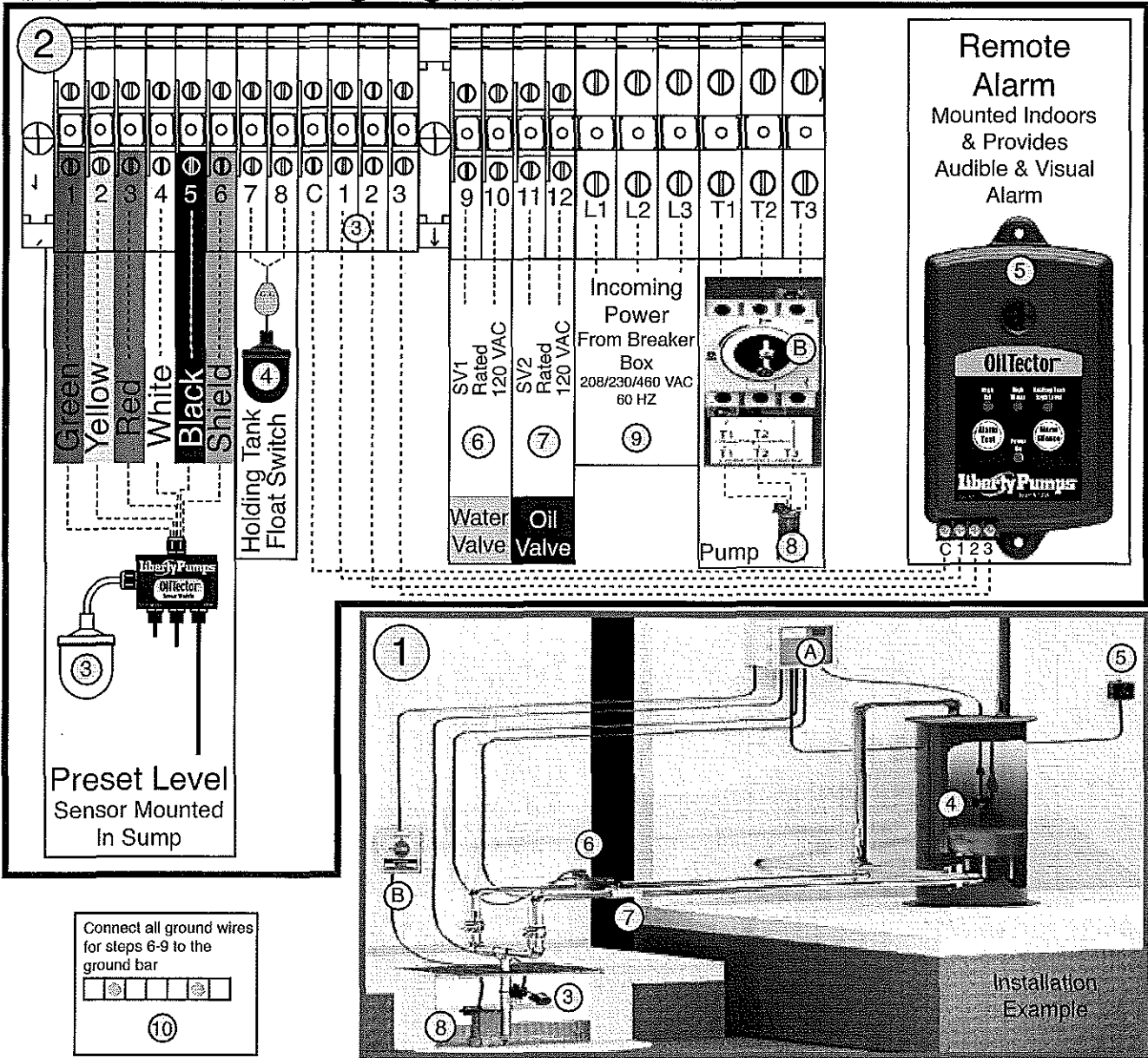
OilTector®

Quick Start
3 Phase Simplex Auto-Valve

Liberty Pumps®

Use the (Installation Example) diagram **1** on the bottom right of this page as a reference to match up each component included in this system to the correct terminal blocks inside the control panel **A** shown in diagram **2**

Follow steps **3** through **8**. The pump **8** is wired to the bottom of the disconnect switch in the junction box **B** then the top of the disconnect switch in the junction box is wired to the control panel **A** Terminals T1, T2 & T3. Then go to page 2 of 4 to set transformer & MPS. Then return to page 1 and connect **9** and **10**.



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Page 1 of 4
Manual 6964000A
DWG# 6964000A

OilTector[®]

Quick Start
3 Phase Simplex Auto-Valve

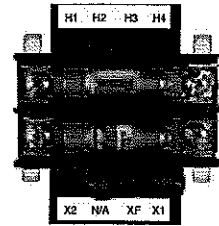
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2. Set Your Transformer Tap

Always refer to included electrical schematic to verify wiring and function. Your transformer is used to step power down to the control voltage required for this control panel. Your transformer has to be wired to the correct voltage on the top of your transformer. H4, on the top right will have one leg connected to it when you get it from the factory. The other wire should connect to the corresponding voltage. See the example to verify which terminal you need to connect the other leg of power to.

WARNING: Both legs of power must be connected on the top of the transformer before powering up the panel.

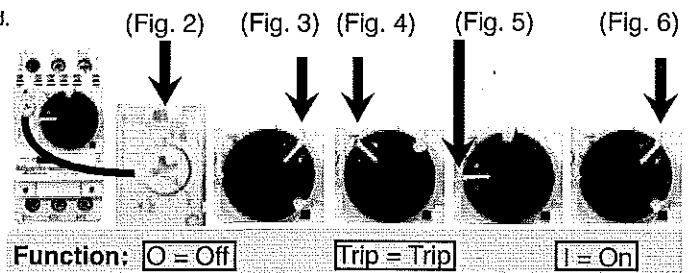
- H1 = 460 VAC
- H2 = 230 VAC
- H3 = 208 VAC
- H4 = Pre Wired at Factory



3. Set MPS Switch

An MPS Switch is a combination of a circuit breaker & an overload.

Before Using: Set the MPS dial for each pump to the FLA (Full Load Amps) of each pump. Use a phillips head screw driver to adjust the MPS dial. Set arrow on dial to correct amps. (Fig. 2). When the panel is ready for operation, place each switch in the on position (Fig. 3) **Note:** If pump trips (Fig. 4), Reset by turning counter clockwise to the off position (Fig. 5), then turn clockwise to the "on" position. (Fig. 6) **Note:** Other brands of MPS Switches operate in a similar manner.



4. Return To Page 1 of 4 And Connect Incoming Power ⑦ Then Proceed To Page 3 Of 4

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Page 2 of 4
Manual 6964000A
DWG# 6964000A

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Quick Start
3 Phase Simplex Auto-Valve

Liberty Pumps[®]

QUICK START

USE PAGE 3 FOR ROUND SHAPED HOLDING TANKS (Follow Steps A-0)

USE PAGE 4 FOR RECTANGLE OR SQUARE SHAPED HOLDING TANKS (Follow Steps A-0)

A. Turn On Power To The Control Panel

B. Press (Configure Oil Tank)

C. Press (Enter Pump GPM)

D1. Enter Pump Gallons Per Minute From Pump Nameplate.
D2. Press ENT

E1. Press (Round Tank)
E2. Press (Round Dimensions)

F1. Press (Diameter Inches) Button. F2. Enter Oil Tank Diameter. Press ENT. Repeat For Depth.

G1. Press (Back) Button On Round Tank Screen

G2. Press (Back) On Select Oil Storage Tank Screen

G3. Press (Next) On Today's Date Screen

H. Press (Maintenance Menu) Button

I1. Enter Password (1001) as shown below.

I2. Press Arrow Keys Until 1 Is Highlighted
I3. Press ENT (1st * appears)
I2. Press Arrow Keys Until 0 Is Highlighted
I3. Press ENT (2nd * appears)
I2. Press Arrow Keys Until 0 Is Highlighted
I3. Press ENT (3rd * appears)
I2. Press Arrow Keys Until 1 Is Highlighted
I3. Press ENT (4th * appears)
I2. Press Arrow Keys Until OK Is Highlighted
I3. Press ENT (You Will Be On Screen 1)

J. Press Pump / Valve To Verify Position Of Switches.
Note: Off Delay Is Preset To 10 Seconds.

N1. Place All Switches In Auto
N2. Press Home Button

O. Place Pump HOA'S into Auto Mode And Do The Bucket Test (See Main Manual)

After completing step **O** you have finished the quick start and are on the Home Screen

Back Will Always Take You To The Previous Screen.

Home Will Always Take You To The Home Screen

Oil Tector[®]

Quick Start

3 Phase Simplex Auto-Valve

Liberty Pumps[®]

QUICK START - FOLLOW STEPS A-D IF USING A SQUARE OR RECTANGLE TANK

A. Turn On Power To The Control Panel

B. Press (Configure Oil Tank)

C. Press (Enter Pump GPM)

D. D1. Enter Pump Gallons Per Minute From Pump Nameplate. D2. Press ENT

E. E1. Press (Rectangle Tank) E2. Press (Rectangle Dimensions)

F. F1. Press (Length Inches) Button. F2. Enter Length. Press ENT. Repeat For Width & Depth.

G1. Press (Back) Button On Square/Rectangle Screen

G2. Press (Back) On Select Oil Storage Tank Screen

G3. Press (Next) On Today's Date Screen

H. Press (Maintenance Menu) Button

I. I1. Enter Password (1001) as shown below. I2. Press Arrow Keys Until 1 Is Highlighted I3. Press ENT (1st * appears) I2. Press Arrow Keys Until 0 Is Highlighted I3. Press ENT (2nd * appears) I2. Press Arrow Keys Until 0 Is Highlighted I3. Press ENT (3rd * appears) I2. Press Arrow Keys Until 1 Is Highlighted I3. Press ENT (4th * appears) I2. Press Arrow Keys Until OK Is Highlighted I3. Press ENT (You Will Be On Screen J)

J. Press Pump / Valve To Verify Position Of Switches. Note: Off Delay Is Preset To 10 Seconds.

N. N1. Place All Switches In Auto N2. Press Home Button

O. Place Pump HOA'S into Auto Mode And Do The Bucket Test (See Main Manual)

After completing step **O** you have finished the quick start and are on the Home Screen

Back Will Always Take You To The Previous Screen

Home Will Always Take You To The Home Screen

OilTector[®]

Operation and Maintenance Manual
Simplex Auto-Valve Control Panel

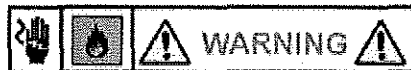
Liberty Pumps[®]

Introduction

Read all instructions thoroughly. Installation of the OilTector must comply with all Federal, State and Local Codes, Regulations and Practices. The OilTector must be installed by qualified personnel familiar with all applicable local electrical and mechanical codes. Refer to the National Electrical Code (NFPA 70). Failure to properly install and test this product can result in personal injury or equipment malfunction.

The OilTector control system is designed and approved for the safe operation of pumping, alarming and monitoring of elevator sump pits, transformer vaults and leachate well applications. The OilTector will activate a pump to remove water from elevator pits in accordance with ASME A17.1. The OilTector stops the pump before oil or other harmful substances enter our water supply. Indicator lights will illuminate on the control panel for the following: power, pump running, high water, high oil. The panel has a set of auxiliary contacts that activate on power loss or high Oil/Water conditions. These contacts can be connected to the OilTector remote panel which contains audio/visual alarming along with auxiliary contacts for connection to building automation system or SCADA system. The recommended minimum sump size is Ø18" x 30" high.

Safety Guidelines



1. DO NOT USE WITH FLAMMABLE OR EXPLOSIVE FLUIDS SUCH AS GASOLINE, FUEL OIL, KEROSENE, ETC. DO NOT USE IN EXPLOSIVE ATMOSPHERES. PROBE/FLOAT SWITCH SHOULD ONLY BE USED WITH WATER.
2. DO NOT HANDLE THE OILTECTOR SYSTEM WITH WET HANDS OR WHEN STANDING ON A WET OR DAMP SURFACE OR IN WATER.
3. DISCONNECT ALL ELECTRICAL SERVICE BEFORE WORKING OR HANDLING THE OIL ALERT SYSTEM.
4. INCOMING VOLTAGE MUST MATCH OILTECTOR SYSTEM VOLTAGE.
5. TO PREVENT ELECTRICAL SHOCK AND EQUIPMENT MALFUNCTION, USE ONLY WITH A PUMP SUPPLIED WITH A GROUNDING CONDUCTOR AND GROUNDING-TYPE ATTACHMENT PLUG. BE CERTAIN TO PLUG THE OILTECTOR PANEL INTO A PROPERLY GROUNDED, GROUNDING-TYPE RECEPTACLE.
6. CONTROL PANEL AND ALARM MUST BE MOUNTED INDOORS. FOR OUTDOOR APPLICATIONS CONSULT FACTORY.
7. SECURE LEVEL SENSOR ON DISCHARGE PIPE AT A LEVEL THAT GUARANTEES PARTIAL PUMP SUBMERSION WHEN WATER LEVEL IS JUST BELOW THE "OFF" PROBE (THE LONGEST PROBE). (See Figure 5 on page 3 of this manual). FAILURE TO PROPERLY MOUNT THE LEVEL SENSOR MAY CAUSE THE PUMP TO ACTIVATE EVEN WHEN OIL IS PRESENT IN THE SUMP.
8. CAUTION! REMOVE ANY FLOAT SWITCH THAT IS CURRENTLY USED OR SUPPLIED WITH THE PUMP. IF THE FLOAT CANNOT BE REMOVED, SECURE SWITCH SO THAT IT IS ALWAYS ON.

Important

REFER TO THE INCLUDED ELECTRICAL SCHEMATIC FOR ALL INCOMING POWER CONNECTIONS AND PUMP CONNECTIONS WHICH MAY INCLUDE OPTIONAL FIELD WIRING CONNECTIONS.

This Manual Is Used With ELV-VS and ELV-VST Series Oil Tector Control Panels.

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Operation and Maintenance Manual
Simplex Auto-Valve Control Panel

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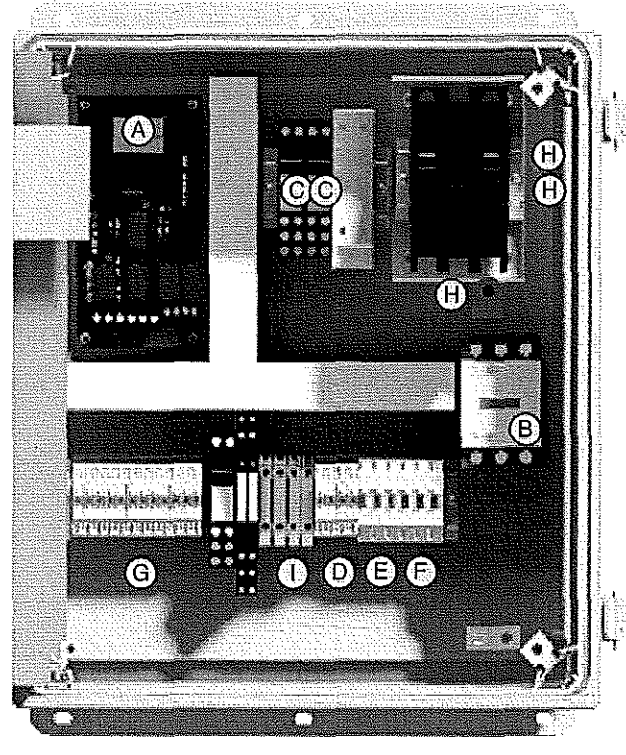
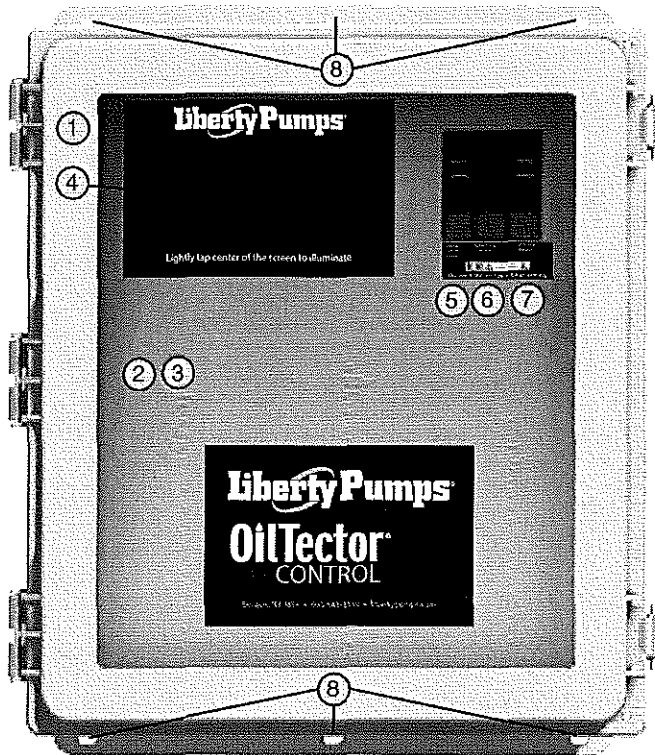
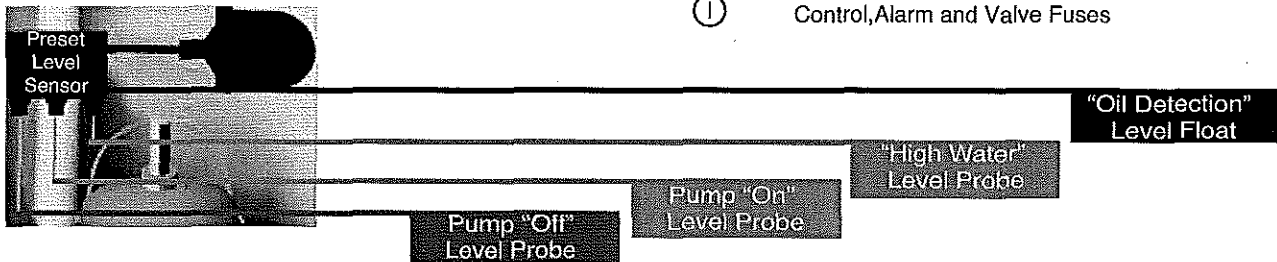
OilTector Simplex Auto-Valve Panel And Preset Level Sensor Specifications

External & Inner Dead Front Door Components

- ① Nema 4X Enclosure
- ② Clear Cover To View Inner Door
- ③ Inner Dead Front Door
- ④ HMI (Human Machine Interface) Touchscreen
- ⑤ Control Power Circuit Breaker
- ⑥ Pump Circuit Breaker
- ⑦ Control Circuit Breaker
- ⑧ Mounting Brackets

Internal Components

- Ⓐ Circuit Board & Status Indicator Lights
- Ⓑ IEC Motor Contactor
- Ⓒ Control Relays
- Ⓓ Incoming Alarm Power Terminals
- Ⓔ Incoming Pump Power Terminals
- Ⓕ Pump Terminals
- Ⓖ Sensor Terminals
- Ⓗ Current Sensors - Pump Run & Valve Monitoring Control, Alarm and Valve Fuses



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Installation of the Pump Disconnect Junction Boxes

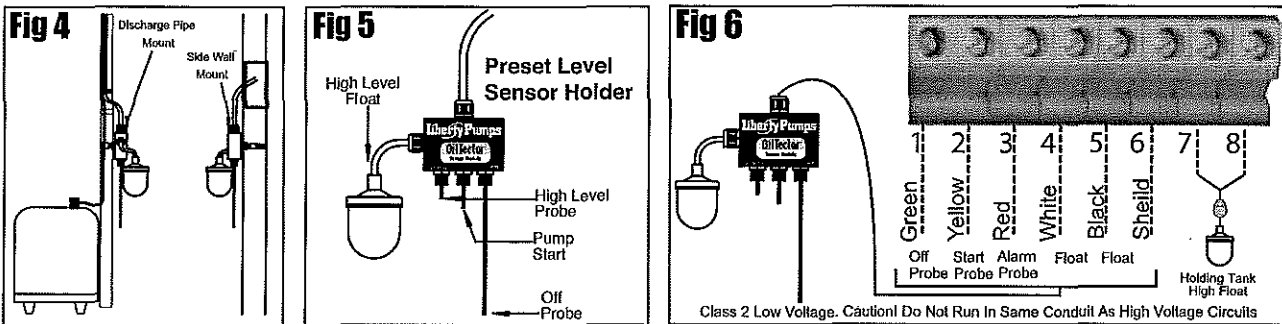
1. Determine mounting location for the disconnect enclosure. Refer to all federal, state and local codes.
2. Drill appropriate holes for cable connectors/conduit fittings for the pump and incoming power for the pump.
3. Connect pump power cable to disconnect switch "load" terminals – use pump wiring label to identify terminals.
4. Connect incoming line power to disconnect switch "line" terminals – use line wiring label to identify terminals.
5. Place Handle to "ON" when ready to apply power to pumps. Note: Power is coming from pump control panel.

Installation of the Control Panel.

1. Determine mounting location for the control panel – Refer to all federal, state and local codes. If splicing is required, the sensor wires must be run in separate conduit as they are on a low voltage, class 2 circuit. Recommend 3 Wire-twisted pair cable 22 to 18 AWG.
2. Determine conduit entrance location on control panel. Make sure all conduits are sealed and waterproof.
3. Refer to schematic for power, pump, preset level sensor and valve connections.

Installing Preset Level Sensor & Holding Tank High Level Float Switch.

#1. Review figures 4, 5 & 6. #2. Attach sensor holder to discharge pipe or separate pipe (mounted to side wall) using the stainless steel clamp. Make sure sensor is clear of inlet water and at least 2 inches away from any conductive material. Make sure the bottom probe (off level) is at the same height as the top of the pump or just slightly below ensuring submergence of the pump. (Fig 5). #3. Route the five conductor cable to the control panel through sealed conduit connections. #4. Connect the wires from the level sensor to the terminal strip inside the control panel. See figure 6. #5. If splicing on sensor cable is required: A. For any splicing longer than 100 feet, consult factory. B. Use liquid tight junction boxes & appropriate liquid tight connectors and/or conduit. C. Do not mix high & low voltage circuits in same junction box or conduit. D. For level sensor splice, it is recommended to use 3 pair-twisted 22 AWG shielded cable.



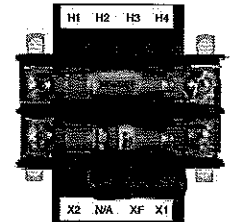
Additional Installation/Settings for 3 Phase Panels

1. Set your transformer tap.

Always refer to included electrical schematic to verify wiring and function. Your transformer is used to step power down to the control voltage required for this control panel. Your transformer has to be wired to the correct voltage on the top of your transformer. H4, on the top right will have one leg connected to it when you get it from the factory. The other wire should connect to the corresponding voltage. See the example to verify which terminal you need to connect the other leg of power to.

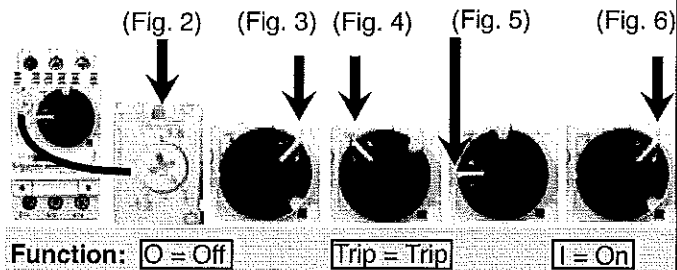
WARNING: Both legs of power must be connected on the top of the transformer before powering up the panel.

- H1 = 460 VAC
- H2 = 230 VAC
- H3 = 208 VAC
- H4 = Pre Wired at Factory



2. An MPS Switch is a combination of a circuit breaker & an overload.

Before Using: Set the MPS dial for each pump to the FLA (Full Load Amps) of each pump. Use a phillips head screw driver to adjust the MPS dial. Set arrow on dial to correct amps. (Fig. 2). When the panel is ready for operation, place each switch in the on position (Fig. 3) **Note:** If pump trips (Fig. 4), Reset by turning counter clockwise to the off position (Fig. 5), then turn clockwise to the "on" position. (Fig. 6) **Note:** Other brands of MPS Switches operate in a similar manner.



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Installation of the Remote Alarm Panel

1. Determine mounting location of the remote alarm panel – Note: the alarm panel can be mounted up to 2,500 feet from the control panel.

Introduction



Before proceeding with the installation or operation of the OilTector Remote Alarm, read all instructions thoroughly, as well as complying with all Federal, State and Local Codes, Regulations and Practices. The OilTector Remote Alarm must be installed by qualified personnel familiar with all applicable local electrical and mechanical codes. Refer to the National Electrical Code (NFPA 70). Failure to properly install and test this product can result in personal injury or equipment malfunction.

Safety Guidelines



1. DO NOT USE WITH FLAMMABLE OR EXPLOSIVE FLUIDS SUCH AS GASOLINE, FUEL OIL, KEROSENE, ETC. DO NOT USE IN EXPLOSIVE ATMOSPHERES.
2. REMOTE ALARM MUST BE MOUNTED INDOORS. FOR OUTDOOR APPLICATIONS CONSULT FACTORY.

Description of Operation

The OILTECTOR REMOTE ALARM is powered by 120 VAC coming from standard wall outlets and is transformed to 9 VDC.

The OilTector Remote Alarm activates on High Oil or High Water in the pump basin and activates High Level in the holding tank. Separate dry contacts for High Oil, High Water and High Holding Tank can be connected to an Auto Dialer, a BAS (building automation system) or SCADA system.

Tools, Supplies and Requirements for Installation (Not Included)

- #1. Phillips screw driver
- #2. (Qty 2) #6 self tapping screws
- #3. Access to 120 VAC power receptacle
- #4. Optional \ plastic anchor if mounting to sheet rock
- #5. Optional 9V battery (used for battery back up if power goes out)
- #6. Optional Wire stripper (used if you need to strip wire to connect to a BAS or SCADA system)
- #7. Optional needle nose pliers if using aux contacts

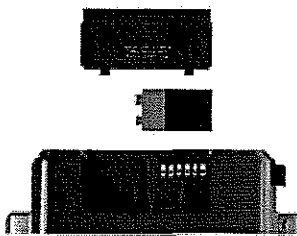
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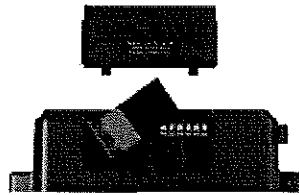
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Installation of the OilTector Remote Alarm Continued

1. To install/replace the battery for the backup power feature, remove the access cover (Fig. 1) and install 9 VDC battery (Fig. 2). After installing battery, press the test button (Fig. 3) to activate the alarm to make sure the battery works properly. The power on indicator, high oil indicator, high water indicator and holding tank high level indicator lights should illuminate and the buzzer should annunciate. If using the auxiliary contacts, leave cover off until step 3 is completed. If you are not using them, replace the access cover (Fig 4).



(Fig. 1)



(Fig. 2)

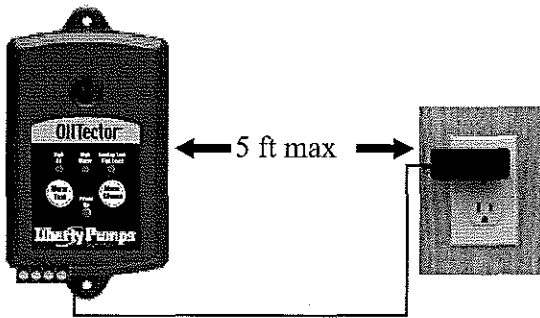


(Fig. 3)



(Fig. 4)

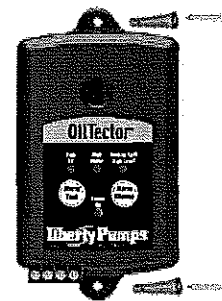
2. Determine mounting location for the OilTector Remote Alarm. Make sure power outlet is within 5 feet of the alarm (Fig. 5). Make sure the outlet is in on a separate circuit breaker from any other device and not on a switched receptacle to maintain power integrity. Mount the alarm using two #6 self tapping screws (not included) (Fig. 6). Use #8 plastic anchor if mounting to sheet rock. (Fig. 7).



(Fig. 5)



(Fig. 6)



(Fig. 7)

Installation of the ALARM UNIT Continued

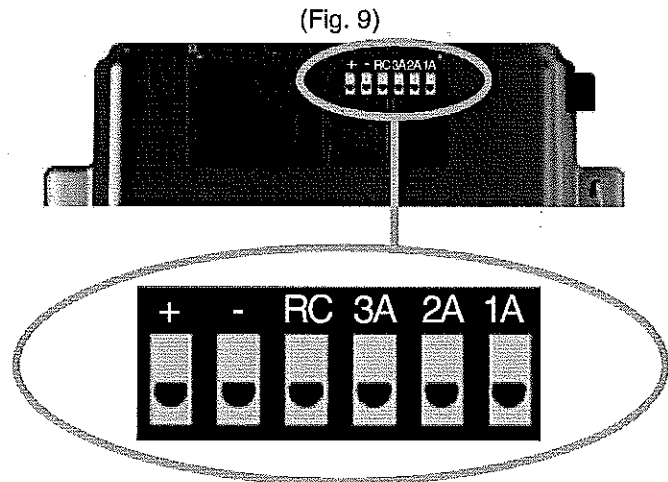
3. Continued. If connecting to existing alarm security system or (BAS) system leave terminals + & - open and use 18 gauge 4 conductor wire to connect the existing product to terminals RC,3A,2A,1A (Fig. 9). When connected, replace the access cover and pull the wire through the knockouts on the access cover (See Step #4) . **Caution!** - When installing wires, route all wires away from sharp objects & internal components.

Terminals RC & 3A
High Holding Tank

Terminals RC & 2A
High Water/Trouble

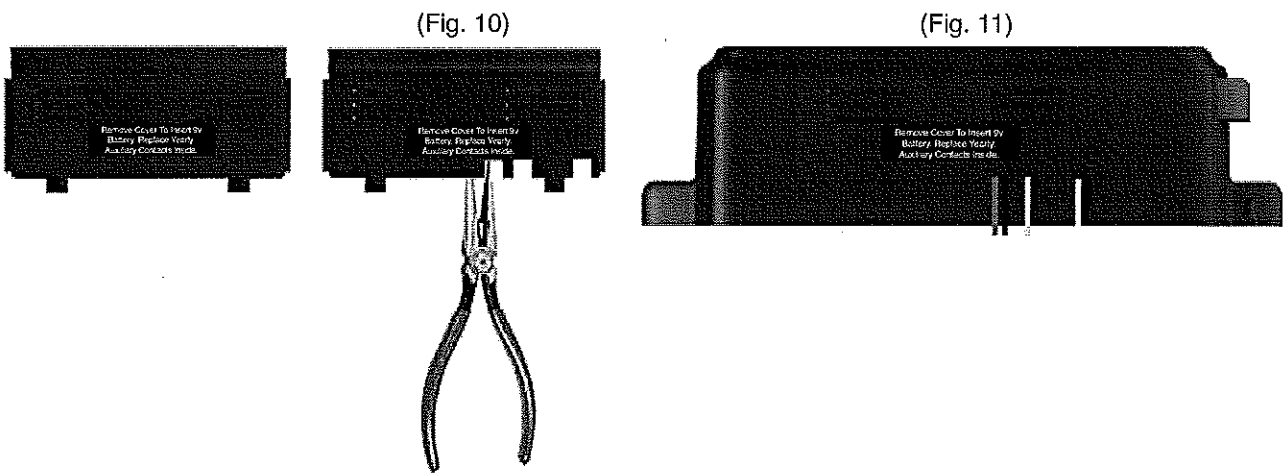
Terminals RC & 1A
High Oil

Class 2, 24 VDC/VAC (50/60 HZ)
100 Milliamps **MAXIMUM**



NOTE: The Auxiliary Contacts on the Oil Tector Remote Alarm are Normally Open only.

4. Use a needlenose pliers to remove the desired "break away tabs" from the access cover (Fig. 10). Lightly pull and twist off tab (s). Replace access cover and run wires through the "break aways" (Fig. 11)



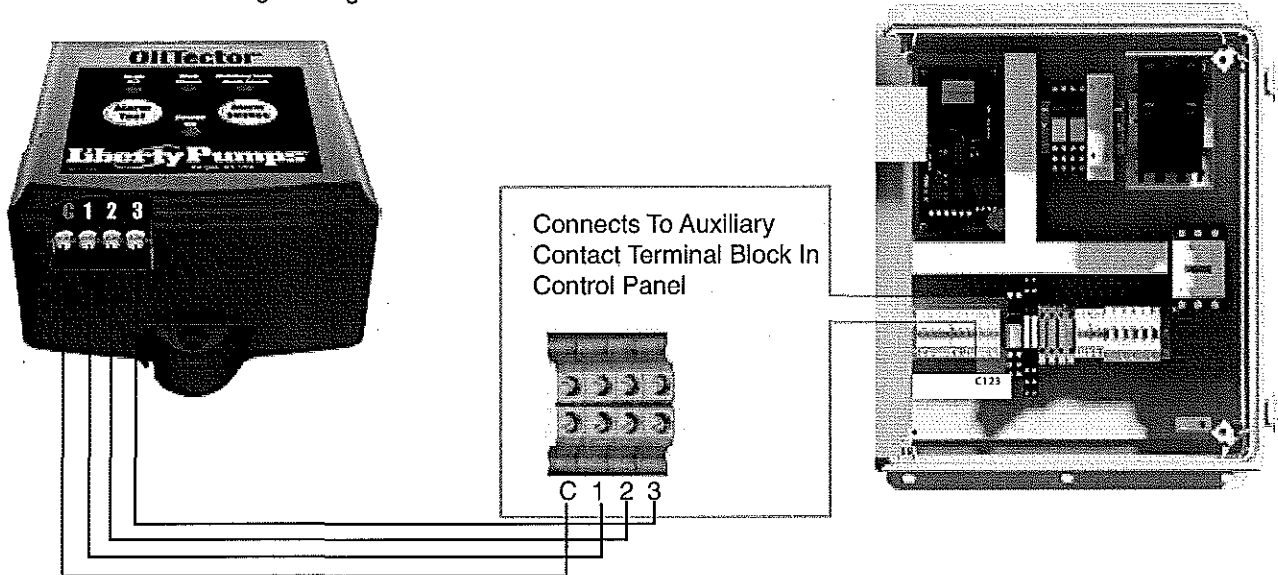
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Operation and Maintenance Manual
Simplex Auto-Valve Control Panel

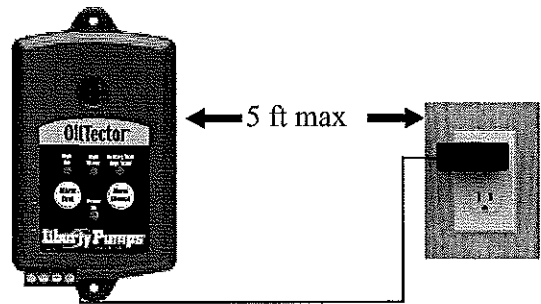
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Installation of the OilTector Remote Alarm Continued

6. Connect the OilTector Remote Alarm to the auxiliary contacts marked C, 1,2,3 in the control panel. C on the alarm to C in the panel. 1 on the alarm to 1 in the panel. 2 on the alarm to 2 in the panel & 3 on the alarm to 3 in the panel. Use 18 awg, 4 conductor cable. CAUTION: The auxiliary contacts are low voltage wires and cannot be run in a conduit with High voltage wires.



6. Plug in the power supply into a 120VAC, 50/60 HZ standard wall outlet. The green "Normal" light should come on.



7. Test the system by pressing the "Alarm Test" button. The buzzer, the red "High Water" light, the red "High Oil" light and the red "Holding Tank High Level" will be "on". Release the "Alarm Test" button and the alarm buzzer and indicator lights will automatically reset. Test product weekly to ensure system integrity.



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Operation and Maintenance Manual
Simplex Auto-Valve Control Panel

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Description And Sequence Of Operation

The HMI / PLC program is designed to run and data log a simplex (one pump) application, with two valve control. The OilTector provides the most accurate data logging by using current sensors on the pump and valves to data log that the correct valve opened and pumped the correct fluid to the correct location. The valves open and close depending on the current condition of the OilTector controller. Also there is a storage tank level display that is time based. Using the pump gallons per minute, and the dimensions of the tank that is entered by the user the level display is only an approximation.

After all terminal connections are made, and supply voltage is verified.

- 1.) Power up control panel.
- 2.) Navigate to the Menu > Configure Oil Tank screen.
- 3.) Configure the controller for oil storage tank volume.
 - 3a. Enter the pump gallons per minute.
 - 3b. Select what type of storage tank is being used, and then press the dimensions button.
 - 3c. Enter the dimensions of the tank.
- 4.) Navigate to the Maintenance Menu > Pump/Valve Control and verify the HOA's are in the correct position.

Hand Mode:

When the pump Hand / Auto switch is placed in "Hand" mode the pump will run.

When the solenoid valve #1 Hand-Off-Auto switch is placed in "Hand" mode the valve will open.

When the solenoid valve #2 Hand-Off-Auto switch is placed in "Hand" mode the valve will open.

Auto Mode:

When the pump Off / Auto switch is placed into auto mode, the pump will be called to run by the oil alert start, stop, high water probes, and oil float. The valves will open and close depending on the conditions of the oil alert. If water is reaches the start probe it will open valve #1 and then start the pump. If oil is detected it will open valve #2 and then run the pump for the amount of time that was programed by the user, if valve #2 does not open or if valve #1 is open the pump will not run during a oil detection. If the controller doesn't see a run confirm in 5 seconds it will stop the pump, and give a pump fail message on the screen. This fault must be reset by going to the main menu, selecting "reset pump fail" and then press the reset pump fail button. If the controller doesn't receive a valid signal from the either valve within a 5 seconds of being called, it will

Alarm Conditions

High Level, Oil Detected, Pump Fail Alarms:

The alarm will trigger under these conditions (high water, oil detection, high storage tank level) or in the event of a pump failure. These alarm conditions will cause a set of contacts to close when active allowing the user to incorporate a remote alarm. The high levels and oil detection alarms will reset automatically when the condition is in the normal state. The pump fail and high storage display can be reset by navigating to the Menu > Reset Faults. The alarm buzzer may be silenced by pressing the alarm "silence" button.

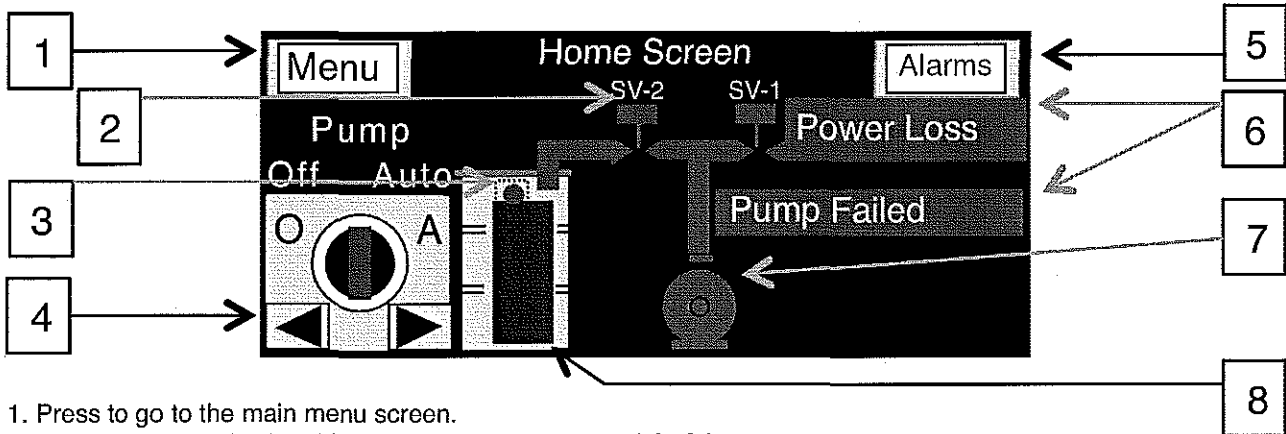
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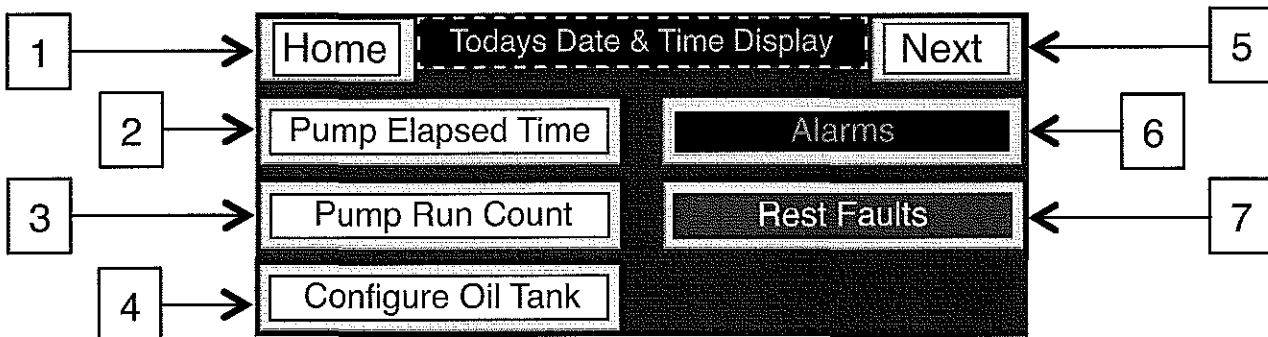
Full Programming Of Touch Screen On Pages 9-16

Home Screen



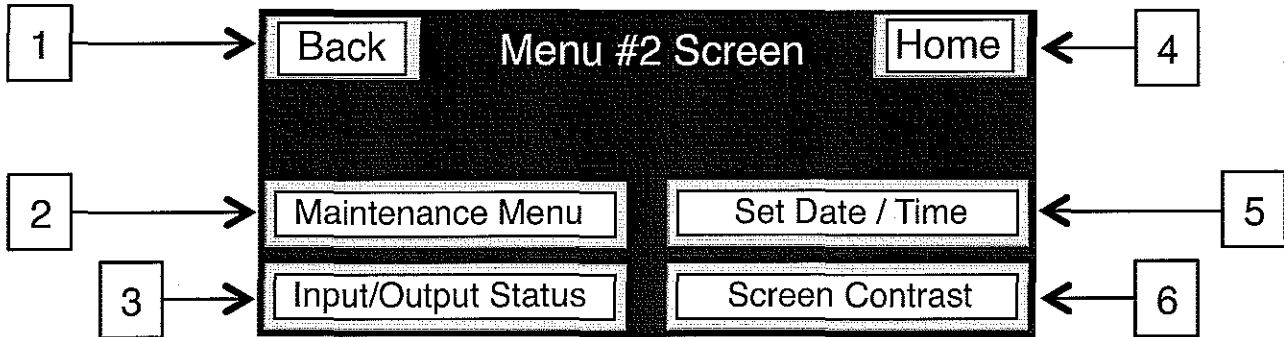
1. Press to go to the main menu screen.
2. Displays status of solenoid valves Green=OPEN, Red CLOSED
3. Red dot blinks if high level float is activated.
4. "OFF-AUTO" selector switch.
5. Press to go to the alarm count and history screen.
6. Displays alarm banners for pump fail, high water, oil alarm, power fail etc.
7. Displays the status of the pump Green=ON, Red=STOP.
8. Shows the estimated amount of oil in the storage tank based on pump run time.

Main Menu Screen



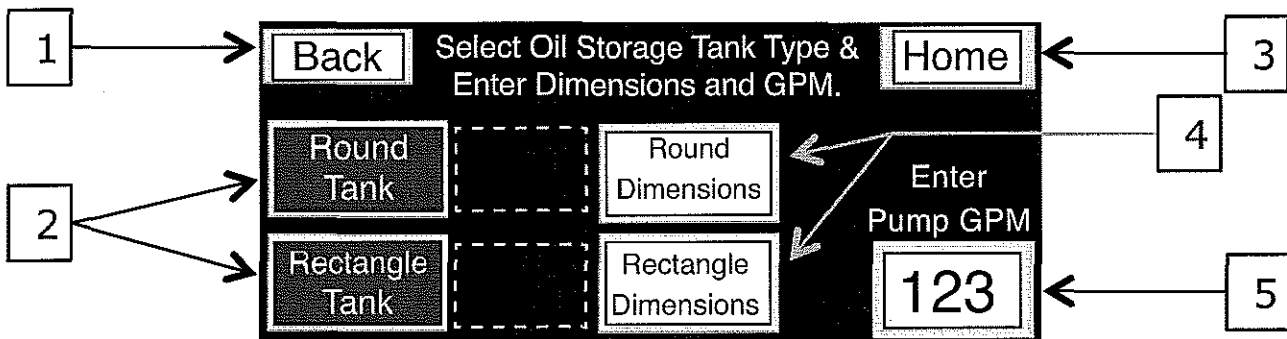
1. Press to go back to the home screen.
2. Press to go to the pump elapsed time meter screen.
3. Press to go to the pump run count screen.
4. Press to go choose the storage tank type round or rectangle and enter the tank dimensions.
5. Press to go to menu screen 2.
6. Press to go to the alarm count and history screen.
7. Press to go to the screen that will allow you to reset a pump / solenoid fail, or full tank display.

Menu Screen #2



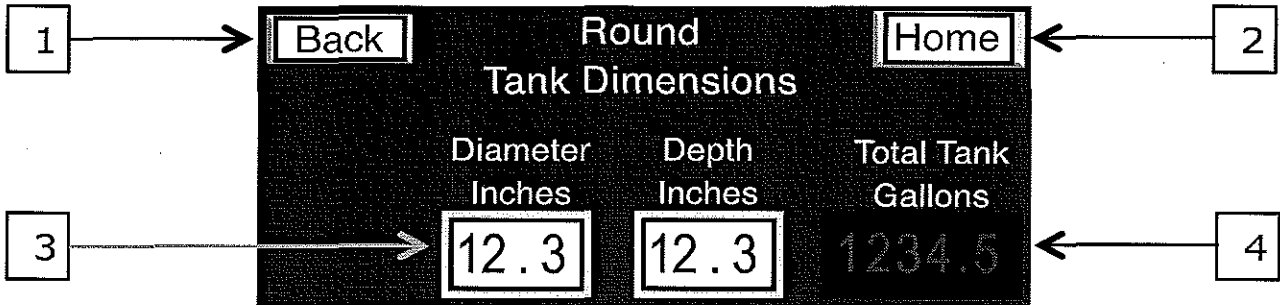
1. Press to go back to the previous screen.
2. Press to go to the maintenance menu screen. *password protected (1001)
3. Press to go view the status of the inputs and outputs.
4. Press to go back to the home screen.
5. Press to update the current date / time.
6. Press to change the brightness of the display.

Oil Storage & Pump GPM Screen



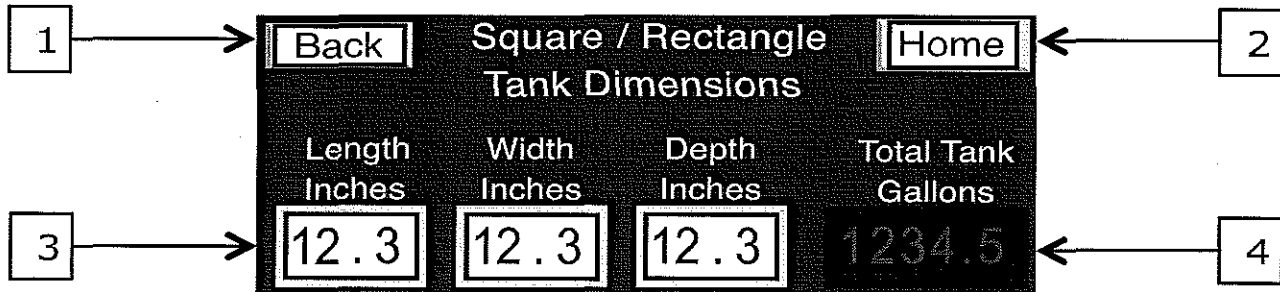
1. Press to go back to the home screen.
2. Press to select what type of tank you have round or rectangle.
3. Press to return to the home screen.
4. Press to enter dimension measurements. *Note: Can only enter the dimensions of the tank that is selected.
5. Press to enter the gallons per minute of the pump.

Round Tank Dimensions Screen



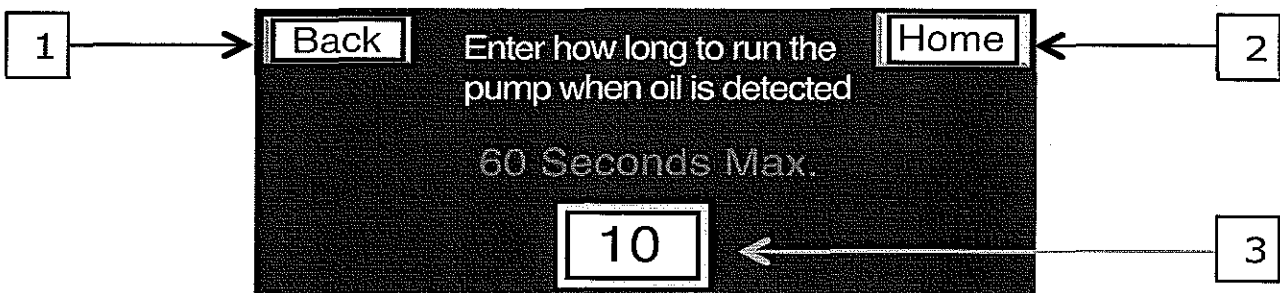
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to enter the measurements of the diameter and depth of the storage tank.
4. Displays the total gallons of the tank based on the dimensions entered.

Rectangle Tank Dimensions Screen



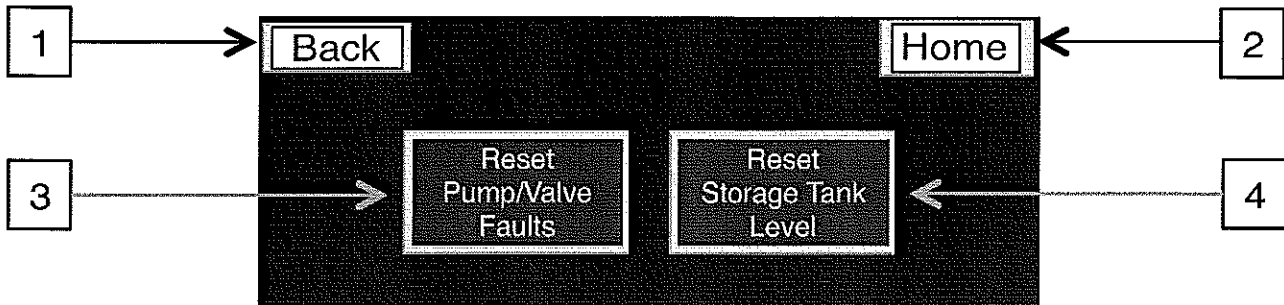
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to enter the measurements of the Length, Width, and Depth of the storage tank.
4. Displays the total gallons of the tank based on the dimensions entered.

Oil Detected Run Time Screen



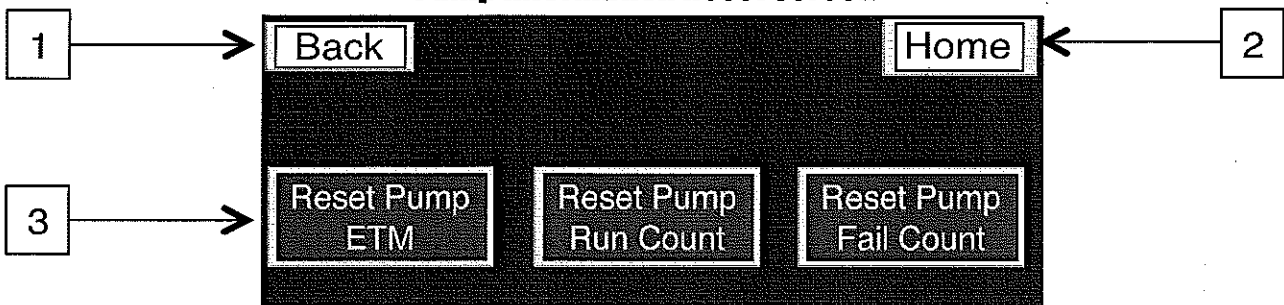
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to enter the amount of time you want the pump to run if oil is detected. (60 Sec. Max.)

Pump / Solenoid / Storage Reset Screen



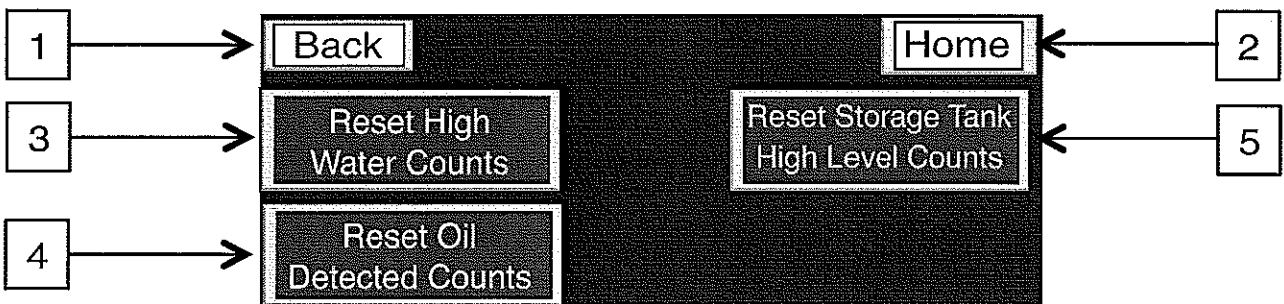
1. Press to go back to the previous screen.
2. Press to go back to the main menu screen.
3. Press to reset a pump fail fault or a solenoid fault.
4. Press to reset the level display of the storage tank.

Pump Information Reset Screen



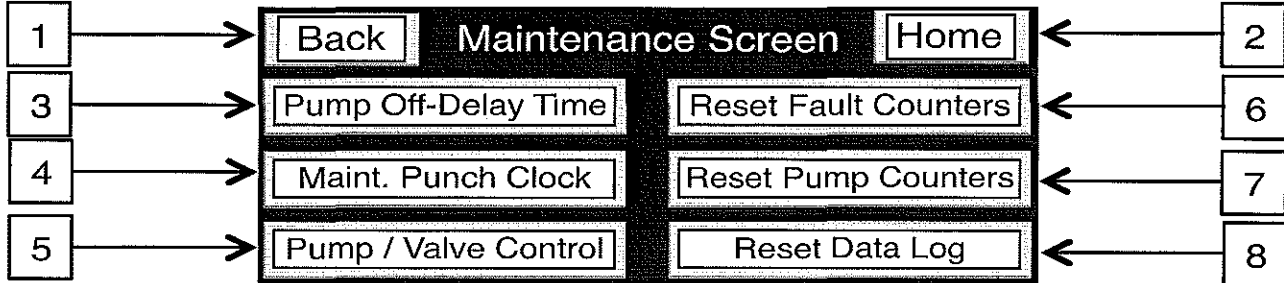
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to reset pump information such as elapsed time meter, run count, pump fail count.

Fault Count Reset Screen



1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to reset the high water alarm counts.
4. Press to reset the oil alarm counts.
5. Press to reset the storage tank high level counts.

Maintenance Menu Screen



1. Press to go back to the previous screen.

Press to return to the home screen.

Press to go to the pump run off-delay timer setting screen. *Note: This value is how long the pump will run after the oil alert float drops, if oil is detected. Factory set for (5 sec.)

Press to go to the maintenance punch clock screen.

Press to go to the pump / valve control screen.

Press to go to the fault reset screen.

Press to go to the pump information reset screen.

Press to go to the data log reset screen. *password protected (3333)

Pump / Solenoid "Auto & Hand" Screen

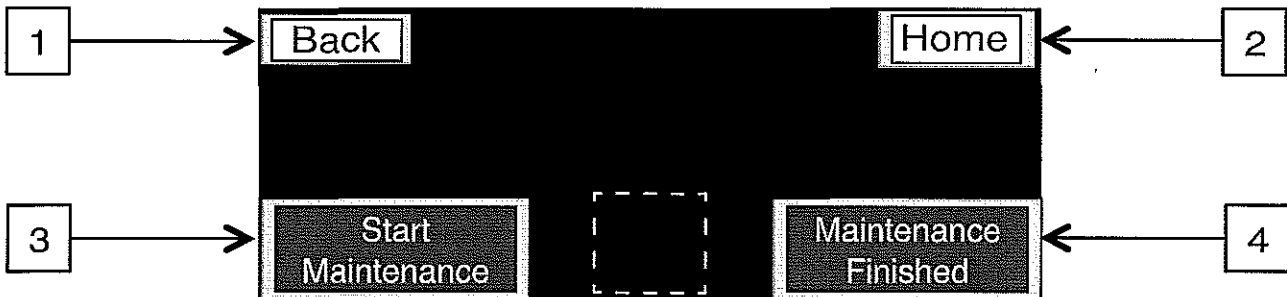


1. Press to go back to the previous screen.

2. Press to return to the home screen.

3. Press to toggle the control Hand Off Auto for the pump, solenoid valve #1, or Solenoid valve #2.

Maintenance Punch Clock Screen



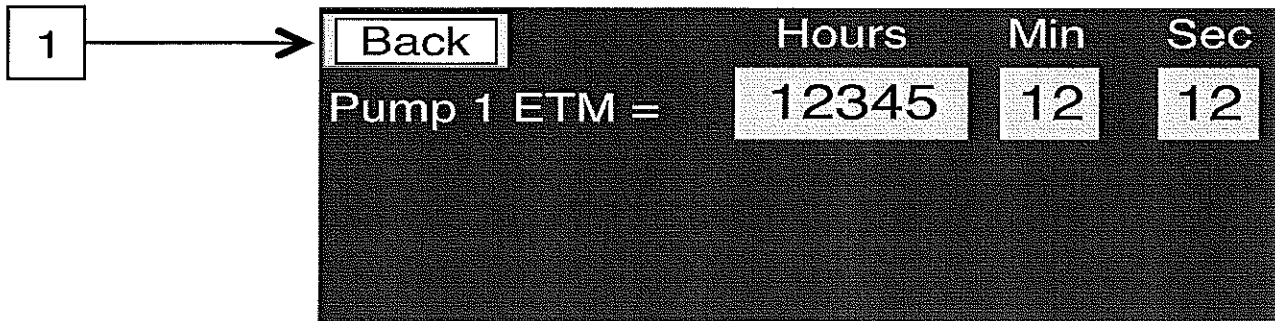
1. Press to go back to the previous screen.

2. Press to return to the home screen.

3. Press to start the maintenance punch clock, a stopwatch image will blink while activated.

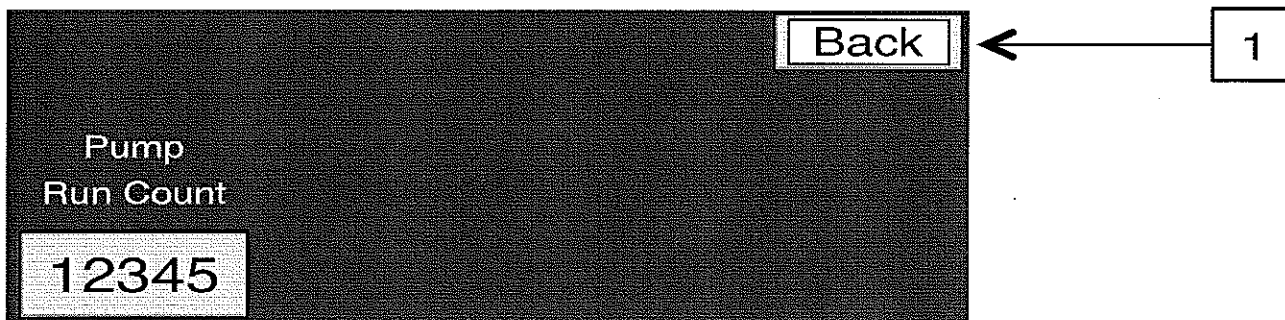
4. Press to stop the maintenance punch clock, the time will then be stored to the USB flash drive if inserted.

Pump Elapsed Time Meter Screen



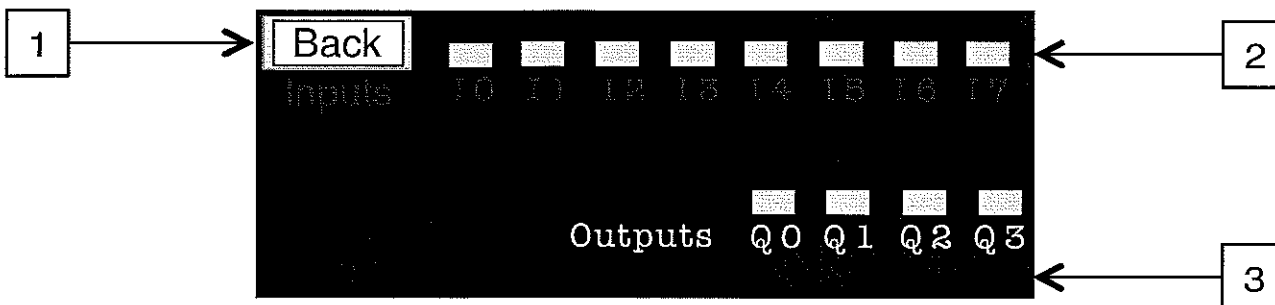
1. Press to go back to the previous screen.

Pump Run Count Screen



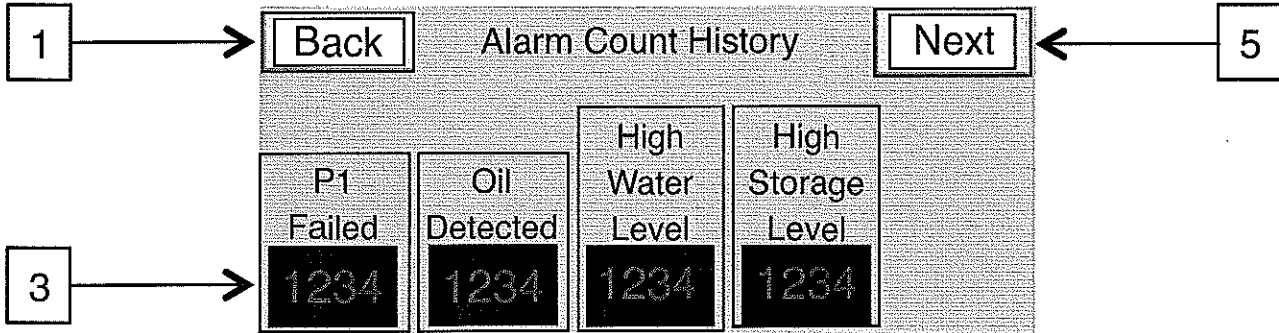
1. Press to go back to the main menu screen.

Input / Output Screen



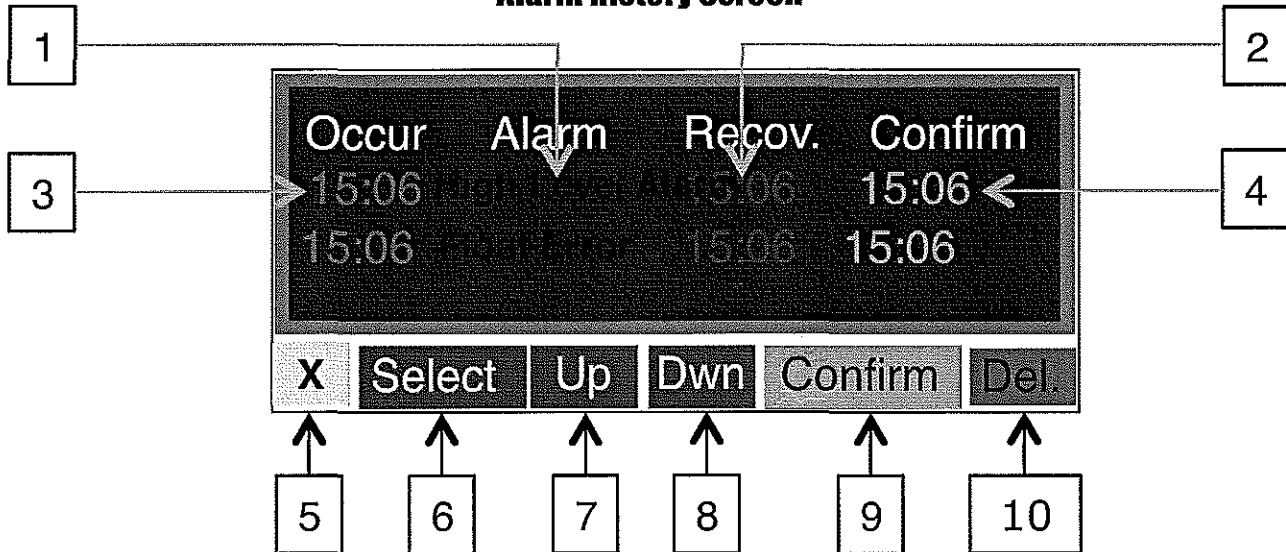
1. Press to go back to the previous screen.
2. Displays if the input is off or on. "On = Green".
3. Displays if the output is off or on. "On = Green".

Alarm Count History Screen



1. Press to go back to the previous screen.
2. Press to go view current and past alarm conditions.
3. Displays the corresponding alarm count history.

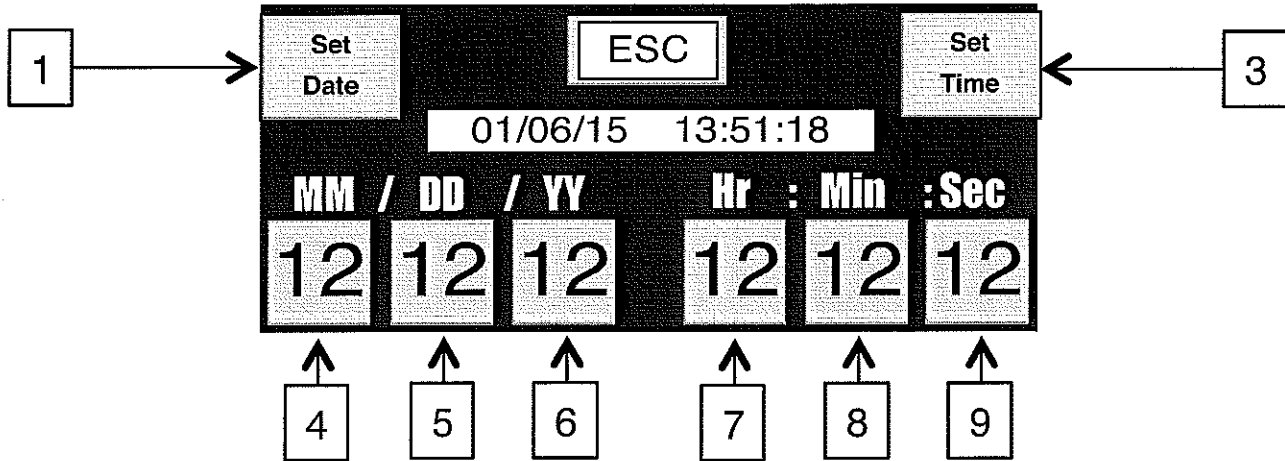
Alarm History Screen



1. Displays the description of the most recent alarm.
2. Displays the time the alarm was recovered.
3. Displays the time that the alarm occurred.
4. Displays the time the time the alarm was confirmed/acknowledged.
5. Press to go back to the main menu screen.
6. Press to highlight the alarm history list. *Note: Must press select button before trying to scroll, confirm, or delete alarms from the list.
7. Press to scroll up through the alarm history list.
8. Press to scroll down through the alarm history list.
9. Press to confirm alarm(s).
10. Press to delete the alarm that is selected from the list.

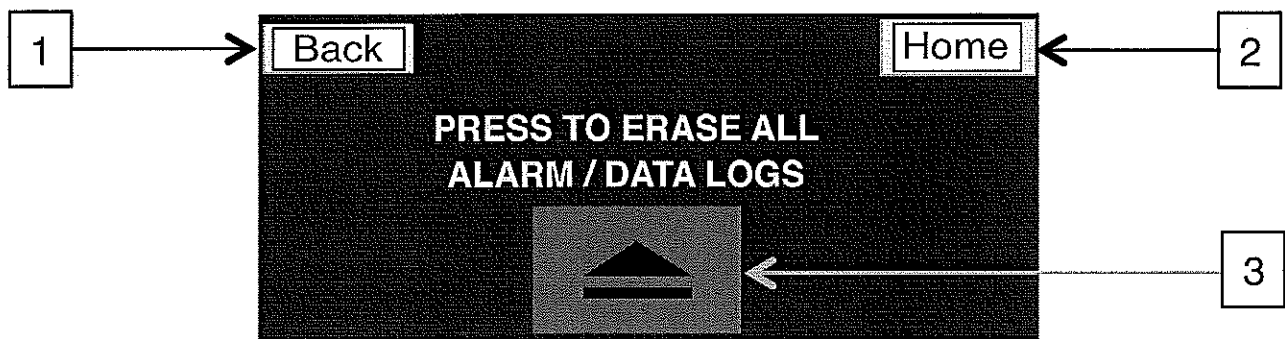
*Note: This information can be saved to the USB flash drive if inserted.

Date / Time Screen



1. Press to set the values from 4,5,6 into the current date.
2. Press to go back to the previous screen.
3. Press to set the values from 7,8,9 into the current time.
4. Press to enter month.
5. Press to enter day.
6. Press to enter year.
7. Press to enter hour. Based on a 24 hour clock
8. Press to enter minute.
9. Press to enter second.

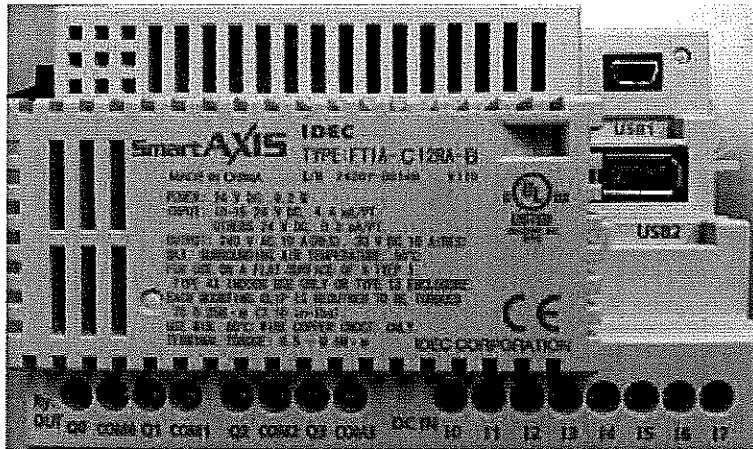
Data Reset Screen



1. Press to go back to the previous screen.
2. Press to go back to the home screen.
3. Press to delete all alarm and data log values.

Data Logger

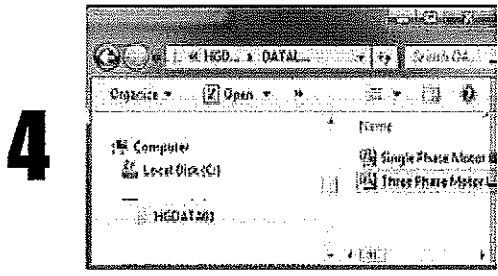
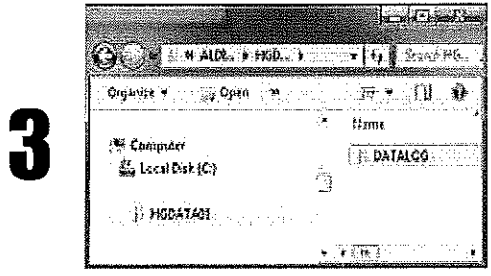
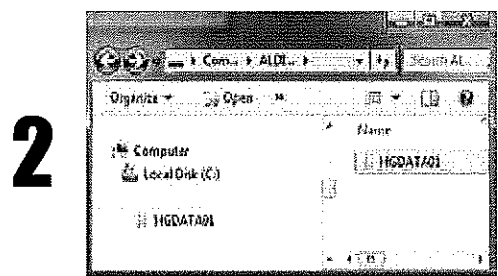
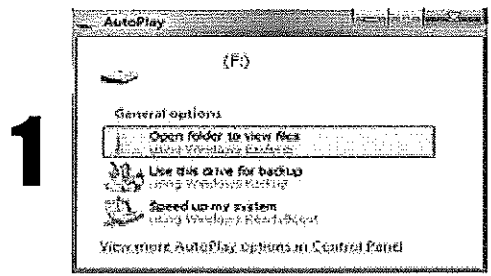
The user can insert a flash drive into the USB2 port on the back of the HMI to retrieve data for the pump and valves. These files are saved as csv. files.



HMI USB2 Port

How To View Data

1. After inserting the USB into your PC this dialog box will appear open folder to view files.
2. Click on the HGDATA01 folder.
3. Click on the DATALOG folder.
4. Click on which csv. file you want to view.



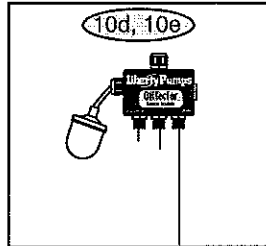
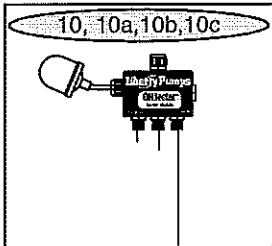
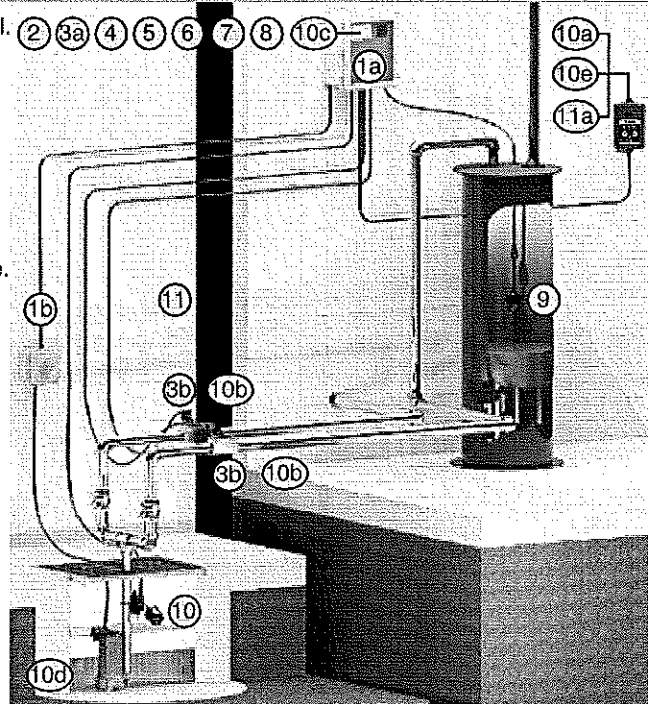
OilTector[®]

Operation and Maintenance Manual
Simplex Auto-Valve Control Panel

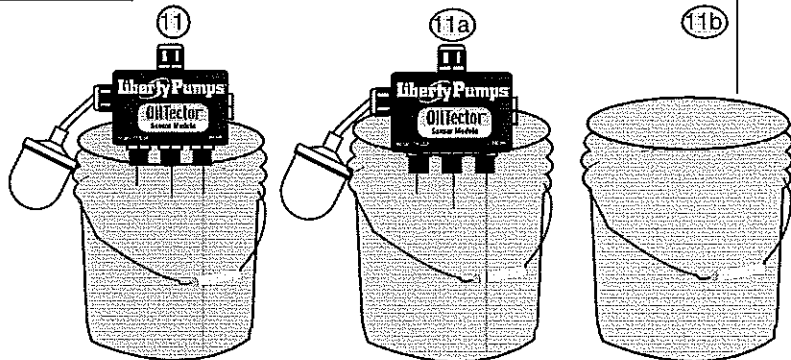
Liberty Pumps[®]

Once installation is completed, test the operation of the control panel and all essential components.

- 1a. & 1b. Verify Incoming power then power up the control panel.
2. Navigate to the Maintenance menu enter the password 1001 and then go to pump / valve control.
- 3a. & 3b. Ensure the correct valves open and close when corresponding selector is toggled from auto / hand modes.
4. Check the motor voltage, amps, and rotation by toggling the auto / hand selector.
5. Place all of the selectors into "auto" mode and navigate to the configure oil tank screen.
6. Enter the pump gallons per minute from the pump nameplate.
7. Select round or rectangle oil storage tank then enter the dimensions of the tank by pressing the corresponding button.
8. Navigate to the home screen place pump off / auto into the auto mode.
9. Raise storage tank float for 5 seconds & verify high storage level alarm activates then lower float & alarm resets.
10. With the probes on the oil sensor out of the water, raise & lower the float on the sensor. Verify the following
 - a. When raised oil detected alarm should activate.
 - b. When raised Solenoid #2 should energize 1 second before the pump starts.
 - c. When raised the tank level display should start rising.
 - d. When lowered the pump should run approximately 5 seconds, or the value of the pump off-delay setting.
 - e. When lowered the oil detected alarm should deactivate.



11. Slowly lower the sensor probes into water. When middle probe makes contact with the water the water pump will start.
 - a. Keep slowly lowering the sensor until the short probe is making contact with the water and after 5 seconds the high water alarm should activate.
 - b. Then slowly raise the sensor from the water, the pump should keep running until the long probe is out of the water.



Note: If using a bucket for the test make sure there is a ground wire placed in the water or hold & press the tact switch on the circuit board when lowering probes in water. Release tact switch after all probes are out of the water.

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Manual 6951000A
DWG# 6951000A

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OilTector[®]

Operation and Maintenance Manual
Simplex Auto-Valve Control Panel

Liberty Pumps[®]

Trouble Shooting

Symptom:	Possible Cause:	Action:
Pump does not start	No source power to panel Control breaker turned OFF Pump breaker or disconnect turned OFF Defective contactor Loose level sensor wires Pump failure Oil storage tank is full HMI selector switch is in OFF mode Solenoid valve is not energizing Solenoid valve CS not activating	Verify source power Turn breaker ON Turn breaker & disconnect ON Replace contactor Tighten sensor connections Replace defective pump Empty tank and reset HMI fault Select AUTO mode in HMI Verify power at solenoid / Replace solenoid Replace current sensor
Pump runs continuously once started with the sensor	Induced voltage on sensor wires	Separate sensor cable from pump power, maintain a minimum separation of 2"
Pump turns off before bottom probe	Poor pump or system ground	Verify good ground for system

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Manual 6951000A
DWG# 6951000A

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**Operation and Maintenance Manual
Simplex Auto-Valve Control Panel**

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Manual 6951000A
DWG# 6951000A

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Liberty Pumps®

OilTector®

ELV Duplex Series



Duplex pump system detects oil and water allowing for diversion of oil to a separate tank via dedicated oil and water pumps.

For use in elevator pits, vaults and other areas requiring the control of oil discharge from sump water.

Features:

- Pumps available in 1/2 hp, 3/4 hp and 6/10 hp
- Flow rates to 95 GPM and heads to 65' (depending on model)
- Single and three-phase pump models available
- Complete system ships with control panel, remote alarm, level sensor, junction box with disconnects, 2 reducer couplings, 2 brass check valves and pumps. (Systems with oil holding tank also available!)
- OilTector® control features advanced touch screen display and programming
- Dry contact outputs for alarm conditions
- Preset level sensor for easy installation
- Advanced system monitors/verifies the amount of fluid pumped and that it was pumped to the correct location
- Controls are available with optional BACnet Gateway for integration with building automation and control systems. Please contact Liberty Pumps for more information

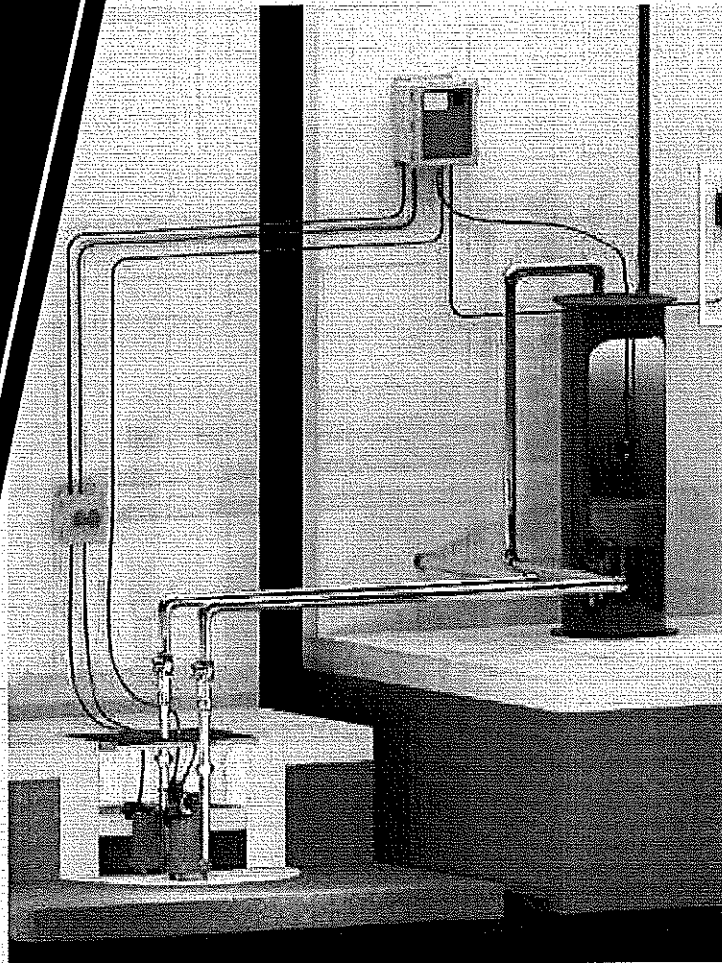
innovate. evolve.

OilTector® ELV Duplex Series

Features and Operation:

The OilTector® duplex pump system pairs a touch screen controller with two proven Liberty sump pumps to eliminate unwanted water from elevator sumps, garages, vaults and other areas where preventing the unwanted discharge of oil to the environment is required.

The OilTector® controller features a pre-set level sensor which consists of 3 metal probes and a float switch which will control two Liberty sump pumps, one designated for water service, and one for oil service. When water collects in the sump and contacts both the lowest and the middle probe, the water service sump pump will discharge the water until the level is below the lowest probe. If the water level increases to the highest probe, the high water alarm sounds signifying a high inflow condition or faulty pump.



In the event of an oil leak, the spilled oil will collect in the sump and float on the surface of the water. Once the layer is thick enough to trip the high oil float, the pump will eliminate the oil and water in the sump; the water will be pumped to the drain and then the oil will be routed to the waste oil storage tank preventing unwanted contamination.

The OilTector® controller additionally provides a means for manual pump operation, dry contacts for alarm conditions and data logging to document all operational activity.

Specifications are
subject to change
without notice.



Duplex Control Panel Features:

Easy-to-use touch screen programming with adjustable display brightness.

Clear cover panel with locking hasp.

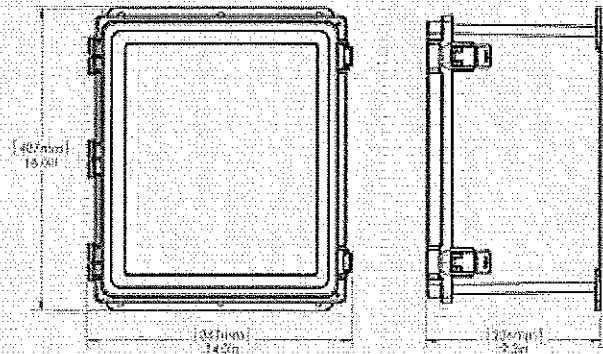
Logic in the panel monitors how much water and/or oil is pumped and verifies that it is pumped to correct location.

The Duplex program is designed to run 2 pumps, one oil and one water. Specific pumps run depending on input from the OilTector® pre-programmed sensor. An oil storage display is time-based using the pump's gallon-per-minute rating and dimensions of the holding tank as input by the user.

Data logging allows export of events to Excel® spreadsheet for expanded analysis and documentation.

Controls are available with optional BACnet Gateway for integration with building automation and control systems. Please contact Liberty Pumps for more information.

Control Panel Dimensional Data



Control Panel Specifications:

Control input volts 120V, 60 Hz
(Single phase only)

Pump input volts 120/230 Single phase or
230/460V 3-phase, 60 Hz

Panel enclosure rating NEMA 4X

Maximum pump amps 15A Single phase
4-6.3A 3-phase

Pump Off/Auto switch

Pump elapsed time meter

Pump run counter

Pump off/delay time: adjusts pumps run-time
when oil is detected

Pump status light GREEN=ON, RED=STOP

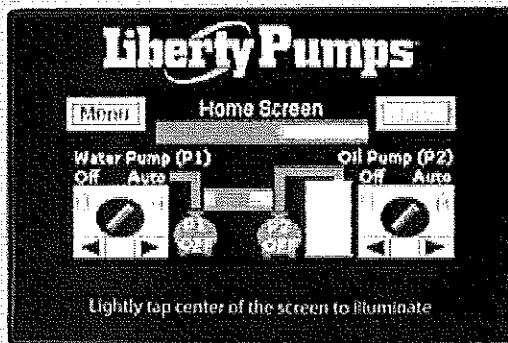
Oil storage level indicator

Display alarm banners for:
• Fail • High Water • Oil Alarm • Power Fail

Preset level sensor with 25' of cord

Remote mount alarm (indoor) can be
mounted up to 2,500' from panel

Float switch for oil level sensing in storage
tank included with control system

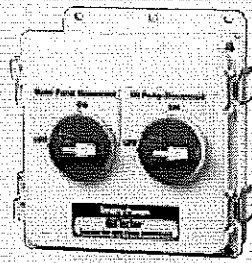


Data Event Log Records

Pump ETM
Pump ETM Minutes
Maintenance Clock
Pump Run Count
Pump Cycle Time
HOA Status
Amp Status
Oil Status
Previous Count Cycle Time

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OilTector[®] ELV Duplex Series



Junction Box with
Pump Disconnects NEMA 4X

Complete system - includes pumps, control panel, level sensor, junction box with disconnects, check valves, reducer couplings and remote alarm (no holding tank)

Models	HP	Volts	Phase	Holding Tank	Wgt Lbs
ELV280-D	1/2	120	1	No	119
ELV280HV-D	1/2	230	1	No	119
ELV290-D	3/4	120	1	No	119
ELV290HV-D	3/4	230	1	No	119
ELVFL63-D	6/10	230	3	No	158

Complete systems as above with 59 gallon oil holding tank

ELV280-DT	1/2	120	1	YES	184
ELV280HV-DT	1/2	230	1	YES	184
ELV290-DT	3/4	120	1	YES	184
ELV290HV-DT	3/4	230	1	YES	184
ELVFL63-DT	6/10	230	3	YES	223

Oil Tank
included
with these
systems

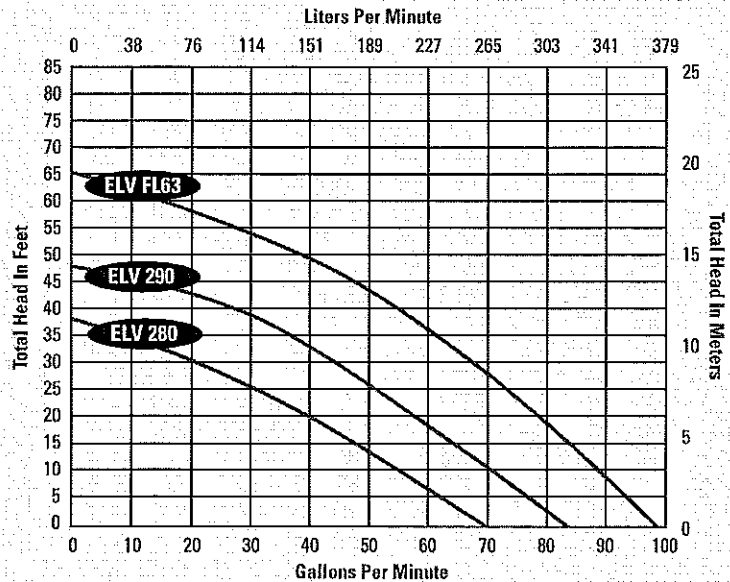
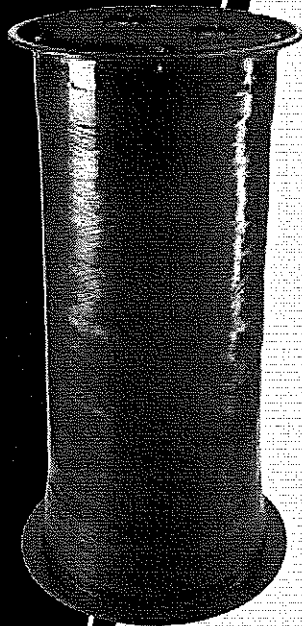
OilTector[®] Control System Only (No pumps or tank)

Models	Volts	Phase	Max Amps.	Panel Style	Style	Wgt. Lbs.
OTC-120/230-D	120/230	1	15	NEMA 4X	Touch Screen	36
OTC-230-3-D	230	3	4-6.3	NEMA 4X	Touch Screen	36

Above OTC control systems include control panel, remote alarm, level sensor, and junction box with disconnect. Controls are available with optional BACnet Gateway for integration with building automation and control systems.

Oil Waste
Holding Tank
18" X 54"
59 Gallons

Other sizes
available
consult
factory



www.
libertypumps
.com

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Phone 800-543-2550 Fax (585) 494-1839

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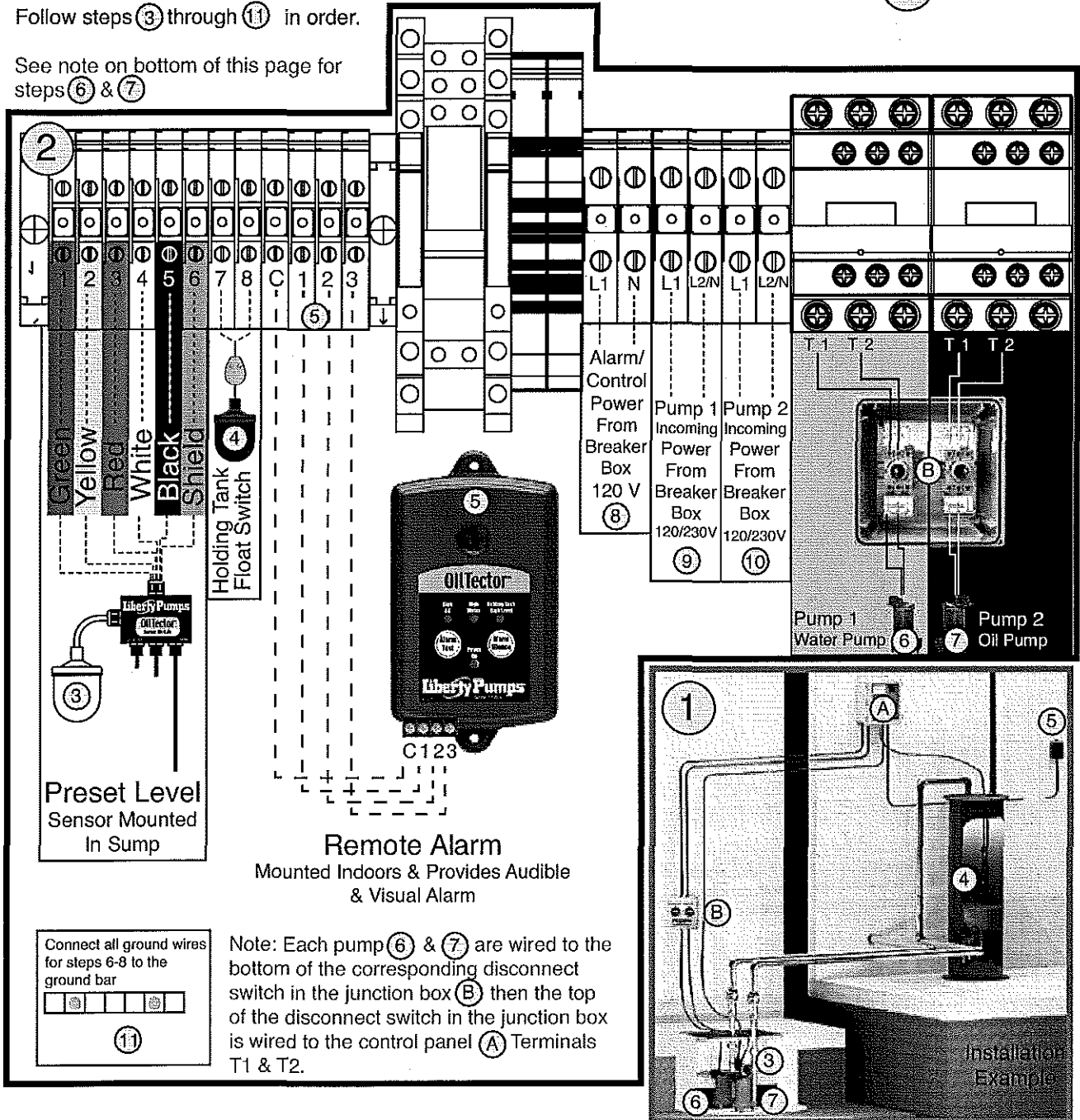
Quick Start
1 Phase Duplex

Liberty Pumps[®]

Use the (Installation Example) diagram (1) on the bottom right of page 1 as a reference to match up each component included in this system to the correct terminal blocks inside the control panel (A) shown in diagram (2)

Follow steps (3) through (11) in order.

See note on bottom of this page for steps (6) & (7)



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OilTector[®]

**Quick Start
1 Phase Duplex**

Liberty Pumps[®]

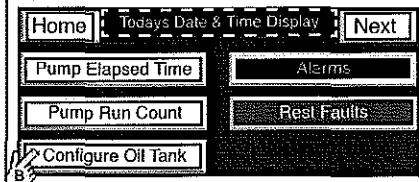
QUICK START

USE PAGE 2 FOR ROUND SHAPED HOLDING TANKS (Follow Steps A-O)

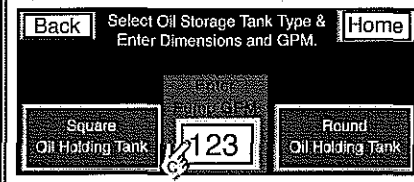
USE PAGE 3 FOR RECTANGLE OR SQUARE SHAPED HOLDING TANKS (Follow Steps A-O)

A. Turn On Power To The Control Panel

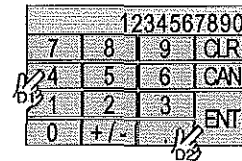
B. Press (Configure Oil Tank)



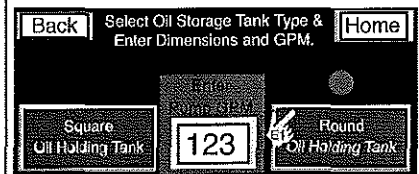
C. Press (Enter Pump GPM)



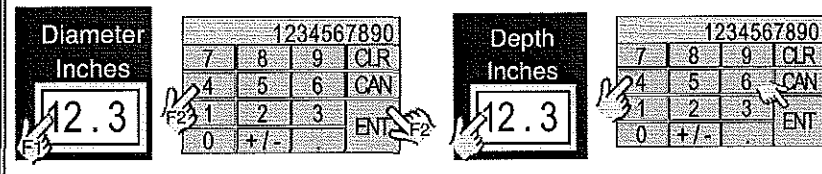
D. D1. Enter Pump Gallons Per Minute From Pump Nameplate. D2. Press ENT



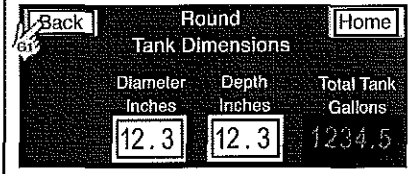
E. E1. Press (Round Tank)



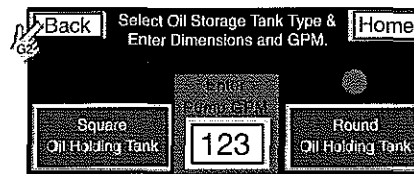
F. F1. Press(Diameter Inches) Button. F2. Enter Oil Tank Diameter. Press ENT. Repeat For Depth.



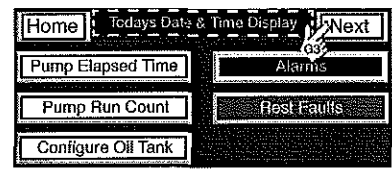
G. G1. Press (Back) Button On Round Tank Screen



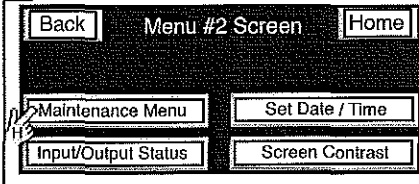
G2. Press (Back) On Select Oil Storage Tank Screen



G3. Press (Next) On Today's Date Screen

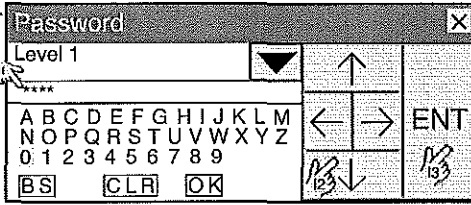


H. Press (Maintenance Menu) Button

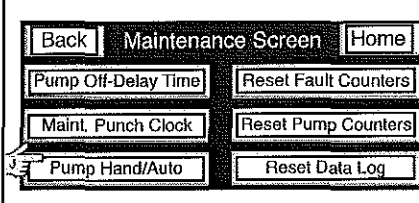


I. I1. Enter Password (1001) as shown below.

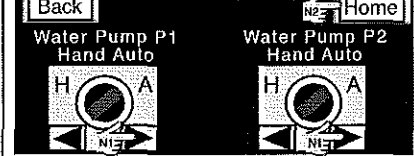
- I2. Press Arrow Keys Until 1 Is Highlighted
- I3. Press ENT (1st * appears)
- I2. Press Arrow Keys Until 0 Is Highlighted
- I3. Press ENT (2nd * appears)
- I2. Press Arrow Keys Until 0 Is Highlighted
- I3. Press ENT (3rd * appears)
- I2. Press Arrow Keys Until 1 Is Highlighted
- I3. Press ENT (4th * appears)
- I2. Press Arrow Keys Until OK Is Highlighted
- I3. Press ENT (You Will Be On Screen(J))



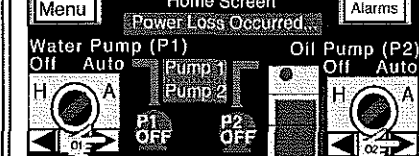
J. Press Pump Hand/Auto To Verify Position Of Switches. Note: Off Delay Is Preset To 10 Seconds.



N. N1. Place All Switches In Auto N2. Press Home Button



O. Place Pump HOA'S into Auto Mode And Do The Bucket Test (See Main Manual For Bucket Test)



After completing step O you have finished the quick start and are on the Home Screen

- Back** Will Always Take You To The Previous Screen
- Home** Will Always Take You To The Home Screen

OilTector[®]

Quick Start
1 Phase Duplex

Liberty Pumps[®]

QUICK START - FOLLOW STEPS A-O IF USING A SQUARE OR RECTANGLE TANK

A. Turn On Power To The Control Panel

B. Press (Configure Oil Tank)

C. Press (Enter Pump GPM)

D. D1. Enter Pump Gallons Per Minute From Pump Nameplate. D2. Press ENT

E. E1. Press (Square Tank)

F. F1. Press (Length Inches) Button. F2. Enter Length. Press ENT. Repeat For Width & Depth.

G. G1. Press (Back) Button On Square/Rectangle Screen

G2. Press (Back) On Select Oil Storage Tank Screen

G3. Press (Next) On Todays Date Screen

H. Press (Maintenance Menu) Button

I. I1. Enter Password (1001) as shown below.

I2. Press Arrow Keys Until 1 Is Highlighted
I3. Press ENT (1st * appears)
I2. Press Arrow Keys Until 0 Is Highlighted
I3. Press ENT (2nd * appears)
I2. Press Arrow Keys Until 0 Is Highlighted
I3. Press ENT (3rd * appears)
I2. Press Arrow Keys Until 1 Is Highlighted
I3. Press ENT (4th * appears)
I3. Press Arrow Keys Until OK Is Highlighted
I3. Press ENT (You Will Be On Screen J)

J. Press Pump Hand/Auto To Verify Position Of Switches. Note: Off Delay Is Preset To 10 Seconds

N. N1. Place All Switches In Auto N2. Press Home Button

O. Place Pump HOA'S into Auto Mode And Do The Bucket Test (See Main Manual For Bucket Test)

After completing step **O** you have finished the quick start and are on the Home Screen

Back Will Always Take You To The Previous Screen

Home Will Always Take You To The Home Screen

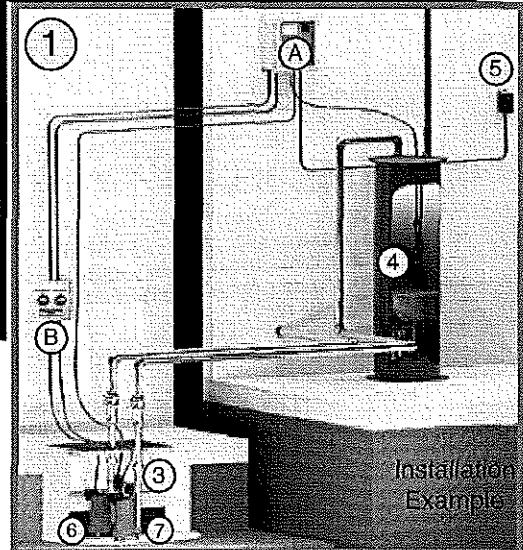
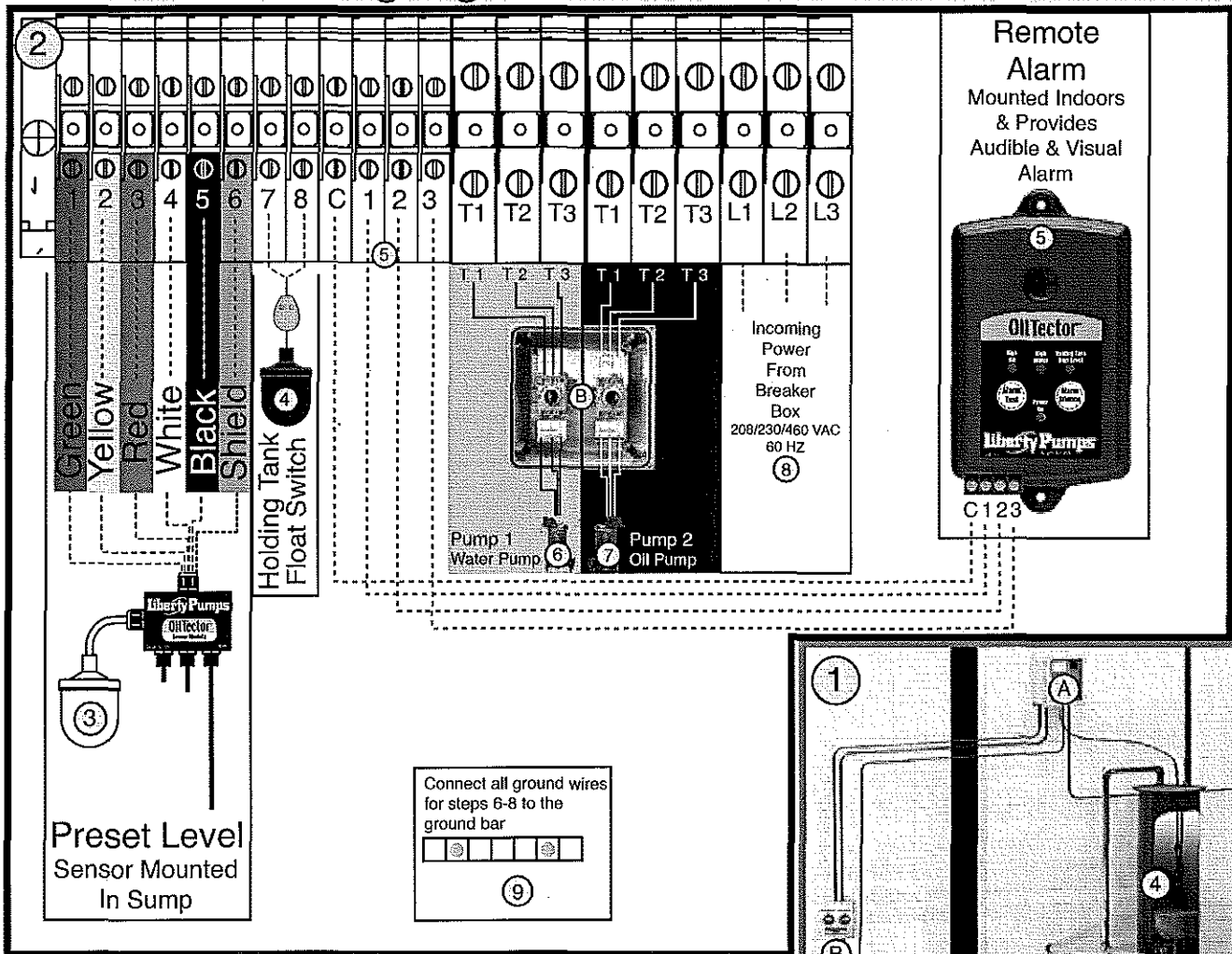
OilTector[®]

Quick Start
3 Phase Duplex

Liberty Pumps[®]

Use the (Installation Example) diagram (1) on the bottom right of page 1 as a reference to match up each component included in this system to the correct terminal blocks inside the control panel (A) shown in diagram (2)

Follow steps (3) through (7) Each pump (6) & (7) is wired to the bottom of the disconnect switch in the junction box (B) then the top of each disconnect switch in the junction box is wired to the control panel (A) Term. T1, T2 & T3. Then go to page 2 of 4 to set transformer & MPS. Then return to page 1 and connect (8) and (9)



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Page 1 of 4
Manual 6966000A
DWGa 6966000A

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OilTector[®]

Quick Start 3 Phase Duplex

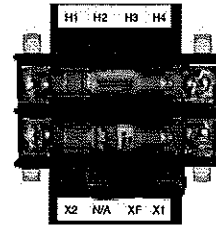
Liberty Pumps[®]

2. Set Your Transformer Tap

Always refer to included electrical schematic to verify wiring and function. Your transformer is used to step power down to the control voltage required for this control panel. Your transformer has to be wired to the correct voltage on the top of your transformer. H4, on the top right will have one leg connected to it when you get it from the factory. The other wire should connect to the corresponding voltage. See the example to verify which terminal you need to connect the other leg of power to.

WARNING: Both legs of power must be connected on the top of the transformer before powering up the panel.

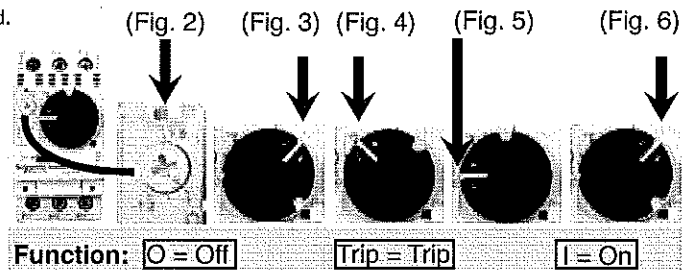
H1 = 460 VAC
H2 = 230 VAC
H3 = 208 VAC
H4 = Pre Wired at Factory



3. Set MPS Switch

An MPS Switch is a combination of a circuit breaker & an overload.

Before Using: Set the MPS dial for each pump to the FLA (Full Load Amps) of each pump. Use a phillips head screw driver to adjust the MPS dial. Set arrow on dial to correct amps. (Fig. 2). When the panel is ready for operation, place each switch in the on position (Fig. 3) **Note:** If pump trips (Fig. 4), Reset by turning counter clockwise to the off position (Fig. 5), then turn clockwise to the "on" position. (Fig. 6) **Note:** Other brands of MPS Switches operate in a similar manner.



4. Return To Page 1 of 4 And Connect Incoming Power ⑦ Then Proceed To Page 3 Of 4

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Page 2 of 4
Manual 6966000A
DWG# 6966000A

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OilTector[®]

**Quick Start
3 Phase Duplex**

Liberty Pumps[®]

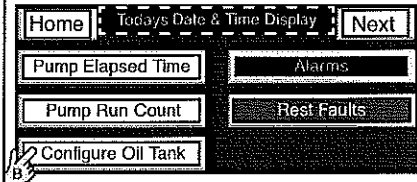
QUICK START

USE PAGE 3 FOR ROUND SHAPED HOLDING TANKS (Follow Steps A-0)

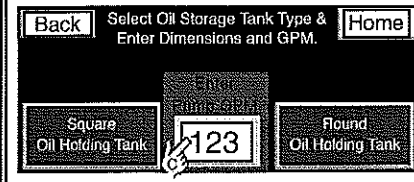
USE PAGE 4 FOR RECTANGLE OR SQUARE SHAPED HOLDING TANKS (Follow Steps A-0)

A. Turn On Power To The Control Panel

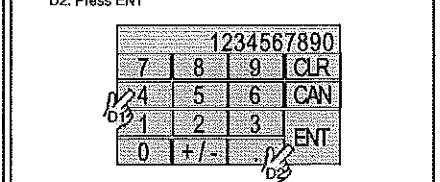
B. Press (Configure Oil Tank)



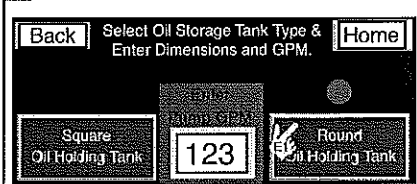
C. Press (Enter Pump GPM)



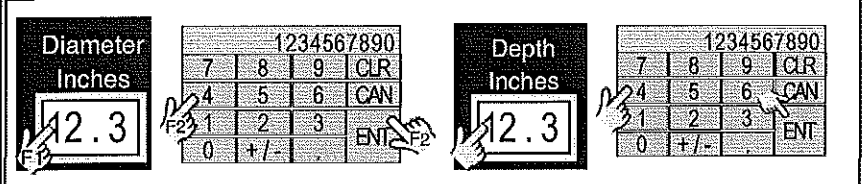
D. D1. Enter Pump Gallons Per Minute From Pump Nameplate. D2. Press ENT



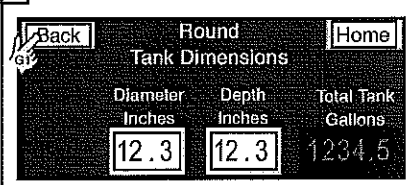
E. E1. Press (Round Tank)



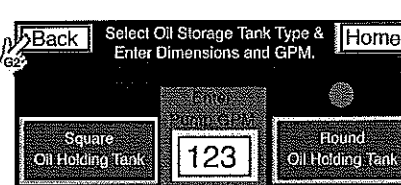
F. F1. Press(Diameter Inches) Button. F2. Enter Oil Tank Diameter. Press ENT. Repeat For Depth.



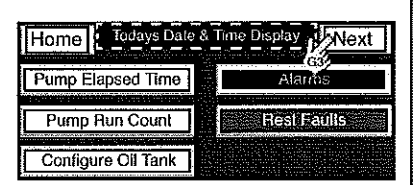
G. G1. Press (Back) Button On Round Tank Screen



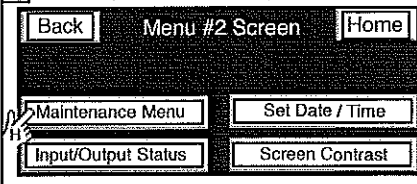
G2. Press (Back) On Select Oil Storage Tank Screen



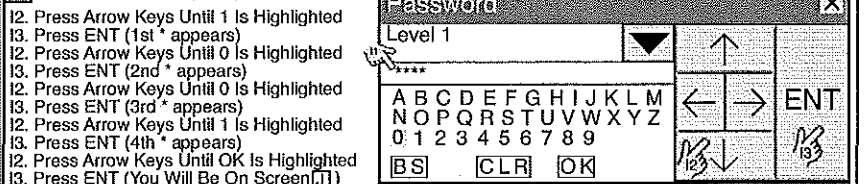
G3. Press (Next) On Today's Date Screen



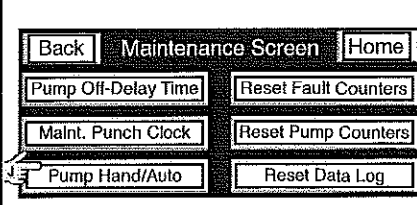
H. Press (Maintenance Menu) Button



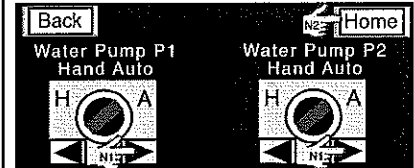
I. I1. Enter Password (1001) as shown below.



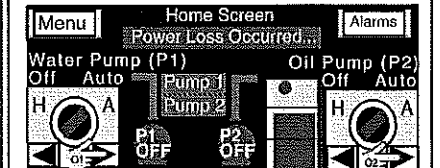
J. Press Pump Hand/Auto To Verify Position Of Switches. Note: Off Delay Is Preset To 10 Seconds



N. N1. Place All Switches In Auto N2. Press Home Button



O. Place Pump HOA'S into Auto Mode And Do The Bucket Test (See Main Manual For Bucket Test)



After completing step **O** you have finished the quick start and are on the Home Screen

Back Will Always Take You To The Previous Screen
Home Will Always Take You To The Home Screen

OilTector[®]

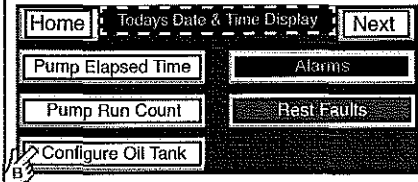
Quick Start 3 Phase Duplex

Liberty Pumps[®]

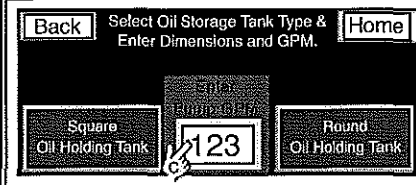
QUICK START - FOLLOW STEPS A-O IF USING A SQUARE OR RECTANGLE TANK

A: Turn On Power To The Control Panel

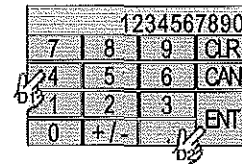
B: B. Press (Configure Oil Tank)



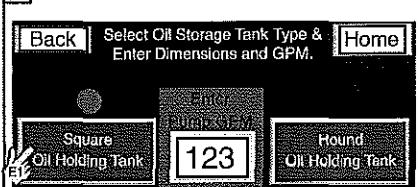
C: C. Press (Enter Pump GPM)



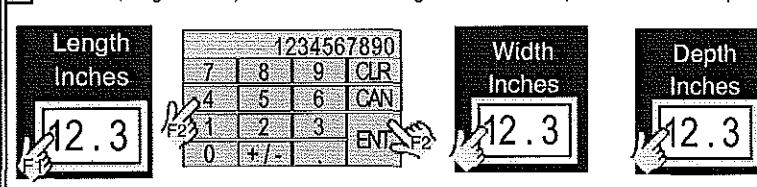
D: D1. Enter Pump Gallons Per Minute From Pump Nameplate.
D2. Press ENT



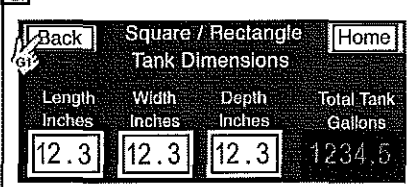
E: E1. Press (Square Tank)



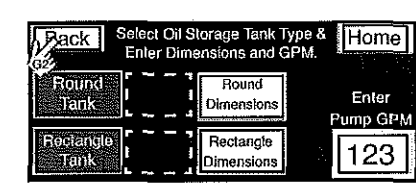
F: F1. Press (Length Inches) Button. F2. Enter Length. Press ENT. Repeat For Width & Depth.



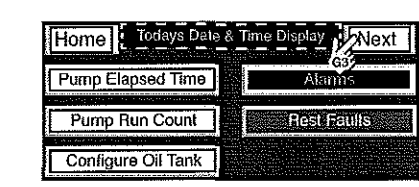
G: G1. Press (Back) Button On Square/Rectangle Screen



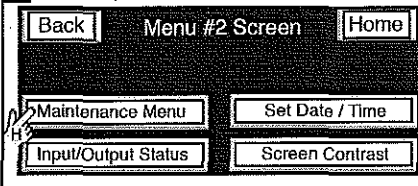
G2: G2. Press (Back) On Select Oil Storage Tank Screen



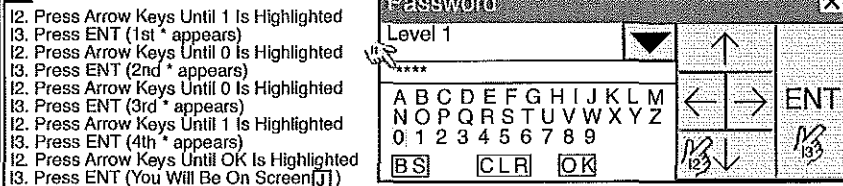
G3: G3. Press (Next) On Today's Date Screen



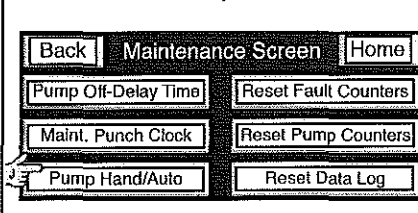
H: H. Press (Maintenance Menu) Button



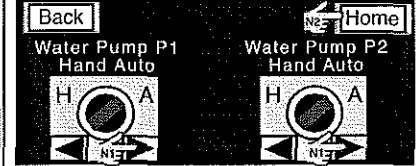
I: I1. Enter Password (1001) as shown below.



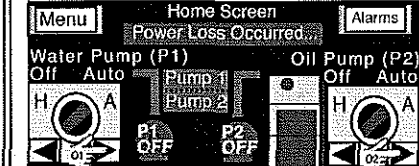
J: J. Press Pump Hand/Auto To Verify Position Of Switches. Note: Off Delay Is Preset To 10 Seconds



N: N1. Place All Switches In Auto
N2. Press Home Button



O: Place Pump HOA'S into Auto Mode And Do The Bucket Test (See Main Manual For Bucket Test)



After completing step **O** you have finished the quick start and are on the Home Screen

Back Will Always Take You To The Previous Screen

Home Will Always Take You To The Home Screen

OilTector[®]

Operation and Maintenance Manual
Duplex Pump Control Panel

Liberty Pumps[®]

Introduction

Read all instructions thoroughly. Installation of the OilTector must comply with all Federal, State and Local Codes, Regulations and Practices. The OilTector must be installed by qualified personnel familiar with all applicable local electrical and mechanical codes. Refer to the National Electrical Code (NFPA 70). Failure to properly install and test this product can result in personal injury or equipment malfunction.

The OilTector control system is designed and approved for the safe operation of pumping, alarming and monitoring of elevator sump pits, transformer vaults and leachate well applications. The OilTector will activate a pump to remove water from elevator pits in accordance with ASME A17.1. The OilTector stops the pump before oil or other harmful substances enter our water supply. Indicator lights will illuminate on the control panel for the following: power, pump running, high water, high oil. The panel has a set of auxiliary contacts that activate on power loss or high Oil/Water conditions. These contacts can be connected to the OilTector remote panel which contains audio/visual alarming along with auxiliary contacts for connection to building automation system or SCADA system. The recommended minimum sump size is Ø18" x 30" high.

Safety Guidelines



1. DO NOT USE WITH FLAMMABLE OR EXPLOSIVE FLUIDS SUCH AS GASOLINE, FUEL OIL, KEROSENE, ETC. DO NOT USE IN EXPLOSIVE ATMOSPHERES. PROBE/FLOAT SWITCH SHOULD ONLY BE USED WITH WATER.
2. DO NOT HANDLE THE OILTECTOR SYSTEM WITH WET HANDS OR WHEN STANDING ON A WET OR DAMP SURFACE OR IN WATER.
3. DISCONNECT ALL ELECTRICAL SERVICE BEFORE WORKING OR HANDLING THE OIL ALERT SYSTEM.
4. INCOMING VOLTAGE MUST MATCH OILTECTOR SYSTEM VOLTAGE.
5. TO PREVENT ELECTRICAL SHOCK AND EQUIPMENT MALFUNCTION, USE ONLY WITH A PUMP SUPPLIED WITH A GROUNDING CONDUCTOR AND GROUNDING-TYPE ATTACHMENT PLUG. BE CERTAIN TO PLUG THE OILTECTOR PANEL INTO A PROPERLY GROUNDED, GROUNDING-TYPE RECEPTACLE.
6. CONTROL PANEL AND ALARM MUST BE MOUNTED INDOORS. FOR OUTDOOR APPLICATIONS CONSULT FACTORY.
7. SECURE LEVEL SENSOR ON DISCHARGE PIPE AT A LEVEL THAT GUARANTEES PARTIAL PUMP SUBMERGANCE WHEN WATER LEVEL IS JUST BELOW THE "OFF" PROBE (THE LONGEST PROBE). (See Figure 5 on page 3 of this manual). FAILURE TO PROPERLY MOUNT THE LEVEL SENSOR MAY CAUSE THE PUMP TO ACTIVATE EVEN WHEN OIL IS PRESENT IN THE SUMP.
8. CAUTION! REMOVE ANY FLOAT SWITCH THAT IS CURRENTLY USED OR SUPPLIED WITH THE PUMP. IF THE FLOAT CANNOT BE REMOVED, SECURE SWITCH SO THAT IT IS ALWAYS ON.

Important

REFER TO THE INCLUDED ELECTRICAL SCHEMATIC FOR ALL INCOMING POWER CONNECTIONS AND PUMP CONNECTIONS WHICH MAY INCLUDE OPTIONAL FIELD WIRING CONNECTIONS.

This Manual Is Used With ELV-D and ELV-DT Series Oil Tector Control Panels.

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DWG# 6952000A

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OilTectorSM

Operation and Maintenance Manual
Duplex Pump Control Panel

Liberty Pumps[®]

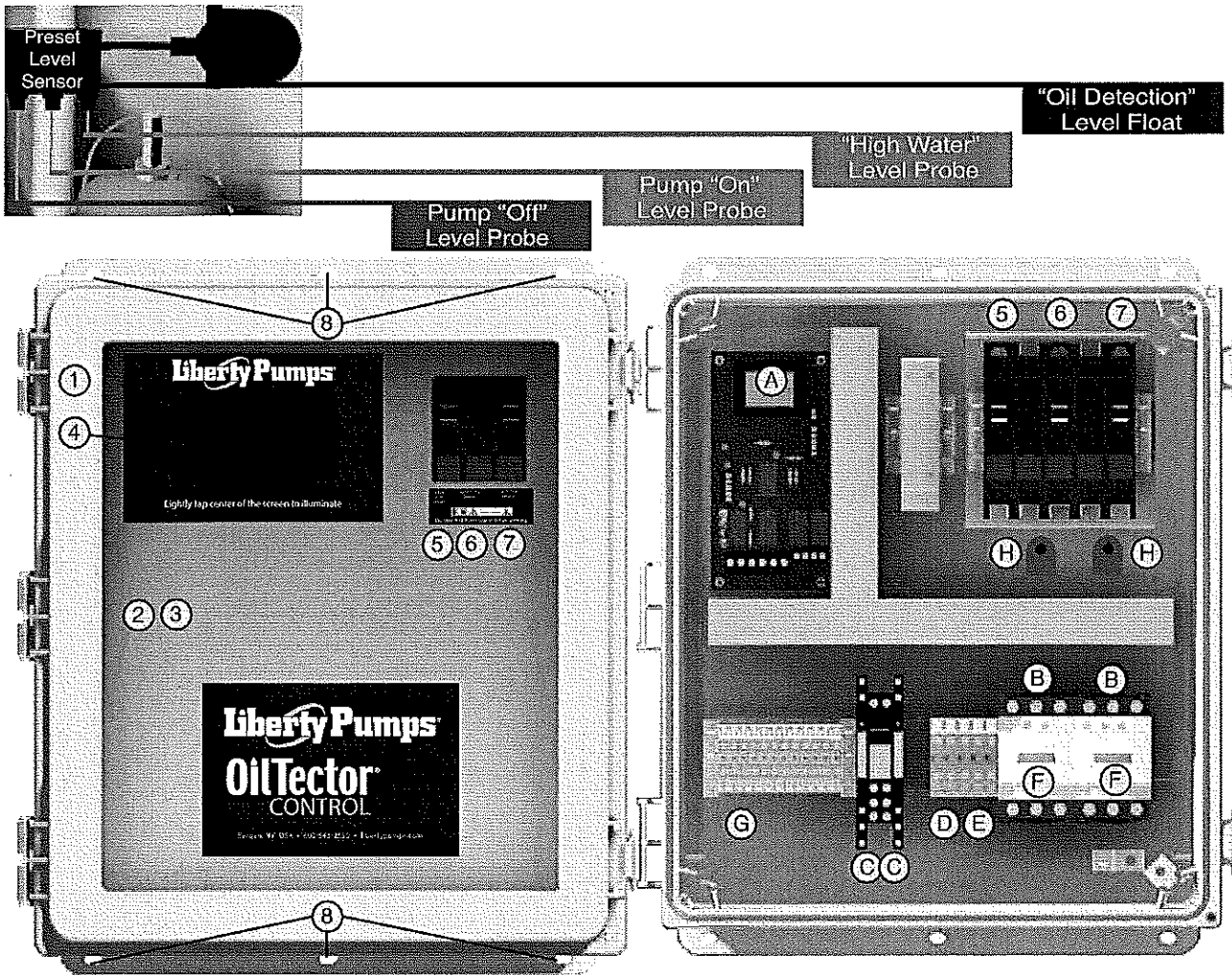
Oil Tector Duplex Pump Panel And Preset Level Sensor Specifications

External & Inner Dead Front Door Components

- ① Nema 4X Enclosure
- ② Clear Cover To View Inner Door
- ③ Inner Dead Front Door
- ④ HMI (Human Machine Interface) Touchscreen
- ⑤ Control Power Circuit Breaker
- ⑥ Water Pump Breaker
- ⑦ Oil Pump Breaker
- ⑧ Mounting Brackets

Internal Components

- Ⓐ Circuit Board & Status Indicator Lights
- Ⓑ IEC Motor Contactors
- Ⓒ Control Relays
- Ⓓ Incoming Alarm Power Terminals
- Ⓔ Incoming Pump Power Terminals
- Ⓕ Pump Terminals
- Ⓖ Sensor Terminals
- Ⓗ Current Sensors - Pump Run Detection



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Installation of the Pump Disconnect Junction Boxes

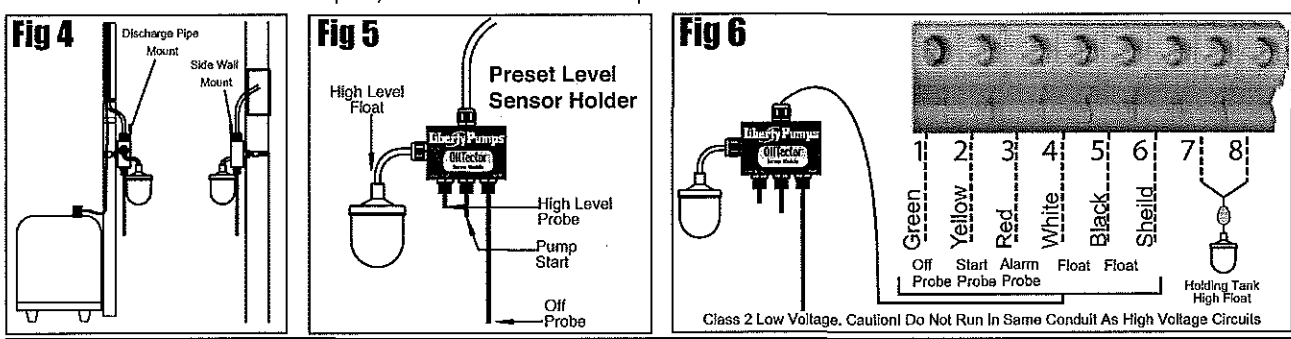
1. Determine mounting location for the disconnect enclosure. Refer to all federal, state and local codes.
2. Drill appropriate holes for cable connectors/conduit fittings for the pump and incoming power for the pump.
3. Connect pump power cable to disconnect switch "load" terminals – use pump wiring label to identify terminals.
4. Connect incoming line power to disconnect switch "line" terminals – use line wiring label to identify terminals.
5. Place Handle to "ON" when ready to apply power to pumps. Note: Power is coming from pump control panel.

Installation of the Control Panel.

1. Determine mounting location for the control panel – Refer to all federal, state and local codes. If splicing is required, the sensor wires must be run in separate conduit as they are on a low voltage, class 2 circuit. Recommend 3 Wire-twisted pair cable 22 to 18 AWG.
2. Determine conduit entrance location on control panel. Make sure all conduits are sealed and waterproof.
3. Refer to schematic for all electrical connections.

Installing Preset Level Sensor & Holding Tank High Level Float Switch.

#1. Review figures 4, 5 & 6. #2. Attach sensor holder to discharge pipe or separate pipe (mounted to side wall) using the stainless steel clamp. Make sure sensor is clear of inlet water and at least 2 inches away from any conductive material. Make sure the bottom probe (off level) is at the same height as the top of the pump or just slightly below ensuring submergence of the pump. (Fig 5). #3. Route the five conductor cable to the control panel through sealed conduit connections. #4. Connect the wires from the level sensor to the terminal strip inside the control panel. See figure 6. #5. If splicing on sensor cable is required: A. For any splicing longer than 100 feet, consult factory. B. Use liquid tight junction boxes & appropriate liquid tight connectors and/or conduit. C. Do not mix high & low voltage circuits in same junction box or conduit. D. For level sensor splice, it is recommended to use 3 pair-twisted 22 AWG shielded cable.



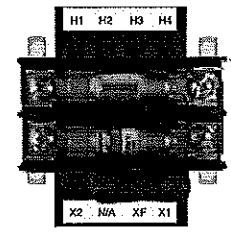
Additional Installation/Settings for 3 Phase Panels

1. Set your transformer tap.

Always refer to included electrical schematic to verify wiring and function. Your transformer is used to step power down to the control voltage required for this control panel. Your transformer has to be wired to the correct voltage on the top of your transformer. H4, on the top right will have one leg connected to it when you get it from the factory. The other wire should connect to the corresponding voltage. See the example to verify which terminal you need to connect the other leg of power to.

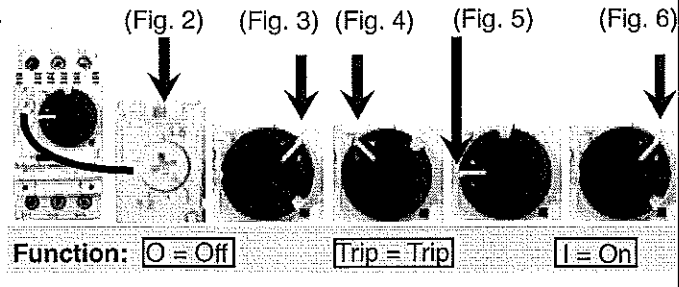
WARNING: Both legs of power must be connected on the top of the transformer before powering up the panel.

- H1 = 460 VAC
- H2 = 230 VAC
- H3 = 208 VAC
- H4 = Pre Wired at Factory



2. An MPS Switch is a combination of a circuit breaker & an overload.

Before Using: Set the MPS dial for each pump to the FLA (Full Load Amps) of each pump. Use a phillips head screw driver to adjust the MPS dial. Set arrow on dial to correct amps. (Fig. 2). When the panel is ready for operation, place each switch in the on position (Fig. 3) **Note:** If pump trips (Fig. 4), Reset by turning counter clockwise to the off position (Fig. 5), then turn clockwise to the "on" position. (Fig. 6) **Note:** Other brands of MPS Switches operate in a similar manner.



OilTector[®]

Operation and Maintenance Manual
Duplex Pump Control Panel

Liberty Pumps[®]

Installation of the Remote Alarm Panel

1. Determine mounting location of the remote alarm panel – Note: the alarm panel can be mounted up to 2,500 feet from the control panel.

Introduction



Before proceeding with the installation or operation of the OilTector Remote Alarm, read all instructions thoroughly, as well as complying with all Federal, State and Local Codes, Regulations and Practices. The OilTector Remote Alarm must be installed by qualified personnel familiar with all applicable local electrical and mechanical codes. Refer to the National Electrical Code (NFPA 70). Failure to properly install and test this product can result in personal injury or equipment malfunction.

Safety Guidelines



1. DO NOT USE WITH FLAMMABLE OR EXPLOSIVE FLUIDS SUCH AS GASOLINE, FUEL OIL, KEROSENE, ETC. DO NOT USE IN EXPLOSIVE ATMOSPHERES.
2. REMOTE ALARM MUST BE MOUNTED INDOORS. FOR OUTDOOR APPLICATIONS CONSULT FACTORY.

Description of Operation

The OILTECTOR REMOTE ALARM is powered by 120 VAC coming from standard wall outlets and is transformed to 9 VDC.

The OilTector Remote Alarm activates on High Oil or High Water in the pump basin and activates High Level in the holding tank. Separate dry contacts for High Oil, High Water and High Holding Tank can be connected to an Auto Dialer, a BAS (building automation system) or SCADA system.

Tools, Supplies and Requirements for Installation (Not Included)

- #1. Phillips screw driver
- #2. (Qty 2) #6 self tapping screws
- #3. Access to 120 VAC power receptacle
- #4. Optional \ plastic anchor if mounting to sheet rock
- #5. Optional 9V battery (used for battery back up if power goes out)
- #6. Optional Wire stripper (used if you need to strip wire to connect to a BAS or SCADA system)
- #7. Optional needle nose pliers if using aux contacts

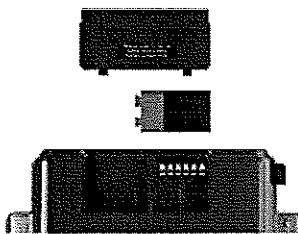
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Installation of the OilTector Remote Alarm Continued

1. To install/replace the battery for the backup power feature, remove the access cover (Fig. 1) and install 9 VDC battery (Fig. 2). After installing battery, press the test button (Fig. 3) to activate the alarm to make sure the battery works properly. The power on indicator, high oil indicator, high water indicator and holding tank high level indicator lights should illuminate and the buzzer should annunciate. If using the auxiliary contacts, leave cover off until step 3 is completed. If you are not using them, replace the access cover (Fig 4).



(Fig. 1)



(Fig. 2)

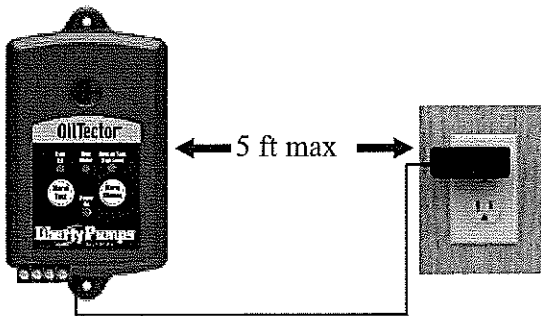


(Fig. 3)



(Fig. 4)

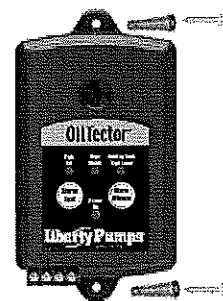
2. Determine mounting location for the OilTector Remote Alarm. Make sure power outlet is within 5 feet of the alarm (Fig. 5). Make sure the outlet is in on a separate circuit breaker from any other device and not on a switched receptacle to maintain power integrity. Mount the alarm using two #6 self tapping screws (not included) (Fig. 6). Use #8 plastic anchor if mounting to sheet rock. (Fig. 7).



(Fig. 5)



(Fig. 6)



(Fig. 7)

Installation of the ALARM UNIT Continued

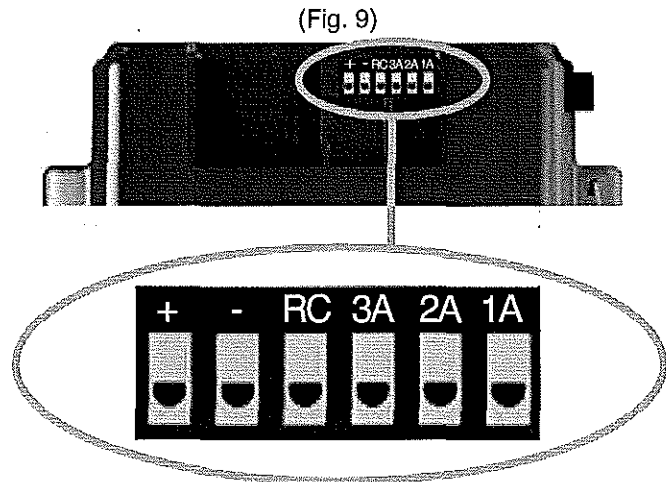
3. Continued. If connecting to existing alarm security system or (BAS) system leave terminals + & - open and use 18 gauge 4 conductor wire to connect the existing product to terminals RC,3A,2A,1A (Fig. 9). When connected, replace the access cover and pull the wire through the knockouts on the access cover (See Step #4) . **Caution!** - When installing wires, route all wires away from sharp objects & internal components.

Terminals RC & 3A
 High Holding Tank

Terminals RC & 2A
 High Water/Trouble

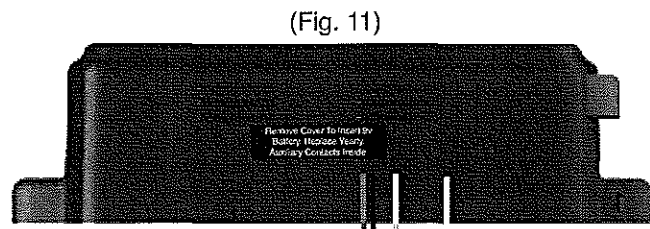
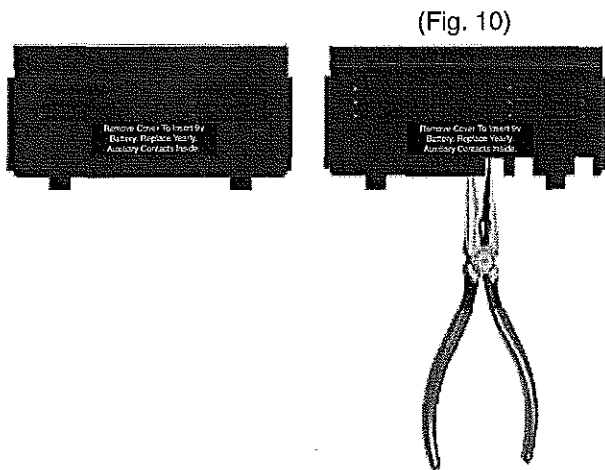
Terminals RC & 1A
 High Oil

Class 2, 24 VDC/VAC (50/60 HZ)
 100 Milliamps **MAXIMUM**



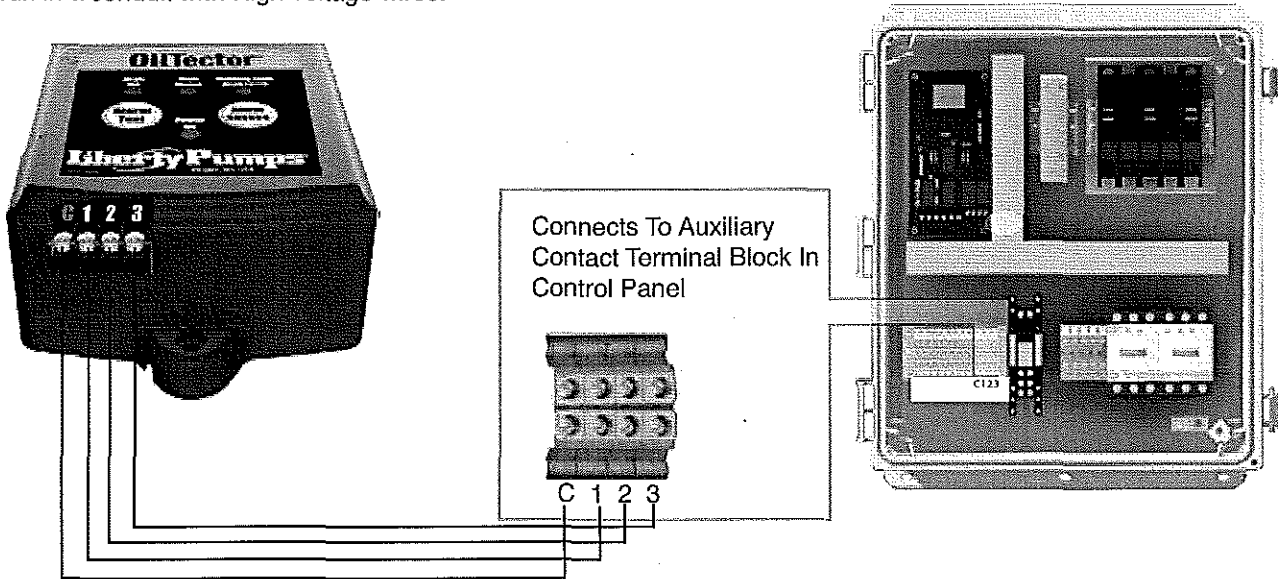
NOTE: The Auxilliary Contacts on the Oil Tector Remote Alarm are Normally Open only.

4. Use a needlenose pliers to remove the desired "break away tabs" from the access cover (Fig. 10). Lightly pull and twist off tab (s). Replace access cover and run wires through the "break aways" (Fig. 11)

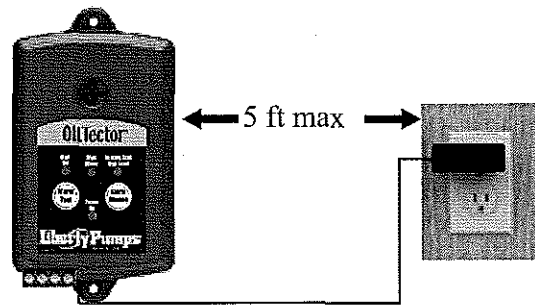


Installation of the OilTector Remote Alarm Continued

6. Connect the OilTector Remote Alarm to the auxiliary contacts marked C, 1,2,3 in the control panel. C on the alarm to C in the panel. 1 on the alarm to 1 in the panel. 2 on the alarm to 2 in the panel & 3 on the alarm to 3 in the panel. Use 18 awg, 4 conductor cable. CAUTION: The auxiliary contacts are low voltage wires and cannot be run in a conduit with High voltage wires.



6. Plug in the power supply into a 120VAC, 50/60 HZ standard wall outlet. The green "Normal" light should come on.



7. Test the system by pressing the "Alarm Test" button. The buzzer, the red "High Water" light, the red "High Oil" light and the red "Holding Tank High Level" will be "on". Release the "Alarm Test" button and the alarm buzzer and indicator lights will automatically reset. Test product weekly to ensure system integrity.



OilTector[®]

Operation and Maintenance Manual
Duplex Pump Control Panel

Liberty Pumps[®]

Description And Sequence Of Operation

The HMI / PLC program is designed to run and data log a duplex (two pump) application, with a separate oil storage tank. The OilTector provides the most accurate data logging of how much water or how much oil has been pumped by using current sensors. The pumps run depending on the current condition of the OilTector controller. Also there is a storage tank level display that is time based. Using the pump gallons per minute, and the dimensions of the tank that is entered by the user the level display is only a guesstimate.

After all terminal connections are made, and supply voltage is verified.

- 1.) Power up control panel.
- 2.) Navigate to the Configure Oil Tank screen.
- 3.) Configure the controller for oil storage tank volume.
 - 3a. Enter the pump gallons per minute.
 - 3b. Select what type of storage tank is being used.
 - 3c. Enter the dimensions of the tank.
- 4.) Navigate to the Maintenance Menu > Pump/Valve Control and verify the HOA's are in the correct position.

Hand Mode:

When the a pump Hand / Auto switch is placed in "Hand" mode the corresponding pump will run.

Auto Mode:

When the pump Off / Auto switches are placed into auto mode, the corresponding pump will be called to run by the condition of the oil alert sensor. If water is reaches the start or high water probe and the sensor doesn't detect oil it will call for pump 1. If the float of the sensor is up and there is no conductivity between the stop and start probes this means oil is in the pump basin and the controller will start pump 2. The pump will continue to run after the float drops until the p2 off-delay time setting is met. (Factory set for 5 seconds.) The off-delay setting is password protected but can be changed per application. This allows the pump to empty the basin of oil into the oil storage tank. If the controller doesn't see a run confirm for the pump in 5 seconds it will give a pump fail message on the screen. This fault must be reset by going to the main menu, selecting

Alarm Conditions

High Level, Oil Detected, Pump Fail Alarms:

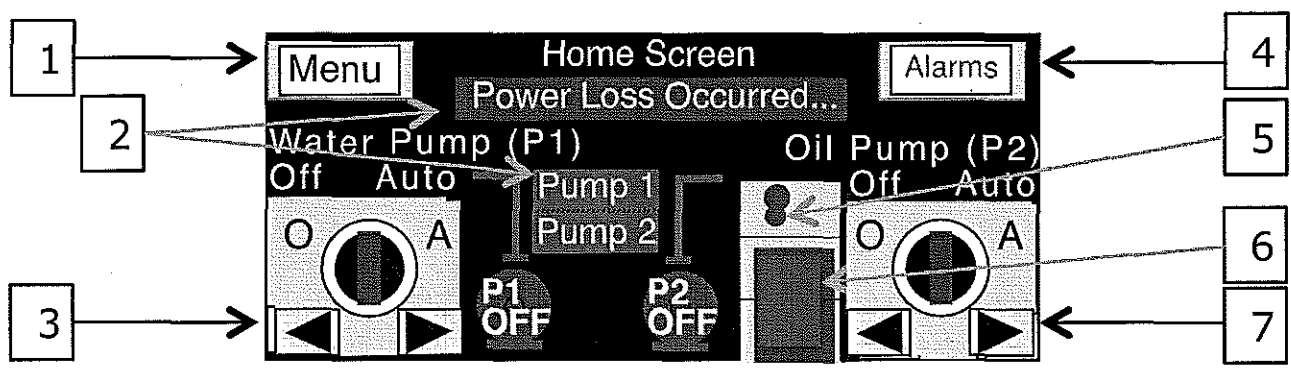
The alarm will trigger under these conditions high water, oil detection, high storage tank level, or if a pump failure. These alarm conditions will cause a dry set of contacts to close when active allowing the user to incorporate a remote alarm. The high levels and oil detection alarms will reset automatically when the condition is in the normal state. The pump fail and high storage display can be reset by navigating to the Menu > Reset Faults. The alarm buzzer may be silenced by pressing the alarm "silence" button.

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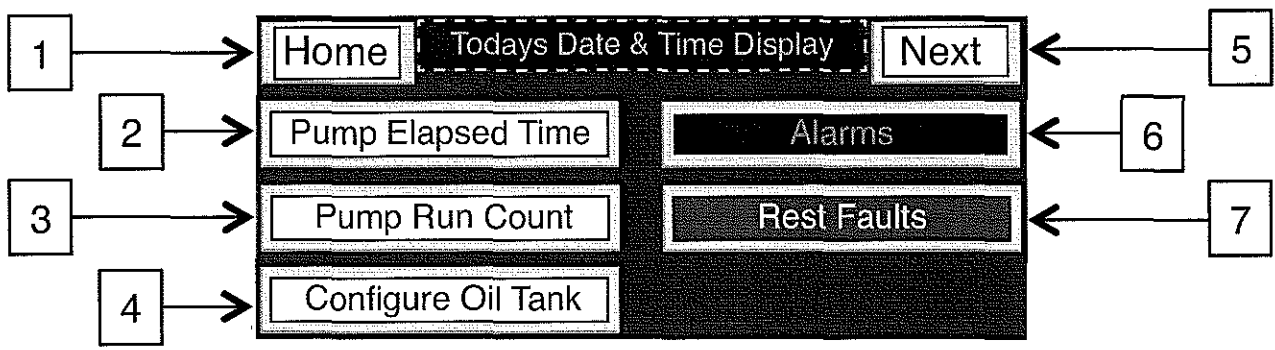
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Home Screen



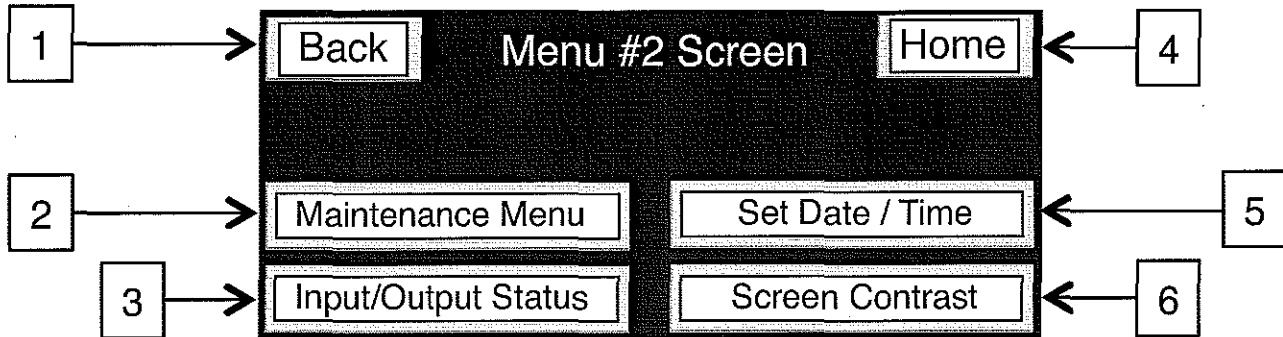
1. Press to go to the main menu screen.
2. Displays alarm banners for pump fail, high water, oil alarm, power fail etc.
3. Pump 1 water pump Off / Auto selector switch.
4. Press to go to the alarm count and history screen.
5. Red dot blinks if the high level float is activated.
6. Shows the estimated amount of oil in the storage tank based on pump run time.
7. Pump 2 oil pump Off / Auto selector switch.
8. Displays the status of the pump Green=ON, Red=STOP.

Main Menu Screen



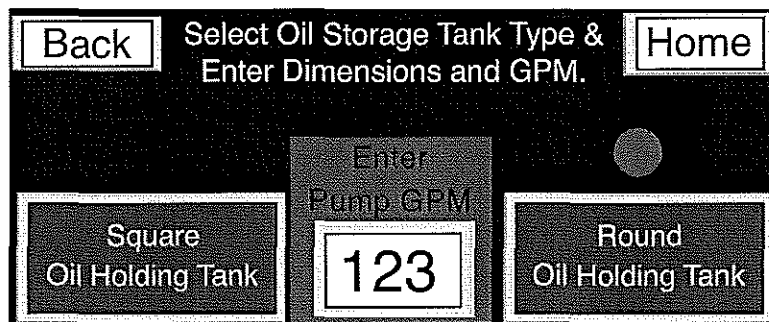
1. Press to go back to the home screen.
2. Press to go to the pump elapsed time meter screen.
3. Press to go to the pump run count screen.
4. Press to go choose the storage tank type round or rectangle and enter the tank dimensions.
5. Press to go to menu screen 2.
6. Press to go to the alarm count and history screen.
7. Press to go to the screen that will allow you to reset a pump / solenoid fail, or full tank display.

Menu Screen #2



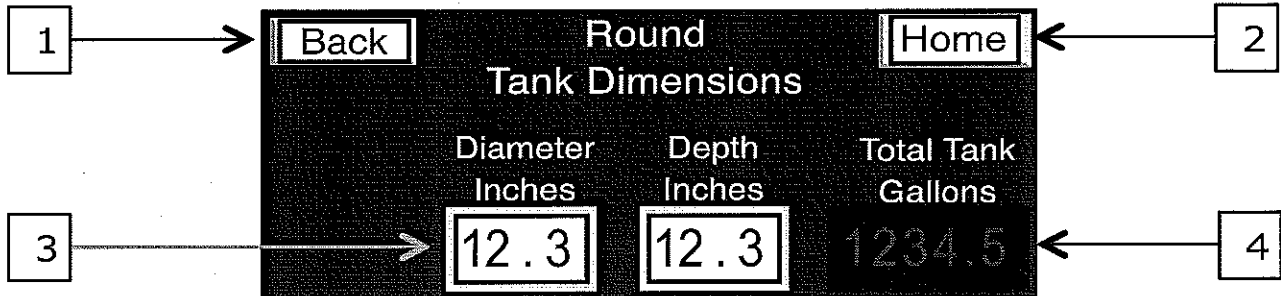
1. Press to go back to the previous screen.
2. Press to go to the maintenance menu screen. *password protected (1001)
3. Press to go view the status of the inputs and outputs.
4. Press to go back to the home screen.
5. Press to update the current date / time.
6. Press to change the brightness of the display.

Oil Storage & Pump GPM Screen



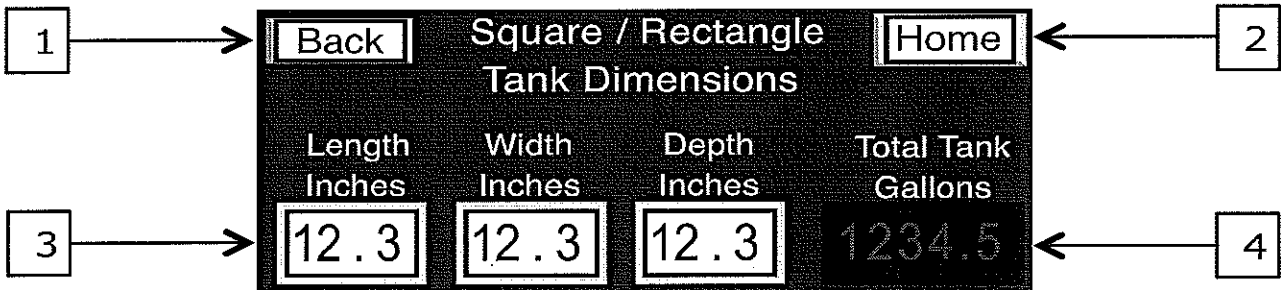
1. Press to go back to the home screen.
2. Press to return to the home screen.
3. Green dot indicates which tank type is chosen.
4. Enter the pump nameplate gallons per minute.
5. Press to enter the dimensions of your square oil storage tank.
6. Press to enter the dimensions of your round oil storage tank.

Round Tank Dimensions Screen



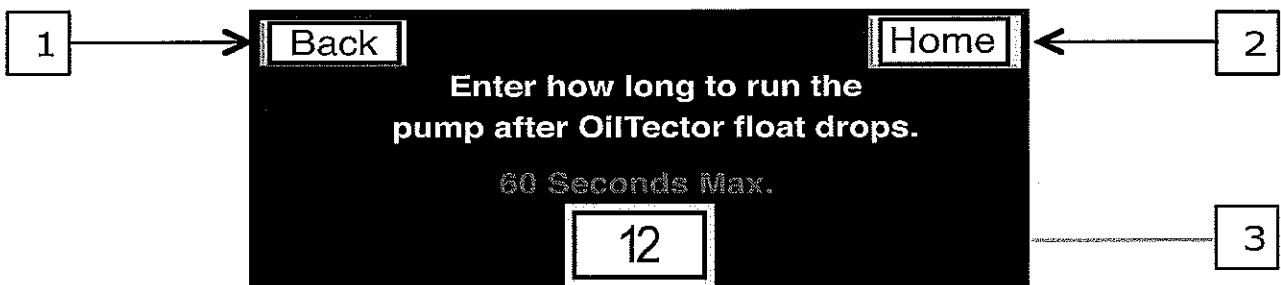
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to enter the measurements of the diameter and depth of the storage tank.
4. Displays the total gallons of the tank based on the dimensions entered.

Square/Rectangle Tank Dimensions Screen



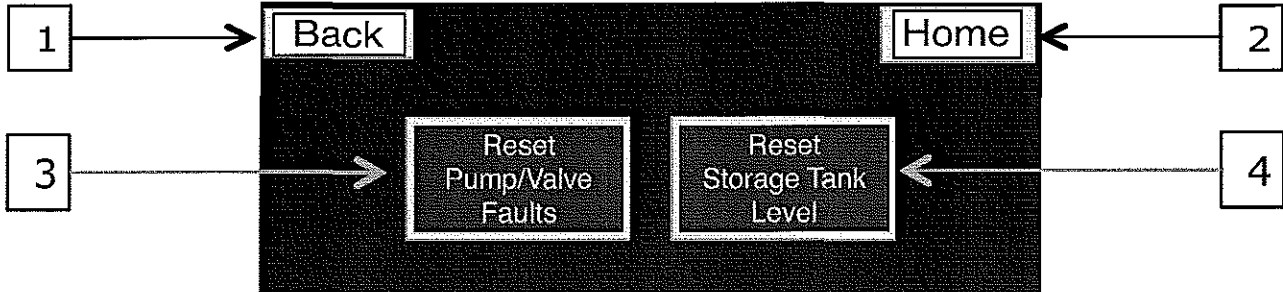
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to enter the measurements of the Length, Width, and Depth of the storage tank.
4. Displays the total gallons of the tank based on the dimensions entered.

Oil Detected Run Time Screen



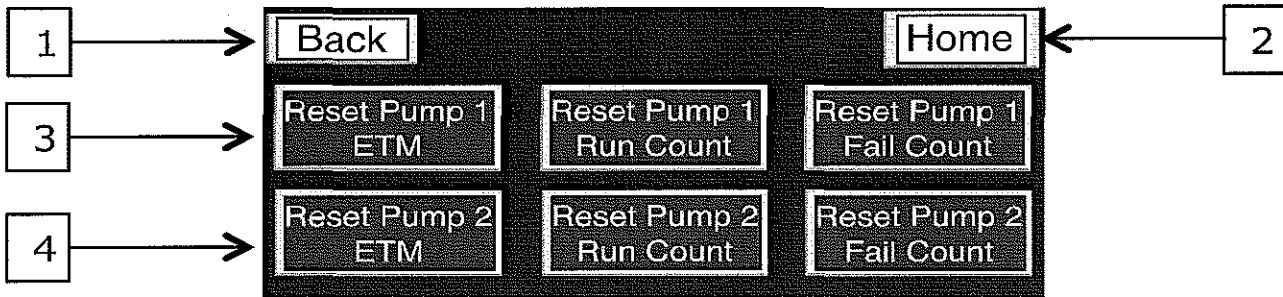
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to enter the amount of time you want the pump to run if oil is detected. (60 Sec. Max.)

Pump / Storage Reset Screen



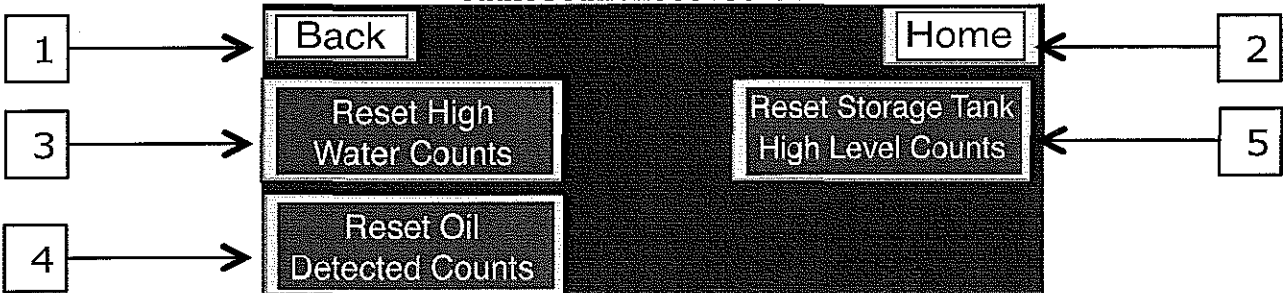
1. Press to go back to the previous screen.
2. Press to go back to the main menu screen.
3. Press to reset a pump fail fault or a solenoid fault.
4. Press to reset the level display of the storage tank.

Pump Information Reset Screen



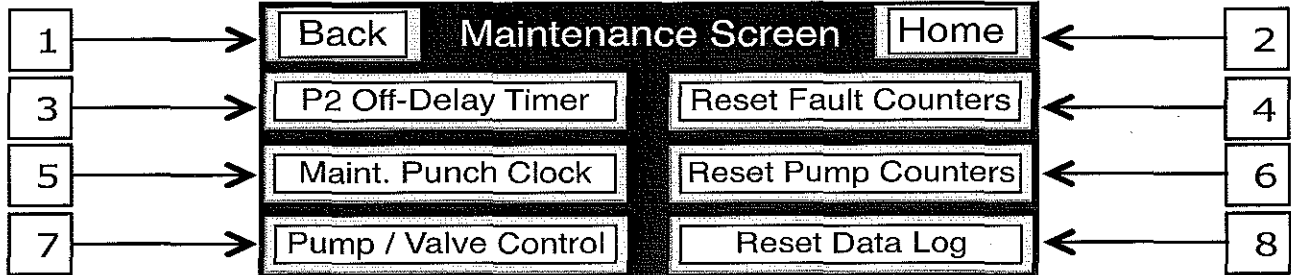
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to reset pump 1 information such as elapsed time meter, run count, pump fail count.
4. Press to reset pump 2 information such as elapsed time meter, run count, pump fail count.

Fault Count Reset Screen



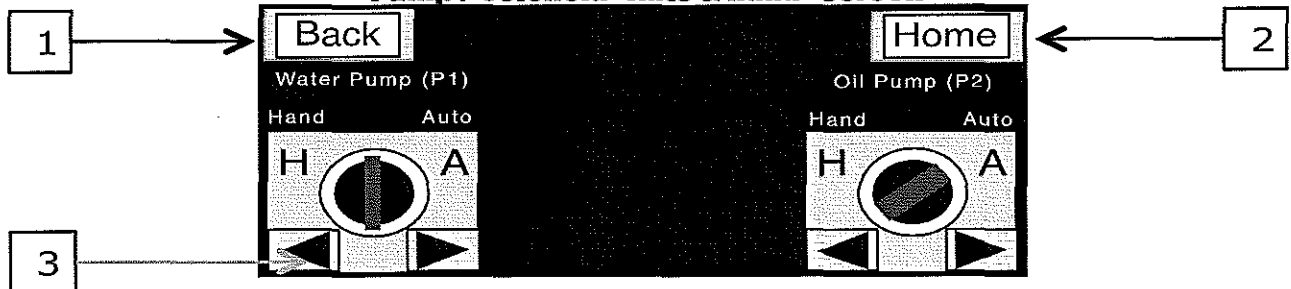
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to reset the high water alarm counts.
4. Press to reset the oil alarm counts.
5. Press to reset the storage tank high level counts.

Maintenance Menu Screen



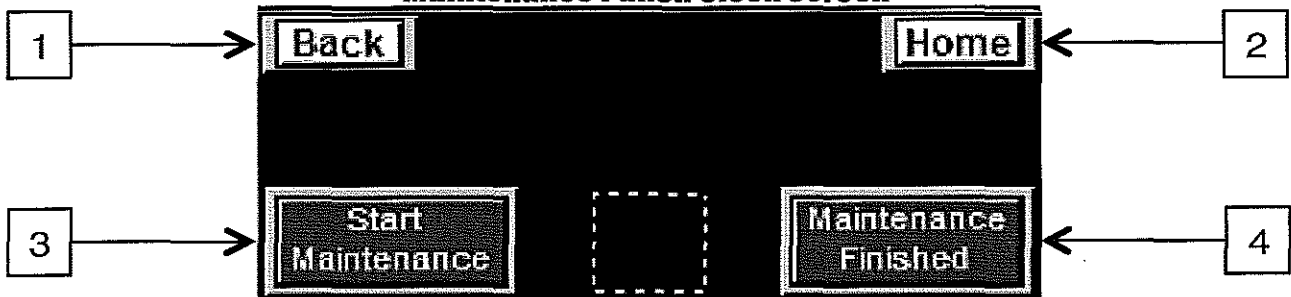
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to go to the pump run off-delay timer setting screen. *Note: This value is how long the pump will run after the oil alert float drops, if oil is detected. Factory set for (5 sec.)
4. Press to go to the fault counters reset screen.
5. Press to go to the maintenance punch clock screen.
6. Press to go to the pump information reset screen.
7. Press to go to the pump hand/auto control screen.
8. Press to go to the pump hand/auto control screen.
9. Press to go to the data log reset screen. *password protected (3333)

Pump / Solenoid "Auto & Hand" Screen



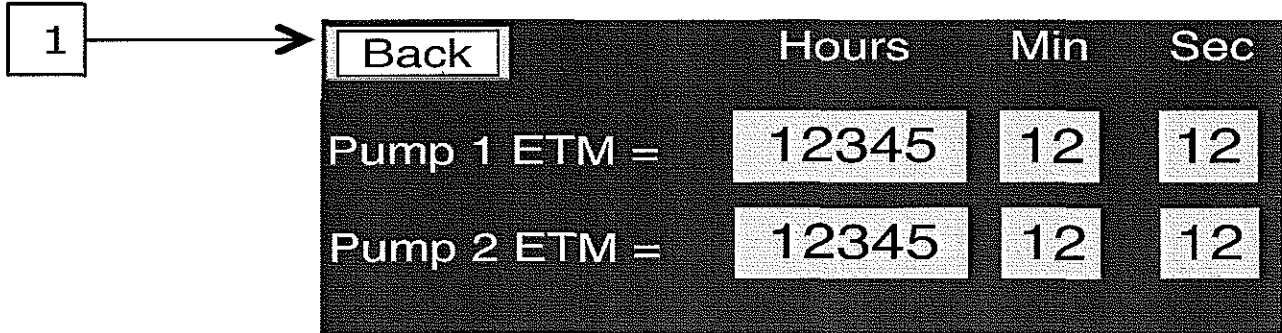
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to toggle the Hand / Auto control for the pumps.

Maintenance Punch Clock Screen



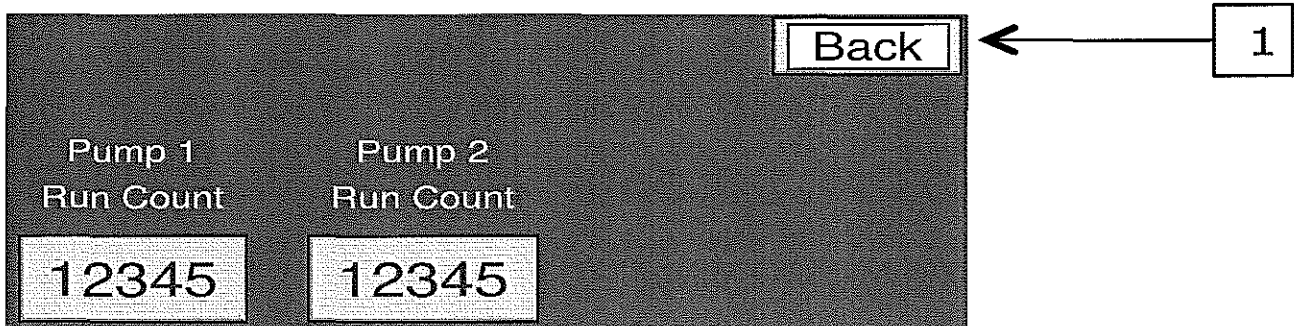
1. Press to go back to the previous screen.
2. Press to return to the home screen.
3. Press to start the maintenance punch clock, a stopwatch image will blink while activated.
4. Press to stop the maintenance punch clock, the time will then be stored to the USB flash drive if inserted.

Pump Elapsed Time Meter Screen



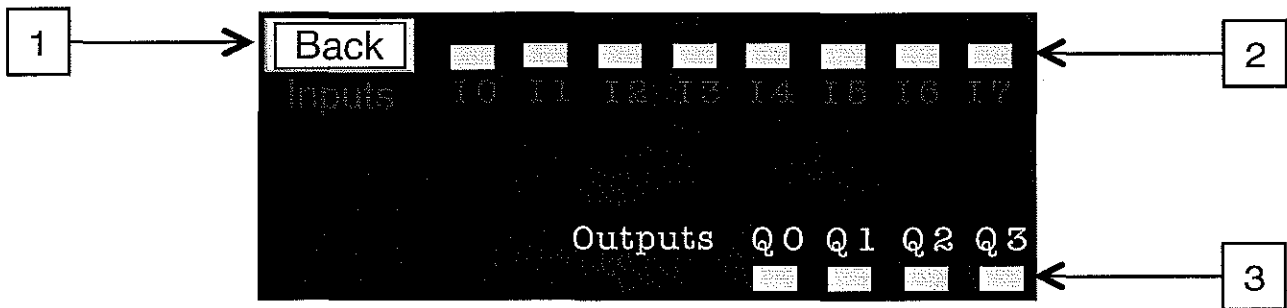
1. Press to go back to the previous screen.
2. This screen allows you to view the run time of each pump.

Pump Run Count Screen



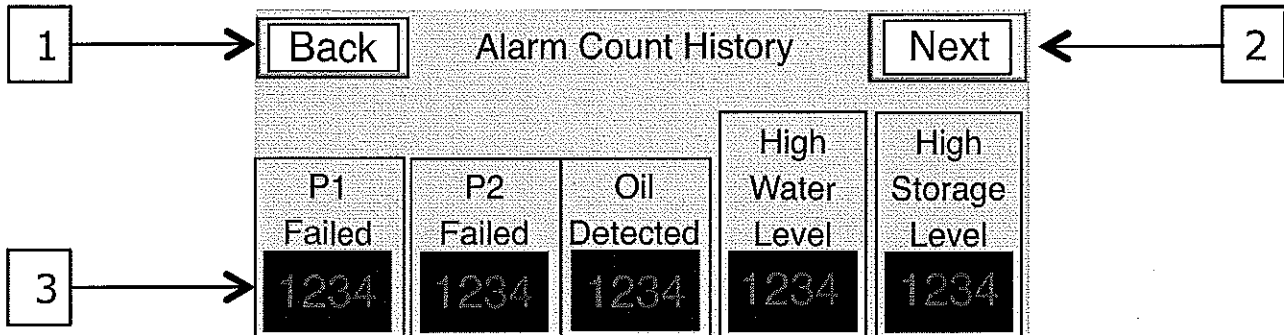
1. Press to go back to the main menu screen.
2. This screen allows you to view the pump run counts for each pump.

Input / Output Screen



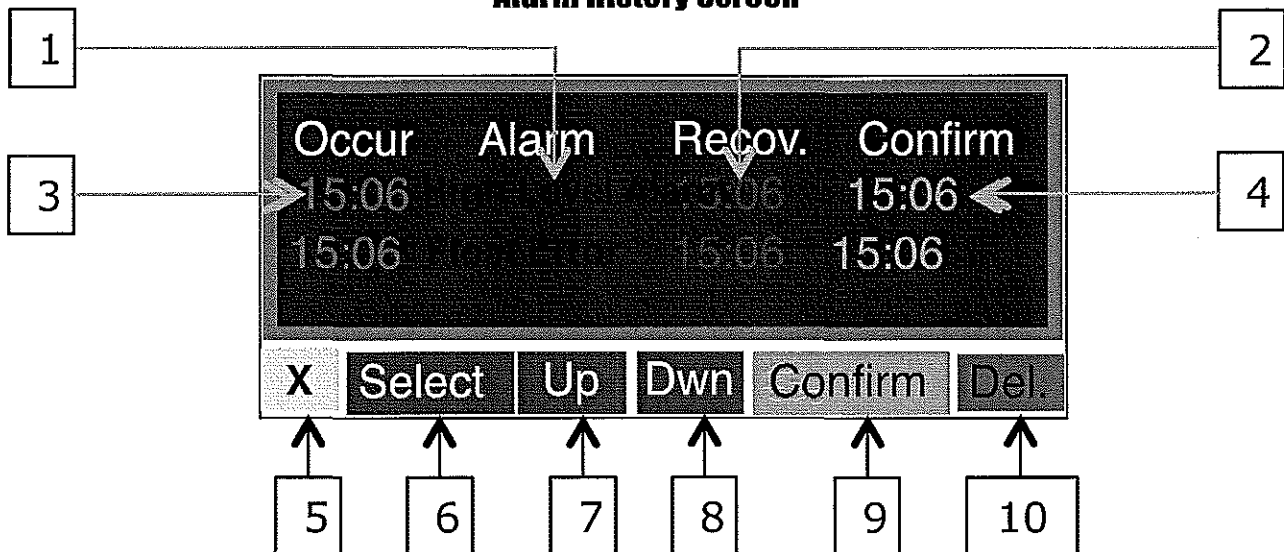
1. Press to go back to the previous screen.
2. Displays if the input is off or on. "On = Green".
3. Displays if the output is off or on. "On = Green".

Alarm Count History Screen



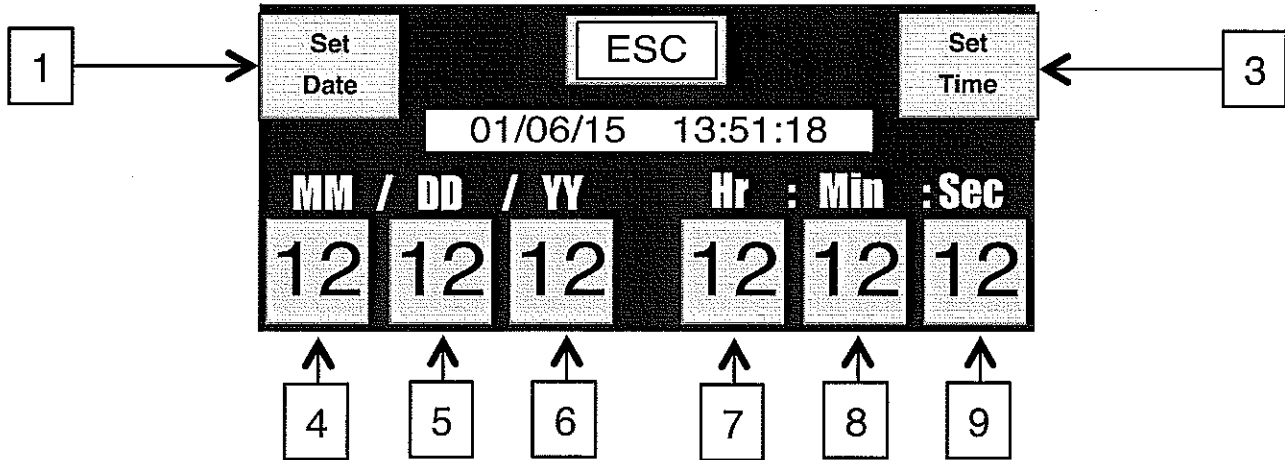
1. Press to go back to the previous screen.
2. Press to go view current and past alarm conditions.
3. Displays the alarm count history for the corresponding fault.

Alarm History Screen



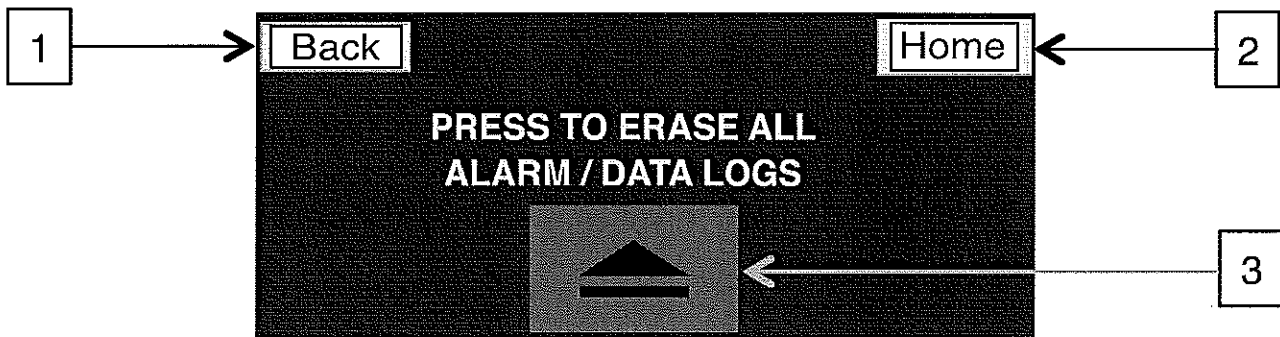
1. Displays the description of the most recent alarm.
 2. Displays the time the alarm was recovered.
 3. Displays the time that the alarm occurred.
 4. Displays the time the time the alarm was confirmed/acknowledged.
 5. Press to go back to the main menu screen.
 6. Press to highlight the alarm history list. *note: Must press select button before trying to scroll, confirm, or delete alarms from the list.
 7. Press to scroll up through the alarm history list.
 8. Press to scroll down through the alarm history list.
 9. Press to confirm alarm(s).
 10. Press to delete the alarm that is selected from the list.
- *Note: This information can be saved to the USB flash drive if inserted.

Date / Time Screen



1. Press to set the values from 4,5,6 into the current date.
2. Press to go back to the previous screen.
3. Press to set the values from 7,8,9 into the current time.
4. Press to enter month.
5. Press to enter day.
6. Press to enter year.
7. Press to enter hour. Based on a 24 hour clock
8. Press to enter minute.
9. Press to enter second.

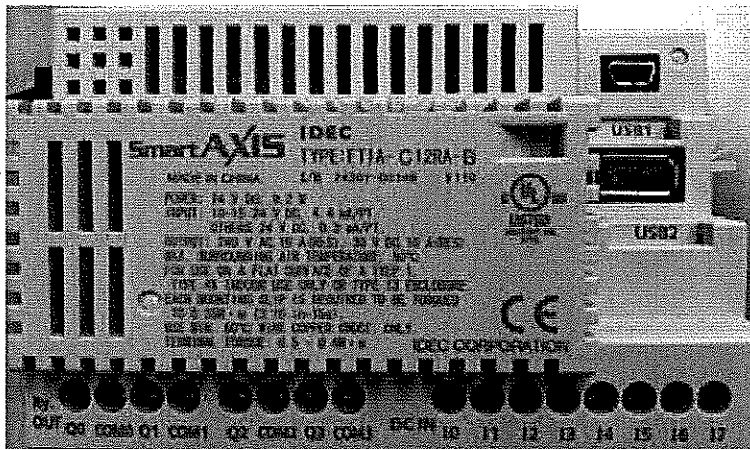
Data Reset Screen



1. Press to go back to the previous screen.
2. Press to go back to the home screen.
3. Press to delete all alarm and data log values.

Data Logger

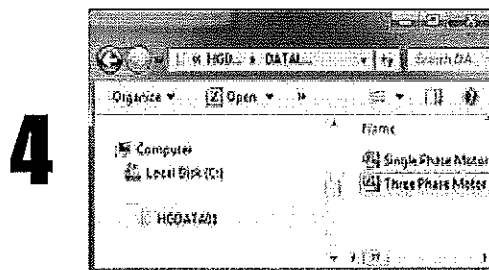
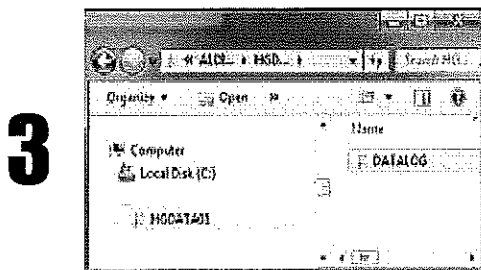
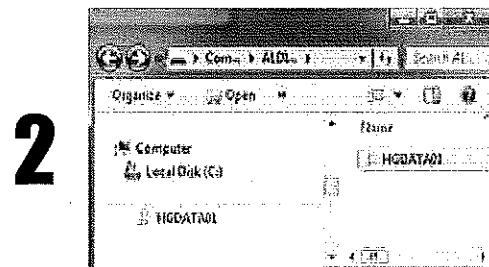
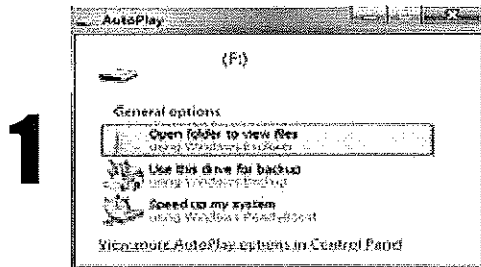
The user can insert a flash drive into the USB2 port on the back of the HMI to retrieve data for the pump and valves. These files are saved as csv. files.



HMI USB2 Port

How To View Data

1. After inserting the USB into your PC this dialog box will appear open folder to view files.
2. Click on the HGDATA01 folder.
3. Click on the DATALOG folder.
4. Click on which csv. file you want to view.



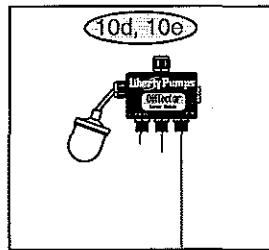
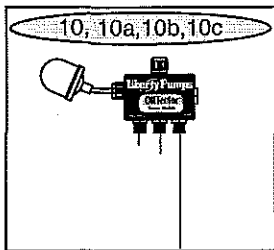
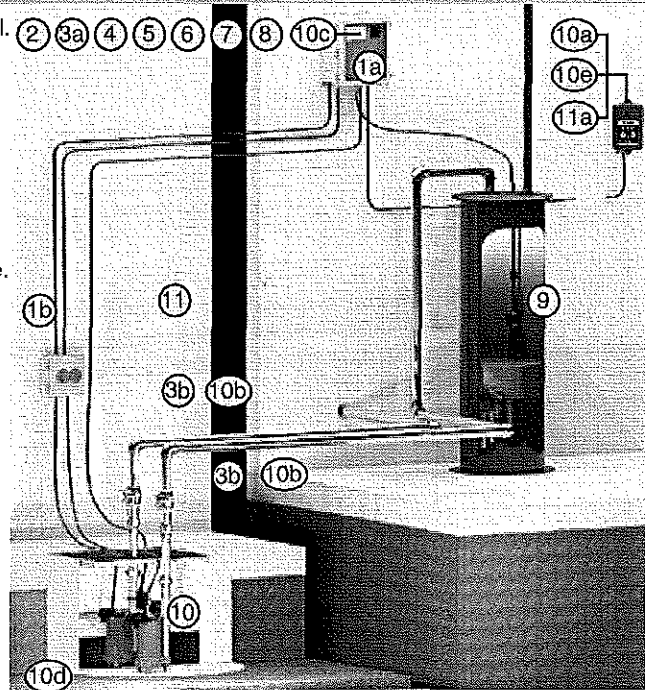
OilTector[®]

Operation and Maintenance Manual
Duplex Pump Control Panel

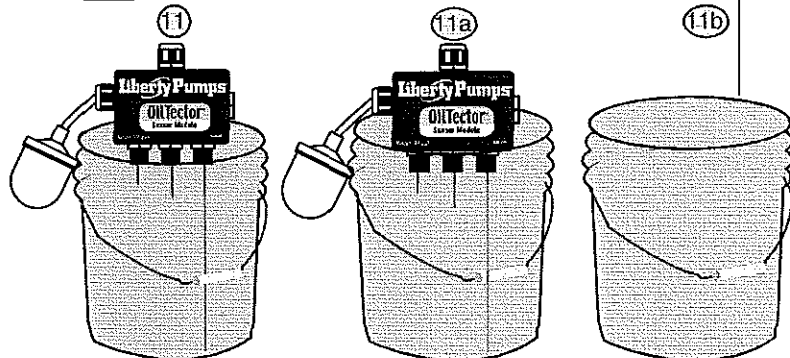
Liberty Pumps[®]

Once installation is completed, test the operation of the control panel and all essential components.

- 1a. & 1b. Verify Incoming power then power up the control panel.
2. Navigate to the Maintenance menu enter the password 1001 and then go to pump / valve control.
- 3a. & 3b. Ensure the correct pump starts and stops when corresponding selector is toggled from auto / hand modes.
4. Check the motor voltage, amps, and rotation by toggling the auto / hand selector.
5. Place all of the selectors into "auto" mode and navigate to the configure oil tank screen.
6. Enter the pump gallons per minute from the pump nameplate.
7. Select round or rectangle oil storage tank then enter the dimensions of the tank by pressing the corresponding button.
8. Navigate to the home screen place pump off / auto into the auto mode.
9. Raise storage tank float & verify high storage level alarm activates then lower float & alarm resets after 3 seconds.
10. With the probes on the oil sensor out of the water, raise & lower the float on the sensor. Verify the following
 - a. When raised oil detected alarm should activate.
 - b. When raised pump #2 starts
 - c. When raised the oil tank level display should start rising.
 - d. When lowered the pump should run approximately 5 seconds, or the value of the pump off-delay setting.
 - e. When lowered the oil detected alarm should deactivate.



11. Slowly lower the sensor probes into water. When middle probe makes contact with the water the water pump will start.
 - a. Keep slowly lowering the sensor until the short probe is making contact with the water and after 5 seconds the high water alarm should activate.
 - b. Then slowly raise the sensor from the water, the pump should keep running until the long probe is out of the water.



Note: If using a bucket for the test make sure there is a ground wire placed in the water or hold & press the tact switch on the circuit board when lowering probes in water. Release tact switch after all probes are out of the water.

Liberty Pumps[®]

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Manual 6952000A
DWG# 6952000A

7000 Apple Tree Avenue, Bergen, NY 14416 Phone: (800) 543-2550-Fax: (585) 494-1839-www.libertypumps.com

Trouble Shooting

Symptom:	Possible Cause:	Action:
Pump does not start	No source power to panel Control breaker turned OFF Pump breaker or disconnect turned OFF Defective contactor Loose level sensor wires Pump failure Oil storage tank is full HMI selector switch is in OFF mode	Verify source power Turn breaker ON Turn breaker & disconnect ON Replace contactor Tighten sensor connections Replace defective pump Empty tank and reset HMI fault Select AUTO mode in HMI
Pump runs continuously once started with the sensor	Induced voltage on sensor wires	Separate sensor cable from pump power, maintain a minimum separation of 2"
Pump turns off before bottom probe	Poor pump or system ground	Verify good ground for system

OilTector[®]

**Operation and Maintenance Manual
Duplex Pump Control Panel**

Liberty Pumps[®]

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Liberty Pumps[®]

Page 20 of 20
Manual 6952000A
DWG# 6952000A

7000 Apple Tree Avenue, Bergen, NY 14416 Phone: (800) 543-2550-Fax: (585) 494-1839-www.libertypumps.com



Certificate of Compliance

Certificate: 1097876 (082005_0_000)

Master Contract: 154610

Project: 70050560

Date Issued: 2016-03-01

Issued to: Liberty Pumps, Inc.
7000 Apple Tree Ave
Bergen, New York 14416
USA

Attention: Jeffrey Waterman

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Issued by: Colin Moorhouse
Colin Moorhouse

PRODUCTS

CLASS - C385101 - LIQUID PUMPS

CLASS - C385181 - LIQUID PUMPS-Certified to US Standards

For details related to rating, size, configuration, etc. reference should be made to the CSA Certification Record or the descriptive report.

PART A - Submersible sewage pumps, household, Series LE50 and PSEW50; consisting of Model LE51A/M, PSEW51A/M and LE51LP, rated 115V, 60Hz, 12, 13 or 13.5A and Model LE52A/M, PSEW52A/M and LE52LP, rated 208-230V, 60Hz, 6.8A. Model numbers with "C" suffix use rubber power cords. Suffix "-2" indicates use of 20' or 25' power cords.

PART B - Submersible sewage pumps, household, Series LE40, PSEW40, consisting of Models LE41M/A, PSEW41A/M, LE41LP and C40SW or PSEW41LP rated 115V, 60Hz, 12 or 13A, Models LE42M/A, rated 208/230 V, 60Hz, 6.8A. Model numbers with "C" suffix use rubber power cords. Suffix "-2" indicates use of 20' or 25' power cords.

PART C - Submersible sump and effluent pumps, domestic cord connected, Series 250 or SS310, 270 or SS320, rated 120V, 60Hz, 7.9A or 5.2A; consisting of the following models; model numbers may be provided with prefix "P".



Certificate: 1097876
Project: 70050560

Master Contract: 154610
Date Issued: 2016-03-01

<u>Model</u>	<u>Alternate Model</u>	<u>Pump</u>	<u>Switch</u>
250	SS310	Cast iron	Switchless
251	SS311	Cast iron	Integral switch
252	-	Cast iron	Vertical switch
253	SS313	Cast iron	Series switch
257	SS314	Cast iron	Vertical magnetic switch
270	SS320	Brass	Switchless
271	SS321	Brass	Integral switch
272	-	Brass	Vertical switch
273	SS323	Brass	Series switch
277	SS324	Brass	Vertical magnetic switch

PART D - Oil Resistant Submersible sump pump, intended for use with a Certified/Listed control or for direct wiring into a control panel, Model EV250, rated 115V, 60Hz, 5.2 A; Model EV250HV, rated 230V, 60 Hz, 2.6A.

PART E - Submersible sump and effluent pumps, domestic cord connected, Series 250HV, rated 230V, 60Hz, 2.6A consisting of the following models;

<u>Model</u>	<u>Switch</u>
250HV	Switchless. CSA marked units have no plug-cap.
251HV	Integral float ball switch.
253HV	Series switch, with piggyback plug.
257HV	Integral vertical magnetic switch.

**Note: All models from Parts A through D may have model number suffix "-2" to indicate 20 or 25 foot power cord. Model numbers in Parts C and E with Addfull brand motors may have suffix "-3" to indicate models with 35 foot power cord, and Manual and Integrally Switched models only may have suffix "-5" to indicate 50 foot power cord. Switchless models may have suffix "BL" to indicate plugless models with bare leads for direct wiring to a Certified control device. All models may have power cords shorter than the maximum listed, with a suffix to identify the shorter length, e.g. "-06" for 6 foot length. All automatic models using switch with series plug may have suffix "V" to indicate use of Certified vertical switch mechanism.

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 108-14 - Liquid Pumps
 UL 778 (5th Edition) - Motor Operated Water Pumps



Certificate of Compliance

Certificate: 1882529 (LR 82005-27)

Master Contract: 154610

Project: 2759574

Date Issued: January 13, 2015

Issued to: Liberty Pumps, Inc.

7000 Apple Tree Ave
Bergen, NY 14416
USA

Attention: Jeffrey Waterman

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Colin Moorhouse

Issued by: Colin Moorhouse

PRODUCTS

CLASS 3851 81 - LIQUID PUMPS - Certified to US Standards

CLASS 3851 01 - LIQUID PUMPS

- Submersible Sump Pumps, Series 280, rated 115V, 60Hz, 10A or 8.5A or 8.0A, consisting of the following models 281, 282, 283 and 287.
- Submersible Sump Pumps, Series SS500, consisting of Models SS510, SS511, SS513 and SS514, rated 115V, 60Hz, 10A.
- Drain Pump Kit, Model PAC287, consisting of the Series 280 pump.
- Submersible Sump Pumps, Series 280HV, rated 208/230V, 60Hz, 5A or 4.6A or 4.0A, consisting of the following models 280HV, 281HV, 283HV and 287HV.
- Oil Resistant Submersible sump pumps, intended for use with a Certified/Listed control or for direct wiring into a control panel, Series EV280, rated 115V, 60Hz, 10A or 8.5A or 8.0A, Series EV280HV, rated 208/230V, 60Hz, 5A or 4.6A or 4.0A, consisting of the following models EV280 and EV280HV.
- Series 290 and 290HV, 3/4 HP Submersible Sump and Effluent Pumps. 290 Series pumps rated 115V, 60Hz, 10.4A. 290HV Series pumps rated 208/230V, 60Hz, 5.3A.



Certificate: 1882529 (LR 82005-27)

Master Contract: 154610

Project: 2759574

Date Issued: January 13, 2015

-
- Submersible sump pumps, Series 280EF, rated 115V, 60Hz, 8.3A.
 - Submersible sump pumps, Series 290EF, rated 115V, 60Hz, 8.9A
 - Submersible sump pumps, Series 290HV-2E, rated 220V, 50Hz, 5.6A

Note: Piggyback switch models in any Part of this Report may have suffix "X" to indicate float switch shipped with, but not clamped to pump. Switchless models may have suffix "BL" to indicate plugless models with bare leads for direct wiring to a Certified control device. All models may have power cords shorter than the maximum listed, with a suffix to identify the shorter length, including "-06" for 6 foot length.

APPLICABLE REQUIREMENTS

CAN/CSA □ C22.2 No. 108-14 - Liquid Pumps

UL Std No. 778 (5th Edition) - Motor Operated Water Pumps



Certificate of Compliance

Certificate: 2552866 (LR 82005-21)

Master Contract: 154610

Project: 70015138

Date Issued: November 12, 2014

Issued to: Liberty Pumps, Inc.
 7000 Apple Tree Ave
 Bergen, NY 14416
 USA
 Attention: Jeffrey Waterman

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Colin Moorhouse

Issued by: Colin Moorhouse

PRODUCTS

- CLASS 3851 81** - LIQUID PUMPS - Certified to US Standards
- CLASS 3851 01** - LIQUID PUMPS

Submersible Effluent Pumps, Cord Connected as follows

- Submersible Effluent Pumps, Cord Connected, automatic or switchless, Series FL50, 115 V, single phase units, consisting of the following models:

Model	Volts	HZ	Phase	Amps	Auto/ Switchless	cCSA plug cap	CSAus plug cap
FL51A	115V	60	1	12	Auto	Yes	Yes
FL51M	115V	60	1	12	Switchless	Yes	Yes

- Submersible Effluent Pumps, Cord Connected, automatic or switchless, Series FL50, 208-230V, single phase units, consisting of the following models:

Model	Volts	HZ	Phase	Amps	Auto/ Switchless	cCSA plug cap	CSAus plug cap
FL52A	208-230V	60	1	6.5	Auto	Yes	Yes
FL52M	208-230V	60	1	6.5	Switchless	No	Optional



**CSA
Group**

Certificate: 2552866 (LR 82005-21)

Master Contract: 154610

Project: 70015138

Date Issued: November 12, 2014

- Submersible Effluent Pumps, Cord Connected, automatic or switchless, Series FL70, 208-230V, single phase units, consisting of the following models:

Model	Volts	HZ	Phase	Amps	Auto/ Switchless	cCSA plug cap	CSAus plug cap
FL72A	208-230V	60	1	10.5	Auto	Yes	Yes
FL72M	208-230V	60	1	10.5	Switchless	No	Optional

- Submersible Effluent Pumps, Cord Connected, Series FL70, 208-230V 3-phase, and 440-480V 3-phase units, consisting of the following models:

Model	Volts	HZ	Phase	Amps	Auto/ Switchless	cCSA plug cap	CSAus plug cap
FL73M	208-230V	60	3	7.5	Switchless	No	No
FL74M	440-480	60	3	3.5	Switchless	No	No

- Submersible Effluent Pumps, Cord Connected, automatic or switchless, Series FL60, 208-230V single phase, 208-230V 3-phase, and 440-480V 3-phase units consisting of the following models:

Model	Volts	HZ	Phase	Amps	Auto/ Switchless	cCSA plug cap	CSAus plug cap
FL62A	208-230V	60	1	8.2	Auto	Yes	Yes
FL62M	208-230V	60	1	8.2	Switchless	No	Optional
FL63M	208-230V	60	3	5.6	Switchless	No	No
FL64M	440-480	60	3	2.8	Switchless	No	No

Submersible Effluent Pumps, Cord Connected, Series FL74- _E, 380-415V, 50Hz, 3-phase units, consisting of the following models:

Model	Volts	HZ	Phase	Amps	Auto/ Switchless	Plug cap
FL74M- _E	380-415V	50	3	2.6	Switchless	No

Submersible Effluent Pumps, Cord Connected, automatic or switchless, Series FL64- _E, 200V, 50Hz, single phase, and 400V, 50Hz 3-phase units consisting of the following models:

Model	Volts	HZ	Phase	Amps	Auto/ Switchless	Plug cap
FL64M- _E	380-415V	50	3	2.5	Switchless	No

Notes:



Certificate: 2552866 (LR 82005-21)

Master Contract: 154610

Project: 70015138

Date Issued: November 12, 2014

1) All models from Parts A thru G may have model number suffix "-2" to indicate 20 or 25 foot power cord, or suffix "-3" to indicate 35 foot power cord. Alternate suffixes may be used to indicate shorter cord lengths.

Suffix -1 is used optionally to indicate use of 10 foot power cord. Models FL73M and FL74M as per Part D of this report and models FL63M and FL64M as per Part E of this report may have power cords to 50 feet as designated with suffix "-5." Alternate suffixes may be used to indicate shorter cord lengths. Units without plugcap may have suffix "BL"

2) Series FL50 and FL60 as described in this Report utilize constructions that supersede those as per Report 154610-1779578 (LR82005-21), effective with serial numbers (configuration codes) commencing with prefix B78.

3) Final suffix E is used to indicate 50Hz rated models.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 108-14 - Liquid Pumps

UL Std No. 778 (5th Edition) - Motor Operated Water Pumps

NITW.E214788
Industrial Control Panels

[Page Bottom](#)

Industrial Control Panels

[See General Information for Industrial Control Panels](#)

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E214788

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Industrial control panels.

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E-mail: toppindustries@toppindustries.com ♦ Web-site: www.toppindustries.com

Fiberglass Basin (wet well) Short Specification

The resins used shall be commercial grade polyester and shall be evaluated as a laminate test or determined by previous service to be acceptable for the intended environment.

The reinforcing material shall be a commercial grade of glass fiber (continuous strand, chopped-strand, continuous mat and/or non-continuous mat) having a coupling agent, which will provide a suitable bond between the glass reinforcement material and resin.

The FRP* laminate wall thickness shall vary with the wet well height to provide the aggregate strength necessary to meet the tensile and flexural physical properties requirements. The wet well FRP* wall laminate must be designed to withstand wall collapse or buckling based on:

- Hydrostatic pressure of 62.4 lbs. per square foot
- Saturated soil weight of 120 lbs. per cubic foot
- Soil modulus of 700 lbs. per square foot
- Pipe stiffness values as a specified in ASTM D3753.

The wet well FRP* laminate must be constructed to withstand or exceed two times the assumed loading on any depth of the wet well.

The finished FRP* laminate will have a Barcol hardness of at least 90% of the resin manufacturer's specified hardness for the fully cured resin. The Barcol hardness shall be the same for both the interior and exterior surfaces.

The wet well top flange (cover flange) shall have an outside diameter 2 inches (min.) greater than the inside diameter of the wet well. A four or six bolthole pattern shall accommodate the mounting of a cover with at least 1/4" diameter 300 series Stainless Steel fasteners.

The following non-corroding threaded inserts are expectable for use:

- Non-corroding Stainless Steel threaded inserts shall be fully encapsulated with non-continuous mat or chopped-strand glass strand reinforcement. The inserts shall have an offset tab to prevent stripping or spinning out when removing and reinserting cover fasteners.

*Fiberglass Reinforced Polyester

Petition Application for Certificate of Acceptability
 Michigan Department of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 P.O. Box 30255, Lansing, MI 48909
 www.michigan.gov/bcc

140/115/130/98

Agency Use Only

Application Fee: \$1,000.00 (Each Approval Requested Requires a Separate Application and Fee)

BCCP-16-003

Authority: 1972 PA 230

Penalty: Failure to provide the information may result in denial of your request.

LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.

CODE UNDER WHICH APPROVAL IS SOUGHT (Limited to One Code Per Petition)

Building (140)

Electrical (115)

Mechanical (130)

Plumbing (98)

APPLICANT INFORMATION (Note: All correspondence will be sent to this address)

NAME OF COMPANY

Northern Concrete Pipe, Inc.

APPLICANT NAME

John E. Balogh

ADDRESS

401 Kelfon Street

TELEPHONE NUMBER (Include Area Code)

(989) 892-3545

CITY

Bay City

STATE

Mi.

ZIP CODE

48706

FAX NUMBER (Include Area Code)

(989) 892-3533

Instructions for Petition Application for Acceptability

Nature of Petition: Check only one box. A component is a preassembled unit of different materials or products that will be incorporated into a building.

Code Under Which Approval is Sought: Check only one box. If there are requirements in 2 or more codes for the approval sought, an additional petition and fee must be submitted.

Name: Provide the name of the material, product, or method/manner of construction or installation.

Other Identification: Provide the model numbers.

Description: Provide a description of the material, product, method or component.

Intended Use: Give a brief description of how the product is incorporated into a building or structure and its purpose.

Laboratory Test and/or Evaluation By: List all tests performed and provide copies as listed above.

Pilot Service Experience and Conditions: Provide report of finding as listed above.

Restrictions for Use: Identify any restrictions or conditions of use.

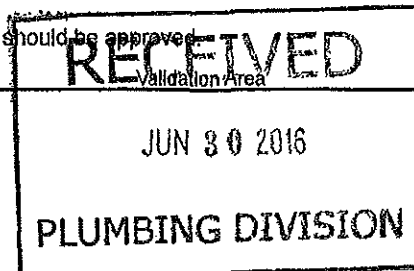
Other: Any documentation or description necessary to demonstrate why this application should be approved.

U.S. Postal Service

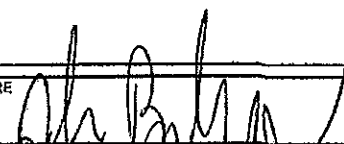
Michigan Dept. of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 (Address to appropriate division-Electrical Division, Mechanical Division or Plumbing Division)
 Please address Building approvals to Plan Review Division
 P.O. Box 30255
 Lansing, MI 48909

Courier Other Than U.S. Postal Service

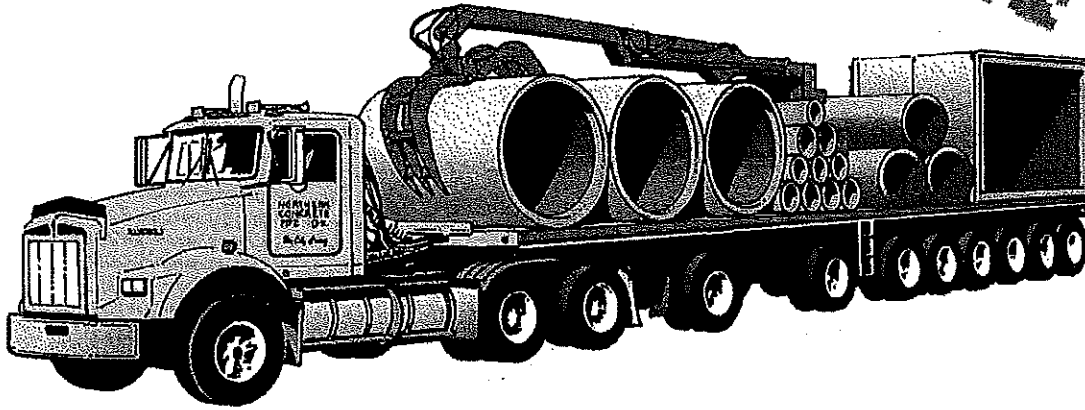
Michigan Dept. of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 (Address to appropriate division-Electrical Division, Mechanical Division or Plumbing Division)
 Please address Building approvals to Plan Review Division
 1st Floor Ottawa Bldg.
 611 W. Ottawa St.
 Lansing, MI 48933



TransInfo:98 21425003-1 06/28/16
 CHRG: 160826 Amt: \$1,000.00
 TO: NORTHERN CONCRETE PIPE INC

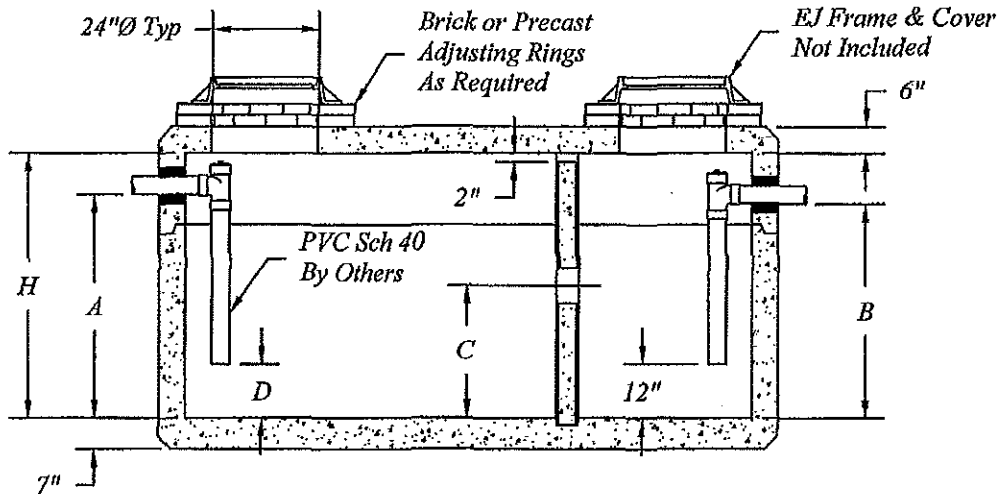
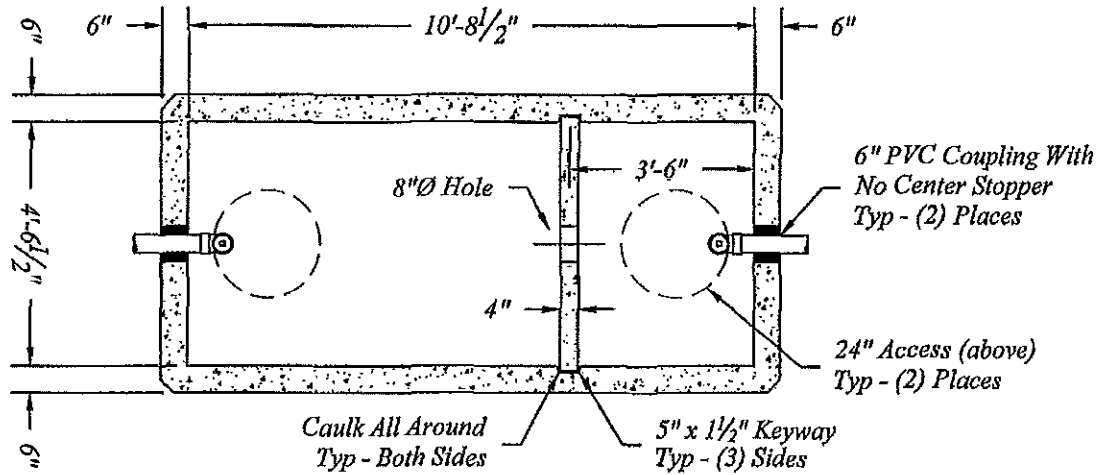
APPROVAL REQUESTED		
NATURE OF PETITION (Limited to One Item Per Petition)		
<input type="checkbox"/> Material	<input type="checkbox"/> Product	<input type="checkbox"/> Method/Manner of Construction or Installation
NAME OF MATERIAL, PRODUCT, OR METHOD/MANNER OF CONSTRUCTION OR INSTALLATION		
Precast Concrete Grease Interceptors		
OTHER IDENTIFICATION (Model Number)		
500, 750, 1000, 1500, 2000, 2500, 3000, 3500, 4000 gallon		
DESCRIPTION (Use Additional Sheets if Necessary)		
Remove grease/oil from the wastewater stream prior to treatment.		
INTENDED USE (Use Additional Sheets if Necessary)		
Treat kitchen wastewaters from motels, cafeterias, restaurants, hospitals, schools and other institutions with large volumes of kitchen wastewaters.		
DATA SUBMITTED		
<input checked="" type="checkbox"/> Letter <input type="checkbox"/> Manual <input checked="" type="checkbox"/> Standards <input checked="" type="checkbox"/> Installation Instructions <input checked="" type="checkbox"/> Display Catalog	Reports <input type="checkbox"/> ICC - ES <input type="checkbox"/> BOCA - NES <input type="checkbox"/> ICBO <input type="checkbox"/> SBCC <input type="checkbox"/> NRB <input type="checkbox"/> Other	<input type="checkbox"/> Product Sample or Model <input type="checkbox"/> Prior Approvals by Other Agencies <input type="checkbox"/> Recommendations by Model Code Bodies <input type="checkbox"/> Laboratory Test/Evaluation
LABORATORY TEST AND/OR EVALUATION BY		
ASTM-C1613-10 Performace / Delta Engineering Structural		
PILOT SERVICE EXPERIENCE AND CONDITIONS (Use Additional Sheets if Necessary)		
RESTRICTIONS FOR USE (Use Additional Sheets if Necessary)		
SIGNATURE		DATE
		6/23/2016

NORTHERN CONCRETE PIPE



Submittal Package

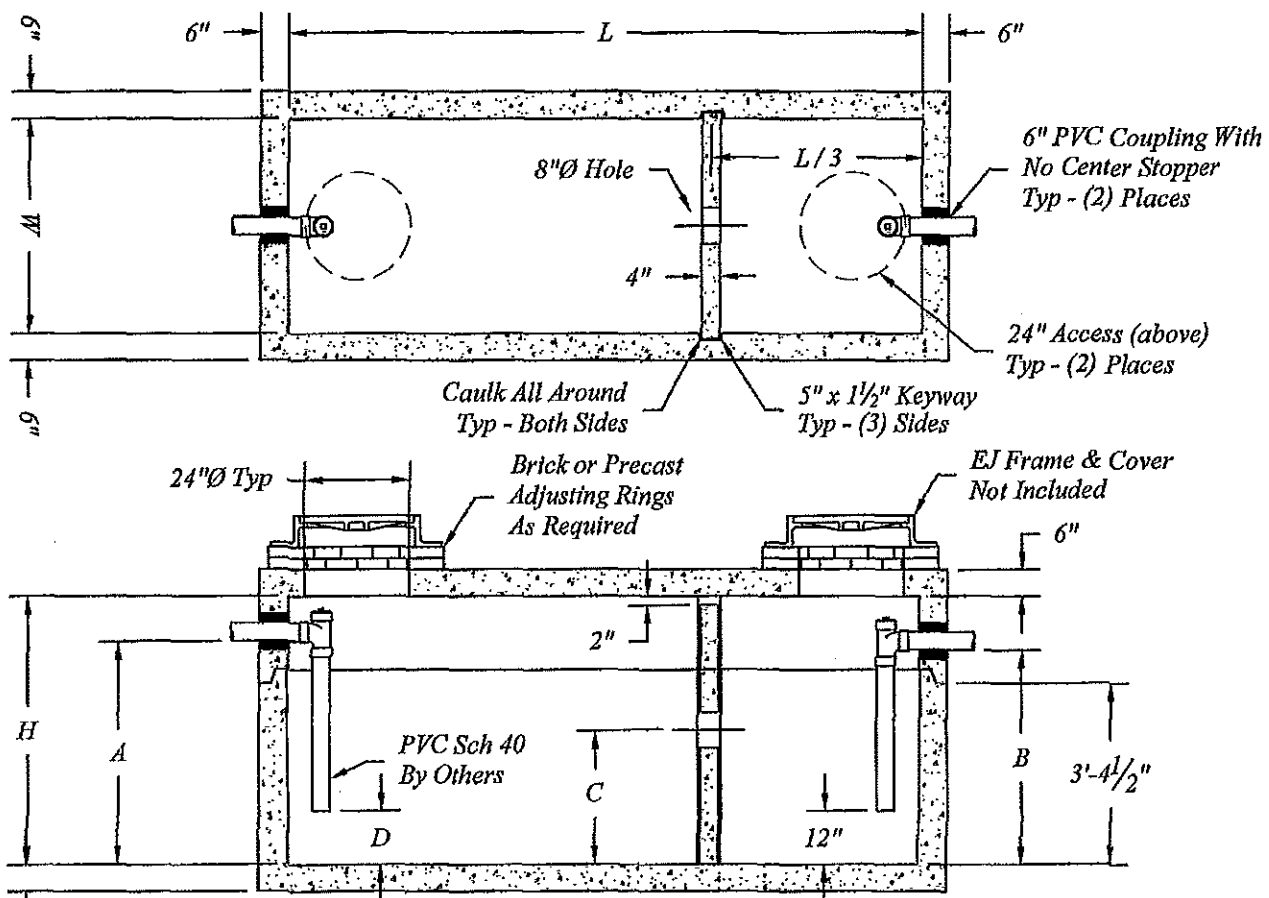
By: John E. Balogh



Capacity (Gallons)	Height (H)	Dim (A)	Dim (B)	Dim (C)	Dim (C)
750	3'-7 1/4"	2'-4"	2'-2"	14"	11"
1000	3'-7 1/4"	2'-10"	2'-8"	17"	13"
1500	4'-11 1/4"	4'-2"	4'-0"	25"	20"
2000	6'-3 1/4"	5'-6"	5'-4"	33"	26"

1. Interceptor/Grease Trap Sections To Be Manufactured By Northern Concrete Pipe, Inc. or Approved Equal per AASHTO 17th Ed. and ASTM C-1613-10 Specifications w/HS-20 Loading and 0.0' to 3.0' of Earth Cover.
2. Concrete: 5000psi @ 28 Days
3. Reinforcement per ASTM A-615 & A-185.
4. Cover To Be Sealed w/1 1/2" EZ-Stik or Equal.
5. Pipe & Fittings For Inlets & Outlets Are Not Included.

750 - 2000 Gallon Precast Concrete Interceptors		
	401 Kelton Street Bay City, MI 48706 1 800 222 9918	Date 21 Oct 11
	5281 Lansing Road Charlotte, MI 48813 1 800 874 9701	Drawn By JpB
		Scale NTS



Capacity (Gallons)	Length (L)	Width (W)	Height (H)	Dim (A)	Dim (B)	Dim (C)	Dim (D)
500	6'-0"	5'-0"	3'-7½"	2'-5"	2'-3"	15"	11"
750	7'-0"	6'-0"	3'-7½"	2'-7"	2'-5"	15"	12"
1000	9'-0"	6'-0"	3'-7½"	2'-8"	2'-6"	15"	12"
1500	14'-0"	6'-0"	3'-7½"	2'-7"	2'-5"	15"	12"
	6'-0"	6'-0"	6'-6"	5'-9"	5'-7"	33"	27"
2000	11'-0"	6'-0"	5'-0"	4'-3"	4'-1"	24"	20"
	8'-0"	6'-0"	6'-6"	5'-9"	5'-7"	33"	27"
2500	14'-0"	6'-0"	5'-0"	4'-2"	4'-0"	24"	20"
	10'-0"	6'-0"	6'-6"	5'-9"	5'-7"	33"	27"
3000	16'-0"	6'-0"	5'-6"	4'-5"	4'-3"	25"	21"
	12'-0"	6'-0"	6'-6"	5'-9"	5'-7"	33"	27"
3500	16'-0"	6'-0"	6'-0"	5'-1"	4'-11"	30"	24"
	13'-0"	6'-0"	7'-0"	6'-2"	6'-0"	36"	29"
4000	16'-0"	6'-0"	6'-6"	5'-9"	5'-7"	33"	27"
	15'-0"	6'-0"	7'-0"	6'-2"	6'-0"	36"	29"

1. Interceptor/Grease Trap Sections To Be Manufactured By Northern Concrete Pipe, Inc. or Approved Equal per AASHTO 17th Ed. and ASTM C-1613-10 Specifications w/HS-20 Loading and 0.0' to 5.0' of Earth Cover.
2. Concrete: 5000psi @ 28 Days
3. Reinforcement per ASTM A-615 & A-185.
4. Cover To Be Sealed w/1½" EZ-Stik or Equal.
5. Pipe & Fittings For Inlets & Outlets Are Not Included.

500 - 4000 Gallon Precast Concrete Interceptors

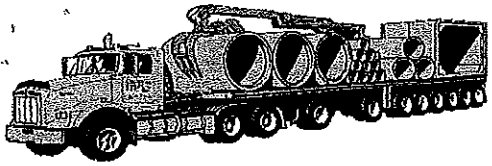
NORTHERN CONCRETE PIPE

401 Kellon Street
Bay City, MI 48706
1 800 222 9918

Date
21 Oct 11
Drawn By
JpB

5281 Lansing Road
Charlotte, MI 48813
1 800 874 9701

Scale
NTS



Northern Concrete Pipe

1-800-222-9918 Bay City, Michigan

Grease Interceptor Installation Guide

1. Excavate a proper OSHA approved pit for the placement of the Grease Interceptor.
2. Place a 6" thick level bed of sand compacted to the specifications provided by your engineer.
3. With properly sized OSHA approved lifting equipment and tackle, usually consisting of coffee pots/lift pins, hooks & cables of proper length & capacity, hoist the grease interceptor base section into the pit and place it, with the proper orientation per the approved set of shop drawings and engineer approved plan set for the project, so that it is plumb vertically and level horizontally.
4. Install project piping and sealed pipe connections, in the proper layout, as specified per the approved set of shop drawings and engineer approved plan set for the project.
5. Hoist the weir wall into the base section if applicable.
6. Seal the joints of the weir wall with engineer approved joint sealer if applicable.
7. Clean any debris from the base section joint surface.
8. Apply butyl material to the base section joint surface.
9. Hoist cover of grease interceptor onto the base section.
10. Apply exterior waterproofing to the joint and lifting holes as specified per the engineer.
11. Backfill evenly around the grease interceptor, on all 4 sides, with 12" lifts of sand compacted to the specifications provided by your engineer.
12. Congratulations! You are now ready to start using your new grease interceptor.

Disclaimer: The guideline instructions offered in this manual do not claim or imply that all project related safety precautions, if any, associated with the use or installation of the grease Interceptor, have been addressed. It is the contractor's responsibility to determine the proper OSHA approved safety precautions and practices, proper environmental and health practices, and proper regulatory requirements required for the installation and use of the grease Interceptor.

The use of these guideline instructions does not guarantee the proper performance and function of the grease Interceptor but merely provides the general outline of how to install the grease Interceptor on your project. Thank you for choosing Northern Concrete Pipe.

11/20/2015 MRZ

DESIGN COMPUTATIONS FOR
Precast Underground Tank, Michigan
Grease Trap Design HS-25
11'-8 1/2" x 5'-6 1/2" Form

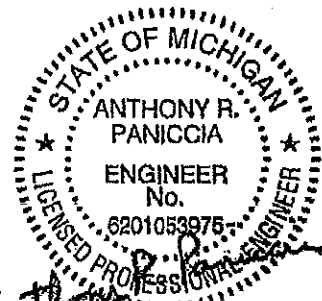
PREPARED FOR:

Northern Concrete Pipe, Inc.
401 Kelton Street
Bay City, Michigan 48706

PREPARED BY:



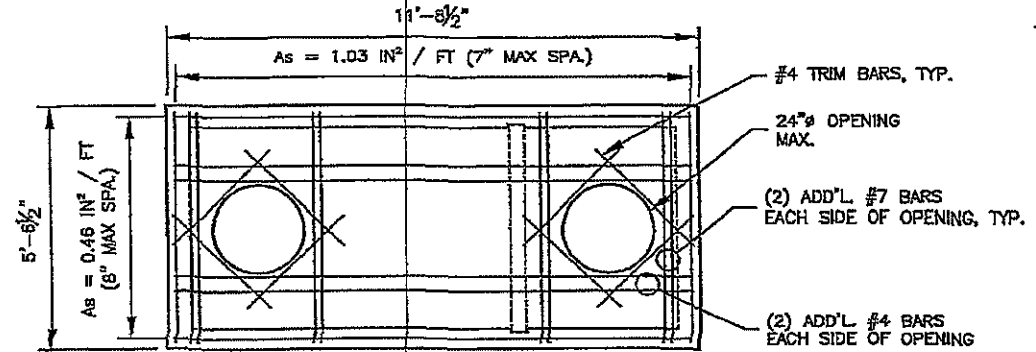
184 Court Street, Binghamton, New York 13901
TEL: 607-231-6600 FAX: 607-231-6650
EMAIL: precast@deltaengineers.com
INTERNET: www.deltaengineers.com



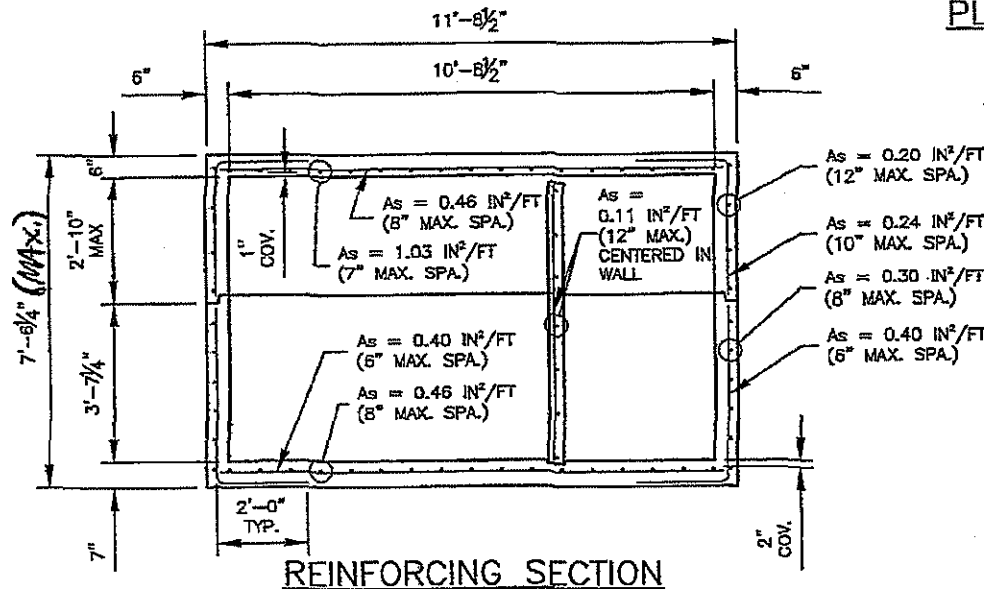
3/29/07

GENERAL NOTES:

1. OPENINGS, SIZE AND LOCATION, AS REQUIRED.
2. PROVIDE ADDITIONAL REINFORCING EQUAL TO THE BARS INTERRUPTED, 1/2 EACH SIDE.
3. ADD #4 DIAGONAL TRIM BARS AROUND OPENINGS.



PLAN VIEW
TOP SLAB



REINFORCING SECTION

DESIGN NOTES

ASSUMPTIONS: (TO BE VERIFIED BY EOR)

1. DESIGN PER AASHTO 17TH ED. AND ASTM WITH HS-25 LOADING.
2. EARTH COVER = 0' TO 3'-0" MAX
3. UNIT WEIGHT OF SOIL = 120 PCF
4. BAR COVER = 1 1/2" U.N.O.
5. EQUIVALENT FLUID PRESSURE = 69 PCF
6. f'c @ 28 DAYS = 5,000 PSI
7. REINFORCEMENT = BAR PER ASTM A615, GRADE 60 (UNCOATED) WWR PER ASTM A497, GRADE 70

<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>														PREPARED FOR: NORTHERN CONCRETE PIPE 401 KELTON STREET BAY CITY, MI 48706 PH: 800-222-9918		5281 LANSING ROAD CHARLOTTE, MI 48813 PH: 800-874-9701	
REV. NO. DATE REVISION		DATE: 3/28/07 SHEET TITLE: REINFORCING DETAILS DRAIN USE: GAS		2015													
PREPARED BY: DELTA ENGINEERS 184 COURT STREET, BINGHAMTON, NY 13901 TEL: (807) 231-6600 FAX: (807) 231-6650		SCALE: N.T.S. PROJECT: PRECAST UNDERGROUND TANK MICHIGAN 10'-8 1/2" x 4'-6 1/2" x 5'-4 1/4" ID		CONTRACTOR: DWG. NO. RS-01 DELTA PROJ. NO. 2007.015.003 SHEET NO. 1 OF 1													



184 Court Street Binghamton, NY 13901
(607) 231-8600 Fax (607) 231-8650

PRECAST VAULT DESIGN DESCRIPTION

Length (I.D.) =	10.71 ft
Width (I.D.) =	4.54 ft
Height (I.D.) =	6.44 ft
Wall Thickness =	6.00 in
Base Slab Thickness =	7.00 in
Cover Slab Thickness =	6.00 in

TECHNICAL DATA

Earth Cover (Min.) =	0.00 ft
Earth Cover (Max) =	3.00 ft
Min Watertable Depth =	3.00 ft
ka =	0.33
Unit Weight of Soil =	120 pcf
Equivalent Lateral Fluid Pressure =	0.069 kcf
LL Surcharge =	0.10 ksf
Depth Below F.G. to Apply Surcharge =	1.800 ft

Concrete Strength (f'c) =	5.0 ksf
Unit Weight of Concrete =	150 pcf
$E_c = 57,000 * \sqrt{f'c} =$	4.03E+06 psi
Yield Strength (fy) =	60 ksf
$E_s =$	2.90E+07 psi
$n = E_c / E_s =$	7.2
$\beta_1 = (.85 - .05(fc-4)) =$	0.8
$f_r = 7.5 \sqrt{f'c} =$	530 psi
$Rho_{max} = (.75 pb) =$	0.0251531
$Z_{max} =$	130 Severe Exposure

Design Wheel Load (Pw) =	20 kips AASHTO HS25
Uniform Live Load =	10 psf

Capacity Reduction Factors:

ϕ - Moment =	0.90
ϕ - Shear =	0.85

Load Factors:

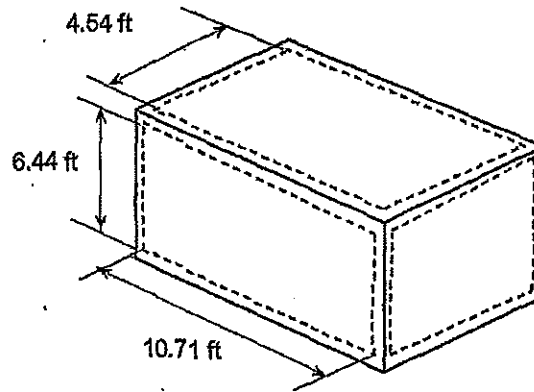
$\gamma =$	1.00
β - LL =	1.67
β - DL =	1.00
β - EL =	1.30

References:

1. "Specifications for Highway Bridges, 17th Ed." - AASHTO
2. "Rectangular Concrete Tanks, 5th Ed." - PCA Publication.
3. "Theory of Plates and Shells" - Timoshenko, S. 1959.
4. "Standard Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures" - ASTM C890

Project:	Precast Underground Tank
Client:	Northern Concrete Pipe
Job Number:	2007-015-008
File Name:	vault1(v2.1.4).xls
Entered By:	GAS
Checked By:	DDG 3/28/07
Date:	3/28/2007
Sheet:	3 of 15

Denotes input field



Vault Isometric View
(Joints not shown for clarity)
(All dimensions I.D.)



184 Court Street
Binghamton, NY 13901
(607)231-6600 Fax(607)231-6650

**EQUIVALENT LATERAL
FLUID PRESSURE:**

Project: Precast Underground Tank
10'-8 1/2" x 5'

Job #: 2007.015.003

Sheet: 4 of 15

By: GAS Date 3/28/2007

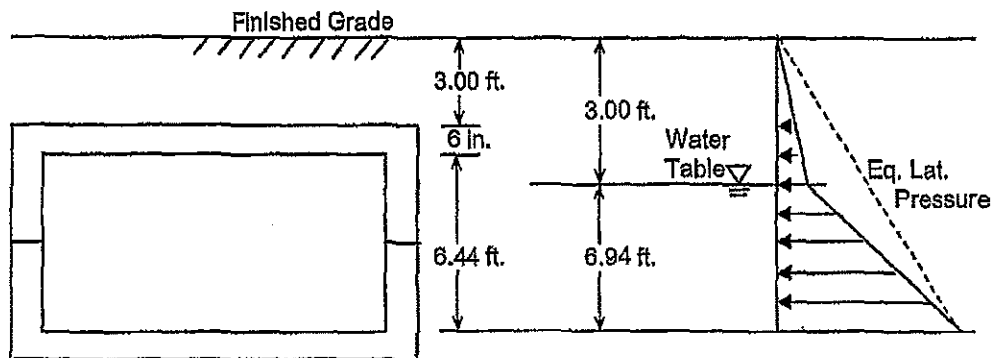
Chk By: OAB Date 3/28/07

Ka =	0.33
Unit Wt. of Soil =	120 pcf
Max. Fill Above Structure =	3.00 ft. (Worst Case)
Structure Inside Ht. =	6.44 ft.
Top Slab Thickness =	6.00 in.
Min. Watertable Depth =	3.00 ft.

Lateral Pressure (Dry) = 39.6 pcf
(Ka*Soil Wt.)

Lateral Pressure (Sat.) = 81.4 pcf
(Ka*(Soil Wt.-62.4pcf)+62.4pcf)

Equivalent Lateral Pressure = 68.8 pcf





184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6650

Project: Precast Underground Tank
 10'-8 1/2" x 5'

Job #: 2007,015.003

Sheet: 5 of 15

By: GAS Date 3/28/2007

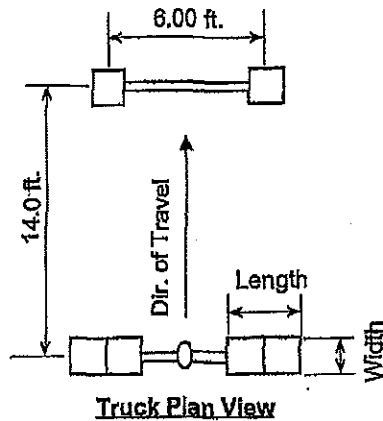
Chk By: Dog Date 3/28/07

Determine Uniform Load From Wheel Live Load for Various Fill Depths

Distance Between CL. of Wheel and CL. of Truck: 6.00 ft
 Wheel Load: 20 kips

Distribution Length = 1.75 x Depth of Fill + Length of Dual Wheel Dimensions
 Distribution Width = 1.75 x Depth of Fill + Width of Dual Wheel Dimensions

Dual Wheel Dimensions: Length 1.67 ft. Width 0.83 ft. AASHTO 3.30



Max Fill:

Depth of Fill (ft)	Distrib. Length	Distrib. Width	Lengths Overlap?	DLA ft ²	Uniform Load psf
3.0	6.92	6.08	YES	42.1	475.4
3.5	7.80	6.98	YES	95.9	416.9
4.0	8.67	7.83	YES	114.9	348.2
4.5	9.55	8.71	YES	135.3	295.6
5.0	10.42	9.58	YES	157.3	254.3
5.5	11.30	10.46	YES	180.8	221.2
6.0	12.17	11.33	YES	205.9	194.3
6.5	13.05	12.21	YES	232.4	172.1
7.0	13.92	13.08	YES	260.6	153.5
7.5	14.80	13.96	YES	290.2	137.8
3.0	6.92	6.08	YES	78.6	509.2

Design Min Fill = 3.00 ft	42.1	475.4
Design Max Fill = 3.00 ft	42.1	475.4

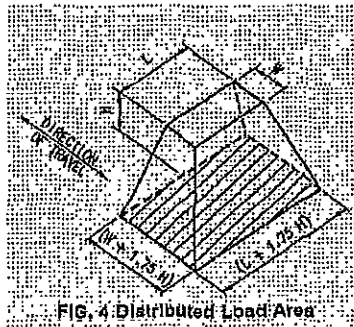


FIG. 4 Distributed Load Area
 (REF "ASTM C 890-91")

Note: If design fill < 3', design using concentrated load case



184 Court Street
 Binghamton, NY 13901
 (607)231-8600 Fax(607)231-8650

COVER SLAB DESIGN
AASHTO 3.24.6

Project: Precast Underground Tank
 10'-8 1/2" x 6'
 Job #: 2007.015.003
 Sheet: 6 of 15
 By: GAS Date 3/28/2007
 Chk By: AOB Date 3/28/07

Length (I.D.) = 10.71 ft
 Width (I.D.) = 4.54 ft
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 Earth Cover = 1.00 ft
 Bar cover = 1.00 in
 Impact = 1.30

One Way Slab

Span (s) = 5.04 ft
 Dead Loads: Soil = 0.12 ksf
 Concrete = 0.08 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 0.20 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 2-Way slab fac. (Concentrated) = 1.000
 $Mdl = wdl \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 0.82 \text{ kip-ft}$
 $e = 4 + .06S = 4.30 \text{ ft}$
 $p = (Pw \cdot \text{Impact}) / e = 6.04 \text{ klps/ft}$
 $Mll = ps / 4 \cdot (2\text{-way slab factor}) = 7.82 \text{ kip-ft}$
 $M_{\text{total}} = \gamma [\beta_{(L+D)} \cdot Mll + \beta_D \cdot Mdl] = 17.34 \text{ kip-ft}$
 $d = 4.56 \text{ in}$

Req. Bar Size and Spacing

Short Span: $As = 1.03 \text{ in. sq/ft.}$ Use #7 @ 7.0 in

Distribution Steel = $As / \text{Span} \cdot 5 = 0.46 \text{ in. sq/ft.}$ Use #5 @ 8.0 in

$p = As / b \cdot d = 0.01882804$
 $p \cdot n = 0.13547002$

Flexure Check:

$a = As \cdot Fy / 0.85 \cdot fcb = 1.213 \text{ in}$
 $\phi Mn = \phi \cdot As \cdot Fy \cdot (d - (a/2)) = 18.35 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{2pn + pn^2} - pn = 0.402$
 $j = 1 - (k/3) = 0.866$
 $M = Mdl + Mll = 8.24 \text{ kip-ft}$
 $fs = M / As \cdot j \cdot d = 24.27 \text{ ksi OK}$
 $dc = 1.438 \text{ in}$
 $A = 2 \cdot dc \cdot \text{Spacing} = 20.1 \text{ sq.in}$
 $Z = fs \cdot \sqrt{dc \cdot A} = 74 \text{ kips/in OK}$

Note: Shear considered satisfactory per AASHTO 3.24.4

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

$\phi Mn \geq 1.2 \cdot M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft OK}$



184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6650

Project: Precast Underground Tank
 10'-8 1/2" x 6'

Job #: 2007.015.003

Sheet: 7 of 15

By: GAS

Date: 3/28/2007

Chk By: DOB

Date: 3/28/07

COVER SLAB DESIGN
UNIFORM LIVE LOAD
MAX FILL
ASTM C890

Length (I.D.) = 10.71 ft.
 Width (I.D.) = 4.54 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 Earth Cover = 3.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.04 ft.
 Dead Loads: Soil = 0.36 ksf
 Concrete = 0.08 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 0.44 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 1.38 \text{ kip-ft}$
 DLA = 42.07 sf
 Wll = 0.48 ksf
 $Mll = wll \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 1.51 \text{ kip-ft}$
 $Mu = \gamma[\beta_{(L+T)} \cdot Mll + \beta_D \cdot Mdl] = 5.08 \text{ kip-ft}$
 d = 4.56 in

Req. Bar Size and Spacing

Short Span: $As = 1.03 \text{ in. sq/ft.}$ Use #7 @ 8.0 in

Distribution Steel = $As / \text{Span} \cdot 5 = 0.46 \text{ in. sq/ft.}$ Use #5 @ 8.0 in

$\rho = As / b \cdot d = 0.01882804$
 $\rho \cdot \eta = 0.13547002$

Flexure Check:

$a = As \cdot Fy / 0.85 \cdot fb = 1.213 \text{ in}$
 $\phi Mn = \phi \cdot As \cdot Fy \cdot (d - (a/2)) = 18.35 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{(2\rho n + \rho n^2)} - \rho n = 0.402$
 $j = 1 - (k/3) = 0.866$
 $M = Mdl + Mll = 2.89 \text{ kip-ft}$
 $fs = M / As \cdot j \cdot d = 8.52 \text{ ksi OK}$
 $dc = 1.438 \text{ in}$

$A = 2 \cdot dc \cdot \text{Spacing} = 20.1 \text{ sq.in}$
 $Z = fs \cdot \sqrt{dc \cdot A} = 26 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} \cdot Wll + \beta_{DL} \cdot Wdl] \cdot [(span/2) - d] = 3.42 \text{ kips/ft}$
 (AASHTO 8-49) $\phi Vc = 6.58 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

$\phi Mn \geq 1.2 \cdot Mcr$
 $Mcr = 3.18 \text{ kip-ft}$
 $1.2 \cdot Mcr = 3.82 \text{ kip-ft OK}$



184 Court Street
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**MONOLITHIC TOP SECTION
 WALL DESIGN
 UNIFORM LOAD**

Project: Precast Underground Tank
 10'-8 1/2" x 5'
 Job #: 2007.015.003
 Sheet: B of 15
 By: GAS Date: 3/28/2007
 Chk By: DAB Date: 3/28/07

Height, a = 2.88 ft
 Length, b = 10.71 ft
 Width, c = 4.54 ft
 Wall Thickness = 6.00 in
 b/a = 3.8

Bottom of wall hinged? Y (Y or N)

OUTSIDE FACE

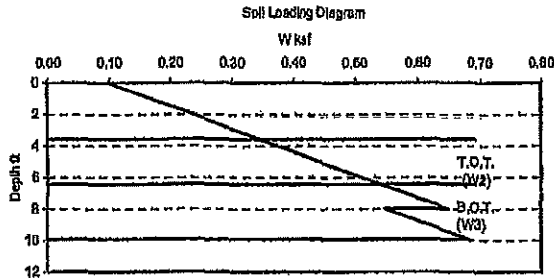
PCA Case # = 8
 Bar Cover = 50 in
 Max horiz. Coeff. = 0.399
 Max vert. Coeff. = 0.417
 Max horiz. neg. moment = 1.42 kip-ft
 Max vert. neg. moment = 1.48 kip-ft

Horizontal lines indicate top & bottom of wall

Lateral Earth Pressure

Eq. Lat. Press. = 0.069 kcf
 W2 = 0.35 ksf
 W3 = 0.54 ksf
 Wavg = 0.44 ksf

(Surcharge Applied Over Entire Height of Unit)



	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	2.40 kip-ft	3.65 kip-ft	#4	21.0 in	4.25 in	0.20 in. sq/ft.	0.23 in
Vertical	2.50 kip-ft	3.83 kip-ft	#4	19.0 in	3.75 in	0.24 in. sq/ft.	0.28 in
Shear coeff. =	1.058						

Vu = 2.25 kips

φVc = 6.13 kips (AASHTO 8-49)
 φVc > Vu: OK
 ldb = 12 in

Cracking Check:

	Horizontal	Vertical
ρ = As / b * d =	0.003850	0.005236
ρ * n =	0.027701	0.037674
k = √(2ρn + ρn²) - ρn =	0.209	0.239
j = 1 - (k/3) =	0.930	0.920
M =	1.42 kip-ft	1.48 kip-ft
fs = M / As j d =	21.94 ksi OK	21.87 ksi OK
dc =	1.75 in	2.25 in
A = 2 * dc * Spacing =	42.00 sq.in	45.00 sq.in
Z = fs √(dc * A) =	92 kips/in OK	102 kips/in OK

Horizontal

φMn ≥ 1.2 * Mcr OR
 Mcr = 3.18 kip-ft
 1.2 Mcr = 3.82 kip-ft

As(prov.) ≥ (1+1/3) * As(req'd)
 C = 3.61
 As(req'd) = 0.13 in. sq/ft.
 1+1/3 As = 0.17 in. sq/ft. OK

Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Vertical

φMn ≥ 1.2 * Mcr OR
 Mcr = 3.18 kip-ft
 1.2 Mcr = 3.82 kip-ft OK



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Project: Precast Underground Tank

10'-8 1/2" x 5'

Job #: 2007.015.003

Sheet: 9

of

15

By: GAS

Date

3/28/2007

Chk By: DRB

Date

3/28/07

INSIDE FACE

Bar Cover = 3.50 in
 Max horiz. Coeff. = 0.069
 Max vert. Coeff. = 0.011
 Max horiz. pos. moment = 0.25 kip-ft
 Max vert. pos. moment = 0.04 kip-ft

	Mu	ϕM_n	Bar Sz	Sp	d	As	a
Horiz	0.41 kip-ft	1.44 kip-ft	#4	12.0 in	1.75 in	0.20 in. sq/ft.	0.23 in
Vertical	0.06 kip-ft	2.24 kip-ft	#4	10.0 in	2.25 in	0.24 in. sq/ft.	0.28 in

Cracking Check:

	Horizontal	Vertical
$\rho = A_s / b * d =$	0.009350	0.008727
$\rho * n =$	0.067274	0.062789
$k = \sqrt{2\rho n + \rho n^2} - \rho n =$	0.306	0.297
$j = 1 - (k/3) =$	0.898	0.901
M =	0.25 kip-ft	0.04 kip-ft
$f_s = M / A_s j d =$	9.54 ksi OK	0.97 ksi OK
dc =	2.25 in	2.25 in
$A = 2 * dc * Spacing =$	54.00 sq.in	45.00 sq.in
$Z = f_s^3 \sqrt{dc * A} =$	47 kips/in OK	4 kips/in OK

Horizontal

$\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft}$

OR $A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$
 $C = 1.49$
 $A_s(\text{req'd}) = 0.05 \text{ in. sq/ft.}$
 $1+1/3 A_s = 0.07 \text{ in. sq/ft. OK}$

Vertical

$\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft}$

OR $A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$
 $C = 1.91$
 $A_s(\text{req'd}) = 0.01 \text{ in. sq/ft.}$
 $1+1/3 A_s = 0.01 \text{ in. sq/ft. OK}$

Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)



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**MONOLITHIC BASE SECTION
 WALL DESIGN
 COMB. UNIFORM & TRIANGULAR LOAD
 PCA Rectangular Concrete Tanks**

Project: Precast Underground Tank

10'-8 1/2" x 5'

Job #: 2007.015.003

Sheet: 10 of 15

By: GAS Date 3/28/2007

Chk By: PDB Date 3/28/07

Height, a = 3.52 ft
 Length, b = 10.71 ft
 Width, c = 4.54 ft
 Wall Thickness = 8.00 in
 b/a = 3.0

Top of wall hinged? No (Y or N)

OUTSIDE FACE

Bar Cover = 1.50 in

	Uniform	Triangular
PCA Case #	8	3
(-) Max horiz. Coeff. =	0.379	0.091
(-) Max vert. Coeff. =	0.351	0.127

Max horiz. neg. moment = 2.82 kip-ft

Max vert. neg. moment = 2.74 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	4.76 kip-ft	5.40 kip-ft	#4	8.0 in	4.25 in	0.29 in. sq/ft.	0.36 in
Vertical	4.82 kip-ft	6.22 kip-ft	#4	8.0 in	3.75 in	0.39 in. sq/ft.	0.46 in

Side Edge Shear coeff. = 1.030 (Uniform) / 0.305 (Triangular)

Vu = 3.76 kips

Bottom Edge Shear coeff. = 1.010 (Uniform) / 0.500 (Triangular)

Vu = 3.97 kips

φVc = 6.13 kips (AASHTO 8-49)

φVc > Vu: OK

φVc = 5.41 kips (AASHTO 8-49)

φVc > Vu: OK

ldb = 12 in

min lap = 21 in

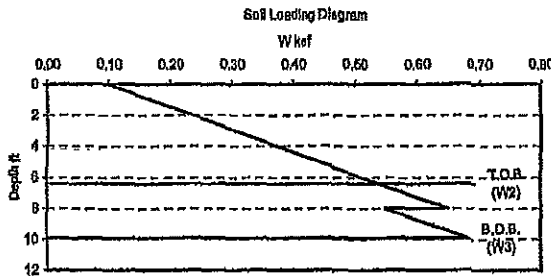
Cracking Check:

Horizontal
 $\rho = A_s / b * d = 0.005775$
 $\rho * n = 0.041552$
 $k = \sqrt{2\rho n + \rho n^2} - \rho n = 0.250$
 $j = 1 - (k/3) = 0.917$
 $M = 2.82 \text{ kip-ft}$
 $f_s = M / A_s j d = 29.44 \text{ ksi OK}$
 $d_c = 1.75 \text{ in}$
 $A = 2 * d_c * \text{Spacing} = 28.00 \text{ sq.in}$
 $Z = f_s^3 \sqrt{d_c * A} = 108 \text{ kips/in OK}$

Vertical
 0.008728646
 0.062789281
 0.297
 0.901
 2.74 kip-ft
 24.74 ksi OK
 2.25 in
 27.00 sq.in
 97 kips/in OK

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Horizontal
 $\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft OK}$



Horizontal line indicates top of wall
Lateral Earth Pressure

Eq. Lat. Press. = 0.069 kof

W2 = 0.54 ksf

W3 = 0.78 ksf

(Surcharge Applied Over Entire Height of Unit)



184 Court Street
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Project: Precast Underground Tank

10'-8 1/2" x 5'

Job #: 2007.015.003

Sheet: 11 of 15

By: GAS Date 3/28/2007

Chk By: DOB Date 3/28/07

Check minimum reinforcement requirements (cont.)

Vertical

$\phi M_n \geq 1.2 M_{cr}$

$M_{cr} = 3.18 \text{ kip-ft}$

$1.2 M_{cr} = 3.82 \text{ kip-ft} \quad \text{OK}$

INSIDE FACE

Bar Cover = 2.50 in

Uniform Triangular

PCA Case # B 3

(+) Max horiz. Coeff. = 0.089 0.024

(+) Max vert. Coeff. = 0.018 0.011

Max horiz. pos. moment = 0.67 kip-ft

Max vert. pos. moment = 0.15 kip-ft

	Mu	ϕM_n	Bar Sz	Sp	d	As	a
Horiz	1.13 kip-ft	2.09 kip-ft	#4	8.0 in	1.75 in	0.29 in. sq/ft.	0.35 in
Vertical	0.26 kip-ft	3.57 kip-ft	#4	6.0 in	2.25 in	0.39 in. sq/ft.	0.46 in

Cracking Check:

	Horizontal	Vertical
$\rho = A_s / b * d =$	0.014025	0.01454441
$\rho * h =$	0.100911	0.104648802
$k = \sqrt{(2\rho n + \rho n^2)} - \rho n =$	0.360	0.365
$j = 1 - (k/3) =$	0.880	0.878
$M = M_d + M_{ll} =$	0.67 kip-ft	0.15 kip-ft
$f_s = M / A_s j d =$	17.70 ksi OK	2.38 ksi OK
$d_c =$	2.25 in	2.25 in
$A = 2 * d_c * \text{Spacing} =$	36.00 sq.in	27.00 sq.in
$Z = f_s \sqrt[3]{(d_c * A)} =$	76 kips/in OK	9 kips/in OK

Check minimum reinforcement requirements per AASHTO 8.17.1

Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Horizontal

$\phi M_n \geq 1.2 M_{cr}$

$M_{cr} = 3.18 \text{ kip-ft}$

$1.2 M_{cr} = 3.82 \text{ kip-ft}$

OR $A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$

$C = 1.49$

$A_s(\text{req'd}) = 0.15 \text{ in. sq/ft.}$

$1+1/3 A_s = 0.20 \text{ in. sq/ft. OK}$

Vertical

$\phi M_n \geq 1.2 M_{cr}$

$M_{cr} = 3.18 \text{ kip-ft}$

$1.2 M_{cr} = 3.82 \text{ kip-ft}$

OR $A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$

$C = 1.91$

$A_s(\text{req'd}) = 0.03 \text{ in. sq/ft.}$

$1+1/3 A_s = 0.03 \text{ in. sq/ft. OK}$



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BASE SLAB DESIGN
HINGED 4 SIDES
PCA Rectangular Concrete Tanks
Case #10

Project: Precast Underground Tank

10'-8 1/2" x 5'

Job #: 2007.015.003

Sheet: 12 of 15

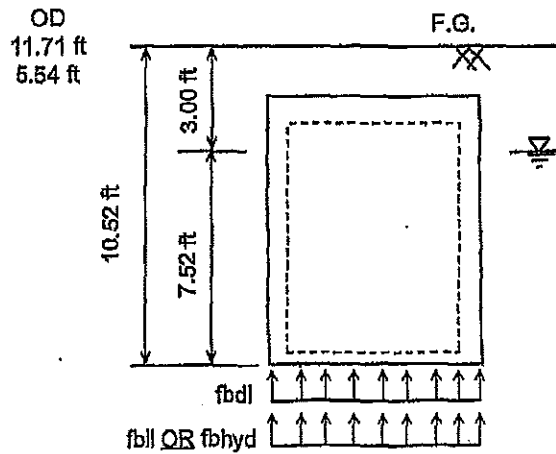
By: GAS Date: 3/28/2007

Chk By: DOB Date: 3/28/07

ID
 Length = 10.71 ft
 Width = 4.54 ft
 Wall Thickness = 6.00 in
 Slab Thickness = 7.00 in
 b/a = 2.4
 Number of Wheels = 2

Vertical Loads:

Soil = 23.36 kips
 Cover slab = 4.87 kips
 Walls = 15.69 kips
 Other =
 Total Dead Load = 43.92 kips
 Live Load = 40.00 kips



Loading Diagram

Net upward bearing pressure:

Dead & Live Load
 fbdl = 0.68 ksf
 fbll = 0.62 ksf
 Wu = 2.22 ksf <== Controls

Dead & Upward Hydrostatic Load
 fbdl = 0.68 ksf
 fbhyd = 0.47 ksf (7.52 ft * 0.0624 kcf)
 Wu = 1.49 ksf

Top cage

Transverse Coeff. = 0.110
 Longitudinal Coeff. = 0.037
 Bar cover = 2.00 in
 Transverse Moment = 2.92 kip-ft
 Longitudinal Moment = 0.99 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Transverse	5.02 kip-ft	9.15 kip-ft	#5	8.0 in	4.69 in	0.46 in. sq/ft.	0.54 in
Longitudinal	1.70 kip-ft	4.16 kip-ft	#4	10.0 in	4.06 in	0.24 in. sq/ft.	0.28 in
Shear Coeff. = Vu @ 'd'	0.476						
	4.38 kips						

φVc = 6.76 kips (AASHTO 8-49)
 φVc > Vu: OK

Cracking Check:

Transverse
 $\rho = A_s / b * d = 0.008181$
 $\rho * n = 0.058865$
 $k = \sqrt{2pn + \rho n^2} - pn = 0.289$
 $j = 1 - (k/3) = 0.904$
 M = 2.92 kip-ft
 $f_s = M / A_s j d = 18.00 \text{ ksi OK}$
 $dc = 2.31 \text{ in}$
 $A = 2 * dc * Spacing = 37.00 \text{ sq.in}$
 $Z = f_s \sqrt{dc * A} = 79 \text{ kips/in OK}$

Longitudinal
 $\rho = 0.004833$
 $\rho * n = 0.034776$
 $k = 0.231$
 $j = 0.923$
 M = 0.99 kip-ft
 $f_s = 11.68 \text{ ksi OK}$
 $dc = 2.25 \text{ in}$
 $A = 45.00 \text{ sq.in}$
 $Z = 54 \text{ kips/in OK}$



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Project: Precast Underground Tank
 10'-8 1/2" x 5'

Job #: 2007.015.003

Sheet: 13

By: GAS

Chk By: DOB

of

Date

Date

15

3/28/2007

3/28/07

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Transverse: $\phi M_n \geq 1.2 * M_{cr}$

$M_{cr} = 4.33 \text{ kip-ft}$

1.2 $M_{cr} = 5.20 \text{ kip-ft}$ OK

Longitudinal: $\phi M_n \geq 1.2 * M_{cr}$

$M_{cr} = 4.33 \text{ kip-ft}$

1.2 $M_{cr} = 5.20 \text{ kip-ft}$

OR

$A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$

$C = 3.45$

$A_s(\text{req'd}) = 0.09 \text{ in. sq/ft.}$

1+1/3 $A_s = 0.13 \text{ in. sq/ft.}$ OK



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BUOYANCY CHECK
 (Structure @ Grade)

Project: Precast Underground Tank
 10'-8 1/2" x 5'
 Job #: 2007.015.003
 Sheet: 14 of 15
 By: GAS Date: 3/28/2007
 Chk By: DOB Date: 3/28/07

Required Safety Factor for Buoyancy 1.00
 Base extension - short side 0.00 ft
 Base extension - long side 0.00 ft
 Base length 11.71 ft
 Base width 5.54 ft

Water table - ft. below grade 0.00 ft Assumed
 Top of structure above grade 0.00 ft
 Depth: F.G. to bottom of base 7.52 ft

Downward Forces:

Soil	0.00 kips	(Based Upon 0.00 ft)
Cover	4.87 kips	
Walls	15.69 kips	
Base slab	5.68 kips	
Soil over base extension	0.00 kips	
Soil Wedge	0.00 kips	
Other	<u>0.00 kips</u>	
Total	26.24 kips	

Upward Buoyant Force: 18.30 kips

Difference = 7.93 kips

Safety factor = 1.43 OK

Weir Wall

By inspection min. Steel will work.

use #3 @ 12" OC ew
centered in wall.

DESIGN COMPUTATIONS FOR
Standard Vault Designs
HS-20 & HS-25 Live Loading
6' Span x 16' Max. x 7' ID Precast Vault

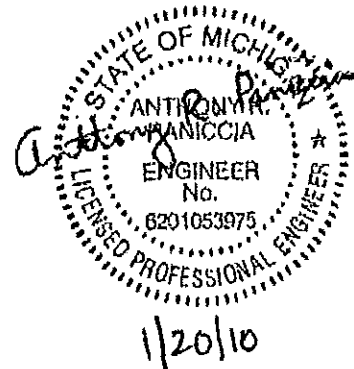
PREPARED FOR:

Northern Concrete Pipe Inc
401 Kelton Street
Bay City, Michigan 48706

PREPARED BY:

DELTA
ENGINEERS, ARCHITECTS, & LAND SURVEYORS

184 Court Street, Binghamton, New York 13901
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EMAIL: precast@deltaengineers.com
INTERNET: www.deltaengineers.com





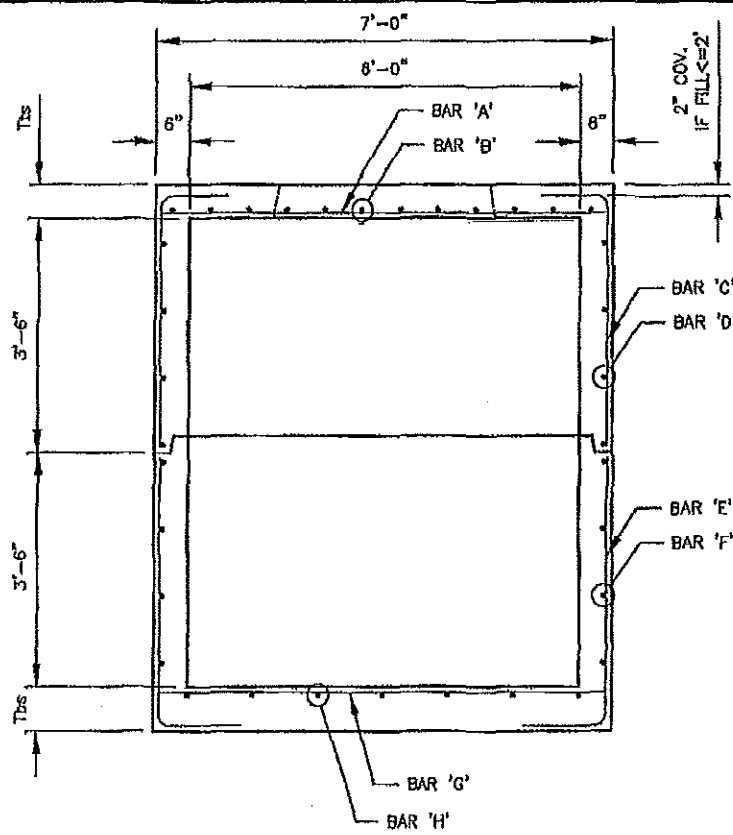
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JOB 2009.015.019
 DESCRIPTION Table of Contents
 SHEET NO. 2 OF 70 SCALE
 CALCULATED BY KMK DATE 1/12/2010
 CHECKED BY S L J DATE 1/20/10

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41-43	Cover Slab Design
44	Monolithic Top Section Design
45-46	Monolithic Bottom Section Design
47-50	Base Slab Design
Design for 6' Span for HS-25 Live Load and 5'-10' earth cover.	
51	Technical Data Sheet
52	Equivalent Lateral Fluid Pressure
53	Uniform Load Distribution
54-55	Cover Slab Design
56	Monolithic Top Section Design
57-58	Monolithic Bottom Section Design
59-60	Base Slab Design
Design for 6' Span for HS-25 Live Load and 10'-15' earth cover.	
61	Technical Data Sheet
62	Equivalent Lateral Fluid Pressure
63	Uniform Load Distribution
64-65	Cover Slab Design
66	Monolithic Top Section Design
67-68	Monolithic Bottom Section Design
69-70	Base Slab Design

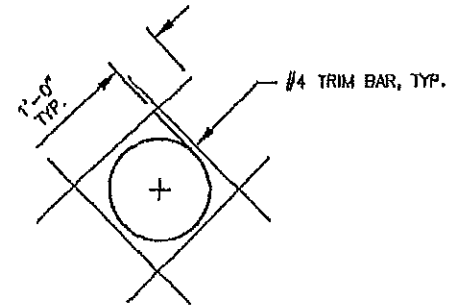


REINFORCING SECTION
(CLEAR COVER = 1" TYP., U.N.O.)

ADDITIONAL REINFORCING NOTES:

1. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, 1/2 EACH SIDE, ADDITIONAL BARS TO BE IN THE SAME PLANE.
2. PROVIDE STANDARD HOOK FOR BARS IF LAP LENGTH EXTENSION CANNOT BE OBTAINED AT JOINTS OR OTHER OBSTRUCTIONS. PLACE ADDITIONAL BARS IN SAME PLANES AS INTERRUPTED REINFORCEMENT.
3. PROVIDE #4 DIAGONAL TRIM BARS AROUND OPENINGS, EXTEND TRIM BARS MIN. 12" BEYOND OPENINGS. PROVIDE STD. HOOKS TO BARS AS REQ'D TO MAINTAIN BAR COVER.
4. PLACE DIAGONAL BARS IN EACH LAYER OF REINFORCEMENT INSIDE NORMAL REINFORCEMENT.
5. ALL REINFORCEMENT TO CLEAR OPENING BY 1".

$f'_c =$	6000PSI
BAR SIZE	MIN LAP
#4	21"
#5	26"
#6	31"
#7	36"
#8	48"



OPENING DETAIL

STANDARD VAULT SUMMARY (6FT SPAN)

LIVE LOADING	WATER TABLE (FT BELOW GRADE, MIN.)	MIN FILL	MAX FILL	Tts (IN)	Tbs (IN)	BAR 'A' (#OSPA)	BAR 'B' (#OSPA)	BAR 'C' (#OSPA)	BAR 'D' (#OSPA)	BAR 'E' (#OSPA)	BAR 'F' (#OSPA)	BAR 'G' (#OSPA)	BAR 'H' (#OSPA)
HS-20	3	0	5'-0"	0	0	#7@7"oc	#5@7"oc	#4@7"oc W/12" HOOK	#4@12"oc	#5@6"oc W/15" HOOK	#4@12"oc	#4@6"oc	#4@12"oc
HS-20	8.5	6'-0"	10'-0"	0	0	#5@6"oc	#5@12"oc	#5@6"oc W/15" HOOK	#4@12"oc	#5@7"oc W/15" HOOK	#4@12"oc	#5@7"oc	#4@10"oc
HS-20	17.5	10'-0"	15'-0"	0	0	#5@6"oc	#5@12"oc	#5@6"oc W/15" HOOK	#4@12"oc	#5@7"oc W/15" HOOK	#4@12"oc	#5@7"oc	#4@12"oc
HS-25	3	0	5'-0"	0	0	#8@7"oc	#5@8"oc	#4@7"oc W/12" HOOK	#4@12"oc	#5@6"oc W/15" HOOK	#4@12"oc	#4@6"oc	#4@12"oc
HS-25	8.5	5'-0"	10'-0"	0	0	#5@6"oc	#5@12"oc	#5@6"oc W/15" HOOK	#4@12"oc	#5@7"oc W/15" HOOK	#4@12"oc	#5@7"oc	#4@10"oc
HS-25	17.5	10'-0"	15'-0"	0	0	#5@6"oc	#5@12"oc	#5@6"oc W/15" HOOK	#4@12"oc	#5@7"oc W/15" HOOK	#4@12"oc	#5@7"oc	#4@12"oc

NOTE: WATER TABLE DEPTHS VARIES TO MAINTAIN 6" WALL THICKNESS.

DESIGN NOTES

ASSUMPTIONS:

1. DESIGN PER AASHTO 17TH EDITION FOR LIVE LOADING LISTED IN TABLE.
2. UNIT WEIGHT OF SOIL = 120 PCF
3. $f'_c @ 28$ DAYS = 5,000 PSI
4. REINFORCEMENT = BAR PER ASTM A615, GRADE 60 (UNCOATED)
5. BUOYANCY TO BE CHECKED ON PROJECT BY PROJECT BASIS.

<p>REVISIONS:</p> <table border="1"> <tr><th>REV. NO.</th><th>DATE</th><th>REVISION</th></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>		REV. NO.	DATE	REVISION													<p>PREPARED FOR:</p> <p>NORTHERN CONCRETE PIPE</p> <p>401 KELTON STREET 5281 LANSING ROAD BAY CITY, MI 48706 CHARLOTTE, MI 48813 PH: 800-222-6918 PH: 800-874-9701</p>	
REV. NO.	DATE	REVISION																
<p>PREPARED BY:</p> <p>DELTA ENGINEERS, ARCHITECTS, & LAND SURVEYORS</p> <p>104 COURT STREET, BINGHAMTON, NY 13901 TEL: (607) 231-5800 FAX: (607) 231-5850</p>		<p>DATE: 1/13/10 SHEET TITLE: REINFORCING SUMMARY DRAWN BY: KMK</p> <p>SCALE: N.T.S. PROJECT: STANDARD DESIGN SUMMARY</p> <p>16' MAX. x 6' x 7' I.D. PRECAST VAULT</p> <p>CONTRACT NO. DELTA PROJ. NO. 2009.015.019 SHEET NO. 1 OF 1</p>																



184 Court Street
BINGHAMTON, NEW YORK 13901
(807) 231-6600 Fax 231-6650

JOB	2009.015.019				
DESCRIPTION	Design Assumptions				
SHEET NO.	4	OF	70	SCALE	-
CALCULATED BY	KMK	DATE	1/12/2010		
CHECKED BY	SLJ	DATE	1/20/10		

Design Assumptions:

- Units to be designed as monolithic top and bottom sections of equal inside height.
- Walls to be designed as cantilever walls with no bending realized in the horizontal direction (Conservative)
- Watertable depths vary to maintain a 6" wall thickness for all sizes of vaults.
- Live Load surcharge applied to 12' Max. below grade. (Conservative)



184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6650

HS-20 0' TO 5' FILL

PRECAST VAULT DESIGN DESCRIPTION

Length (I.D.) =	16.00 ft	(Max.)
Width (I.D.) =	6.00 ft	
Height (I.D.) =	7.00 ft	
Wall Thickness =	6.00 in	
Base Slab Thickness =	6.00 in	
Cover Slab Thickness =	6.00 in	

TECHNICAL DATA

Earth Cover (Min.) =	0.00 ft
Earth Cover (Max) =	5.00 ft
Min Watertable Depth =	3.00 ft
ka =	0.33
Unit Weight of Soil =	120 pcf
Equivalent Lateral Fluid Pressure =	0.071 kcf
LL Surcharge =	0.08 ksf
Depth Below F.G. to Apply Surcharge =	12.00 ft (Cons.)

Concrete Strength (f'c) =	5.0 ksi
Unit Weight of Concrete =	150 pcf
$E_c = 57,000 \sqrt{f'c} =$	4.03E+06 psi
Yield Strength (fy) =	60 ksi
$E_s =$	2.90E+07 psi
$n = E_s / E_c =$	7.2
$\beta_1 = (.85 - .05(f_c - 4)) =$	0.8
$f_r = 7.5 \sqrt{f'c} =$	530 psi
Rho max = (.75 pb) =	0.0251531
Zmax =	130 Severe Exposure

Design Wheel Load (Pw) =	16 kips	AASHTO HS20
Uniform Live Load =	0 psf	

Capacity Reduction Factors:

ϕ - Moment =	0.90
ϕ - Shear =	0.85

Load Factors:

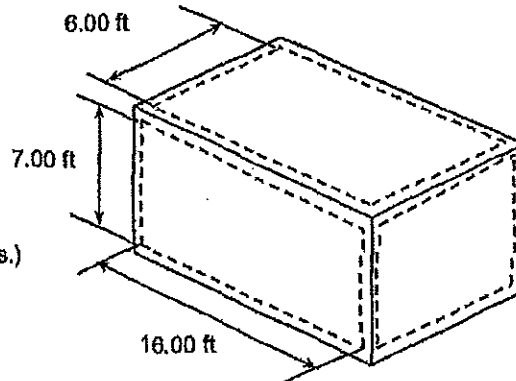
$\gamma =$	1.30
β - LL =	1.67
β - DL =	1.00
β - EL =	1.30

References:

1. "Specifications for Highway Bridges, 17th Ed." - AASHTO
2. "Rectangular Concrete Tanks, 5th Ed." - PCA Publication.
3. "Theory of Plates and Shells" - Timoshenko, S. 1959.
4. "Standard Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures" - ASTM C890

Project:	Standard Vault Designs
	6ft span HS-20 Loading
Client:	Northern Concrete Pipe
Job Number:	2009.015.019
File Name:	vaultlf(V2.2.1).xls
Entered By:	KMK
Checked By:	SLJ
Date:	1/12/2010
Sheet:	5 of 70

Denotes input field



Vault Isometric View
 (Joints not shown for clarity)
 (All dimensions I.D.)

DELTA

ENGINEERS, ARCHITECTS, & LAND SURVEYORS

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 Binghamton, NY 13901
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EQUIVALENT LATERAL FLUID PRESSURE:

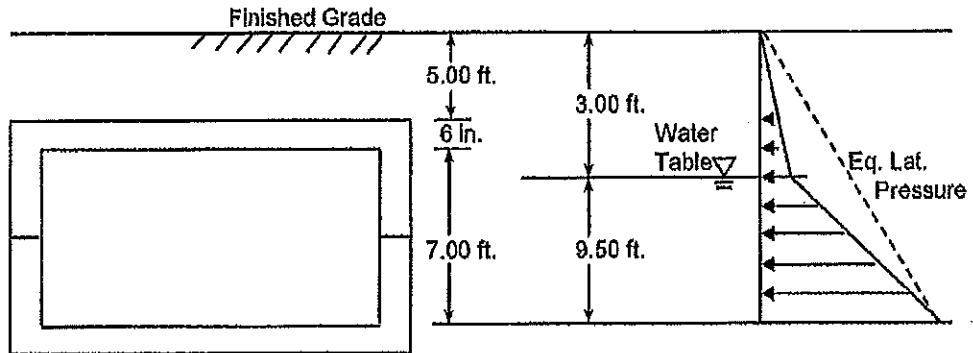
Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 6 of 70
 By: KMK Date 1/12/2010
 Chk By: SLW Date 1/20/10

Ka =	0.33
Unit Wt. of Soil =	120 pcf
Max. Fill Above Structure =	5.00 ft. (Worst Case)
Structure Inside Ht. =	7.00 ft.
Top Slab Thickness =	6.00 in.
Min. Watertable Depth =	3.00 ft.

Lateral Pressure (Dry) = 39.6 pcf
 (Ka*Soil Wt.)

Lateral Pressure (Sat.) = 81.4 pcf
 (Ka*(Soil Wt.-62.4pcf)+62.4pcf)

Equivalent Lateral Pressure = 71.4 pcf



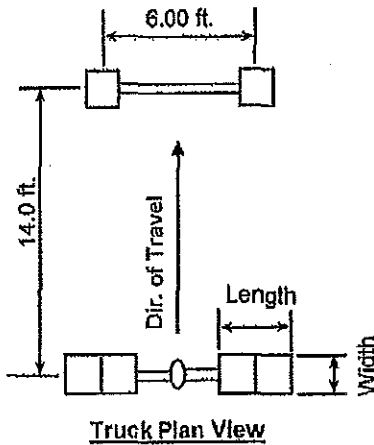
Project: Standard Vault Designs
6ft span HS-20 Loading
Job #: 2009.015.019
Sheet: 7 of 70
By: KMK Date 1/12/2010
Chk By: SW Date 1/20/10

Determine Uniform Load From Wheel Live Load for Various Fill Depths

Distance Between CL of Wheel and CL of Truck: 3 ft
Wheel Load: 16 kips

Distribution Length = 1.75 x Depth of Fill + Length of Dual Wheel Dimensions
Distribution Width = 1.75 x Depth of Fill + Width of Dual Wheel Dimensions

Dual Wheel Dimensions: Length 1.67 ft. Width 0.83 ft. AASHTO 3.30



Max Fill:

Depth of Fill (ft)	Distrib. Length	Distrib. Width	Lengths Overlap?	DLA ft ²	Uniform Load psf
3.0	6.92	6.08	YES	42.1	380.3
3.5	7.80	6.96	YES	95.9	333.5
4.0	8.67	7.83	YES	114.9	278.6
4.5	9.55	8.71	YES	135.3	236.5
5.0	10.42	9.58	YES	157.3	203.4
5.5	11.30	10.46	YES	180.8	177.0
6.0	12.17	11.33	YES	205.9	155.4
6.5	13.05	12.21	YES	232.4	137.7
7.0	13.92	13.08	YES	260.8	122.8
7.5	14.80	13.96	YES	290.2	110.3
3.0	6.92	6.08	YES	78.6	407.4
5.0	10.42	9.58	YES	157.3	203.4

Design Min Fill = 3.00 ft	42.1	380.3
Design Max Fill = 5.00 ft	157.3	203.4

Note: If design fill < 3', design using concentrated load case

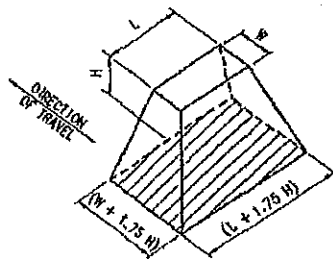


FIG. 4 Distributed Load Area
(REF "ASTM C 890-91")



184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6650

COVER SLAB DESIGN
AASHTO 3.24.6

Project: Standard Vault Designs
 6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 8 of 10

By: KMK Date 1/12/2010

Chk By: SW Date 1/20/10

- Length (I.D.) = 16.00 ft
- Width (I.D.) = 6.00 ft
- Wall Thickness = 6.00 in
- Slab Thickness = 6.00 in
- Earth Cover = 1.00 ft
- Bar cover = 1.00 in
- Impact = 1.30

Controls

One Way Slab

- Span (s) = 6.50 ft
- Dead Loads: Soil = 0.12 ksf
- Concrete = 0.08 ksf
- Additional Uniform Dead Load = 0.00 ksf
- Total (wdl) = 0.20 ksf

- 2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
- 2-Way slab fac. (Concentrated) = 1.000
- Mdl = wdl l² / 8 * (2-way slab factor) = 1.03 kip-ft
- e = 4 * .06S = 4.39 ft
- p = (Pw * Impact) / e = 4.74 kips/ft
- Mll = ps/4 * (2-way slab factor) = 7.70 kip-ft
- Mu = γ[β_(L+I) * Mll + β_D * Mdl] = 18.05 kip-ft
- d = 4.56 in

Req. Bar Size and Spacing

Short Span: As = 1.03 in. sq/ft. Use #7 @ 7.0 in

Distribution Steel = As / Span * .5 = 0.40 in. sq/ft. Use #5 @ 7.0 in

$\rho = A_s / b * d = 0.01882804$
 $\rho * n = 0.13547002$

Flexure Check:
 $a = A_s F_y / 0.85 f'c b = 1.213$ in
 $\phi M_n = \phi A_s F_y (d - (a/2)) = 18.35$ kip-ft OK

Cracking Check:
 $k = \sqrt{(2\rho n + \rho n^2)} - \rho n = 0.402$
 $j = 1 - (k/3) = 0.866$
 $M = Mdl + Mll = 8.73$ kip-ft
 $f_s = M / A_s j d = 25.72$ ksi OK
 $dc = 1.438$ in
 $A = 2 * dc * Spacing = 20.1$ sq.in
 $Z = f_s^3 \sqrt{dc * A} = 79$ kips/in OK

Note: Shear considered satisfactory per AASHTO 3.24.4

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

$\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18$ kip-ft
 $1.2 M_{cr} = 3.82$ kip-ft OK



184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6660

COVER SLAB DESIGN
UNIFORM LIVE LOAD
 MIN. FILL
 ASTM C890

Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 9 of 70
 By: KMK Date 1/12/2010
 Chk By: SLW Date 1/20/10

Length (I.D.) = 16.00 ft.
 Width (I.D.) = 6.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 Earth Cover = 3.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.50 ft
 Dead Loads: Soil = 0.36 ksf
 Concrete = 0.08 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 0.44 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 2.30 \text{ kip-ft}$
 $DLA = 42.07 \text{ sf}$
 $Wll = 0.38 \text{ ksf}$
 $Mll = wll \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 2.01 \text{ kip-ft}$
 $Mu = \gamma[(\beta_{(1,+)} \cdot Mll) + \beta_D \cdot Mdl] = 7.35 \text{ kip-ft}$

d = 4.56 in

Req. Bar Size and Spacing

Short Span: $As = 1.03 \text{ in. sq/ft.}$ Use #7 @ 7.0 in

Distribution Steel = $As / \text{Span} \cdot 5 = 0.40 \text{ in. sq/ft.}$ Use #5 @ 7.0 in

$\rho = As / b \cdot d = 0.01882804$
 $\rho \cdot n = 0.13547002$

Flexure Check:

$a = As \cdot Fy / 0.85 \cdot fc \cdot b = 1.213 \text{ in}$
 $\phi Mn = \phi \cdot As \cdot Fy \cdot (d - (a/2)) = 18.35 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{2\rho n + \rho n^2} - \rho n = 0.402$
 $j = 1 - (k/3) = 0.866$
 $M = Mdl + Mll = 4.31 \text{ kip-ft}$
 $fs = M / As \cdot j \cdot d = 12.68 \text{ ksi OK}$
 $dc = 1.438 \text{ in}$
 $A = 2 \cdot dc \cdot \text{Spacing} = 20.1 \text{ sq.in}$
 $Z = fs \cdot \sqrt{dc \cdot A} = 39 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} \cdot Wll + \beta_{DL} \cdot Wdl] \cdot [(span/2) - d] = 3.99 \text{ kips/ft}$
 (AASHTO 8-49) $\phi Vc = 6.58 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least $1/8 \text{ sq. in./ft}$ (AASHTO 8.20.1)

$\phi Mn \geq 1.2 \cdot Mcr$
 $Mcr = 3.18 \text{ kip-ft}$
 $1.2 \cdot Mcr = 3.82 \text{ kip-ft OK}$



184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6650

**COVER SLAB DESIGN
 UNIFORM LIVE LOAD
 MAX FILL
 ASTM C890**

Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 10 of 70
 By: KMK Date 7/12/2010
 Chk By: SWJ Date 1/20/10

Length (I.D.) = 18.00 ft.
 Width (I.D.) = 6.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 Earth Cover = 5.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.50 ft.
 Dead Loads: Soil = 0.60 ksf
 Concrete = 0.08 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 0.68 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl \cdot l^2 / 8$ (2-way slab factor) = 3.58 kip-ft
 DLA = 157.30 sf
 Wll = 0.20 ksf
 $Mll = wll \cdot l^2 / 8$ (2-way slab factor) = 1.07 kip-ft
 $Mu = \gamma[\beta_{(L+I)} \cdot Mll + \beta_D \cdot Mdl]$ = 6.97 kip-ft

d = 4.56 in

Req. Bar Size and Spacing

Short Span: $As = 1.03 \text{ in. sq/ft.}$ Use #7 @ 7.0 in

Distribution Steel = $As / \text{Span} \cdot 5 = 0.40 \text{ in. sq/ft.}$ Use #5 @ 7.0 in

$\rho = As / b \cdot d = 0.01882804$

$\rho \cdot n = 0.13547002$

Flexure Check:

$a = As \cdot Fy / 0.85 \cdot Fcb = 1.213 \text{ in}$

$\phi Mn = \phi \cdot As \cdot Fy \cdot (d - (a/2)) = 18.35 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{(2\rho n + \rho n^2)} - \rho n = 0.402$

$j = 1 - (k/3) = 0.866$

$M = Mdl + Mll = 4.64 \text{ kip-ft}$

$fs = M / As \cdot j \cdot d = 13.67 \text{ ksi OK}$

$dc = 1.438 \text{ in}$

$A = 2 \cdot dc \cdot \text{Spacing} = 20.1 \text{ sq.in}$

$Z = fs \cdot \sqrt[3]{dc \cdot A} = 42 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} \cdot Wll + \beta_{DL} \cdot Wdl] \cdot$

$[(\text{span}/2) - d] = 3.79 \text{ kips/ft}$

(AASHTO 8-49) $\phi Vc = 6.58 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

$\phi Mn \geq 1.2 \cdot Mcr$

$Mcr = 3.18 \text{ kip-ft}$

$1.2 \cdot Mcr = 3.82 \text{ kip-ft OK}$



184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6650
**MONOLITHIC TOP SECTION
 CANTILEVER WALL DESIGN
 UNIFORM LOAD**

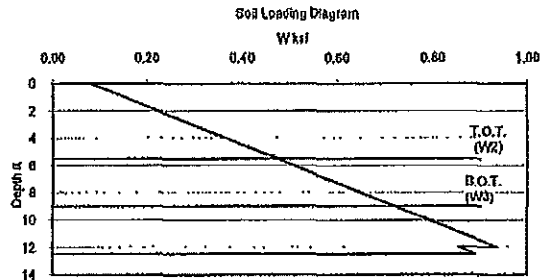
Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 11 of 70
 By: KMK Date 1/19/2010
 Chk By: SLJ Date 1/20/10

Height, a = 3.50 ft
 Length, b = 16.00 ft
 Width, c = 6.00 ft
 Wall Thickness = 6.00 in

Bottom of wall hinged? N (Y or N)

OUTSIDE FACE

PCA Case # = 8
 Bar Cover = 1.00 in
 Max horiz. Coeff. = 0.000
 Max vert. Coeff. = 0.500
 Max horiz. neg. moment = 0.00 kip-ft
 Max vert. neg. moment = 3.66 kip-ft



Horizontal lines indicate top & bottom of wall

Lateral Earth Pressure

Eq. Lat. Press. = 0.071 kcf
 W2 = 0.47 ksf
 W3 = 0.72 ksf
 Wavg = 0.60 ksf

(Surcharge Applied Over Entire Height of Unit)

	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.65 kip-ft	# 4	12.0 in	4.25 in	0.20 in. sq/ft.	0.23 in
Vertical	6.18 kip-ft	6.89 kip-ft	# 4	7.0 in	4.75 in	0.34 in. sq/ft.	0.40 in
Shear coeff. =	1.000						

Vu = 3.53 kips

φVc = 6.13 kips (AASHTO 8-49)
 φVc > Vu: OK
 ldb = 12 in

Cracking Check:

Horizontal
 $\rho = A_s / b * d = 0.003850$
 $\rho * n = 0.027701$
 $k = \sqrt{2\rho n + \rho n^2} - \rho n = 0.209$
 $j = 1 - (k/3) = 0.930$
 M = 0.00 kip-ft
 $f_s = M / A_s j d = 0.00 \text{ ksi}$ OK
 $dc = 1.75 \text{ in}$
 $A = 2 * dc * \text{Spacing} = 42.00 \text{ sq.in}$
 $Z = f_s^3 \sqrt{dc * A} = 0 \text{ kips/in}$ OK

Vertical
 $\rho = 0.005905$
 $\rho * n = 0.042489$
 $k = 0.252$
 $j = 0.916$
 M = 3.66 kip-ft
 $f_s = 29.99 \text{ ksi}$ OK
 $dc = 1.25 \text{ in}$
 $A = 17.50 \text{ sq.in}$
 $Z = 84 \text{ kips/in}$ OK

Horizontal

$\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft}$

OR

$A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$
 $C = 3.61$
 $A_s(\text{req'd}) = 0.00 \text{ in. sq/ft.}$
 $1+1/3 A_s = 0.00 \text{ in. sq/ft.}$ OK

Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Vertical

$\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft}$ OK

OR



184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6650
**MONOLITHIC BASE SECTION
 CANTILEVER WALL DESIGN
 COMB. UNIFORM & TRIANGULAR LOAD
 PCA Rectangular Concrete Tanks**

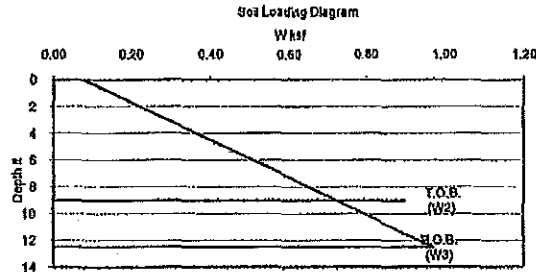
Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 12 of 70
 By: KMK Date: 1/12/2010
 Chk By: [Signature] Date: 1/20/10

Height, a = 3.50 ft.
 Length, b = 16.00 ft.
 Width, c = 6.00 ft.
 Wall Thickness = 6.00 in
 b/a = 4.6

Top of wall hinged? Y N (Y or N)

OUTSIDE FACE
 Bar Cover = 1.00 in

	Uniform	Triangular
PCA Case #	8	3
(-) Max horiz. Coeff. =	0.000	0.000
(-) Max vert. Coeff. =	0.500	0.167



Horizontal line indicates top of wall
Lateral Earth Pressure
 Eq. Lat. Press. = 0.071 kcf
 W2 = 0.72 ksf
 W3 = 0.97 ksf

Max horiz. neg. moment = 0.00 kip-ft
 Max vert. neg. moment = 4.94 kip-ft

(Surcharge Applied Over Entire Height of Unit)

	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.54 kip-ft	# 4	12.0 in	4.13 in	0.20 in. sq/ft.	0.23 in
Vertical	8.34 kip-ft	11.95 kip-ft	# 5	6.0 in	4.69 in	0.61 in. sq/ft.	0.72 in

	Uniform	Triangular
Side Edge Shear coeff. =	1.000	0.305
Vu =	4.72 kips	
Bottom Edge Shear coeff. =	1.000	0.500
Vu =	5.01 kips	

φVc = 5.95 kips (AASHTO 8-49)
 φVc > Vu: OK
 φVc = 6.76 kips (AASHTO 8-49)
 φVc > Vu: OK
 min lap = 21 in

ldb = 12 in

Cracking Check:

Horizontal
 $\rho = A_s / b * d = 0.003967$
 $\rho * n = 0.028541$
 $k = \sqrt{(2\rho n + \rho n^2)} - \rho n = 0.212$
 $j = 1 - (k/3) = 0.929$
 M = 0.00 kip-ft
 $f_s = M / A_s j d = 0.00 \text{ ksi}$ OK
 $d_c = 1.88 \text{ in}$
 $A = 2 * d_c * \text{Spacing} = 45.00 \text{ sq.in}$
 $Z = f_s^3 \sqrt{d_c * A} = 0 \text{ kips/in}$ OK

Vertical
 0.010908308
 0.078486602
 0.325
 0.892
 4.94 kip-ft
 23.10 ksi OK
 1.31 in
 15.75 sq.in
 63 kips/in OK

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Horizontal

$\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft}$

OR $A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$
 $C = 3.51$
 $A_s(\text{req'd}) = 0.00 \text{ in. sq/ft.}$
 $1+1/3 A_s = 0.00 \text{ in. sq/ft.}$ OK

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Project: Standard Vault Designs
6ft span HS-20 Loading

Job #: 2008.015.019

Sheet: 13

By: KMK

Chk By: S.J.

of 70
Date 1/12/2010

Date 1/20/10

Monolithic Base Section Design Continued:

Check minimum reinforcement requirements (cont.)

Vertical

$$\phi M_n \geq 1.2 M_{cr}$$

$$M_{cr} = 3.18 \text{ kip-ft}$$

$$1.2 M_{cr} = 3.82 \text{ kip-ft} \quad \text{OK}$$



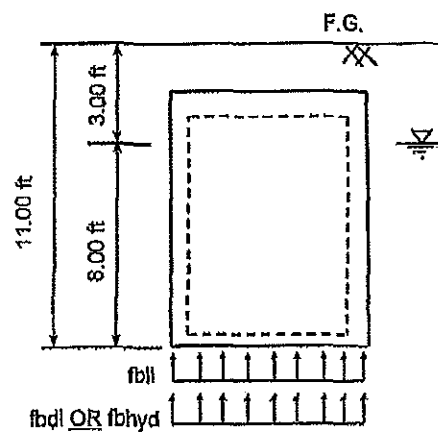
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BASE SLAB DESIGN
HINGED 4 SIDES
 PCA Rectangular Concrete Tanks
 Case #10

Controls

ID
 Length = 16.00 ft
 Width = 6.00 ft
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 b/a = 2.7
 Number of Wheels = 3
Vertical Loads:
 Soil = 42.84 kips (Based on 3' Fill)
 Cover slab = 8.93 kips
 Walls = 24.15 kips
 Other =
 Total Dead Load = 75.92 kips
 Live Load = 48.00 kips

Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 14 of 70
 By: KMK Date 1/12/2010
 Chk By: SLW Date 1/20/10



Loading Diagram
 Ref: ASTM C857 Sec 4.3

Net upward bearing pressure:

Dead Load, fbdl = 0.64 ksf **<= Controls**
 Hydrostatic, fbhyd = 0.50 ksf (8.00 ft * 0.0624 kcf)
 Live Load, fbll = + 0.40 ksf
 w = 1.04 ksf
 Wu = 1.71 ksf

Top cage
 Transverse Coeff. = 0.114
 Longitudinal Coeff. = 0.037
 Bar cover = 1.00 in
 Transverse Moment = 4.29 kip-ft
 Longitudinal Moment = 1.37 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Transverse	7.02 kip-ft	7.99 kip-ft	# 4	6.0 in	4.75 in	0.39 in. sq/ft.	0.46 in
Longitudinal	2.25 kip-ft	3.65 kip-ft	# 4	12.0 in	4.25 in	0.20 in. sq/ft.	0.23 in
Shear Coeff. =	0.484						

Vu @ 'd' = 4.62 kips

φVc = 6.85 kips (AASHTO 8-49)
 φVc > Vu: OK

Cracking Check:

	Transverse	Longitudinal
p = As / b * d =	0.006889	0.003850
p * n =	0.049570	0.027701
k = √(2pn + pn²) - pn =	0.269	0.209
j = 1 - (k/3) =	0.910	0.930
M =	4.29 kip-ft	1.37 kip-ft
fs = M / As j d =	30.31 ksi OK	18.98 ksi OK
dc =	1.25 in	1.75 in
A = 2 * dc * Spacing =	15.00 sq.in	42.00 sq.in
Z = fs³√(dc * A) =	80 kips/in OK	79 kips/in OK



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Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 15 of 70
 By: KMK Date 1/12/2010
 Chk By: SJD Date 1/20/10

Base Slab Design Continued:

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Transverse: $\Delta M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft}$ OK

Longitudinal: $\Delta M_n \geq 1.2 * M_{cr}$ OR
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft}$

$A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$
 $C = 3.61$
 $A_s(\text{req'd}) = 0.12 \text{ in. sq/ft.}$
 $1+1/3 A_s = 0.16 \text{ in. sq/ft. OK}$

DELTA

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BASE SLAB DESIGN
HINGED 4 SIDES
 PCA Rectangular Concrete Tanks
 Case #10

Project: Standard Vault Designs
 8ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 16 of 70

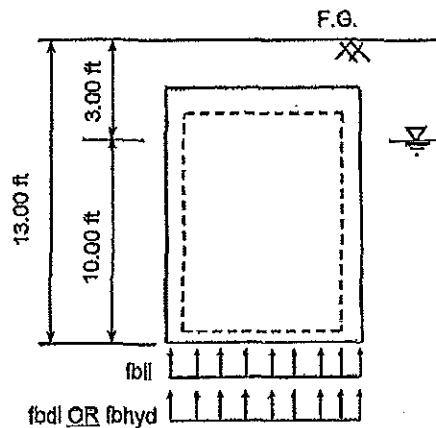
By: KMK Date: 1/12/2010

Chk By: SLJ Date: 1/20/10

	ID	OD
Length =	16.00 ft	17.00 ft
Width =	6.00 ft	7.00 ft
Wall Thickness =	6.00 in	
Slab Thickness =	6.00 in	
b/a =	2.7	
Number of Wheels =	0	Distributed load used from top slab design (Based on 5' Fill)

Vertical Loads:

Soil =	71.40 kips
Cover slab =	8.93 kips
Walls =	24.15 kips
Other =	
Total Dead Load =	104.48 kips



Loading Diagram
 Ref: ASTM C857 Sec 4.3

Net upward bearing pressure:

Dead Load, fbdl = 0.88 ksf **<== Controls**
 Hydrostatic, fbhyd = 0.62 ksf (10.00 ft * 0.0624 kcf)

Live Load, fbll = + 0.20 ksf
 w = 1.08 ksf
 Wu = 1.58 ksf

Top cage

Transverse Coeff. =	0.114
Longitudinal Coeff. =	0.037
Bar cover =	1.00 in
Transverse Moment =	4.45 kip-ft
Longitudinal Moment =	1.42 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Transverse	6.52 kip-ft	7.99 kip-ft	# 4	6.0 in	4.75 in	0.39 in. sq/ft.	0.46 in
Longitudinal	2.09 kip-ft	3.65 kip-ft	# 4	12.0 in	4.25 in	0.20 in. sq/ft.	0.23 in
Shear Coeff. =	0.484						
Vu @ 'd' =	4.29 kips						

φVc = 6.85 kips (AASHTO 8-49)
 φVc > Vu: OK

Cracking Check:

	Transverse	Longitudinal
$\rho = A_s / b * d =$	0.006899	0.003850
$\rho * n =$	0.049570	0.027701
$k = \sqrt{2\rho n + \rho n^2} - \rho n =$	0.269	0.209
$j = 1 - (k/3) =$	0.910	0.930
M =	4.45 kip-ft	1.42 kip-ft
$f_s = M / A_s j d =$	31.47 ksi	19.71 ksi
dc =	1.25 in	1.75 in
$A = 2 * dc * Spacing =$	15.00 sq.in	42.00 sq.in
$Z = fs \sqrt{dc * A} =$	84 kips/in	82 kips/in



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Project: Standard Vault Designs
6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 17 of

By: KMK Date

Chk By: scj Date

70
1/12/2010
1/20/10

Base Slab Design Continued:

Check minimum reinforcement requirements per AASHTO 8.17.1

Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Transverse: $\phi M_n \geq 1.2 * M_{cr}$

$M_{cr} = 3.18$ kip-ft

1.2 $M_{cr} = 3.82$ kip-ft OK

Longitudinal: $\phi M_n \geq 1.2 * M_{cr}$

$M_{cr} = 3.18$ kip-ft

1.2 $M_{cr} = 3.82$ kip-ft

OR

$A_s(\text{prov.}) \geq (1 + 1/3) * A_s(\text{req'd})$

$C = 3.61$

$A_s(\text{req'd}) = 0.11$ in. sq/ft.

1 + 1/3 $A_s = 0.15$ in. sq/ft. OK

HS-20 5' TO 10' FILL

PRECAST VAULT DESIGN DESCRIPTION

Length (I.D.) =	16.00 ft	(Max.)
Width (I.D.) =	6.00 ft	
Height (I.D.) =	7.00 ft	
Wall Thickness =	6.00 in	
Base Slab Thickness =	6.00 in	
Cover Slab Thickness =	6.00 in	

TECHNICAL DATA

Earth Cover (Min.) =	5.00 ft
Earth Cover (Max) =	10.00 ft
Min Watertable Depth =	6.50 ft
ka =	0.33
Unit Weight of Soil =	120 pcf
Equivalent Lateral Fluid Pressure =	0.066 ksf
LL Surcharge =	0.08 ksf
Depth Below F.G. to Apply Surcharge =	12.00 ft (Cons.)

Concrete Strength (f _c) =	5.0 ksi
Unit Weight of Concrete =	150 pcf
E _c = 57,000 * √f _c =	4.03E+06 psi
Yield Strength (f _y) =	60 ksi
E _s =	2.90E+07 psi
n = E _s / E _c =	7.2
β ₁ = (.85-.05(fc-4)) =	0.8
f _r = 7.5 √f _c =	530 psi
Rho max = (.75 pb) =	0.0251531
Z _{max} =	130 Severe Exposure

Design Wheel Load (P _w) =	16 klps	AASHTO HS20
Uniform Live Load =	0 psf	

Capacity Reduction Factors:

φ - Moment =	0.90
φ - Shear =	0.85

Load Factors:

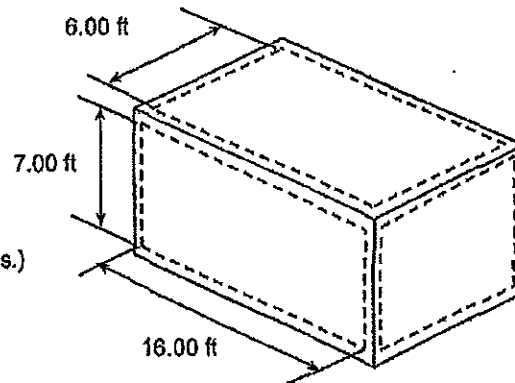
γ =	1.30
β - LL =	1.67
β - DL =	1.00
β - EL =	1.30

References:

1. "Specifications for Highway Bridges, 17th Ed." - AASHTO
2. "Rectangular Concrete Tanks, 5th Ed." - PCA Publication.
3. "Theory of Plates and Shells" - Timoshenko, S. 1959.
4. "Standard Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures" - ASTM C890

Project:	Standard Vault Designs
	6ft span HS-20 Loading
Client:	Northern Concrete Pipe
Job Number:	2009.015.019
File Name:	vaultlf(V2.2.1).xls
Entered By:	KMK
Checked By:	SLJ
Date:	1/12/2010
Sheet:	18 of 110

Denotes Input field



Vault Isometric View
 (Joints not shown for clarity)
 (All dimensions I.D.)

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EQUIVALENT LATERAL FLUID PRESSURE:

Project: Standard Vault Designs
 6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 19 of 70

By: KMK Date 1/12/2010

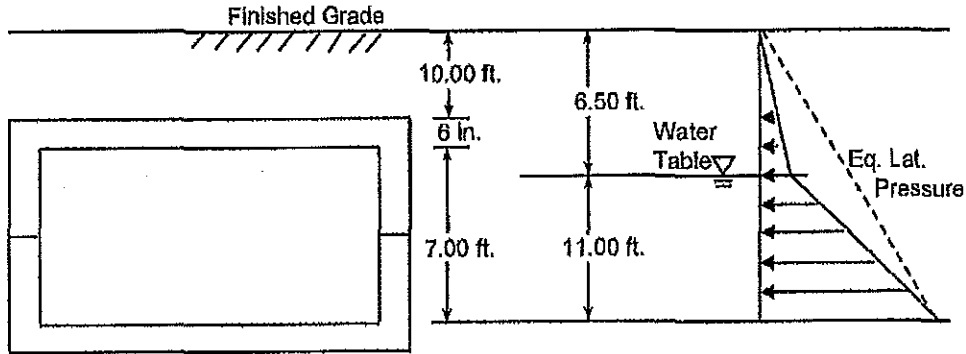
Chk By: SLS Date 1/20/10

Ka =	0.33	
Unit Wt. of Soil =	120 pcf	
Max. Fill Above Structure =	10.00 ft.	(Worst Case)
Structure Inside Ht. =	7.00 ft.	
Top Slab Thickness =	6.00 in.	
Mln. Watertable Depth =	6.50 ft.	

Lateral Pressure (Dry) = 39.6 pcf
 (Ka*Soil Wt.)

Lateral Pressure (Sat.) = 81.4 pcf
 (Ka*(Soil Wt.-62.4pcf)+62.4pcf)

Equivalent Lateral Pressure = 65.9 pcf



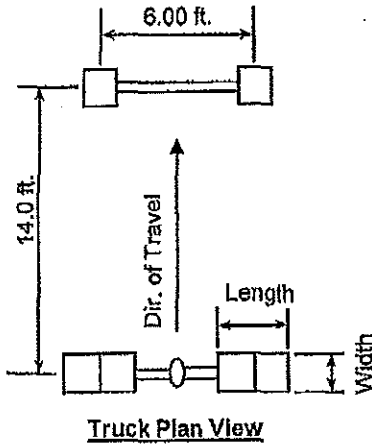
Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 70 of 70
 By: KMK Date 1/12/2010
 Chk By: SLJ Date 1/20/10

Determine Uniform Load From Wheel Live Load for Various Fill Depths

Distance Between CL of Wheel and CL of Truck: 3 ft
 Wheel Load: 16 kips

Distribution Length = 1.75 x Depth of Fill + Length of Dual Wheel Dimensions
 Distribution Width = 1.75 x Depth of Fill + Width of Dual Wheel Dimensions

Dual Wheel Dimensions: Length 1.67 ft. Width 0.83 ft. AASHTO 3.30



Max Fill:

Depth of Fill (ft)	Distrib. Length	Distrib. Width	Lengths Overlap?	DLA ft ²	Uniform Load psf
3.0	6.92	6.08	YES	42.1	380.3
3.5	7.80	6.96	YES	95.9	333.5
4.0	8.67	7.83	YES	114.9	278.6
4.5	9.55	8.71	YES	135.3	236.5
5.0	10.42	9.58	YES	157.3	203.4
5.5	11.30	10.46	YES	180.8	177.0
6.0	12.17	11.33	YES	205.9	155.4
6.5	13.05	12.21	YES	232.4	137.7
7.0	13.92	13.08	YES	260.6	122.8
7.5	14.80	13.96	YES	290.2	110.3
5.0	10.42	9.58	YES	157.3	203.4
10.0	19.17	18.33	YES	461.4	69.4

Design Min Fill = 5.00 ft	157.3	203.4
Design Max Fill = 10.00 ft	461.4	69.4

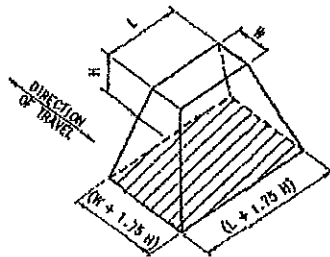


FIG. 4 Distributed Load Area
 (REF "ASTM C 890-91")

Note: If design fill < 3', design using concentrated load case



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**COVER SLAB DESIGN
 UNIFORM LIVE LOAD**

MAX FILL
 ASTM C890

Controls

Length (L.D.) = 16.00 ft.
 Width (L.D.) = 6.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 Earth Cover = 10.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.50 ft.
 Dead Loads: Soil = 1.20 ksf
 Concrete = 0.08 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 1.28 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl l^2 / 8 * (2\text{-way slab factor}) = 6.73 \text{ kip-ft}$
 DLA = 461.37 sf
 Wll = 0.07 ksf
 $Mll = wll l^2 / 8 * (2\text{-way slab factor}) = 0.37 \text{ kip-ft}$
 $Mu = \gamma[\beta_{(L+I)} * Mll + \beta_D * Mdl] = 9.55 \text{ kip-ft}$

d = 4.69 in

Req. Bar Size and Spacing

Short Span: $As = 0.61 \text{ in. sq/ft.}$

Use	# 5	@	6.0 in
-----	-----	---	--------

Distribution Steel = $As / \text{Span} * .5 = 0.24 \text{ in. sq/ft.}$

Use	# 5	@	45.0 in
-----	-----	---	---------

12.0

$\rho = As / b * d = 0.01090831$
 $\rho * n = 0.0784866$

Flexure Check:

$a = AsFy / 0.85f'cb = 0.722 \text{ in}$
 $\phi Mn = \phi * As * Fy * (d - (a/2)) = 11.95 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{2pn + \rho n^2} - \rho n = 0.325$
 $j = 1 - (k/3) = 0.892$
 $M = Mdl + Mll = 7.10 \text{ kip-ft}$
 $fs = M / As * j * d = 33.23 \text{ ksi OK}$
 $dc = 1.313 \text{ in}$

$A = 2 * dc * \text{Spacing} = 15.8 \text{ sq.in}$
 $Z = fs * \sqrt[3]{dc * A} = 91 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} * Wll + \beta_{DL} * Wdl] *$
 $[(\text{span}/2) - d] = 5.17 \text{ kips/ft}$
 (AASHTO 8-49) $\phi Vc = 6.76 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least $1/8 \text{ sq. in./ft}$ (AASHTO 8.20.1)

$\phi Mn \geq 1.2 * Mcr$

$Mcr = 3.18 \text{ kip-ft}$
 $1.2 Mcr = 3.82 \text{ kip-ft OK}$

Project: Standard Vault Designs
 8ft span HS-20 Loading

Job #: 2008.015.019

Sheet: 21 of 70

By: KMK Date 1/12/2010

Chk By: SLJ Date 1/20/10



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COVER SLAB DESIGN
UNIFORM LIVE LOAD
 MIN. FILL
 ASTM C890

Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 22 of 70
 By: KMK Date 1/12/2010
 Chk By: SLS Date 1/20/10

Length (I.D.) = 16.00 ft.
 Width (I.D.) = 6.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 Earth Cover = 5.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.50 ft.
 Dead Loads: Soil = 0.60 ksf
 Concrete = 0.08 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 0.68 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl l^2 / 8 * (2\text{-way slab factor}) = 3.56 \text{ kip-ft}$
 DLA = 157.30 sf
 Wll = 0.20 ksf
 $Mll = wll l^2 / 8 * (2\text{-way slab factor}) = 1.07 \text{ kip-ft}$
 $Mu = \gamma[\beta_{(L+I)} * Mll + \beta_D * Mdl] = 6.97 \text{ kip-ft}$

d = 4.69 in

Req. Bar Size and Spacing

Short Span: $As = 0.61 \text{ in. sq/ft.}$ Use #5 @ 6.0 in

Distribution Steel = $As / \text{Span} = 0.24 \text{ in. sq/ft.}$ Use #5 @ 75.0 in
 12.0

$\rho = As / b * d = 0.01090831$
 $\rho * n = 0.0784866$

Flexure Check:

$a = AsFy / 0.85Fcb = 0.722 \text{ in}$
 $\phi Mn = \phi * As * Fy * (d - (a/2)) = 11.95 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{2\rho n + \rho n^2} - \rho n = 0.325$
 $j = 1 - (k/3) = 0.892$
 $M = Mdl + Mll = 4.64 \text{ kip-ft}$
 $fs = M / As * j * d = 21.71 \text{ ksi OK}$
 $dc = 1.313 \text{ in}$

$A = 2 * dc * \text{Spacing} = 15.8 \text{ sq.in}$
 $Z = fs^3 / (dc * A) = 60 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} * Wll + \beta_{DL} * Wdl] *$
 $[(\text{span}/2) - d] = 3.77 \text{ kips/ft}$
 (AASHTO 8-49) $\phi Vc = 6.76 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

$\phi Mn \geq 1.2 * Mcr$

$Mcr = 3.18 \text{ kip-ft}$
 $1.2 Mcr = 3.82 \text{ kip-ft OK}$



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**MONOLITHIC TOP SECTION
 CANTILEVER WALL DESIGN
 UNIFORM LOAD**

Project: Standard Vault Designs
 6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 23 of 70

By: KMK Date: 1/19/2010

Chk By: 521 Date: 1/20/10

Height, a = 3.50 ft
 Length, b = 16.00 ft
 Width, c = 6.00 ft
 Wall Thickness = 6.00 in

Bottom of wall hinged? N (Y or N)

OUTSIDE FACE

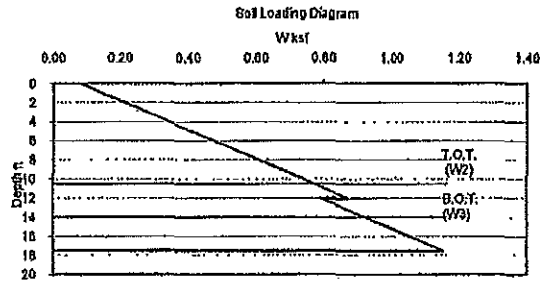
PCA Case # = 8
 Bar Cover = 1.00 in
 Max horiz. Coeff. = 0.000
 Max vert. Coeff. = 0.500
 Max horiz. neg. moment = 0.00 kip-ft
 Max vert. neg. moment = 5.43 kip-ft

Horizontal lines indicate top & bottom of wall

Lateral Earth Pressure

Eq. Lat. Press. = 0.066 kcf
 W2 = 0.77 ksf
 W3 = 1.00 ksf
 Wavg = 0.89 ksf

(Surcharge Applied Over Entire Height of Unit)



	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.54 kip-ft	# 4	12.0 in	4.13 in	0.20 in. sq/ft.	0.23 in
Vertical	9.18 kip-ft	11.95 kip-ft	# 5	6.0 in	4.69 in	0.81 in. sq/ft.	0.72 in
Shear coeff. =	1.000						

Vu = 5.25 kips

φVc = 5.95 kips (AASHTO 8-49)

φVc > Vu: OK

ldb = 12 in

Cracking Check:

	Horizontal	Vertical
$\rho = A_s / b * d =$	0.003967	0.010908
$\rho * n =$	0.028541	0.078487
$k = \sqrt{(2\rho n + \rho n^2)} - \rho n =$	0.212	0.325
$j = 1 - (k/3) =$	0.929	0.892
M =	0.00 kip-ft	5.43 kip-ft
$f_s = M / A_s j d =$	0.00 ksi OK	25.43 ksi OK
dc =	1.88 in	1.31 in
A = 2 * dc * Spacing =	45.00 sq.in	15.75 sq.in
Z = $f_s^3 \sqrt{(dc * A)} =$	0 kips/in OK	70 kips/in OK

Horizontal

$\phi M_n \geq 1.2 * M_{cr}$
 M_{cr} = 3.18 kip-ft
 1.2 M_{cr} = 3.82 kip-ft

OR

$A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$

C = 3.51
 A_s(req'd) = 0.00 in. sq/ft.
 1+1/3 A_s = 0.00 in. sq/ft. OK

Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Vertical

$\phi M_n \geq 1.2 * M_{cr}$
 M_{cr} = 3.18 kip-ft
 1.2 M_{cr} = 3.82 kip-ft OK

OR



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**MONOLITHIC BASE SECTION
 CANTILEVER WALL DESIGN
 COMB. UNIFORM & TRIANGULAR LOAD
 PCA Rectangular Concrete Tanks**

Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 24 of 70
 By: KMK Date 1/12/2010
 Chk By: SLJ Date 1/20/10

Height, a = 3.50 ft.
 Length, b = 16.00 ft.
 Width, c = 6.00 ft.
 Wall Thickness = 6.00 in

Top of wall hinged? N (Y or N)
OUTSIDE FACE

Bar Cover = 1.00 in

	Uniform	Triangular
PCA Case #	8	3
(-) Max horiz. Coeff. =	0.000	0.000
(-) Max vert. Coeff. =	0.500	0.187

Max horiz. neg. moment = 0.00 kip-ft
 Max vert. neg. moment = 6.12 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.54 kip-ft	# 4	12.0 in	4.13 in	0.20 in. sq/ft.	0.23 in
Vertical	10.34 kip-ft	10.36 kip-ft	# 5	7.0 in	4.69 in	0.53 in. sq/ft.	0.62 in

Side Edge Shear coeff. = 1.000 0.305
 Vu = 5.87 kips
 Bottom Edge Shear coeff. = 1.000 0.500
 Vu = 6.14 kips

φVc = 5.95 kips (AASHTO 8-49)
 φVc > Vu: OK
 φVc = 6.76 kips (AASHTO 8-49)
 φVc > Vu: OK
 min lap = 21 in

ldb = 12 in

Cracking Check:

	Horizontal	Vertical
$\rho = A_s / b * d =$	0.003967	0.009349978
$\rho * n =$	0.028541	0.06727423
$k = \sqrt{2\rho n + \rho n^2} - \rho n =$	0.212	0.306
$j = 1 - (k/3) =$	0.929	0.898
M =	0.00 kip-ft	6.12 kip-ft
$f_s = M / A_s j d =$	0.00 ksi OK	33.17 ksi OK
dc =	1.88 in	1.31 in
$A = 2 * dc * Spacing =$	45.00 sq.in	18.38 sq.in
$Z = f_s \sqrt{dc * A} =$	0 kips/in OK	96 kips/in OK

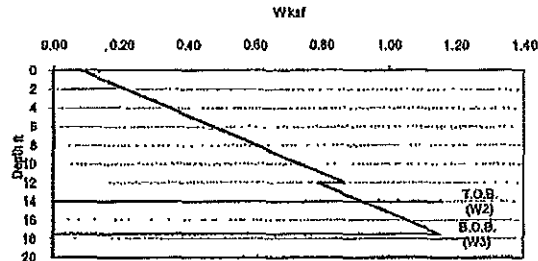
Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Horizontal

$\phi M_n \geq 1.2 * M_{cr}$
 M_{cr} = 3.18 kip-ft
 1.2 M_{cr} = 3.82 kip-ft

OR $A_s(prov.) \geq (1+1/3) * A_s(req'd)$
 C = 3.51
 A_s(req) = 0.00 in. sq/ft.
 1+1/3 A_s = 0.00 in. sq/ft. OK

Soil Loading Diagram



Horizontal line indicates top of wall
Lateral Earth Pressure
 Eq. Lat. Press. = 0.066 kcf
 W2 = 0.92 ksf
 W3 = 1.15 ksf
 No Surcharge



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Project: Standard Vault Designs
6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 25

By: KMK

Chk By: SLJ

of
Date

Date

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1/12/2010
1/20/10

Monolithic Base Section Design Continued:

Check minimum reinforcement requirements (cont.)

Vertical

$$\phi Mn \geq 1.2 Mcr$$

$$Mcr = 3.18 \text{ kip-ft}$$

$$1.2 Mcr = 3.82 \text{ kip-ft} \quad \text{OK}$$



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BASE SLAB DESIGN
HINGED 4 SIDES
PCA Rectangular Concrete Tanks
Case #10

Project: Standard Vault Designs
 6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 26 of

By: KMK Date

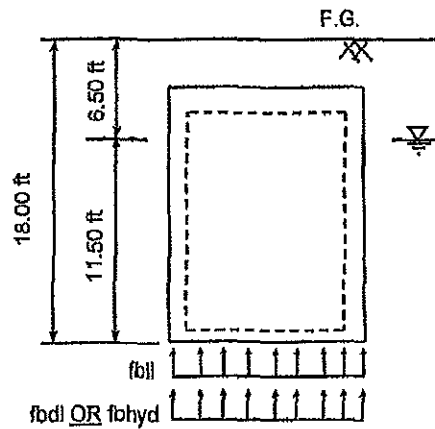
Chk By: SWJ Date

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 1/12/2010
 1/20/10

	ID	OD
Length =	16.00 ft	17.00 ft
Width =	6.00 ft	7.00 ft
Wall Thickness =	6.00 in	
Slab Thickness =	6.00 in	
b/a =	2.7	
Number of Wheels =	0	

Vertical Loads: Distributed load used from top slab design (Based on 10' Fill)

Soil =	142.80 kips
Cover slab =	8.93 kips
Walls =	24.15 kips
Other =	
Total Dead Load =	175.88 kips



Loading Diagram
 Ref: ASTM C857 Sec 4.3

Net upward bearing pressure:

Dead Load, fbd =	1.48 ksf	<== Controls
Hydrostatic, fbhd =	0.72 ksf	(11.50 ft * 0.0624 kcf)
Live Load, fbll =	+ 0.07 ksf	
w =	1.55 ksf	
Wu =	2.07 ksf	

Top cage

Transverse Coeff. =	0.114
Longitudinal Coeff. =	0.037
Bar cover =	1.00 in
Transverse Moment =	6.37 kip-ft
Longitudinal Moment =	2.04 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Transverse	8.53 kip-ft	10.36 kip-ft	# 5	7.0 in	4.69 in	0.53 in. sq/ft.	0.62 in
Longitudinal	2.73 kip-ft	4.23 kip-ft	# 4	10.0 in	4.13 in	0.24 in. sq/ft.	0.28 in

Shear Coeff. = 0.484
 Vu @ 'd' = 6.63 kips

φVc = 6.76 kips (AASHTO 8-49)
 φVc > Vu: OK

Cracking Check:

	Transverse	Longitudinal
ρ = As / b * d =	0.009350	0.004760
ρ * n =	0.067274	0.034249
k = √(2pn + ρn ²) - ρn =	0.306	0.230
j = 1 - (k/3) =	0.898	0.923
M =	6.37 kip-ft	2.04 kip-ft
fs = M / As j d =	34.54 ksi OK	23.99 ksi OK
dc =	1.31 in	1.88 in
A = 2 * dc * Spacing =	18.38 sq.in	37.50 sq.in
Z = fs ^{3/4} (dc * A) =	100 kips/in OK	99 kips/in OK

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Project: Standard Vault Designs
6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 27

By: KMK

Chk By: SJS

of 70
Date 1/12/2010
Date 1/20/10

Base Slab Design Continued:

Check minimum reinforcement requirements per AASHTO 8.17.1
Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Transverse: $\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft} \quad \text{OK}$

Longitudinal: $\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft} \quad \text{OK}$



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HS-20 10' TO 15' FILL

PRECAST VAULT DESIGN DESCRIPTION

Length (I.D.) =	16.00 ft	(Max.)
Width (I.D.) =	6.00 ft	
Height (I.D.) =	7.00 ft	
Wall Thickness =	8.00 in	
Base Slab Thickness =	8.00 in	
Cover Slab Thickness =	8.00 in	

TECHNICAL DATA

Earth Cover (Min.) =	10.00 ft
Earth Cover (Max) =	15.00 ft
Min Watertable Depth =	17.50 ft
ka =	0.33
Unit Weight of Soil =	120 pcf
Equivalent Lateral Fluid Pressure =	0.049 kcf
LL Surcharge =	0.08 ksf
Depth Below F.G. to Apply Surcharge =	8.00 ft

Concrete Strength (f'c) =	5.0 ksi
Unit Weight of Concrete =	150 pcf
$E_c = 57,000 * \sqrt{f'c} =$	4.03E+06 psi
Yield Strength (fy) =	60 ksi
$E_s =$	2.90E+07 psi
$n = E_s / E_c =$	7.2
$\beta_1 = (.85 - .05(f_c - 4)) =$	0.8
$f_r = 7.5 \sqrt{f'c} =$	530 psi
Rho max = (.75 pb) =	0.0251531
Zmax =	130 Severe Exposure

Design Wheel Load (Pw) =	16 kips	AASHTO HS20
Uniform Live Load =	0 psf	

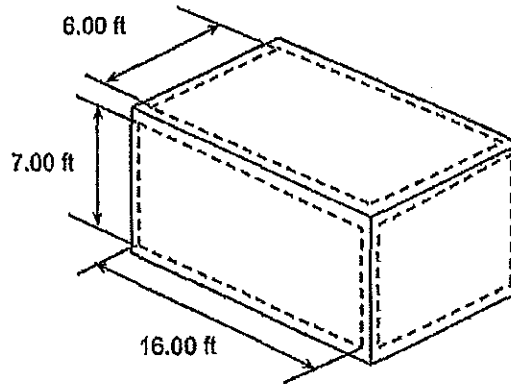
Capacity Reduction Factors:	
ϕ - Moment =	0.90
ϕ - Shear =	0.85
Load Factors:	
$\gamma =$	1.30
β - LL =	1.67
β - DL =	1.00
β - EL =	1.30

References:

1. "Specifications for Highway Bridges, 17th Ed." - AASHTO
2. "Rectangular Concrete Tanks, 5th Ed." - PCA Publication.
3. "Theory of Plates and Shells" - Timoshenko, S. 1959.
4. "Standard Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures" - ASTM C890

Project:	Standard Vault Designs 6ft span HS-20 Loading
Client:	Northern Concrete Pipe
Job Number:	2009.015.019
File Name:	vaultff(V2.2.1).xls
Entered By:	KMK
Checked By:	SJV
Date:	1/12/2010
Sheet:	28 of 70

Denotes input field



Vault Isometric View
 (Joints not shown for clarity)
 (All dimensions I.D.)

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EQUIVALENT LATERAL FLUID PRESSURE:

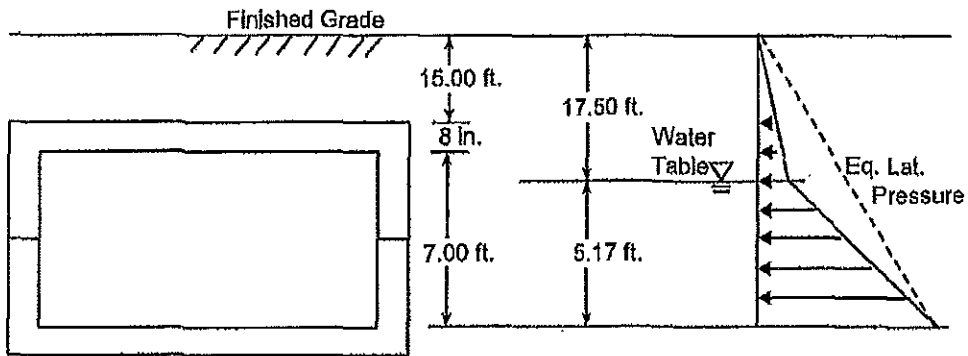
Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009,015,019
 Sheet: 29 of 70
 By: KMK Date 1/12/2010
 Chk By: S.L.S. Date 1/30/10

Ka =	0.33	
Unit Wt. of Soil =	120 pcf	
Max. Fill Above Structure =	15.00 ft.	(Worst Case)
Structure Inside Ht. =	7.00 ft.	
Top Slab Thickness =	8.00 in.	
Min. Watertable Depth =	17.50 ft.	

Lateral Pressure (Dry) = 39.6 pcf
 (Ka * Soil Wt.)

Lateral Pressure (Sat.) = 81.4 pcf
 (Ka * (Soil Wt. - 62.4pcf) + 62.4pcf)

Equivalent Lateral Pressure = 49.1 pcf





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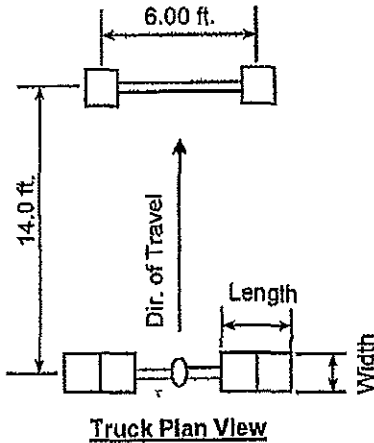
Project: Standard Vault Designs
 8ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 30 of 70
 By: KMK Date 1/12/2010
 Chk By: SLD Date 1/20/10

Determine Uniform Load From Wheel Live Load for Various Fill Depths

Distance Between CL of Wheel and CL of Truck: 3 ft
 Wheel Load: 16 kips

Distribution Length = 1.75 x Depth of Fill + Length of Dual Wheel Dimensions
 Distribution Width = 1.75 x Depth of Fill + Width of Dual Wheel Dimensions

Dual Wheel Dimensions: Length 1.67 ft. Width 0.83 ft. AASHTO 3.30



Max Fill:

Depth of Fill (ft)	Distrib. Length	Distrib. Width	Lengths Overlap?	DLA ft ²	Uniform Load psf
3.0	6.92	6.08	YES	42.1	380.3
3.5	7.80	6.96	YES	95.9	333.5
4.0	8.67	7.83	YES	114.9	278.6
4.5	9.55	8.71	YES	135.3	236.5
5.0	10.42	9.58	YES	157.3	203.4
5.5	11.30	10.46	YES	180.8	177.0
6.0	12.17	11.33	YES	205.9	155.4
6.5	13.05	12.21	YES	232.4	137.7
7.0	13.92	13.08	YES	260.6	122.8
7.5	14.80	13.96	YES	290.2	110.3
10.0	19.17	18.33	YES	461.4	69.4
15.0	27.92	27.08	YES	918.6	34.8

Design Min Fill = 10.00 ft	461.4	69.4
Design Max Fill = 15.00 ft	918.6	34.8

Note: If design fill < 3', design using concentrated load case

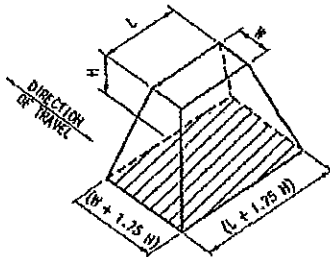


FIG. 4 Distributed Load Area
 (REF "ASTM C 890-91")



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COVER SLAB DESIGN
UNIFORM LIVE LOAD
MAX FILL
ASTM C890

Controls

Length (L.D.) = 16.00 ft.
 Width (L.D.) = 6.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 8.00 in
 Earth Cover = 15.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.50 ft.
 Dead Loads: Soil = 1.80 ksf
 Concrete = 0.10 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 1.90 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 10.03 \text{ kip-ft}$
 DLA = 918.55 sf
 Wll = 0.03 ksf
 $Mll = wll \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 0.18 \text{ kip-ft}$
 $Mu = \gamma[\beta_{(L+I)} \cdot Mll + \beta_D \cdot Mdl] = 13.44 \text{ kip-ft}$

d = 6.69 in

Req. Bar Size and Spacing

Short Span: $As = 0.61 \text{ in. sq/ft.}$ Use #5 @ 6.0 in

Distribution Steel = $As / \text{Span} \cdot 5 = 0.24 \text{ in. sq/ft.}$ Use #5 @ 15.0 in

12.0

$\rho = As / b \cdot d = 0.00764601$
 $\rho \cdot n = 0.05501397$

Flexure Check:

$a = As \cdot Fy / 0.85 \cdot fc \cdot b = 0.722 \text{ in}$
 $\phi Mn = \phi \cdot As \cdot Fy \cdot (d - (a/2)) = 17.47 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{2 \rho n + \rho n^2} - \rho n = 0.281$
 $j = 1 - (k/3) = 0.906$
 $M = Mdl + Mll = 10.22 \text{ kip-ft}$
 $fs = M / As \cdot j \cdot d = 32.97 \text{ ksi OK}$
 $dc = 1.313 \text{ in}$
 $A = 2 \cdot dc \cdot \text{Spacing} = 15.8 \text{ sq.in}$
 $Z = fs \cdot \sqrt{dc \cdot A} = 90 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} \cdot Wll + \beta_{DL} \cdot Wdl] \cdot [(span/2) - d] = 6.85 \text{ kips/ft}$
 (AASHTO 8-49) $\phi Vc = 9.65 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least $1/8 \text{ sq. in./ft}$ (AASHTO 8.20.1)

$\phi Mn \geq 1.2 \cdot Mcr$
 $Mcr = 5.86 \text{ kip-ft}$
 $1.2 \cdot Mcr = 6.79 \text{ kip-ft OK}$



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COVER SLAB DESIGN
UNIFORM LIVE LOAD
MIN. FILL
ASTM C890

Project: Standard Vault Designs
 6ft span HS-20 Loading
 Job #: 2009.015.019
 Sheet: 32 of 70
 By: KMK Date 1/12/2010
 Chk By: SLS Date 1/20/10

Length (I.D.) = 16.00 ft.
 Width (I.D.) = 6.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 8.00 in
 Earth Cover = 10.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.50 ft.
 Dead Loads: Soil = 1.20 ksf
 Concrete = 0.10 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 1.30 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl l^2 / 8 * (2\text{-way slab factor}) = 6.87 \text{ kip-ft}$
 DLA = 461.37 sf
 Wll = 0.07 ksf
 $Mll = wll l^2 / 8 * (2\text{-way slab factor}) = 0.37 \text{ kip-ft}$
 $Mu = \gamma[\beta_{(L+I)} * Mll + \beta_D * Mdl] = 9.72 \text{ kip-ft}$

d = 6.69 in

Req. Bar Size and Spacing

Short Span: $As = 0.61 \text{ in. sq/ft.}$

Use	# 5	@	6.0 in
-----	-----	---	--------

Distribution Steel = $As / \text{Span}^*.5 = 0.24 \text{ in. sq/ft.}$

Use	# 5	@	15.0 in
-----	-----	---	---------

12.0

$\rho = As / b * d = 0.00764601$
 $\rho * n = 0.05501397$

Flexure Check:

$a = AsFy / 0.85fcb = 0.722 \text{ in}$
 $\phi Mn = \phi * As * Fy * (d - (a/2)) = 17.47 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{2pn + pn^2} - pn = 0.281$
 $j = 1 - (k/3) = 0.906$
 $M = Mdl + Mll = 7.23 \text{ kip-ft}$
 $fs = M / As j d = 23.34 \text{ ksi OK}$
 $dc = 1.313 \text{ in}$
 $A = 2 * dc * \text{Spacing} = 15.8 \text{ sq.in}$
 $Z = fs^3 \sqrt{dc * A} = 64 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} * Wll + \beta_{DL} * Wdl] *$
 $[(\text{span}/2) - d] = 4.96 \text{ kips/ft}$
 (AASHTO 8-49) $\phi Vc = 9.65 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least $1/8 \text{ sq. in./ft}$ (AASHTO 8.20.1)

$\phi Mn \geq 1.2 * Mcr$
 $Mcr = 5.66 \text{ kip-ft}$
 $1.2 Mcr = 6.79 \text{ kip-ft OK}$



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**MONOLITHIC TOP SECTION
CANTILEVER WALL DESIGN
UNIFORM LOAD**

Project: Standard Vault Designs
6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 33 of 70

By: KMK

Date: 1/19/2010

Chk By: SLJ

Date: 1/20/10

Height, a = 3.50 ft
Length, b = 16.00 ft
Width, c = 6.00 ft
Wall Thickness = 6.00 in

Bottom of wall hinged? N (Y or N)

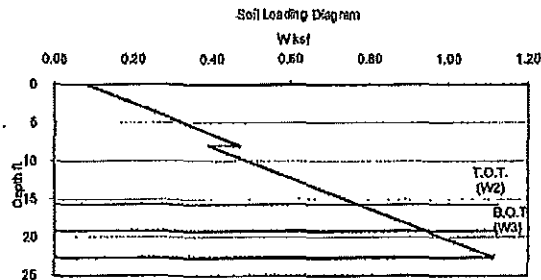
OUTSIDE FACE

PCA Case # 8
Bar Cover = 1.00 in
Max horiz. Coeff. = 0.000
Max vert. Coeff. = 0.500
Max horiz. neg. moment = 0.00 kip-ft
Max vert. neg. moment = 5.24 kip-ft

Horizontal lines indicate top & bottom of wall

Lateral Earth Pressure

Eq. Lat. Press. = 0.049 kcf
W2 = 0.77 ksf
W3 = 0.94 ksf
Wavg = 0.86 ksf
No Surcharge



	Mu	ϕMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.54 kip-ft	# 4	12.0 in	4.13 in	0.20 in. sq/ft.	0.23 in
Vertical	8.86 kip-ft	11.95 kip-ft	# 5	6.0 in	4.69 in	0.61 in. sq/ft.	0.72 in
Shear coeff. =	1.000						

Vu = 5.06 kips

$\phi Vc = 5.95$ kips (AASHTO 8-49)
 $\phi Vc > Vu$: OK
ldb = 12 in

Cracking Check:

Horizontal
 $\rho = As / b * d = 0.003967$
 $\rho * n = 0.028541$
 $k = \sqrt{(2\rho n + \rho n^2)} - \rho n = 0.212$
 $j = 1 - (k/3) = 0.929$
M = 0.00 kip-ft
 $fs = M / As j d = 0.00$ ksi OK
dc = 1.88 in
A = 2 * dc * Spacing = 45.00 sq.in
 $Z = fs^3 \sqrt{dc * A} = 0$ kips/in OK

Vertical
0.010908
0.078487
0.325
0.892
5.24 kip-ft
24.53 ksi OK
1.31 in
15.75 sq.in
67 kips/in OK

Horizontal

$\phi Mn \geq 1.2 * Mcr$
Mcr = 3.18 kip-ft
1.2 Mcr = 3.82 kip-ft

OR

$As(prov.) \geq (1+1/3) * As(req'd)$
C = 3.51
 $As(req) = 0.00$ in. sq/ft.
 $1+1/3 As = 0.00$ in. sq/ft. OK

Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Vertical

$\phi Mn \geq 1.2 * Mcr$
Mcr = 3.18 kip-ft
1.2 Mcr = 3.82 kip-ft OK

OR



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**MONOLITHIC BASE SECTION
 CANTILEVER WALL DESIGN
 COMB. UNIFORM & TRIANGULAR LOAD
 PCA Rectangular Concrete Tanks**

Project: Standard Vault Designs
 6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 34 of

By: KMK Date

Chk By: SJD Date

70

1/12/2010

1/20/10

Height, a = 3.50 ft.
 Length, b = 16.00 ft.
 Width, c = 6.00 ft.
 Wall Thickness = 6.00 in

Top of wall hinged? N (Y or N)
OUTSIDE FACE

Bar Cover = 1.00 in

Uniform Triangular

PCA Case # 8 3

(-) Max horiz. Coeff. = 0.000 0.000

(-) Max vert. Coeff. = 0.500 0.167

Max horiz. neg. moment = 0.00 kip-ft

Max vert. neg. moment = 6.12 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.54 kip-ft	# 4	12.0 in	4.13 in	0.20 in. sq/ft.	0.23 in
Vertical	10.34 kip-ft	10.36 kip-ft	# 5	7.0 in	4.69 in	0.53 in. sq/ft.	0.62 in

Uniform Triangular

Side Edge Shear coeff. = 1.000 0.305

Vu = 5.88 kips

Bottom Edge Shear coeff. = 1.000 0.500

Vu = 6.08 kips

φVc = 5.95 kips (AASHTO 8-49)

φVc > Vu: OK

φVc = 6.76 kips (AASHTO 8-49)

φVc > Vu: OK

ldb = 12 in

min lap = 21 in

Cracking Check:

Horizontal
 $p = A_s / b * d = 0.003967$
 $p * n = 0.028541$
 $k = \sqrt{(2pn + pn^2)} - pn = 0.212$
 $j = 1 - (k/3) = 0.929$
 M = 0.00 kip-ft
 $f_s = M / A_s j d = 0.00 \text{ ksi OK}$
 $dc = 1.88 \text{ in}$
 $A = 2 * dc * \text{Spacing} = 45.00 \text{ sq.in}$
 $Z = f_s^3 \sqrt{(dc * A)} = 0 \text{ kips/in OK}$

Vertical
 0.009349978
 0.06727423
 0.306
 0.898
 6.12 kip-ft
 33.17 ksi OK
 1.31 in
 18.38 sq.in
 96 kips/in OK

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Horizontal

φMn ≥ 1.2 * Mcr

Mcr = 3.18 kip-ft

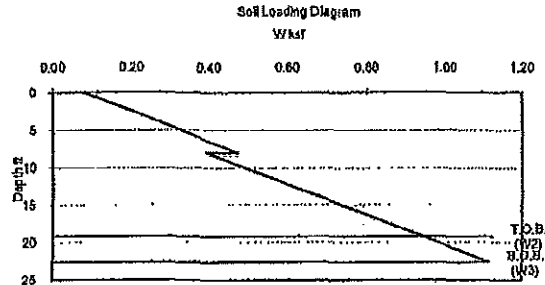
1.2 Mcr = 3.82 kip-ft

OR $A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$

C = 3.51

As(req) = 0.00 in. sq/ft.

1+1/3 As = 0.00 in. sq/ft. OK



Horizontal line indicates top of wall

Lateral Earth Pressure

Eq. Lat. Press. = 0.049 ksf

W2 = 0.94 ksf

W3 = 1.11 ksf

No Surcharge



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Project: Standard Vault Designs
6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 35

By: KMK

Chk By: SLD

of 70
Date 1/12/2010
Date 1/20/10

Monolithic Base Section Design Continued:

Check minimum reinforcement requirements (cont.)

Vertical
 $\phi M_n \geq 1.2 M_{cr}$
Mcr = 3.18 kip-ft
1.2 Mcr = 3.82 kip-ft OK



184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6650

BASE SLAB DESIGN
HINGED 4 SIDES
PCA Rectangular Concrete Tanks
Case #10

Project: Standard Vault Designs
 6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 36 of

By: KMK Date

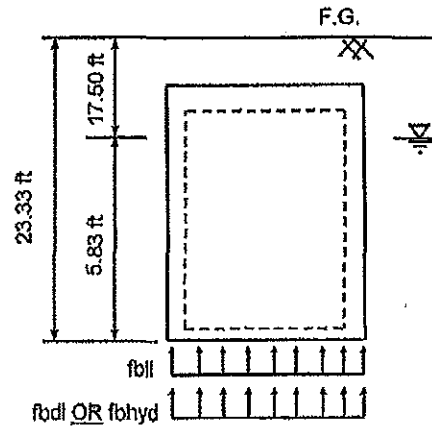
Chk By: swj Date

70
 1/12/2010
 1/20/10

	ID	OD
Length =	16.00 ft	17.00 ft
Width =	6.00 ft	7.00 ft
Wall Thickness =	6.00 in	
Slab Thickness =	8.00 in	
b/a =	2.7	
Number of Wheels =	<u>0</u>	Distributed load used from top slab design (Based on 15' Fill)

Vertical Loads:

Soil =	214.20 kips
Cover slab =	11.90 kips
Walls =	24.15 kips
Other =	<u> </u>
Total Dead Load =	250.25 kips



Loading Diagram
 Ref: ASTM C857 Sec 4.3

Net upward bearing pressure:

Dead Load, fbdl =	2.10 ksf	<== Controls
Hydrostatic, fbhyd =	0.36 ksf	(5.83 ft * 0.0624 kcf)
Live Load, fbll =	+ 0.03 ksf	
w =	2.14 ksf	
Wu =	2.81 ksf	

Top cage

Transverse Coeff. =	<u>0.114</u>
Longitudinal Coeff. =	<u>0.037</u>
Bar cover =	<u>1.00 in</u>
Transverse Moment =	8.80 kip-ft
Longitudinal Moment =	2.82 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Transverse	11.57 kip-ft	15.10 kip-ft	# 5	7.0 in	6.89 in	0.53 in. sq/ft.	0.62 in
Longitudinal	3.70 kip-ft	5.31 kip-ft	# 4	12.0 in	6.13 in	0.20 in. sq/ft.	0.23 in
Shear Coeff. =	0.484						
Vu @ 'd' =	7.40 kips						

φVc = 8.65 kips (AASHTO 8-49)
 φVc > Vu: OK

Cracking Check:

	Transverse	Longitudinal
ρ = As / b * d =	0.008554	0.002671
ρ * n =	0.047155	0.019221
k = √(2ρn + ρn ²) - ρn =	0.264	0.178
j = 1 - (k/3) =	0.912	0.941
M =	8.80 kip-ft	2.82 kip-ft
fs = M / As j d =	32.93 ksi OK	27.36 ksi OK
dc =	1.31 in	1.88 in
A = 2 * dc * Spacing =	18.38 sq.in	45.00 sq.in
Z = fs ^{3/4} (dc * A) =	95 kips/in OK	120 kips/in OK



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Project: Standard Vault Designs
 6ft span HS-20 Loading

Job #: 2009.015.019

Sheet: 37

By: KMK

Chk By: SLJ

of 70
 Date 1/12/2010

Date 1/20/10

Base Slab Design Continued:

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Transverse: $\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 5.66 \text{ kip-ft}$
 $1.2 M_{cr} = 6.79 \text{ kip-ft} \quad \text{OK}$

Longitudinal: $\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 5.66 \text{ kip-ft}$
 $1.2 M_{cr} = 6.79 \text{ kip-ft}$

OR

$A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$
 $C = 5.21$
 $A_s(\text{req'd}) = 0.14 \text{ in. sq/ft.}$
 $1+1/3 A_s = 0.18 \text{ in. sq/ft. OK}$



184 Court Street
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HS-25 0' TO 5' FILL

PRECAST VAULT DESIGN DESCRIPTION

Length (I.D.) =	16.00 ft	(Max.)
Width (I.D.) =	6.00 ft	
Height (I.D.) =	7.00 ft	
Wall Thickness =	6.00 in	
Base Slab Thickness =	6.00 in	
Cover Slab Thickness =	6.00 in	

TECHNICAL DATA

Earth Cover (Min.) =	0.00 ft
Earth Cover (Max) =	5.00 ft
Min Watertable Depth =	3.00 ft
ka =	0.33
Unit Weight of Soil =	120 pcf
Equivalent Lateral Fluid Pressure =	0.071 kcf
LL Surcharge =	0.10 ksf
Depth Below F.G. to Apply Surcharge =	12.00 ft (Cons.)

Concrete Strength (fc) =	5.0 ksi
Unit Weight of Concrete =	150 pcf
$E_c = 57,000 * \sqrt{f_c}$ =	4.03E+06 psi
Yield Strength (fy) =	60 ksi
$E_s =$	2.90E+07 psi
$n = E_s / E_c =$	7.2
$\beta_1 = (.85 - .05(f_c - 4)) =$	0.8
$f_r = 7.5 \sqrt{f_c} =$	530 psi
Rho max = (.75 ρ_b) =	0.0251531
Zmax =	130 Severe Exposure

Design Wheel Load (Pw) =	20 klps	AASHTO HS25
Uniform Live Load =	0 psf	

Capacity Reduction Factors:

ϕ - Moment =	0.90
ϕ - Shear =	0.85

Load Factors:

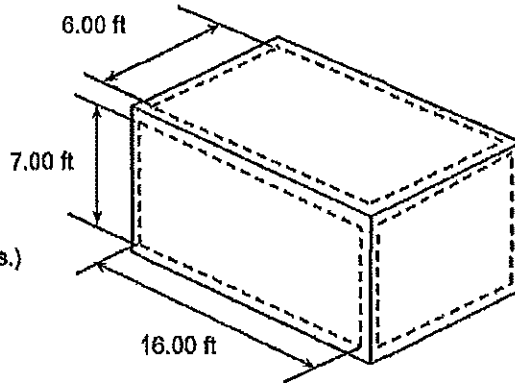
$\gamma =$	1.30
β - LL =	1.07
β - DL =	1.00
β - EL =	1.30

References:

1. "Specifications for Highway Bridges, 17th Ed." - AASHTO
2. "Rectangular Concrete Tanks, 5th Ed." - PCA Publication.
3. "Theory of Plates and Shells" - Timoshenko, S. 1959.
4. "Standard Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures" - ASTM C890

Project:	Standard Vault Designs
	6ft span HS-25 Loading
Client:	Northern Concrete Pipe
Job Number:	2009.015.019
File Name:	vaultif(V2.2.1).xls
Entered By:	KMK
Checked By:	SLJ
Date:	1/12/2010
Sheet:	38 of 50

Denotes input field



Vault Isometric View
 (Joints not shown for clarity)
 (All dimensions I.D.)

DELTA

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EQUIVALENT LATERAL FLUID PRESSURE:

Project: Standard Vault Designs
 6ft span HS-25 Loading

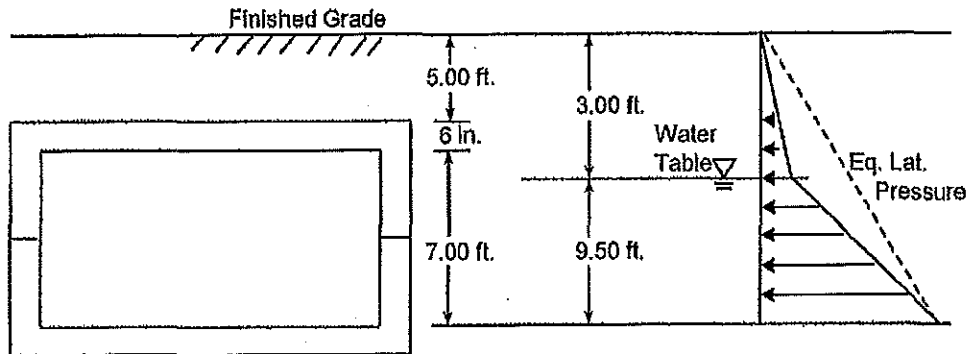
Job #: 2009.015.019
 Sheet: 39 of 70
 By: KMK Date 1/12/2010
 Chk By: SLD Date 1/20/10

Ka =	0.33	
Unit Wt. of Soil =	120 pcf	
Max. Fill Above Structure =	5.00 ft.	(Worst Case)
Structure Inside Ht. =	7.00 ft.	
Top Slab Thickness =	6.00 in.	
Mln. Watertable Depth =	3.00 ft.	

Lateral Pressure (Dry) = 39.6 pcf
 (Ka*Soil Wt.)

Lateral Pressure (Sat.) = 81.4 pcf
 (Ka*(Soil Wt.-62.4pcf)+62.4pcf)

Equivalent Lateral Pressure = 71.4 pcf



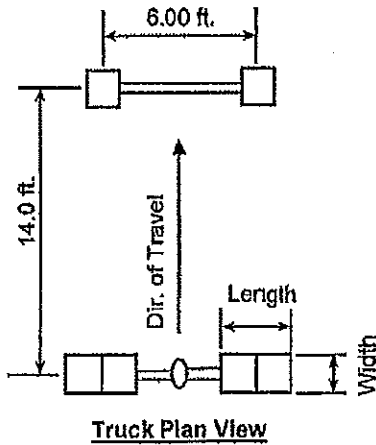
Project: Standard Vault Designs
6ft span HS-25 Loading
Job #: 2009.015.019
Sheet: 40 of 70
By: KMK Date 1/12/2010
Chk By: SWL Date 1/20/10

Determine Uniform Load From Wheel Live Load for Various Fill Depths

Distance Between CL of Wheel and CL of Truck: 3 ft
Wheel Load: 20 kips

Distribution Length = 1.75 x Depth of Fill + Length of Dual Wheel Dimensions
Distribution Width = 1.75 x Depth of Fill + Width of Dual Wheel Dimensions

Dual Wheel Dimensions: Length 1.67 ft. Width 0.83 ft. AASHTO 3.30



Max Fill:

Depth of Fill (ft)	Distrib. Length	Distrib. Width	Lengths Overlap?	DLA ft ²	Uniform Load psf
3.0	6.92	6.08	YES	42.1	475.4
3.5	7.80	6.96	YES	95.9	416.9
4.0	8.67	7.83	YES	114.9	348.2
4.5	9.55	8.71	YES	136.3	295.6
5.0	10.42	9.58	YES	157.3	254.3
5.5	11.30	10.46	YES	180.8	221.2
6.0	12.17	11.33	YES	206.9	194.3
6.5	13.05	12.21	YES	232.4	172.1
7.0	13.92	13.08	YES	260.6	153.5
7.5	14.80	13.96	YES	290.2	137.8
3.0	6.92	6.08	YES	78.6	509.2
5.0	10.42	9.58	YES	157.3	254.3

Design Min Fill = 3.00 ft	42.1	475.4
Design Max Fill = 5.00 ft	157.3	254.3

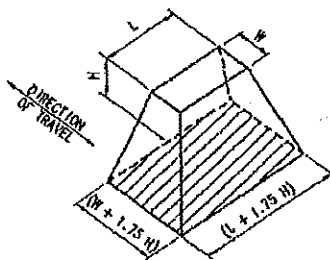


FIG. 4 Distributed Load Area
(REF "ASTM C 890-91")

Note: If design fill < 3', design using concentrated load case



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COVER SLAB DESIGN
AASHTO 3.24.6

Project: Standard Vault Design
6ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 41 of 70

By: KMK Date 1/12/2010

Chk By: SLJ Date 1/20/10

Length (I.D.) = 16.00 ft
Width (I.D.) = 6.00 ft
Wall Thickness = 6.00 in
Slab Thickness = 6.00 in
Earth Cover = 1.00 ft
Bar cover = 1.00 in
Impact = 1.30

} Controls

One Way Slab

Span (s) = 6.50 ft
Dead Loads: Soil = 0.12 ksf
Concrete = 0.08 ksf
Additional Uniform Dead Load = 0.00 ksf
Total (wdl) = 0.20 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
2-Way slab fac. (Concentrated) = 1.000
Mdl = wdl * s² / 8 * (2-way slab factor) = 1.03 kip-ft
e = 4 + .06S = 4.38 ft
p = (Pw * Impact) / e = 5.92 kips/ft
Mll = ps/4 * (2-way slab factor) = 9.62 kip-ft
Mu = γ[β_(L+1) * Mll + β_D * Mdl] = 22.23 kip-ft

d = 4.50 in

Req. Bar Size and Spacing

Short Span: As = 1.35 in. sq/ft. Use #8 @ 7.0 in

Distribution Steel = As / Span² = 0.53 in. sq/ft. Use #5 @ 6.0 in

ρ = As / b * d = 0.02493328
ρ * n = 0.17939795

Flexure Check:

a = AsFy / 0.85fcb = 1.584 in
φMn = φ * As * Fy * (d - (a/2)) = 22.47 kip-ft OK

Cracking Check:

k = √(2pn + pn²) - pn = 0.446
j = 1 - (k/3) = 0.851
M = Mdl + Mll = 10.65 kip-ft
fs = M / As * j * d = 24.78 ksi OK
dc = 1.500 in
A = 2 * dc * Spacing = 21.0 sq.in
Z = fs³ / √(dc * A) = 78 kips/in OK

Note: Shear considered satisfactory per AASHTO 3.24.4

Check minimum reinforcement requirements per AASHTO 8.17.1
Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

$\phi M_n \geq 1.2 M_{cr}$

Mcr = 3.18 kip-ft
1.2 Mcr = 3.82 kip-ft OK



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COVER SLAB DESIGN
UNIFORM LIVE LOAD
MIN. FILL
ASTM C890

Project: Standard Vault Designs
 6ft span HS-25 Loading

Job #: 2008.015.019

Sheet: 42 of 70

By: KMK Date 1/12/2010

Chk By: SLJ Date 1/20/10

Length (L.D.) = 16.00 ft.
 Width (L.D.) = 8.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 Earth Cover = 3.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.50 ft.
 Dead Loads: Soil = 0.36 ksf
 Concrete = 0.08 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 0.44 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl l^2 / B * (2\text{-way slab factor}) = 2.30 \text{ kip-ft}$
 DLA = 42.07 sf
 Wll = 0.48 ksf
 $Mll = wll l^2 / B * (2\text{-way slab factor}) = 2.51 \text{ kip-ft}$
 $Mu = \gamma[\beta_{(L+I)} * Mll + \beta_D * Mdl] = 8.44 \text{ kip-ft}$

d = 4.50 in

Req. Bar Size and Spacing

Short Span: $As = 1.35 \text{ in. sq/ft.}$ Use #8 @ 7.0 in

Distribution Steel = $As / \text{Span}^1.5 = 0.53 \text{ in. sq/ft.}$ Use #5 @ 6.0 in

$\rho = As / b * d = 0.02493328$

$\rho * n = 0.17939795$

Flexure Check:

$a = AsFy / 0.85Fcb = 1.584 \text{ in}$

$\phi Mn = \phi * As * Fy * (d - (a/2)) = 22.47 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{(2\rho n + \rho n^2)} - \rho n = 0.446$

$j = 1 - (k/3) = 0.851$

$M = Mdl + Mll = 4.81 \text{ kip-ft}$

$fs = M / As j d = 11.18 \text{ ksi OK}$

$dc = 1.500 \text{ in}$

$A = 2 * dc * \text{Spacing} = 21.0 \text{ sq.in}$

$Z = fs \sqrt{dc * A} = 35 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} * Wll + \beta_{DL} * Wdl] *$

$[(\text{span}/2) - d] = 4.59 \text{ kips/ft}$

(AASHTO 8-49) $\phi Vc = 6.49 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1

Note: Minimum As shall be at least $1/8 \text{ sq. in./ft}$ (AASHTO 8.20.1)

$\phi Mn \geq 1.2 * Mcr$

$Mcr = 3.18 \text{ kip-ft}$

$1.2 Mcr = 3.82 \text{ kip-ft OK}$



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COVER SLAB DESIGN
UNIFORM LIVE LOAD
MAX FILL
ASTM C890

Project: Standard Vault Designs
 6ft span HS-25 Loading
 Job #: 2009.015.019
 Sheet: 43 of 70
 By: KMK Date 1/12/2010
 Chk By: SJD Date 1/20/10

Length (I.D.) = 16.00 ft.
 Width (I.D.) = 8.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 Earth Cover = 5.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.50 ft.
 Dead Loads: Soil = 0.80 ksf
 Concrete = 0.08 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 0.88 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl \cdot l^2 / 8$ * (2-way slab factor) = 3.58 kip-ft
 DLA = 157.30 sf
 Wll = 0.25 ksf
 $Mll = wll \cdot l^2 / 8$ * (2-way slab factor) = 1.34 kip-ft
 $Mu = \gamma[\beta_{(L+H)} * Mll + \beta_D * Mdl]$ = 7.55 kip-ft

d = 4.50 in

Req. Bar Size and Spacing

Short Span: $As = 1.35 \text{ in. sq/ft.}$ Use # 8 @ 7.0 in

Distribution Steel = $As / \text{Span} \cdot 5 = 0.53 \text{ in. sq/ft.}$ Use # 5 @ 6.0 in

$\rho = As / b \cdot d = 0.02493328$
 $\rho \cdot n = 0.17939795$

Flexure Check:

$a = As \cdot Fy / 0.85 \cdot f'c \cdot b = 1.584 \text{ in}$
 $\phi Mn = \phi \cdot As \cdot Fy \cdot (d - (a/2)) = 22.47 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{2 \cdot \rho n + \rho n^2} - \rho n = 0.446$
 $j = 1 - (k/3) = 0.851$
 $M = Mdl + Mll = 4.91 \text{ kip-ft}$
 $fs = M / As \cdot j \cdot d = 11.42 \text{ ksi OK}$
 $dc = 1.500 \text{ in}$
 $A = 2 \cdot dc \cdot \text{Spacing} = 21.0 \text{ sq.in}$
 $Z = fs \cdot \sqrt[3]{dc \cdot A} = 36 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} \cdot Wll + \beta_{DL} \cdot Wdl]$ *
 $[(\text{span}/2) - d] = 4.11 \text{ kips/ft}$
 (AASHTO 8-49) $\phi Vc = 6.49 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least $1/8 \text{ sq. in./ft}$ (AASHTO 8.20.1)

$\phi Mn \geq 1.2 \cdot Mcr$
 $Mcr = 3.18 \text{ kip-ft}$
 $1.2 \cdot Mcr = 3.82 \text{ kip-ft OK}$



184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6650
**MONOLITHIC TOP SECTION
 CANTILEVER WALL DESIGN
 UNIFORM LOAD**

Project: Standard Vault Designs
 6ft span HS-25 Loading
 Job #: 2009.015.019
 Sheet: 44 of 70
 By: KMK Date 1/19/2010
 Chk By: SLJ Date 1/20/10

Height, a = 3.50 ft
 Length, b = 16.00 ft
 Width, c = 6.00 ft
 Wall Thickness = 6.00 in

Bottom of wall hinged? N (Y or N)

OUTSIDE FACE

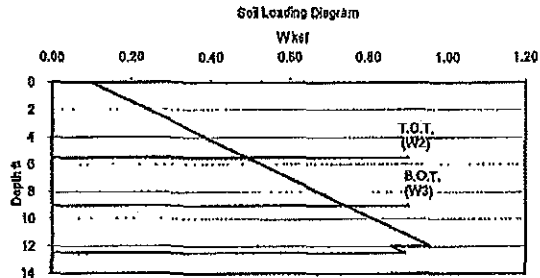
PCA Case # = 8
 Bar Cover = 1.00 in
 Max horiz. Coeff. = 0.000
 Max vert. Coeff. = 0.500
 Max horiz. neg. moment = 0.00 kip-ft
 Max vert. neg. moment = 3.78 kip-ft

Horizontal lines indicate top & bottom of wall

Lateral Earth Pressure

Eq. Lat. Press. = 0.071 kcf
 W2 = 0.49 ksf
 W3 = 0.74 ksf
 Wavg = 0.62 ksf

(Surcharge Applied Over Entire Height of Unit)



	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.65 kip-ft	# 4	12.0 in	4.25 in	0.20 in. sq/ft.	0.23 in
Vertical	6.39 kip-ft	6.89 kip-ft	# 4	7.0 in	4.75 in	0.34 in. sq/ft.	0.40 in
Shear coeff. =	<u>1.000</u>						

Vu = 3.65 kips

φVc = 6.13 kips (AASHTO 8-49)
 φVc > Vu: OK
 ldb = 12 in

Cracking Check:

Horizontal
 $\rho = A_s / b * d = 0.003850$
 $\rho * n = 0.027701$
 $k = \sqrt{2\rho n + \rho n^2} - \rho n = 0.209$
 $j = 1 - (k/3) = 0.930$
 M = 0.00 kip-ft
 $f_s = M / A_s j d = 0.00 \text{ ksi}$ OK
 $d_c = 1.75 \text{ in}$
 $A = 2 * d_c * \text{Spacing} = 42.00 \text{ sq.in}$
 $Z = f_s^3 \sqrt{d_c * A} = 0 \text{ kips/in}$ OK

Vertical
 $\rho = 0.005905$
 $\rho * n = 0.042489$
 $k = 0.252$
 $j = 0.916$
 M = 3.78 kip-ft
 $f_s = 30.99 \text{ ksi}$ OK
 $d_c = 1.25 \text{ in}$
 $A = 17.50 \text{ sq.in}$
 $Z = 87 \text{ kips/in}$ OK

Horizontal

$\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft}$

OR

$A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$
 $C = 3.61$
 $A_s(\text{req'd}) = 0.00 \text{ in. sq/ft.}$
 $1+1/3 A_s = 0.00 \text{ in. sq/ft.}$ OK

Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Vertical

$\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft}$ OK

OR



184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6650
MONOLITHIC BASE SECTION
CANTILEVER WALL DESIGN
COMB. UNIFORM & TRIANGULAR LOAD
PCA Rectangular Concrete Tanks

Project: Standard Vault Designs
 6ft span HS-25 Loading
 Job #: 2009.015.019
 Sheet: AS of 70
 By: KMK Date 1/12/2010
 Chk By: SW Date 1/20/10

Height, a = 3.50 ft.
 Length, b = 16.00 ft.
 Width, c = 6.00 ft.
 Wall Thickness = 6.00 in
 b/a = 4.6

Top of wall hinged? N (Y or N)
OUTSIDE FACE

Bar Cover = 1.00 in

	Uniform	Triangular
PCA Case #	8	3
(-) Max horiz. Coeff. =	0.000	0.000
(-) Max vert. Coeff. =	0.500	0.167

Max horiz. neg. moment = 0.00 kip-ft
 Max vert. neg. moment = 5.06 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.54 kip-ft	# 4	12.0 in	4.13 in	0.20 in. sq/ft.	0.23 in
Vertical	8.55 kip-ft	11.95 kip-ft	# 5	6.0 in	4.69 in	0.61 in. sq/ft.	0.72 in

Side Edge Shear coeff. = 1.000 0.305
 Vu = 4.84 kips
 Bottom Edge Shear coeff. = 1.000 0.500
 Vu = 5.13 kips

φVc = 5.95 kips (AASHTO 8-49)
 φVc > Vu: OK
 φVc = 6.76 kips (AASHTO 8-49)
 φVc > Vu: OK
 min lap = 21 in

ldb = 12 in

Cracking Check:

Horizontal
 $\rho = A_s / b * d = 0.003967$
 $\rho * n = 0.028541$
 $k = \sqrt{2\rho n + \rho n^2} - \rho n = 0.212$
 $j = 1 - (k/3) = 0.929$
 M = 0.00 kip-ft
 $f_s = M / A_s j d = 0.00 \text{ ksi}$ OK
 dc = 1.88 in
 $A = 2 * dc * \text{Spacing} = 45.00 \text{ sq.in}$
 $Z = f_s^3 \sqrt{dc * A} = 0 \text{ kips/in}$ OK

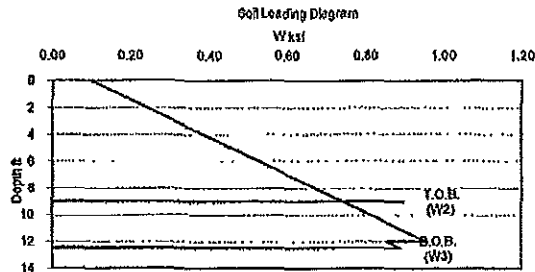
Vertical
 0.010908308
 0.078486602
 0.325
 0.892
 5.06 kip-ft
 23.67 ksi OK
 1.31 in
 15.75 sq.in
 65 kips/in OK

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Horizontal

$\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft}$

OR $A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$
 $C = 3.51$
 $A_s(\text{req'd}) = 0.00 \text{ in. sq/ft.}$
 $1+1/3 A_s = 0.00 \text{ in. sq/ft. OK}$



Horizontal line indicates top of wall
Lateral Earth Pressure
 Eq. Lat. Press. = 0.071 kof
 W2 = 0.74 ksf
 W3 = 0.99 ksf

(Surcharge Applied Over Entire Height of Unit)



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Project: Standard Vault Designs
6ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 46

By: KMK

Chk By: SLW

of

Date

Date

70
1/12/2010
1/20/10

Monolithic Base Section Design Continued:

Check minimum reinforcement requirements (cont.)

Vertical

$$\phi M_n \geq 1.2 M_{cr}$$

$$M_{cr} = 3.18 \text{ kip-ft}$$

$$1.2 M_{cr} = 3.82 \text{ kip-ft} \quad \text{OK}$$

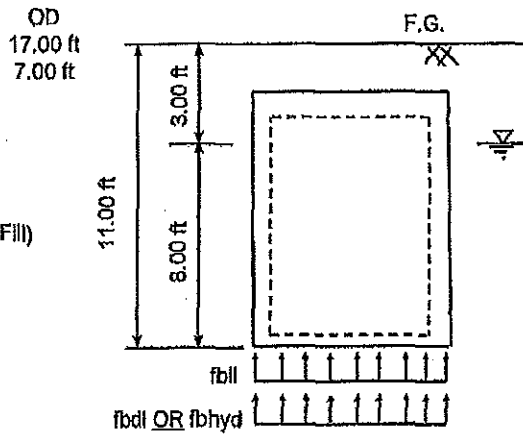


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BASE SLAB DESIGN
HINGED 4 SIDES
PCA Rectangular Concrete Tanks
Case #10
Controls

Project: Standard Vault Designs
 6ft span HS-25 Loading
 Job #: 2009.015.019
 Sheet: 47 of 70
 By: KMK Date 1/12/2010
 Chk By: SLJ Date 1/20/10

ID
 Length = 16.00 ft
 Width = 6.00 ft
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 b/a = 2.7
 Number of Wheels = 3
Vertical Loads:
 Soil = 42.84 kips (Based on 3' Fill)
 Cover slab = 8.93 kips
 Walls = 24.15 kips
 Other =
 Total Dead Load = 75.92 kips
 Live Load = 60.00 kips



Loading Diagram
 Ref: ASTM C857 Sec 4.3

Net upward bearing pressure:

Dead Load, fbdl = 0.64 ksf <== Controls
 Hydrostatic, fbhyd = 0.50 ksf (8.00 ft * 0.0624 kcf)
 Live Load, fbll = +0.50 ksf
 w = 1.14 ksf
 Wu = 1.92 ksf

Top cage
 Transverse Coeff. = 0.114
 Longitudinal Coeff. = 0.037
 Bar cover = 1.00 in
 Transverse Moment = 4.70 kip-ft
 Longitudinal Moment = 1.50 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Transverse	7.92 kip-ft	7.99 kip-ft	# 4	8.0 in	4.75 in	0.39 in. sq/ft.	0.46 in
Longitudinal	2.53 kip-ft	3.65 kip-ft	# 4	12.0 in	4.25 in	0.20 in. sq/ft.	0.23 in
Shear Coeff. =	0.484						

Vu @ 'd' = 5.22 kips

φVc = 6.86 kips (AASHTO 8-49)
 φVc > Vu: OK

Cracking Check:

	<u>Transverse</u>	<u>Longitudinal</u>
p = As / b * d =	0.006889	0.003850
p * n =	0.049570	0.027701
k = √(2pn + pn²) - pn =	0.269	0.209
j = 1 - (k/3) =	0.910	0.930
M =	4.70 kip-ft	1.50 kip-ft
fs = M / As j d =	33.24 ksl OK	20.81 ksl OK
dc =	1.25 in	1.75 in
A = 2 * dc * Spacing =	15.00 sq.in	42.00 sq.in
Z = fs³√(dc * A) =	88 kips/in OK	87 kips/in OK



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Project: Standard Vault Designs
6ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 48 of

By: KMK Date

Chk By: S.W. Date

70
1/12/2010
1/20/10

Base Slab Design Continued:

Check minimum reinforcement requirements per AASHTO 8.17.1
Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Transverse: $\phi M_n \geq 1.2 * M_{cr}$

$M_{cr} = 3.18 \text{ kip-ft}$

$1.2 M_{cr} = 3.82 \text{ kip-ft}$ OK

Longitudinal: $\phi M_n \geq 1.2 * M_{cr}$

$M_{cr} = 3.18 \text{ kip-ft}$

$1.2 M_{cr} = 3.82 \text{ kip-ft}$

OR

$A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$

$C = 3.61$

$A_s(\text{req'd}) = 0.14 \text{ in. sq/ft.}$

$1+1/3 A_s = 0.18 \text{ in. sq/ft.}$ OK

DELTA

ENGINEERS, ARCHITECTS, & LAND SURVEYORS

184 Court Street
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BASE SLAB DESIGN
HINGED 4 SIDES
PCA Rectangular Concrete Tanks
Case #10

Project: Standard Vault Designs
6ft span HS-25 Loading

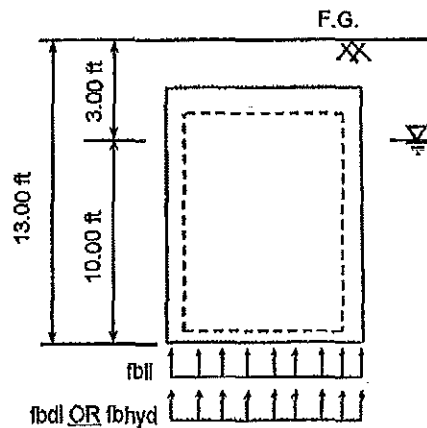
Job #: 2009.015.019

Sheet: 49 of 70

By: KMK Date 1/12/2010

Chk By: 323 Date 1/20/10

ID OD
Length = 16.00 ft 17.00 ft
Width = 8.00 ft 7.00 ft
Wall Thickness = 6.00 in
Slab Thickness = 6.00 in
b/a = 2.7
Number of Wheels = 0 Distributed load used
Vertical Loads: from top slab design
Soil = 71.40 kips (Based on 5' Fill)
Cover slab = 8.93 kips
Walls = 24.15 kips
Other =
Total Dead Load = 104.48 kips



Loading Diagram
Ref: ASTM C857 Sec 4.3

Net upward bearing pressure:

Dead Load, fbdl = 0.88 ksf <== Controls
Hydrostatic, fbhd = 0.62 ksf (10.00 ft * 0.0624 ksf)

Live Load, fbll = + 0.25 ksf
w = 1.13 ksf
Wu = 1.69 ksf

Top cage
Transverse Coeff. = 0.114
Longitudinal Coeff. = 0.037
Bar cover = 1.00 in
Transverse Moment = 4.66 kip-ft
Longitudinal Moment = 1.49 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Transverse	6.97 kip-ft	7.99 kip-ft	# 4	6.0 in	4.75 in	0.39 in. sq/ft.	0.46 in
Longitudinal	2.23 kip-ft	3.65 kip-ft	# 4	12.0 in	4.25 in	0.20 in. sq/ft.	0.23 in
Shear Coeff. =	0.484						

Vu @ 'd' = 4.59 kips

φVc = 6.85 kips (AASHTO 8-49)
φVc > Vu: OK

Cracking Check:

	Transverse	Longitudinal
p = As / b * d =	0.006889	0.003850
p * n =	0.049570	0.027701
k = √(2pn + pn ²) - pn =	0.269	0.209
j = 1 - (k/3) =	0.910	0.930
M =	4.66 kip-ft	1.49 kip-ft
fs = M / As j d =	32.95 ksi OK	20.63 ksi OK
dc =	1.25 in	1.75 in
A = 2 * dc * Spacing =	15.00 sq.in	42.00 sq.in
Z = fs ³ √(dc * A) =	87 kips/in OK	86 kips/in OK



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Project: Standard Vault Designs
 6ft span HS-25 Loading

Job #: 2009.016.019

Sheet: 50

By: KMK

Chk By: SLJ

of

Date

Date

70
1/12/2010
1/20/10

Base Slab Design Continued:

Check minimum reinforcement requirements per AASHTO 8.17.1

Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Transverse: $\phi M_n \geq 1.2 * M_{cr}$

$M_{cr} = 3.18 \text{ kip-ft}$

$1.2 M_{cr} = 3.82 \text{ kip-ft}$ OK

Longitudinal: $\phi M_n \geq 1.2 * M_{cr}$

$M_{cr} = 3.18 \text{ kip-ft}$

$1.2 M_{cr} = 3.82 \text{ kip-ft}$

OR

$A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$

$C = 3.61$

$A_s(\text{req'd}) = 0.12 \text{ in. sq/ft.}$

$1+1/3 A_s = 0.16 \text{ in. sq/ft. OK}$

DELTA

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HS-25 5' TO 10' FILL

PRECAST VAULT DESIGN DESCRIPTION

Length (I.D.) =	16.00 ft	(Max.)
Width (I.D.) =	6.00 ft	
Height (I.D.) =	7.00 ft	
Wall Thickness =	6.00 in	
Base Slab Thickness =	6.00 in	
Cover Slab Thickness =	6.00 in	

TECHNICAL DATA

Earth Cover (Min.) =	5.00 ft
Earth Cover (Max) =	10.00 ft
Min Watertable Depth =	6.50 ft
ka =	0.33
Unit Weight of Soil =	120 pcf
Equivalent Lateral Fluid Pressure =	0.066 kcf
LL Surcharge =	0.10 ksf
Depth Below F.G. to Apply Surcharge =	12.00 ft (Cons.)

Concrete Strength (f'c) =	5.0 ksi
Unit Weight of Concrete =	150 pcf
$E_c = 57,000 * \sqrt{f'c} =$	4.03E+06 psi
Yield Strength (fy) =	60 ksi
$E_s =$	2.90E+07 psi
$n = E_s / E_c =$	7.2
$\beta_1 = (.85 - .05(fc-4)) =$	0.8
$f_r = 7.5 \sqrt{f'c} =$	530 psi
Rho max = (.75 pb) =	0.0251531
Zmax =	130 Severe Exposure

Design Wheel Load (Pw) =	20 kips	AASHTO HS25
Uniform Live Load =	0 psf	

Capacity Reduction Factors:

ϕ - Moment =	0.90
ϕ - Shear =	0.85

Load Factors:

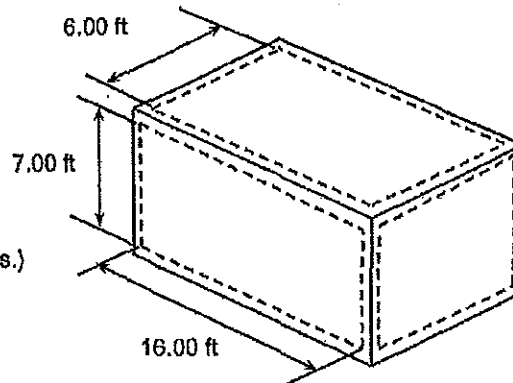
$\gamma =$	1.30
β - LL =	1.67
β - DL =	1.00
β - EL =	1.30

References:

1. "Specifications for Highway Bridges, 17th Ed." - AASHTO
2. "Rectangular Concrete Tanks, 5th Ed." - PCA Publication.
3. "Theory of Plates and Shells" - Timoshenko, S. 1959.
4. "Standard Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures" - ASTM C890

Project:	Standard Vault Designs
	6ft span HS-25 Loading
Client:	Northern Concrete Pipe
Job Number:	2009.015.019
File Name:	vaultlif(V2.2.1).xls
Entered By:	KMK
Checked By:	SLJ
Date:	1/12/2010
Sheet:	5 of 10

Denotes input field



Vault Isometric View
 (Joints not shown for clarity)
 (All dimensions I.D.)



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Project: Standard Vault Designs
8ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 60

By: KMK

Chk By: SLJ

of 70
Date 1/12/2010

Date 1/20/10

Base Slab Design Continued:

Check minimum reinforcement requirements per AASHTO 8.17.1
Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 6.20.1)

Transverse: $\phi M_n \geq 1.2 * M_{cr}$

$M_{cr} = 3.18 \text{ kip-ft}$

$1.2 M_{cr} = 3.82 \text{ kip-ft}$ OK

Longitudinal: $\phi M_n \geq 1.2 * M_{cr}$

$M_{cr} = 3.18 \text{ kip-ft}$

$1.2 M_{cr} = 3.82 \text{ kip-ft}$ OK



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**EQUIVALENT LATERAL
 FLUID PRESSURE:**

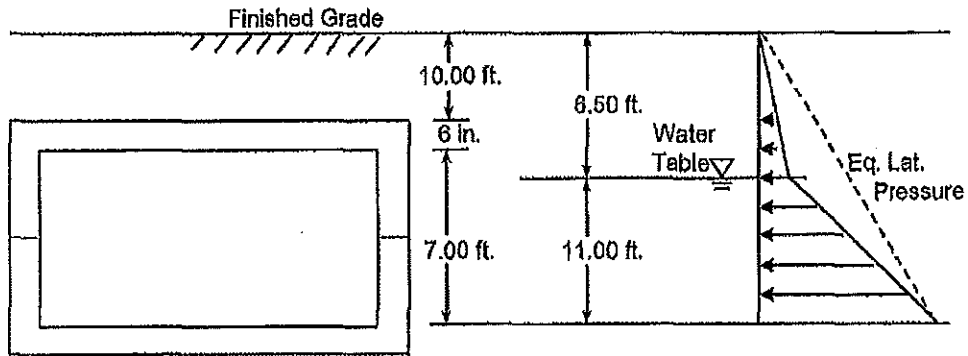
Project: Standard Vault Designs
 6ft span HS-25 Loading
 Job #: 2009.015.019
 Sheet: 52 of 70
 By: KMK Date 1/12/2010
 Chk By: slw Date 1/20/10

Ka =	0.33
Unit Wt. of Soil =	120 pcf
Max. Fill Above Structure =	10.00 ft. (Worst Case)
Structure Inside Ht. =	7.00 ft.
Top Slab Thickness =	6.00 in.
Min. Watertable Depth =	6.50 ft.

Lateral Pressure (Dry) = 39.6 pcf
 (Ka*Soil Wt.)

Lateral Pressure (Sat.) = 81.4 pcf
 (Ka*(Soil Wt.-62.4pcf)+62.4pcf)

Equivalent Lateral Pressure = 65.9 pcf



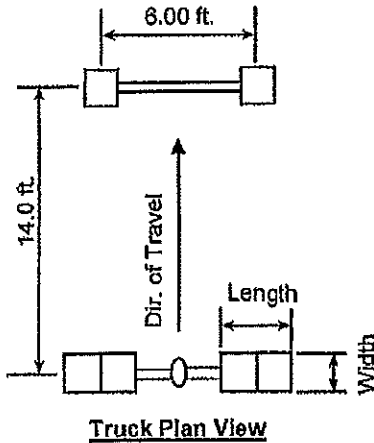
Project: Standard Vault Designs
 6ft span HS-25 Loading
 Job #: 2009.015.019
 Sheet: 53 of 70
 By: KMK Date 1/12/2010
 Chk By: SLJ Date 1/20/10

Determine Uniform Load From Wheel Live Load for Various Fill Depths

Distance Between CL of Wheel and CL of Truck: 3 ft
 Wheel Load: 20 kips

Distribution Length = 1.75 x Depth of Fill + Length of Dual Wheel Dimensions
 Distribution Width = 1.75 x Depth of Fill + Width of Dual Wheel Dimensions

Dual Wheel Dimensions: Length 1.67 ft. Width 0.83 ft. AASHTO 3.30



Max Fill:

Depth of Fill (ft)	Distrib. Length	Distrib. Width	Lengths Overlap?	DLA ft ²	Uniform Load psf
3.0	6.92	6.08	YES	42.1	475.4
3.5	7.80	6.96	YES	95.9	416.9
4.0	8.67	7.83	YES	114.9	348.2
4.5	9.55	8.71	YES	136.3	295.6
5.0	10.42	9.58	YES	157.3	254.3
5.5	11.30	10.46	YES	180.8	221.2
6.0	12.17	11.33	YES	205.9	194.3
6.5	13.05	12.21	YES	232.4	172.1
7.0	13.92	13.08	YES	260.6	153.5
7.5	14.80	13.96	YES	290.2	137.8
5.0	10.42	9.58	YES	157.3	254.3
10.0	19.17	18.33	YES	461.4	86.7

Design Min Fill = 5.00 ft	157.3	254.3
Design Max Fill = 10.00 ft	461.4	86.7

Note: If design fill < 3', design using concentrated load case

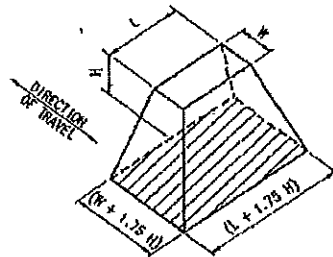


FIG. 4 Distributed Load Area
 (REF "ASTM C 890-91")



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**COVER SLAB DESIGN
 UNIFORM LIVE LOAD**

MAX FILL *Controls*
 ASTM C890

Length (I.D.) = 16.00 ft.
 Width (I.D.) = 6.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 Earth Cover = 10.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.50 ft.
 Dead Loads: Soil = 1.20 ksf
 Concrete = 0.08 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 1.28 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl l^2 / 8 *$ (2-way slab factor) = 6.73 kip-ft
 DLA = 461.37 sf
 Wll = 0.09 ksf
 $Mll = wll l^2 / 8 *$ (2-way slab factor) = 0.46 kip-ft
 $Mu = \gamma[\beta_{(L+1)} * Mll + \beta_D * Mdl] = 9.75 \text{ kip-ft}$

d = 4.69 in

Req. Bar Size and Spacing

Short Span: $As = 0.61 \text{ in. sq/ft.}$ Use #5 @ 6.0 in

Distribution Steel = $As / \text{Span} * .5 = 0.24 \text{ in. sq/ft.}$ Use #5 @ 15.0 in
 12.0

$\rho = As / b * d = 0.01090831$
 $\rho * n = 0.0784866$

Flexure Check:

$a = As Fy / 0.85 f'c b = 0.722 \text{ in}$
 $\phi Mn = \phi * As * Fy * (d - (a/2)) = 11.95 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{2\rho n + \rho n^2} - \rho n = 0.325$
 $j = 1 - (k/3) = 0.892$
 $M = Mdl + Mll = 7.19 \text{ kip-ft}$
 $fs = M / As j d = 33.66 \text{ ksi OK}$
 $dc = 1.313 \text{ in}$

$A = 2 * dc * \text{Spacing} = 15.8 \text{ sq.in}$
 $Z = fs^3 / (dc * A) = 92 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} * Wll + \beta_{DL} * Wdl] *$
 $[(\text{span}/2) - d] = 5.28 \text{ kips/ft}$
 (AASHTO 8-49) $\phi Vc = 6.76 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least $1/8 \text{ sq. in./ft}$ (AASHTO 8.20.1)

$\phi Mn \geq 1.2 * Mcr$
 $Mcr = 3.18 \text{ kip-ft}$
 $1.2 Mcr = 3.82 \text{ kip-ft OK}$

Project: Standard Vault Designs
 6ft span HS-25 Loading
 Job #: 2009.015.019
 Sheet: 54 of 70
 By: KMK Date 1/12/2010
 Chk By: SW Date 1/20/10



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COVER SLAB DESIGN
UNIFORM LIVE LOAD
MIN. FILL
ASTM C890

Project: Standard Vault Designs
 6ft span HS-25 Loading
 Job #: 2009.015.019
 Sheet: 55 of 70
 By: KMK Date 1/12/2010
 Chk By: SLJ Date 1/20/10

Length (I.D.) = 16.00 ft.
 Width (I.D.) = 6.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 6.00 in
 Earth Cover = 5.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.60 ft.
 Dead Loads: Soil = 0.60 ksf
 Concrete = 0.08 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 0.68 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 3.56 \text{ kip-ft}$
 $DLA = 157.30 \text{ sf}$
 $Wll = 0.25 \text{ ksf}$
 $Mll = wll \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 1.34 \text{ kip-ft}$
 $Mu = \gamma[\beta_{LL} \cdot Mll + \beta_D \cdot Mdl] = 7.55 \text{ kip-ft}$

d = 4.89 in

Req. Bar Size and Spacing

Short Span: $As = 0.61 \text{ in. sq/ft.}$ Use #5 @ 6.0 in

Distribution Steel = $As / \text{Span} \cdot 5 = 0.24 \text{ in. sq/ft.}$ Use #5 @ 15.0 in (2.0)

$\rho = As / b \cdot d = 0.01090831$
 $\rho \cdot n = 0.0784866$

Flexure Check:

$a = As \cdot Fy / 0.85 \cdot f'c \cdot b = 0.722 \text{ in}$
 $\phi Mn = \phi \cdot As \cdot Fy \cdot (d - (a/2)) = 11.95 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{2\rho n + \rho n^2} - \rho n = 0.325$
 $j = 1 - (k/3) = 0.892$
 $M = Mdl + Mll = 4.91 \text{ kip-ft}$
 $fs = M / As \cdot j \cdot d = 22.97 \text{ ksi OK}$
 $dc = 1.313 \text{ in}$
 $A = 2 \cdot dc \cdot \text{Spacing} = 15.8 \text{ sq.in}$
 $Z = fs \cdot \sqrt[3]{dc \cdot A} = 63 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} \cdot Wll + \beta_{DL} \cdot Wdl] \cdot [(span/2) - d] = 4.09 \text{ kips/ft}$
 (AASHTO 8-49) $\phi Vc = 6.78 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least $1/8 \text{ sq. in./ft}$ (AASHTO 8.20.1)

$\phi Mn \geq 1.2 \cdot Mcr$
 $Mcr = 3.18 \text{ kip-ft}$
 $1.2 \cdot Mcr = 3.82 \text{ kip-ft OK}$



184 Court Street
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**MONOLITHIC TOP SECTION
 CANTILEVER WALL DESIGN
 UNIFORM LOAD**

Project: Standard Vault Designs
 6ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 56 of 70

By: KMK Date 1/19/2010

Chk By: SED Date 1/20/10

Height, a = 3.50 ft
 Length, b = 16.00 ft
 Width, c = 6.00 ft
 Wall Thickness = 6.00 in

Bottom of wall hinged? N (Y or N)

OUTSIDE FACE

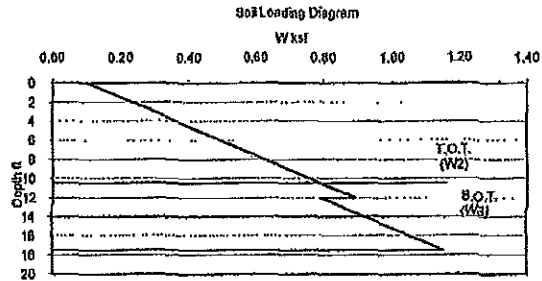
PCA Case # 8
 Bar Cover = 1.00 in
 Max horiz. Coeff. = 0.000
 Max vert. Coeff. = 0.500
 Max horiz. neg. moment = 0.00 kip-ft
 Max vert. neg. moment = 5.56 kip-ft

Horizontal lines indicate top & bottom of wall

Lateral Earth Pressure

Eq. Lat. Press. = 0.066 kcf
 W2 = 0.79 ksf
 W3 = 1.02 ksf
 Wavg = 0.91 ksf

(Surcharge Applied Over Entire Height of Unit)



	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.54 kip-ft	# 4	12.0 in	4.13 in	0.20 in. sq/ft.	0.23 in
Vertical	9.39 kip-ft	11.95 kip-ft	# 5	6.0 in	4.69 in	0.61 in. sq/ft.	0.72 in
Shear coeff. =	1.000						

Vu = 5.37 kips

φVc = 5.95 kips (AASHTO 8-49)

φVc > Vu: OK

ldb = 12 in

Cracking Check:

Horizontal
 $p = A_s / b * d = 0.003967$
 $p * n = 0.028541$
 $k = \sqrt{2pn + pn^2} - pn = 0.212$
 $j = 1 - (k/3) = 0.929$
 M = 0.00 kip-ft
 $f_s = M / A_s j d = 0.00 ksi$ OK
 dc = 1.88 in
 $A = 2 * dc * Spacing = 45.00 sq.in$
 $Z = f_s^3 \sqrt{dc * A} = 0 kips/in$ OK

Vertical
 0.010908
 0.078487
 0.325
 0.892
 5.56 kip-ft
 26.00 ksi OK
 1.31 in
 15.75 sq.in
 71 kips/in OK

Horizontal

$\phi M_n \geq 1.2 * M_{cr}$ OR
 M_{cr} = 3.18 kip-ft
 1.2 M_{cr} = 3.82 kip-ft

As(prov.) ≥ (1+1/3)*As(req'd)

C = 3.51
 As(req) = 0.00 in. sq/ft.
 1+1/3 As = 0.00 in. sq/ft. OK

Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Vertical

$\phi M_n \geq 1.2 * M_{cr}$ OR
 M_{cr} = 3.18 kip-ft
 1.2 M_{cr} = 3.82 kip-ft OK



184 Court Street
 Binghamton, NY 13901
 (607)231-6600 Fax(607)231-6650
MONOLITHIC BASE SECTION
CANTILEVER WALL DESIGN
COMB. UNIFORM & TRIANGULAR LOAD
PCA Rectangular Concrete Tanks

Project: Standard Vault Designs
 6ft span HS-25 Loading
 Job #: 2009.015.019
 Sheet: 57 of 70
 By: KMK Date: 1/12/2010
 Chk By: SLQ Date: 1/20/10

Height, a = 3.50 ft.
 Length, b = 16.00 ft.
 Width, c = 6.00 ft.
 Wall Thickness = 6.00 in

Top of wall hinged? N (Y or N)
OUTSIDE FACE

Bar Cover = 1.00 in

	Uniform	Triangular
PCA Case #	8	3
(-) Max horiz. Coeff. =	0.000	0.000
(-) Max vert. Coeff. =	0.500	0.167

Max horiz. neg. moment = 0.00 kip-ft
 Max vert. neg. moment = 6.12 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.54 kip-ft	# 4	12.0 in	4.13 in	0.20 in. sq/ft.	0.23 in
Vertical	10.34 kip-ft	10.36 kip-ft	# 5	7.0 in	4.69 in	0.53 in. sq/ft.	0.62 in

	Uniform	Triangular
Side Edge Shear coeff. =	1.000	0.305
Vu =	5.87 kips	
Bottom Edge Shear coeff. =	1.000	0.500
Vu =	6.14 kips	

φVc = 5.95 kips (AASHTO 8-49)
 φVc > Vu: OK
 φVc = 6.76 kips (AASHTO 8-49)
 φVc > Vu: OK
 min lap = 21 in

ldb = 12 in

Cracking Check:

Horizontal
 $\rho = A_s / b * d = 0.003967$
 $\rho * n = 0.028541$
 $k = \sqrt{2\rho n + \rho n^2} - \rho n = 0.212$
 $j = 1 - (k/3) = 0.929$
 M = 0.00 kip-ft
 $f_s = M / A_s j d = 0.00 \text{ ksi}$ OK
 dc = 1.88 in
 A = 2 * dc * Spacing = 45.00 sq.in
 $Z = f_s^3 \sqrt{dc * A} = 0 \text{ kips/in}$ OK

Vertical
 0.009349978
 0.06727423
 0.306
 0.898
 6.12 kip-ft
 33.17 ksi OK
 1.31 in
 18.38 sq.in
 96 kips/in OK

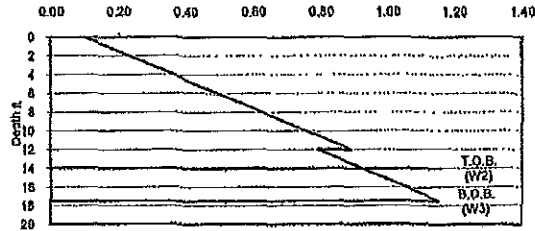
Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Horizontal

$\phi M_n \geq 1.2 * M_{cr}$
 Mcr = 3.18 kip-ft
 1.2 Mcr = 3.82 kip-ft

OR $A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$
 C = 3.51
 As(req'd) = 0.00 in. sq/ft.
 1+1/3 As = 0.00 in. sq/ft. OK

603 Loading Diagram
 Wksf



Horizontal line indicates top of wall
Lateral Earth Pressure
 Eq. Lat. Press. = 0.066 kcf
 W2 = 0.92 ksf
 W3 = 1.15 ksf
 No Surcharge



ENGINEERS, ARCHITECTS, & LAND SURVEYORS

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Project: Standard Vault Designs
8ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 58

By: KMK

Chk By: SLJ

of

Date

Date

70
1/12/2010
1/20/10

Monolithic Base Section Design Continued:

Check minimum reinforcement requirements (cont.)

Vertical

$\phi M_n \geq 1.2 M_{cr}$

$M_{cr} = 3.18 \text{ kip-ft}$

$1.2 M_{cr} = 3.82 \text{ kip-ft} \quad \text{OK}$

Project:	Standard Vault Designs
	6ft span HS-25 Loading
Client:	Northern Concrete Pipe
Job Number:	2009.015.019
File Name:	vaultlf(v2.2.1).xls
Entered By:	KMK
Checked By:	SLJ
Date:	1/12/2010
Sheet:	61 of 110

HS-25 10' TO 15' FILL

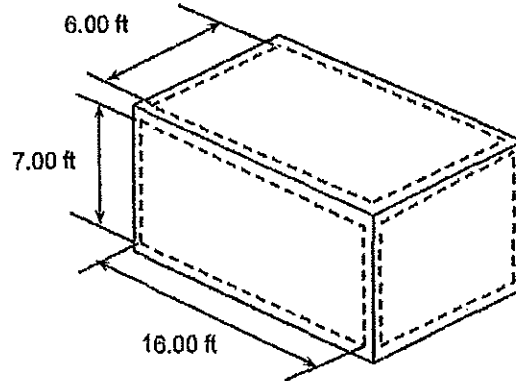
PRECAST VAULT DESIGN DESCRIPTION

Length (I.D.) =	16.00 ft	(Max.)
Width (I.D.) =	6.00 ft	
Height (I.D.) =	7.00 ft	
Wall Thickness =	6.00 in	
Base Slab Thickness =	8.00 in	
Cover Slab Thickness =	8.00 in	

Denotes input field

TECHNICAL DATA

Earth Cover (Min.) =	10.00 ft
Earth Cover (Max) =	15.00 ft
Min Watertable Depth =	17.50 ft
ka =	0.33
Unit Weight of Soil =	120 pcf
Equivalent Lateral Fluid Pressure =	0.049 ksf
LL Surcharge =	0.10 ksf
Depth Below F.G. to Apply Surcharge =	8.00 ft



Vault Isometric View
 (Joints not shown for clarity)
 (All dimensions I.D.)

Concrete Strength (fc) =	5.0 ksi
Unit Weight of Concrete =	150 pcf
$E_c = 57,000 * \sqrt{f_c}$ =	4.03E+06 psi
Yield Strength (fy) =	60 ksi
E_s =	2.90E+07 psi
$n = E_s / E_c$ =	7.2
$\beta_1 = (.85 - .05(f_c - 4))$ =	0.8
$f_r = 7.5 \sqrt{f_c}$ =	530 psi
Rho max = (.75 pb) =	0.0251531
Zmax =	130 Severe Exposure

Design Wheel Load (Pw) =	20 kips	AASHTO HS25
Uniform Live Load =	0 psf	

Capacity Reduction Factors:

ϕ - Moment =	0.90
ϕ - Shear =	0.85

Load Factors:

γ =	1.30
β - LL =	1.67
β - DL =	1.00
β - EL =	1.30

References:

1. "Specifications for Highway Bridges, 17th Ed." - AASHTO
2. "Rectangular Concrete Tanks, 5th Ed." - PCA Publication.
3. "Theory of Plates and Shells" - Timoshenko, S. 1959.
4. "Standard Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures" - ASTM C890

DELTA

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EQUIVALENT LATERAL FLUID PRESSURE:

Project: Standard Vault Designs
 6ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 62 of 70

By: KMK Date 1/12/2010

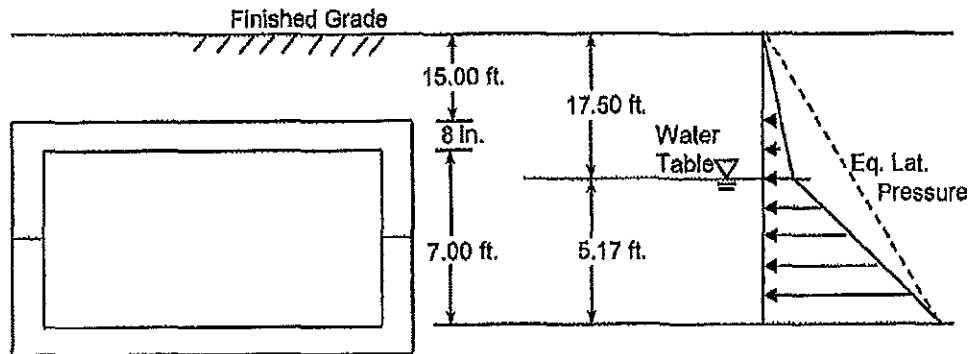
Chk By: SLB Date 1/20/10

Ka =	0.33
Unit Wt. of Soil =	120 pcf
Max. Fill Above Structure =	15.00 ft. (Worst Case)
Structure Inside Ht. =	7.00 ft.
Top Slab Thickness =	8.00 in.
Min. Watertable Depth =	17.50 ft.

Lateral Pressure (Dry) = 39.6 pcf
 (Ka*Soil Wt.)

Lateral Pressure (Sat.) = 81.4 pcf
 (Ka*(Soil Wt.-62.4pcf)+62.4pcf)

Equivalent Lateral Pressure = 49.1 pcf



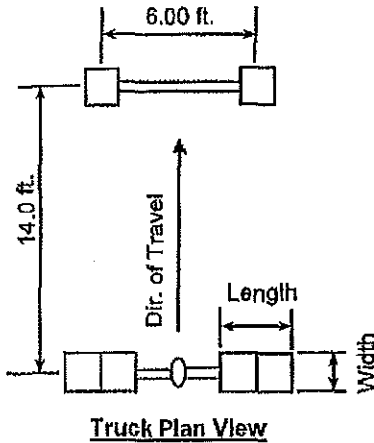
Project: Standard Vault Designs
6ft span HS-25 Loading
Job #: 2009.015.019
Sheet: 63 of 70
By: KMK Date: 1/12/2010
Chk By: SLD Date: 1/20/10

Determine Uniform Load From Wheel Live Load for Various Fill Depths

Distance Between CL of Wheel and CL of Truck: 3 ft
Wheel Load: 20 kips

Distribution Length = 1.75 x Depth of Fill + Length of Dual Wheel Dimensions
Distribution Width = 1.75 x Depth of Fill + Width of Dual Wheel Dimensions

Dual Wheel Dimensions: Length 1.67 ft. Width 0.83 ft. AASHTO 3.30



Max Fill:

Depth of Fill (ft)	Distrib. Length	Distrib. Width	Lengths Overlap?	DLA ft ²	Uniform Load psf
3.0	6.92	6.08	YES	42.1	475.4
3.5	7.80	6.96	YES	95.9	416.9
4.0	8.67	7.83	YES	114.9	348.2
4.5	9.55	8.71	YES	135.3	295.6
5.0	10.42	9.58	YES	157.3	254.3
5.5	11.30	10.46	YES	180.8	221.2
6.0	12.17	11.33	YES	205.9	194.3
6.5	13.05	12.21	YES	232.4	172.1
7.0	13.92	13.08	YES	260.6	153.5
7.5	14.80	13.96	YES	290.2	137.8
10.0	19.17	18.33	YES	461.4	86.7
15.0	27.92	27.08	YES	918.6	43.5

Design Min Fill = 10.00 ft	461.4	86.7
Design Max Fill = 15.00 ft	918.6	43.5

Note: If design fill < 3', design using concentrated load case

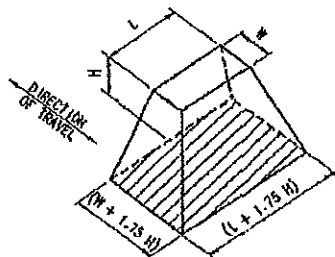


FIG. 4 Distributed Load Area
(REF "ASTM C 890-91")



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**COVER SLAB DESIGN
 UNIFORM LIVE LOAD**

MAX FILL
 ASTM C890

Controls

Length (I.D.) = 16.00 ft.
 Width (I.D.) = 6.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 8.00 in
 Earth Cover = 15.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.50 ft.
 Dead Loads: Soil = 1.80 ksf
 Concrete = 0.10 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 1.90 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 10.03 \text{ kip-ft}$
 DLA = 918.55 sf
 Wll = 0.04 ksf
 $Mll = wll \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 0.23 \text{ kip-ft}$
 $Mu = \gamma[\beta_{(L>1)} \cdot Mll] + \beta_D \cdot Mdl = 13.54 \text{ kip-ft}$

d = 6.69 in

Req. Bar Size and Spacing

Short Span: $As = 0.61 \text{ in. sq/ft.}$

Use	# 5	@	6.0 in
-----	-----	---	--------

Distribution Steel = $As / \text{Span} \cdot 5 = 0.24 \text{ in. sq/ft.}$

Use	# 5	@	45.0 in
-----	-----	---	---------

12.0

$\rho = As / b \cdot d = 0.00764601$
 $\rho \cdot n = 0.05501397$

Flexure Check:

$a = As \cdot Fy / 0.85 \cdot Fcb = 0.722 \text{ in}$
 $\phi Mn = \phi \cdot As \cdot Fy \cdot (d - (a/2)) = 17.47 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{2\rho n + \rho n^2} - \rho n = 0.281$
 $j = 1 - (k/3) = 0.906$
 $M = Mdl + Mll = 10.26 \text{ kip-ft}$
 $fs = M / As \cdot j \cdot d = 33.12 \text{ ksi OK}$
 $dc = 1.313 \text{ in}$
 $A = 2 \cdot dc \cdot \text{Spacing} = 15.8 \text{ sq.in}$
 $Z = fs \cdot \sqrt{dc \cdot A} = 91 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} \cdot Wll + \beta_{DL} \cdot Wdl] \cdot [(span/2) - d] = 6.91 \text{ kips/ft}$
 (AASHTO 8-49) $\phi Vc = 9.65 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

$\phi Mn \geq 1.2 \cdot Mcr$
 $Mcr = 5.66 \text{ kip-ft}$
 $1.2 \cdot Mcr = 6.79 \text{ kip-ft OK}$

Project: Standard Vault Designs
 6ft span HS-25 Loading
 Job #: 2009.015.019
 Sheet: 64 of 70
 By: KMK Date 1/12/2010
 Chk By: slj Date 1/20/10



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COVER SLAB DESIGN
UNIFORM LIVE LOAD
 MIN. FILL
 ASTM C890

Project: Standard Vault Designs
 6ft span HS-25 Loading
 Job #: 2009.015.019
 Sheet: 65 of 70
 By: KMK Date 1/12/2010
 Chk By: sw Date 1/20/10

Length (I.D.) = 18.00 ft.
 Width (I.D.) = 8.00 ft.
 Wall Thickness = 6.00 in
 Slab Thickness = 8.00 in
 Earth Cover = 10.00 ft.
 Bar cover = 1.00 in

One Way Slab

Span = 6.50 ft.
 Dead Loads: Soil = 1.20 ksf
 Concrete = 0.10 ksf
 Additional Uniform Dead Load = 0.00 ksf
 Total (wdl) = 1.30 ksf

2-Way slab fac. (Distributed) = 1.000 (AASHTO 3.24.6.1)
 $Mdl = wdl \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 6.87 \text{ kip-ft}$
 $DLA = 461.37 \text{ sf}$
 $Wll = 0.09 \text{ ksf}$
 $Mll = wll \cdot l^2 / 8 \cdot (2\text{-way slab factor}) = 0.46 \text{ kip-ft}$
 $Mu = \gamma[\beta_{(L+I)} \cdot Mll + \beta_D \cdot Mdl] = 9.92 \text{ kip-ft}$

d = 6.69 in

Req. Bar Size and Spacing

Short Span: $As = 0.61 \text{ in. sq/ft.}$ Use #5 @ 6.0 in

Distribution Steel: $As / \text{Span}^2 = 0.24 \text{ in. sq/ft.}$ Use #5 @ 15.0 in

(2.0)

$\rho = As / b \cdot d = 0.00784801$
 $\rho \cdot n = 0.05501397$

Flexure Check:

$a = AsFy / 0.85Fcb = 0.722 \text{ in}$
 $\phi Mn = \phi \cdot As \cdot Fy \cdot (d - (a/2)) = 17.47 \text{ kip-ft OK}$

Cracking Check:

$k = \sqrt{(2\rho n + \rho n^2)} - \rho n = 0.281$
 $j = 1 - (k/3) = 0.908$
 $M = Mdl + Mll = 7.32 \text{ kip-ft}$
 $fs = M / As \cdot j \cdot d = 23.63 \text{ ksi OK}$
 $dc = 1.313 \text{ in}$

$A = 2 \cdot dc \cdot \text{Spacing} = 15.8 \text{ sq.in}$
 $Z = fs^3 \cdot \sqrt{dc \cdot A} = 65 \text{ kips/in OK}$

Shear Check:

$Vu @ d = \gamma[\beta_{LL} \cdot Wll + \beta_{DL} \cdot Wdl] \cdot [(span/2) - d] = 5.06 \text{ kips/ft}$
 (AASHTO 8-49) $\phi Vc = 9.65 \text{ kips/ft OK}$

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

$\phi Mn \geq 1.2 \cdot Mcr$
 $Mcr = 5.66 \text{ kip-ft}$
 $1.2 \cdot Mcr = 6.79 \text{ kip-ft OK}$



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**MONOLITHIC TOP SECTION
 CANTILEVER WALL DESIGN
 UNIFORM LOAD**

Project: Standard Vault Designs
 6ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 66 of 70

By: KMK

Date: 1/19/2010

Chk By: [Signature]

Date: 1/20/10

Height, a = 3.50 ft
 Length, b = 16.00 ft
 Width, c = 6.00 ft
 Wall Thickness = 6.00 in

Bottom of wall hinged? N (Y or N)

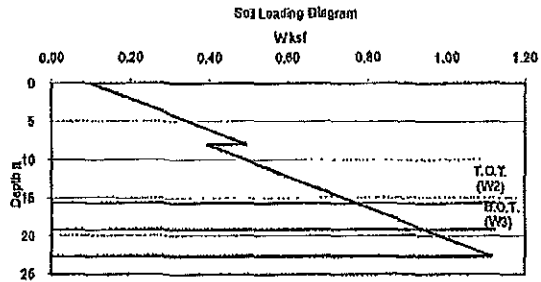
OUTSIDE FACE

PCA Case # 8
 Bar Cover = 1.00 in
 Max horiz. Coeff. = 0.000
 Max vert. Coeff. = 0.500
 Max horiz. neg. moment = 0.00 kip-ft
 Max vert. neg. moment = 5.24 kip-ft

Horizontal lines indicate top & bottom of wall

Lateral Earth Pressure

Eq. Lat. Press. = 0.049 kcf
 W2 = 0.77 ksf
 W3 = 0.94 ksf
 Wavg = 0.86 ksf
 No Surcharge



	Mu	ϕMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.54 kip-ft	# 4	12.0 in	4.13 in	0.20 in. sq/ft.	0.23 in
Vertical	8.86 kip-ft	11.95 kip-ft	# 5	6.0 in	4.69 in	0.61 in. sq/ft.	0.72 in
Shear coeff. =	1.000						

Vu = 5.06 kips

$\phi Vc = 5.95$ kips (AASHTO 8-49)

$\phi Vc > Vu$: OK

ldb = 12 in

Cracking Check:

Horizontal
 $\rho = As / b * d = 0.003967$
 $\rho * n = 0.028541$
 $k = \sqrt{(2\rho n + \rho n^2)} - \rho n = 0.212$
 $j = 1 - (k/3) = 0.929$
 M = 0.00 kip-ft
 $fs = M / As * j * d = 0.00$ ksi OK
 $dc = 1.88$ in
 $A = 2 * dc * Spacing = 45.00$ sq.in
 $Z = fs * \sqrt[3]{dc * A} = 0$ kips/in OK

Vertical
 $\rho = 0.010908$
 $\rho * n = 0.078487$
 $k = 0.325$
 $j = 0.892$
 M = 5.24 kip-ft
 $fs = 24.53$ ksi OK
 $dc = 1.31$ in
 $A = 15.75$ sq.in
 $Z = 67$ kips/in OK

Horizontal

$\phi Mn \geq 1.2 * Mcr$
 $Mcr = 3.18$ kip-ft
 $1.2 Mcr = 3.82$ kip-ft

OR

$As(prov.) \geq (1+1/3) * As(req'd)$

C = 3.51
 $As(req) = 0.00$ in. sq/ft.
 $1+1/3 As = 0.00$ in. sq/ft. OK

Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Vertical

$\phi Mn \geq 1.2 * Mcr$
 $Mcr = 3.18$ kip-ft
 $1.2 Mcr = 3.82$ kip-ft OK

OR



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**MONOLITHIC BASE SECTION
 CANTILEVER WALL DESIGN
 COMB. UNIFORM & TRIANGULAR LOAD
 PCA Rectangular Concrete Tanks**

Project: Standard Vault Designs
 6ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 67 of

By: KMK Date

Chk By: SLD Date

70
 1/12/2010
 1/20/10

Height, a = 3.50 ft.
 Length, b = 16.00 ft.
 Width, c = 6.00 ft.
 Wall Thickness = 6.00 in

Top of wall hinged? N (Y or N)
OUTSIDE FACE

Bar Cover = 1.00 in

	Uniform	Triangular
PCA Case #	8	3
(-) Max horiz. Coeff. =	0.000	0.000
(-) Max vert. Coeff. =	0.500	0.167

Max horiz. neg. moment = 0.00 kip-ft

Max vert. neg. moment = 6.12 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Horiz	0.00 kip-ft	3.54 kip-ft	# 4	12.0 in	4.13 in	0.20 in. sq/ft.	0.23 in
Vertical	10.34 kip-ft	10.36 kip-ft	# 5	7.0 in	4.69 in	0.53 in. sq/ft.	0.62 in

Side Edge Shear coeff. = 1.000 Uniform 0.305 Triangular

Vu = 5.88 kips

Bottom Edge Shear coeff. = 1.000 Uniform 0.500 Triangular

Vu = 6.08 kips

φVc = 5.95 kips (AASHTO 8-49)

φVc > Vu: OK

φVc = 6.76 kips (AASHTO 8-49)

φVc > Vu: OK

ldb = 12 in

min lap = 21 in

Cracking Check;

Horizontal
 $\rho = A_s / b * d = 0.003967$
 $\rho * n = 0.028541$
 $k = \sqrt{2\rho n + \rho n^2} - \rho n = 0.212$
 $j = 1 - (k/3) = 0.929$
 M = 0.00 kip-ft
 $f_s = M / A_s j d = 0.00 \text{ ksi OK}$
 $dc = 1.88 \text{ in}$
 $A = 2 * dc * \text{Spacing} = 45.00 \text{ sq.in}$
 $Z = f_s^2 \sqrt{dc * A} = 0 \text{ kips/in OK}$

Vertical
 0.009349978
 0.06727423
 0.306
 0.898
 6.12 kip-ft
 33.17 ksi OK
 1.31 in
 18.38 sq.in
 96 kips/in OK

Check minimum reinforcement requirements per AASHTO 8.17.1
 Note: Minimum As shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Horizontal

$\phi M_n \geq 1.2 * M_{cr}$
 $M_{cr} = 3.18 \text{ kip-ft}$
 $1.2 M_{cr} = 3.82 \text{ kip-ft}$

OR

$A_s(\text{prov.}) \geq (1+1/3) * A_s(\text{req'd})$
 $C = 3.51$
 $A_s(\text{req'd}) = 0.00 \text{ in. sq/ft.}$
 $1+1/3 A_s = 0.00 \text{ in. sq/ft. OK}$



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Project: Standard Vault Designs
8ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 68 of

By: KMK Date

Chk By: SLJ Date

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1/12/2010

1/20/10

Monolithic Base Section Design Continued:

Check minimum reinforcement requirements (cont.)

Vertical

$\phi M_n \geq 1.2 M_{cr}$

$M_{cr} = 3.18 \text{ kip-ft}$

$1.2 M_{cr} = 3.82 \text{ kip-ft} \quad \text{OK}$



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BASE SLAB DESIGN
HINGED 4 SIDES
PCA Rectangular Concrete Tanks
Case #10

Project: Standard Vault Designs
 6ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 69 of 70

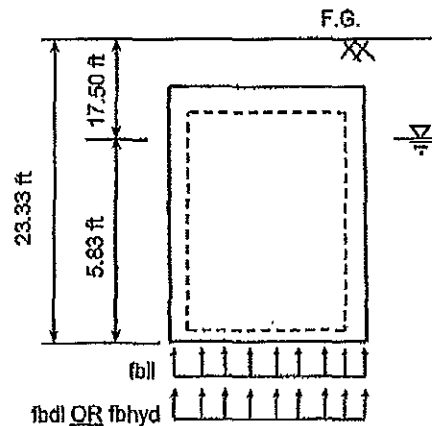
By: KMK Date 1/12/2010

Chk By: SLJ Date 1/20/10

ID
 Length = 16.00 ft
 Width = 6.00 ft
 Wall Thickness = 6.00 in
 Slab Thickness = 8.00 in
 b/a = 2.7
 Number of Wheels = 0
Vertical Loads:
 Soil = 214.20 kips
 Cover slab = 11.90 kips
 Walls = 24.15 kips
 Other =
 Total Dead Load = 250.25 kips

OD
 17.00 ft
 7.00 ft

Distributed load used from top slab design (Based on 15' Fill)



Net upward bearing pressure:

Dead Load, fbdl = 2.10 ksf <== Controls
 Hydrostatic, fbhd = 0.36 ksf (5.83 ft * 0.0624 kcf)
 Live Load, fbl = + 0.04 ksf
 w = 2.15 ksf
 Wu = 2.83 ksf

Top cage
 Transverse Coeff. = 0.114
 Longitudinal Coeff. = 0.037
 Bar cover = 1.00 in
 Transverse Moment = 8.84 kip-ft
 Longitudinal Moment = 2.83 kip-ft

	Mu	φMn	Bar Sz	Sp	d	As	a
Transverse	11.65 kip-ft	15.10 kip-ft	# 5	7.0 in	6.69 in	0.53 in. sq/ft.	0.82 in
Longitudinal	3.73 kip-ft	5.31 kip-ft	# 4	12.0 in	6.13 in	0.20 in. sq/ft.	0.23 in
Shear Coeff. =	0.484						

Vu @ 'd' = 7.45 kips

φVc = 9.65 kips (AASHTO 8-49)
 φVc > Vu: OK

Cracking Check:

	Transverse	Longitudinal
ρ = As / b * d =	0.006564	0.002671
ρ * n =	0.047155	0.019221
k = √(2pn + pn²) - pn =	0.264	0.178
j = 1 - (k/3) =	0.912	0.941
M =	8.84 kip-ft	2.83 kip-ft
fa = M / As j d =	33.07 ksi OK	27.47 ksi OK
dc =	1.31 in	1.88 in
A = 2 * dc * Spacing =	18.38 sq.in	45.00 sq.in
Z = fs³√(dc * A) =	95 kips/in OK	120 kips/in OK

DELTA
ENGINEERS, ARCHITECTS, & LAND SURVEYORS
184 Court Street
Binghamton, NY 13901
(607)231-6600 Fax(607)231-6650

Project: Standard Vault Designs
6ft span HS-25 Loading

Job #: 2009.015.019

Sheet: 70

By: KMK

Chk By: SLW

of 70
Date 1/12/2010

Date 1/20/10

Base Slab Design Continued:

Check minimum reinforcement requirements per AASHTO 8.17.1

Note: Minimum A_s shall be at least 1/8 sq. in./ft (AASHTO 8.20.1)

Transverse: $\phi M_n \geq 1.2 M_{cr}$

$M_{cr} = 5.66$ kip-ft

1.2 $M_{cr} = 6.79$ kip-ft OK

Longitudinal: $\phi M_n \geq 1.2 M_{cr}$

$M_{cr} = 5.66$ kip-ft

1.2 $M_{cr} = 6.79$ kip-ft

OR

$A_s(\text{prov.}) \geq (1+1/3) A_s(\text{req'd})$

$C = 5.21$

$A_s(\text{req'd}) = 0.14$ in. sq/ft.

1+1/3 $A_s = 0.18$ in. sq/ft. OK



Designation: C1613 – 10

Standard Specification for Precast Concrete Grease Interceptor Tanks¹

This standard is issued under the fixed designation C1613; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers design requirements, manufacturing practices, and performance requirements for monolithic or sectional precast concrete grease interceptor tanks.

1.2 This specification describes precast concrete tanks installed to separate fats, oils, grease, soap scum, and other typical kitchen wastes associated with the food service industry.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

- A82/A82M Specification for Steel Wire, Plain, for Concrete Reinforcement
- A184/A184M Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
- A185/A185M Specification for Steel Welded Wire Reinforcement, Plain, for Concrete
- A496/A496M Specification for Steel Wire, Deformed, for Concrete Reinforcement
- A497/A497M Specification for Steel Welded Wire Reinforcement, Deformed, for Concrete
- A615/A615M Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
- A706/A706M Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
- C33 Specification for Concrete Aggregates

- C39/C39M Test Method for Compressive Strength of Cylindrical Concrete Specimens
 - C94/C94M Specification for Ready-Mixed Concrete
 - C125 Terminology Relating to Concrete and Concrete Aggregates
 - C150 Specification for Portland Cement
 - C260 Specification for Air-Entraining Admixtures for Concrete
 - C330 Specification for Lightweight Aggregates for Structural Concrete
 - C494/C494M Specification for Chemical Admixtures for Concrete
 - C595 Specification for Blended Hydraulic Cements
 - C618 Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
 - C685/C685M Specification for Concrete Made by Volumetric Batching and Continuous Mixing
 - C890 Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures
 - C923 Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals
 - C990 Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
 - C1116 Specification for Fiber-Reinforced Concrete and Shotcrete
 - C1602/C1602M Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
- #### 2.2 ACI Standard:³
- ACI 318 Building Code Requirements for Reinforced Concrete
- #### 2.3 IAPMO Documents:⁴
- Uniform Plumbing Code
 - IAPMO PS-80 Grease Interceptors and Clarifiers
- #### 2.4 AASHTO Standard:⁵
- Standard Specifications for Highway Bridges

¹ This specification is under the jurisdiction of ASTM Committee C27 on Precast Concrete Products and is the direct responsibility of Subcommittee C27.30 on Water and Wastewater Containers.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American Concrete Institute (ACI), P.O. Box 9094, Farmington Hills, MI 48333-9094, <http://www.concrete.org>.

⁴ Available from International Association of Plumbing and Mechanical Officials (IAPMO), 5001 E. Philadelphia St., Ontario, CA 91761.

⁵ Available from American Association of State Highway and Transportation Officials (AASHTO), 444 N. Capitol St., NW, Suite 249, Washington, DC 20001, <http://www.transportation.org>.

3. Terminology

3.1 For definitions of terms relating to concrete, see Terminology C125.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *access opening, n*—a hole in the top slab used to gain access to the inside of the tank for the purpose of cleaning and removing grease, floating scum and sludge without a person actually having to enter the tank.

3.2.2 *air scum volume, n*—the number of cubic inches (centimeters) in the space between the liquid surface and the underside of the top slab.

3.2.3 *baffle, n*—a device, such as a sanitary tee or other deflector, used to direct the flow of influent down below the separated layer and prevent floating layer of fats, oils, or grease from exiting the tank through the outlet.

3.2.4 *grease interceptor capacity, n*—the volume of liquid the tank is designed to hold.

3.2.5 *grease interceptor tank system, n*—a single tank or series of tanks in which wastes from a kitchen or food service establishment containing no sanitary discharges from toilets, urinals and other similar fixtures are received and retained, and from which the liquid effluent, which is comparatively free from fats, oils, greases and settleable and/or floating solids, is then discharged to a public sewer, septic or other approved treatment system.

3.2.6 *inspection opening, n*—a hole in the top slab used for the purpose of observing conditions inside the tank.

3.2.7 *joint, n*—a physical separation where two pieces of precast concrete are in contact.

3.2.8 *non-sealed joint, n*—a joint where sealant is not used but where a machined fit will minimize the movement of liquid from one side of a precast concrete wall to the opposite side.

3.2.9 *owner, n*—is by definition end user, customer, or purchaser.

3.2.10 *sealed joint, n*—a joint that is sealed to prevent liquid passing from one side of a precast concrete wall to the opposite side.

3.2.11 *tank dividing wall, n*—a partition across the width of the tank that extends partially between the top and bottom intended to deflect influent downward and increase the length of the flow path of the liquid as it travels through the tank.

4. Ordering Information

4.1 The purchaser shall include the following information in bidding documents and on the purchase order, as applicable to the units being ordered:

4.1.1 Reference to this specification, and date of issue.

4.1.2 Quantity, that is, number of units ordered.

4.1.3 Capacity of tank in gallons or litres.

4.1.4 Special cement requirements including moderate sulfate-resisting cement, Specification C150 Type II, or highly sulfate-resisting cement, Specification C150, Type V. If the purchaser does not stipulate, the manufacturer shall use any cement meeting the requirements of Specification C150 or C595 (Type IS or Type IP only).

4.1.5 Acceptance will be based on a review of the calculations or on proof tests.

4.1.6 Design requirements such as depth of earth cover, live load applied at the surface, and ground water level.

4.1.7 Testing for water leakage shall not be required at the job site unless specifically required by the owner at the time of ordering.

4.1.8 Manufacturer is permitted to require testing at the job site prior to backfill in accordance with section 9.1.2.

5. Materials and Manufacture

5.1 *Cement*—Portland cement shall conform to the requirements of Specification C150 or shall be portland blast-furnace slag cement (Type IS) or portland-pozzolan cement (Type IP) conforming to the requirements of Specification C595.

5.2 *Aggregates*—Aggregates shall conform to Specification C33 and lightweight aggregates shall conform to Specification C330, except that the requirements for grading shall not apply.

5.3 *Water*—Water used in mixing concrete shall meet the requirements of Specification C1602/C1602M.

5.4 *Admixtures*—Admixtures, when used, shall conform to Specification C494/C494M, Specification C618, or Specification C260 and shall not be detrimental to other products used in the concrete.

5.5 *Steel Reinforcement*—Steel reinforcement shall conform to Specification A82/A82M or A496/A496M for wire; Specification A185/A185M or A497/A497M for wire fabric; or Specification A184/A184M, A615/A615M, or A706/A706M for bars.

5.5.1 *Locating Reinforcement*—Reinforcement shall be placed in the forms as required by the design.

5.5.2 *Holding Reinforcement in Position During Pouring*—Reinforcement must be securely tied in place to maintain position during concrete placing operations. Chairs, bolsters, braces, and spacers in contact with forms shall have a corrosion-resistant surface.

5.6 *Concrete Mixtures*—The aggregates, cement, and water shall be proportioned and mixed to produce a homogeneous concrete meeting the requirements of this specification, and in accordance with Specification C94/C94M or Specification C685/C685M.

5.7 *Forms*—The forms used in manufacture shall be sufficiently rigid and accurate to maintain the dimensions of the grease interceptor tank within the stated tolerances. All casting surfaces shall be of smooth nonporous material. Form releasing agents used shall not be injurious to the concrete.

5.8 *Concrete Placement*—Concrete shall be placed in the forms and consolidated such that all reinforcement steel and fixtures are embedded without segregation of materials or voids in the concrete.

5.9 *Curing*—The precast concrete sections shall be cured by any method or combination of methods that will develop the specified compressive strength at 28 days or less.

5.10 *Concrete Quality*—The quality of the concrete shall be in accordance with the chapter on concrete quality in ACI 318, except for frequency of tests, which shall be specified by the purchaser. Concrete compressive strength tests shall be conducted in accordance with Test Method C39/C39M.

5.11 *Fibers*—Polypropylene or polyolefin fibers are only permitted as a secondary reinforcing material, at the manufacturer's option, in precast concrete grease interceptor tanks. For

the purposes of this standard, secondary reinforcing material is only used to resist temperature and shrinkage effects. Only Type III conforming to the requirements of Specification C1116 shall be accepted.

5.12 *Pipe Connections*—Pipe-to-tank connections shall employ flexible connectors conforming to the requirements of Specification C923. Materials for the connectors shall have demonstrated resistance to the effects of fats, oils, grease, and fluid temperatures of at least 160°F (70°C).

5.13 *Sealants*—Flexible sealants employed in the manufacture or installation of tanks shall conform to Specification C990. Rigid (mortar) sealing of tank sections is not permitted.

6. Structural Design Requirements

6.1 Structural design of grease interceptor tanks shall be by calculation or by performance.

6.1.1 Design by calculation shall be completed using the Strength Design Method (ultimate strength theory) or the Alternate Design Method (working stress theory) outlined in ACI 318.

6.1.2 Design by performance requires the manufacturer to demonstrate that failure will not occur by physically applying loads to the product. The load applied shall be 2.2 times the design live load or 1.5 times the design dead load, whichever is greater. Such testing shall be witnessed and certified by a registered professional engineer.

NOTE 1—When synthetic fibers are used to replace some or all of the secondary steel reinforcement in the grease interceptor, equivalent performance criteria can be found in section 5.4 of IAPMO PS-80.

NOTE 2—Vacuum testing may be used to simulate uniform loads. It is not possible to simulate concentrated loads, such as wheel loads, using vacuum testing.

6.1.3 Tanks shall be designed so that they will not collapse or rupture when subjected to anticipated earth and hydrostatic pressures when the tanks are either full or empty.

6.1.4 At a minimum, loads from Practice C890 designation A-16 (AASHTO HS20-44) shall be used for design.

6.1.5 The live loads imposed at lifting points shall be considered in the design of the grease interceptor tank.

6.1.6 Inserts embedded in the concrete (including embedded lifting devices) shall be designed and used according to all federal, state, and local regulations.

NOTE 3—Lift inserts are typically manufactured with an integral factor of safety of 4, which is already accounted for in their rated load.

6.2 *Concrete Strength*—The minimum compressive strength (f'c) for designs shall be 4000 psi (28 MPa) at 28 days of age.

6.3 *Reinforcing Steel Placement*—The concrete cover for reinforcing bars, mats, or fabric shall not be less than 1 in. (25 mm).

6.4 *Openings*—The structural design shall take into consideration the number, placement, and size of all openings.

6.5 *Lift Equipment*—All equipment used to handle the precast concrete tank shall be designed and used according to all federal, state, and local regulations.

7. Physical Design Requirements

7.1 *Capacity*—Sizes are generally specified by local regulations and they shall supersede the following requirements.

When local regulations are not available, grease interceptor capacity may be determined by use of one of the sizing criteria provided in the Appendix.

7.2 *Shape*—Grease interceptor shapes are generally specified by local regulations and they shall supersede the following requirements.

7.2.1 The air scum volume above the liquid shall be at least 12.5 % of the volume of liquid but not less than 9 in. (230 mm) high for entire surface above liquid.

7.2.2 Minimum liquid depth shall be 30 in. (760 mm) unless otherwise approved by local regulations or the authority having jurisdiction.

7.2.3 Maximum liquid depth shall be 72 in. (1800 mm) unless otherwise approved or required by local regulations, the authority having jurisdiction, or the design engineer.

7.2.4 Tank length shall be greater than the width.

7.3 Compartments:

7.3.1 Grease interceptor tank systems shall include single and multi-compartment units unless otherwise approved by local codes or jurisdiction. In multi-compartment tanks the dividing walls shall be monolithically cast or placed secondarily utilizing a non-sealed joint with the tank body, or any combination thereof.

7.3.2 Multiple units installed in series are acceptable.

7.3.3 The transfer port between compartments shall be sized to maintain a low velocity as liquid moves between compartments. A minimum of 50 in.² (320 cm²) shall be used where local codes do not specify otherwise.

7.3.4 The transfer port between compartments shall be in the middle 25 % of the distance from the bottom of the tank to the water line.

7.3.5 No tee, outlet filter unit, or tank-dividing wall shall extend to the interior roof without providing for venting. The cross-sectional area of a vent shall be at least equivalent to a 4 in. (100 mm) diameter pipe. Poured-in-place inlet and/or outlet baffles are not permitted.

7.4 Inlet and Outlet Pipes:

7.4.1 The inlet pipe shall be no less than 4 in. (100 mm) in diameter.

7.4.2 The difference between the invert of the inlet pipe and the invert of the outlet pipe shall be a minimum of 2 in. (50 mm) and a maximum of 4 in. (100 mm).

7.5 Baffles and Outlet Devices:

7.5.1 Baffles or tees shall be placed at the inlet pipe. Baffles, tees or outlet filters shall be placed at the outlet pipe.

7.5.2 Baffles, tees or outlet filters shall be made of noncorrosive materials and be permanently connected with noncorrosive fasteners to either the inside of the tank or the outlet pipe.

7.5.3 The inlet baffle or tee shall be submerged to a depth located in the middle 25 % of the distance from the bottom of the tank to the water line and at least 5 in. (125 mm) above the liquid level.

7.5.4 The outlet baffle, tee or filter shall be submerged to a depth 6 in. (150 mm) to 12 in. (300 mm) above the tank floor. It shall extend a minimum of 5 in. (125 mm) above the liquid level.

7.5.5 Outlet filter, when used, shall be maintained in accordance with manufacturer's recommendations or requirements of regulating agencies, or both.

7.5.5.1 Outlet filters, when used, shall be sized using the estimated daily sewage flow through the tank and the rated capacity of the filter, per the filter manufacturer's specifications.

7.5.5.2 When used, the manufacturer of the outlet filter must specify suitability for grease, oil, scum and solids removal for this type of waste.

7.5.5.3 When used, the minimum required filtration surface of an outlet filter shall be based upon the estimated daily waste water volume from the kitchen or food service establishment and the recommendations of the unit manufacturer or regulating agencies, or both.

7.6 Openings in Top Slab:

7.6.1 All access openings and inspection openings shall be brought to grade using risers or other assemblies.

7.6.2 An access opening shall be located over the inlet baffle or tee and the outlet baffle or tee.

7.6.3 An access opening or openings 20 in. or greater shall be provided to permit pumping of all compartments and for each 10-ft increment of tank length for tanks longer than 20 ft.

7.6.4 An access opening or inspection opening located over the tank-dividing wall shall not be prohibited.

7.6.5 All access opening covers and inspection opening covers shall have a permanent means to permit authorized access. Handles, when used, shall be made of corrosion-resistant material and be capable of supporting the weight of the cover.

7.6.6 Handles are not required when the access opening cover sits on top of the slab. The cover must be prevented from moving laterally if sitting on top of the slab.

7.6.7 Each access opening and inspection opening shall be provided with a cover. The cover shall be provided with a means to prevent unauthorized entrance.

7.6.8 All openings, joints, risers, and covers shall be watertight.

8. Quality Control and Sampling

8.1 The manufacturer shall certify that the product meets three criteria: (1) watertightness, (2) physical dimensions, and (3) strength of grease interceptor tank.

8.2 Installation shall be in accordance with manufacturer's instructions.

9. Watertightness Test Methods

9.1 Testing for watertightness shall be performed using either vacuum testing or hydrostatic testing.

9.1.1 *Vacuum Testing*—Seal the empty tank and apply a vacuum to 4 in. (100 mm) of mercury. Hold the vacuum for 5 minutes. During this initial 5 minute period, the vacuum shall not drop more than ½ in. (13 mm) of mercury, which allows for a pressure equalization loss from equipment seating, and so forth. If the vacuum drops, it shall be brought back up to 4 in. (100 mm) of mercury and held for a further 5 minutes with no vacuum loss. If the tank fails the test, it shall be repaired and retested.

9.1.2 *Hydrostatic Testing*—Seal the tank, fill with water to its operational level, and let stand for 8 to 10 h. If there is a measurable drop in the water surface elevation, refill the tank and let stand for another 8 to 10 h. There shall be no further measurable drop in the water surface elevation. Tanks shall not be rejected for damp spots on the exterior concrete surface. If water is dripping in a steady stream, the tank shall be repaired and retested.

10. Dimensions and Permissible Variations

10.1 *Dimensional Tolerances*—The length, width, height, or diameter measurements of the grease interceptor tank when measured on the inside surface shall not deviate from the design dimensions more than the following:

Dimension	Tolerance
0 to less than 5 ft (0 to 1.5 m)	±¼ in. (±6 mm)
5 to less than 10 ft (1.5 to 3.0 m)	±¾ in. (±10 mm)
10 to less than 20 ft (3.0 to 6.1 m)	±½ in. (±13 mm)
20 ft (6.1 m) and over	±¾ in. (±19 mm)

10.2 *Squareness Tolerance*—The inside of the rectangular precast concrete component shall be square as determined by diagonal measurements. The difference between such measurements shall not exceed:

Measured Length	Allowance Difference
0 to less than 5 ft (0 to 1.5 m)	±½ in. (±13 mm)
5 to less than 10 ft (1.5 to 3.0 m)	±¾ in. (±19 mm)
10 ft to less than 20 ft (3.0 m to 6.1 m)	±1 in. (±25 mm)
20 ft (6.1 m) and over	±1½ in. (±38 mm)

10.3 *Joint Surfaces*—The joint tolerances for sealed joint gap between two mating joint surfaces shall not exceed ¾ in. (10 mm) before the joint sealant is applied.

10.4 *Reinforcement Location*—With reference to thickness of wall or slab, reinforcement shall be within ±¼ in. (6 mm) of the design location, but in no case shall the cover be less than 1 in. (25 mm). The variation in reinforcement spacing shall not be more than one tenth of the designed bar spacing nor exceed 1½ in. (38 mm). The total number of bars shall not be less than that computed using the design spacing.

11. Repairs

11.1 Repairs of precast concrete grease interceptors, when required shall be performed by the manufacturer in a manner ensuring that the repaired grease interceptor tank will conform to the requirements of this specification.

12. Rejection

12.1 Precast concrete grease interceptor tanks or sections of grease interceptor tanks shall be subject to rejection because of failure to conform after repairs to any of the requirements contained in this specification.

13. Product Marking

13.1 Each grease interceptor tank shall be clearly marked within 2 ft (6 m) of the inlet to the tank by indentation or other approved means with (1) date manufactured, (2) name or trademark of the manufacturer, (3) tank capacity, (4) minimum and maximum amount of earth cover in feet (or meters), unless required otherwise by local codes.

13.2 Each grease interceptor tank cover shall be clearly marked by indentation, or other approved means with (1) date

of manufacture, (2) name or trademark of the manufacturer, and (3) indication of external loads for which the grease interceptor tank is designed to resist, including the minimum and maximum amount of earth cover in feet (or meters) above top slab and surface load from Practice C890 (A-16), unless required otherwise by local codes.

13.2.1 When all the requirements of this specification are met, the product shall be so stamped.

NOTE 4—Where an access opening or an inspection opening has a dimension greater than 8 in. (200 mm) a confined space warning label should be placed in a prominent place.

14. Keywords

14.1 fats, oils and greases; grease interceptor tank; liquid kitchen waste; precast concrete; wastewater pretreatment

APPENDIX

(Nonmandatory Information)

X1. OPTIONAL PRECAST CONCRETE GREASE INTERCEPTOR SIZING CRITERIA

X1.1 The grease interceptor tank may be sized in accordance with Appendix H of the 2003 Uniform Plumbing Code or Chapter 10 of the 2006 Uniform Plumbing Code.

X1.2 The grease interceptor tank may be sized for an existing facility by using the actual average daily-metered water-use figures from the facility multiplied by a safety factor

of 1.5. A minimum retention time of 30 minutes shall be used to size the grease interceptor tank.

X1.3 The grease interceptor tank may be sized by using the peak design flow rates for all fixtures leading to the grease interceptor. A minimum retention time of 30 minutes shall be used to size the grease interceptor tank.

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<input type="checkbox"/> Building (140)	<input type="checkbox"/> Electrical (115)	<input type="checkbox"/> Mechanical (130)	<input checked="" type="checkbox"/> Plumbing (98)

APPLICANT INFORMATION (Note: All correspondence will be sent to this address)

NAME OF COMPANY Waste Water Heat Transfer Systems
--

APPLICANT NAME

ADDRESS 40675 Mound Road, PO Box 70	TELEPHONE NUMBER (Include Area Code) (586) 531-7690
--	--

CITY Sterling Heights	STATE Michigan	ZIP CODE 48311	FAX NUMBER (Include Area Code) (586) 698-2871
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Instructions for Petition Application for Acceptability

Nature of Petition: Check only one box. A component is a preassembled unit of different materials or products that will be incorporated into a building.

Code Under Which Approval is Sought: Check only one box. If there are requirements in 2 or more codes for the approval sought, an additional petition and fee must be submitted.

Name: Provide the name of the material, product, or method/manner of construction or installation.

Other Identification: Provide the model numbers.

Description: Provide a description of the material, product, method or component.

Intended Use: Give a brief description of how the product is incorporated into a building or structure and its purpose.

Laboratory Test and/or Evaluation By: List all tests performed and provide copies as listed above.

Pilot Service Experience and Conditions: Provide report of finding as listed above.

Restrictions for Use: Identify any restrictions or conditions of use.

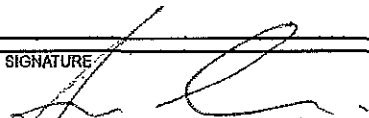
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Validation Area

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 Lansing, MI 48933

140/115/130/98 21512662-1 08/18/16 CHECK: 25921 Amt: \$1,000.00 (BY: CASADY STRUCTURAL STEEL INC <h1 align="center">RECEIVED</h1> AUG 23 2016 OFFICE OF ADMINISTRATIVE SERVICES

APPROVAL REQUESTED		
NATURE OF PETITION (Limited to One Item Per Petition)		
<input type="checkbox"/> Material	<input checked="" type="checkbox"/> Product	<input type="checkbox"/> Method/Manner of Construction or Installation
NAME OF MATERIAL, PRODUCT, OR METHOD/MANNER OF CONSTRUCTION OR INSTALLATION		
Heat Wave (Liquid to Liquid Heat Recovery Unit)		
OTHER IDENTIFICATION (Model Number)		
W2-80-4-1		
DESCRIPTION (Use Additional Sheets If Necessary)		
See attachment		
INTENDED USE (Use Additional Sheets If Necessary)		
See attachment		
DATA SUBMITTED		
<input checked="" type="checkbox"/> Letter <input type="checkbox"/> Manual <input type="checkbox"/> Standards <input type="checkbox"/> Installation Instructions <input type="checkbox"/> Display Catalog	Reports <input type="checkbox"/> ICC - ES <input type="checkbox"/> BOCA - NES <input type="checkbox"/> ICBO <input type="checkbox"/> SBCC <input type="checkbox"/> NRB <input checked="" type="checkbox"/> Other	<input checked="" type="checkbox"/> Product Sample or Model <input checked="" type="checkbox"/> Prior Approvals by Other Agencies <input type="checkbox"/> Recommendations by Model Code Bodies <input checked="" type="checkbox"/> Laboratory Test/Evaluation
LABORATORY TEST AND/OR EVALUATION BY		
NSF		
PILOT SERVICE EXPERIENCE AND CONDITIONS (Use Additional Sheets If Necessary)		
Oakland University Student Center Cafeteria at the Oakland Center		
RESTRICTIONS FOR USE (Use Additional Sheets If Necessary)		
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SIGNATURE		DATE
		8/16/2016

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RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

STEVE ARWOOD
DIRECTOR

STATE PLUMBING BOARD
Upper Peninsula State Fairgrounds
2401 12th Avenue North
Escanaba, Michigan 49829

MINUTES
July 16, 2014
8:15 a.m. Eastern Standard Time

MEMBERS PRESENT

Mr. Daniel Nixon, Vice Chairperson
Mr. Curt McNitt
Mr. Anthony D'Ascenzo
Mr. Steve Busch
Mr. Walter Maner

MEMBERS ABSENT

Ms. Dana DeBruyn
Mr. Aaron Fedewa

DEPARTMENT PERSONNEL ATTENDING

Mr. Joseph Madziar, Chief, Plumbing Division

OTHERS IN ATTENDANCE

Mr. Tyler Jouppe, Journey Applicant
Mr. Myril Brix III., Master Applicant
Mr. Doug Guldán, Waste Water Heat Transfer Systems, LLC
Mr. Tim Laske, B-Dry Systems of Michigan
Mr. Mike Henery, B-Dry Systems of Michigan

1. CALL TO ORDER AND DETERMINATION OF QUORUM

Vice Chairperson Nixon called the meeting to order at 8:15 a.m. A quorum was present at that time.

2. NOMINATION AND ELECTION OF CHAIRPERSON

Board Member Maner moved to nominate Anthony D'Ascenzo as Chairperson. Board Member McNitt seconded the motion. **MOTION CARRIED UNANIMOUSLY.**

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P.O. BOX 30254 • LANSING, MICHIGAN 48909
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3. APPROVAL OF AGENDA

Board Member Maner moved to approve the agenda for the July 16, 2014 State Plumbing Board meeting. Chairperson D'Ascenzo seconded the motion. **MOTION CARRIED.**

4. APPROVAL OF MINUTES

Board Member McNitt moved to approve the board minutes from the June 3, 2014 meeting. Board Member Busch seconded the motion. **MOTION CARRIED.**

5. APPROVAL OF EXAMINATION MINUTES

Board Member Maner moved to approve the examination minutes of the Journey Plumber and Master Plumber Examinations held on June 4, 2014 and the Plumbing Contractor Examination held on June 25, 2014. Board Member McNitt seconded the motion. **MOTION CARRIED.**

6. APPLICANTS APPEARING BEFORE THE BOARD

- A. Mr. Tyler W. Jouppe, Journey Applicant, appeared before the Board requesting permission to take the Journey Plumber Examination. Mr. Jouppe provided documentation verifying his out-of-state license was obtained through substantially the same requirements as the State of Michigan.

After a discussion with Mr. Jouppe regarding his qualifications to take the Journey Plumber Examination, Board Member Maner moved to allow Mr. Jouppe to take the Journey Plumber Examination. Board Member McNitt seconded the motion. **MOTION CARRIED.**

- B. Mr. Myril A. Brix III, Master Applicant, appeared before the Board requesting permission to take the Master Plumber Examination. Mr. Brix provided documentation verifying his out-of-state license was obtained through substantially the same requirements as the State of Michigan.

After a discussion with Mr. Brix regarding his qualifications to take the Master Plumber Examination, Chairperson D'Ascenzo moved to allow Mr. Brix to take the Master Plumber Examination. Board Member McNitt seconded the motion. **MOTION CARRIED.**

7. NEW PRODUCTS

- A. Waste Water Heat Transfer Systems, LLC, Heat Wave, BCCP-14-006

Mr. Doug Guldan presented the Board a product approval request from Waste Water Heat Transfer Systems, LLC for Heat Wave, Model W2-80-4-1.

Following a review and discussion with Mr. Guldan, Chairperson D'Ascenzo moved to forward the product to the Commission for approval for nonpotable water applications. Once the product adheres to NSF 61, the applicant may reapply for product approval for potable water applications. Board Member Busch seconded the motion. **MOTION CARRIED.**

B. B-Dry Systems of Michigan, Pipe & Gravel System, BCCP-14-007

Mr. Tim Laske and Mr. Mike Henery presented the Board a product approval request from B-Dry Systems of Michigan for a Pipe & Gravel System.

Following a review and discussion with Mr. Laske and Mr. Henery, Chairperson D'Ascenzo moved to forward the product to the Commission for approval. Board Member McNitt seconded the motion. **MOTION CARRIED.**

C. MIFAB, Inc., Floor Drain Trap Seal Protection Devices, BCCP-14-009

Mr. Madziar presented the Board a product approval request from MIFAB, Inc. for Floor Drain Trap Seal Protection Devices, Models MI-GARD-2, MI-GARD-3, MI-GARD-35, AND MI-GARD-4.

Following a review and discussion, Board Member McNitt moved to forward the product to the Commission for approval. Board Member Maner seconded the motion. **MOTION CARRIED.**

8. CHIEF'S REPORT

Mr. Madziar provided information on the following issues:

- A. Prior Chairperson David Jones was not reappointed to the Board. Mr. Madziar expressed his appreciation for Mr. Jones' many years of service as a board member.
- B. Mr. Aaron Fedewa was appointed to the Board and will represent licensed plumbing contractors who hold a master's license.
- C. The 2012 Plumbing Code Update Course is now available online through the MPMCA.
- D. The September examinations will be based on the 2012 Michigan Plumbing Code.
- E. Committee work continues on the 2012 Michigan Residential Code.

Providing for Michigan's Safety in the Built Environment

- F. The Plumbing Division currently has one inspector, Walt Reynolds, off on medical leave. The Division has been approved to hire a temporary inspector.
- G. Mr. Madziar will be attending the NSF Plastics Committee meeting on July 23, 2014 in Ann Arbor.

9. LEGISLATIVE UPDATE

None

10. UNFINISHED BUSINESS

None

11. NEW BUSINESS

The Board discussed Section 27 (2) and (3) of the State Plumbing Act 733 of 2002.

12. PUBLIC COMMENT

None

13. NEXT MEETING

September 16, 2014

14. ADJOURNMENT

Board Member Busch moved to adjourn the meeting at 9:34 a.m. Eastern Standard Time. Board Member Nixon seconded the motion. **MOTION CARRIED.**

Approved: _____ Date: _____

Chairperson Anthony D'Ascenzo



OFFICIAL LISTING

NSF International Certifies that the products appearing on this Listing conform to the requirements of NSF/ANSI Standard 61 - Drinking Water System Components - Health Effects

This is the Official Listing recorded on June 3, 2016.

Waste Water Heat Transfer Systems, LLC
P.O. Box 70
Sterling Heights, MI 48311
586-531-7690

Facility: Sterling Heights, MI

Mechanical Devices

Table with 4 columns: Trade Designation, Size, Water Contact Temp, Water Contact Material. Row 1: Heat Exchanger [1], Heat Wave Model W2-80-4-1 [2], C. HOT, CU

[1] Copper tube (Alloy C12200) is Certified by NSF to NSF/ANSI 61 for use in drinking water supplies of pH 6.5 and above. Drinking water supplies that are less than pH 6.5 may require corrosion control to limit leaching of copper into the drinking water.

[2] Certified for a minimum daily flow rate of 5450 L/day.

Note: Additions shall not be made to this document without prior evaluation and acceptance by NSF International.

NSF International

789 N. Dixboro Road, Ann Arbor, MI 48105 USA

RECOGNIZES

Waste Water Heat Transfer Systems, LLC

Sterling Heights, MI

AS COMPLYING WITH NSF/ANSI 61 AND ALL APPLICABLE REQUIREMENTS.

PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE
AUTHORIZED TO BEAR THE NSF MARK.



ANSI Accredited Program
PROJECT C0077531
#0218
Certification Program
Accredited by the
American National
Standards Institute



Certification Program
Accredited by the
Standards Council
of Canada

This certificate is the property of NSF International and must be returned upon request. This certificate remains valid as long as this client has products in Listing for the referenced standards. For the most current and complete Listing information, please access NSF's website (www.nsf.org).

June 3, 2016

Certificate# C0077531 - 03

David Purkiss

General Manager, Plumbing

NSF International

789 N. Dixboro Road, Ann Arbor, MI 48105 USA

RECOGNIZES

Waste Water Heat Transfer Systems, LLC

Facility: Sterling Heights, MI

AS COMPLYING WITH NSF/ANSI 61 AND ALL APPLICABLE REQUIREMENTS.

PRODUCTS APPEARING IN THE NSF OFFICIAL LISTING ARE
AUTHORIZED TO BEAR THE NSF MARK.



ANSI Accredited Program
PRODUCT CERTIFICATION
6216
Certification Program
Accredited by the
American National
Standards Institute



Certification Program
Accredited by the
Standards Council
of Canada

This certificate is the property of NSF International and must be returned upon request. This certificate remains valid as long as this client has products in Listing for the referenced standards. For the most current and complete Listing information, please access NSF's website (www.nsf.org).

A handwritten signature in black ink, appearing to read "David Purkiss".

June 3, 2016

Certificate# C0292086 - 01

David Purkiss

General Manager, Plumbing

Madziar, Joseph (LARA)

From: Bruno Casadei <bcasadei@casadeisteel.com>
Sent: Saturday, June 04, 2016 12:42 PM
To: Madziar, Joseph (LARA)
Cc: Doug Guldán (dguldán@w2hts.com)
Subject: W2HTS NSF Cert
Attachments: C0077531 - 061.pdf; Certificate - C0077531.PDF; Certificate - C0292086.pdf

Hi Joe,

I am pleased to inform you that we have passed the NSF pat 61 certification for potable water with our heat transfer unit. I have enclosed the documents from NSF. Doug Guldán and I would like to give you a call on Monday June 6th to discuss what will be required for us to have our product certified as and approved plumbing product. Please let me know when you would have some time to talk preferably after 11:00 am. We look forward to speaking with you.

Sincerely

Bruno Casadei

President

Casadei Steel Inc.

40675 Mound Road

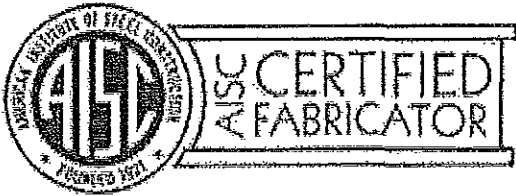
PO BOX 70

Sterling Heights MI 48311

PH 586-698-2898

FAX 586-698-2871

CELL 586-531-7690



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DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
P.O. BOX 30254
LANSING, MI 48909

CERTIFICATE OF ACCEPTABILITY
PRODUCT APPROVAL

1653-PA

Issued by the Michigan State Construction Code Commission in accordance with authority granted under Section 21, 1972 P.A. 230, MCL 125.1521 on the recommendation of the Bureau of Construction Codes, Plumbing Division. This product was reviewed to the 2012 Michigan Plumbing Code.

MANUFACTURER:

Waste Water Heat Transfer Systems, LLC

PRODUCT:

Heat Wave, model W2-80-4-1

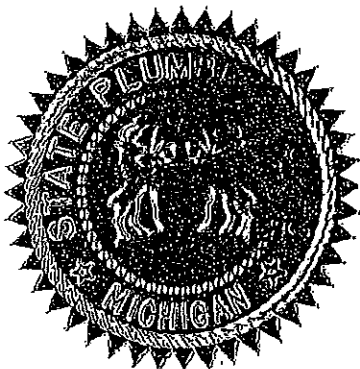
MANUFACTURER DESIGNATION:

Waste Water Heat Transfer Systems, LLC
40675 Mound Road, P.O. Box 70
Sterling Heights, MI 48311

CONDITIONS OF USE AND INSTALLATION:

1. All requirements of the Michigan Plumbing Code shall be applicable.
2. Shall be installed in accordance with manufacturer's installation instructions.
3. This approval only allows for the installation of this product in a non-potable water system.
4. This approval shall become void if and when the product no longer meets the requirements of the Michigan Plumbing Code or a change in design/designation occurs.

THIS CERTIFICATE SHALL NOT BE USED FOR ADVERTISING PURPOSES.



By Direction of the Construction Code Commission

Irvin J. Poke

Irvin J. Poke, AIA, Director

Joseph T. Madziar

Joseph T. Madziar, Chief, Plumbing Division

Effective Date: October 1, 2014

BCC-978 (Rev. 11/12)

Petition Application for Certificate of Acceptability
 Michigan Department of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 P.O. Box 30255, Lansing, MI 48909
 www.michigan.gov/bcc

140/115/130/98

Agency Use Only

Application Fee: \$1,000.00 (Each Approval Requested Requires a Separate Application and Fee)

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

CODE UNDER WHICH APPROVAL IS SOUGHT (Limited to One Code Per Petition)

Building (140)
 Electrical (115)
 Mechanical (130)
 Plumbing (98)

APPLICANT INFORMATION (Note: All correspondence will be sent to this address)

NAME OF COMPANY
Huber Engineered Woods, LLC

APPLICANT NAME
Ken W. Hix

ADDRESS 1446 Hwy 334			TELEPHONE NUMBER (Include Area Code) (706) [REDACTED]
CITY Commerce	STATE GA	ZIP CODE 30530	FAX NUMBER (Include Area Code) (706) 336-3164

Instructions for Petition Application for Acceptability

Nature of Petition: Check only one box. A component is a preassembled unit of different materials or products that will be incorporated into a building.

Code Under Which Approval is Sought: Check only one box. If there are requirements in 2 or more codes for the approval sought, an additional petition and fee must be submitted.

Name: Provide the name of the material, product, or method/manner of construction or installation.

Other Identification: Provide the model numbers.

Description: Provide a description of the material, product, method or component.

Intended Use: Give a brief description of how the product is incorporated into a building or structure and its purpose.

Laboratory Test and/or Evaluation By: List all tests performed and provide copies as listed above.

Pilot Service Experience and Conditions: Provide report of finding as listed above.

Restrictions for Use: Identify any restrictions or conditions of use.

Other: Any documentation or description necessary to demonstrate why this application should be approved.

Validation Area

U.S. Postal Service
 Michigan Dept. of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 (Address to appropriate division-Electrical Division, Mechanical Division or Plumbing Division
 Please address Building approvals to Plan Review Division)
 P.O. Box 30255
 Lansing, MI 48909

Courier Other Than U.S. Postal Service
 Michigan Dept. of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 (Address to appropriate division-Electrical Division, Mechanical Division or Plumbing Division
 Please address Building approvals to Plan Review Division)
 1st Floor Ottawa Bldg.
 611 W. Ottawa St.
 Lansing, MI 48933

TranInfo:140 21946642-1 02/23/17
 CHNR: 8000083369 Amt: \$1,000.00
 10: HUBER ENGINEERED WOODS

APPROVAL REQUESTED

NATURE OF PETITION (Limited to One Item Per Petition)

Material Product Method/Manner of Construction or Installation

NAME OF MATERIAL, PRODUCT, OR METHOD/MANNER OF CONSTRUCTION OR INSTALLATION

ZIP System Roof and Wall Sheathing

OTHER IDENTIFICATION (Model Number)

DESCRIPTION (Use Additional Sheets If Necessary)

Oriented strand board (OSB) panel laminated with a poly-modified water resistive barrier with a self sealing tape applied to the panel joints.

INTENDED USE (Use Additional Sheets If Necessary)

Combined roof sheathing and underlayment (ESR 1473).
Combined wall sheathing, air barrier, and WRB (ESR 1474).

DATA SUBMITTED

<input type="checkbox"/> Letter	Reports	<input type="checkbox"/> Product Sample or Model
<input type="checkbox"/> Manual	<input checked="" type="checkbox"/> ICC - ES	<input type="checkbox"/> Prior Approvals by Other Agencies
<input type="checkbox"/> Standards	<input type="checkbox"/> BOCA - NES	<input type="checkbox"/> Recommendations by Model Code Bodies
<input checked="" type="checkbox"/> Installation Instructions	<input type="checkbox"/> ICBO	<input type="checkbox"/> Laboratory Test/Evaluation
<input type="checkbox"/> Display Catalog	<input type="checkbox"/> SBCC	
	<input type="checkbox"/> NRB	
	<input checked="" type="checkbox"/> Other	

LABORATORY TEST AND/OR EVALUATION BY

International Code Council Evaluation Service

PILOT SERVICE EXPERIENCE AND CONDITIONS (Use Additional Sheets If Necessary)

Product has Certificate of Acceptability based on 2009 Michigan Building and Residential Codes.

RESTRICTIONS FOR USE (Use Additional Sheets If Necessary)

See section 5.0 in attached ICC-ES evaluation reports.

SIGNATURE

John W. Hill

DATE

1 Feb 2017

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
P.O. BOX 30254
LANSING, MI 48909

CERTIFICATE OF ACCEPTABILITY
PRODUCT APPROVAL

1635-BA

Issued by the Michigan State Construction Code Commission in accordance with authority granted under Section 21, 1972 P.A. 230, MCL 125.1521 on the recommendation of the Bureau of Construction Codes, Plan Review Division.

MANUFACTURER:

Huber Engineered Woods, LLC
10925 David Taylor Drive, Suite 300
Charlotte, NC 28262

PRODUCT:

ZIP System Roof and Wall Sheathing

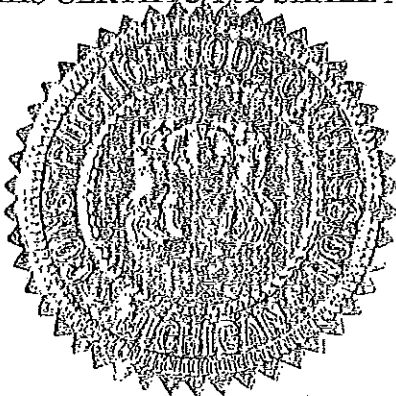
MANUFACTURER DESIGNATION:

Oriented strand board (OSB) panel laminated with a poly-modified water resistive barrier with a self sealing tape applied to the panel joints identified as ZIP System Roof and Wall Sheathing.

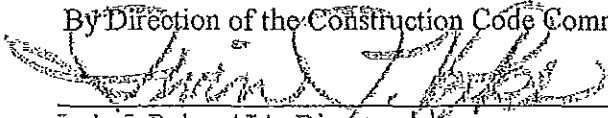
CONDITIONS OF USE AND INSTALLATION:

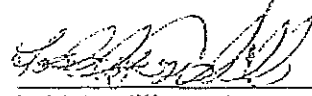
1. This product shall bear identification of the above –manufacturer and designations.
2. The approval shall become void if and when the requirements for this product in the 2009 Michigan Building Code and 2009 Michigan Residential Code are amended or new requirements become applicable.
3. Condition of use and installation shall be as specified in the International Code Council's (ICC) Evaluation Service Reports ESR-1473 (combined roof sheathing and roof underlayment) and ESR-1474 (combination of wall sheathing, air barrier and WRB).

THIS CERTIFICATE SHALL NOT BE USED FOR ADVERTISING PURPOSES.



By Direction of the Construction Code Commission


Irvin J. Poke, AIA, Director


Todd Cordill, NCARB –Chief, Plan Review Div.

Effective Date: January 9, 2013



Most Widely Accepted and Trusted

ICC-ES Report

ESR-1473

ICC-ES | (800) 423-6587 | (562) 699-0543 | www.icc-es.org

Reissued 09/2015
This report is subject to renewal 09/2017.

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

SECTION: 06 16 00—SHEATHING

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

SECTION: 07 30 05—ROOFING FELT AND UNDERLAYMENT

REPORT HOLDER:

HUBER ENGINEERED WOODS, LLC

ONE RESOURCE SQUARE
10925 DAVID TAYLOR DRIVE, SUITE 300
CHARLOTTE, NORTH CAROLINA 28262

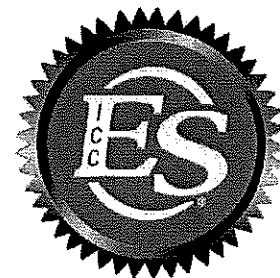
EVALUATION SUBJECT:

ZIP SYSTEM® AND ZIP SYSTEM+™ ROOF SHEATHING



Look for the trusted marks of Conformity!

"2014 Recipient of Prestigious Western States Seismic Policy Council (WSSPC) Award in Excellence"



A Subsidiary of INTERNATIONAL CODE COUNCIL

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ICC-ES Evaluation Report**ESR-1473***

Reissued September 2015

*This report is subject to renewal September 2017.***www.icc-es.org | (800) 423-6587 | (562) 699-0543***A Subsidiary of the International Code Council®***DIVISION: 06 00 00—WOOD, PLASTICS, AND
COMPOSITES****Section: 06 16 00—Sheathing****DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION****Section: 07 30 05—Roofing Felt and Underlayment****REPORT HOLDER:****HUBER ENGINEERED WOODS, LLC
ONE RESOURCE SQUARE
10925 DAVID TAYLOR DRIVE, SUITE 300
CHARLOTTE, NORTH CAROLINA 28262
(800) 933-9220
www.huberwood.com****EVALUATION SUBJECT:****ZIP SYSTEM® AND ZIP SYSTEM+™ ROOF SHEATHING****1.0 EVALUATION SCOPE****Compliance with the following codes:**

- 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2013 *Abu Dhabi International Building Code* (ADIBC)[†]

[†]The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

Properties evaluated:

- Structural—wind uplift resistance
- Nonclassified roof covering
- Classified roof covering
- Weather resistance

2.0 USES

ZIP System® and ZIP System+™ roof sheathing panels are used as combination roof sheathing and roof underlayment.

3.0 DESCRIPTION

The ZIP System® and ZIP System+™ roof Sheathing panels are wood structural panels having a laminated facer. The ZIP System+™ panels are manufactured using a different resin than the Zip System® panels. The panels are installed with a proprietary seam tape, which allows the systems to be used as an alternate to the underlayment

required in Chapter 15 of the IBC and Chapter 9 of the IRC. The OSB substrate complies with U.S. DOC PS-2 for wood structural panels and is overlaid on one side with a medium-density, phenol-impregnated, polymer-modified sheet material. The standard-size panels are nominally 4 feet by 8 feet. Oversize panels, wider than 4 feet (1219 mm) or longer than 8 feet (2438 mm), or both, are also produced. The panels are available with either a square-finished-edge profile a tongue-and-groove edge profile or a machined edge profile. The proprietary seam tape is a self-adhering sheet-type membrane consisting of acrylic adhesive laminated to a polyolefin backing, and the face of the tape is labeled with ESR-1473. The tape is 0.012 inch thick (0.30 mm) with a minimum width of 3 inches (76.2 mm), and comes in rolls of varying length.

4.0 INSTALLATION**4.1 General:**

Installation of ZIP System® and ZIP System+™ roof sheathing must comply with the applicable code, this report and the manufacturer's published installation instructions. The installation instructions are to be available at the jobsite at all times during installation. The instructions within this report must govern if there are any conflicts between the manufacturer's published instructions and this report.

4.2 Application:

The ZIP System® and ZIP System+™ roof sheathing panels must be installed with the longer dimension perpendicular to the roof framing and fastened to the roof framing in accordance with the applicable code for wood structural panels. The panels must be installed in accordance with the panel span rating as shown on the panels. All corners are to be securely fastened. Tongue-and-groove and machined edge panels are designed to provide the correct gap size at the panel edges during installation. Squared-edged panels must be spaced apart a minimum of 1/8 inch (3.18 mm) at the time of installation. End joints of adjacent panel runs must be staggered. The panel must be installed with the laminated phenol-impregnated polymer-modified sheet material facing to the exterior. All ZIP System® and ZIP System+™ roof sheathing seams must be sealed with the Zip System® tape. All overlay surfaces must be free of any significant presence of debris, particles or sawdust prior to installation of the ZIP System® tape. Overlay surfaces must be void of any free water prior to application of the ZIP System® tape. The ZIP System® tape edges must be sealed and the tape is to be centered within +/- 1/2 inch (12.7 mm) of all panel edge seam centers. All ZIP System® and ZIP System+™

***Revised November 2015**

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roof sheathing surface defects, openings, cracks, etc., that completely penetrate the overlay and substrate, and caused by handling or construction work, must be covered with the ZIP System® tape. The ZIP System® tape must extend a minimum of 1 inch (25.4 mm) past the panel edge T-joint intersections. The ZIP System® tape must be adhered to the ZIP System® and ZIP System+™ roof sheathing. Wrinkles in the ZIP System seam tape are acceptable unless they create a leak path to the panel seam.

4.3 Roof Assemblies

4.3.1 Classified Roof Coverings

4.3.1.1 Class A: Underlayment is not required for a minimum 1/2-inch thick Zip System+™ roof sheathing with Class A asphalt glass fiber mat shingles.

4.3.1.2 Class B: Underlayment is not required for a minimum 7/16-inch thick Zip System® roof sheathing with Class A asphalt glass fiber mat shingles.

4.3.2 Nonclassified Roof Coverings: The ZIP System® and ZIP System+™ roof sheathing panels are limited to installation on buildings permitted to have nonclassified roof coverings using code-complying asphalt-fiberglass shingles, metal shingles, metal panels, wood shakes, wood shingles, built-up roofing, slate and slate-type shingles, and clay and concrete tile roof coverings. Roof coverings may be applied directly to the taped ZIP System® and ZIP System+™ roof panels unless multi-layer underlayments are required.

4.4 Wind Uplift Resistance:

Wind uplift design loads and ZIP System® and ZIP System+™ roof wood structural panel allowable uplift resistance shall be determined in accordance with Sections 1609 and 2304.8.2 of the 2015 IBC or 2304.7.2 of the 2012 and 2009 IBC and Section R301.2.1 of the IRC. Roof coverings must be fastened to the sheathing with mechanical fasteners sufficient to resist the design uplift load.

5.0 CONDITIONS OF USE

The ZIP System® and ZIP System+™ roof sheathing panels described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 This evaluation report and the manufacturer's published installation instructions, when required by the code official, must be submitted at the time of permit application.
- 5.2 The ZIP System® and ZIP System+™ roof sheathing panels must be manufactured, identified and installed in accordance with this report and the manufacturer's published installation instructions.
- 5.3 The ZIP System® and ZIP System+™ roof sheathing panels are limited to code-approved structural use for

wood structural panels with either a 24/16, 32/16 or 40/20 span rating.

- 5.4 In jurisdictions enforcing the IBC, the roof covering system incorporating the panels is limited to installations in the following construction types:

- Type III-B and Type V-B
- Type III-A or Type V-A under the conditions specified in footnote d of IBC Table 601
- Type III-A or Type V-A under the conditions specified in footnote b of IBC Table 601, for occupancies other than Group F-1, H, M and S-1

In jurisdictions enforcing the IRC, the roof covering system incorporating the panels may be installed on structures constructed in accordance with the IRC.

- 5.5 Enclosed attics and rafter spaces must be ventilated in accordance with the applicable code, except where unvented conditioned attic assemblies are permitted by 2015 and 2012 IRC Section R806.5 or 2009 IRC Section R806.4.
- 5.6 An ice barrier must be provided as required by Section 1507.2.8.2 of the IBC and Section R905.2.7 of the 2015 IRC and Section R905.2.7.1 of the 2012 and 2009 IRC.
- 5.7 Installation is limited to roofs having a slope of 2:12 (16.67% slope) or greater.
- 5.8 ZIP System® and ZIP System+™ roof sheathing panels are manufactured by Huber Engineered Woods, LLC, in Crystal Hill, Virginia; Commerce, Georgia; Broken Bow, Oklahoma; and Easton, Maine, under a quality-control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Wood Structural Panel Roof Sheathing Factory-laminated with an Alternative Roof Underlayment (AC266), dated May 2008 (editorially updated October 2015).

7.0 IDENTIFICATION

Each ZIP System® and ZIP System+™ roof sheathing panel covered by this report must bear a label that includes the manufacturer's name (Huber Engineered Woods, LLC) and address; the product name; the evaluation report number (ESR-1473); and the grade, performance category and bond classification.

The panel mill label and span rating, grade, performance category and bond classification label must be visible on the bottom face of panels, opposite the laminated face.

The ZIP System® tape roll is labeled with the product name and the evaluation report number (ESR-1473).



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ICC-ES Report

ESR-1474

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Reissued 10/2016
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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

SECTION: 06 16 00—SHEATHING

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

SECTION: 07 25 00—WATER-RESISTIVE BARRIERS/WEATHER BARRIERS

SECTION: 07 27 00—AIR BARRIERS

REPORT HOLDER:

HUBER ENGINEERED WOODS, LLC

ONE RESOURCE SQUARE
10925 DAVID TAYLOR DRIVE, SUITE 300
CHARLOTTE, NORTH CAROLINA 28262

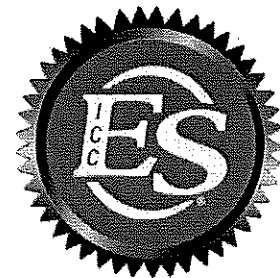
EVALUATION SUBJECT:

ZIP SYSTEM® WALL SHEATHING



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ICC-ES Evaluation Report
ESR-1474

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**DIVISION: 06 00 00—WOOD, PLASTICS AND
COMPOSITES**
Section: 06 16 00—Sheathing
**DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION**
**Section: 07 25 00—Water-resistive Barriers/Weather
Barriers**
Section: 07 27 00—Air Barriers
REPORT HOLDER:
**HUBER ENGINEERED WOODS, LLC
ONE RESOURCE SQUARE
10925 DAVID TAYLOR DRIVE, SUITE 300
CHARLOTTE, NORTH CAROLINA 28262
(800) 933-9220
www.huberwood.com**
EVALUATION SUBJECT:
ZIP SYSTEM® WALL SHEATHING
1.0 EVALUATION SCOPE
Compliance with the following codes:

- 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2015, 2012 and 2009 *International Energy Conservation Code*® (IECC)

Properties evaluated:

- Weather resistance
- Air leakage

2.0 USES

ZIP System® Wall Sheathing panels are used as combination wall sheathing, air barrier, and water-resistive barrier. This report recognizes the use of ZIP System® Sheathing, when installed with ZIP System™ flexible flashing seam tape, in walls of Type V construction (IBC) and dwellings under the IRC, and as an alternate to the water-resistive barrier required in Chapter 14 of the IBC and Chapter 7 of the IRC, and to the air barrier required by Sections R402.4 and C402.5.1 of the 2015 IECC (Sections R402.4 and C402.4.1 of the 2012 IECC; Sections 402.4.1 and 502.4.3 of the 2009 IECC).

3.0 DESCRIPTION
3.1 Sheathing Panel:

The ZIP System® Wall Sheathing panel is an OSB wood structural panel having a laminated exterior facer. The Exposure 1 OSB complies with US DOC PS 2 for wood structural panels. The exterior facer is a medium-density, phenolic-impregnated, polymer-modified sheet material qualifying as a Grade D water-resistive barrier (required by Section 2510.6 of the 2012 and 2009 IBC). The panels are nominally 4 feet wide by 8, 9, 10, 11 or 12 feet long and have a square-finished-edge or machined-edge profile.

When tested in accordance with ASTM E96 (water method), the polymer-modified sheet overlay has a minimum vapor permeance of 12 perms [68.6 X 10⁻¹¹ kg/(Pa-s-m²)]. Equivalent Water Vapor Transmission rate (WVT) of the polymer-modified sheet overlay is 83.4 g/(24h-m²) when tested at 73.4°F (23°C).

The water-resistive barrier and air barrier properties of the ZIP System® Wall Sheathing Panels are not affected when the panels are manufactured to comply as facing materials for SIPs in accordance with Section R610.3.2 and Table R610.3.2 of the 2015 IRC (Section R613.3.2 and Table R613.3.2 of the 2012 and 2009 IRC).

3.2 Seam Tape:

The ZIP System™ seam tape is a self-adhering membrane tape consisting of acrylic adhesive laminated to a polyolefin backing. The tape is 0.012 inch (0.30 mm) thick with a minimum width of 3³/₄ inches (95.2 mm), and comes in rolls of various lengths.

4.0 INSTALLATION
4.1 General:

Installation of ZIP System® Wall Sheathing panels must comply with the applicable code, this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite during installation.

4.2 Application:

4.2.1 General: The ZIP System® Wall Sheathing panels must be attached to wall framing in accordance with the applicable code for wood structural panels, and in compliance with their panel span rating. The panels must be installed with the polymer-modified sheet overlay facing the exterior. In accordance with the manufacturer's published installation instructions, it is recommended that the square edges of the panels be installed with a gap

between adjacent panels and between panels and dissimilar materials. All ZIP System® Wall Sheathing panel seams must be sufficiently sealed with ZIP System™ seam tape. All overlay surfaces must be dry and free of sawdust and dirt prior to application of the ZIP System™ seam tape. The ZIP System™ seam tape must extend a minimum of 1 inch (25.4 mm) past the panel edge T-joint intersections and must be centered within 1/2 inch (12.7 mm) over the middle of panel seams. The tape must be pressed firmly to adhere to the surfaces and seal the seams. Wrinkles in the ZIP System™ seam tape are acceptable unless they create a leak path to the panel seam.

4.2.2 Flashing: Flashing complying with the applicable code must be installed at the perimeter of door and window assemblies, penetrations and terminations of exterior wall assemblies, exterior wall intersections with roofs, chimneys, porches, decks, balconies, and similar projections, and at built-in gutters and similar locations where moisture could enter the wall. An adhesive-backed flashing tape recognized in a current ICC-ES evaluation report must be installed to seal all ZIP System® Wall Sheathing flashing joints. Penetration items must be sealed to the panels. The adhesive-backed flashing tape must comply with the ICC-ES Acceptance Criteria for Flexible Flashing Materials (AC148) and must be installed in accordance with the manufacturer's published installation instructions. See Figures 1 through 7 of this report for typical flashing, water-resistive barrier and air barrier assembly installation details.

4.2.3 Air Barrier Assembly: ZIP System® Wall Sheathing fastened to maximum 24-inch-on-center (610 mm), wood wall framing, using minimum 6d nails spaced at 6 inches (152 mm) around panel edges and at 12 inches (305 mm) in the field, leaving a 1/8-inch (3.18 mm) gap between panels, forms an air barrier assembly when the gaps between panels and the perimeter of penetrations are sealed with ZIP System™ seam tape as required by Section 4.2.1. The assembly has demonstrated a maximum air leakage of 0.0072 cfm/ft² [0.037 L/(s·m²)] infiltration and 0.0023 cfm/ft² [0.012 L/(s·m²)] exfiltration at a pressure differential of 1.57 psf (75 Pa) when tested in accordance with ASTM E2357.

5.0 CONDITIONS OF USE

The ZIP System® Wall Sheathing panel and tape system described in this report complies with, or is a suitable

alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

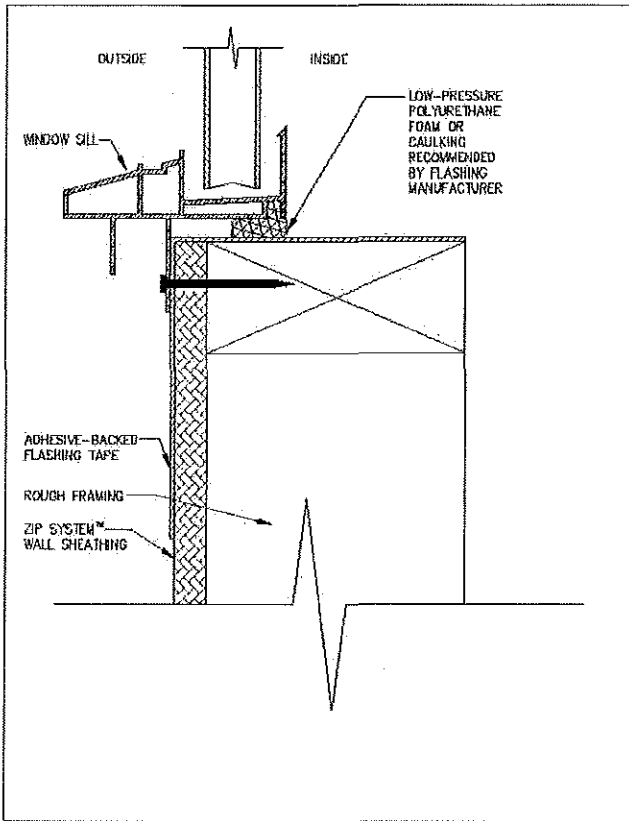
- 5.1 This evaluation report and the manufacturer's published installation instructions, when required by the code official, must be submitted at the time of permit application.
- 5.2 The ZIP System® Wall Sheathing panels must be manufactured, identified and installed in accordance with this report and the manufacturer's published installation instructions. In the event of a conflict between the instructions and this report, this report must govern.
- 5.3 The ZIP System® Wall Sheathing panels must be covered with a code-complying exterior wall covering, or one that is recognized in a current ICC-ES evaluation report.
- 5.4 The OSB sheathing must comply with US DOC PS-2.
- 5.5 Fire-resistance-rated construction is outside the scope of this report.

6.0 EVIDENCE SUBMITTED

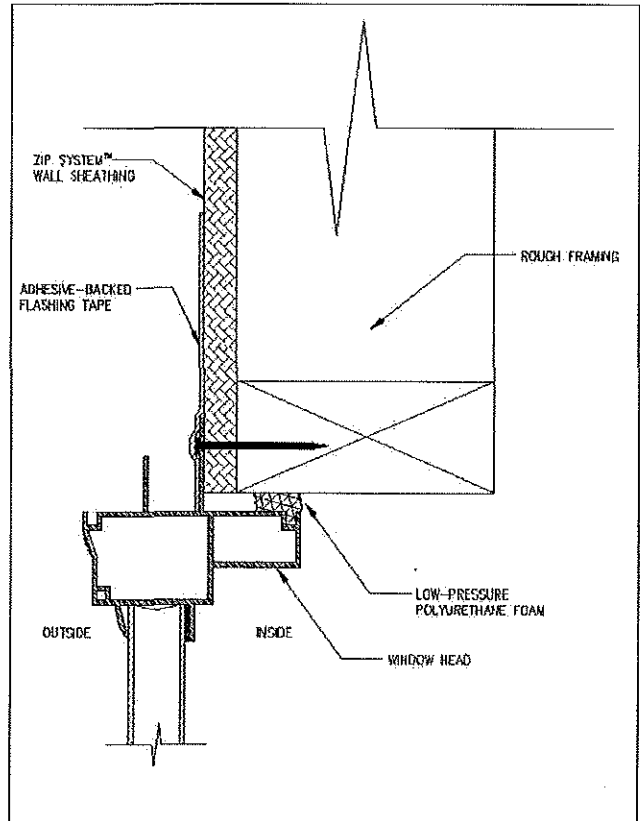
- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Water-resistive Membranes Factory-bonded to Wood-based Structural Sheathing, Used as Water-resistive Barriers (AC310), dated May 2008 (editorially revised August 2015).
- 6.2 Air leakage data in accordance with ASTM E2357.

7.0 IDENTIFICATION

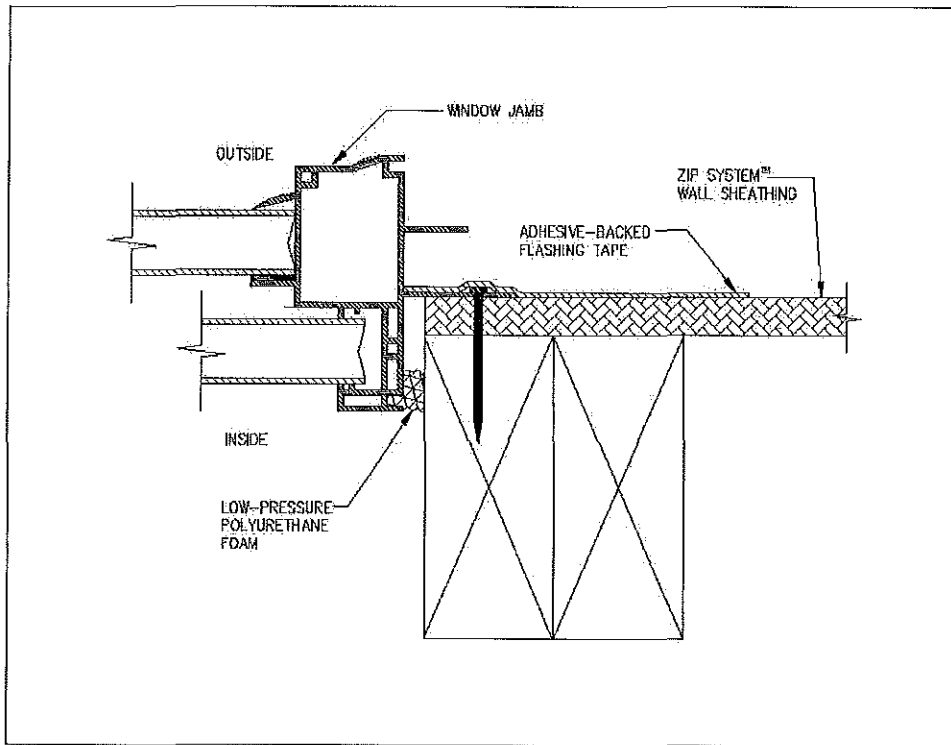
Each ZIP System® Wall Sheathing panel described in this report must bear a label that includes the manufacturer's name (Huber Engineered Woods LLC), the product name, nominal panel thickness, the evaluation report number (ESR-1474), and the words "Mill 229, Crystal Hill, Virginia"; "Mill 228, Easton, Maine"; "Mill 227, Commerce, Georgia"; or "Mill 290, Broken Bow, Oklahoma." The OSB sheathing must also bear a label demonstrating compliance with US DOC PS 2 from an approved inspection agency. The ZIP System™ seam tape roll must be labeled with the ZIP System logo and the evaluation report number ESR-1474 (see Figure 8).



SILL SECTION

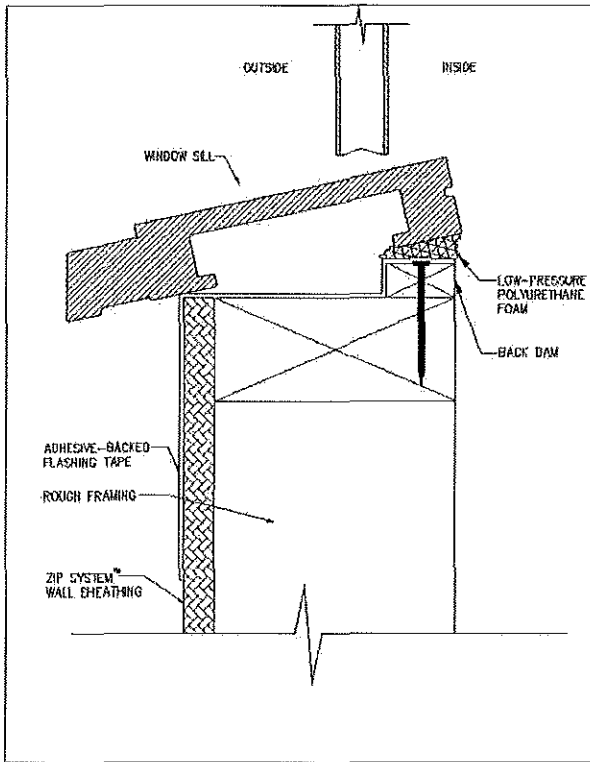


HEADER SECTION

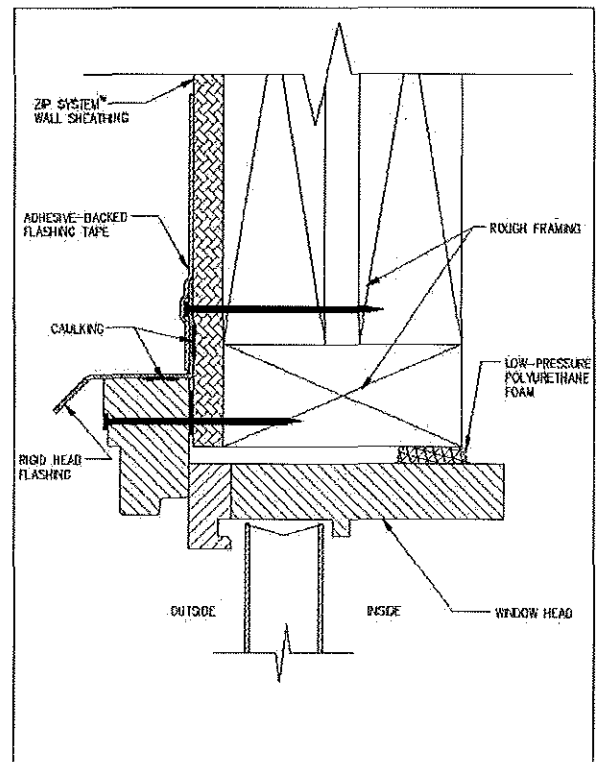


JAMB SECTION

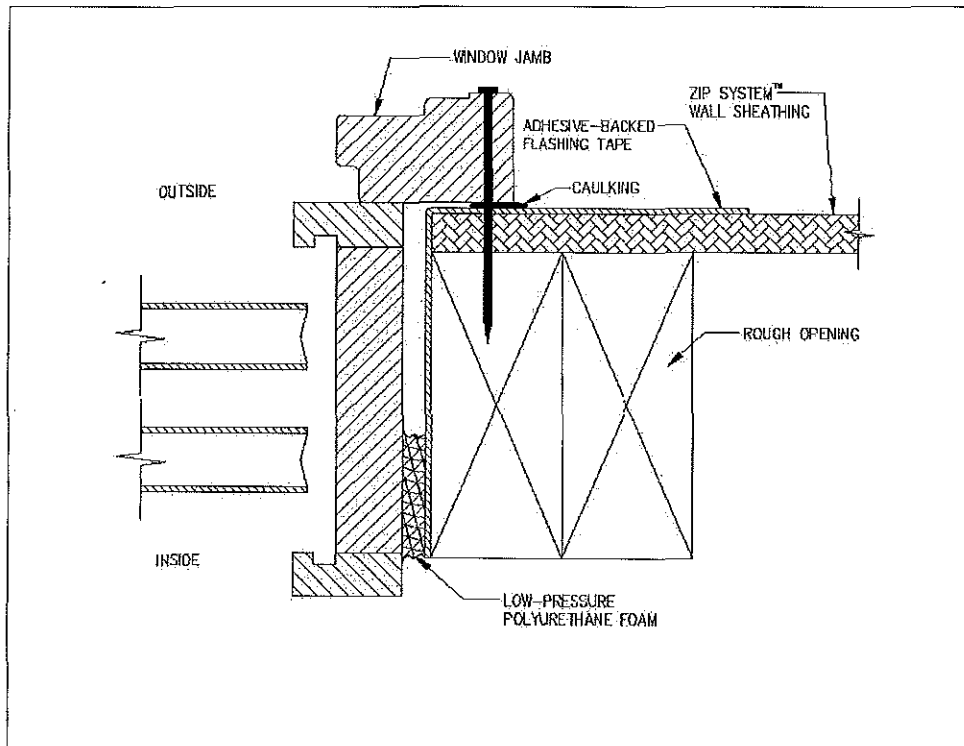
FIGURE 1—TYPICAL CROSS SECTIONS OF FLANGED WINDOW



SILL SECTION



HEADER SECTION



JAMB SECTION

FIGURE 2—TYPICAL CROSS SECTIONS OF INSTALLED BRICK MOLD WINDOW

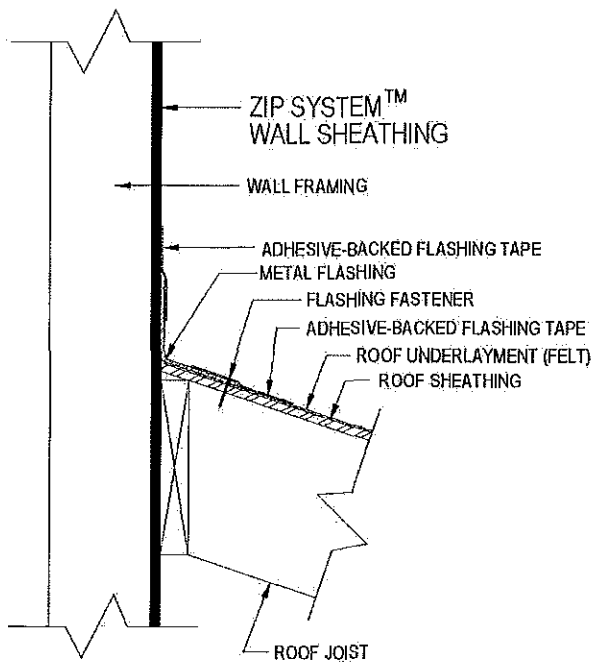


FIGURE 3—ROOF-WALL INTERSECTION (OPTION 1)

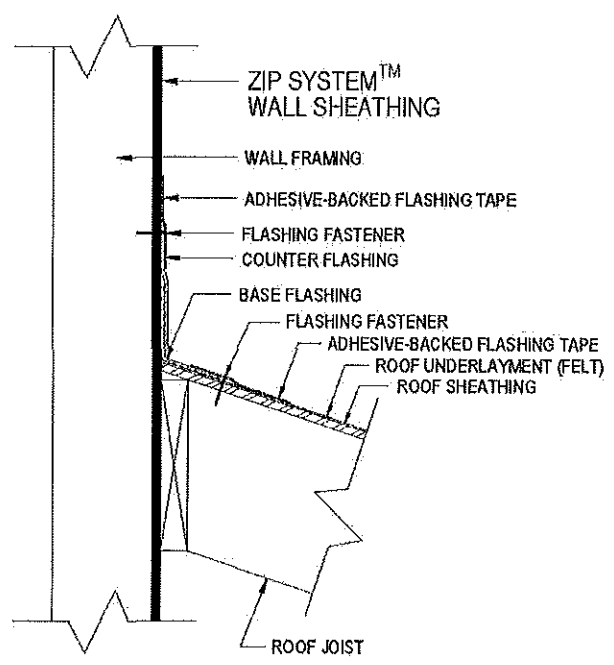


FIGURE 4—ROOF-WALL INTERSECTION (OPTION 2)

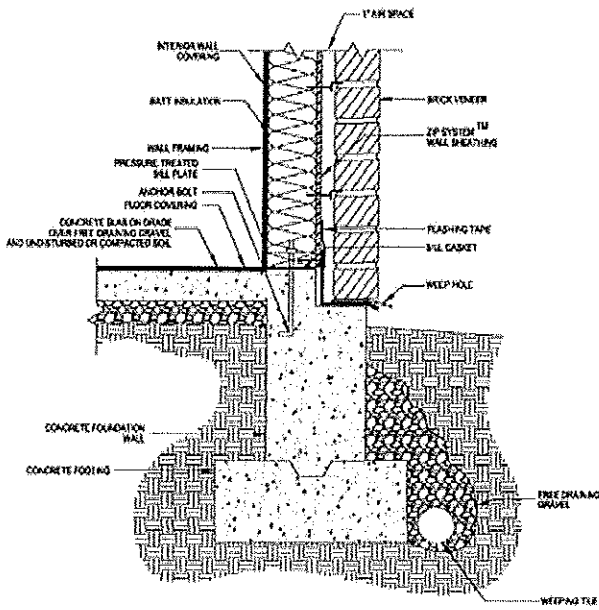


FIGURE 5—TYPICAL WALL-SILL INTERSECTION AND FLASHING DETAILS FOR BRICK SIDING

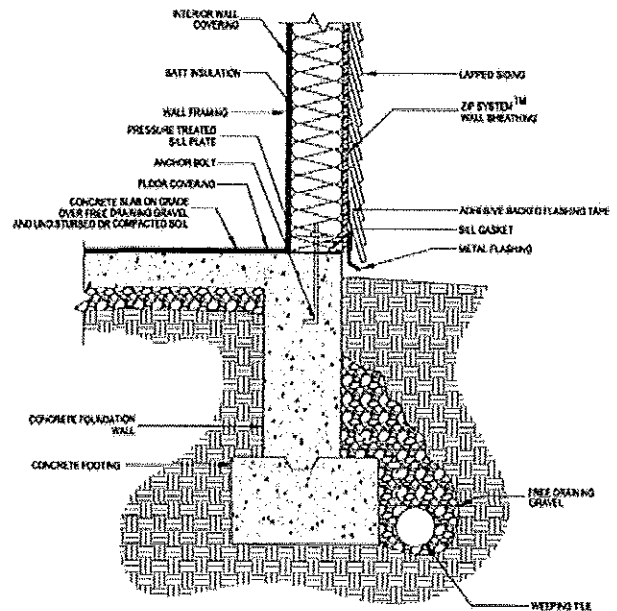


FIGURE 6—TYPICAL WALL-SILL INTERSECTION AND FLASHING DETAILS FOR LAPPED SIDING

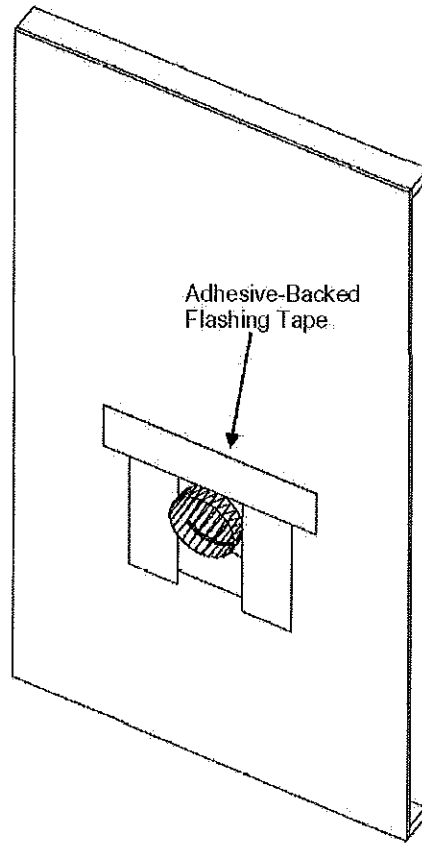


FIGURE 7—INSTALLATION AT PENETRATION OPENING (NON-FIRE-RESISTANCE RATED)



FIGURE 8—LABELING FOR THE ZIP SYSTEM SEAM TAPE ROLL



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ESR-2227

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION
SECTION: 07 65 00—FLEXIBLE FLASHINGS

REPORT HOLDER:

HUBER ENGINEERED WOODS, LLC

ONE RESOURCE SQUARE
10925 DAVID TAYLOR DRIVE, SUITE 300
CHARLOTTE, NORTH CAROLINA 28262

EVALUATION SUBJECT:

ZIP SYSTEM™ FLEXIBLE FLASHING TAPE



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ICC-ES Evaluation Report**ESR-2227**

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DIVISION: 07 00 00—THERMAL AND MOISTURE
PROTECTION

Section: 07 65 00—Flexible Flashings

REPORT HOLDER:

HUBER ENGINEERED WOODS, LLC
ONE RESOURCE SQUARE
10925 DAVID TAYLOR DRIVE, SUITE 300
CHARLOTTE, NORTH CAROLINA 28262
(800) 933-9220
www.huberwood.com

EVALUATION SUBJECT:

ZIP SYSTEM™ FLEXIBLE FLASHING TAPE

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2015, 2012 and 2009 *International Residential Code*® (IRC)

Property evaluated:

Water resistance

2.0 USES

ZIP System™ Flexible Flashing Tape is a pressure-sensitive, self-adhering, cold-applied tape used as flashing around windows, frames, door frames, wall penetrations and roof penetrations described in this report when used with the materials and substrates noted in Section 5.3. The use of the tape as a flashing material is recognized for use on Type V construction under the IBC and non-fire-resistance-rated construction recognized under the IBC and IRC. The tape is recognized as a self-adhered membrane when used as flashing material in accordance with 2015 IRC Section R703.4 [2012 and 2009 IRC Section R703.8].

3.0 DESCRIPTION

ZIP System™ Flexible Flashing Tape is a pressure-sensitive tape consisting of a polyolefin film with an acrylic adhesive which complies with AAMA 711. The tape is nominally 0.012 inch thick [0.30 mm (12 mils)] and is produced in rolls of various widths, [minimum 3³/₄ inches (95 mm)] and lengths.

4.0 INSTALLATION

Installation of ZIP System™ Flexible Flashing Tape must comply with this report and the manufacturer's published installation instructions. The installation instructions must be available at the jobsite at all times during installation.

The surfaces to which the tapes are applied must be dry and free of frost, dust and dirt, loose nails, and other protrusions. Contact of the adhesive surface with foreign matter that may affect the bond to the substrate must be avoided. The ambient air and substrate temperatures must be at or above 20°F (-6.7°C) at the time of application.

The tape is applied around penetrations in the manner described in the tape manufacturer's, as well as the window or door manufacturer's, published installation instructions, as applicable. End joints must be overlapped the minimum distance specified in the manufacturer's published installation instructions. The tape is cut to the desired length and firmly pressed into the entire length of the opening and smoothed out until it conforms tightly to the frame opening. Wrinkles in the ZIP System™ Flexible Flashing Tape are acceptable unless they create a leak path. Application should be in accordance with the manufacturer's installation instructions.

5.0 CONDITIONS OF USE

The Huber Engineered Woods ZIP System™ Flexible Flashing Tape described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

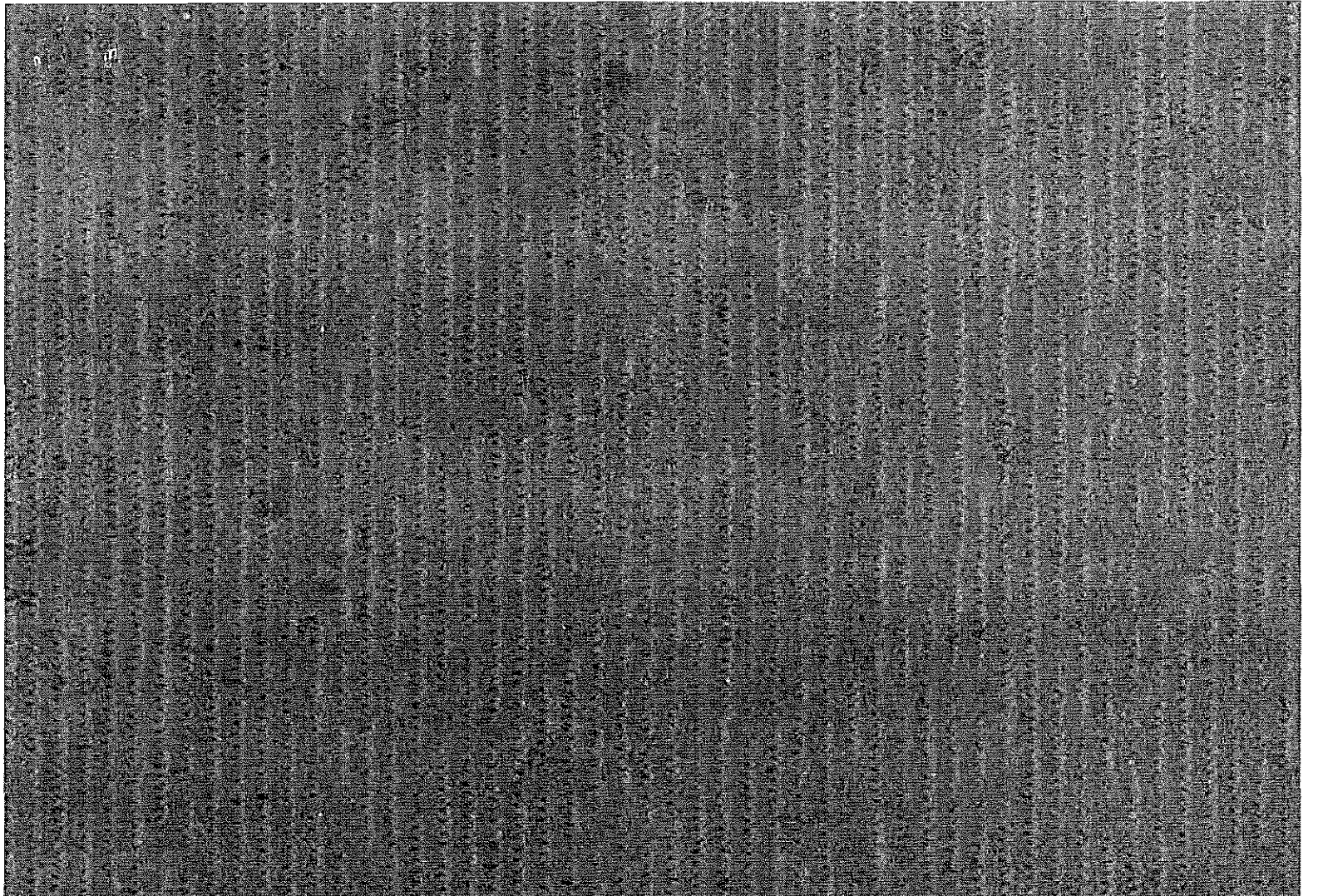
- 5.1** Installation must comply with this report and the manufacturer's published installation instructions. In the event of conflict between this report and the installation instructions, this report governs.
- 5.2** The ZIP System™ Flexible Flashing Tape must not be left exposed to the weather or installed where it is subject to permanent direct weather exposure.
- 5.3** Installation of the tape as a flashing material is limited to use with OSB, wood, steel, aluminum and vinyl-framed flanged windows and door frames, transitions to rigid flashings and the proprietary wall and roof sheathing substrates recognized in ICC-ES evaluation reports [ESR-1473](#) and [ESR-1474](#).

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Flexible Flashing Materials (AC148), dated April 2015.

7.0 IDENTIFICATION

The Huber Engineered Woods ZIP System™ Flexible Flashing Tape described in this report is labeled at regular intervals with the manufacturer's identification (ZIP System™) and the evaluation report number (ESR-2227). The tape packaging is labeled with the manufacturer's name (Huber Engineered Woods LLC) and address and the evaluation report number (ESR-2227).



ZIPsystemTM
 ROOF & WALL SHEATHING

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FROM THE
 CREATORS OF **AdvanTech**

**ZIP System® Roof & Wall Sheathing
 INSTALLATION MANUAL**

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 Charlotte, NC 28262 Fax: 704-547-9228

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another innovation from  **ENGINEERED WOODS**

ZIP System® Roof & Wall Sheathing INSTALLATION MANUAL



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03	ZIP System™ Tape Installation - Roof Panel Seams	09	ZIP System® Roof & Wall Sheathing - Window Installation Brick Mould Windows (continued)
04	ZIP System™ Tape Installation - Roof Panel Seams (continued)	10	ZIP System® Roof & Wall Sheathing - Penetration Openings
05	Roof Covering Installation Instructions	11	ZIP System® Roof & Wall Sheathing Installation Details
06	ZIP System® Roof & Wall Sheathing Installation	12	ZIP System® Roof & Wall Sheathing Installation Details (continued)
07	ZIP System™ Tape Installation - Panel Seams		

ATTENTION: This installation guide is intended to provide general information for the designer and end user. The following guidelines will help you safely and properly install the ZIP System® Roof & Wall sheathing. We urge you, and anyone installing this product, to read these guidelines in order to minimize any risk of safety hazards and to prevent voiding any applicable warranties. This manual is a general installation guide and does not cover every installation condition. Proper installation shall be deemed to mean the most restrictive requirement specified by Huber Engineered Woods (HEW), local building code, engineer or architect of record or other authority having jurisdiction. You are fully and solely responsible for all safety requirements and code compliance. For additional information contact Huber Engineered Woods LLC.

ZIP System® Roof & Wall Sheathing Safety Guidelines

- Follow all OSHA regulations and any other safety guidelines and safety practices during installation and construction.
- Use approved safety belts and/or harnesses or other fall protection equipment.
- Install ZIP System panels and tape only in dry conditions and on dry surfaces. Do not install in rain, snow, frost or other slippery conditions.
- Wear rubber-soled or other high-traction footwear while installing ZIP System sheathing in a roof application. Do not wear footwear with worn soles or heels.
- Ensure the roofing surface is free from oil, chemicals, sawdust, dirt, tools, electric cords, air hoses, clothing and anything else that might create a tripping hazard.
- Install temporary toe boards along the ZIP System sheathing roof surface.

What Is ZIP System® Roof & Wall Sheathing?

ZIP System Roof & Wall sheathing is code-recognized as a wood structural panel, roofing underlayment (ICC-ES ESR-1473), water-resistive barrier and air barrier (ICC-ES ESR-1474). ZIP System Roof & Wall sheathing has a built-in moisture barrier that lets you say good-bye to building paper or housewrap on the walls and felt paper on the roof.* Simply install the panels, tape the seams, and you have a structural wall sheathing, water-resistive barrier and air barrier or a structural roof sheathing and roofing underlayment all from one product.

ZIP System Roof & Wall sheathing can be used with a range of exterior claddings and roof coverings. Approved wall coverings include brick, vinyl, stone, wood fiber cement, wood and cedar shakes, traditional hard coat stucco and specified drainable EIFS applications, however it is not recommended for use with adhesively attached EIFS. Approved roof coverings include asphalt-fiberglass shingles, metal tiles and panels, clay and concrete tiles, slate and slate-type shingles and wood shakes and shingles. Follow all cladding and roof covering manufacturer's installation instructions.

ZIP System Roof & Wall sheathing can be used on buildings of Type III (Roof Applications ONLY) and Type V construction and construction permitted under the IRC.

ZIP System® Roof & Wall Sheathing includes:

- ZIP System sheathing panels with built-in moisture barrier with preprinted fastening and tape guides
- ZIP System tape

Storage and Handling

- Set panel stack on three supports (stickers) to keep off the ground.
- Outdoors, cover panels loosely with waterproof protective material.
- Anchor covers on top of the stack, but keep away from sides and bottom to assure good air circulation.
- In high moisture environments, cut banding on the panel stack to prevent edge damage.

ZIP System® Roof & Wall Sheathing Notes and Limitations:

- Do not use on roofs with slopes less than 2/12.
- Do not use abutted against general stone or masonry without providing a minimum of a 1/2" gap.
- Do not install ZIP System tape in temperatures less than 20° F
- ZIP System products are not recommended for manufactured housing applications that are built under a federal building code administered by the U.S. Department of Housing and Urban Development (HUD).
- Do not use panel edge clips (H-Clips) with ZIP System Roof & Wall sheathing without expressed written approval from Huber Engineered Woods.**
- Do not use ZIP System tape to permanently seal around circular roof projections (plumbing vents, pipes, curved walls, etc.)

Contents (continued)

Wall Coverings

- ZIP System Roof & Wall sheathing should be covered with the finished roof covering or exterior cladding within 180 days of installation.
- Finished roof and exterior cladding products should be installed per the manufacturer's installation instructions.
- Per the recommendation of the Western Red Cedar Lumber Association and the U.S. Forest Products Laboratory, wood siding should be primed before installation.
- When original roofing or claddings are removed and replaced on existing ZIP System sheathing, the roof or wall should be covered with an additional roofing underlayment or water resistive barrier prior to installation of the new finished roofing or cladding.

Note: In cladding systems requiring multiple layers of water-resistive barriers, like traditional hard-coat stucco, ZIP System sheathing is intended only to replace the first layer.

Wet Blown Cellulose Insulation

- In addition to following manufacturer installation instructions, we recommend a maximum moisture content of the cellulose of less than 25% measured at the inside surface of the ZIP System panel before closing the wall cavity.

Secondary Coatings

Do not apply secondary coatings or treatments to ZIP System Roof & Wall sheathing panels with the exception of the following:

- HEW approved fire resistant coatings. Fire resistant coatings must be tested and approved by HEW for use with ZIP System panels.
- Field applied water-soluble borate insecticide or fungicide treatments applied to the non overlay side of the panel. See technical tip, "Termite Treatments on ZIP System Roof & Wall Sheathing," on zipsystem.com for more information.
- Permeable laminated radiant barrier foil or paint. For a radiant barrier foil or coating to be considered permeable, it must have an applied permeance of five perms or greater as tested by the ASTM E 96 wet cup standard. For a radiant foil, the permeance evaluation would include any adhesive and/or backer used to laminate a foil. For a radiant paint/coating, the permeance evaluation should be conducted at the applied thickness of the paint/coating.

* ZIP System Roof and Wall sheathing replaces only the first layer in multi-underlayment systems.

** Edge support is not required by code with 1/2 (32/16 span rated) and 5/8 (40/20 span rated) performance category sheathing if the framing does not exceed 24" o.c. and the total load does not exceed 93 psf for 1/2 and 156 psf for 5/8 performance categories. This is based on L/180 deflection criteria for total load.

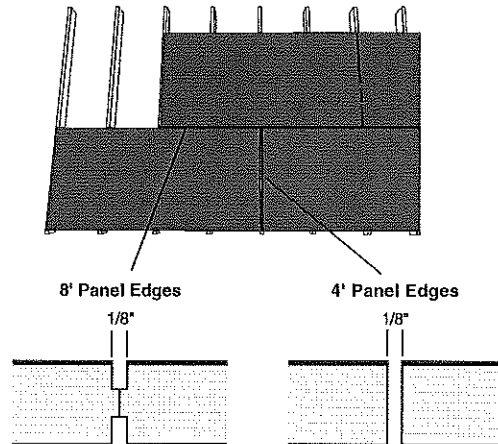
02

ZIP System® Sheathing Installation on Roofs

Overview: ZIP System Roof & Wall sheathing is composed of ZIP System panels and ZIP System seam sealing tape. ZIP System® Roof & Wall Sheathing panels should be fully installed before the seam sealing tape is applied. In general, the ZIP System roof sheathing panels should be installed from the lowest point on the roof to the highest. It is at the discretion of the installer whether to apply tape from the top down or from the bottom up. However, working from the highest sections of the roof and working down will minimize foot traffic on the tape. The following installation steps are presented as guidelines and a general outline of the installation process. These are manufacturer installation recommendations – please visit zipsystem.com for a library of flashing and installation details. You are fully and solely responsible for all safety requirements. Good construction and safety practices should be followed at all times.

Step 1.

- Ensure that the panel surface is dry and clean of any nails, sawdust, or other debris or protrusions prior to installing or walking on the panels.
- After ensuring compliance with all OSHA and local code safety guidelines, install ZIP System sheathing panels with the moisture barrier surface facing outside. The long edge (8') should be oriented perpendicular to the framing members, and panels should be installed with the 4' edge seams staggered a minimum of 24".
- 1/8" spacing between square edges of all adjacent panels is recommended, in accordance with industry standards for wood sheathing. (Tongue & Groove panels are designed to self-space and do not require manual spacing on the 8' edges.)



The unique edge profile is designed to accommodate incremental panel expansion and does not require manual gapping along the 8' edges.

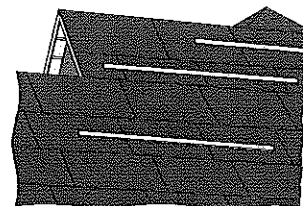
Maintain 1/8" space where 4' edges meet. Unique edge profile is on 8' edges only.

Step 2.

- Ensure that ZIP System panels span at least three framing members and a framing member supports the entire 4' edge of the panels.
- Fasten the ZIP System Roof & Wall sheathing panel to the framing members with code approved fasteners spaced at the appropriate edge and intermediate spacing. It is the responsibility of the general contractor to verify proper fastener type and spacing prior to installation.
- Apply the fasteners 3/8" from the panel ends and corners.
- An ideal installation would be where fastener heads are flush with the panel surface. However, due to variations in materials and limitations on equipment, this may be difficult to achieve in some situations. It is not required to tape over overdriven fasteners unless the fastener head creates a hole through the entire panel thickness. Please see the technical tip, "Overdriven Fasteners in ZIP System Roof and Wall Sheathing," for more information.

Step 3.

Install temporary toe boards as necessary when applying the ZIP System sheathing panels up the slope of the roof planes.

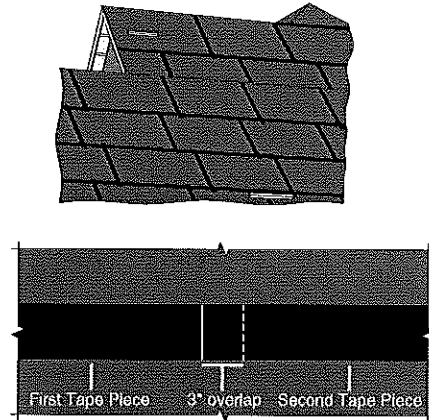


ZIP System™ Tape Installation - Roof Panel Seams

Apply ZIP System tape after all ZIP System Roof & Wall sheathing panels are fully fastened to roof-framing members. Only ZIP System tape should be used to seal the seams of ZIP System panels. Ensure that the panel surfaces are dry and free of any nails, sawdust and other debris, or protrusions. Avoid stepping on tape in high temperature environments. ZIP System tape is a contact tape that requires pressure for an adequate seal.

Step 1.

- Apply ZIP System tape to every vertical and horizontal panel seam. It is at the discretion of the installer whether to apply tape from the top down or from the bottom up. However, working from the highest sections of the roof and working down will minimize foot traffic on the tape.
- Ensure that the tape is centered over the seam within +/- 1/2" to provide adequate coverage and to ensure that wrinkles in the tape are minimized.
- Ensure that tape lengths are continuous across the 8' horizontal edge of the panels. If splices are unavoidable, create an overlapping splice of at least 3". Apply moderate pressure onto the surface of the tape to ensure a secure bond between the panel and the tape.
- Use ZIP System tape gun or tape roller to apply pressure to the tape and smooth out any wrinkles.
- Take special care to remove any voids and/or trapped air at splice areas and T-joints.

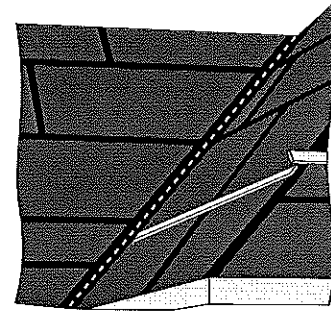


Step 2.

- For valley areas of framing, we recommend you use 6" wide ZIP System tape. This tape is wider than panel seam tape and is designed to give you optimal protection in valley areas.
- Starting from the bottom and working your way up, apply one continuous piece of 6" tape so that the center of the tape is over the valley seam.
- Use the tape gun or tape roller to apply pressure to the tape to ensure proper contact with the panel and to eliminate any wrinkles that might have occurred in the tape. Take special care to seat tape completely into the valley.

Note:

- It is important to pay extra attention to valley taping as water is directed toward the valleys during rain events.
- Self-adhering ice and water barriers may be required by code. ZIP System tape is not considered a replacement for self-adhering ice and water barriers. Therefore, when self-adhering ice and water barriers are required, they should be installed in addition to ZIP System tape.



04

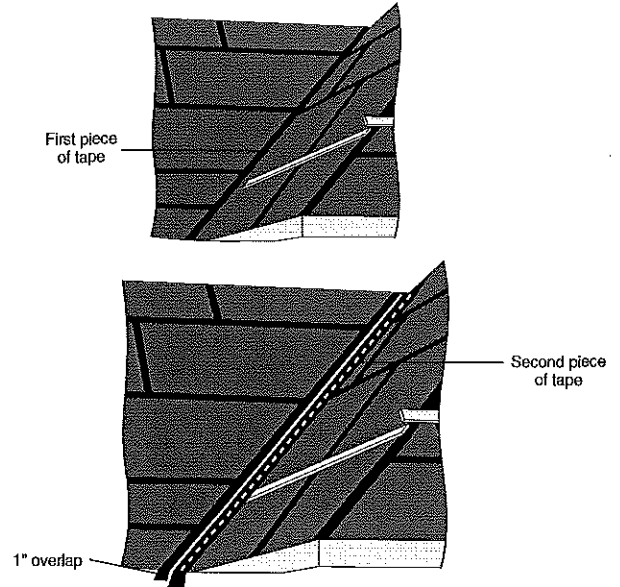
ZIP System™ Tape Installation - Roof Panel Seams (continued)

Step 3.

- If 6" ZIP System tape is not available, use two continuous pieces of 3.75" ZIP System panel seam tape over the entire length of the valley seam, overlapping the pieces on the valley seam by at least 1".
- Starting from the bottom, install the first piece of tape overlapping the valley seam by at least 1".
- Use the tape gun or tape roller to apply pressure to the tape to ensure proper contact with the panel and to eliminate any wrinkles that might have occurred in the tape.
- Apply the second piece of tape, overlapping the first piece in the valley seam by 1".
- Repeat use of the tape gun or roller to make sure the tape is adequately adhered and tightly pressed into the valley seam.

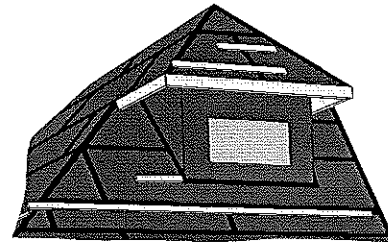
Note:

- It is important to pay extra attention to valley taping as water is directed toward the valleys during rain events.
- Self-adhering ice and water barriers may be required by code. ZIP System tape is not considered a replacement for self-adhering ice and water barriers. Therefore, when self-adhering ice and water barriers are required, they should be installed in addition to ZIP System tape.



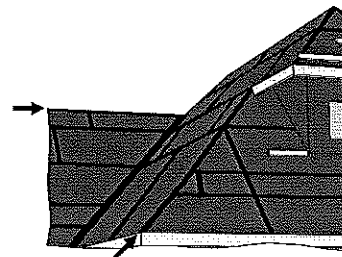
Step 4.

- To provide temporary weather protection to roof/wall intersections of dormers or other wood-sheathed projections, apply 2" of the tape width up the vertical projection from where it intersects with the roof. The remaining tape width can be adhered to the ZIP System roof sheathing panels.
- Use the tape gun or tape roller to apply pressure to the tape and smooth out any wrinkles.



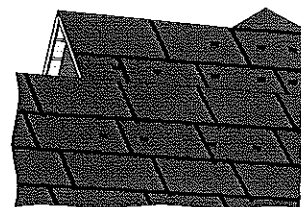
Step 5.

- Install ZIP System tape over hips and ridges by centering the tape over the peak seam. Apply tape in sufficient length to completely extend the length of the hip or ridge.
- Starting from the lowest point of the hip and working up, press tape into place keeping tape centered over the hip. Apply moderate pressure onto the surface of the tape to ensure a secure bond between the panel and the tape.
- Cut ridge tape as required for ventilation prior to installing ridge vent.



Step 6.

Tape over toe board nail holes once the toe boards are removed, working from the highest toe boards to the lowest.



Roof Covering Installation Instructions

ZIP System Roof & Wall sheathing is a code recognized sheathing and underlayment and is approved for use with the following roof coverings:

- Asphalt-fiberglass Shingles
- Metal Roofs (shingles and panels)
- Clay Tile
- Concrete Tile
- Slate and Slate-type Shingles
- Wood Shingles
- Wood Shakes

When installing roof coverings, follow applicable codes and manufacturer's suggested instructions. Some roof coverings require a slip-sheet in addition to conventional underlayment. Where slip-sheets are required, they should be installed over ZIP System sheathing panels.

Note: Visit zipsystem.com for updates and installation details.

Asphalt-fiberglass Shingles

Apply asphalt shingles directly to ZIP System sheathing. For roofs with a slope of 2/12 or greater but less than 4/12, additional underlayment may be required. Install asphalt-fiberglass shingles according to applicable codes and manufacturer's installation instructions.

Metal Roof Coverings

Metal roof coverings may be applied to ZIP System sheathing provided that the roof covering manufacturer's installation instructions and applicable codes are followed.

Fasteners used to secure the ZIP System Roof & Wall sheathing panels to supporting framing must be compatible with the specific metal roof covering used. Galvanized fasteners shall be used with galvanized roof coverings, aluminum-zinc coated fasteners shall be used with aluminum-zinc coated roof coverings and 300 series stainless steel fasteners shall be used with copper roofs. Stainless steel fasteners are acceptable with all metal roof types.

In addition, metal roof flashing shall also be made of a material compatible with the specific metal roof covering used. Apply metal shingles on roofs with slopes of 3/12 or greater.

Clay and Concrete Tile Roof Coverings

ZIP System Roof & Wall sheathing is intended to replace the first layer in a two-layer or multi-layer underlayment system. When installing clay or concrete tile roof coverings, follow the installation recommendations of FRSA/TRI 07320. Install tile roofs according to applicable codes and manufacturer's installation instructions.

Slate and Slate-type Shingles

Apply slate and slate-type shingles on roofs with slopes of 4/12 or greater. Install slate and slate-type shingles according to applicable codes and manufacturer's installation instructions.

Wood Shingles

ZIP System Roof & Wall sheathing is intended to replace the first layer of underlayment required by the IBC and/or the IRC. Additional layers of underlayment may be required by code depending on the local climate. Apply wood shingles on roofs with slopes of 3/12 or greater. Install wood shingles according to applicable codes and manufacturer's installation instructions.

Wood Shakes

ZIP System Roof & Wall sheathing is intended to replace the first layer of underlayment required by the IBC and/or the IRC. Additional layers of underlayment may be required by code depending on the local climate. ZIP System roof sheathing is not to be construed as a replacement for interlayment. Apply wood shakes on roofs with slopes of 4/12 or greater. Install wood shakes according to applicable codes and manufacturer's installation instructions.

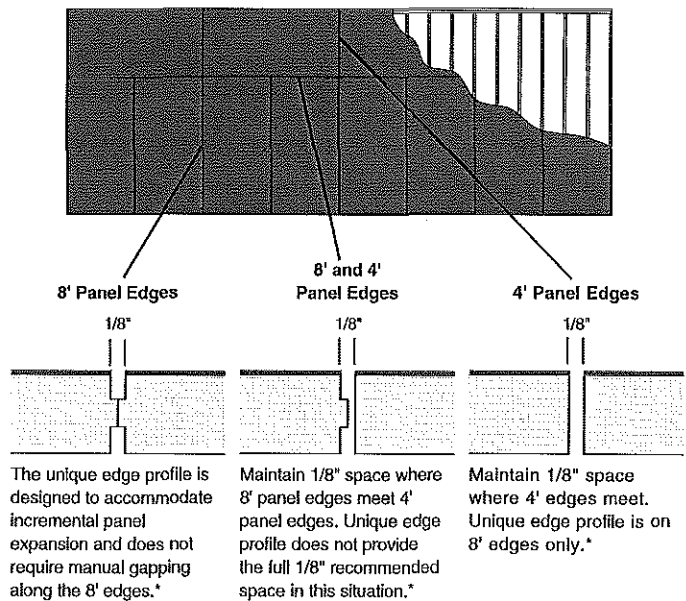
06

ZIP System® Sheathing Installation on Walls

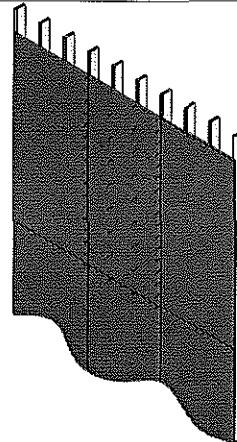
Overview: ZIP System Roof & Wall sheathing is composed of ZIP System panels and ZIP System seam sealing tape. ZIP System® Roof & Wall Sheathing panels should be fully installed before the seam sealing tape is applied. The following installation steps are presented as a general outline of the installation process. These are manufacturer installation recommendations—please visit zipsystem.com for a library of flashing and installation details. You are fully and solely responsible for all safety requirements. Good construction and safety practices should be followed at all times.

Step 1. Install ZIP System Roof & Wall sheathing panels positioned with the water-resistive barrier facing outside. The panels may be installed with the long side of the panel oriented either horizontally or vertically to the framing members. Walls that are designed to resist lateral shear forces and sheathed with wood structural panels typically require solid framing or blocking behind all panel edges. If oriented horizontally, block horizontal joints if wall is designed for bracing or as a shear wall.

1/8" spacing between square edges of all adjacent panels is recommended in accordance with industry standards for wood sheathing installation.



Step 2. Fasten the panels to the framing members with code approved fasteners. Space fasteners 6" o.c. along supported edges and 12" o.c. at intermediate supports, unless otherwise specified by local code or the designer of record. It is the responsibility of the general contractor to verify proper fastener type and spacing prior to installation. Apply the fasteners 3/8" from the ends and corners. An ideal installation would be where fastener heads are flush with the panel surface. However, due to variations in materials and limitations on equipment, this may be difficult to achieve in some situations. It is not required to tape over overdriven fasteners unless the fastener head creates a hole through the entire panel thickness. Please see the technical tip "Overdriven Fasteners in Zip System Roof and Wall Sheathing," on zipsystem.com for more information.

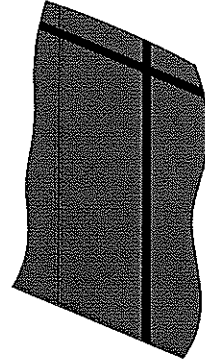


ZIP System™ Tape Installation - Wall Panel Seams

Apply ZIP System tape after all ZIP System Roof & Wall sheathing panels are fully fastened to wall-framing members. Only ZIP System tape should be used to seal the seams of ZIP System panels. Ensure that the panel surface is dry and free of sawdust and dirt prior to taping. ZIP System tape is a contact tape that requires pressure for an adequate seal.

Step 1. Tape all seams using ZIP System tape. Ensure that the tape is centered over the seam within $\pm 1/2"$ to provide adequate coverage and that wrinkles in tape are minimal.

Use the ZIP System tape gun or roller to apply pressure to the tape and smooth out any wrinkles.

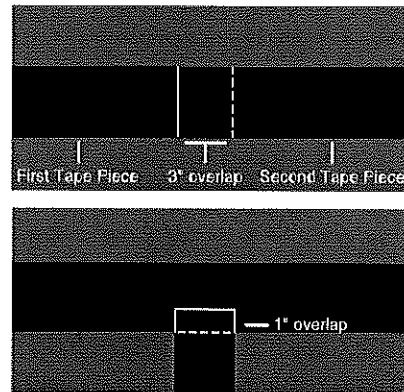


Step 2. Wherever tape splices occur at a horizontal or vertical seam, create an overlapping splice of at least 3".

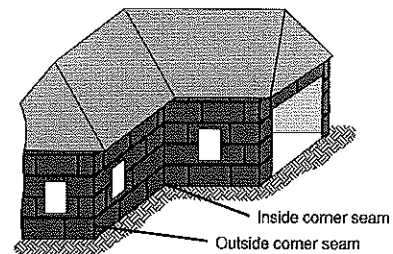
At T-joints, the tape pieces should overlap by at least 1". Apply moderate pressure onto the surface of the tape to ensure a secure bond between the panel and the tape.

Use the ZIP System tape gun or roller to apply pressure to the tape and smooth out any wrinkles.

Take special care to remove any voids and/or trapped air at splice areas and T-joints.



Step 3. Tape inside and outside corner seams.



Note: Tape over any areas of the panel or tape that are damaged during construction.

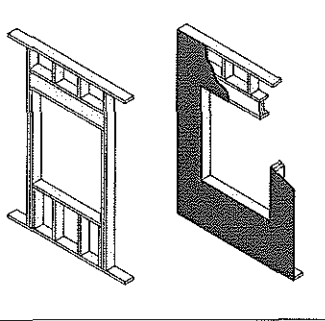
08

ZIP System - Window Installation

DISCLAIMER: The following steps represent a general overview for the proper installation of window flashing. Please defer to/consult the installation instructions of your window manufacturer as well as code requirements in your jurisdiction for full installation details.

Flanged Windows

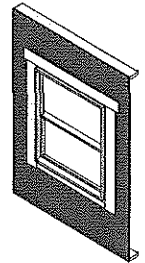
1. Fasten the ZIP System sheathing to the wood frame and install ZIP System tape to all wall panel seams, as detailed in sections 02 and 03.



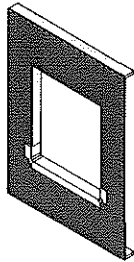
5. Cut a length of ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to the header, ensuring that the flashing overlaps the jamb flashings.*

Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.

*DO NOT tape bottom flange.

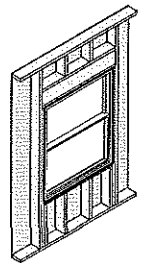


2. ZIP System tape may be used as pan flashing if installed in accordance with flanged window installation details posted on zipsystem.com. Other adhesive-based flashing tapes (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) may be used as pan flashing if installed per ASTM 2112-07. Apply the flashing to cover the bottom of the opening, overhanging onto the sheathing by at least 2" and extending a minimum of 6" up each jamb.

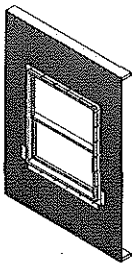


6. From the interior, apply low-pressure polyurethane foam (for windows) between the rough opening and the window frame. (Caulk sealant compatible with the sill flashing may be used at the sill if the opening between the sill flashing and window is too narrow to allow the use of low-pressure polyurethane foam.)

When using ZIP System tape, butyl, 100% silicone or polyurethane sealants are acceptable. Do not use latex sealants with ZIP System tape. If using another flashing tape, follow the flashing manufacturer's recommendation in selecting a sealant compatible with that flashing.

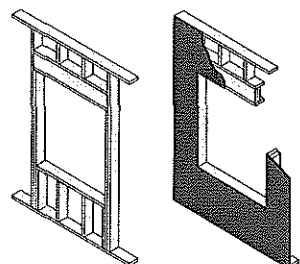


3. Apply sealant around inside face of mounting flange. Sealant must be gapped at the sill to permit drainage. Install and level window per manufacturer's installation instructions. Verify sealant compatibility with window manufacturer. When using ZIP System tape as pan flashing, butyl, 100% silicone or polyurethane sealants are acceptable. Do not use latex or other water-based sealants.



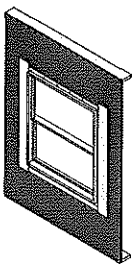
Brick Mould Windows

1. Fasten the ZIP System sheathing to the wood frame and install ZIP System tape to all wall panel seams, as detailed in sections 02 and 03.

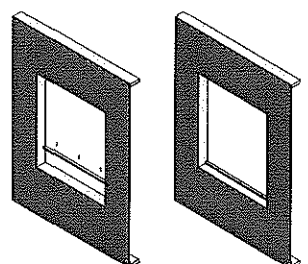


4. Cut two pieces of ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to each of the window jamb flanges, ensuring the jamb flashings overlap the sill flashing.

Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.



2. If recommended by the window manufacturer, cut a strip of wood to function as a back dam at the sill. The wood strip should have a length equal to the width of the rough opening and a height and width of at least 1/2". Position the block at the inside edge of the window frame.

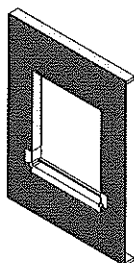


ZIP System - Window Installation

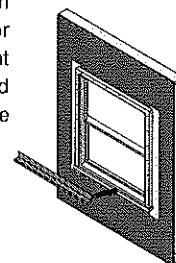
DISCLAIMER: The following steps represent a general overview for the proper installation of window flashing. Please defer to/consult the installation instructions of your window manufacturer as well as code requirements in your jurisdiction for full installation details.

Brick Mould Windows (continued)

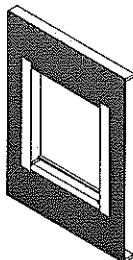
3. ZIP System tape may be used as pan flashing if installed in accordance with brick mould window installation details posted on zipsystem.com. Other adhesive-based flashing tapes (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) may be used as pan flashing if installed per ASTM 2112-07. Apply the flashing to cover the bottom of the opening, overhanging onto the sheathing by at least 2" and extending a minimum of 6" up each jamb.



7. Cut a piece of rigid head flashing so that when installed, it is flush with the edges of the exterior moulding of the window. Apply a bead of sealant to the back and bottom surface of the rigid head flashing. Use sealant recommended by the flashing manufacturer.

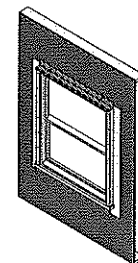


4. For vertical jambs, cut ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to each of the window jambs. Ensure that they cover the entire inside of the rough opening as well as overlap onto the sheathing by at least 2". Flashing shall also extend above the rough opening, such that it will project 1" beyond the exterior trim of the window.

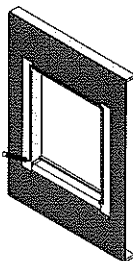


Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.

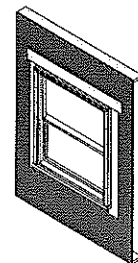
8. Secure the rigid head flashing to ZIP System wall sheathing.



5. Apply sealant to jambs and header allowing for drainage at the sill in accordance with window manufacturer's installation instructions. When using ZIP System tape, use a butyl, polyurethane or 100% silicone sealant. Do not use latex or other water-based sealants with ZIP System tape. When using another flashing tape, follow the flashing manufacturer's recommendations in selecting a sealant compatible with that flashing.

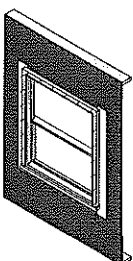


9. Cut a length of ZIP System tape or another adhesive-backed flashing tape (must meet ICC-ES Acceptance Criteria for Flashing Materials (AC148)) and apply to the rigid head flashing, ensuring that the adhesive-backed flashing overlaps the jamb flashings.

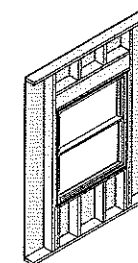


Once the tape is in place, use the tape gun or roller to seal the flashing to the sheathing.

6. Install and level window per manufacturer's installation instructions.



10. From the interior, apply low-pressure polyurethane foam (for windows) between the rough opening and the window frame. (Caulk sealant compatible with the sill flashing may be used at the sill if the opening between the sill flashing and window is too narrow to allow the use of low-pressure polyurethane foam.)

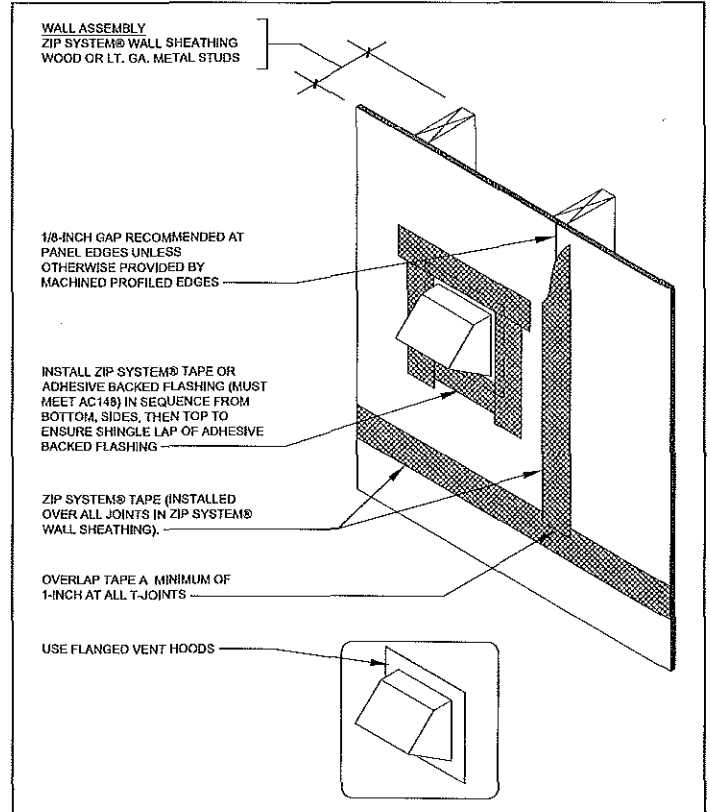
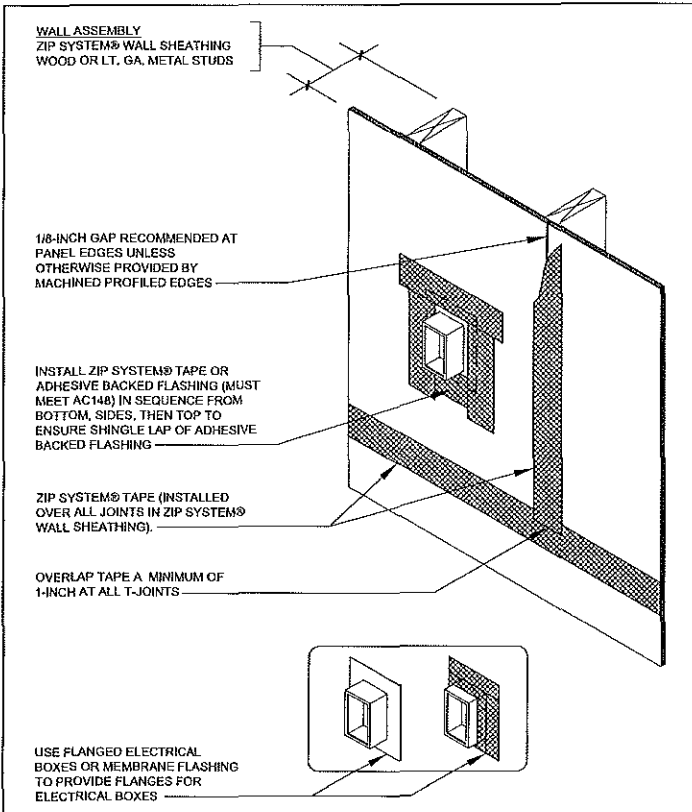
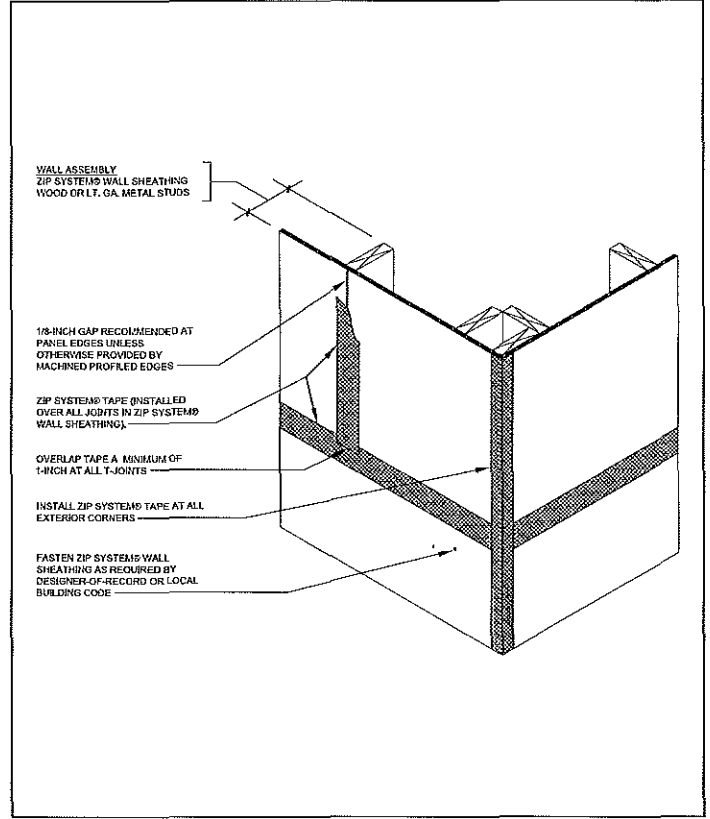
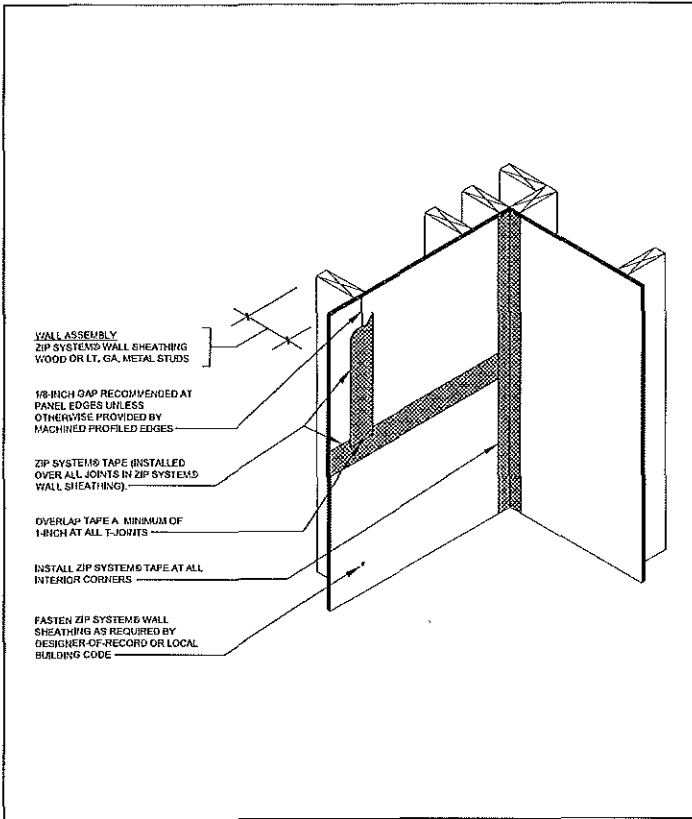


When using ZIP System tape, butyl, 100% silicone or polyurethane sealants are acceptable. Do not use latex or other water-based sealants with ZIP System tape. If using another flashing tape, follow the flashing manufacturer's recommendation in selecting a sealant compatible with that flashing.

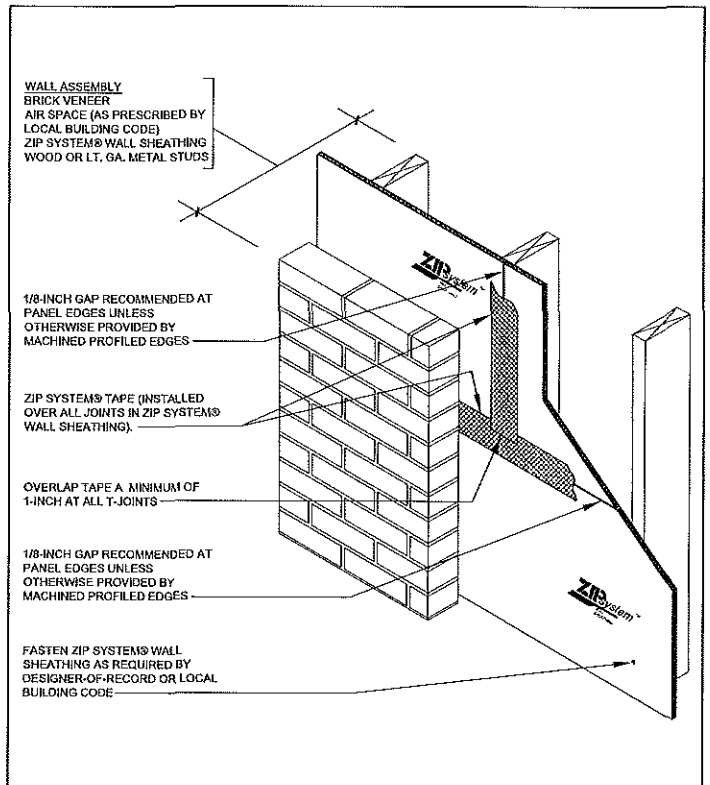
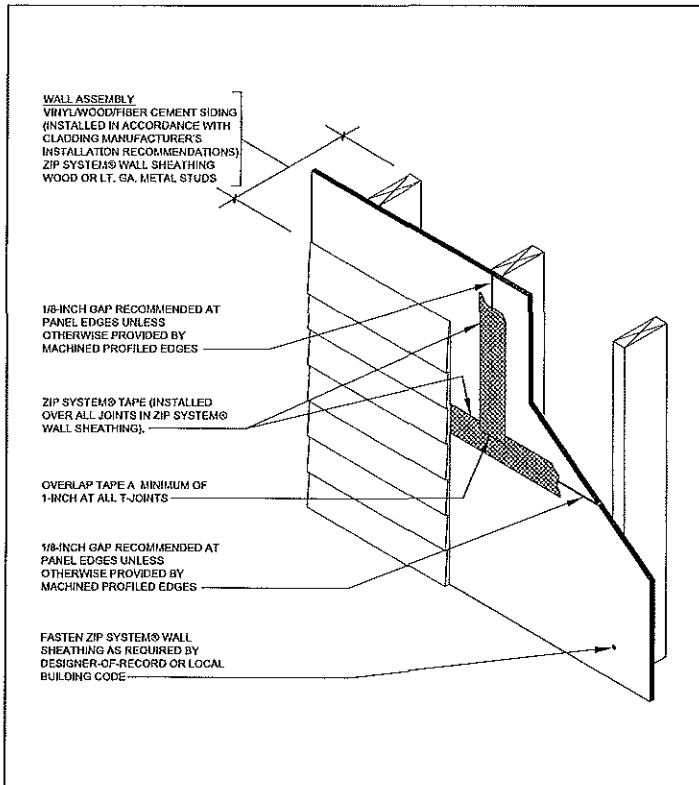
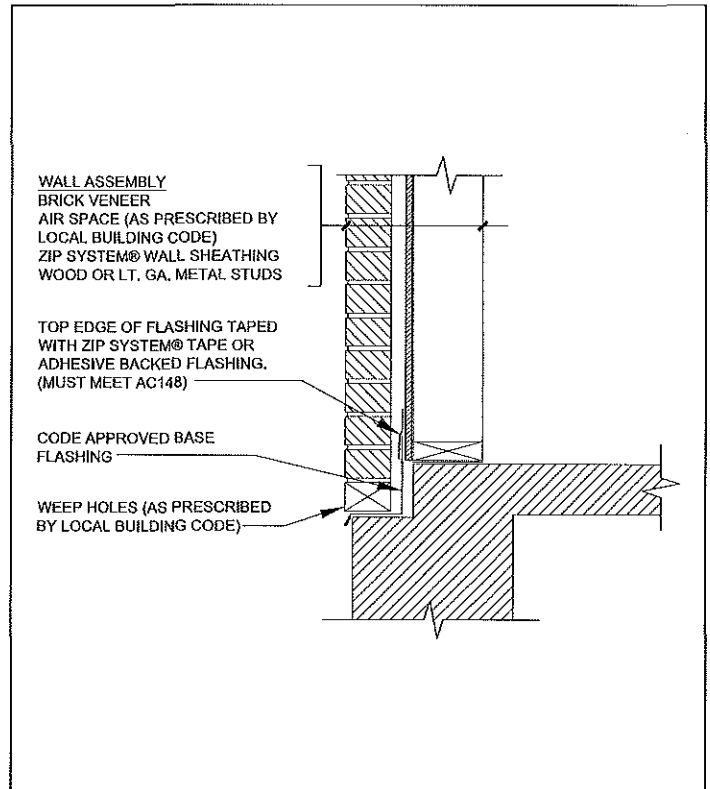
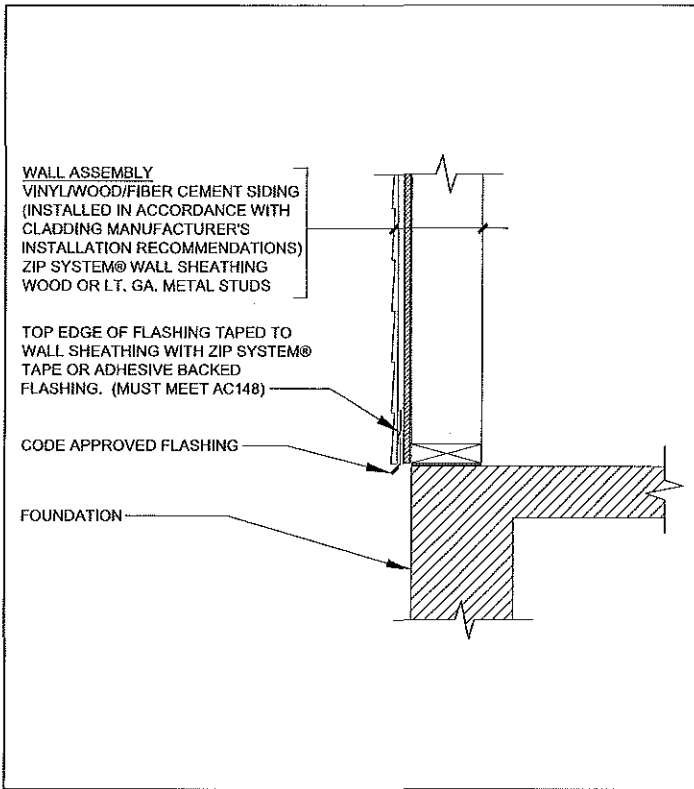
10

ZIP System - Penetration Openings

DISCLAIMER: The following steps represent a general overview for the proper installation of penetration flashing. Please defer to/consult your code requirements in your jurisdiction for full installation details.



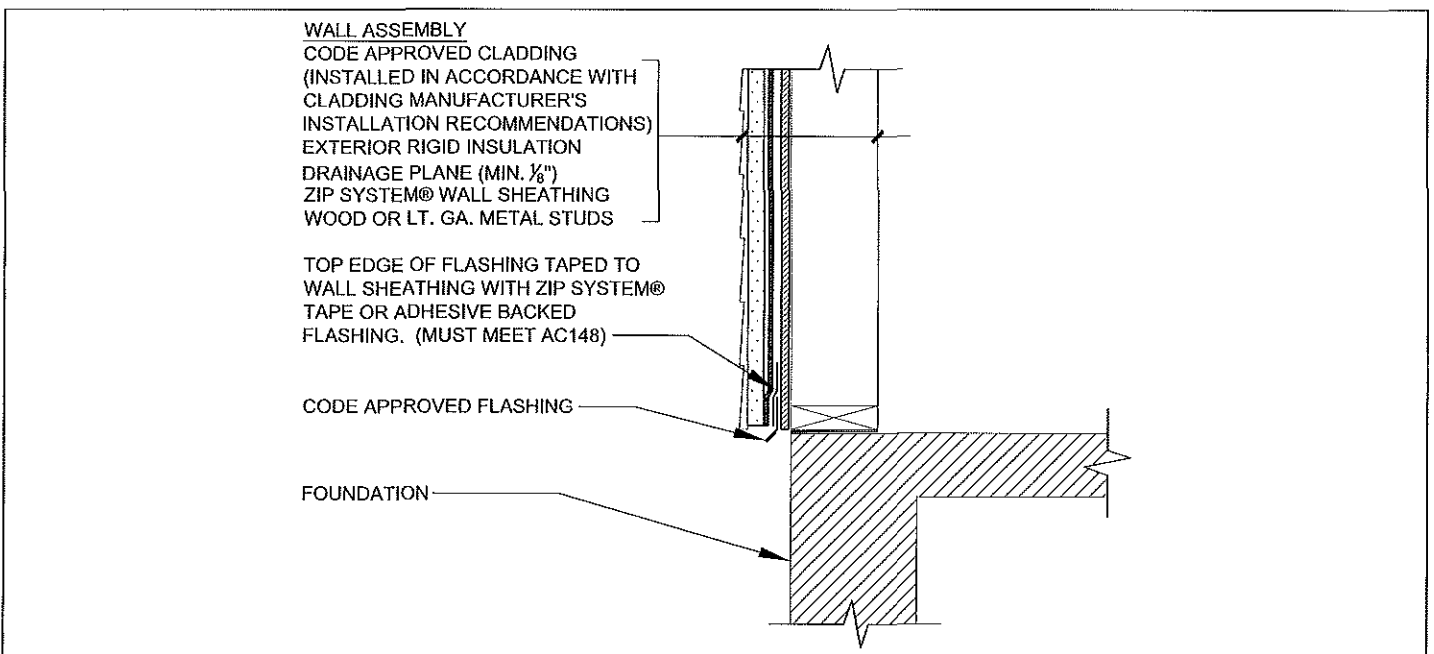
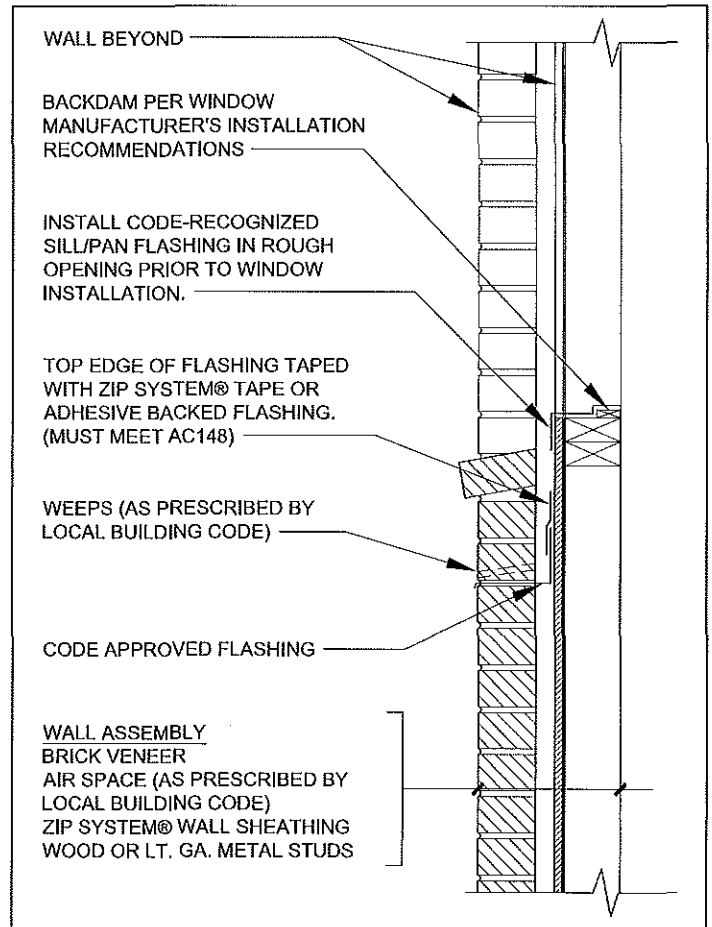
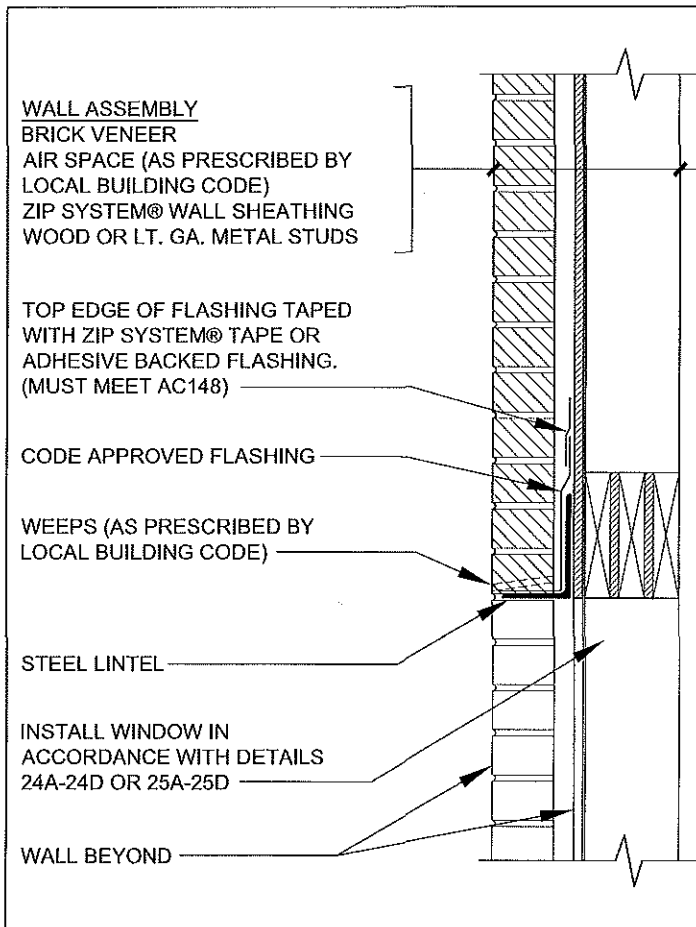
ZIP System Sheathing Installation Details on Walls – visit zipsystem.com for more details.



Note: For optimal air leakage reduction, all untaped edges of the panels can be caulked, gasketed or sealed with a weather stripping material.

12

ZIP System Sheathing Installation Details on Walls (continued)



Note: For optimal air leakage reduction, all untaped edges of the panels can be caulked, gasketed or sealed with a weather stripping material.

Leiby, Sara (LARA)

From: Yvette Robinson <yrobinson@highlandparkcity.org>
Sent: Wednesday, June 07, 2017 1:51 PM
To: Leiby, Sara (LARA); HYopp@HighlandParkCity.org; tford@highlandparkcity.org; Loris Thomas; Kathy Ramsey; rharlin@highlandparkcity.org
Cc: Allaire, LeeAnn (LARA); Lambert, Keith (LARA)
Subject: RE: Highland Park Building Code Adoption
Attachments: Highland Park Building Operations Documents.pdf

Good Afternoon,

Please see the attached documentations in response to requested information and updates to our application to enforce.

Please review and let us know if there are any additional changes or information needed by July 3, 2017. This will afford us the time to reply prior to the next meeting.

Thank you in advance and we look forward to a positive outcome at the next meeting.

Yvette L. Robinson, Director
Community & Economic Development
City of Highland Park
12050 Woodward Ave.
Highland Park, MI 48203
313.252.0050 ext. 257
313.852.7320 fax
YRobinson@HighlandParkCity.org
www.HighlandParkCity.org
"Return to Excellence"

-----Original Message-----

From: Leiby, Sara (LARA) [mailto:LeibyS@michigan.gov]
Sent: Thursday, May 11, 2017 3:40 PM
To: HYopp@HighlandParkCity.org; yrobinson@highlandparkcity.org
Cc: Allaire, LeeAnn (LARA); Lambert, Keith (LARA)
Subject: RE: Highland Park Building Code Adoption

Good Afternoon,

Please see the attached regarding the April 12, 2017 Construction Code Commission review of or your Application to Administer and Enforce Michigan Building, Electrical, Mechanical and Plumbing Codes. The attachment was also placed in the mail today.

If you have any questions, please contact the Administrative Services Division at (517)241-9303.

Sara Leiby, Secretary
Administrative Services Division
Bureau of Construction Codes
Department of Licensing & Regulatory Affairs
(517) 241-9303

PROPOSED BUDGET for HIGHLAND PARK BUILDING OPERATIONS

For 12 Periods Ending 7/31/2018

	Period Ending 8/31/2017	Period Ending 9/30/2017	Period Ending 10/31/2017	Period Ending 11/30/2017	Period Ending 12/31/2017	Period Ending 1/31/2018	Period Ending 2/28/2018	Period Ending 3/31/2018	Period Ending 4/30/2018	Period Ending 5/31/2018	Period Ending 5/30/2018	Period Ending 7/31/2018	Total
Revenue													
Building Permits	5000.00	7000.00	10000.00	10000.00	10000.00	11000.00	11000.00	12000.00	14000.00	15000.00	17000.00	20000.00	-142,000
Rentals, Vacants & Business Licenses	4000.00	5000.00	7000.00	8000.00	8000.00	8000.00	9000.00	9000.00	10000.00	10000.00	10000.00	10000.00	-98,000
Total Revenue	9000.00	12000.00	17000.00	18000.00	18000.00	19000.00	20000.00	21000.00	24000.00	25000.00	27000.00	30000.00	240000.00
Operating Costs													
Wages:	9,500	9,500	9,500	9,500	9,500	9,500	9,500	9,500	9,500	9,500	9,500	9,500	114,000
Temporary Employee:	500	500	500	500	500	500	500	500	500	500	500	500	6,000
Payroll Taxes	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000
Health Insurance:	0	0	0	0	0	0	0	0	0	0	0	0	0
Fuel:	300	300	300	300	300	300	300	300	300	300	300	300	3,600
Tools and Equipment:	200	200	200	200	200	200	200	200	200	200	200	200	2,400
Other Office Equipment- Misc:	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Total Cost Of Sales	15,500	15,500	15,500	15,500	15,500	15,500	15,500	15,500	15,500	15,500	15,500	15,500	186,000
Gross Revenue	6500.00	3500.00	1500.00	2500.00	2500.00	3500.00	4500.00	5500.00	8500.00	9500.00	11500.00	14500.00	54000.00
Expenses													
Company-issued Clothing:	50	50	50	50	50	50	50	50	50	50	50	50	600
Office Supplies:	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000
Postage and Delivery:	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000
Cellular Service:	500	500	500	500	500	500	500	500	500	500	500	500	6,000
	0	0	0	0	0	0	0	0	0	0	0	0	0
Seminars & Training	400	400	400	400	400	400	400	400	400	400	400	400	4,800
Dues and Subscriptions:	140	140	140	140	140	140	140	140	140	140	140	140	1,680
Total Expenses	3,590	3,590	3,590	3,590	3,590	3,590	3,590	3,590	3,590	3,590	3,590	3,590	43,080
Net Income From Operations	10090.00	7090.00	2090.00	1090.00	1090.00	90.00	910.00	1910.00	4910.00	5910.00	7910.00	10910.00	10.00
Net Income (Loss)	10090.00	7090.00	2090.00	1090.00	1090.00	90.00	910.00	1910.00	4910.00	5910.00	7910.00	10910.00	10.00



Highland Park
Construction Board of Appeals Appointees

1. Aubin Williams
2. Mike Curis
3. Antar Rageh
4. Nathan Harvey
5. Vacant – Appointment Acceptance Pending

Robert B. Blackwell Municipal Building
12050 Woodward Avenue
Highland Park, Michigan 48203
313-252-0050 ext. 240
313-852-7320 fax

BUILDING PERMIT APPLICATION

**CITY OF HIGHLAND PARK
BUILDING DEPARTMENT
12050 WOODWARD AVE.
HIGHLAND PARK, MICHIGAN 48203
(313) 252-7320**

OFFICE USE ONLY	
Permit # _____	
Issue Date: _____	
Issued By: _____	

PERMIT TYPE: BUILDING	CLASS: RESIDENTIAL	CATEGORY: NEW
MOVING	COMMERCIAL	REMODEL/ADDITION
CIRCLE ONE DEMOLITION	MULTI-FAMILY	GARAGE, BARN, SHED
IN EACH MISC.	INDUSTRIAL	DECK
COLUMN	OTHER	RE-ROOF
	RENEWAL	REPL. WINDOWS
	PRE-APPROVED	OTHER _____

ALL BLANKS MUST BE FILLED IN - INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED

PROPERTY ADDRESS & INFORMATION		
STREET NUMBER _____	STREET NAME _____	LOT NUMBER _____
41- - - -		
PROPERTY TAX I.D. # <small>(Example 41-000-00-0000-000)</small>	SUBDIVISION _____	

All notices are sent by e-mail. E-mail address: _____
Print clearly

APPLICANT INFORMATION:			
FIRST NAME _____	LAST NAME _____	BUSINESS NAME _____	
STREET ADDRESS _____		() _____	PHONE NUMBER
CITY _____	STATE _____	ZIP _____	() _____ FAX NUMBER

NOTE: ALL RESIDENTIAL CONTRACTORS MUST REGISTER WITH THE CITY ON A SEPARATE FORM

PROPERTY OWNER:			
FIRST NAME _____	LAST OR BUSINESS NAME _____	STREET ADDRESS _____	
CITY _____		STATE _____	ZIP _____ () _____ PHONE NUMBER

ALL REQUESTED INFORMATION MUST BE PROVIDED - INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED

FILL IN **ONE** OF THE NEXT TWO BOXES BELOW COMPLETELY
DEPENDING ON THE TYPE OF CONSTRUCTION

ALL RESIDENTIAL ONE AND TWO FAMILY CONSTRUCTION: (NEW/REMODEL/ADDITIONS)

CONSTRUCTION COST: _____ (INCLUDE ALL COSTS INCLUDING DRIVEWAYS ETC. BUT
NO LAND VALUE)

SQUARE FOOTAGE: _____ (INCLUDE ALL HABITABLE AREA ON ALL FLOORS
INCLUDING ALL FINISHED BASEMENT AREA
AND BONUS ROOMS)

BEDROOMS: _____ # BATHROOMS: FULL _____ HALF _____ # STORIES _____

WATER/SEWER UTILITIES NEW _____ EXISTING _____

FINISH FLOOR ELEVATION: _____ FINISH GRADE ELEVATION: _____

ALL OTHER CONSTRUCTION: COMMERCIAL/INDUSTRIAL/MULTI FAMILY

CONSTRUCTION COST: _____ (INCLUDE ALL COSTS EXCEPT FIXTURES AND SITE
IMPROVEMENTS)

SQUARE FOOTAGE: _____ (TOTAL AREA USING OUTSIDE DIMENSIONS)

MBC USE GROUP(S) _____ MBC CONSTRUCTION TYPE: _____

SPRINKLER SYSTEM TYPE: _____ MEZZANINE: YES NO IF YES AREA IS _____

SPECIFIC USE(S) OF STRUCTURE: _____

OF FIRE AREAS: _____

HAS KNOX BOX BEEN ORDERED? YES NO IS SPECIAL INSPECTION LIST ATTACHED? YES NO

ARCHITECT: (IF APPLICABLE)

FIRST NAME LAST OR BUSINESS NAME NUMBER STREET NAME

CITY STATE ZIP ()
PHONE NUMBER

()
FACSIMILE NUMBER (REQUIRED)

**ALL SUBMISSIONS MUST INCLUDE TWO COPIES OF THE CONSTRUCTION DOCUMENTS. ONE
COPY MUST BE A FULL SIZE COPY (24 X 36 MAXIMUM) TO SCALE AND THE OTHER MUST BE
NO LARGER THAN 11 X 17 INCHES. ALL REDUCED COPIES MUST BE FULLY LEGIBLE.
REVERSED TEXT DRAWINGS WILL NOT BE ACCEPTED.**

DESCRIBE IN DETAIL THE SCOPE OF THE WORK

PERMITS ARE NOT TRANSFERABLE AS TO PERSON OR PLACE AND ARE NOT REFUNDABLE. ISSUANCE OF A PERMIT DOES NOT GUARANTEE COMPLIANCE WITH ANY BUILDING OR OTHER CODE. HOMEOWNERS MUST COMPLETE WORK THEMSELVES OR HIRE LICENSED CONTRACTORS. COMPLETED WORK MUST BE INSPECTED IMMEDIATELY. THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING PERMITS AND INSPECTIONS AND PAYMENT OF FEES. IF WORK IS STARTED BEFORE A PERMIT IS ISSUED AN ADDITIONAL INVESTIGATIVE FEE WILL BE ASSESSED.

SECTION 23a OF THE STATE CONSTRUCTION CODE ACT OF 1972, ACT 230 OF THE PUBLIC ACTS OF 1972, BEING SECTION 125.15321 OF THE MICHIGAN COMPILED LAWS, PROHIBITS A PERSON FROM CONSPIRING TO CIRCUMVENT THE LICENSING REQUIREMENTS OF THE 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.

APPLICANT SIGNATURE: I HAVE READ AND UNDERSTAND THE CONDITIONS LISTED ABOVE

APPLICANT'S SIGNATURE (SEE AFFADAVIT BELOW)

DATE

IF THE APPLICANT IS NOT THE OWNER, THE AFFIDAVIT BELOW MUST BE COMPLETED BY THE APPLICANT.

NON-OWNER APPLICANT AFFIDAVIT

I, _____ HEREBY CERTIFY THAT THE PROPOSED WORK IS
NAME OF APPLICANT

AUTHORIZED BY THE OWNER OF RECORD AND THAT I HAVE BEEN AUTHORIZED BY THE OWNER,

PRINTED OWNER(S) NAME(S) OF _____
OWNER'S ADDRESS

FOR THE PURPOSE OF APPLYING FOR, AND OBTAINING, THE PERMIT HEREIN REQUESTED.

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.

APPLICANT'S SIGNATURE

DATE

OFFICE USE ONLY

	FEES:	PAID:
Administrative Fee:	_____	_____
Permit Fee:	_____	_____
Bond:	_____	_____
Bond Number:	_____	
Plan Review Fee:	_____	_____
Eng. Plot Plan Fee:	_____	_____
Contractor Registration:	_____	_____
Occupancy Fee:	_____	_____
Investigative Fee:	_____	_____
Other:	_____	_____
TOTAL:	_____	_____

OFFICE USE ONLY:	
APPROVED BY _____	DATE _____
COMMENTS:	

REV 11/15

**CITY OF HIGHLAND PARK
BUILDING DEPARTMENT
12050 WOODWARD AVE. HIGHLAND PARK, MI 48203
(313) 852-0050**

**STATEMENT OF POLICIES, REQUIREMENTS AND REGULATIONS
AS OF APRIL, 2017**

This document contains the general policies, requirements and regulations of the City of Highland Park Building Division as they pertain to the review, issuance and/or inspection of site plans, building and trade permits, code inspections, and certificates of occupancy. It is not intended to be all inclusive and is subject to change at any time without notice.

PERMITS:

To obtain permits from this department may require any or all of the following material.

1. Approved Site Plan
2. Construction Drawings
3. Building, Electrical, Mechanical or Plumbing License
4. For County/State roads - driveway (ROW) permit (from WCRC or MDOT)
5. Soil Erosion Permit or waiver
6. Plan approval from the Wayne County Health Department or the Department of Agriculture
7. Payment of Required Fees

Requirements for these items are as follows:

1. SITE PLANS

A. Single Family Residential Construction

A site plan of the parcel or lot is required for all new residential construction and for all other residential construction which involves an addition to, or a change in, the number, size or shape of any structure(s). Structures include such things as accessory structures, pools and garages in addition to houses. The site plan must show the following:

1. STANDARD DRAFTING REQUIREMENTS
 - a. North arrow
 - b. Graphic Scale
 - c. Lot dimensions, bearings or interior angles
 - d. Legal description
 - e. Legend

2. EXISTING CONDITIONS

- a. All structures, houses, garages, driveways, sheds, etc., on site (if any) and off-site within 50 feet.
- b. All utilities, based on field observations and city records, on site or adjacent thereto.
- c. Existing street catch basins with dimensional tie to the nearest property line.
- d. Ground elevations taken approximately on a one (1) foot contour:
 - 1) on site
 - 2) at finish grade (F.G.) of adjacent houses, garages, driveways
 - 3) 50 foot off-site in all directions including back of sidewalk, top of curb and gutter and along the rear lot line (extended) and along the front lot line (extended)
- e. Bench Mark near the site, with an elevation related to the U.S.G.S. Datum.

3. PROPOSED CONDITIONS

- a. Location and dimensions (size) of new house, garage, and driveway.
- b. Drainage pattern by arrows.
- c. Location of connections and leads for the water service and sanitary sewer.
- d. Proposed Elevations:
 - 1) finish floor and bottom of footing
 - 2) finish grade (brick ledge) of proposed house
 - 3) every 50 feet along all property lines including the lot corners
 - 4) all driveway corners and at the two points along the front setback line
 - 5) finish grade of proposed garage slab
 - 6) threshold elevation of any side door opening to a driveway.
- e. Location and dimensions of all easements on the property.
- f. Method of discharge, and the location and type, of all underground piping for the sump pump and ground water. The following methods of discharge for ground water and sump pumps may be approved as noted.
 - 1) Connection to a storm structure or storm sewer. This is the preferred method and will be required unless the applicant can demonstrate that using this method is a severe economic hardship or a practical difficulty.
 - 2) On site discharge into a swale. The applicant must furnish soil and engineering information to prove the swale can contain, and dissipate, the discharge within the site. Unobstructed point discharge (sump discharge) into, or onto, public sidewalks or other public right-of-way shall not be permitted.
 - 3) In the case where discharge can not be accomplished by the above methods, and the property is serviced by a combined sewer system, the applicant may request discharge into the combined sewer line pursuant to the provisions of the Michigan Plumbing Code. This is considered a last resort method. A sump pump

installation shall be required in all such cases to facilitate discharge to the exterior of the structure in an emergency.

All underground storm or ground water piping serving more than one parcel shall be in recorded easements.

Photocopier enlargements of subdivision site plans or plats will not be accepted. Residential site plans may be a maximum of 11 x 17 inches. Others must provide one copy reduced to 11 x 17 along with the required sets to scale.

B. Commercial, Multi-family, and Industrial Construction

New commercial, multi-family or industrial construction requires site plan approval by the City of Highland Park Planning Commission. Additionally, any construction which involves an addition to, or a change in, the number, size or shape of any structure or landscaping also requires review of the amended site plan by the Commission. No permits will be issued until the site plan review is complete and signed copies of the approved or amended plan are received from the Commission.

2. **CONSTRUCTION DRAWINGS**

Complete drawings, including an electrical layout plan are required for all buildings and structures. Complete electrical, mechanical and plumbing plans are required on all plans except one and two family residential. One and two family residential plans under thirty-five hundred (3500) square feet may be submitted by a currently licensed Michigan Residential Builder or a qualified homeowner. All other drawings must bear the countersigned seal of a Michigan registered architect or engineer. **At least one set of drawings must be submitted in a format no larger than 11 x 17 inches.** 11 X 17 drawings which are reduced from larger drawings must contain a graphic scale usable on the reduced drawing and must be legible. Reverse layout plans with reversed text will not be accepted.

3. **BUILDING, ELECTRICAL, MECHANICAL OR PLUMBING LICENSE**

Any contractor making application for a permit must be licensed in the trade for which the permit is requested with the following exceptions:

- A. Commercial building permits (requires sealed plans).
- B. Qualified homeowners.

All residential builders, maintenance and alteration, demolition and moving contractors, electrical contractors, mechanical contractors, plumbing contractors, fire protection contractors, alarm contractors, sign electrical contractors and mobile home installers must register with the City prior to applying for permits. Initial registration requires the license holder to appear in person.

4. **CONCRETE PERMITS**

New or replacement exterior concrete placement requires a concrete permit. This permit is for the purpose of checking grades and drainage after forming. We do not inspect the flatwork concrete itself on private property.

5. FEES

All permit fees are established by resolution of the City Council. The current fee schedule is available from the Community Development Department.

6. INSPECTIONS:

The City of Highland Park provides inspection services through its Building Department for all required inspections except those requiring a licensed professional (surveyor or engineer). Services are provided by State registered inspectors. All inspections are scheduled by the City of Highland Park Building Division at (313) 252-0050.

Inspections must be requested one day in advance. Late requests will be honored only if the workload permits. Inspections are done Monday through Friday between 9:30 AM and 3:30 PM. (Note: Schedule may vary due to workload and inspector availability.)

We can not guarantee an inspection time.

All inspections which do not pass will require payment of a re-inspection fee. This includes lock-outs and missed appointments. Fees must be received prior to re-scheduling the inspection. Inspection fee schedules and required inspection lists are available from this Department.

Cancellations must be received before 9:00 AM the day of the inspection or a re-inspection fee may be charged. Inspections canceled or rescheduled more than once may be subject to a re-inspection fee.

7. CERTIFICATES OF OCCUPANCY:

A certificate of occupancy must be obtained prior to occupying the following for any reason:

1. Any new structure.
2. A new addition to any structure.
3. Any structure which has had a change of use under the building code.
4. All business uses.

Commercial certificates of occupancy for new construction must be requested 10 working days in advance. Single family residential certificates require 5 working days notice. The site must meet the minimum requirements set forth in the Ordinances of the City of Highland Park. Temporary certificates will be issued for a maximum of 90 days only in the following circumstances:

1. Construction or site completion is delayed more than seven (7) days by weather.
2. Site completion, such as landscaping, can not be completed do to City regulations or seasonal conditions.
3. Other unusual circumstances at the sole discretion of the Department.

Temporary certificates will not be issued due to construction delays, closing schedules, or poor planning on the part of the builder or purchaser.

8. OTHER DEPARTMENT POLICIES:

- A. Except where accomplished by a rated unit, no access opening shall be permitted in any required fire separation assembly, and all electric boxes and other similar devices in the surface of such assemblies shall be 2 hr. rated.
- B. All water services must conform to the approved water service installation policy.
- C. On all construction sites the property lines must be identified and verifiable at all times during construction.

City of Highland Park
12050 Woodward Ave.
Highland Park, MI 48203
(313) 252-0050

CONTRACTOR REGISTRATION FORM

If the Federal I.D. number provided is a Social Security number, pursuant to the Michigan Social Security Number Privacy Act, this document contains CONFIDENTIAL INFORMATION

Business Name: _____

Business Owner or Qualifying Officer: _____

Address: _____ **Telephone #:** _____

_____ **Cell Phone #:** _____

Federal I.D. #: _____ **Fax #:** _____

Contractor License #: _____ **Expiration date:** _____

E-mail: _____

Workers Comp Ins. Carrier (or reason for exemption): _____

MESC Employer # (Self Employed): _____

FOR BUILDING & SIGN CONTRACTORS ONLY:

Authorized Signatures – please print (only the contractor and the following names will be allowed to obtain permits):

FOR ELECTRICAL, PLUMBING, MECHANICAL & SIGN CONTRACTORS ONLY:

Master/Specialist authorized to obtain permits – please print (copy of master's/specialist's license(s) must be attached)

Name: _____ Master/Specialist License #: _____

For Electrical and Plumbing provide Contractor's License #: _____

I, the undersigned, hereby certify that the information herein is true and correct to the best of my knowledge.

Signature of Contractor: _____ **Date:** ____/____/____
Has appeared in person or has signed this letter in front of a Notary Public whose signature and seal is affixed hereto.

Subscribed and sworn to me on this

_____ day of _____, in the year _____

_____, Notary Public

Printed Name

_____ County, Michigan

Acting in _____ County, Michigan

My commission expires: _____

Office Use Only:

Reg. # _____

Expires: ____/____/____

Licenses Verified

Initials: _____ Date: _____

Did you remember to include:

- Copy of licensee's (contractor) driver's license.
- Current contractor's license, and current masters or specialist license for electrical, plumbing and sign specialists. Copy of qualifying officer's license for LLC's, Corporations and Partnerships.
- Registration fee from reverse side.
- Signature of licensee (contractor) on this form (**must be notarized if form is not being submitted in person**).

FOR OFFICE USE ONLY

PERMIT #: _____

DATE ISSUED: _____

BY: _____

ELECTRICAL PERMIT APPLICATION

JOB ADDRESS: _____

OWNER'S NAME: _____ PHONE: _____ FAX: _____

OWNER'S ADDRESS: _____ CITY: _____ ZIP: _____

APPLICANT: _____ PHONE: _____ FAX: _____

APPLICANT'S ADDRESS: _____ CITY: _____ ZIP: _____

E-mail address: _____

FEES & WORK DESCRIPTION:

No. of Inspections	Type of Inspection or Fee	Fee	Cost (No. x Fee)
Required	Administrative Fee	\$50.00	\$50.00
	Temporary Service	\$75.00	
	Permanent Service	\$75.00	
	Underground Inspection	\$75.00	
	Rough Inspection	\$75.00	
	Final Inspection	\$75.00	
	Other _____	\$75.00	
	TOTAL FEES:		

FOR OFFICE USE ONLY

	<u>FEES</u>	<u>PAID</u>
Permit: _____		
Registration: _____		
Investigative Fee: _____		
Other: _____		
TOTAL: _____		

Code Official Approval: _____

Date approved for issue: _____

DESCRIPTION OF WORK: _____

PLAN REVIEW: Plan review is required when the building exceeds 3,500 square feet or the service exceeds 400 amperes. Required plans shall be prepared under the direct supervision of a **qualified** architect or engineer licensed pursuant to Act 299, of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's seal.

HAVE PLANS BEEN SUBMITTED? YES NO NOT REQUIRED

APPLICANT'S SIGNATURE: Section 23A of the State Construction Act of 1972, Act No. 230 of the Public Acts of 1972, being Section 125.1523A of the Michigan Compiled Laws, 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. By signing this application I consent to receiving notices by e-mail.

HOMEOWNER AFFIDAVIT: I hereby certify the work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the electrical code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the Inspector. I will cooperate with the Inspector and assume the responsibility to arrange for necessary inspections.

I HAVE READ AND UNDERSTAND THE ABOVE PROVISIONS:

APPLICANT'S SIGNATURE DATE

FEE INFORMATION ON REVERSE SIDE

1.0 ELECTRICAL PERMIT FEE SCHEDULE

- 1.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 1.2 The Permit Fees for any electrical permit shall be \$75.00 per inspection. One inspection and the application fee are required on all permits. Permit renewals shall be \$30.00. Permit fees are non-refundable after work has started and non-transferable.
- 1.3 Permits for new construction shall be for the minimum number of inspections required in Section 3.
- 1.4 An investigative fee equal to the permit fee, shall be assessed if a permit was not issued prior to commencement of work.
- 1.5 A fee of \$40.00 per inspection shall be charged for the re-inspection of all failed inspections.

3.0 INSPECTIONS: MINIMUM NUMBER AND WHEN REQUIRED

3.1 Electrical: Single-Family Residential

For new construction a minimum of three inspections are required, a service, rough and final inspection. An additional inspection shall be required if temporary service is provided.

Remodels shall require a minimum of two inspections, a rough and a final. For all other types or work of this class, inspections shall be required for each visit required from the electrical inspector.

3.2 Electrical: Multiple-Family, Commercial, Industrial

For a multiple-family structure or multi-tenant commercial or industrial building, a minimum of two inspections, a rough and a final, shall be required for each designed unit in such a structure. An inspection shall also be required for the building service.

For all other buildings of this class, inspections shall be required for each visit required from the electrical inspector. The inspector shall estimate the number of visits required.

A separate inspection shall be required for temporary service.

**CITY OF HIGHLAND PARK
BUILDING DEPARTMENT
12050 WOODWARD AVE. HIGHLAND PARK, MI 48203
(313) 852-0050**

FOR OFFICE USE ONLY

PERMIT #: _____

DATE ISSUED: _____

BY: _____

MECHANICAL PERMIT APPLICATION

JOB ADDRESS: _____

OWNER'S NAME: _____ PHONE: _____ FAX: _____

OWNER'S ADDRESS: _____ CITY: _____ ZIP: _____

APPLICANT: _____ PHONE: _____ FAX: _____

APPLICANT'S ADDRESS: _____ CITY: _____ ZIP: _____

Check here to receive Notices of Repair by e-mail . E-mail address: _____

FEES & WORK DESCRIPTION:

No. of Inspections	Type of Inspection or Fee	Fee	Cost (No. x Fee)
Required	Administrative Fee	\$50.00	\$50.00
	Rough Heat	\$75.00	
	Final Heat	\$75.00	
	Residential Air Conditioning	\$75.00	
	Commercial Heat or Air (One inspection per unit)	\$75.00	
	Refrigeration	\$75.00	
	Gas Line	\$75.00	
	Fire Suppression	\$75.00	
	Other _____		
	TOTAL FEES:		

FOR OFFICE USE ONLY

	<u>FEES</u>	<u>PAID</u>
Permit: _____		
Registration: _____		
Investigative Fee: _____		
Other: _____		
TOTAL: _____		
Code Official Approval: _____		
Date approved for issue: _____		

DESCRIPTION OF WORK: _____

PLAN REVIEW: Plan review is not required for one and two family dwellings under 3,500 square feet or for alterations determined to be minor by the building official. Plans are required for all other building types and shall be prepared under the direct supervision of a **qualified** architect or engineer licensed pursuant to Act 299, of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's seal.

HAVE PLANS BEEN SUBMITTED? YES NO NOT REQUIRED

APPLICANT'S SIGNATURE: Section 23A of the State Construction Act of 1972, Act No. 230 of the Public Acts of 1972, being Section 125.1523A of the Michigan Compiled Laws, 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 HAVE READ AND UNDERSTAND THE ABOVE PROVISIONS:

APPLICANT'S SIGNATURE DATE

FEE INFORMATION ON REVERSE SIDE

1.0 MECHANICAL PERMIT FEE SCHEDULE

- 1.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 1.2 The Permit Fees for any mechanical permit shall be \$75.00 per inspection. One inspection and the application fee are required on all permits. Permit renewals shall be \$35.00. Permit fees are non-refundable after work has started and non-transferable.
- 1.3 Contractor registration fee shall be \$15.00 for mechanical (all categories).
- 1.4 Permits for new construction shall be for the minimum number of inspections required in Section 3.
- 1.5 An investigative fee equal to the permit fee, shall be assessed if a permit was not issued prior to commencement of work.
- 1.6 A fee of \$40.00 per inspection shall be charged for the re-inspection of all failed inspections.

3.0 INSPECTIONS: MINIMUM NUMBER AND WHEN REQUIRED

3.3 Mechanical: Single-Family Residential

1. For new construction a minimum of three inspections, a rough, final, and gas line inspection shall be required for each heating system. A separate inspection shall be required for each cooling system. A heating or cooling unit without a distribution system shall require one inspection.

Remodels shall require a minimum of a rough and final inspection. For all other types or work of this class, inspections shall be required for each visit required from the mechanical inspector.

2. Pre-fab fireplaces shall require a minimum of one inspection per dwelling unit. Multiple fireplaces in the same dwelling unit, and inspected on the same visit, shall require one inspection. Units may also require a gas line inspection.

3.4 Mechanical: Multiple-Family, Commercial, Industrial

Each heating and/or cooling unit shall require one inspection. Each multi-family dwelling unit shall require a rough and final. Installation or modification of any distribution system not involving the associated heating/cooling unit shall require one inspection. Where an underground inspection(s) is required, an additional inspection shall be charged per visit. Gas lines require an additional inspection per system.

Refrigeration units of one horse-power or greater shall require one inspection per unit.

Concealed piping shall require an additional inspection per system.

**CITY OF HIGHLAND PARK
BUILDING DEPARTMENT
12050 WOODWARD AVE. HIGHLAND PARK, MI 48203
(313) 852-0050**

FOR OFFICE USE ONLY	
PERMIT #:	_____
DATE ISSUED:	_____
BY:	_____

PLUMBING PERMIT APPLICATION

JOB ADDRESS: _____

OWNER'S NAME: _____ PHONE: _____ FAX: _____

OWNER'S ADDRESS: _____ CITY: _____ ZIP: _____

APPLICANT: _____ PHONE: _____ FAX: _____

APPLICANT'S ADDRESS: _____ CITY: _____ ZIP: _____

Check here to receive Notices of Repair by or e-mail . E-mail address: _____

FEES & WORK DESCRIPTION:

No. of Inspections	Type of Inspection or Fee	Fee	Cost (No. x Fee)
Required	Administrative Fee	\$50.00	\$50.00
	Water or Sewer Lead or Private Structures (ea.)	\$75.00	
	Underground Inspection	\$75.00	
	Rough Inspection	\$75.00	
	Final Inspection	\$75.00	
	Other _____	\$75.00	
	Other _____		
	TOTAL FEES:		

FOR OFFICE USE ONLY	
<u>FEES</u>	<u>PAID</u>
Permit: _____	_____
Registration: _____	_____
Investigative Fee: _____	_____
Other: _____	_____
TOTAL: _____	_____
Code Official Approval: _____	
Date approved for issue: _____	

DESCRIPTION OF WORK: _____

PLAN REVIEW: Plan review is not required for one and two family dwellings under 3,500 square feet, alterations determined to be minor by the building official. Plans are required for all other building types and shall be prepared under the direct supervision of a **qualified** architect or engineer licensed pursuant to Act 299, of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's seal.

HAVE PLANS BEEN SUBMITTED? YES NO NOT REQUIRED

APPLICANT'S SIGNATURE: Section 23A of the State Construction Act of 1972, Act No. 230 of the Public Acts of 1972, being Section 125.1523A of the Michigan Compiled Laws, 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 HAVE READ AND UNDERSTAND THE ABOVE PROVISIONS:

APPLICANT'S SIGNATURE DATE

FEE INFORMATION ON REVERSE SIDE

1.0 PLUMBING PERMIT FEE SCHEDULE

- 1.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 1.2 The Permit Fees for any plumbing permit shall be \$75.00 per inspection. One inspection and the application fee are required on all permits. Permit renewals shall be \$30.00. Permit fees are non-refundable after work has started and non-transferable.
- 1.3 Contractor registration fee shall be \$15.00.
- 1.4 Permits for new construction shall be for the minimum number of inspections required in Section 3.
- 1.5 An investigative fee equal to the permit fee, shall be assessed if a permit was not issued prior to commencement of work.
- 1.6 A fee of \$40.00 per inspection shall be charged for the re-inspection of all failed inspections.

3.0 INSPECTIONS: MINIMUM NUMBER AND WHEN REQUIRED

3.5 Plumbing: Single-Family Residential

For new construction a underground, rough and final plumbing inspection shall be required.

Remodels shall require a minimum of two inspections, a rough and final. For all other types or work of this class, inspections shall be required for each visit required from the plumbing inspector.

3.6 Plumbing: Multiple-Family, Commercial, Industrial

Each unit in a multiple-family structure or in a multi-tenant structure shall require a rough and a final inspection. A multiple-family structure or other multi-tenant building shall require an additional inspection for underground plumbing at the rate of one inspection per building. An additional inspection shall be required for sewer and water service.

All other commercial and industrial buildings shall be charged at the rate of one inspection for each visit required from the plumbing inspector. The inspector shall estimate the number of visits required.



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

SHELLY EDGERTON
DIRECTOR

May 11, 2017

Mayor Hubert Yopp
City of Highland Park
12050 Woodward Ave.
Highland Park, MI 48203

RE: Application to Administer and Enforce Michigan Building, Electrical, Mechanical and Plumbing Codes

Dear Mayor Yopp:

At the April 12, 2017 Construction Code Commission meeting, the Commission postponed consideration of the City of Highland Park's Application to Administer and Enforce to allow time for additional documentation to be provided reflecting the proposed program budget, a construction board of appeals, and applications are brought up to statutory requirements. Attached are excerpts from your application which are highlighted indicating a conflict with 1972 PA 230. If you wish to address the matter at the July 12, 2017 meeting, please provide any supplemental material for your application regarding the discussion from the meeting no later than June 7, 2017.

The July 12, 2017 meeting will be located at 611 West Ottawa Street, Lansing, MI 48933 in the Upper Level Conference Room #4. The public entrance is on the south side of the building. The meeting will begin at 9:30 a.m.

You or your representative are encouraged to attend the meeting. If you have any questions, please contact the Administrative Services Division at (517) 241-9303.

cc: Ms. Yvette Robinson, Department of Community and Economic Development Director
Mr. Jack Williams, Building Official
City of Highland Park Clerk
BCC Building Division
BCC Electrical Division
BCC Mechanical Division
BCC Plumbing Division
BCC Permits and Plan Review Division
BCC Licensing and Complaints Division



CITY OF HIGHLAND PARK

Return to Excellence

Hubert Yopp, Mayor

Department of Community & Economic Development

March 16, 2017

Bureau of Construction Codes
Construction Code Commission
P.O. Box 30254
Lansing, MI 48909

RE: Application to Enforce for the City of Highland Park

Dear Commission Members,

Late in 2016 the City of Highland Park filed an application to enforce the building codes in the City. Currently those services are being provided by the State. The City desires to provide full time local access to building department services for its residents as well as full time inspection and enforcement of the codes throughout the City. It is our belief that full time enforcement is necessary to assure compliance.

The City currently has a contract with SAFEbuilt, Inc. to provide these services. SAFEbuilt is currently providing housing and business license inspections and is ready to provide full building department services upon State approval. All inspection personnel are full time employees and are registered with the State under Act 54.

The contract with SAFEbuilt provides for SAFEbuilt to receive seventy-five percent of the permit revenue with the City retaining the remaining twenty-five percent. SAFEbuilt will provide inspection staff, back-up permit techs, vehicles, phones, field computers, forms and equipment; the City will provide office space, one permit tech and office computers and some office equipment. All records will be maintained at the Highland Park City Hall. A formal budget has not been established because we were unable to get permit revenue information from the State. A fee resolution has been adopted by the City Council and any future changes will also be done by resolution of City Council.

Based on SAFEbuilt's experience is anticipated that plan reviews will average three days for residential plans and ten days for commercial/industrial plans. Codes and standards commonly used in the local plan review process will be kept at Highland Park Building Department office and will be available for the public. SAFEbuilt is a national company and through its many offices and locations has access to the remaining standards.

A Board of Review has not yet been established and finding members is extremely problematic as discussed at the January Board meeting. We will continue to pursue this issue. We are aware, per the Director at the January meeting, that we can use the State Board as the CBA in the interim should it become necessary.

Robert B. Blackwell Municipal Building
12050 Woodward Avenue
Highland Park, Michigan 48203
313-252-0050 ext. 240
313-852-7320 fax

BUILDING PERMIT APPLICATION

CITY OF HIGHLAND PARK
 BUILDING DEPARTMENT
 12050 WOODWARD AVE.
 HIGHLAND PARK, MICHIGAN 48203
 (313) 252-0050 ext. 209

OFFICE USE ONLY	
Permit #	_____
Issue Date:	_____
Issued By:	_____

PERMIT TYPE: BUILDING	CLASS: RESIDENTIAL	CATEGORY: NEW
MOVING	COMMERCIAL	REMODEL/ADDITION
CIRCLE ONE DEMOLITION	MULTI-FAMILY	GARAGE, BARN, SHED
IN EACH MISC.	INDUSTRIAL	DECK
COLUMN	OTHER	RE-ROOF
	RENEWAL	REPL. WINDOWS
	PRE-APPROVED	OTHER _____

ALL BLANKS MUST BE FILLED IN - INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED

PROPERTY ADDRESS & INFORMATION		
STREET NUMBER	STREET NAME	LOT NUMBER
41- - - -		
PROPERTY TAX I.D. # (Example 41-000-00-0000-000)	SUBDIVISION	

All notices are sent by e-mail. E-mail address: _____
 Print clearly

APPLICANT INFORMATION:			
FIRST NAME	LAST NAME	BUSINESS NAME	
STREET ADDRESS		()	PHONE NUMBER
CITY	STATE	ZIP	() FAX NUMBER

NOTE: ALL RESIDENTIAL CONTRACTORS MUST REGISTER WITH THE CITY ON A SEPARATE FORM

PROPERTY OWNER:			
FIRST NAME	LAST OR BUSINESS NAME	STREET ADDRESS	
CITY	STATE	ZIP	() PHONE NUMBER
DRIVER'S LICENSE NUMBER		DATE OF BIRTH	

ALL REQUESTED INFORMATION MUST BE PROVIDED - INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED

DESCRIBE IN DETAIL THE SCOPE OF THE WORK

PERMITS ARE NOT TRANSFERABLE AS TO PERSON OR PLACE AND ARE NOT REFUNDABLE. ISSUANCE OF A PERMIT DOES NOT GUARANTEE COMPLIANCE WITH ANY BUILDING OR OTHER CODE. HOMEOWNERS MUST COMPLETE WORK THEMSELVES OR HIRE LICENSED CONTRACTORS. COMPLETED WORK MUST BE INSPECTED IMMEDIATELY. THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING PERMITS AND INSPECTIONS AND PAYMENT OF FEES. IF WORK IS STARTED BEFORE A PERMIT IS ISSUED AN ADDITIONAL INVESTIGATIVE FEE WILL BE ASSESSED.

SECTION 23a OF THE STATE CONSTRUCTION CODE ACT OF 1972, ACT 230 OF THE PUBLIC ACTS OF 1972, BEING SECTION 125.15321 OF THE MICHIGAN COMPILED LAWS, PROHIBITS A PERSON FROM CONSPIRING TO CIRCUMVENT THE LICENSING REQUIREMENTS OF THE 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.

APPLICANT SIGNATURE: I HAVE READ AND UNDERSTAND THE CONDITIONS LISTED ABOVE

APPLICANT'S SIGNATURE (SEE AFFADAVIT BELOW)

DATE

IF THE APPLICANT IS NOT THE OWNER, THE AFFIDAVIT BELOW MUST BE COMPLETED BY THE APPLICANT. PROVIDE A COPY OF THE SIGNED CONTRACT. RESIDENTIAL CONTRACTS MUST BE IN THE NAME SHOWN ON THE RESIDENTIAL BUILDER'S OR MAINTENANCE AND ALTERATION CONTRACTOR'S LICENSE.

NON-OWNER APPLICANT AFFIDAVIT

I, _____ HEREBY CERTIFY THAT THE PROPOSED WORK IS
NAME OF APPLICANT

AUTHORIZED BY THE OWNER OF RECORD AND THAT I HAVE BEEN AUTHORIZED BY THE OWNER,

PRINTED OWNER(S) NAME(S) OF _____
OWNER'S ADDRESS

TO ACT AS HIS/HER/THEIR AUTHORIZED AGENT FOR THE PURPOSE OF APPLYING FOR, AND OBTAINING, THE PERMIT HEREIN REQUESTED.

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.

APPLICANT'S SIGNATURE

DATE

All underground storm or ground water piping serving more than one parcel shall be in recorded easements.

Photocopier enlargements of subdivision site plans or plats will not be accepted. Residential site plans may be a maximum of 11 x 17 inches. Others must provide one copy reduced to 11 x 17 along with the required sets to scale.

B. Commercial, Multi-family, and Industrial Construction

New commercial, multi-family or industrial construction requires site plan approval by the City of Highland Park Planning Commission. Additionally, any construction which involves an addition to, or a change in, the number, size or shape of any structure or landscaping also requires review of the amended site plan by the Commission. No permits will be issued until the site plan review is complete and signed copies of the approved or amended plan are received from the Commission.

2. **CONSTRUCTION DRAWINGS**

Complete drawings, including an electrical layout plan are required for all buildings and structures. Complete electrical, mechanical and plumbing plans are required on all plans except one and two family residential. One and two family residential plans under thirty-five hundred (3500) square feet may be submitted by a currently licensed Michigan Residential Builder or a qualified homeowner. All other drawings must bear the countersigned seal of a Michigan registered architect or engineer. For all projects the original plan(s), DRAWN TO SCALE, shall be a maximum of 24 x 36 inch format. **At least one set of drawings must be submitted in a format no larger than 11 x 17 inches.** 11 X 17 drawings which are reduced from larger drawings must contain a graphic scale usable on the reduced drawing and must be legible. Drawings larger than 24 x 36 inches will not be accepted. Reverse layout plans with reversed text will not be accepted.

3. **BUILDING, ELECTRICAL, MECHANICAL OR PLUMBING LICENSE**

Any contractor making application for a permit must be licensed in the trade for which the permit is requested with the following exceptions:

- A. Commercial building permits (requires sealed plans).
- B. Qualified homeowners.

All residential builders, maintenance and alteration, demolition and moving contractors, electrical contractors, mechanical contractors, plumbing contractors, fire protection contractors, alarm contractors, sign electrical contractors and mobile home installers must register with the City prior to applying for permits. Initial registration requires the license holder to appear in person. **All persons registering must present their license, federal identification number, workman's compensation carrier, and M.E.S.C. number and pay a registration fee. All contractors' vehicles must have identifying signs on the vehicle.**

4. **CONCRETE PERMITS**

New or replacement exterior concrete placement requires a concrete permit. This permit is for the purpose of checking grades and drainage after forming. We do not inspect the flatwork concrete itself on private property.

City of Highland Park
12050 Woodward Ave.
Highland Park, MI 48203
(313) 252-0050

CONTRACTOR REGISTRATION FORM

If the Federal I.D. number provided is a Social Security number, pursuant to the Michigan Social Security Number Privacy Act, this document contains CONFIDENTIAL INFORMATION

Business Name: _____

Business Owner or Qualifying Officer: _____

Address: _____ Telephone #: _____

Cell Phone #: _____

Federal I.D. #: _____ Fax #: _____

Contractor License #: _____ Expiration date: _____

E-mail: _____

Workers Comp Ins. Carrier (or reason for exemption): _____

MESC Employer # (Self Employed): _____

FOR BUILDING & SIGN CONTRACTORS ONLY:

Authorized Signatures – please print (only the contractor and the following names will be allowed to obtain permits):

FOR ELECTRICAL, PLUMBING & SIGN CONTRACTORS ONLY:

Master/Specialist authorized to obtain permits – please print (copy of master's/specialist's license(s) must be attached)

Name: _____ Master/Specialist License #: _____

Please be advised that the State of Michigan licensing regulations allow only licensed Electrical/Plumbing Contractors and Authorized Master to obtain Electrical/Plumbing permits.

I, the undersigned, hereby certify that the information herein is true and correct to the best of my knowledge.

Signature of Contractor: _____ Date: ____/____/____
Has appeared in person or has signed this letter in front of a Notary Public whose signature and seal is affixed hereto.

Subscribed and sworn to me on this

_____ day of _____, in the year _____

_____, Notary Public

Printed Name

_____ County, Michigan

Acting in _____ County, Michigan

My commission expires: _____

Office Use Only:

Reg. # _____

Expires: ____/____/____

Licenses Verified

Initials: _____ Date: _____

Did you remember to include:

- Copy of licensee's (contractor) driver's license.
- Current contractor's license, and current masters or specialist license for electrical, plumbing and sign specialists. Copy of qualifying officer's license for LLC's, Corporations and Partnerships.
- Registration fee from reverse side.
- Signature of licensee (contractor) on this form (must be notarized if form is not being submitted in person).

1.0 ELECTRICAL PERMIT FEE SCHEDULE

- 1.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 1.2 The Permit Fees for any electrical permit shall be \$75.00 per inspection. One inspection and the application fee are required on all permits. Permit renewals shall be \$30.00. Permit fees are non-refundable after work has started and non-transferable.
- 1.3 **Contractor registration fee shall be \$15.00 for electrical (all categories).**
- 1.4 Permits for new construction shall be for the minimum number of inspections required in Section 3.
- 1.5 An investigative fee equal to the permit fee, shall be assessed if a permit was not issued prior to commencement of work.
- 1.6 A fee of \$40.00 per inspection shall be charged for the re-inspection of all failed inspections.

3.0 INSPECTIONS: MINIMUM NUMBER AND WHEN REQUIRED

3.1 Electrical: Single-Family Residential

For new construction a minimum of three inspections are required, a service, rough and final inspection. An additional inspection shall be required if temporary service is provided.

Remodels shall require a minimum of two inspections, a rough and a final. For all other types or work of this class, inspections shall be required for each visit required from the electrical inspector.

3.2 Electrical: Multiple-Family, Commercial, Industrial

For a multiple-family structure or multi-tenant commercial or industrial building, a minimum of two inspections, a rough and a final, shall be required for each designed unit in such a structure. An inspection shall also be required for the building service.

For all other buildings of this class, inspections shall be required for each visit required from the electrical inspector. The inspector shall estimate the number of visits required.

A separate inspection shall be required for temporary service.

**CITY OF HIGHLAND PARK
BUILDING DEPARTMENT
12050 WOODWARD AVE. HIGHLAND PARK, MI 48203
(313) 252-0050 ext. 209**

FOR OFFICE USE ONLY	
PERMIT #:	_____
DATE ISSUED:	_____
BY:	_____

MECHANICAL PERMIT APPLICATION

JOB ADDRESS: _____

OWNER'S NAME: _____ PHONE: _____ FAX: _____

OWNER'S ADDRESS: _____ CITY: _____ ZIP: _____

APPLICANT: _____ PHONE: _____ FAX: _____

APPLICANT'S ADDRESS: _____ CITY: _____ ZIP: _____

Check here to receive Notices of Repair by e-mail . E-mail address: _____

FEES & WORK DESCRIPTION:

No. of Inspections	Type of Inspection or Fee	Fee	Cost (No. x Fee)
Required	Administrative Fee	\$50.00	\$50.00
	Rough Heat	\$75.00	
	Final Heat	\$75.00	
	Residential Air Conditioning	\$75.00	
	Commercial Heat or Air (One inspection per unit)	\$75.00	
	Refrigeration	\$75.00	
	Gas Line	\$75.00	
	Fire Suppression	\$75.00	
	Other _____		
	TOTAL FEES:		

FOR OFFICE USE ONLY	
FEES	PAID
Permit: _____	_____
Registration: _____	_____
Investigative Fee: _____	_____
Other: _____	_____
TOTAL: _____	_____
Code Official Approval: _____	
Date approved for issue: _____	

DESCRIPTION OF WORK: _____

PLAN REVIEW: Plan review is not required for one and two family dwellings under 3,500 square feet or for alterations determined to be minor by the building official. Plans are required for all other building types and shall be prepared under the direct supervision of a **qualified** architect or engineer licensed pursuant to Act 299, of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's seal.

HAVE PLANS BEEN SUBMITTED? YES NO NOT REQUIRED

APPLICANT'S SIGNATURE: Section 23A of the State Construction Act of 1972, Act No. 230 of the Public Acts of 1972, being Section 125.1523A of the Michigan Compiled Laws, 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 HAVE READ AND UNDERSTAND THE ABOVE PROVISIONS:

 APPLICANT'S SIGNATURE DATE **DRIVER'S LICENSE NUMBER** **DATE OF BIRTH**

FEE INFORMATION ON REVERSE SIDE

**CITY OF HIGHLAND PARK
BUILDING DEPARTMENT
12050 WOODWARD AVE. HIGHLAND PARK, MI 48203
(313) 852-0050 ext. 209**

FOR OFFICE USE ONLY	
PERMIT #:	_____
DATE ISSUED:	_____
BY:	_____

PLUMBING PERMIT APPLICATION

JOB ADDRESS: _____

OWNER'S NAME: _____ PHONE: _____ FAX: _____

OWNER'S ADDRESS: _____ CITY: _____ ZIP: _____

APPLICANT: _____ PHONE: _____ FAX: _____

APPLICANT'S ADDRESS: _____ CITY: _____ ZIP: _____

Check here to receive Notices of Repair by or e-mail . E-mail address: _____

FEES & WORK DESCRIPTION:

No. of Inspections	Type of Inspection or Fee	Fee	Cost (No. x Fee)
Required	Administrative Fee	\$50.00	\$50.00
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	Rough Inspection	\$75.00	
	Final Inspection	\$75.00	
	Other	\$75.00	
	Other		
	TOTAL FEES:		

FOR OFFICE USE ONLY	
<u>FEES</u>	<u>PAID</u>
Permit: _____	_____
Registration: _____	_____
Investigative Fee: _____	_____
Other: _____	_____
TOTAL: _____	_____
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Date approved for issue: _____	

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I HAVE READ AND UNDERSTAND THE ABOVE PROVISIONS:

 APPLICANT'S SIGNATURE DATE **DRIVER'S LICENSE NUMBER** **DATE OF BIRTH**

FEE INFORMATION ON REVERSE SIDE



CITY OF HIGHLAND PARK

Return to Excellence

Hubert Yopp, Mayor

Department of Community & Economic Development

March 16, 2017

Bureau of Construction Codes
Construction Code Commission
P.O. Box 30254
Lansing, MI 48909

RE: Application to Enforce for the City of Highland Park

Dear Commission Members,

Late in 2016 the City of Highland Park filed an application to enforce the building codes in the City. Currently those services are being provided by the State. The City desires to provide full time local access to building department services for its residents as well as full time inspection and enforcement of the codes throughout the City. It is our belief that full time enforcement is necessary to assure compliance.

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A Board of Review has not yet been established and finding members is extremely problematic as discussed at the January Board meeting. We will continue to pursue this issue. We are aware, per the Director at the January meeting, that we can use the State Board as the CBA in the interim should it become necessary.

Robert B. Blackwell Municipal Building
12050 Woodward Avenue
Highland Park, Michigan 48203
313-252-0050 ext. 240
313-852-7320 fax



CITY OF HIGHLAND PARK

Return to Excellence

Hubert Yopp, Mayor

Department of Community & Economic Development

We look forward to a decision at the April 12, 2017 meeting. Should you have any questions or concerns prior to that meeting, please contact me at YRobinson@HighlandParkCity.org or 313-252-0050 ext. 257.

Sincerely,

Yvette L. Robinson, Director
Department of Community & Economic Development

The following are attached:

Public documents: Permit forms, Policy document, Occupancy certificate, Stop order, Violation notice, etc., Adopted fee resolution and ordinance.

Robert B. Blackwell Municipal Building
12050 Woodward Avenue
Highland Park, Michigan 48203
313-252-0050 ext. 240
313-852-7320 fax

BUILDING PERMIT APPLICATION

CITY OF HIGHLAND PARK
 BUILDING DEPARTMENT
 12050 WOODWARD AVE.
 HIGHLAND PARK, MICHIGAN 48203
 (313) 252-0050 ext. 209

OFFICE USE ONLY	
Permit #	_____
Issue Date:	_____
Issued By:	_____

PERMIT TYPE: BUILDING	CLASS: RESIDENTIAL	CATEGORY: NEW
MOVING	COMMERCIAL	REMODEL/ADDITION
CIRCLE ONE DEMOLITION	MULTI-FAMILY	GARAGE, BARN, SHED
IN EACH MISC.	INDUSTRIAL	DECK
COLUMN	OTHER	RE-ROOF
	RENEWAL	REPL. WINDOWS
	PRE-APPROVED	OTHER _____

ALL BLANKS MUST BE FILLED IN - INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED

PROPERTY ADDRESS & INFORMATION		
STREET NUMBER	STREET NAME	LOT NUMBER
41- - - -		
PROPERTY TAX I.D. # (Example 41-000-00-0000-000)	SUBDIVISION	

All notices are sent by e-mail. E-mail address: _____
 Print clearly

APPLICANT INFORMATION:			
FIRST NAME	LAST NAME	BUSINESS NAME	
STREET ADDRESS		()	PHONE NUMBER
CITY	STATE	ZIP	() FAX NUMBER

NOTE: ALL RESIDENTIAL CONTRACTORS MUST REGISTER WITH THE CITY ON A SEPARATE FORM

PROPERTY OWNER:			
FIRST NAME	LAST OR BUSINESS NAME	STREET ADDRESS	
CITY	STATE	ZIP	() PHONE NUMBER
DRIVER'S LICENSE NUMBER		DATE OF BIRTH	

ALL REQUESTED INFORMATION MUST BE PROVIDED - INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED

FILL IN ONE OF THE NEXT TWO BOXES BELOW COMPLETELY
DEPENDING ON THE TYPE OF CONSTRUCTION

ALL RESIDENTIAL ONE AND TWO FAMILY CONSTRUCTION: (NEW/REMODEL/ADDITIONS)

CONSTRUCTION COST: _____ (INCLUDE ALL COSTS INCLUDING DRIVEWAYS ETC. BUT NO LAND VALUE)

SQUARE FOOTAGE: _____ (INCLUDE ALL HABITABLE AREA ON ALL FLOORS INCLUDING ALL FINISHED BASEMENT AREA AND BONUS ROOMS)

BEDROOMS: _____ # BATHROOMS: FULL _____ HALF _____ # STORIES _____

WATER/SEWER UTILITIES NEW _____ EXISTING _____

FINISH FLOOR ELEVATION: _____ FINISH GRADE ELEVATION: _____

ALL OTHER CONSTRUCTION: COMMERCIAL/INDUSTRIAL/MULTI FAMILY

CONSTRUCTION COST: _____ (INCLUDE ALL COSTS EXCEPT FIXTURES AND SITE IMPROVEMENTS)

SQUARE FOOTAGE: _____ (TOTAL AREA USING OUTSIDE DIMENSIONS)

MBC USE GROUP(S) _____ MBC CONSTRUCTION TYPE: _____

SPRINKLER SYSTEM TYPE: _____ MEZZANINE: YES NO IF YES AREA IS _____

SPECIFIC USE(S) OF STRUCTURE: _____

OF FIRE AREAS: _____

HAS KNOX BOX BEEN ORDERED? YES NO IS SPECIAL INSPECTION LIST ATTACHED? YES NO

ARCHITECT: (IF APPLICABLE)

FIRST NAME _____ LAST OR BUSINESS NAME _____ NUMBER _____ STREET NAME _____

CITY _____ STATE _____ ZIP _____ () _____ PHONE NUMBER

() _____
FACSIMILE NUMBER (REQUIRED)

ALL SUBMISSIONS MUST INCLUDE TWO COPIES OF THE CONSTRUCTION DOCUMENTS. ONE COPY MUST BE A FULL SIZE COPY (24 X 36 MAXIMUM) TO SCALE AND THE OTHER MUST BE NO LARGER THAN 11 X 17 INCHES. ALL REDUCED COPIES MUST BE FULLY LEGIBLE. REVERSED TEXT DRAWINGS WILL NOT BE ACCEPTED.

DESCRIBE IN DETAIL THE SCOPE OF THE WORK

PERMITS ARE NOT TRANSFERABLE AS TO PERSON OR PLACE AND ARE NOT REFUNDABLE. ISSUANCE OF A PERMIT DOES NOT GUARANTEE COMPLIANCE WITH ANY BUILDING OR OTHER CODE. HOMEOWNERS MUST COMPLETE WORK THEMSELVES OR HIRE LICENSED CONTRACTORS. COMPLETED WORK MUST BE INSPECTED IMMEDIATELY. THE APPLICANT SHALL BE RESPONSIBLE FOR OBTAINING PERMITS AND INSPECTIONS AND PAYMENT OF FEES. IF WORK IS STARTED BEFORE A PERMIT IS ISSUED AN ADDITIONAL INVESTIGATIVE FEE WILL BE ASSESSED.

SECTION 23a OF THE STATE CONSTRUCTION CODE ACT OF 1972, ACT 230 OF THE PUBLIC ACTS OF 1972, BEING SECTION 125.15321 OF THE MICHIGAN COMPILED LAWS, PROHIBITS A PERSON FROM CONSPIRING TO CIRCUMVENT THE LICENSING REQUIREMENTS OF THE 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.

APPLICANT SIGNATURE: I HAVE READ AND UNDERSTAND THE CONDITIONS LISTED ABOVE

APPLICANT'S SIGNATURE (SEE AFFADAVIT BELOW)

DATE

IF THE APPLICANT IS NOT THE OWNER, THE AFFIDAVIT BELOW MUST BE COMPLETED BY THE APPLICANT. PROVIDE A COPY OF THE SIGNED CONTRACT. RESIDENTIAL CONTRACTS MUST BE IN THE NAME SHOWN ON THE RESIDENTIAL BUILDER'S OR MAINTENANCE AND ALTERATION CONTRACTOR'S LICENSE.

NON-OWNER APPLICANT AFFIDAVIT

I, _____ HEREBY CERTIFY THAT THE PROPOSED WORK IS
NAME OF APPLICANT

AUTHORIZED BY THE OWNER OF RECORD AND THAT I HAVE BEEN AUTHORIZED BY THE OWNER,

PRINTED OWNER(S) NAME(S) OF _____
OWNER'S ADDRESS

TO ACT AS HIS/HER/THEIR AUTHORIZED AGENT FOR THE PURPOSE OF APPLYING FOR, AND OBTAINING, THE PERMIT HEREIN REQUESTED.

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.

APPLICANT'S SIGNATURE

DATE

OFFICE USE ONLY

	FEES:	PAID:
Administrative Fee:	_____	_____
Permit Fee:	_____	_____
Bond:	_____	_____
Bond Number:	_____	
Plan Review Fee:	_____	_____
Eng. Plot Plan Fee:	_____	_____
Contractor Registration:	_____	_____
Occupancy Fee:	_____	_____
Investigative Fee:	_____	_____
Other:	_____	_____
TOTAL:	_____	_____

OFFICE USE ONLY:	
APPROVED BY _____	DATE _____
COMMENTS: _____	

REV 03/17

**CITY OF HIGHLAND PARK
BUILDING DEPARTMENT
12050 WOODWARD AVE. HIGHLAND PARK, MI 48203
(313) 252-0050 ext. 209**

**STATEMENT OF POLICIES, REQUIREMENTS AND REGULATIONS
AS OF APRIL, 2017**

This document contains the general polices, requirements and regulations of the City of Highland Park Building Division as they pertain to the review, issuance and/or inspection of site plans, building and trade permits, code inspections, and certificates of occupancy. It is not intended to be all inclusive and is subject to change at any time without notice.

PERMITS:

To obtain permits from this department may require any or all of the following material.

1. Approved Site Plan
2. Construction Drawings
3. Building, Electrical, Mechanical or Plumbing License
4. For County/State roads - driveway (ROW) permit (from WCRC or MDOT)
5. Soil Erosion Permit or waiver
6. Plan approval from the Wayne County Health Department or the Department of Agriculture
7. Payment of Required Fees

Requirements for these items are as follows:

1. SITE PLANS

A. Single Family Residential Construction

A site plan of the parcel or lot is required for all new residential construction and for all other residential construction which involves an addition to, or a change in, the number, size or shape of any structure(s). Structures include such things as accessory structures, pools and garages in addition to houses. The site plan must show the following:

1. STANDARD DRAFTING REQUIREMENTS

- a. North arrow
- b. Graphic Scale
- c. Lot dimensions, bearings or interior angles
- d. Legal description
- e. Legend

2. EXISTING CONDITIONS

- a. All structures, houses, garages, driveways, sheds, etc., on site (if any) and off-site within 50 feet.
- b. All utilities, based on field observations and city records, on site or adjacent thereto.

- c. Existing street catch basins with dimensional tie to the nearest property line.
- d. Ground elevations taken approximately on a one (1) foot contour:
 - 1) on site
 - 2) at finish grade (F.G.) of adjacent houses, garages, driveways
 - 3) 50 foot off-site in all directions including back of sidewalk, top of curb and gutter and along the rear lot line (extended) and along the front lot line (extended)
- e. Bench Mark near the site, with an elevation related to the U.S.G.S. Datum.

3. PROPOSED CONDITIONS

- a. Location and dimensions (size) of new house, garage, and driveway.
- b. Drainage pattern by arrows.
- c. Location of connections and leads for the water service and sanitary sewer.
- d. Proposed Elevations:
 - 1) finish floor and bottom of footing
 - 2) finish grade (brick ledge) of proposed house
 - 3) every 50 feet along all property lines including the lot corners
 - 4) all driveway corners and at the two points along the front setback line
 - 5) finish grade of proposed garage slab
 - 6) threshold elevation of any side door opening to a driveway.
- e. Location and dimensions of all easements on the property.
- f. Method of discharge, and the location and type, of all underground piping for the sump pump and ground water. The following methods of discharge for ground water and sump pumps may be approved as noted.
 - 1) Connection to a storm structure or storm sewer. This is the preferred method and will be required unless the applicant can demonstrate that using this method is a severe economic hardship or a practical difficulty.
 - 2) On site discharge into a swale. The applicant must furnish soil and engineering information to prove the swale can contain, and dissipate, the discharge within the site. Unobstructed point discharge (sump discharge) into, or onto, public sidewalks or other public right-of-way shall not be permitted.
 - 3) In the case where discharge cannot be accomplished by the above methods, and the property is serviced by a combined sewer system, the applicant may request discharge into the combined sewer line pursuant to the provisions of the Michigan Plumbing Code. This is considered a last resort method. A sump pump installation shall be required in all such cases to facilitate discharge to the exterior of the structure in an emergency.

All underground storm or ground water piping serving more than one parcel shall be in recorded easements.

Photocopier enlargements of subdivision site plans or plats will not be accepted. Residential site plans may be a maximum of 11 x 17 inches. Others must provide one copy reduced to 11 x 17 along with the required sets to scale.

B. Commercial, Multi-family, and Industrial Construction

New commercial, multi-family or industrial construction requires site plan approval by the City of Highland Park Planning Commission. Additionally, any construction which involves an addition to, or a change in, the number, size or shape of any structure or landscaping also requires review of the amended site plan by the Commission. No permits will be issued until the site plan review is complete and signed copies of the approved or amended plan are received from the Commission.

2. **CONSTRUCTION DRAWINGS**

Complete drawings, including an electrical layout plan are required for all buildings and structures. Complete electrical, mechanical and plumbing plans are required on all plans except one and two family residential. One and two family residential plans under thirty-five hundred (3500) square feet may be submitted by a currently licensed Michigan Residential Builder or a qualified homeowner. All other drawings must bear the countersigned seal of a Michigan registered architect or engineer. For all projects the original plan(s), DRAWN TO SCALE, shall be a maximum of 24 x 36 inch format. **At least one set of drawings must be submitted in a format no larger than 11 x 17 inches.** 11 X 17 drawings which are reduced from larger drawings must contain a graphic scale usable on the reduced drawing and must be legible. Drawings larger than 24 x 36 inches will not be accepted. Reverse layout plans with reversed text will not be accepted.

3. **BUILDING, ELECTRICAL, MECHANICAL OR PLUMBING LICENSE**

Any contractor making application for a permit must be licensed in the trade for which the permit is requested with the following exceptions:

- A. Commercial building permits (requires sealed plans).
- B. Qualified homeowners.

All residential builders, maintenance and alteration, demolition and moving contractors, electrical contractors, mechanical contractors, plumbing contractors, fire protection contractors, alarm contractors, sign electrical contractors and mobile home installers must register with the City prior to applying for permits. Initial registration requires the license holder to appear in person. All persons registering must present their license, federal identification number, workman's compensation carrier, and M.E.S.C. number and pay a registration fee. All contractors' vehicles must have identifying signs on the vehicle.

4. **CONCRETE PERMITS**

New or replacement exterior concrete placement requires a concrete permit. This permit is for the purpose of checking grades and drainage after forming. We do not inspect the flatwork concrete itself on private property.

5. FEES

All permit fees are established by resolution of the City Council. The current fee schedule is available from the Community & Economic Development Department; Building Division.

6. INSPECTIONS:

The City of Highland Park provides inspection services through its Building Department for all required inspections except those requiring a licensed professional (surveyor or engineer). Services are provided by State registered inspectors. All inspections are scheduled by the City of Highland Park Building Division at (313) 252-0050 ext. 234 or 209.

Inspections must be requested one day in advance. Late requests will be honored only if the workload permits. Inspections are done Monday through Friday between 9:30 AM and 3:30 PM. (Note: Schedule may vary due to workload and inspector availability.)

We cannot guarantee an inspection time.

All inspections which do not pass will require payment of a re-inspection fee. This includes lock-outs and missed appointments. Fees must be received prior to re-scheduling the inspection. Inspection fee schedules and required inspection lists are available from this Department.

Cancellations must be received before 9:00 AM the day of the inspection or a re-inspection fee may be charged. Inspections canceled or rescheduled more than once may be subject to a re-inspection fee.

7. CERTIFICATES OF OCCUPANCY:

A certificate of occupancy must be obtained prior to occupying the following for any reason:

1. Any new structure.
2. A new addition to any structure.
3. Any structure which has had a change of use under the building code.
4. All business uses.

Commercial certificates of occupancy for new construction must be requested 10 working days in advance. Single family residential certificates require 5 working days notice. The site must meet the minimum requirements set forth in the Ordinances of the City of Highland Park. Temporary certificates will be issued for a maximum of 90 days only in the following circumstances:

1. Construction or site completion is delayed more than seven (7) days by weather.
2. Site completion, such as landscaping, cannot be completed do to City regulations or seasonal conditions.
3. Other unusual circumstances at the sole discretion of the Department.

Temporary certificates will not be issued due to construction delays, closing schedules, or poor planning on the part of the builder or purchaser.

8. OTHER DEPARTMENT POLICIES:

- A. Except where accomplished by a rated unit, no access opening shall be permitted in any required fire separation assembly, and all electric boxes and other similar devices in the surface of such assemblies shall be 2 hr. rated.
- B. All water services must conform to the approved water service installation policy.
- C. On all construction sites the property lines must be identified and verifiable at all times during construction.

City of Highland Park
12050 Woodward Ave.
Highland Park, MI 48203
(313) 252-0050

CONTRACTOR REGISTRATION FORM

If the Federal I.D. number provided is a Social Security number, pursuant to the Michigan Social Security Number Privacy Act, this document contains CONFIDENTIAL INFORMATION

Business Name: _____

Business Owner or Qualifying Officer: _____

Address: _____ Telephone #: _____

Cell Phone #: _____

Federal I.D. #: _____ Fax #: _____

Contractor License #: _____ Expiration date: _____

E-mail: _____

Workers Comp Ins. Carrier (or reason for exemption): _____

MESC Employer # (Self Employed): _____

FOR BUILDING & SIGN CONTRACTORS ONLY:

Authorized Signatures – please print (only the contractor and the following names will be allowed to obtain permits):

FOR ELECTRICAL, PLUMBING & SIGN CONTRACTORS ONLY:

Master/Specialist authorized to obtain permits – please print (copy of master's/specialist's license(s) must be attached)

Name: _____ Master/Specialist License #: _____

Please be advised that the State of Michigan licensing regulations allow only licensed Electrical/Plumbing Contractors and Authorized Master to obtain Electrical/Plumbing permits.

I, the undersigned, hereby certify that the information herein is true and correct to the best of my knowledge.

Signature of Contractor: _____ Date: ____/____/____
Has appeared in person or has signed this letter in front of a Notary Public whose signature and seal is affixed hereto.

Subscribed and sworn to me on this

_____ day of _____, in the year _____

_____, Notary Public

Printed Name

_____ County, Michigan

Acting in _____ County, Michigan

My commission expires: _____

Office Use Only:

Reg. # _____

Expires: ____/____/____

Licenses Verified

Initials: _____ Date: _____

Did you remember to include:

- Copy of licensee's (contractor) driver's license.
- Current contractor's license, and current masters or specialist license for electrical, plumbing and sign specialists. Copy of qualifying officer's license for LLC's, Corporations and Partnerships.
- Registration fee from reverse side.
- Signature of licensee (contractor) on this form (must be notarized if form is not being submitted in person).

CITY OF HIGHLAND PARK

Building Department

12050 Woodward Ave. Highland Park, MI 48203

PH. (313) 252-0050 ext. 209

Name
Address
City St Zip

Date

Dear Permit Holder,

Please be advised that the inspection called for on _____ at _____ under permit # _____ is not approved. The outstanding violations are listed below. A re-inspection is required and the fee of \$40.00 must be paid before a re-inspection may be scheduled. Make checks payable to the City of Highland Park.

Sincerely,

Jack Williams

Building Inspector

Violations:

Uncorrected

Uncorrected

**CITY OF HIGHLAND PARK
BUILDING DEPARTMENT
12050 WOODWARD AVE. HIGHLAND PARK, MI 48203
(313) 252-0050 ext. 209**

FOR OFFICE USE ONLY

PERMIT #: _____

DATE ISSUED: _____

BY: _____

ELECTRICAL PERMIT APPLICATION

JOB ADDRESS: _____

OWNER'S NAME: _____ PHONE: _____ FAX: _____

OWNER'S ADDRESS: _____ CITY: _____ ZIP: _____

APPLICANT: _____ PHONE: _____ FAX: _____

APPLICANT'S ADDRESS: _____ CITY: _____ ZIP: _____

E-mail address: _____

FEES & WORK DESCRIPTION:

No. of Inspections	Type of Inspection or Fee	Fee	Cost (No. x Fee)
Required	Administrative Fee	\$50.00	\$50.00
	Temporary Service	\$75.00	
	Permanent Service	\$75.00	
	Underground Inspection	\$75.00	
	Rough Inspection	\$75.00	
	Final Inspection	\$75.00	
	Other	\$75.00	
	TOTAL FEES:		

FOR OFFICE USE ONLY

	<u>FEES</u>	<u>PAID</u>
Permit: _____		
Registration: _____		
Investigative Fee: _____		
Other: _____		
TOTAL: _____		
Code Official Approval: _____		
Date approved for issue: _____		

DESCRIPTION OF WORK: _____

PLAN REVIEW: Plan review is required when the building exceeds 3,500 square feet or the service exceeds 400 amperes. Required plans shall be prepared under the direct supervision of a qualified architect or engineer licensed pursuant to Act 299, of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's seal.

HAVE PLANS BEEN SUBMITTED? YES NO NOT REQUIRED

APPLICANT'S SIGNATURE: Section 23A of the State Construction Act of 1972, Act No. 230 of the Public Acts of 1972, being Section 125.1523A of the Michigan Compiled Laws, 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. By signing this application I consent to receiving notices by e-mail.

HOMEOWNER AFFIDAVIT: I hereby certify the work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the electrical code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the Inspector. I will cooperate with the Inspector and assume the responsibility to arrange for necessary inspections.

I HAVE READ AND UNDERSTAND THE ABOVE PROVISIONS:

 APPLICANT'S SIGNATURE DATE DRIVER'S LICENSE NUMBER DATE OF BIRTH

FEE INFORMATION ON REVERSE SIDE

1.0 ELECTRICAL PERMIT FEE SCHEDULE

- 1.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 1.2 The Permit Fees for any electrical permit shall be \$75.00 per inspection. One inspection and the application fee are required on all permits. Permit renewals shall be \$30.00. Permit fees are non-refundable after work has started and non-transferable.
- 1.3 Contractor registration fee shall be \$15.00 for electrical (all categories).
- 1.4 Permits for new construction shall be for the minimum number of inspections required in Section 3.
- 1.5 An investigative fee equal to the permit fee, shall be assessed if a permit was not issued prior to commencement of work.
- 1.6 A fee of \$40.00 per inspection shall be charged for the re-inspection of all failed inspections.

3.0 INSPECTIONS: MINIMUM NUMBER AND WHEN REQUIRED

3.1 Electrical: Single-Family Residential

For new construction a minimum of three inspections are required, a service, rough and final inspection. An additional inspection shall be required if temporary service is provided.

Remodels shall require a minimum of two inspections, a rough and a final. For all other types or work of this class, inspections shall be required for each visit required from the electrical inspector.

3.2 Electrical: Multiple-Family, Commercial, Industrial

For a multiple-family structure or multi-tenant commercial or industrial building, a minimum of two inspections, a rough and a final, shall be required for each designed unit in such a structure. An inspection shall also be required for the building service.

For all other buildings of this class, inspections shall be required for each visit required from the electrical inspector. The inspector shall estimate the number of visits required.

A separate inspection shall be required for temporary service.

**CITY OF HIGHLAND PARK
WAYNE COUNTY, MICHIGAN**

**RESOLUTION
regarding
FEE SCHEDULE FOR
COMMUNITY DEVELOPMENT DEPARTMENT SERVICES**

WHEREAS, the City of Highland Park has adopted a City Code containing a Building Code, Property Maintenance Code, and other provisions to protect the public health safety and welfare: and

WHEREAS, it is provided in said Code that the City Council, by resolution, shall establish reasonable fees to be charged by the City for acts and services performed there under; and

WHEREAS, in accordance with the Charter of the City of Highland Park, it is provided that the City Council shall adopt a Budget for the fiscal year, appropriate funds for said purposes and provide for a levy of taxes for said Budget appropriations; and

NOW, THEREFORE, BE IT RESOLVED that the following schedule of fees be, and hereby are, determined and established as follows and that the following schedule of fees shall supersede and replace all previous fee schedules for the services so listed:

**CITY OF HIGHLAND PARK
COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT
12050 WOODWARD AVE.
HIGHLAND PARK, MI 48203
(313) 252-0050 X 234**

**SCHEDULE OF FEES FOR PERMITS AND SERVICES
Effective October 1, 2016**

BUILDING FEES AND INSPECTION SCHEDULE

Notice for all permits: A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if; 1) the authorized work is not commenced within one hundred eighty (180) days after issuance of the permit or; 2) if the authorized work is suspended or abandoned for a period of one hundred eighty (180) days after the time of commencing the work or; 3) if no inspections are requested and conducted within one hundred eighty (180) days of the date of issuance or the date of a previous inspection. Closed permits cannot be refunded. Closed permits may be reopened within thirty (30) days of the closure date. The charge to re-open a closed permit is \$75.00. Permits may be renewed, *prior to their expiration*, one time for a period of one hundred eighty (180) days.

1.0 ELECTRICAL, MECHANICAL & PLUMBING PERMIT FEE SCHEDULE

- 1.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 1.2 The permit fees for any electrical, mechanical or plumbing permit shall be \$75.00 per inspection. A minimum of one inspection and the application fee are required on all permits. Permit renewals shall be \$35.00. Permit fees are non-refundable after work has started and non-transferable.
- 1.3 Contractor registration fee shall be \$15.00 for all categories of electrical, mechanical and plumbing contractors. Registrations shall be yearly unless required otherwise by law.
- 1.4 Permits shall be for the minimum number of inspections required in Section 3.

- 1.5 An investigative fee equal to the amount provided for in Section 1.2, may be assessed if a permit was not obtained prior to commencement of work.
- 1.6 A fee of \$40.00 per inspection shall be charged for the re-inspection of all failed inspections.

2.0 BUILDING, MOVING, DEMOLITION AND SIGN PERMIT FEE SCHEDULE

- 2.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 2.2 The permit fees for building permits shall be an application fee plus the applicable permit fee. One inspection and the application fee are required on all permits. Permit renewals shall be \$35.00. Permit fees are non-refundable after work has started and non-transferable.
- 2.3 Contractor registration fee shall be \$15.00 annually for building, moving, demolition, concrete and sign contractors.
- 2.4 A fee of \$40.00 per inspection shall be charged for the re-inspection of all failed inspections.
- 2.5 FEE SCHEDULE

Building and Plan Review Permit Fees

Building fees:

\$50.00 non-refundable application fee plus permit fees as follows:

<u>Improvement Cost</u>	<u>Fee</u>
\$0.00 to \$2,000.00	= \$93.00
\$2001.00 up	= \$93.00 plus an additional \$13.00 per thousand, or fraction thereof over \$2000.00

Plan review fees:

Residential alteration or accessory structure	= \$75.00
New residential construction	= \$200.00
Multi-family, Commercial and Industrial	= .005 x cost, minimum \$250.00, maximum \$5,000.00

In the event that the Department requires review by outside consultants as part of the plan review, all costs for required outside architectural or engineering reviews shall be paid by the applicant in addition to the standard plan review fees.

Certificates of Occupancy

Residential (One and Two-family)

Certificate of Occupancy including replacement certificates = \$25.00

Multiple-Family, Commercial, Industrial

Additions/New Construction/Change in use, owner or occupant: = \$200.00.
Replacement certificates: = \$25.00

Temporary Certificate of Occupancy

One and Two Family residential - \$250.00 plus bond of \$500.00 per incomplete item or 100% of cost, whichever is greater. Bondable items are concrete, sod and final grade in the winter months only. Bond for an as-built plot plan shall be \$1000.00.

All other construction - \$250.00 plus bond for 100% of incomplete work.

All temporary certificates are 90 days maximum with one renewal.

Signs

All permits shall be assessed a non-refundable application fee of \$50.00.

Permit Fees: Permit fees are non-transferable.

Permanent signs

Signs:	Up to 20 square feet	= \$125.00
	Over 20 square feet	= \$250.00

Temporary signs

General information	= \$100.00
Non-commercial signs	No fee, must be on private property

Demolition

All permits shall be assessed a non-refundable application fee of \$50.00.

Permit Fees:

Residential = \$225.00 (Includes pre-inspection, open hole/sewer cap and final inspection)

Non-residential = \$100.00 + \$0.07 per square foot

Dumpster in Right-of-Way

\$5.00 per day, \$25.00 minimum

Code Inspections

\$75.00 per inspector/per hour, or fraction thereof.

Overtime Inspections

\$115.00 per hour.

Additional/Add-on Inspections, All Permits

\$75.00 per inspection.

- 2.6 An investigation fee equal to the amounts provided in Section 2.5, may be assessed if a permit was not obtained prior to commencement of work.

3.0 INSPECTIONS: MINIMUM NUMBER AND WHEN REQUIRED

3.1 Electrical: One and Two Family Residential

For new construction a minimum of three inspections are required for each dwelling unit, a service, rough and final inspection. An additional inspection shall be required if temporary service is provided.

Remodels shall require a minimum of two inspections per unit, a rough and a final. For all other types of work of this class, inspections shall be required for each visit required from the electrical inspector.

3.2 Electrical: Multiple-Family, Commercial and Industrial

For a multiple-family structure or multi-tenant commercial or industrial building, a minimum of two inspections, a rough and a final, shall be required for each living or work unit. An inspection shall also be required for each service.

For all other buildings of this class, inspections shall be required for each visit required from the electrical inspector. The inspector shall estimate the number of visits required.

A separate inspection shall be required for temporary service.

3.3 Mechanical: One and Two Family Residential

1. For new construction a minimum of three inspections, a rough, final, and gas line inspection shall be required for each heating system. A separate inspection shall be required for each cooling system. A heating or cooling unit without a distribution system shall require one inspection.

Remodels shall require a minimum of a rough and final inspection. For all other types of work of this class, inspections shall be required for each visit required from the mechanical inspector.

2. Pre-fab fireplaces shall require a minimum of one inspection per dwelling unit. Multiple fireplaces in the same dwelling unit and inspected on the same visit shall require one inspection. Units may also require a separate gas line pressure test and inspection.

3.4 Mechanical: Multiple-Family, Commercial and Industrial

Each heating and/or cooling unit shall require one inspection. Each multi-family dwelling unit shall require a rough and final per dwelling unit. Installation or modification of any distribution system not involving the associated heating/cooling unit shall require one inspection. Where an underground inspection(s) is required, an additional inspection shall be charged per visit. Gas lines require an additional pressure test and inspection per system.

Refrigeration units of one horse-power or greater shall require one inspection per unit.

Concealed piping shall require an additional inspection per system.

3.5 Plumbing: One and Two Family Residential

For new construction an underground, rough and final plumbing inspection shall be required for each dwelling unit.

Remodels shall require a minimum of two inspections, a rough and final. For all other types of work of this class, inspections shall be required for each visit required from the plumbing inspector.

3.6 Plumbing: Multiple-Family, Commercial and Industrial

Each unit in a multiple-family structure or in a multi-tenant structure shall require a rough and a final inspection. An additional inspection for underground plumbing shall be required for each unit in a strip center. A multiple-family structure or other multi-tenant building shall require an additional inspection for underground plumbing at the rate of one inspection per building. An additional inspection shall be required for sewer and water service.

All other commercial and industrial buildings shall be charged at the rate of one inspection for each visit required from the plumbing inspector. The inspector shall estimate the number of visits required.

3.7 Building – Required Inspections: All Construction

Building inspections shall follow the schedule below to the extent applicable:

- a. Footing - before footing is poured. Property lines must be identified for the inspection.
- b. Backfill - before foundation wall is backfilled and before slab floors and with sill plate and foundation drain in place and anchor bolts and bracing installed.
- c. Brick Ledge - after first course of brick, flashing, weep holes, and pea stone are installed.
- d. Rough - before any framing is covered and after rough electrical, mechanical and plumbing inspections are approved.
- e. Insulation - prior to covering insulation.
- f. Slab - prior to pouring concrete slab with sub-base, forms and any reinforcement and insulation installed.
- g. Fireplace - Masonry - when damper and first flue liner are in place.
- h. Drywall - fastener inspection before drywall is taped.
- i. Final - after final electrical, plumbing, and mechanical inspections are approved.
- j. Final Site/Certificate of Occupancy - when all inspections are approved and prior to Occupancy. It is illegal to occupy a building before a Certificate of Occupancy is issued. As built drawings including the approved, existing, final grade elevations must be received before an occupancy certificate can be issued.

CONCRETE PERMITS

- 1.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 1.2 Permit Fees: Permit fees are non-refundable after work has started and non-transferable.

Concrete flatwork = \$75.00 per inspection
Restoration inspection = \$75.00
- 1.3 Contractor registration fee: = \$15.00

- 1.4 An investigative fee equal to the amount provided for in Section 1.2, shall be assessed if a permit was not obtained prior to commencement of work.

FENCE PERMITS

- 1.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 1.2 Permit Fees: Permits and fees are non-refundable after work has started and non-transferable.
- Fences: Industrial/Commercial - First 100 feet - \$50.00
Each additional 100 feet - \$100.00
Residential - \$50.00
- 1.3 Contractor registration fee: = \$15.00
- 1.4 An investigative fee equal to the amount provided for in Section 1.2, shall be assessed if a permit was not obtained prior to commencement of work.

PRIVATE SEWER AND WATER SERVICE

- 1.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 1.2 Permit Fees: Permit fees are non-refundable after work has started and non-transferable. Private sewer and water leads (from the building to the storm sewer, sanitary sewer or water main) including replacements:
- | | |
|------------------------------|-----------------|
| Storm or sanitary sewer lead | = \$75.00 each. |
| Water lead | = \$75.00 |
| Gate wells or structures | = \$75.00 each. |
- 1.3 Contractor registration fee: Registration = \$15.00
- 1.4 An investigative fee equal to the amount provided for in Section 1.2, shall be assessed if a permit was not obtained prior to commencement of work.

RESALE INSPECTIONS

- 1.1 All applications shall be assessed a non-refundable application fee of \$50.00.
- 1.2 Initial Exterior Inspection = \$75.00 (Includes one re-inspection)
- Second and Subsequent Re-inspections = \$75.00 per inspection

PLANNING FEES

Site Plan Review:

- | | |
|--|---|
| Residential, Infill or Multi-family: | = \$600.00 + \$10.00 per unit |
| Commercial, Office, Industrial or Institutional: | = \$600.00 + \$50.00 per acre or fraction thereof |
| Planned Development: | Preliminary Plan Review – Hourly rates vary |

Final Detailed Site Plan Review – Same as Residential & Commercial Above

Revision Reviews: =0.6 Times the Regular Fee

Expedited Review: =1.5 Times the Regular Fee

Engineering Reviews: = \$500.00 Deposit (Due upon submission – unused portion refunded)

Special Land Use Permits:

Special Land Use Review: = \$600.00 + \$20.00 per acre or fraction thereof

Special Land Use Review w/ Site Plan Review: = \$300.00 + \$20.00 per acre or fraction thereof

Special Land Use Permit Renewal: = \$200.00

Zoning Ordinance Text or Map Amendment Hearing: = \$600.00 + \$25.00 per acre or fraction thereof

Plats and Site Condominiums \$1000.00

Easements:

Vacations \$500.00

Encroachments \$50.00

Land Divisions/Combinations: = \$250.00 + \$40.00 per lot

Alley or Street Vacations: = \$250.00 + \$35.00 per abutting lot

Other Reviews: = \$500.00 Deposit (hourly rates vary)

ZONING FEES

Zoning Board Appeals:

Variance Request, Ordinance Interpretations: Commercial = \$750.00
Residential = \$300.00

Appeal of Administrative Decision/Use Variance = \$750.00

RENTAL CERTIFICATES

Registration fee – all properties: = \$100.00

Certificate Fees:	New Registrations and Renewals	
	Up to the Renewal Date*	Late Fees**
One & Two Family	= \$150.00 per dwelling unit	= \$75.00 per unit
Multiple Family, 3 units and over	= \$300 + \$25.00 per unit	= \$12.50 per unit

The license period for all new and renewal certificates shall be twenty-four (24) months from the application date or the expiration date of the previous certificate for the same owner.

*The application fee includes an initial inspection and one re-inspection, if required. An additional fee of \$75.00 per inspection shall be charged for all locked-out inspections, the second and subsequent re-inspection of all failed inspections and second and subsequent cancelled inspections with less than seventy-two hours notice.

****Late fees are assessed if the application and fee are not received before the current expiration date; if the renewal is not completed within fifteen (15) days after the renewal date; or if a new application for an occupied property is not completed within thirty (30) days of the application date.**

VACANT PROPERTY REGISTRATION

Residential: Initial Registration fee: = \$275.00* Annual renewal: = \$200.00

Commercial: Initial Registration fee: = \$375.00* Annual renewal: = \$300.00

Additional Inspections: = \$75.00 each * Includes one initial inspection and one re-inspection

BUSINESS LICENSE INSPECTIONS

Business License Inspection: = \$175.00 (Includes one re-inspection. Additional re-inspections and lock-outs = \$75.00 each)

City of Highland Park

12050 Woodward Ave.
Highland Park, Michigan. 48203
Phone No. (313) 252-0050 ext. 209

PLAN REVIEW COMMENTS

Date: Permit Number: PB
Project Address:
Project Name:
Use Group: Construction Type:
Scope of Work:
Special Notes and Conditions:
Reviewed By: Jack R. Williams, Building Official

- Codes Used: (Boxes Checked are Codes used for Review) Code Symbol
- City of Highland Park Code of Ordinances and Local Requirements..... (CC)
 - City of Highland Park Zoning Ordinance..... (Z)
 - 2015 Michigan Residential Code..... (MRC)
 - 2012 Michigan Building Code..... (MBC)
 - 2015 Michigan Energy Code..... (MENGC)
 - 2012 Michigan Electrical Code (2014 NEC) (commercial & industrial)..... (MEC)
 - 2012 Michigan Mechanical Code..... (MMC)
 - 2012 Michigan Plumbing Code..... (MPC)
 - 2009 International Fire Code as amended..... (IFC)
 - Totally encased electrode with all new footings with rerod

No.	Comments or requested information	Code

FAILURE TO IDENTIFY A CODE VIOLATION DURING THE REVIEW OF THE PLANS
DOES NOT GIVE THE PERMIT APPLICANT THE RIGHT TO VIOLATE THE CODE.

CONTINUED ON REVERSE SIDE

PLAN REVIEW COMMENTS

- Plans Approved as Submitted.
- Plans Approved Contingent Upon Compliance With Items Listed.
- Revised Plans That Comply With Code Must Be Resubmitted For Review.

Inspectors Additional Comments:

Permit Tracking Log:

**CITY OF HIGHLAND PARK
BUILDING DEPARTMENT
12050 WOODWARD AVE. HIGHLAND PARK, MI 48203
(313) 252-0050 ext. 209**

FOR OFFICE USE ONLY	
PERMIT #:	_____
DATE ISSUED:	_____
BY:	_____

MECHANICAL PERMIT APPLICATION

JOB ADDRESS: _____

OWNER'S NAME: _____ PHONE: _____ FAX: _____

OWNER'S ADDRESS: _____ CITY: _____ ZIP: _____

APPLICANT: _____ PHONE: _____ FAX: _____

APPLICANT'S ADDRESS: _____ CITY: _____ ZIP: _____

Check here to receive Notices of Repair by e-mail . E-mail address: _____

FEES & WORK DESCRIPTION:

No. of Inspections	Type of Inspection or Fee	Fee	Cost (No. x Fee)
Required	Administrative Fee	\$50.00	\$50.00
	Rough Heat	\$75.00	
	Final Heat	\$75.00	
	Residential Air Conditioning	\$75.00	
	Commercial Heat or Air (One inspection per unit)	\$75.00	
	Refrigeration	\$75.00	
	Gas Line	\$75.00	
	Fire Suppression	\$75.00	
	Other _____		
	TOTAL FEES:		

FOR OFFICE USE ONLY	
FEES	PAID
Permit: _____	_____
Registration: _____	_____
Investigative Fee: _____	_____
Other: _____	_____
TOTAL: _____	_____
Code Official Approval: _____	
Date approved for issue: _____	

DESCRIPTION OF WORK: _____

PLAN REVIEW: Plan review is not required for one and two family dwellings under 3,500 square feet or for alterations determined to be minor by the building official. Plans are required for all other building types and shall be prepared under the direct supervision of a **qualified** architect or engineer licensed pursuant to Act 299, of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's seal.

HAVE PLANS BEEN SUBMITTED? YES NO NOT REQUIRED

APPLICANT'S SIGNATURE: Section 23A of the State Construction Act of 1972, Act No. 230 of the Public Acts of 1972, being Section 125.1523A of the Michigan Compiled Laws, 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 HAVE READ AND UNDERSTAND THE ABOVE PROVISIONS:

 APPLICANT'S SIGNATURE DATE DRIVER'S LICENSE NUMBER DATE OF BIRTH

FEE INFORMATION ON REVERSE SIDE

1.0 MECHANICAL PERMIT FEE SCHEDULE

- 1.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 1.2 The Permit Fees for any mechanical permit shall be \$75.00 per inspection. One inspection and the application fee are required on all permits. Permit renewals shall be \$35.00. Permit fees are non-refundable after work has started and non-transferable.
- 1.3 Contractor registration fee shall be \$15.00 for mechanical (all categories).
- 1.4 Permits for new construction shall be for the minimum number of inspections required in Section 3.
- 1.5 An investigative fee equal to the permit fee, shall be assessed if a permit was not issued prior to commencement of work.
- 1.6 A fee of \$40.00 per inspection shall be charged for the re-inspection of all failed inspections.

3.0 INSPECTIONS: MINIMUM NUMBER AND WHEN REQUIRED

3.3 Mechanical: Single-Family Residential

1. For new construction a minimum of three inspections, a rough, final, and gas line inspection shall be required for each heating system. A separate inspection shall be required for each cooling system. A heating or cooling unit without a distribution system shall require one inspection.

Remodels shall require a minimum of a rough and final inspection. For all other types or work of this class, inspections shall be required for each visit required from the mechanical inspector.

2. Pre-fab fireplaces shall require a minimum of one inspection per dwelling unit. Multiple fireplaces in the same dwelling unit, and inspected on the same visit, shall require one inspection. Units may also require a gas line inspection.

3.4 Mechanical: Multiple-Family, Commercial, Industrial

Each heating and/or cooling unit shall require one inspection. Each multi-family dwelling unit shall require a rough and final. Installation or modification of any distribution system not involving the associated heating/cooling unit shall require one inspection. Where an underground inspection(s) is required, an additional inspection shall be charged per visit. Gas lines require an additional inspection per system.

Refrigeration units of one horse-power or greater shall require one inspection per unit.

Concealed piping shall require an additional inspection per system.

CERTIFICATE OF OCCUPANCY

CITY OF HIGHLAND PARK WAYNE COUNTY STATE OF MICHIGAN

Issued by the City of Highland Park Building Department, and having complied with the requirements of the Zoning Ordinance, as amended, and the State Construction Code, where applicable, permission is hereby granted to occupy the premises as set forth below and in the corresponding application.

Property Address:	2035 BELMONT
Certificate Number: OF 17-0003	Issued:
Use Group:	Construction Type:
Spinkler System: N	Zoning:
Property Owner: RAHMAN, KAZI [REDACTED] HAMTRAMCK, MI 48212	Issued to: RAHMAN, KAZI [REDACTED] HAMTRAMCK MI 48212

Permission to occupy the above described structure is granted on the express condition that said building is, or shall be, in all respects and at all times, in conformance with the Code of Ordinances of the City of Highland Park, regulating the construction, occupancy, use and maintenance of buildings. This Certificate expires immediately upon any change in use or occupancy and may be revoked at any time, without prior notice, upon violation of any provision of the above ordinances.

Signed in Highland Park, Michigan

NON-TRANSFERABLE

S/ Jack R. Williams

Building Official

**CITY OF HIGHLAND PARK
BUILDING DEPARTMENT
12050 WOODWARD AVE. HIGHLAND PARK, MI 48203
(313) 852-0050 ext. 209**

FOR OFFICE USE ONLY	
PERMIT #:	_____
DATE ISSUED:	_____
BY:	_____

PLUMBING PERMIT APPLICATION

JOB ADDRESS: _____

OWNER'S NAME: _____ PHONE: _____ FAX: _____

OWNER'S ADDRESS: _____ CITY: _____ ZIP: _____

APPLICANT: _____ PHONE: _____ FAX: _____

APPLICANT'S ADDRESS: _____ CITY: _____ ZIP: _____

Check here to receive Notices of Repair by or e-mail . E-mail address: _____

FEES & WORK DESCRIPTION:

No. of Inspections	Type of Inspection or Fee	Fee	Cost (No. x Fee)
Required	Administrative Fee	\$50.00	\$50.00
	Water or Sewer Lead or Private Structures (ea.)	\$75.00	
	Underground Inspection	\$75.00	
	Rough Inspection	\$75.00	
	Final Inspection	\$75.00	
	Other	\$75.00	
	Other		
	TOTAL FEES:		

FOR OFFICE USE ONLY	
FEES	PAID
Permit: _____	_____
Registration: _____	_____
Investigative Fee: _____	_____
Other: _____	_____
TOTAL: _____	_____
Code Official Approval: _____	
Date approved for issue: _____	

DESCRIPTION OF WORK: _____

PLAN REVIEW: Plan review is not required for one and two family dwellings under 3,500 square feet, alterations determined to be minor by the building official. Plans are required for all other building types and shall be prepared under the direct supervision of a **qualified** architect or engineer licensed pursuant to Act 299, of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's seal.

HAVE PLANS BEEN SUBMITTED? YES NO NOT REQUIRED

APPLICANT'S SIGNATURE: Section 23A of the State Construction Act of 1972, Act No. 230 of the Public Acts of 1972, being Section 125.1523A of the Michigan Compiled Laws, 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 HAVE READ AND UNDERSTAND THE ABOVE PROVISIONS:

 APPLICANT'S SIGNATURE DATE DRIVER'S LICENSE NUMBER DATE OF BIRTH

FEE INFORMATION ON REVERSE SIDE

1.0 PLUMBING PERMIT FEE SCHEDULE

- 1.1 All permits shall be assessed a non-refundable application fee of \$50.00.
- 1.2 The Permit Fees for any plumbing permit shall be \$75.00 per inspection. One inspection and the application fee are required on all permits. Permit renewals shall be \$30.00. Permit fees are non-refundable after work has started and non-transferable.
- 1.3 Contractor registration fee shall be \$15.00.
- 1.4 Permits for new construction shall be for the minimum number of inspections required in Section 3.
- 1.5 An investigative fee equal to the permit fee, shall be assessed if a permit was not issued prior to commencement of work.
- 1.6 A fee of \$40.00 per inspection shall be charged for the re-inspection of all failed inspections.

3.0 INSPECTIONS: MINIMUM NUMBER AND WHEN REQUIRED

3.5 Plumbing: Single-Family Residential

For new construction a underground, rough and final plumbing inspection shall be required.

Remodels shall require a minimum of two inspections, a rough and final. For all other types or work of this class, inspections shall be required for each visit required from the plumbing inspector.

3.6 Plumbing: Multiple-Family, Commercial, Industrial

Each unit in a multiple-family structure or in a multi-tenant structure shall require a rough and a final inspection. A multiple-family structure or other multi-tenant building shall require an additional inspection for underground plumbing at the rate of one inspection per building. An additional inspection shall be required for sewer and water service.

All other commercial and industrial buildings shall be charged at the rate of one inspection for each visit required from the plumbing inspector. The inspector shall estimate the number of visits required.

CITY OF HIGHLAND PARK

Building Department
12050 Woodward Ave., Highland Park MI 48203
PH. (313) 252-0050 ext. 209

Date _____

NAME:
ADDRESS:
CITY: ST: ZIP

STOP WORK ORDER

Dear :

The City of Highland Park believes that you are in violation of Ordinance § 497 Art. III Sec 2.02.1 for the construction, development, razing of any use, structure or building, or the restoration or structural improvement of any existing use or structure without first obtaining a permit at _____ FOR PORCH REPAIR. NO FURTHER WORK, EXCEPT TO MAKE THE BUILDING SAFE, IS TO BE DONE UNTIL AND UNLESS THE PROPERTY IS IN COMPLIANCE WITH THE CODE.

You have until Date: _____ to correct this violation.

Failure to correct this action by the deadline issued above will result in the issuance of a ticket subject to the following penalties:

1. \$100.00 fine for the first offense, plus costs if any;
2. \$250.00 fine for the second offense within one (1) year, plus costs if any;
3. Misdemeanor violation subject to ninety (90) days in jail, a \$500 fine, or any combination thereof upon conviction for the third and additional offense within one (1) year.

When the violation is abated, please contact:

The Office of Building Services – (313) 252-0050 ext. 234 or 209 - includes all trade inspections (electrical, mechanical, plumbing), Building Official – Jack Williams, Clerk - Kenyatta Smith.
-emails to: KSmith@HighlandParkCity.org

The Office of Code Enforcement – (313) 252-0050 ext. 201 –Carlton Clyburn
-emails to: CClyburn@HighlandParkCity.org.

Please use reference number _____.

Sincerely,

Jack Williams

Jack Williams
Office of Building and Code Enforcement

Application to Administer and Enforce
Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes / Office of Administrative Services
P.O. Box 30254, Lansing, MI 48909
517-335-2972
E-Mail: bccoas@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

NAME OF GOVERNMENTAL SUBDIVISION City of Highland Park		CONTACT PERSON (Elected Official) Mayor Hubert Yopp	
ADDRESS (Street Number and Name) 12050 Woodward Ave			
CITY Highland Park	COUNTY Wayne	STATE MI	ZIP CODE 48203
TELEPHONE NUMBER (Include Area Code) (313) 252-0050	FAX NUMBER (Include Area Code) (313) 852-7320	E-MAIL ADDRESS HYopp@HighlandParkCity.org	

Code Adoption

To assume responsibility for the administration and enforcement of the act and the state code in accordance with Section 8b(6) of 1972 PA 230. Attach a copy of the certified adopted ordinance assuming responsibility for administration and enforcement of the act and the code.

State Code(s) to be Enforced

Building Electrical Mechanical Plumbing

By checking the boxes below you are certifying the following:

The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce this act and the code and all related acts and rules.

Agency personnel are provided as necessary.

Administrative services are provided.

Plan review services are provided.

Timely field inspection services will be provided.

A Board of Appeals is in place per MCL 125.1514.


Have immediate access to the codes & standards for which you have applied to administer & enforce.

BUILDING OFFICIAL INFORMATION	Name: Jack Williams	Registration Number: 002916
--------------------------------------	----------------------------	------------------------------------

Certification

I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge.

Name of Elected Official (Type or Print) Hubert Yopp Title Mayor

Signature of Elected Official  Date 9-19-16

Copies of all ordinances submitted with this application must include clear and visible identification of the governmental subdivision's department of building safety.

The conduct of the administration and enforcement of the Michigan codes shall be performed in accordance with the approved Application to Administer and Enforce and ordinance. Any changes in the approved ordinance must be submitted to the Bureau of Construction Codes for review and final approval prior to implementation by local departments of building safety.

RESOLUTION MANDATING THE IMMEDIATE REPEAL OF THE
EMERGENCY FINANCIAL MANAGER DIRECTIVE #61 OF 2003 AND
REINSTATEMENT OF THE HIGHLAND PARK BUILDING CODE (CHAPTER
1420.) FROM THE HIGHLAND PARK 'CODE OF ORDINANCES'

WHEREAS, the Emergency Financial Manager, through Directive #61 on February 27th, 2003, directed the City of Highland Park to transfer responsibility for the administration and enforcement of its Building, Electrical, Mechanical and Plumbing code provisions to the Bureau of Construction Code (the State of Michigan) and,

WHEREAS, this directive taken by the aforementioned Emergency Financial Manager has relieved the City of Highland Park of its own ability to inspect building, electrical, mechanical and plumbing within the boundaries of the City of Highland Park and,

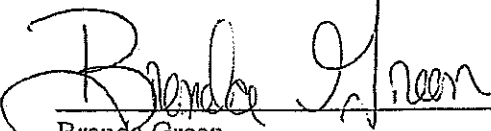
WHEREAS, this directive taken by the aforementioned Emergency Financial Manager has assisted in causing financial hardship to the City of Highland Park, now

THEREFORE BE IT RESOLVED, that the Highland Park City Council through its legal legislative powers hereby mandates the immediate REPEAL of the Emergency Financial Manager Directive #61 and REINSTATES the City of Highland Park Building Code (Chapter 1420.) from the Highland Park 'Code of Ordinances' effective immediately.

Yeas 4 Nays 0 Absent: McClary

Date: July 5, 2016

Certified by the City Clerk:


Brenda Green

CODIFIED ORDINANCES OF HIGHLAND PARK
PART FOURTEEN - BUILDING AND HOUSING CODE

TITLE TWO - Standards

- Chap. 1420. BOCA National Building Code and Model Energy Code.
Chap. 1422. International Plumbing Code.
Chap. 1424. International Mechanical Code.
Chap. 1426. BOCA National Property Maintenance Code.
Chap. 1428. National Electrical Code.

CHAPTER 1420

BOCA National Building Code and Model Energy Code

EDITOR'S NOTE: This chapter was previously titled "BOCA National Building Code and National Energy Conservation Code." The title was changed upon the adoption of the Model Energy Code, the 1995 edition.

1420.01	Short title.	1420.08	Adoption of Building Code Rules.
1420.02	Purpose.	1420.09	Deletions from Building Code Rules.
1420.03	Adoption of 1996 edition of BOCA National Building Code.	1420.10	Adoption of 1995 edition of Model Energy Code.
1420.04	Enforcement officers.	1420.11	Effective date.
1420.05	Coordination with other laws.	1420.12	Conflict of laws.
1420.06	Uniform Board of Appeals.	1420.13	Amendments of BOCA Code.
1420.07	Violations and penalties.		

CROSS REFERENCES

- State Construction Code - see M.C.L.A. Secs. 125.1501 et seq.
Storage of building materials - see GEN. OFF. 646.04
Construction of buildings; protection of vegetation - see S.U. & P.S. 1026.17
Building permits - see B. & H. Ch. 1442, Ch. 1444
Licensing of contractors - see B. & H. Ch. 1442, Ch. 1444
Builders' Registry - see B. & H. 1442.05

1420.01 SHORT TITLE.

This chapter shall be known and cited as the Highland Park Building Code.
(Ord. 1113. Passed 11-15-82.)

1420.02 PURPOSE.

This chapter is intended to establish minimum acceptable building standards, in terms of performance objectives, implemented by specific requirements, rather than in rigid specifications. This makes possible the acceptance of new materials which can be evaluated under nationally recognized standards, without the necessity of adopting cumbersome amendments for each variable condition. In addition, by presenting the purposes to be accomplished rather than the method to be followed, the designer is allowed the widest possible freedom, and the development of new and innovative construction systems is not hindered.

This chapter shall cover all matters concerning the construction, alteration, addition, repair, removal, demolition, use, location, occupancy and maintenance of all buildings and structures, and shall apply to existing or proposed buildings or structures, except where such matters are otherwise provided for in other chapters or statutes, or in the rules and regulations authorized for promulgation under the provisions of this chapter.
(Ord. 1113. Passed 11-15-82.)

1420.03 ADOPTION OF 1996 EDITION OF BOCA NATIONAL BUILDING CODE.

That certain document, three copies of which are on file in the office of the City Clerk, being marked and designated as the BOCA National Building Code, Thirteenth Edition, 1996, as amended, as published by Building Officials and Code Administrators (BOCA) International, Inc., is hereby adopted by reference as the Building Code of the City for the control of buildings and structures as therein provided, except such parts of such Code as are hereinafter modified or deleted, and each and all of the regulations of the BOCA National Building Code, Thirteenth Edition, 1996, as amended, are hereby referred to, adopted and made a part hereof as if fully set out in this chapter.
(Ord. 1189. Passed 11-18-96.)

1420.04 ENFORCEMENT OFFICERS.

(a) Building Official. The Inspections Coordinator or his or her designee shall enforce this chapter as herein provided. This official shall be referred to by the term Building Official or Code Official. However, if the Inspections Coordinator is not a licensed architect or engineer, permits for new construction and/or substantial renovation and condemnation orders for unsafe buildings shall be reviewed and approved by the City Engineer or other licensed architect or engineer.

(b) Coordination of Enforcement. Inspection of premises and the issuing of orders in connection therewith under the provisions of this chapter shall be the responsibility of the Building Official. Wherever, in the opinion of the Building Official, it is necessary or desirable to have an inspection of any condition by any other department, he or she shall

arrange for this to be done in such manner that the owners or occupants of buildings shall not be subjected to visits by numerous inspectors or to multiple or conflicting orders. An order to correct any violation under this chapter shall not be issued without the approval of the Building Official, and it shall be the responsibility of the Building Official, before issuing any such order, to determine that the order has the concurrence of any other department or official of the City concerned with any matter involved in the case in question.

(Ord. 1154. Passed 12-15-86.)

1420.05 COORDINATION WITH OTHER LAWS.

(a) Zoning. The Building Official shall not issue any certificate of occupancy until the application for such certificate has been reviewed by the Zoning Official who shall have made a finding, in writing, that the proposed use does not conflict with the requirements of the Zoning Code.

The Building Official shall not issue any building permit for a new structure (including permits for the construction of building foundations or parking lots), or any building permit for a building renovation, where the estimated construction costs exceed five thousand dollars (\$5,000), until the application has been reviewed by the Zoning Official who shall have made a finding, in writing, that the proposed construction does not conflict with the requirements of the Zoning Code.

(b) Michigan Energy Code. The Building Official shall not issue any building permit for a new structure (excluding permits for the construction of building foundations or parking lots) until the application has been reviewed by the Division of Engineering, which shall have made a finding, in writing, that the proposed construction does not conflict with the requirements of the Michigan Energy Code. (Ord. 1113. Passed 11-15-82.)

1420.06 UNIFORM BOARD OF APPEALS.

The appeal process specified in Section 124.0 of the BOCA National Building Code, as adopted in Section 1420.03, shall be superseded by the procedures specified in Chapter 1440. (Ord. 1113. Passed 11-15-82.)

1420.07 VIOLATIONS AND PENALTIES.

The penalty section of the BOCA National Building Code (Section 117.0), as adopted in Section 1420.03, is superseded by the following regulations consistent with Section 23 of Act 230 of the Public Acts of 1972, as amended, the Michigan State Construction Code:

- (a) Offenses. A person, including an officer, director or employee of a corporation, or a governmental official or agent charged with the responsibility of issuing permits or inspecting buildings or structures, who commits any of the following acts, shall be guilty of a misdemeanor and shall be punished as provided in Section 202.99:
- (1) Knowingly violates a provision of this chapter and/or a rule for the enforcement of this chapter;
 - (2) Knowingly constructs or builds a structure or building in violation of a condition of a building permit;
 - (3) Knowingly fails to comply with an order issued pursuant to this chapter by the Building Official, the Uniform Board of Appeals or a court;
 - (4) Knowingly makes a false or misleading written statement, or knowingly omits required information or a statement in an inspection report, application,

petition, request for approval or appeal to the Building Official or to the Uniform Board of Appeals;

- (5) Knowingly refuses entry or access to an inspector lawfully authorized to inspect any premises, building or structure pursuant to this chapter;
 - (6) Unreasonably interferes with an authorized inspection;
 - (7) Knowingly issues, fails to issue, causes to be issued or assists in the issuance of a certificate, permit or license in violation of this chapter or a rule promulgated under this chapter or other applicable laws; or
 - (8) Having a duty to report a violation of this chapter or a rule promulgated under this chapter or other applicable law, knowingly conceals a violation.
- (b) Penalties. With respect to paragraph (a)(3) hereof, a person is guilty of a separate offense for each day that the person fails to comply with a stop construction order validly issued by the Building Official and for each week that a person fails to comply with any other order validly issued by an enforcing agency. With respect to paragraphs (a)(1) and (4) hereof, a person is guilty of a separate offense for each knowing violation of this chapter or a rule promulgated under this chapter and for each false or misleading written statement or omission of required information or a statement knowingly made in an application, petition, request for approval or appeal to the Building Official or the Uniform Board of Appeals. With respect to paragraph (a)(2) hereof, a person is guilty of a separate offense for each knowing violation of a condition of a building permit. With respect to the other paragraphs, a person is guilty of a separate offense for each knowing violation of this chapter.

(Ord. 1113. Passed 11-15-82.)

1420.08 ADOPTION OF BUILDING CODE RULES.

That certain document, three copies of which are on file in the office of the City Clerk, being marked and designated as Part 4 Building Code Rules of the Michigan Department of Labor, Construction Code Commission, is hereby adopted by reference as an amendment to the Building Code of the City, except for such parts of such Building Code Rules as may be in conflict with the Charter of the City, and except for such parts of such Building Code Rules as may be modified or deleted in this chapter, and each and all of the regulations of Part 4 Building Code Rules, as amended, are hereby referred to, adopted and made a part hereof as if fully set out in this chapter.

In addition, it is acknowledged that those portions of Part 4 Building Code Rules that apply to barrier free design are specifically mandated by State law. Any future barrier free design rule changes made by the Michigan Department of Labor, Construction Code Commission, shall also be considered to be an amendment to the Building Code of the City. (Ord. 1172. Passed 10-15-90.)

1420.09 DELETIONS FROM BUILDING CODE RULES.

Part 4 Building Code Rules, as adopted in Section 1420.08, are hereby amended and supplemented as set forth in this section. The following rules, which primarily pertain to the administration of the State Building Codes, are hereby deleted: Rules 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 413 and 414. (Ord. 1154. Passed 12-15-86.)

1420.10 ADOPTION OF 1995 EDITION OF MODEL ENERGY CODE.

That certain document, three copies of which are on file in the office of the City Clerk, being marked and designated as the Model Energy Code, 1995 edition, as amended, as published by the Council of American Building Officials, is hereby adopted by reference as an amendment to the Building Code of the City for the control of buildings and structures as therein provided, except such parts of such Code as are herein modified or deleted, and each and all of the regulations of the Model Energy Code, 1995 edition, are hereby referred to, adopted and made a part hereof as if fully set out in this chapter.

1420.11 EFFECTIVE DATE.

The City Clerk shall certify the adoption of this chapter and cause the same to be published according to law, and this chapter shall take effect fifteen days after approval as so certified. However, this chapter shall not take effect until the State Construction Code Authority has reviewed and approved this chapter, or until the State Construction Code Authority has had this chapter for ninety days without either approving or denying this chapter.

(Ord. 1172. Passed 10-15-90.)

1420.12 CONFLICT OF LAWS.

In the event of a conflict between any of the provisions of the BOCA National Building Code, as adopted in Section 1420.03, and a provision of this Building and Housing Code, or any other local ordinance, rule or regulation, the provision of this Building and Housing Code, or the local ordinance, rule or regulation, shall control. In the event of a conflict between any of the provisions of the BOCA National Building Code, as aforesaid, or a provision of this Building and Housing Code, or any other local ordinance, rule or regulation, and a provision of any State law, rule or regulation, the State law, rule or regulation shall control.

1420.13 AMENDMENTS OF BOCA CODE.

The BOCA National Building Code, as adopted in Section 1420.03, is hereby amended and supplemented as set forth in this section:

SECTION 101.0 SCOPE (amendment)

BOCA 101.1 Title: These regulations as set forth herein shall be known as the Highland Park Building Code and are herein referred to as such or as this Code.

SECTION 112.0 FEES (amendment)

BOCA 112.3.1 Fee schedule: The fees for all plan examinations, building permits and inspections shall be as established from time to time by resolution of Council.

SECTION 114.0 PROFESSIONAL ARCHITECTURAL AND ENGINEERING SERVICES (amendment)

BOCA 114.1 General: All design for new construction work, alteration, repair, expansion, addition or modification work involving the practice of professional architecture or engineering shall be as defined by Act 299 of the Public Acts of 1980, as amended, being Sections 339.101 et seq. of the Michigan Compiled Laws, and known as the Occupational Code, and as administered by the Department of Licensing and Regulation. All plans, computations and specifications required for a building permit application for such work shall be prepared by or under the direct supervision of a registered architect or engineer and bear that architect's or engineer's signature and seal in accordance with the Occupational Code.

SECTION 116.0 VIOLATIONS (amendment)

BOCA 116.4 Violation penalties: The penalty section of the BOCA National Building Code is superseded by Section 1420.07 of the Codified Ordinances of the City, consistent with Section 23 of Act 230 of the Public Acts of 1972, as amended, the Michigan State Construction Code.

SECTION 117.0 STOP WORK ORDER (amendment)

BOCA 117.2 Unlawful continuance: Any person who continues any work in or about the structure after having been served with a stop work order, except such work as he or she is directed to perform to remove a violation or unsafe condition, shall be subject to the penalty provisions specified in Section 1420.07 of the Codified Ordinances of the City, consistent with Section 23 of Act 230 of the Public Acts of 1972, as amended, the Michigan State Construction Code.

SECTION 119.0 UNSAFE STRUCTURES AND EQUIPMENT (addition)

BOCA 119.1.1 Definition of "unsafe structure": For the purpose of this Code, any building or structure which has any or all of the following described conditions shall be deemed an unsafe structure:

- (1) Whenever any door, aisle, passageway, stairway or other means of exit is not of sufficient width or size and is not so arranged as to provide safe and adequate means of exit in case of fire or panic for all persons housed or assembled therein who would be required to use such door, aisle, passageway, stairway or other means of exit;
- (2) Whenever any portion of a structure has been damaged by wind, flood, fire or any other cause in such a manner that the structural strength or stability is appreciably less than it was before such catastrophe and is less than the minimum requirements of this chapter;
- (3) Whenever any portion or appurtenance thereof is likely to fall, become detached or dislodged or collapse and thereby injure persons or damage property;
- (4) Whenever any portion thereof has settled to such an extent that a wall or other structural portions have materially less resistance to winds than is required in the case of new construction;
- (5) Whenever the building or structure or any part thereof, because of dilapidation, deterioration, decay or faulty construction, or because of the removal or movement of some portion of the ground necessary for the purpose of supporting such building or portion thereof, or for other reason, is likely to partially or completely collapse, or whenever some portion of the foundation or underpinning is likely to fall or give way;
- (6) Whenever, for any reason whatsoever, the building or structure or any portion thereof is manifestly unsafe for the purpose for which it is used;
- (7) Whenever the building or structure has been so damaged by fire, wind or flood, or has become so dilapidated or deteriorated, as to become an attractive nuisance to children who might play therein to their danger, or as to afford a harbor for vagrants, criminals or immoral persons, or as to enable persons to resort thereto for the purpose of committing a nuisance or an unlawful or immoral act;

- (8) Whenever a building or structure used or intended to be used for dwelling purposes, because of dilapidation, decay, damage or faulty construction or arrangement or otherwise, is unsanitary or unfit for human habitation, or is in a condition that is likely to cause sickness or disease when so determined by the Health Officer, or likely to cause injury to the health, safety or general welfare of those living within; or
- (9) Whenever any building becomes vacant, dilapidated and open at a door or window, leaving the interior of the building exposed to the elements or accessible to entrance by trespassers.

SECTION 121.0 MEANS OF APPEAL (amendment)

BOCA 121.1 Application for appeal: The appeal process section of the BOCA National Building Code is superseded by the procedures specified in Chapter 1440 of the Codified Ordinances of the City.

SECTION 122.0 DEMOLITION OF UNSAFE BUILDINGS (additions)

BOCA 122.1 Demolition of unsafe buildings; general: The Building Official may order the owner of premises upon which is located any structure or part thereof which is unsafe, as defined in Section 119.1.1, to raze and remove such structure or part thereof, or, if it can be made safe by repairs, to make the structure safe and sanitary, or, where there has been a cessation of normal construction of any structure for a period of more than two years, to raze and remove such structure or part thereof.

BOCA 122.2 Unsafe buildings; unreasonable repairs: Whenever the Building Official determines that the cost of such repairs would exceed 100 percent of the current value of such structure, such repairs shall be presumed unreasonable and it shall be presumed that such structure is a public nuisance which may be ordered razed without option on the part of the owner to repair.

BOCA 122.3 Unsafe buildings; order: The order shall specify a time in which the owner shall comply therewith and specify repairs, if any. It shall be served on the owner of record, or an agent where an agent is in charge of the building, and upon the holder of any encumbrance of record, in the manner provided for service of a summons by a court of record. If the owner or a holder of an encumbrance of record cannot be found, the order may be served by posting it on the main entrance of the building and by publishing it once a week for three successive weeks in a newspaper authorized to provide service by publication.

BOCA 122.4 Unsafe buildings; restraining actions: Anyone affected by any such order shall, within 30 days after service of such order, apply to a court of record for an order restraining the Building Official from razing and removing such structure or parts thereof. The court shall determine whether the order of the Building Official is reasonable. If found reasonable, the court shall dissolve the restraining order; if not found reasonable, the court shall continue the restraining order or modify it as the circumstances may require.

BOCA 122.5 Unsafe buildings; failure to comply: Whenever the owner of a property fails to comply with a demolition order within the time prescribed, the Building Official shall cause the structure or part thereof to be razed and removed, either through an available public agency or by contract or arrangement with private persons, and the cost of such razing and removal shall be charged against the real estate upon which the structure is located and shall be a lien upon such real estate.

BOCA 122.6 Unsafe buildings; salvage materials: When any structure has been ordered razed and removed, Council, or another designated officer under such contract or arrangement aforesaid, may sell the salvage and valuable materials at the highest price obtainable. The net proceeds of such sale, after deducting the expenses of such razing and removal, shall be promptly remitted with a report of such sale or transaction, including the items of expense and the amounts deducted, for the use of the person who may be entitled thereto, subject to any order of a court. If such a surplus does not remain to be turned over, the report shall so state.

SECTION 123.0 CONTRACTORS' LICENSES (additions)

BOCA 123.1 Licenses; contractors: All contractors performing work in the City covered under this chapter shall register with the City in the office of the Engineering Division.

BOCA 123.2 Licenses; fees: All contractors shall be required to pay a fee for registration or license; such fee shall be established by resolution of Council.

BOCA 123.3 Licenses; qualifications: All contractors shall possess a State Contractor's license for the trade in which they are principally involved, prior to making application to the City for a City license or registration.

SECTION 925.0 SMOKE DETECTORS (additions)

BOCA 925.1 Smoke detectors required: Each apartment, suite or sleeping area of every single-family, two-family or multifamily dwelling, boarding house, hotel or motel shall be equipped with a minimum of one smoke detector capable of sensing visible or invisible particles of combustion. The detector shall be approved by a recognized independent testing laboratory. When activated, the detector shall provide an alarm suitable to warn the occupants within the individual dwelling unit. A minimum of one detector shall be located in or adjacent to all sleeping quarters.

BOCA 925.2 Smoke detectors; installation date: All existing dwellings with two or more dwelling units were required to comply with Section 925.1 by December 28, 1979, which was six months after the effective date of Ordinance No. 1081. All existing single-family dwellings were required to comply with Section 925.1 by June 28, 1982, which was three years after the effective date of Ordinance No. 1981. No permit shall be issued for any major alteration or addition to any single-family residence unless the property is brought into compliance with the requirements of Section 925.1.

BOCA 925.3 Smoke detectors; maintenance: Each detector installed in compliance with Section 925.1 shall be maintained in an operational manner and in accordance with NFPA Standards and manufacturer's standards.

SECTION 3102.0 SIGNS (amendment)

BOCA 3102.10.2 Projecting signs; maximum projection: A projecting sign shall not extend across a property line or more than twelve inches into a public right of way.

SECTION 3310.0 DEMOLITION AND EXCAVATION (amendment)

BOCA 3310.6 Deep excavations: Whenever an excavation is made to a depth of more than 12 feet below the established curb, the person who causes such excavation to be made, if afforded the necessary license to enter the adjoining premises, shall preserve and protect from injury at all times, and at his own expense, such adjoining structure or premises which may be affected by the excavation. If the necessary license is not afforded, it shall then be the duty of the owner of the adjoining premises to make his building or structure safe by installing proper underpinning or foundations or otherwise. Such owner, if it be necessary for the prosecution of his work, shall be granted the necessary license to enter the premises where the excavation or demolition is contemplated.

BOCA 3310.7 Shallow excavations: Whenever an excavation is made to a depth less than 12 feet below the curb, the owner of a neighboring building or structure, the safety of which may be affected by the proposed excavation, shall preserve and protect his or her structure from injury and shall support the same by the necessary underpinning or foundations. If necessary for that purpose, such owner shall be afforded a license to enter the premises where the excavation is contemplated.



CITY OF HIGHLAND PARK

Return to Excellence

Hubert Yopp, Mayor

Department of Community & Economic Development

RESOLUTION TO ADOPT FEE SCHEDULE FOR CITY BUILDING SERVICES

WHEREAS, the City of Highland Park has adopted a City Code containing a Building Code, Property Maintenance Code, and other provisions to protect the public health safety and welfare; and

WHEREAS, it is provided in said Code that the City Council, by resolution, shall establish reasonable fees to be charged by the City for acts and services performed there under; and

WHEREAS, in accordance with the Charter of the City of Highland Park, it is provided that the City Council shall adopt a Budget for the fiscal year, appropriate funds for said purposes and provide for a levy of taxes for said Budget appropriations; and

NOW, THEREFORE, BE IT RESOLVED that the following schedule of fees be, and hereby are, determined and established as follows and that the following schedule of fees shall supersede and replace all previous fee schedules for the services so listed:

AYES: 5 NAYS: 0

Certified by City Clerk

Brenda Green, City Clerk / *Cidra Wicker-Brown*, Deputy Clerk

Robert B. Blackwell Municipal Building
12050 Woodward Avenue
Highland Park, Michigan 48203
313-252-0050 ext. 257
313-852-7320 fax

ORDINANCE NO. 2016-

An Ordinance to amend the Highland Park City Building Code, Chapters 1420, 1422, 1424 and 1428, and by adopting Public Act No. 230, of the Acts of 1972, (MCL 125.1501 et seq.) and to provide a means for the city to promote, protect and safeguard the public health, safety and welfare of its citizens.

WHEREAS, the City of Highland Park wishes to amend a local Ordinance adopting Public Act No. 230, of the Acts of 1972, (MCL 125.1501 et seq.).

WHEREAS, the Charter for the City of Highland Park provides that Council has the authority to enact all ordinances they deem necessary for the safety, order, and good government of the City and the general welfare of the inhabitants

NOW, THEREFORE, THE CITY OF HIGHLAND PARK ORDAINS:

- **CONSTRUCTION CODES: PART 1420**

Pursuant to the provisions of the State Building Code, in accordance with Public Act No. 230, of the Acts of 1972, (MCL 125.1501 et seq.) the City of Highland Park hereby assumes the responsibility for the administration and enforcement of that act and code throughout its corporate limits. The building official of the City of Highland Park is designated as the enforcing agency to discharge the responsibilities of the city under the Act.

- **PLUMBING CODE: PART 1422**

Pursuant to the provisions of the State Plumbing Code, in accordance with Public Act No. 230, of the Acts of 1972, (MCL 125.1501 et seq.) the City of Highland Park hereby assumes the responsibility for the administration and enforcement of that act and code throughout its corporate limits. The building official of the City of Highland Park is designated as the enforcing agency to discharge the responsibilities of the city under the Act.

- **MECHANICAL CODE PART: 1424**

Pursuant to the provisions of the State Mechanical Code, in accordance with Public Act No. 230, of the Acts of 1972, (MCL 125.1501 et seq.) the City of Highland Park hereby assumes the responsibility for the administration and enforcement of that act and code throughout its corporate limits. The building official of the City of Highland Park is designated as the enforcing agency to discharge the responsibilities of the city under the Act.

- **ELECTRICAL CODE PART: 1428**

Pursuant to the provisions of the State Electrical Code, in accordance with Public Act No. 230, of the Acts of 1972, (MCL 125.1501 et seq.) the City of Highland Park hereby assumes the responsibility for the administration and enforcement of that act and code throughout its corporate limits. The building official of the City of Highland Park is designated as the enforcing agency to discharge the responsibilities of the city under the Act.

Yeas: 5 Nays: 0

Date: September 6, 2016

Certified by the City Clerk



Cidia Wicker-Brown, Deputy

Nov. 3. 2008 1:35PM

02/24/2003 14:59 517-482-8750

CORP., SEC. & LAND DEV. Fax: 517-241-6371

LAZAR

No. 8682

P. 2

PAGE 01

Feb 24 '03 14:57

P.02

*Mich. Bureau of Const. Codes
Box 241-6371*

An ordinance to repeal City of Highland Park Building, Electrical, Mechanical and Plumbing Code Enforcement Authority Administration and enforcement of its Building, Electrical, Mechanical and Plumbing to the Bureau of Construction Codes under the provisions of the State Construction Code Act (Act 230 of the Public Acts of 1972, as amended).

The City of Highland Park ordains:

Section 1. Pursuant to the provisions of Section 8b (7) of the State Construction Code Act of 1972, as amended, the City of Highland Park hereby transfers responsibility for the administration and enforcement of its Building, Electrical, Mechanical and Plumbing code provisions to the Bureau of Construction Codes.

Section 2. All ordinances inconsistent with the provisions of this ordinance are hereby repealed.

Section 3. This ordinance shall be effective immediately upon legal publication, in accordance with provisions of the Act governing same.

Date 2.24.03

[Signature]
Signature Title

Raymond H. Pearson, Emergency Fin. Mgr.



STATE OF MICHIGAN
EXECUTIVE OFFICE
LANSING

RICK SNYDER
GOVERNOR

BRIAN CALLEY
LT. GOVERNOR

April 28, 2014

DeAndre Windom, Mayor
City of Highland Park
12050 Woodward Avenue
Highland Park, Michigan 48203-3578

Highland Park City Council
12050 Woodward Avenue
Highland Park, Michigan 48203-3578

Dear Mayor Windom and Highland Park City Councilmembers:

On January 24, 2014, the City of Highland Park Financial Review Team transmitted its report to my Office. The report concluded, pursuant to Section 5(4)(b) of Public Act 436 of 2012, the Local Financial Stability and Choice Act, that a financial emergency exists within the City.

On January 30, 2014, I concurred in the assessment of the Financial Review Team and determined, pursuant to Section 6(1) of the Act, that a financial emergency exists within the City. My January 30, 2014, letter of determination set forth the findings of fact upon which my determination was based and also provided notice of the City's right to request a hearing upon the determination.

On February 3, 2014, the City Council by resolution requested a hearing upon the determination of a financial emergency in the City, pursuant to Section 6(2) of the Act. The hearing was conducted on February 11, 2014, before State Treasurer R. Kevin Clinton.

On February 24, 2014, the State Treasurer submitted to me his report concerning the testimony and information received at the hearing. Having carefully reviewed the record of that hearing, and pursuant to Section 6(2) of the Act, I hereby confirm my determination that a financial emergency exists in the City of Highland Park.

The testimony presented on behalf of the City of Highland Park Financial Review Team by Frederick Headen, Legal Advisor to the State Treasurer and member of the Review Team, documented the financial condition of the City, which I summarize as follows:

- During the City's 2013 fiscal year, the ending balance in the Water and Sewer fund increased from a negative \$5.5 million as of June 30, 2012, to a negative \$12.5 million as of June 30, 2013. This increase in the negative fund balance was attributable to a \$7.7 million operating loss during the 2013 fiscal year which was offset slightly by a \$771,000 transfer from the General Fund.
- As of October 31, 2013, the City owed approximately \$19.5 million in total accounts payable to various vendors. This total included an estimated \$18.2 million owed to the City of Detroit for water and sewer services; \$311,380 owed to DTE Energy; \$142,265 owed to Wayne County

for property assessing; \$125,370 owed to Wayne County for prisoner maintenance; \$105,667 owed to the City of Hamtramck for municipal income tax collection and administration; and \$101,284 owed to the State of Michigan for principal and interest upon outstanding emergency loans.

In fact, according to information provided by City officials to the Review Team, accounts payable increased by more than \$756,000 during just a one-month period, from September 30, 2013 to October 31, 2013. This increase was due primarily to water and sewer services provided by the City of Detroit.

- On November 22, 2013, the City of Detroit Water and Sewer Department filed a lawsuit in United States District Court against the City of Highland Park for an estimated \$17.7 million in delinquent accounts payable (consisting of \$16.9 million for unpaid sewer service and \$805,000 for unpaid water service). On December 30, the Court dismissed the majority of the lawsuit, but upon subject-matter jurisdiction grounds. In other words, the Court concluded that the lawsuit should have been filed in State court rather than in Federal court.
- On December 12, 2013, Fifth Third Bank served written notice upon City officials that failure by them to timely pay the City of Detroit for water and sewer services constituted an "event of default" upon a letter of credit extended by the Bank. The written notice also indicated that the bank would, beginning in January 2014, deny City officials access to bond proceeds on deposit with the Bank that City officials had been utilizing to remit certain monthly pension obligations. Since the Review Team filed its report, the Bank essentially has seized the remaining bond proceeds, forcing City officials to find other sources from which to pay certain monthly pension obligations.
- The City has a relatively high property tax millage rate and, correspondingly, a relatively low property tax collection rate. For example, during the 2012 calendar year, the City levied an aggregate of 59.7258 mills for various purposes (e.g., operations, garbage collection, pensions, and judgments). However, according to City officials, the City collected on average only 60 percent of property taxes levied. The remaining 40 percent of property taxes not collected for a given year were returned delinquent to the Wayne County Treasurer's Office for collection, but remained the responsibility of the City if not collected by the County.
- The City's 2013 fiscal year financial audit raised a specific doubt about the ongoing financial viability of the City. Noting that the City "has a significant net deficit in the Water and Sewer Fund at June 30, 2013," the financial audit stated that "[t]his condition raises substantial doubt about the City's ability to continue as a going concern."
- During the 2013 fiscal year, city officials violated Public Act 2 of 1968, the Uniform Budgeting and Accounting Act, by engaging in unbudgeted expenditures in several funds.
- City officials had been consistently unable to issue timely and accurate bills to residential and commercial users of water and sewer services, in some instances for up to two years. One City official had expressed to the Review Team the belief that up to 80 percent of the

water and sewer accounts were delinquent, either because the City had not issued a bill or because the user had received a bill, but had not remitted the amount due.

It was noted that the present City administration had made a decision to stop issuing water and sewer bills altogether because of concerns over the accuracy of some of the bills that had been issued. Whether due to the City's delinquency in issuing accurate bills, an inability of residents to pay, or other factors, City officials had estimated that \$8.5 million in water and sewer bills were uncollectible. This represented 73 percent of the total Water and Sewer Fund receivables as reported in the City's June 30, 2013 audited financial statements.

The City's testimony was presented by City Attorney Todd Perkins, Mayor DeAndre Windom, City Council President Christopher Woodard, and Finance Director Earnestine Williams. Michigan Senator Bert Johnson also testified on behalf of the City.

City officials did not contest the findings of the Review Team report. However, Senator Johnson did question the accuracy of some of the accounts payable owed by the City. In particular, he questioned the amount owed to the City of Detroit for water and sewer services. However, he offered no countervailing evidence in support of his position. Furthermore, the accounts payable amounts contained in the Review Team report were provided to the Review Team by the City of Highland Park.

The testimony of City officials also expressed the view that they had formulated a plan to address the financial emergency. The essence of the testimony presented on behalf of the City was that City officials had made progress in addressing pension funding issues and financial reforms and could continue to make further progress if given additional time and State assistance.

However, as the State Treasurer set forth in his report summarizing the hearing, nothing presented by City officials at the hearing disturbed the Review Team's conclusion, and my subsequent determination, that a financial emergency exists within the City. Therefore, pursuant to Section 6(2) of the Act, I confirm my determination that a financial emergency exists within the City of Highland Park.

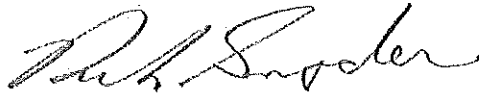
Pursuant to Section 7(1) of the Act, the Highland Park City Council must within seven days of the date of this confirmation adopt a resolution that selects one of the following four statutory options to address the financial emergency:

- (a) The Consent Agreement option pursuant to Section 8 of the Act.
- (b) The Emergency Manager option pursuant to Section 9 of the Act.
- (c) The Neutral Evaluation Process option pursuant to Section 25 of the Act.
- (d) The Chapter 9 Bankruptcy option pursuant to Section 26 of the Act.

DeAndre Windom, Mayor
Highland Park City Council
April 28, 2014
Page 4

The deadline by which the Highland Park City Council must submit an adopted resolution selecting one of the foregoing statutory options is 5:00 P.M., Monday May 5, 2014. The resolution must be submitted to the Michigan Department of Treasury, Office of Legal Affairs, Richard H. Austin Building, First Floor, 430 West Allegan Street, Lansing, MI 48922. The e-mail address is MIStateTreasurer@michigan.gov. Pursuant to Section 7(3) of the Act, if the City Council fails or refuses to select a statutory option by the deadline, the City will be required to proceed under the Neutral Evaluation Process.

Sincerely,

A handwritten signature in cursive script, appearing to read "Rick Snyder".

Rick Snyder
Governor



CITY OF HIGHLAND PARK

Return to Excellence...

DeAndre Windom
Mayor

September 2, 2014

Mr. Rick Snyder, Governor
Executive Office
State Capitol
Lansing, MI 48901

Mr. R. Kevin Clinton, State Treasurer
Michigan Department of Treasury
Richard H. Austin Building, 1st Floor
430 West Allegan Street
P.O. Box 15128
Lansing, MI 48901

Re: City of Highland Park – Submission of Plan of Adjustment and or Readjustment

Dear Governor Snyder and Treasurer Clinton:

Pursuant to your determination that a financial emergency exists within the City of Highland Park and the subsequent selection of the Neutral Evaluation Process by the Highland Park City Council, I hereby submit the City's Plan of Adjustment and or Readjustment dated August 28, 2014 (the "Plan") which was adopted at a duly called and noticed special meeting held at City Hall on Thursday, August 28, 2014 at 4:30 p.m.

The Neutral Evaluation Process which began May 29, 2014 proved to be challenging but the City has undoubtedly resolved all pending disputes with its Interested Parties as required in subsection 23 of Section 25 of Public Act 436 of 2012.

I have also enclosed a certified copy of the resolution passed by City Council approving the City's Plan of how the City of Highland Park will address its outstanding obligations. We now submit the Plan to your office for final approval.

I am happy to answer any questions regarding the enclosed Plan.

Respectfully,

DeAndre Windom, Mayor
City of Highland Park



CITY OF HIGHLAND PARK

Return to Excellence...

DeAndre Windom

Mayor

cc: Senator Bert Johnson – 2nd Senate District
State Representative Thomas F. Stallworth III – 7th House District
Members of the City of Highland Park Council
Wayne L. Workman, Michigan Department of Treasury, Bureau of Local Government
William F. Pettit, Office of the Attorney General – Finance Division
Dennis Muchmore, Chief of Staff to Governor Snyder



STATE OF MICHIGAN
DEPARTMENT OF TREASURY
LANSING

RICK SNYDER
GOVERNOR

R. KEVIN CLINTON
STATE TREASURER

September 29, 2014

Mayor DeAndre Windom
City of Highland Park
12050 Woodward Ave.
Highland Park, MI 48203

Mayor Windom,

I am in receipt of your proposed settlement agreement dated August 28, 2014. Reflecting on the neutral evaluation process as facilitated by Ronald Rose, I am encouraged by the possibilities for financial sustainability and operational reform detailed in your submitted document.

In the months ahead, the Department of Treasury expects to work closely with the City in order to monitor and assist in the actual implementation of the settlement agreement.

Sincerely,

A handwritten signature in cursive script that reads "Wayne L. Workman".

Wayne Workman
Deputy State Treasurer

CC: Highland Park City Council
R. Kevin Clinton, State Treasurer
Senator Bert Johnson, 2nd Senate District
Dennis Muchmore, Chief of Staff to Governor Rick Snyder

CRAIN'S DETROIT BUSINESS

Detroit and Southeast Michigan's premier business news and information website

July 17, 2009 9:59 PM

Highland Park returned to local control, for now

By The Associated Press

HIGHLAND PARK (AP) — The state has returned control of Highland Park's finances to local elected officials and department heads — at least for now.

The **Michigan Department of Treasury** says that although emergency financial manager Robert Mason's 90-day term is expiring Friday, the declaration of a financial emergency declared in 2001 remains in place.

The department says it has authority to name another financial manager for the 16,000-resident community surrounded by Detroit if the mayor and City Council don't meet criteria laid out by Mason during the next year.

Mason was appointed after the state fired former emergency financial manager Arthur Blackwell in April amid allegations he authorized \$264,000 in city payments to himself not approved by the state.

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TREASURY

Highland Park Returned to Local Control

Contact: Terry Stanton, (517) 335-2167

Agency: Treasury

The Local Emergency Financial Assistance Loan Board (ELB) has announced that the 90-day term for Highland Park's Second Successor Emergency Financial Manager, Robert Mason, will expire at the close of business today. At that time, authority over the city's finances will be returned to locally-elected officials and department heads, while the declaration of a financial emergency will remain in place pursuant to Public Act 72 of 1990.

"This has been a long and sometimes difficult process for the residents of Highland Park," said State Treasurer Robert J. Kleine, Chair of the Emergency Loan Board. "Despite the ups and downs, Highland Park residents should be pleased that their elected representatives are committed to working together to ensure a return to self-governance in the not-too-distant future."


While local officials will assume control of the city's finances, the Mayor and City Council President have represented to Mr. Mason that they will abide by a number of provisions laid out to them in Mr. Mason's Final Directive. Should any of the provisions not be followed or acted upon, the Emergency Loan Board has authority to again place an Emergency Financial Manager into Highland Park. If the provisions are successfully carried out by Highland Park during the next year, the Emergency Loan Board will recommend to Governor Granholm that the declaration of financial emergency be lifted.

The Department of Treasury first conducted a review of Highland Park's finances in 1996. The city has been under the authority of an Emergency Financial Manager since 2001.

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LOCAL FINANCIAL STABILITY AND CHOICE ACT (EXCERPT)
Act 436 of 2012

141.1565 Neutral evaluation process.

Sec. 25. (1) A neutral evaluation process may be utilized as provided for in this act. The state treasurer may, in his or her own discretion, determine that the state monitor the neutral evaluation process initiated by a local government under this section and may identify 1 or more individuals who may attend and observe the neutral evaluation process. A local government shall initiate the neutral evaluation process by providing notice by certified mail of a request for neutral evaluation process to all interested parties. If the local government does not provide notice under this subsection to all interested parties within 7 days after selecting the neutral evaluation process option, the treasurer may require the local government to go into receivership and proceed under section 9.

(2) An interested party shall respond within 10 business days of receipt of notice of the local government's request for neutral evaluation process.

(3) The local government and the interested parties agreeing to participate in the neutral evaluation process shall, through a mutually agreed-upon process, select a neutral evaluator to oversee the neutral evaluation process and facilitate all discussions in an effort to resolve their disputes.

(4) If the local government and interested parties fail to agree on a neutral evaluator within 7 days after the interested parties have responded to the notification sent by the local government, the local government shall, within 7 days, select 5 qualified neutral evaluators and provide their names, references, and backgrounds to the participating interested parties. Within 3 business days, a majority of participating interested parties may disqualify up to 4 names from the list. If a majority of participating interested parties disqualify 4 names from the list, the remaining candidate shall be the neutral evaluator. If the majority of participating parties disqualify fewer than 4 names, the local government shall choose which of the remaining candidates shall be the neutral evaluator.

(5) If an interested party objects to the qualifications of the neutral evaluator after the process for selection in subsection (4) is complete, the interested party may appeal to the state treasurer to determine if the neutral evaluator meets the qualifications under subsection (6). If the state treasurer determines that the qualifications have been met, the neutral evaluation process shall continue. If the state treasurer determines that the qualifications have not been met, the state treasurer shall select the neutral evaluator.

(6) A neutral evaluator shall have experience and training in conflict resolution and alternative dispute resolution and have at least 1 of the following qualifications:

(a) At least 10 years of high-level business or legal experience involving bankruptcy or service as a United States bankruptcy judge.

(b) At least 10 years of combined professional experience or training in municipal finance in 1 or more of the following areas:

- (i) Municipal organization.
- (ii) Municipal debt restructuring.
- (iii) Municipal finance dispute resolution.
- (iv) Chapter 9 bankruptcy.
- (v) Public finance.
- (vi) Taxation.
- (vii) Michigan constitutional law.
- (viii) Michigan labor law.
- (ix) Federal labor law.

(7) The neutral evaluator's performance shall be impartial, objective, independent, and free from prejudice. The neutral evaluator shall not act with partiality or prejudice based on any participant's personal characteristics, background, values, or beliefs, or performance during the neutral evaluation process.

(8) The neutral evaluator shall avoid a conflict of interest and the appearance of a conflict of interest during the neutral evaluation process. The neutral evaluator shall make a reasonable inquiry to determine whether there are any facts that a reasonable individual would consider likely to create a potential or actual conflict of interest. Notwithstanding subsection (16), if the neutral evaluator is informed of the existence of any facts that a reasonable individual would consider likely to create a potential or actual conflict of interest, the neutral evaluator shall disclose these facts in writing to the local government and all interested parties involved in the neutral evaluation process. If any participating interested party to the neutral evaluation process objects to the neutral evaluator, that interested party shall notify the local government and all other participating interested parties to the neutral evaluation process, including the neutral evaluator, within 15 days of receipt of the notice from the neutral evaluator. The neutral evaluator shall withdraw, and a new neutral evaluator shall be

selected as provided in subsections (3) and (4).

(9) Before commencing a neutral evaluation process, the neutral evaluator shall not establish another fiscal or fiduciary relationship with any of the interested parties or the local government in a manner that would raise questions about the integrity of the neutral evaluation process, except that the neutral evaluator may conduct further neutral evaluation processes regarding other potential local public entities that may involve some of the same or similar constituents to a prior mediation.

(10) The neutral evaluator shall conduct the neutral evaluation process in a manner that promotes voluntary, uncoerced decision making in which each participant makes free and informed choices regarding the neutral evaluation process and outcome.

(11) The neutral evaluator shall not impose a settlement on the participants. The neutral evaluator shall use his or her best efforts to assist the participants to reach a satisfactory resolution of their disputes. Subject to the discretion of the neutral evaluator, the neutral evaluator may make oral or written recommendations for a settlement or plan of readjustment to a participant privately or to all participants jointly.

(12) The neutral evaluator shall inform the local government and all participants of the provisions of chapter 9 relative to other chapters of title 11 of the United States Code, 11 USC 101 to 1532. This instruction shall highlight the limited authority of United States bankruptcy judges in chapter 9, including, but not limited to, the restriction on federal bankruptcy judges' authority to interfere with or force liquidation of a local government's property and the lack of flexibility available to federal bankruptcy judges to reduce or cram down debt repayments and similar efforts not available to reorganize the operations of the local government that may be available to a corporate entity.

(13) The neutral evaluator may request from the participants documentation and other information that the neutral evaluator believes may be helpful in assisting the participants to address the obligations between them. This documentation may include the status of funds of the local government that clearly distinguishes between general funds and special funds and the proposed plan of readjustment prepared by the local government. The participants shall respond to a request from the neutral evaluator in a timely manner.

(14) The neutral evaluator shall provide counsel and guidance to all participants, shall not be a legal representative of any participant, and shall not have a fiduciary duty to any participant.

(15) If a settlement with all interested parties and the local government occurs, the neutral evaluator may assist the participants in negotiating a pre-petitioned, pre-agreed-upon plan of readjustment in connection with a potential chapter 9 filing.

(16) If at any time during the neutral evaluation process the local government and a majority of the representatives of the interested parties participating in the neutral evaluation process wish to remove the neutral evaluator, the local government or any interested party may make a request to the other interested parties to remove the neutral evaluator. If the local government and a majority of the interested parties agree that the neutral evaluator should be removed and agree on who should replace the neutral evaluator, the local government and the interested parties shall select a new neutral evaluator.

(17) The local government and all interested parties participating in the neutral evaluation process shall negotiate in good faith.

(18) The local government and each interested party shall provide a representative to attend all sessions of a neutral evaluation process. Each representative shall have the authority to settle and resolve disputes or shall be in a position to present any proposed settlement or plan of readjustment to the participants in the neutral evaluation process.

(19) The local government and the participating interested parties shall maintain the confidentiality of the neutral evaluation process and shall not at the conclusion of the neutral evaluation process or during any bankruptcy proceeding disclose statements made, information disclosed, or documents prepared or produced unless a judge in a chapter 9 bankruptcy proceeding orders that the information be disclosed to determine the eligibility of a local government to proceed with a bankruptcy proceeding under chapter 9, or as otherwise required by law.

(20) A neutral evaluation process authorized by this act shall not last for more than 60 days following the date the neutral evaluator is initially selected, unless the local government or a majority of participating interested parties elect to extend the neutral evaluation process for up to 30 additional days. The neutral evaluation process shall not last for more than 90 days following the date the neutral evaluator is initially selected.

(21) The local government shall pay 50% of the costs of a neutral evaluation process, including, but not limited to, the fees of the neutral evaluator, and the interested parties shall pay the balance of the costs of the neutral evaluation process, unless otherwise agreed to by the local government and a majority of the interested parties.

(22) The neutral evaluation process shall end if any of the following occur:

(a) The local government and the participating interested parties execute a settlement agreement. However, if the state treasurer determines that the settlement agreement does not provide sufficient savings to the local government, the state treasurer shall provide notice to the local government that the settlement agreement does not provide sufficient savings to the local government and the local government shall proceed under 1 of the other local government options as provided in section 7.

(b) The local government and the participating interested parties reach an agreement or proposed plan of readjustment that requires the approval of a bankruptcy judge.

(c) The neutral evaluation process has exceeded 60 days following the date the neutral evaluator was selected, the local government and the participating interested parties have not reached an agreement, and neither the local government nor a majority of the interested parties elect to extend the neutral evaluation process past the initial 60-day time period.

(d) The local government initiated the neutral evaluation process under subsection (1) and did not receive a response from any interested party within the time specified in subsection (2).

(e) The fiscal condition of the local government deteriorates to the point that necessitates the need to proceed under the chapter 9 bankruptcy option pursuant to section 26.

(23) If the 60-day time period for a neutral evaluation process expires, including any extension of the neutral evaluation process past the initial 60-day time period under subsection (20), and the neutral evaluation process is complete with differences resolved, the neutral evaluation process shall be concluded. If the neutral evaluation process does not resolve all pending disputes with the local government and the interested parties, or if subsection (22)(b), (c), or (d) applies, the governing body of the local government shall adopt a resolution recommending that the local government proceed under chapter 9 and submit the resolution to the governor and the state treasurer. Except as otherwise provided in this subsection, if the local government has a strong mayor, the resolution requires strong mayor approval before the local government proceeds under chapter 9. The resolution shall include a statement determining that the financial condition of the local government jeopardizes the health, safety, and welfare of the residents who reside within the local government or service area of the local government absent the protections of chapter 9. If the governor approves the resolution for the local government to proceed under chapter 9, the governor shall inform the local government in writing of the decision. The governor may place contingencies on a local government in order to proceed under chapter 9 including, but not limited to, appointing a person to act exclusively on behalf of the local government in the chapter 9 bankruptcy proceedings. If the governing body of the local government fails to adopt a resolution within 7 days after the neutral evaluation process is concluded as provided in this subsection, the governor may appoint a person to act exclusively on behalf of the local government in chapter 9 bankruptcy proceedings. If the governor does not appoint a person to act exclusively on behalf of the local government in chapter 9 bankruptcy proceedings, the chief administrative officer of the local government shall act exclusively on behalf of the local government in chapter 9 bankruptcy proceedings. Upon receiving written approval from the governor under section 26, the local government may file a petition under chapter 9 and exercise powers under federal bankruptcy law.

History: 2012, Act 436, Eff. Mar. 28, 2013.

Compiler's note: Enacting section 2 of Act 436 of 2012 provides:

"Enacting section 2. It is the intent of the legislature that this act function and be interpreted as a successor statute to former 1988 PA 101, former 1990 PA 72, and former 2011 PA 4, and that whenever possible a reference to former 1988 PA 101, former 1990 PA 72, or former 2011 PA 4, under other laws of this state or to a function or responsibility of an emergency financial manager or emergency manager under former 1988 PA 101, former 1990 PA 72, or former 2011 PA 4, under other laws of this state shall function and be interpreted to reference to this act, with the other laws of this state referencing former 1988 PA 101, former 1990 PA 72, or former 2011 PA 4, including, but not limited to, all of the following:

- (a) The charter township act, 1947 PA 359, MCL 42.1 to 42.34.
- (b) 1966 PA 293, MCL 45.501 to 45.521.
- (c) 1851 PA 156, MCL 46.1 to 46.32.
- (d) The general law village act, 1895 PA 3, MCL 61.1 to 74.25.
- (e) The home rule village act, 1909 PA 278, MCL 78.1 to 78.28.
- (f) The fourth class city act, 1895 PA 215, MCL 81.1 to 113.20.
- (g) The home rule city act, 1909 PA 279, MCL 117.1 to 117.38.
- (h) The metropolitan transportation authorities act of 1967, 1967 PA 204, MCL 124.401 to 124.426.
- (i) 1947 PA 336, MCL 423.201 to 423.217."

Leiby, Sara (LARA)

From: Mike Setzer <msetzer@villageofbirchrun.com>
Sent: Friday, June 02, 2017 9:39 AM
To: Leiby, Sara (LARA)
Cc: Jeff Hugo (██████████@hotmail.com); Phil Kerns
Subject: FW: Tuscola Township, MI - Construction Code Commission July 12th Appearance.
Attachments: CCG - Tuscola Twp.pdf

Sarah, find attached the information requested from the Construction Code Commission regarding our application to Administer and Enforce the applicable codes for Tuscola Township. Please have your staff contact me with any questions or concerns.

Thanks

Michael Setzer
Building & Zoning Administrator
12060 Heath Street
P. O. Box 371
Birch Run, MI. 48415
(989) 624-5711
(989) 624-9681 fax

From: Phil Kerns [mailto:pkerns@frankenmuthcity.com]
Sent: Wednesday, May 31, 2017 11:49 AM
To: Mike Setzer
Subject: Fwd: Tuscola Township, MI - Construction Code Commission April 12th Appearance.

See attached.

Phillip W. Kerns
City of Frankenmuth
240 W. Genesee Street
Frankenmuth, MI 48734-1398

Direct Dial: (989) 652-3430, x111
Main Office: (989) 652-9901

BUILDING DEPARTMENT

POLICIES AND PROCEDURES

2016

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PREFACE

These policies and procedures are intended to provide a general overview of Building, Plumbing, Mechanical and Electrical code administration activities. This document is not intended to be all inclusive.

BUILDING OFFICIAL

Position Description:

Supervise / coordinate building, plumbing, mechanical and electrical plan review, inspections, office administration and enforcement activities.

Position Duties:

- Distribute construction documents to plan reviewer's and keep a record of review / mailing schedule
- Render interpretations of the current codes and adopt policies and procedures in order to clarify the application of their provisions.
- Issue notices and orders to assure code compliance.
- Answer questions and address concerns to property owners, design professionals and contractors regarding building, plumbing, mechanical and electrical inspector's duties.
- Review / approve requests for the use of alternate material and methods of construction.
- Coordinates building, plumbing, mechanical and electrical inspections to help assure that construction projects receive minimum required inspections.
- Issues certificates of occupancies when required inspections are complete.
- Assists the inspectors in the enforcement of construction codes.
- Maintain the records of the Building Departments activities.

BUILDING INSPECTOR

Position description

Complete inspections of the architectural trades portions of construction documents, construction work in progress and/or completed building projects in an effort to assure that buildings are compliant with the requirements of the Construction Code Act of 1972 (P.A.230) as amended.

Position Duties

- Review submitted construction documents for compliance to applicable building codes. Communicate results of review to the designer.
- Answer questions and address concerns regarding the buildings codes to design professionals, building contractors and homeowners.
- Review building permit applications and process them into a building permit once applicable requirements are met.
- Schedule and conduct site inspections to periodically verify building code compliance. See checklist chapter for general inspection schedule.
- Prepare for on-site posting, inspection notices that list areas of concern which need the permit holder's attention before proceeding.
- Create/maintain project files for each building permit. The file should consist of: construction documents, permit applications, construction permits, inspection notices, inspection record, misc. project information and a certificate of occupancy.
- Conduct enforcement activities to complete required inspections and to assure that inspection notice issues are properly addressed. Enforcement activities may include: Written correspondence, stop work orders, issuance of civil infraction and/or civil litigation.
- Complete at the request of the State of Michigan, investigations of licensed builder complaints. Including written and oral testimony.

PLAN REVIEWER

Position description

Review submitted construction documents for compliance with applicable construction codes as required by:

- The Construction Code Act of 1972 (P.A. 230) as amended.
- The State Plumbing Act of 2002 (P.A. 733) as amended.
- The Forbes Mechanical Act 192 of 1984 as amended.
- The Electrical Administrative Act 217 of 1956 amended.

Duties for all trade inspectors:

(i.e. Plumbing, Mechanical, Electrical Inspectors)

- Review submitted construction documents
- Prepare for the designer, written documentation of any deficiencies found. Include with the deficiency the applicable code section.
- Answer questions and concerns regarding plan review comments and construction code issues.
- Approve or deny in writing plan review response from the designer. Once the Plan Reviewer approves the plans, construction permits can be issued.
- Maintain project files including: Plan review letter or notes, calculation for fee ordinance as amended, plan review response if in letter form and misc. project information.

PLUMBING INSPECTOR

Position Description:

- The code official shall enforce all of the provisions of the Michigan Plumbing Code and shall act on any question relative to the installation, alteration, repair, maintenance, or operation of all plumbing systems, devices, and equipment except as specifically provided for by statutory requirements or as provided for other section of the code.

Position Duties:

- Review submitted construction documents for compliance to applicable plumbing codes. Communicate results of review to the designer.
- Answer questions and address concerns regarding the plumbing code to design professionals, building contractors and homeowners.
- Review plumbing permit applications and process them into a plumbing permit once applicable requirement are met.
- Schedule and conduct site inspections to periodical verify plumbing code compliance. See checklist chapter for general inspection schedule.
- Prepare for on-site posting, inspection notices that list areas of concern which need the permit holder's attention before proceeding.
- Create/maintain project files for each plumbing permit. The file should consist of: plumbing documents, permit applications, plumbing permits, inspection notices, inspection record and misc. project information.
- Conduct enforcement activities to complete required inspections and to assure that inspection notice issues are properly addressed. Enforcement activities may include: Written correspondence, stop work orders, issuance of civil infraction and/or civil litigation.
- Complete at the request of the State of Michigan, investigations of licensed plumber complaints. Including written and oral testimony.

MECHANICAL INSPECTOR

Position Description:

- The code official is hereby authorized and directed to enforce the provisions of the Michigan Mechanical Code.

Position Duties:

- Review submitted construction documents for compliance to applicable mechanical codes. Communicate results of review to the designer.
- Answer questions and address concerns regarding the mechanical code to design professionals, building contractors and homeowners.
- Review mechanical permit applications and process them into a mechanical permit once applicable requirements are met.
- Schedule and conduct site inspections to periodically verify mechanical code compliance. See checklist chapter for general inspection schedule.
- Prepare for on-site posting, inspection notices that list areas of concern which need the permit holder's attention before proceeding.
- Create/maintain project files for each mechanical permit. The file should consist of: mechanical documents, permit applications, mechanical permits, inspection notices, inspection record and misc. project information.
- Conduct enforcement activities to complete required inspections and to assure that inspection notice issues are properly addressed. Enforcement activities may include: Written correspondence, stop work orders, issuance of civil infraction and/or civil litigation.
- Complete at the request of the State of Michigan, investigations of licensed mechanical complaints. Including written and oral testimony

ELECTRICAL INSPECTOR

Position Description:

- The code official shall enforce the provisions of the code and shall act on any question relative to the installation, alteration, repair, maintenance, or operation of electrical wiring and equipment, except as otherwise specifically provided for by statute.

Position Duties:

- Review submitted construction documents for compliance to applicable NEC and Part 8 Rules. Communicate results of review to the designer.
- Answer questions and address concerns regarding the electrical code to design professionals, building contractors and homeowners.
- Review electrical permit applications and process them into an electrical permit once applicable requirements are met.
- Schedule and conduct site inspections to periodically verify electrical code compliance. See checklist chapter for general inspection schedule.
- Prepare for on-site posting, inspection notices that list areas of concern which need the permit holder's attention before proceeding.
- Create/maintain project files for each electrical permit. The file should consist of: electrical documents, permit applications, electrical permits, inspection notices, inspection record and misc. project information.
- Conduct enforcement activities to complete required inspections and to assure that inspection notice issues are properly addressed. Enforcement activities may include: Written correspondence, stop work orders, issuance of civil infraction and/or civil litigation.
- Complete at the request of the State of Michigan, investigations of licensed electrician complaints. Including written and oral testimony

OFFICE / FIELD PROCEDURES

Construction plan review and inspection personal daily activities are divided between office and field operations. It is the responsibility of the individual to schedule adequate amounts of time to service the needs of the building owner, design professional and contractors in both office and field settings. Each inspectors general schedule will need approval from the Building Official or their designee.

Hours:

- Office / field times are on an as requested basis depending on the inspections scheduled each day. No holiday inspections are required unless scheduled by the individual inspector.
- Scheduling of office time / field inspections are required to be flexible enough to reasonably serve the needs of our clientele.

Lunch & Breaks:

- At the leisure of the inspector

Time-Off:

- It is the responsibility of the person requesting the time-off, to contact the Building Official to schedule qualified persons to cover inspection requests during their absences.

Client Relations:

- Inspectors are expected to treat clients in a courteous and professional manor and respond to their pertinent needs in a timely fashion.

Office Relations:

- Inspectors are expected to treat other office staff in a courteous and professional manor.

Vehicles:

- Inspector vehicles shall be operated in compliance with all local and state laws.

Clerical Support:

- It is the intention of the Building Official to provide clerical support to construction code enforcement personal. This support includes answering phones, permit processing and filing. However, this support is to be provided on a work-load permitted basis. Therefore, when construction code enforcement personal are in the office they are to assist in answering phones, permit processing and filing. Clerical support is to be utilized only when clerical staff has ample time to accommodate additional activities.

BUILDING PERMIT APPLICATION REVIEW PROCEDURES

The following outline is intended to guide the Permit Technician through the building permit application for accuracy. This list is not inclusive and may not include all review requirements.

- Application with plans and specifications are received by the administration department, stamped received with a date and assigned to a permit technician.
- The Permit Technician reviews the construction cost and verifies all applicable fees have been received with the application.
- Permit Technician then verifies all information contained in the permit application is accurate to the best of their ability.
- The permit and associated plans are then delivered to a plan review technician for processing.

PLAN REVIEW PROCEDURES

- Once the plans and specifications have been received by the plan reviewer they are placed in order for review.
- The review process should be completed within ten (10) days from their stamped receipt date.
- If the review will take more than ten (10) days then contact with the permit applicant will be required.
- Upon completion, a review comment letter will be sent to both the applicant and Licensed Design Professional if one is in responsible charge of the project.
- Once the comments have been outlined and all issues have been addressed then the plan reviewer will sign and date the plans stating the following:
 - *Reviewed for code compliance
 - *Released for construction.

PERMIT ISSUANCE PROCEDURES

- The signed and dated plans then will be received by the Building Official for permit issuance.

- The Building Official will then issue the permit and send copies to the applicant.
- The Building Official and all inspectors assigned to the project will need to review the plans, specifications and the plan review comments.

CODE VIOLATION/CORRECTION NOTICE PROCEDURE

- Code violations will be reported in detail on the inspection notice.
- The applicable code section should be in the notice.
- One copy of the inspection will be left on the jobsite and/or mailed to the applicant. (this procedure to be discussed with the applicant)
- No further work should proceed until the corrections have been performed and documented by the evidence of an additional inspection notice.

CERTIFICATE OF USE AND OCCUPANCY PROCEDURES

- The Building Official or their designee shall review the construction project file and verify that all trade permits have been completed.
- Once verified the Building Official shall have the Certificate of Occupancy/Certificate of Completion issued to the applicant. (125.1513)

CONTRACTOR REGISTRATION PROCEDURE

- The permit technician shall obtain a copy of a contractor registration form furnished by the jurisdiction from the person to be licensed under the Act. Upon payment of all fees the licensed contractor shall be registered for the duration of the license issued under the applicable Act.

FIELD INSPECTION PROCEDURES

CHECKLISTS

Required Inspections of Residential & Commercial Construction

- Temporary electrical services
- Footing (after excavation is complete, reinforcement & forms are set / prior to concrete placement) Soil reports may be required.
- Foundation reinforcement inspection. (prior to concrete placement).
- Foundation (after foundation wall is constructed, damproofing is installed & footing drain system is completed / prior to back-filling)

- Electrical Rough-In (after distribution panel is set, outlet & Switch boxes are set & wiring is installed / prior to insulating & drywall installation)
- Plumbing Rough-In (after all supply & waste water piping is installed including vent piping / prior to insulating & drywall installation)
- Mechanical Rough-In (after furnace with related ductwork is installed, exhaust & dryer venting is installed & gas piping is complete / prior to insulating & drywall installation)
- Fireplace Rough-In (after fireplace with related ducting, fire stopping& gas piping is installed / prior to insulating & drywall installation)
- Building exterior weather resistive barrier and all required flashings. (prior to exterior veneer installation)
- Building Rough-In (after framing, sheeting, exterior doors & windows, & stair systems are installed / prior to insulating & drywall installation.)
- Insulation (after installation of insulation systems / prior to drywalling)
- Electrical Final (after installation of the electrical system is complete / prior to occupancy)
- Plumbing Final (after installation of plumbing system is complete / prior to occupancy)
- Mechanical Final (after installation of mechanical system is complete / prior to occupancy)
- Fireplace Final (after installation of fireplace surround and hearth is complete / prior to occupancy)
- Building Final (after building finishes are installed / prior to occupancy)

Please Note:In commercial construction an inspection will need to be scheduled with the fire department at the same time the Rough-In's and Final inspections are scheduled.

When other than "typical" construction materials and methods are used, the Building Department may require "Special Inspections"

All inspectors are required to follow an inspection *checklist and the applicable codes enforced at the time of inspection.

After these inspections/ approvals are complete a Certificate of Occupancy can be issued.

*Checklist included in this procedures manual may not be inclusive and are subject to the individual inspectors review.

Architectural Trades Plan Review Checklists

Inspection Checklist

RESIDENTIAL ROUGH-IN INSPECTION

Please verify the following when completing a residential rough-in inspection.

This checklist is intended for use in completing an inspection. This is only a general list and is not intended to address all possible conditions. References are to the 2015 (MRC) Michigan Residential, Mechanical, Plumbing, Fuel Gas Codes; 2014 NEC; 2009 NFPA 1 & 101; 2009 ICC/ANSI A117.1

A. Site

- Re-inspection fee payment due prior to next inspection.
- All necessary sub-permits obtained (mechanical, plumbing, electrical, etc.)
- Street is clear of all debris (mud, nails, rock, trash, wood, etc.)
- Portable toilet facility is on-site
- Site is identified via a numbered lot sign, visible from the street
- Erosion control is correctly installed & maintained
- Construction driveway is maintained
- Debris dumpster is on-site and not overflowing
- Building permit placard is posted, visible from the street
- Electrical rough-in inspection has been approved
- Electrical underground installation completed
- Grinder pump rough-in has been approved (if applicable)
- Water & sewer underground lines installation completed
- Roof covering installation is complete

B. Framing

- Construction drawings: approved and complete set are on-site
- Mud sill plates are P.T. lumber; anchored w/ min. ½" dia. Bolts; spaced max. 6' apart; extend min. 7" into concrete or grouted cells of concrete masonry units; bolts have washers and nuts; min. 2 bolts per plate; bolt not located >12" or < 7 bolt diameters from each end of plate section. (or straps installed per manufacturer specifications.
- Lumber is identified by grade mark (dimensional load-bearing)
- Lumber components fastened per table.
- Wall Studs** – size, height and spacing per table.
- Wall Studs** – max. allowable height is not exceeded
- Wall Studs** – bearing and/or exterior: bored/drilled = >40% to = <60% require doubled-studs (or stud shoes) with no more than two successive doubled studs bored
- Wall Studs** – bearing and/or exterior: notched are not cut nor notched >25% of width
- Wall Studs** – non-bearing: bored/drilled = <60% with edge of hole no more than 5/8" to stud's edge and no cut or notch
- Wall Studs** – non-bearing: notched = <40% of a single stud width
- Bearing** wall top plates that have been bored/notched >50% area properly plate-strapped and contain 8-10d nails each side. Metal tie extends min. 6" past the opening
- Double top plates provided, unless exception for single top plate has been met (walls)

- Top plate joints are offset a minimum of 24"
- Bottom (sole) plate support for bearing wall studs
- Untreated lumber isolated from contact with masonry / concrete
- Install header at HVAC return air located in bearing wall
- Header spans are not exceeded
- Jack studs at bearing headers / correct number per code
- Walls braced in accordance with code
- Knee walls braced at intervals of 48" on center

- Floor joists (including floor trusses):** 1st floor – floor system layout was approved by prior inspection. If not, refer to that inspection checklist and attach list of issues
- Lumber species, grade, sizing, spacing and length, comply with plans / code / engineered lumber layout drawings
- Floor joist spans are not exceeded
- Floor joists; ends are supported laterally
- Floor joist: ends meet min. bearing requirements or are supported by hangers or ledger strip
- Floor joists: cutting, notching and drilling of structural floor members meet code. Check for cuts and/or holes in webs and chords of engineered lumber.
- Engineered lumber: squash blocking / panel blocking installed per plan
- Floor framing openings framed with header and trimmer joists
- 1st floor: floor-system layout is per approved plans
- Floor / ceiling joists (including floor trusses): Lumber species, grade, sizing, spacing and length, comply with plans / code / engineered lumber layout drawings
- Floor / ceiling joist spans are not exceeded
- Floor / ceiling joists: ends are supported laterally
- Floor / ceiling joists: ends meet min. bearing requirements or are supported by hangers or ledger strip
- Floor / ceiling joists: cutting, notching and drilling of structural floor members meet code. Check for cuts and/or holes in webs and chords of engineered lumber
- Engineered lumber: squash blocking / panel installed per plan
- Floor framing openings framed with header and trimmer joists
- 2nd floor: floor-system layout per approved plans

- Ceiling joists:** Lumber species, grade, sizing, spacing and length comply with plans / code / engineered lumber layout drawings
- Ceiling joists not over-spanned
- Ceiling joists: ends that are lapped or butted comply w/ code
- Ceiling joists: ends meet min. bearing requirements or are supported by hangers or ledger strip
- Ceiling joists: cutting, notching and drilling of structural floor members meet code. Check for cuts or holes in webs and chords of engineered lumber
- Ceiling joist taper cuts at the end of the ceiling joists do not exceed ¼ the depth of the member

- Rafters:** Lumber species, grade, sizing, spacing and length comply with plans / code / engineered lumber layout drawings
- Rafters are not over-spanned

- Ends of rafters (lower) meet min. bearing requirements
- Rafters connected to wall top plates (unless exception met) provide uplift resistance
- Ridge boards, top main rafters, valley main rafters shall not be less in depth than the cut end of rafters
- Main roof framing components are supported to bearing. Roof bracing exceeding 8 feet in length requires "Tee" brace
- Collar ties at rafters: min. 1"x4" and spaced =<4' on center
- Purlins are sized no less than the rafter they support; are continuous and supported by 2x4 braces installed to bearing walls at a slope not less than 45 degrees; supported at 48" max. on center; and bracing > 8 feet in length are constructed as "Tee" brace
- Double rafters at dormers, skylights, etc.
- Openings in roof & ceiling framing: framed with header & trimmer joists. Headers supported by hangers or ledger strip
- Ends of mid-ridge rafters are supported w/ hangers or ledger strip
- Rafter splices supported to bearing
- Masonry veneer steel angle installed and fastened; Triple rafter support for brick load is braced to bearing.

-
- Roof Trusses:** Lumber species, grade, sizing, spacing and length comply with plans / code / engineered lumber layout drawings
 - Roof trusses connected to wall top plates (uplift resistance)
 - Roof truss system braced per plan
 - Structural roof members are not cut, bored or notched in excess of code allowances, nor are they damaged
 - All structural point loads are fully transferred to bearing from roof to foundation

-
- Attic ventilation:** Openings in roof sheathing meet code requirements. Where ridge vents are installed, roof sheathing has been cut back per ridge vent installation instructions. Again verify at final inspection.

-
- Hangers** are missing at: joists / beams / trusses / other
 - Hangers are backed-out at joists / beams / other
 - Hangers are the correct size / type for the application
 - Hanger fasteners appear to be of the correct *type*
 - Hanger fasteners appear to be of the correct *quantity*

-
- Dimensional lumber:** ends of rafters, ceiling joists, floor/ceiling joists, beams, girders, etc. meet min. bearing requirements

-
- Engineered lumber:** ends of rafters, ceiling joists, floor/ceiling joists, beams, girders, etc. meet min. bearing requirements
 - Ends of multi-ply structural members (e.g. beams, girders, I-joists / LVLs, etc.) are supported for full-thickness to bearing
 - Ledger strips – min. number of fasteners and fastener size are provided per code
 - LVL bolted per Mfg.'s specifications

- Layout of all rooms and other spaces comply with approved drawings. No additional rooms or spaces added

C. Fireblocking / Firestopping / Draftstopping

- Garage / carport separation properly maintained from habitable spaces (openings / penetrations)
 - The following are fireblocked with approved materials: chases, fireplace chases, voids, walls at drop ceilings, walls at 10' height intervals, walls at ceiling height, gap between top plates of side-by-side walls
 - Walls at stair stringers and stair landings are fireblocked, parallel w/ stair stringers and stair landings and all penetrations are sealed with approved materials
 - Roof offset(s): walls are fireblocked parallel with rafter(s) and penetrations thru fireblocking are firestopped with approved materials
 - Top and bottom wall plates: penetrations sealed with approved materials
 - Penetrations thru fireblocking sealed with approved materials
 - Penetrations thru fireblocking at walls of stair stringers and stair landings are sealed with approved materials
 - Tub / shower: DWV & supply piping thru subfloor are fireblocked / firestopped with approved materials
 - Basement – gap at stud wall top plate and concrete foundation wall (running parallel to one another) fireblocked with penetrations firestopped
-
- Draftstopping** is installed so that areas of the concealed spaces do not exceed 1,000 sq. ft. Draftstopping has divided the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draftstopping is provided in floor/ceiling assemblies under the following circumstances: 1) Ceiling is suspended under the floor framing; 2) Floor framing is constructed of truss-type open-web or perforated members
 - Draftstopping consists of the material, material thickness, is per code and is properly supported
 - Fireplace chase-flue within the attic space shall be draft-stopped. Draft-stopping materials shall not be less than ½" gypsum board, 3/8" wood structural panels or other materials approved by the building inspector and shall be adequately supported. Penetrations through draft-stopping materials shall be supported and sealed with approved materials to maintain the integrity of the assembly

D. Plumbing

- Water Supply Piping** – Water supply pressure test: Gauge reading exactly at 100psi
- Replace defective test gauge
- Pressure reducing valve installed
- Water supply piping is supported at max. distances of: copper@6' o.c. ; PEX @ 32" o.c.; CPVC @ 3' o.c.
- Air chambers required (water hammering)
- Shower valve bodies and heads supported
- Primer evident on joints
- Shutoff valves for main service and water heater installed

- DWV Piping** – Plumbing drain test: 10’ head test above highest fitting section in that section or to the highest point of the completed system or by air test @ 5psi (**AIR TEST NOT PERMITTED ON PLASTIC**)
 - Bathtubs filled with water above the overflow w/ plugs removed
 - Shower liner test (min. 2” water depth)
 - DWV piping supported 4’ o.c. horizontal
 - DWV piping = <2” dia. is supported midway in wall (vertical runs)
 - DWV piping sized, and sloped correctly in the correct direction
 - DWV cleanouts provided, accessible with min. clearances
 - Primer evident on joints
 - Slab openings around bathtubs, showers, piping, etc. sealed
-
- Water Supply Piping and DWV Piping** – Water supply piping less than 1-1/2” to the edge of studs, joists, rafters is protected against physical damage by steel shield plates, extending not less than 2” above sole plates and below top plates
 - DWV piping less than 1-1/2” to the edge of studs, joists, rafters is protected against physical damage by steel shield plates extending not less than 2” above sole plates and below top plates
 - Bathtubs equipped with circulation pumps shall be provided with an access opening per Mfg. or code for pump removal (12”x12” / 18”x18” when >2’ from access)
 - Bath, toilet and shower spaces: rough-ins for fixtures are spaced in accordance with code
 - Piping subject to freezing not installed at exterior wall, attics or crawl spaces unless adequate provision to protect from freezing
-
- Water heaters:** Fuel-fired water heater is not located in a storage closet. If located in bedroom or bathroom, shall be in an enclosure and provided with combustion air.
 - Water heater: when located in garage, water heater’s ignition source is elevated min. 18” above garage floor
 - Water heater installed in attic and/or crawl space: passageway and illumination of passageway are per code
 - Other locations where water leakage could cause damage, an approved pan under the water heater has been provided
 - The pan is drained by an indirect waste pipe, not less than 3/4” of approved material; and extend full-size and terminate over an indirect waste receptor or shall extend to the building’s exterior between 6”-24” above the adjacent ground surface
 - A pressure/temperature (P/T) relief valve has been installed and the release mechanism is not obstructed
 - The P/T relief valve discharge pipe is not directly connected to the drainage system
 - Fuel-fired water heater has required combustion air supply provided or appliance is listed as “Direct Vent”

E. Mechanical

- Gas supply line system test:** Gas supply test gauge reading maintained 15psi for 15 minutes
- Replace defective / inaccurate gas test gauge
- Gas gauge face type is max #30
- Fuel gas piping is properly supported / strapped

- Piping unions are not located in concealed area(s)

- Clothes dryer** vent piping length does not exceed 35' in length. See Table for duct fitting equivalent length.
- Clothes dryer vent piping is rigid metal duct, assembled without screws and supported at 12' max. intervals
- Clothes dryer vent does not terminate less than 3' from openings into buildings

- Bath and/or toilet rooms:** an operable window or exhaust fan has been provided
- Exhaust fan hoses are securely attached to exhaust fan housing and routed to eave / exterior wall / roof cap

- Gas shut-off valves accessible
- Gas shut-off valves accessible if located in concealed areas
- Appliances to be accessible for service, repair and replacement
- Appliance connections and proper venting in place
- Clearances from Type-B vent piping and combustible materials
- Gas vent piping has min. 1/4" / ft upward slope
- Gas vent piping is properly supported
- Gas vent termination – minimum height from roof to lowest discharge opening
- Auxiliary drain pan and condensate discharge installed
- Condensate drain lines supported and sloped
- Return air – outdoor & return air not taken from prohibited sources
- Combustion air requirements in compliance
- HVAC duct located in garage and penetrating the garage separation barrier, shall be a min. 26ga steel
- Supply ducts (HVAC) located in attics are R-8 insulated. All other ducts, R-6. No insulation required if ducts are located completely inside the building thermal envelope
- All ducts, air handlers, filter boxes and building cavities used as ducts shall be sealed.
- Building framing cavities are not used as supply ducts
- Mechanical system piping capable of carry fluids above 105° F or below 55° F are insulated to a min. R-3
- Isolate direct contact of dissimilar metals (i.e. copper – steel)

- Fireplaces** Factory and masonry fireplaces: clearances from combustibles comply with product installation instructions/code
- New wood-burning fireplaces provided with gasketed doors and combustion air supplied from outdoor
- Gas shut-off valve for fireplace is outside of firebox but is within 6' of fireplace/firebox assembly
- Gas supply piping penetration into fireplace chase is fire-caulked
- Fireplace flue piping strapping has been installed per manufacturer's installation instructions
- Fuel gas appliances not installed in prohibited locations. See code exceptions
- A cricket or saddle is installed on the ridge side of any chimney or penetration more than 30 inches wide as measured perpendicular to the slope

- Chimney – shall extend 2’ higher than any portion of the building within 10’, but not less than 3’ above the highest point when passing thru roof.

F. Fenestration / Glazing at Hazardous Locations

- Windows, doors and skylights, located in the building thermal envelope, are NFRC labeled. Compare the U-factor with approved construction drawings. Verify that windows, skylights and sliding glass doors have an air infiltration rate of no more than 0.3 cfm per square foot. Swinging doors have an air leakage rate of no more than 0.5cgm per square foot
- Safety glazing installed and labeled at hazardous locations. Glazing in doors; adjacent to doors; in windows; in guards and railings; at wet surfaces; adjacent to stairs and ramps; etc.

G. Building Envelope

- All joints, seams, penetrations, openings, cracks, etc. thru exterior wall sheathing and floors have been sealed to limit air and moisture infiltration
- All recessed luminaries, located in the building thermal envelope, are listed as IC rated and labeled as meeting ASTM E283
- Duct tightness testing verified via rough-in test** via 3rd party. Documentation received (test exempt if air handler and all ducts located within the conditioned space)
-
- Duct tightness testing to be verified via post-construction test**, via 3rd party. Documentation pending. (test exempt if air handler and all ducts located within the conditioned space)

H. Life Safety

- Smoke alarm and carbon monoxide boxes are at required locations and identified.
-
- Emergency escape and rescue openings** required for basements, habitable attics and every sleeping room. Minimum 5.0 sq. ft. for grade floor openings; minimum 5.7 sq. ft. for all others. Minimum height opening 24” net clear, minimum width opening 20” net clear, maximum sill height 44”
- Where the opening of an operable window is located more than 72” above the finished grade or surface below, the lowest part of the clear opening of the window shall be a min. of 24” above the finished floor. Where openings of operable sections of windows are less than 24” of the finished floor, window openings do not allow passage of a 4” diameter sphere or are equipped with window opening control devices, listed in compliance with ASTM F2090. When located at emergency egress and rescue openings, the window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by code.
-
- Means of Egress** Min. 1 egress door, 32” min. clear width (single leaf side-hinged)
- Stairways have minimum headroom clearance 6’-8” and 36” min. clear width
- Stairways, ramps, landings, winders, risers, treads and tread nosings are required to be code compliant. i.e. max. riser height 8 ¼ ”; min tread depth 9”; not varying 3/8” in run, etc. Will verify at inspection
- Stair *landings* are structurally supported

- Stair *stringers* are structurally supported
- Stair flight does not have a vertical rise greater than 12 feet between floor levels or landings.
- Stair landing at either side of all exterior doors
- Stairs/landings located inside and/or outside are provided with means of illumination.
- Safety rails at stairs, landings, crossovers and walkovers exceeding 30" to grade or floor are in place during construction

I. Radon

- Radon piping installed in slabs (as required), attic, crawl, basement. Properly identified in exposed and visible locations with the *label*, "Radon Reduction System"
- Radon piping has a 110-volt electrical outlet located within 6 feet of radon piping and where applicable and has a 24" walkway to her electrical outlet and radon piping

J. Crawl Space

- All construction material debris, vegetation and organic matter have been removed from the crawl space area
- Crawl ventilation vents are installed at locations and in the amount per code unless meeting unvented requirements. (MUEC)
- HVAC and appliances installed in crawl spaces are capable of being removed thru an adequate access opening. Travel path from access to appliance does not exceed 20 feet and travel path is illuminated. If no appliance equipment exists, then min. access opening is 16"x24"/18" x 24"

K. Attic Access

- Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that exceed 30 sq. ft. and have a vertical height of 30 "or greater. The rough framed opening shall not be less than 22" x 30" and be located in a hallway or other readily accessible location with headroom of 30" at some point above the access. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.

L. Other

- Drip edge is provided at eaves and gables of shingle roofs.
-
- Lintels – See the code regarding min. / max. height of masonry veneer above openings and allowable spans for lintels supporting masonry veneer
- Structural support posts are mechanically connected at top (structure) and bottom (slab/grade beam)
- Remove wood from brick ledge at foundation
- Porch pit(s): all wood and other bio-degradable items have been removed
- Provide product information for: _____
- Structural engineer is to investigate and provide report for the following: _____

Inspection Checklist
RESIDENTIAL FINAL INSPECTION

Please verify the following when completing a residential final inspection.

This checklist is intended for use in completing an inspection. This is only a general list and is not intended to address all possible conditions. References are to the 2015 MRC Michigan Residential, Mechanical, Plumbing, Fuel Gas Codes; 2009 NFPA 1 & 101; 2009 ICC/ANSI A117.1

A. Preliminary

- All necessary sub-permits have been obtained (mechanical, plumbing, irrigation, etc.)
- Lot final inspection approval
- Grinder pump final inspection
- Electrical final inspection approval
- Lawn irrigation system (if applicable)
- All engineer's inspection reports have been received

B. Site and House Exterior

- Street is clear of all debris (mud, nails, rock, trash, wood, etc.)
 - Site is identified by a house-numbers as required by the Saginaw County Ordinance.
 - Driveway has been installed, per approved drawings
 - Electric meter has been set
 - Water meter has been set
 - Gas meter has been set, if applicable
 - Penetrations thru exterior brick veneer, wall covering and foundation walls are sealed and sleeved, where required
 - Condensate drain lines terminate min. 18" away from foundation wall
 - Weepholes in masonry walls are spaced 33" maximum on-center; are min. 3/16" in diameter; and located immediately above the flashing
 - Final grade is complete. Grade along house perimeter is sloped away from foundation a min. 6 inches in 10 feet
-
- Egress door:** at least one egress door is side-hinged; provides a min. clear width of 32 inches when measured between the face of the door and the stop with the door opened at 90°; min. clear height of the door opening is not less than 78"; is readily openable from inside the dwelling without the use of a key or special knowledge or effort
-
- Egress door – landing or floor:** a landing or floor is on each side of the egress door and has a width not less than the egress in the direction of travel. On the exterior side, the landing or floor is not more than 7-3/4" below the top of the threshold provided the door does not swing over the landing or floor. If the exterior landing or floor is not at grade, a ramp or stair provides access to grade
-
- Exterior doors:** a landing or floor is on each side of each exterior door. The width of each landing is not less than the door served. Every landing has a min. dimension of 36" measured in

the direction of travel. Landing or floor on the exterior side is not more than 7-3/4" below the top of the threshold provided the door does not swing over the landing or floor. (Exception: a landing is not required where a stairway of two or fewer risers is located on the exterior side of the door, provided the door does not swing over the stairway)

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- Exterior stairways:** stairways, ramps, landings, winders, risers, treads and tread nosings, handrails, guardrails, minimum head room, etc. are code compliant including min. 36" width
 - Exterior flights of stairs do not have a vertical rise greater than 12 feet between floor levels or landings.

-
- Exterior/Interior stairways – illumination:** all interior and exterior stairways shall be provided with a means to illuminate the stairs, including the landings and treads. Interior stairways shall be provided with an artificial light source (1 ft. candle power) located in the immediate vicinity of each landing of the stairway. Exterior stairways providing access to a basement from the outside grade level shall be provided with an artificial light source located in the immediate vicinity of the bottom landing of the stairway. (Exception: artificial light source is not required at the top and bottom landing, provided an artificial light source is located directly over each stairway section.) Light activation: the illumination of the exterior stairways is controlled from inside the dwelling unit. (Exception: lights that are continuously illuminated or automatically controlled)

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- Decks:** where supported by attachment to an exterior wall, decks shall be positively anchored to the primary structure and designed for both vertical and lateral loads as applicable. Such attachment shall not be by toenails or nails subject to withdrawal. If positive connection to the primary building structure cannot be verified during inspection, the deck is required to be self-supporting. Decks with cantilevered framing members, connections to exterior walls or other framing members, shall be designed and constructed to resist uplift from the full live load, acting on the cantilevered portion of the deck.(Table R301.5)

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- Deck ledger connection to band joist:** decks supporting a total design load of 50 lbs. per sq. foot, the connection between a deck ledger of P.T. Southern Pine, incised P.T. or approved decay-resistant species, and a 2"nominal lumber band joist bearing on a sill plate or wall plate shall be constructed with 1/2" lag screws or bolts with washers in accordance with Table 502.2.2.1. Lag screws, bolts and washers are to be hot-dipped galvanized or stainless steel. Placement of lag screws or bolts in deck ledgers and band joists are to code
 - Deck lateral load connection is per code
 - Deck post footings have been inspected prior to concrete placement
 - Deck framing construction is per approved drawings
 - Deck framing includes necessary joist hangers, ledger strips, 1/2" bolting of main framing bands and stair stringers to support posts
 - Deck wood/plastic composites bear a label indicating the required performance levels and demonstrating compliance with the provisions of ASTM D 7032
 - Deck wood/plastic composites appear to have been installed in accordance with the manufacturer's instructions.
-

- Hose bibbs** are protected by an atmospheric-type or pressure-type vacuum breaker or a permanently attached hose connection vacuum breaker. Hose bibbs subject to freezing, including the "frostproof" type, are equipped with an accessible stop-and-waste type valve inside the building for control and drainage during cold periods, unless exception is met.
-
- Drip edge** is provided at eaves and gables of shingle roofs.
-
- Fireplace chimney** A cricket or saddle is installed on the ridge side of any chimney or penetration more than 30 inches wide as measured perpendicular to the slope
 - Chimney shall extend 2' higher than any portion of the building within 10', but not less than 3' above the highest point when passing thru the roof
 - Chimney caps: masonry chimneys have concrete, metal or stone cap, sloped to shed water, a drip edge and spark arrestor
 - Radon piping is terminated min. 12" above the roof in a location at least 10 feet away from any window or other opening into the conditioned spaces of the building that is less than 2 feet below the exhaust point
 - No structure is located outside the building envelope
-
- Retaining walls:** location(s) per approved drawings; engineer's inspection reports have been received; guardrails have been installed, where required
-
- Drainage:** Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection that does not create a hazard. Lots shall be graded to drain surface water away from the foundation walls. The grade shall fall a minimum of 6" within the first 10'. Exception (R401.3)

C. Garage and Garage Separation

- Garage Separation:** separation from the residence and attics is via 1/2" thick gypsum board or equivalent; separation from the habitable rooms above is 5/8" thick Type X gypsum board or equivalent; Structures supporting floor/ceiling assemblies used for separation by code via 1/2" thick gypsum board or equivalent
 - Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a min. No. 26 gauge sheet steel or other approved material and have no openings into the garage.
 - Ducts and other penetrations thru the separation have their openings sealed with an approved material to resist the free passage of flame and products of combustion
 - Openings between the garage and residence are equipped with solid wood doors not less than 1-3/8" in thickness, solid or honeycomb-core steel doors not less than 1-3/8" thick, or 20 minute fire-rated doors.
-
- Garage Stairs:** treads, tread nosings and risers meet code. Where guard is required, guard is min. 36" in height. Where 4 or more stair risers exist, a code-complying handrail is installed 34"-38" above tread nosing with min. 1-1/2" clearance, when mounted to wall. Guard on open side of stairs does not allow passage of a sphere 4-3/8" in diameter

- The triangular openings at the open side of stairs, formed by the riser, tread and bottom rail of a guard, does not allow passage of a sphere 6" in diameter

- Garage-located water heater** – the water heater's ignition source is elevated min. 18" above garage floor; A pressure / temperature (P/T) relief valve has been installed and the release mechanism is not obstructed
- The P/T relief valve discharge pipe is not directly connected to the drainage system
- A readily accessible full-open valve is installed in the cold-water supply pipe of the water heater
- Fuel-fired water heater has required combustion air supply provided or appliance is listed as direct vent
- Appliances located in private garage are installed with a minimum clearance of 6 feet above the floor. Exception: the appliances are protected from motor vehicle impact
- There are no openings from a private garage directly into a room used for sleeping purposes.

D. Kitchen

- Every kitchen area is provided with a sink
- No water leaks were noted under kitchen sink
- Potable water valves serving individual fixtures, appliances, risers and branches are provided with access. An individual shutoff valve is installed on the fixture water supply pipe to each plumbing fixture
- The dishwasher waste line rises and is securely fastened to the underside of the counter before connecting to the sink tailpiece
- No S-trap has been created in the DWV piping under the kitchen sink
- Air admittance valve, when provided, has been installed per code
- Fuel-fired appliances have a gas shutoff valve within 6 feet of the appliance and is installed upstream of the union, connector or quick disconnect device it serves. Each shutoff valve is provided with access
- Penetrations thru kitchen base cabinets have been sealed

E. Bathrooms

- Potable water valves serving individual fixtures are provided with access. An individual shutoff valve is installed on the fixture water supply pipe to each plumbing fixture
- No water leaks were noted under sinks
- NO S-trap has been created in the DWV piping under the bathroom sink
- Air admittance valves when provided, have been installed per code
- Bathrooms, water closet compartments and other similar rooms are provided with aggregate glazing area in windows of not less than 3 sq. ft., one-half of which is openable or have been provided with artificial light and a local exhaust system of 50 cfm intermittent or 20 cfm continuous. Exhaust air from these spaces has been exhausted directly to the outdoors.
- Bathtubs equipped with circulation pumps shall be provided with an access opening per Mfr. or code for pump removal (12"x12" or 18"x18" when >2' from access)
- Safety glazing has been installed in walls or enclosures containing or facing hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers where the bottom exposed edge of the glazing is less than 60" measured vertically above any standing or walking surface shall be considered a

hazardous location. Exception: Glazing that is more than 60", measured horizontally and in a straight line, from the water's edge of a bathtub, hot tub, spa, whirlpool, or swimming pool

F. Stairways and Hallways - Indoors

- The minimum width of hallways is not less than 3 feet
- Indoor stairways: stairways, ramps, landings, winders, risers, treads and tread nosings, handrails etc. are code compliant
- Stairways have minimum headroom clearance 6'-8" (6'-6" spirals) and 36" min. clear width
- Flight of stairs do not have a vertical rise greater than 12 feet between floor levels or landings

G. Emergency Escape and Rescue Openings

- Emergency escape and rescue openings:** basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room.
- Emergency escape and rescue openings:** Minimum opening areas required for basements, habitable attics and every sleeping room. Minimum 5.0 sq ft for grade floor openings; Minimum 5.7 sq ft for all others; Minimum height opening 24" net clear; Minimum width opening 20" net clear; Maximum sill height 44".

H. Guards and Window Fall Protection

- Where the opening of an operable window is located more than 72" above the finished grade or surface below, the lowest part of the clear opening of the window is a min. of 24" above the finished floor. Where openings of operable sections of windows are less than 24" from the finished floor, window openings shall not allow passage of a 4" diameter sphere or are equipped with window opening control devices, listed in compliance with ASTM F 2090. When located at emergency egress and rescue openings, the window opening control device, after operation to release the window to fully open, does not reduce the minimum net clear opening area of the window unit to less than the area required by code

I. Fenestration / Glazing at Hazardous Locations

- All safety glazing has been installed and labeled at hazardous locations. Glazing in doors; adjacent to doors; in windows; in guards and railings; at wet surfaces; adjacent to stairs and ramps; etc. as specified by code

J. Smoke Alarms and Carbon Monoxide Alarms

- Smoke alarms:** smoke alarms are installed 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; receive their primary power from the building wiring; and are equipped with battery backup power
- Smoke alarms have been tested in presence of building inspector. Actuation of one alarm activated all of the alarms within the house

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- Carbon monoxide alarms:** NEW CONSTRUCTION a carbon monoxide alarm is installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units that utilize a fuel fired appliance, and/or have an attached garage.
 - Carbon monoxide alarms:** EXISTING CONSTRUCTION where work requiring a building permit occurs in existing dwellings that have attached garages or where fuel fired appliances exist, alarms shall be installed as above.
-

K. Energy Conservation

- Blower door test passed or Visual Inspection certification received
- At least one programmable thermostat has been provided for each separate forced-air heating and cooling system. Thermostat is capable of maintaining the HVAC system on a daily schedule and different times of the day
- Supply ducts in attics shall be insulated to a minimum R-8. All others insulated to a minimum of R-6 unless ducts are installed on the inside of the building thermal envelope
- The HVAC unit(s) complies with the minimum efficiency indicated in the approved construction documents.
- A permanent certificate is completed and posted on or in the electrical distribution panel. The certificate lists the predominant R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawl space wall and/or floor) and ducts outside conditioned spaces; U-factors for fenestration and the solar heat gain coefficient (SHGC) of fenestration and the results from any required duct system and building envelope air leakage testing done on the building. Where there is more than one value for each component, the certificate lists the value covering the largest area. The certificate lists the types and efficiencies of heating, cooling and service water heating equipment. Where a gas-fired unvented room heater, electric furnace, or baseboard electric heater is installed in the residence, the certificate shall list "gas-fired unvented room heater", "electric furnace" or baseboard electric heater", as appropriate. Efficiency shall not be listed for gas-fired unvented room heaters, electric furnaces or electric baseboard heaters.
- A min. of 50% of the lamps in permanently installed lighting fixtures are high-efficiency lamps

L. Attic Areas

- Attic Access:** Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that exceed 30 sq. ft. and have a vertical height of 30" or greater. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.
 - Ceiling framed opening a minimum of 22" x 30".
 - Wall opening min. 22" wide x 30" high
 - In all cases, opening(s) shall be large enough to accommodate the removal of appliances, if applicable
 - Travel distance to the appliance, if applicable, shall not exceed 20' and have 24" wide continuous solid flooring (see exception)

- A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet near the appliance location in accordance with NFPA 70.

-
- Radon** piping is properly identified in exposed and visible locations with the label “Radon Reduction System”
 - Radon piping has a 110-volt electrical outlet located within 6 feet of radon piping and where applicable has a 24” walkway to the electrical outlet and radon piping

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- Attic insulation:** Pull-down stairway assembly opening is insulated and weather-stripped. Backside of vertically mounted doors and upper side of horizontally mounted access panels have been weather-stripped and insulated to a level equivalent to the insulation on the surrounding surfaces
 - Attic insulation is R-38 in Zone 5.
 - If spray foam utilized, provide builder with list of information requirements and follow-up
 - Eave baffles are installed at the eaves and baffles at other locations to prevent insulation from falling or wind-washing into the eaves and other spaces
 - The thickness of blown-in or sprayed roof/ceiling insulation (fiberglass or cellulose) is written in inches on markers that are installed at least one for every 300 sq. ft. throughout the attic space. The markers are affixed to the trusses or joists and marked with the minimum initial installed thickness with numbers a minimum of 1” in height. Each marker faces the attic access opening. Spray polyurethane foam thickness and installed R-value shall be listed on certification provided by the insulation installer.
 - Attic ventilation:** Openings in roof sheathing meet code requirements. Where ridge vents are installed, roof sheathing has been cut back per ridge vent installation instructions

-
- Attic – other:** HVAC supply ducts in attics shall be insulated to a minimum of R-8
 - Clearances from Type-B vent piping and combustible materials
 - Gas vent piping has min. ¼”/ft. upward slope
 - Gas vent piping is properly supported.
 - Gas vent termination – minimum height from roof to lowest discharge opening
 - Auxiliary drain pans(s) in place and free of debris
 - Condensate drain line piping from HVAC unit are supported and sloped. Piping is insulated for a distance not less than 10’ from the HVAC unit
 - Roof framing members including trusses: unless otherwise noted, no evidence of damage is evident

M. Mechanical

- Water heaters** – Fuel fired water heater is *not* located in a storage closet. If located in bedroom or bathroom, shall be in an enclosure and provided with combustion air
- Other locations where water leakage could cause damage, an approved pan under the water heater has been provided
- The pan is drained by an indirect waste pipe, not less than ¾” of approved material; and extend full-size and terminate over an indirect waste receptor or shall extend to the building’s exterior between 6” -24” above the adjacent ground surface

Inspection Checklist

COMMERCIAL ROUGH-IN INSPECTION

Please verify the following when completing a commercial rough-in inspection.

This checklist is intended for use in completing an inspection. This is only a general list and is not intended to address all possible conditions. References are to the 2012 MBC Michigan Building, Mechanical, Plumbing, Fuel Gas Codes; 2009 NFPA 1 & 101; 2009 ICC/ANSI A117.1

General

- Job site address / lot number is identified and visible from the street
- Stamped / approved drawings on jobsite
- City and State permits posted at the jobsite
- Street is clear of all debris (mud, nails, rock, trash, wood, etc.)
- Erosion control is correctly installed & maintained
- Construction driveway is maintained
- Provide report(s) for required special inspections
- Provide report(s) for structural observations completed by design professional.
- Structure is "in-the-dry" (electrical, roof and wall framing protected)
- Any previous outstanding corrections on project
- Electrical rough-in and low voltage inspection completed by the Electrical Inspector
- Foam / Insulation proposed (walls, ceiling and/or floors) ES Report on jobsite

Foundation

- Required anchoring installed per approved drawings
- Seismic or special structural elements; reports provided
- Soil density and/or compaction test reports provided
- Reinforcement steel installed; special inspector report required
- Relief arch(s) and /or sleeves installed at piping locations
- Vapor barrier in place; special inspection report to confirm

Framing

- All connectors installed per approved plans; special inspection report to confirm and included in report
- Structural elements/bearing points (beams, girders, support columns, lintels, etc.) in compliance to approved drawings
- Ends of joists, beams and girders meet min. bearing requirements
- Field welding, bolting anchoring, etc. to be verified by special inspection and included in report
- Wall framing layout design consistent with approved plans
- Floor framing layout design consistent with approved plans
- Roof framing layout design consistent with approved plans
- Penetrations in rated assemblies are required to be sleeved and sealed

- Attic draft-stopping required every 3000 sf in combustible construction with no fire suppression system.
- Untreated lumber isolated from contact with masonry / concrete
- Wall Studs – Notched, non-bearing =<40% of a single stud width
- Wall Studs – Notched, exterior and/or bearing: not cut/notched >25% of width
- Wall Studs – Bored/drilled non-bearing: =<60% with edge of hole no more than 5/8" to stud's edge and no cut or notch
- Wall Studs – Bored/drilled exterior and/or bearing: =<40% to =<60% require doubled-studs (or stud shoes) with no more than two successive doubled studs bored.
- Studs (wall) do not exceed max. height limitations
- Attic access and service space provided

Fireblocking / Draft-Stopping

- Top & bottom wall plates: Penetrations sealed with approved material(s)
- Chases are fire-stopped
- Penetrations thru fire-blocking are correctly sealed
- Walls and soffits are blocked at ceiling height
- Walls = horizontally fire-blocked at 10' intervals
- Walls at ceiling height: fire-blocked correctly
- Exterior wall sheathing penetrations/openings correctly sealed
- Stair stringers at walls and landings are fire-blocked
- Stair stringers at walls and landings: penetrations thru fire-blocking are fire-stopped correctly

Plumbing

- Water supply pressure test; gauge reading 100psi
- Plumbing drain test passed
- Fixture clearances
- Drinking fountain location
- Location of water heater(s); provide access for observation, maintenance, servicing and replacement (relief valve location)
- Boilers exceeding 199,999 BTU's are regulated by the State of Michigan- Division of Boiler and Elevator Inspections
- Protection of potable water supply
- Piping, traps, bend, material and devices used in plumbing system shall bear identification of the manufacturer
- Piping supported and secured; hangar spacing compliance and at fixture locations
- Piping protected from freezing, breakage, stress & strains; sleeved or relieving arch provided through or under footings and foundations
- Piping insulated
- Condensation disposal; auxiliary and secondary
- Elevator pump discharge; location, contained or interceptor proposed
- Nail-guards for piping have been correctly installed/provided
- DWV cleanouts are provided per code
- Grease interceptor or separator rough-in inspection has been passed by the Water & Sewer Dept.
- Grinder pump rough-in inspection has been passed by the Water & Sewer Department (external)

- Internal sump or ejector pump proposed
- Building sewer and water service piping separation (5')
- Primary and secondary roof drainage compliance

Mechanical / Gas

- Gas supply line system test: Test gauge remained at psi for 15 minutes
- Appliances to be accessible
- Combustion air compliance (indoor/outdoor)
- Mechanical ventilation system for enclosed parking garages
- For other than steel pipe, exposed pipe shall be identified by a yellow label marked "gas" in black letters at intervals not exceeding 5 feet
- Piping from multiple meter installations shall be marked/identified for each meter
- Piping to be protected from corrosive action
- Gas piping shall not penetrate building foundation walls at any point below grade.
- Minimum burial depth of 12 inches for underground piping
- Sediment traps installed
- Appliance shut-off(s) to be in same room – within 6 feet of appliance
- Appliance clearance from grade
- Fueled fired appliances-prohibited locations (sleeping rooms, bathrooms, toilet rooms, storage closets, surgical rooms) Review IMC for exceptions
- Elevated ignition source (18inches) unless listed as flammable vapor ignition resistant
- Minimum clearances between gas vent piping and/or fireplace vent piping and combustible materials are being maintained
- Gas piping supported/secured
- Vent systems shall be sized and installed in accordance with manufacturer's installation instructions
- All portions of vent system properly supported
- Commercial venting and hood exhaust (Type I or II)
- Commercial make-up air supplied during operation of equipment
- Gas vent/exhaust termination compliance from roof, openings, other
- Materials within plenums; non-combustibles
- Duct insulation shall conform to the 2009 IECC
- Air distribution systems shall be equipped with smoke detectors
- Ducts and air transfer openings penetrating fire partitions shall be protected by fire dampers
- Ducts and air transfer openings penetrating smoke barriers shall be protected by smoke dampers
- Shaft enclosure penetrations; exceptions
- Refrigerant circuit access located outside must be secured
- Temporary safety guardrails and handrails installed at stairs, landings and ramps
- Safety glazing installed at required hazardous locations
- Ensure stair treads and risers meet code at final inspection
- Stairway headroom meets or exceeds 6'-8" clearance

Other

- Exterior wall sheathing penetrations / openings sealed

- Wood and wood-based product protected against decay
- Ensure adequate attic ventilation, at final inspection
- Additional Comments, Requirements, etc.

Inspection Checklist

COMMERCIAL FINAL INSPECTION

Please verify the following when completing a commercial final inspection.

This checklist is intended for use in completing an inspection. This is only a general list and is not intended to address all possible conditions. References are to the 2012 MBC Michigan Building, Mechanical, Plumbing, Fuel Gas Codes; 2009 NFPA 1 & 101; 2009 ICC/ANSI A117.1

A. Preliminary

- Approved construction drawings on-site.
- Completed electrical final inspection
- Final Inspection by Birch Run Township Fire Department
- Utilities operational (electric, gas and water meters installed)
- Initial back-flow test report(s) for irrigation, domestic and/or fire
- Grinder pump approved by the DPW
- Submit fire alarm inspection and testing report per NFPA 72 U0rj/Strobe devices shall be wired so that the strobes continue to flash when the system is silenced
- Submit contractor's material and test report for underground, above ground and standpipes
- Submit pump acceptance test data for fire pump
- Submit copy of State Elevator Inspector's approval
- State Fire Marshal's final approval (daycare, educational, etc.)
- Saginaw County Health Department Approval (food service and /or swimming pool)
- State Department-Division of Health Care Facilities approval (adult day care, assisted living)
- Submit final inspection reports documenting required special inspections and correction of any discrepancies noted. (Steel, concrete, masonry, soils, pile foundations, driven deep foundations, cast-in-place foundations, sprayed fire resistive materials, mastic & intumescent fire-resistant coating

B. Exterior

- Planning Dept. Approval (landscaping, irrigation system, parking, striping, signage, exterior lighting, build materials, etc.)
- Engineering approval (parking, drainage, detention/retention, stabilization of site, etc.)
- HVAC equipment properly screened per Planning Commission and/or Planning Dept. Staff
- Elevator shaft-pump discharge location. To be contained and/or separator required prior to discharge
- Site accessibility (sidewalks, ramps, landings, etc.)
- Handrails and guardrails permanently installed
- Construction & storage trailers and dumpsters removed from site
- Thresholds at doors shall not exceed ½ inch in height
- The floor on both sides of any door shall be substantially level except for exterior landings which may have a slope of 2% plus 0.5 inch due to finish material
- Emergency egress lighting at exterior door exit locations
- Permanent placard of property address

- Verify exterior of building is completed
- Verify flashing and roof covering(s) are installed

C. Interior

- Rated wall assemblies to be identified (stenciled) above the lay-in ceiling assembly.
- Door closures installed on rated door assemblies.
- A chair rail or other visual barrier is required at glass panels that may be mistaken for doors(s)
- Floors of toilet rooms shall have a smooth, hard, nonabsorbent surface that extend a minimum of 4 inches up the wall
- Walls of toilet rooms within 2 feet of urinals or water closets shall have a smooth, hard, nonabsorbent surface to four feet above.
- Dressing and fitting room accessibility
- Accessible bathroom floor clearances and grab bars installed

D. Plumbing

- Drinking fountain(s) installed and operational
- Restroom / Bathroom fixtures installed and operational
- Primary and secondary roof drainage system 100% completed (location of discharge identified if concealed)
- Provide secondary condensate drain for evaporators and cooling coils disposed of where the drain can indicate usage and the clogging of the primary drain.

E. Mechanical

- Mechanical exhaust is required for bathrooms, locker rooms, smoking lounges and toilet rooms.
- Furnace rooms with any piece of fuel fired equipment shall be enclosed with one-hour rated construction with 45 minute doors or provide automatic sprinkler system and smoke partition
- Commercial kitchen fire suppression and hood testing
- Provide manual fire suppression actuation device at or near a means of egress from the cooking area a minimum of 10 feet but no more than 20 feet from the kitchen exhaust system.
- The actuation of the commercial kitchen hood shall automatically shut down the fuel or electrical power supply to the cooking equipment with manual reset.
- Provide shunt trip for fuel gas equipment under a Class I Kitchen Hood
- Gas appliance shut-off requirements/location
- For other than steel pipe, exposed piping shall be identified by a yellow label marked "gas" in black letters and each length of pipe or tubing and each pipe fitting utilized in a fuel gas system shall bear identification of the manufacturer.
- All equipment and piping properly supported.
- Air handler equipment installed in accessible locations (s)
- Clearances from combustible products

F. Life Safety

- Construction zone area life safety inspection ready
- Provide horn, strobe and alarm compliance letter for new or modifications to existing system during construction. Horn/strobe devices to be wired so that the strobe(s) continue to flash when the system is silenced.
- Emergency egress lighting operational
- Exit signs operational
- Provide tactile exit signs centered 60 inches above finished floor stating "EXIT" complying with 2006 ICC/ANSI at each door to an egress stairway, an exit passageway, and exit discharge.
- Sprinkler shop drawings submitted to the Fire Marshall for modifications to existing fire suppression system.
- Assembly rooms having an occupancy load over 49 must be posted at the main entrance to the building or room.
- Portable fire extinguishers installed.

G. Additional Comments

Inspection Checklist **ELECTRICAL INSPECTION**

Please verify the following when completing a residential or commercial electrical inspection, rough-in and final. This checklist is intended for use in completing an inspection. This is only a general list and is not intended to address all possible conditions. References are to the 2014 NEC, 2012 MBC Michigan Building, Mechanical, Plumbing, Fuel Gas Codes; 2009 NFPA 1 & 101; 2009 ICC/ANSI

A. Plan Checklist / Information Sheet

- One set of original plans should be required for plan check
- The plan should be of a scale not less than 1/8in.
- A complete single-line diagram should be provided
- Panelboard schedules and a load summary, including all loads
- Available fault current (obtainable from the serving utility)
- Interrupting capacities of all overcurrent protective devices
- Location of all panelboards, utilization equipment and outlets
- Location of service equipment, service lateral, and overhead service.
- Rating and location of all disconnecting means
- Size of all branch-circuit conductors
- Check for overloaded conductors
- Clearances and working space at all electrical equipment
- Verify proper use of multiwire branch circuits, and balance all loads
- Check all enclosures, raceways and proper sizing for raceway fill
- Check motor-starting and running protection.
- Verify calculations in accordance with the National Electrical Code
- Plans must be of sufficient clarity to identify the extent or location of the proposed installation.
- All electrical information must be provided on sheets labeled "E"
- Check the plans for a note as follows: "Electrical equipment and material shall be listed and labeled by a recognized electrical testing laboratory"
- Check details of all lighting fixtures, or ceiling fan supports
- Check for a complete symbol and abbreviation list.
- Check to see that all conductor sizes are show on the plans
- Check for grounding electrode system and bonding of the interior water piping system.
- Check for main service overcurrent protective device
- Check for sizes and material of the subfeeder(s)
- Check to see that panelboard schedules match the layout
- Check for panelboard identification, type, voltage phases and bus suzes in amperes, and size of main circuit breakers or fuses
- Check the service section and subpanel locations and electrical equipment to be maintained and serviced
- Verify that equipment will include proper working clearances and is not located in spaces used for storage

- All circuiting should match the circuit numbers on the schedules
- Check all raceway sizes or cable assembly types, conductor sizes, and number of conductors installed in raceways.
- Disconnecting means shall be located at a readily accessible location and within sight of all air-conditioning and refrigerating equipment
- Check disconnecting means for motors and controllers, as required

Basic Checklist

- Stamped / approved drawings on jobsite
- Number and location of receptacle outlets.
- Proper strapping of cables, conduits, or raceways not damaged.
- Proper size of conductors as to load and material
- Raceway capacities and derating, where required.
- Size of all junction and device boxes, conductor fill.
- Extension rings and raised covers, where required.
- Location of distribution panel, size and support
- Feeders, sizes and installation
- Size and type of overcurrent devices per conductor size
- Conductor insulation in high ambient temperatures
- Type of conductor insulation used in wet locations
- Recessed fixtures, spacing from combustibles, insulation thermal protection and suitable splice boxes
- Outside receptacles installed, and on ground-faultcircuit-interrupter protection (GFCI)
- Bathroom and garage receptacles on GFCI
- Proper setting of boxes as to type of construction.
- Support of switch, device, outlet, and receptacle boxes
- Cable clamps where required in device boxes
- Receptacle outlet installed behind gas range
- Outlet spacing at all counter tops in kitchen area
- Appliance branch circuits in kitchen and laundry
- Receptacle within 6 feet of laundry
- Equipment grounding terminal bar bonded to metallic cabinet in subpanel, neutral floating
- Lighting outlets as required at all exterior entrances or exits
- Switched receptacles or lighting outlets
- Lighting as required in attics or underfloor areas
- Location of bell transformer not outside of panels
- Listed floor boxes where located in the floor
- Only recognized types of wiring methods used
- Access to all device, outlet and junction boxes.
- Unused or open knockouts sealed
- At least 6 inches of free conductor at all outlets
- All splicing complete, and neutrals spliced on multiwire branch circuits
- Proper wire connectors used at all splices
- Proper location of closet light

- Cables through or run parallel to studs, joists, or rafters
- Termination of equipment grounding conductors on metal boxes
- Conductors wrapped clockwise around device screws
- Proper polarity of fixtures and receptacles
- Identification of grounded conductors
- Accessibility of equipment requiring servicing
- Method of support of fixtures and equipment
- Circuits balanced and evenly proportioned in panels
- Same size equipment grounding conductor in nonmetallic-sheathed or Type UF cable
- No. 8 AWG stranded conductors installed in raceways, with exception for pools
- Material of ground clamp compatible with material of water pipe
- Ground clamp properly installed
- Ground rod (made electrode) properly installed
- Sizes and types of grounding electrodes
- Main switch installed at service entrance
- Aluminum grounding electrode conductor not permitted within 18" of the earth
- Sheath of non-metallic-sheathed cable not damaged
- Lighting and headroom at electrical equipment
- Depth of conduit or cable buried in the ground
- Completed panelboard circuit directory
- Equipment bonding jumpers at receptacles
- Proper weatherhead at service entrance, drip loop.
- Cables run properly in attic areas
- Insulated bushings where required at raceway ends
- Check temperature rating requirements at fixtures
- Check tightness of all locknuts, couplings, and connectors
- Grounding continuity of entire electrical system
- Switches and receptacles installed properly
- Configuration of range and dryer receptacles
- Raceways reamed, proper cutting die used at threads
- Boxes installed at all splices
- Boxes installed at all lighting fixture outlets
- No concealed flexible cord assemblies
- Dead-front cord caps and proper type and length of cord on food waste disposal and dishwasher
- Size and height of outside branch circuits
- Radius of bends in cables
- Size of conduit body used for splicing
- Lugs listed for aluminum or copper conductors
- Proper point of attachment for service drop
- Type S fuses and adapters installed properly
- No storage in electric equipment room
- No fuse in grounded (neutral) conductor
- Service minimum of 3-wire 100 amperes
- Grounding electrode conductor not smaller than No. 8 AWG copper

- Grounding electrode conductor connected to a metal water pipe and other approved electrode with an approved ground clamp
- Service cable protected and secured to building
- Connection to ground clamp accessible
- Service equipment suitable for short-circuit current
- All branch circuits, feeders, safety switches properly identified
- Panelboard not installed in clothes closet or where obstructed
- All splices proper and securely made
- No switching in the neutral (grounded) conductor
- Type UF cable equipment grounding conductor integral with cable and of proper size
- Nonmetallic-sheathed cable NM-B not run where subject to physical damage
- Location of HVAC equipment disconnecting means
- Class 2 and 3 conductors not in same raceway with supply conductors to AC unit
- Conductors run in parallel for services or feeders
- Raceways installed as complete system
- Raceways not used as support for cables
- Installation of conductors with other systems
- Surge arresters installed in accordance with Article 280 and NFPA 780
- Metal underground gas pipe not used as grounding electrode
- Points of bonding jumper attachment accessible
- Material of main bonding jumper
- Construction of main bonding jumper
- Attachment of main bonding jumper
- Method of bonding at service equipment
- Use of grounded circuit conductor for grounding equipment on supply and load side
- Equipment grounding types and materials
- Grounding of motor operated water pumps
- Entire system free from short circuits and grounds
- Anti-short bushings (redheads or red devils) installed at Type AC cable ends
- Receptacles connected to aluminum conductors marked CO/ALR
- Position of knife switches
- Snap switch 20 amp or less on aluminum marked CO/ALR
- Class P (thermally protected) ballasts for fluorescent fixtures
- Fixtures of proper type where installed in wet or damp locations
- Openings around electrical penetrations fire stopped
- Equipment grounding conductor installed
- Rating of single receptacle on individual circuit
- Bonding jumper installed around water meter and galvanized water pipe unions
- Proper ceiling bar boxes for hanging heavy lighting fixtures
- Service mast (periscope, stack, etc.) installation and support
- Independent support of fixtures in excess of 50 lbs.
- Secured grounding electrode conductor
- Receptacle accessible where disposal, dishwasher or trash compactor are cord-and-plug connected
- TV antenna not secured to electric service mast
- Not more than one cable assembly under one clamp

- Subpanel not protected by overcurrent device larger than rating of bus
- Quantity of circuit breakers, CTL type, in panelboard
- Splices in panelboards or enclosures
- Operating temperature of SE conductors
- Feeder includes an equipment grounding conductor
- Neutral (grounded conductor) disconnect link at service equipment
- Rating of service disconnect
- Proper use and installation of equipment
- Support of electric equipment
- Prevention of physical damage

B. Final Inspection

- Air-conditioning equipment connected in an approved manner
- All circuits tested for proper operation
- All circuits 2-pole type provided with a suitable handle-tie (not a nail or screw)
- All devices in place with proper plates installed
- All equipment exposed to weather of approved or listed type.
- All spare or unused outlet boxes have conductors taped off and blank covers installed
- Bonding-type bushings on service raceways and bonding jumpers where required
- Circuit breakers or fuses of proper size
- Clearance of service drop and drip loop
- Conductors other than service conductors not installed in a service raceway except for grounding conductors and load management conductors having overcurrent protection
- Covers installed on all fuse or circuit-breaker panels
- Dishwasher/food waste disposal frames properly grounded
- Ensure tight connections and check grounding continuity throughout
- Fixtures properly hung
- Frames of ranges and dryers properly grounded.
- Ground clamp of the approved type.
- Ground-fault circuit-interrupter(s) installed for outdoor, rooftops, garage, basement, kitchen and bathroom receptacles
- Grounding electrode conductor run in raceway when subject to damage. Enclosed in a continuous metal raceway or bonded
- Grounding-type receptacles at all locations
- Lighting outlets where required
- Metal service raceway properly grounded
- Neutral properly grounded and properly identified
- Overcurrent protection on all motors that automatically start
- Panel directory properly filled in either with typed page or ink (not Pencils)
- Proper label of qualified electrical testing laboratory on all equipment
- Proper working clearances at all panelboards, service equipment, and motors
- Proper working space at all electric equipment
- Proper working space at all electric equipment
- Proper-size service-entrance conductors
- Raceways sealed at entry into building

LIST OF INSPECTORS

Michael Setzer

- Reg. # 2434
- Building Official
- Building Inspector
- Plan Reviewer

Ronald Wheatley

- Reg. #4955
- Building Official
- Building Inspector
- Plan Reviewer

Donald Pawlowski

- Reg. # 4911
- Electrical Inspector
- Plan Reviewer

Alton Wicker

- Reg.
- Electrical Inspector
- Plan Reviewer

Merle West

- Reg. # 4108
- Mechanical Inspector
- Plumbing Inspector
- Plan Reviewer

Jeffrey M. Hugo

- Reg. # 3608
- Building Official
- Building Inspector
- Plan Reviewer

CBA PROCEDURES (125.1514)

City of Frankenmuth
240 W. Genesee Street
Frankenmuth, MI 48734-1398
Telephone: (989) 652-9901 • Fax: (989) 652-3451
Website: www.frankenmuthcity.com

Construction Board of Appeals Procedures

The following procedures are hereby adopted by the City Council of the City of Frankenmuth to facilitate the duties as outlined in the State Construction Code Act, 1972 PA 230.

SECTION 1. ESTABLISHMENT.

- A. **Members**-The Construction Board of Appeals shall consist of not less than three (3) members.
- B. **Tenure**-Members shall be appointed for two (2) year terms. All terms shall be concurrent.
- C. **Appointment**-Members shall be appointed by the City Manager and the Saginaw County Board of Commissioners Chairperson. Members shall then be affirmed by the City Council.
- D. **Appointment Criteria**-A member of the Board of Appeals shall be qualified by experience or training in construction and possess a working knowledge of the codes being enforced.

SECTION 2. MEETING REQUIREMENTS.

- A. **Meetings**-The Construction Board of Appeals shall meet, at a minimum, once yearly to select their officers and review State rule changes. All meetings, except the annual meeting, shall be considered SPECIAL MEETINGS and will be called as needed based on case load.
- B. **Open Meetings**-Business of the Construction Board of Appeals must be conducted at a public meeting held in compliance with the Open Meetings Act, PA 267 of the Public Acts of 1976.
- C. **Special Meetings**-Special meetings of the Construction Board of Appeals shall be held in compliance with the Open Meetings Act, PA 267 of the Public Acts of 1976.
- D. **Publication Notice Requirements**-Meeting notices shall contain the following:
 - Name, address, and telephone number of the City office.
 - The date, time and location of the meeting.
 - The applicant(s) and the nature of their request(s).

E. Notice to Interested Parties-Notice shall be given to all interested parties via First Class U.S Mail and shall include the following:

- The date, hour, place, and nature of the hearing.
- A statement of the legal authority and jurisdiction under which the hearing is to be held.
- A reference to the particular section(s) of the statutes, rules or codes involved.
- A short statement of the matters declared.

F. Meeting Minutes-Minutes shall be kept of all Board of Appeals meetings and shall contain the date, time, and place of the meeting, members present and absent, any decision made, and a reference to the substance and disposition of all roll call votes, including how each member voted. Draft minutes shall be available not more than eight (8) business days after the meeting to which the minutes refer.

G. Public Hearings- All public hearings held by the Construction Board of Appeals must be held as part of a regular or special meeting of the Construction Board of Appeals. The following rules of procedure shall apply to public hearings held by the Construction board of Appeals:

1. Chairperson opens public hearing and announces the subject.
2. Chairperson summarizes procedures/rules to be followed during the hearing.
3. Applicant presents request.
4. City Building Official/Inspector presents a summary or analysis of the request.
5. Applicant has the ability to cross-examine the City Building Official/Inspector
6. Persons wishing to comment on the request are recognized.
7. Applicant may submit rebuttal evidence.
8. Chairperson closes public hearing and returns to the regular/special meeting.
9. Construction Board of Appeals deliberates and decides.

SECTION 3. VARIANCES.

A. Variances of the Code-The Construction Board of Appeals may grant a specific variance to a substantive requirement of the code if the literal application of the substantive requirement would result in an exceptional, practical difficulty to the applicant, and if both of the following requirements are satisfied:

1. The performance of the particular item or part of the building or structure with respect to which the variance is granted shall be adequate for its intended use and shall not substantially deviate from the performance required by the code of that particular item or part of the health, safety, and welfare of the people of the City of Frankenmuth and of the State.
2. The specific condition justifying the variance shall be neither so general nor recurrent in nature as to make an amendment of the code with respect to the condition reasonable, practical or desirable.

B. Conditions-The Construction Board of Appeals may attach in writing any condition in connection with the granting of a variance that in its judgment is necessary to protect the health, safety and welfare of the people of the City of Frankenmuth and of the State. The breach of a condition shall

automatically invalidate the variance and any permit, license and certificate granted on the basis of it.

- C. **Minimum Relief**-In no case shall more than the minimum variance from the code be granted to alleviate the exceptional, practical difficulty.

SECTION 4. APPEALS.

- A. **Appeals of Permit Issuance**-Applications for permits shall be granted in whole or in part, or denied within 15 days of complete submittal or shall be deemed a denial for the purposes of instituting grounds for an appeal.
- B. **Appeals (other)**-Appeals may be taken by any person aggrieved by any decision of the Building Official/Inspector and/or their designee as permitted by law.

SECTION 5. DECISIONS.

- A. **Timely Decisions**-The Construction Board of Appeals shall hear variance requests and appeals and render a determination not more than 30 days of the submittal of a complete application.
- B. **Appeals of decisions of the Construction Board of Appeals**-An interested party may appeal a decision of the Construction Board of Appeals to the State of Michigan's Construction Code Commission within ten (10) business days of the filing of the City/Township Appeals Board's decision.

SECTION 6. APPLICATION PROCESS.

- A. **Application**-Application for a variance or appeal shall be filed on the established form by the City.
- B. **Fee**-The fee as determined by the City Council shall also be submitted with the completed form.

CBA PROCEDURES (125.1514)

**Township of Frankenmuth
240 W. Genesee Street
Frankenmuth, MI 48734-1398
Telephone: (989) 652-6741 • Fax: (989) 652-3795
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- A reference to the particular section(s) of the statutes, rules or codes involved.
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1. Chairperson opens public hearing and announces the subject.
2. Chairperson summarizes procedures/rules to be followed during the hearing.
3. Applicant presents request.
4. Township Building Official/Inspector presents a summary or analysis of the request.
5. Applicant has the ability to cross-examine the Township Building Official/ Inspector
6. Persons wishing to comment on the request are recognized.
7. Applicant may submit rebuttal evidence.
8. Chairperson closes public hearing and returns to the regular/special meeting.
9. Construction Board of Appeals deliberates and decides.

SECTION 3. VARIANCES.

D. Variances of the Code-The Construction Board of Appeals may grant a specific variance to a substantive requirement of the code if the literal application of the substantive requirement would result in an exceptional, practical difficulty to the applicant, and if both of the following requirements are satisfied:

1. The performance of the particular item or part of the building or structure with respect to which the variance is granted shall be adequate for its intended use and shall not substantially deviate from the performance required by the code of that particular item or part of the health, safety, and welfare of the people of the Township of Frankenmuth and of the State.
2. The specific condition justifying the variance shall be neither so general nor recurrent in nature as to make an amendment of the code with respect to the condition reasonable, practical or desirable.

E. Conditions-The Construction Board of Appeals may attach in writing any condition in connection with the granting of a variance that in its judgment is necessary to protect the health, safety and welfare of the people of the Township of Frankenmuth and of the State. The breach of a

condition shall automatically invalidate the variance and any permit, license and certificate granted on the basis of it.

- F. **Minimum Relief**-In no case shall more than the minimum variance from the code be granted to alleviate the exceptional, practical difficulty.

SECTION 4. APPEALS.

- C. **Appeals of Permit Issuance**-Applications for permits shall be granted in whole or in part, or denied within 15 days of complete submittal or shall be deemed a denial for the purposes of instituting grounds for an appeal.
- D. **Appeals (other)**-Appeals may be taken by any person aggrieved by any decision of the Building Official/Inspector and/or their designee as permitted by law.

SECTION 5. DECISIONS.

- C. **Timely Decisions**-The Construction Board of Appeals shall hear variance requests and appeals and render a determination not more than 30 days of the submittal of a complete application.
- D. **Appeals of decisions of the Construction Board of Appeals**-An interested party may appeal a decision of the Construction Board of Appeals to the State of Michigan's Construction Code Commission within ten (10) business days of the filing of the Township Appeals Board's decision.

SECTION 6. APPLICATION PROCESS.

- C. **Application**-Application for a variance or appeal shall be filed on the established form by the Township.
- D. **Fee**-The fee as determined by the Township Board of Trustees shall also be submitted with the completed form.

CBA PROCEDURES (125.1514)

Township of Blumfield
1175 W. Vassar Road
Reese, MI 48757
Telephone: (989) 868-9512 • Fax: (989) 868-9519
Website: www.blumfieldtwp.org

Construction Board of Appeals Procedures

The following procedures are hereby adopted by the Township Board of Blumfield to facilitate the duties as outlined in the State Construction Code Act, 1972 PA 230.

SECTION 1. ESTABLISHMENT.

- I. **Members**-The Construction Board of Appeals shall consist of not less than three (3) members.
- J. **Tenure**-Members shall be appointed for two (2) year terms. All terms shall be concurrent.
- K. **Appointment**-Members shall be appointed by the Township Supervisor and the Saginaw County Board of Commissioners Chairperson. Members shall then be affirmed by the Township Board of Trustees.
- L. **Appointment Criteria**-A member of the Board of Appeals shall be qualified by experience or training in construction and possess a working knowledge of the codes being enforced.

SECTION 2. MEETING REQUIREMENTS.

- I. **Meetings**-The Construction Board of Appeals shall meet, at a minimum, once yearly to select their officers and review State rule changes. All meetings, except the annual meeting, shall be considered SPECIAL MEETINGS and will be called as needed based on case load.
- J. **Open Meetings**-Business of the Construction Board of Appeals must be conducted at a public meeting held in compliance with the Open Meetings Act, PA 267 of the Public Acts of 1976.
- K. **Special Meetings**-Special meetings of the Construction Board of Appeals shall be held in compliance with the Open Meetings Act, PA 267 of the Public Acts of 1976.
- L. **Publication Notice Requirements**-Meeting notices shall contain the following:
 - Name, address, and telephone number of the Township office.
 - The date, time and location of the meeting.
 - The applicant(s) and the nature of their request(s).

E. Notice to Interested Parties-Notice shall be given to all interested parties via First Class U.S Mail and shall include the following:

- The date, hour, place, and nature of the hearing.
- A statement of the legal authority and jurisdiction under which the hearing is to be held.
- A reference to the particular section(s) of the statutes, rules or codes involved.
- A short statement of the matters declared.

F. Meeting Minutes-Minutes shall be kept of all Board of Appeals meetings and shall contain the date, time, and place of the meeting, members present and absent, any decision made, and a reference to the substance and disposition of all roll call votes, including how each member voted. Draft minutes shall be available not more than eight (8) business days after the meeting to which the minutes refer.

G. Public Hearings- All public hearings held by the Construction Board of Appeals must be held as part of a regular or special meeting of the Construction Board of Appeals. The following rules of procedure shall apply to public hearings held by the Construction board of Appeals:

1. Chairperson opens public hearing and announces the subject.
2. Chairperson summarizes procedures/rules to be followed during the hearing.
3. Applicant presents request.
4. Township Building Official/Inspector presents a summary or analysis of the request.
5. Applicant has the ability to cross-examine the Township Building Official/ Inspector
6. Persons wishing to comment on the request are recognized.
7. Applicant may submit rebuttal evidence.
8. Chairperson closes public hearing and returns to the regular/special meeting.
9. Construction Board of Appeals deliberates and decides.

SECTION 3. VARIANCES.

G. Variances of the Code-The Construction Board of Appeals may grant a specific variance to a substantive requirement of the code if the literal application of the substantive requirement would result in an exceptional, practical difficulty to the applicant, and if both of the following requirements are satisfied:

1. The performance of the particular item or part of the building or structure with respect to which the variance is granted shall be adequate for its intended use and shall not substantially deviate from the performance required by the code of that particular item or part of the health, safety, and welfare of the people of the Township of Blumfield and of the State.
2. The specific condition justifying the variance shall be neither so general nor recurrent in nature as to make an amendment of the code with respect to the condition reasonable, practical or desirable.

H. Conditions-The Construction Board of Appeals may attach in writing any condition in connection with the granting of a variance that in its judgment is necessary to protect the health, safety and welfare of the people of the Township of Blumfield and of the State. The breach of a condition

shall automatically invalidate the variance and any permit, license and certificate granted on the basis of it.

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SECTION 4. APPEALS.

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SECTION 5. DECISIONS.

- E. **Timely Decisions**-The Construction Board of Appeals shall hear variance requests and appeals and render a determination not more than 30 days of the submittal of a complete application.
- F. **Appeals of decisions of the Construction Board of Appeals**-An interested party may appeal a decision of the Construction Board of Appeals to the State of Michigan's Construction Code Commission within ten (10) business days of the filing of the Township Appeals Board's decision.

SECTION 6. APPLICATION PROCESS.

- E. **Application**-Application for a variance or appeal shall be filed on the established form by the Township.
- F. **Fee**-The fee as determined by the Township Board of Trustees shall also be submitted with the completed form.

CBA MEMBERS (125.1514)

Construction Board of Appeals Members

1. Representative of Engineering 4. Patrick Peterson

Firm designated by the jurisdiction.

[REDACTED]

Birch Run, MI. 48415
(989) [REDACTED]

2. Thomas A. Gerken

Licensed Builder

[REDACTED]

Bridgeport, MI. 48722
(989) [REDACTED]

5. Ronald Wheatley

Building Official

[REDACTED]

Birch Run, MI. 48415
(989) [REDACTED]

3. Mark A. Latch

Structural Engineer

[REDACTED]

Saginaw, MI. 48601
(989) [REDACTED]

6. Samuel Placher

Electrical Contractor

[REDACTED]

Bridgeport, MI. 48722
(989) [REDACTED]

FLOODPLAIN AND WETLANDS MANAGEMENT PRACTICES:

The jurisdictions participate in the National Flood Insurance Program. New construction permit applications are reviewed for whether or not they are reasonably located in a Special Flood Hazard Area (SFHA) as defined by the Federal Emergency Management Agency (FEMA) and as illustrated in the locally adopted Flood Insurance Rate Map (FIRM).

Permit applications for properties determined to be located in a SFHA and that would impact or be conducted within a floodplain/floodway are then referred to the regional office of the Michigan Department of Environmental Quality (MDEQ) for review prior to the issuance of any permits.

REGISTRATION OF CONTRACTOR LICENSE:

In accordance with Act 299 of 1980 Article 24 any person who contracts with a property owner to perform residential construction or remodeling projects which total value is \$600.00 or more, including material and labor, is required to be licensed with the State of Michigan as either a residential Builder or Alteration Contractor and register with the jurisdiction as a licensed contractor.

The following is the process for registering:

1. Complete a Contractor Registration form with all required information.

COMPLAINT PROCESSING AND RESOLUTION PROCEDURES:

There comes a time in every community when the adopted codes and standards are violated, whether intentional or unintentional is irrelevant. The credibility of successful building codes lies not only in the ability to administer them reasonably and fairly, but in the ability to enforce specific trade code requirements. The following criteria should be evaluated every time a complaint or a code violation has been determined.

1. INVESTIGATION:

Upon receiving a complaint or discovering a code violation the authorized inspector or administrative staff shall:

- a. Log the code violation and all relevant documentation into the data base.
- b. Verify the contractor has been notified either by personal delivery of the inspection correction notice or by first class mail.
- c. Discuss the specific correction action with the Building Official for follow up with the contractor involved.

2. RESOLUTION OF VIOLATION:

After the violation has been documented, the Building Official shall follow up with the contractor and/or "Person in Responsible Charge" of the project to obtain compliance.

- a. Once compliance has been obtained the portion of the work resulting in the violation shall be re-inspected by the authority having jurisdiction.
- b. An approved re-inspection shall be required to proceed with the portion of the project affected by the violation.
- c. If the "Person in Responsible Charge" of the project does not cause the work in violation of the code to be corrected pursuant to the correction notice the authority having jurisdiction may proceed to secure compliance as provided by law and further institute in an appropriate court an injunction, mandamus, abatement or other appropriate proceedings to enjoin, abate or remove any violation of the code.

HOURS OF OPERATION FOR THE BUILDING DEPARTMENT

The hours of operation for the Construction Code Group (CCG) Building Department are Monday through Friday 8:30 am until 5:00 pm. The CCG is located in the Municipal Building at 240 W. Genesee St. Frankenmuth, MI. 48734. Offices are closed on the following Holidays:

New Year's Eve

New Year's Day

Good Friday

Memorial Day

Independence Day

Labor Day

Thanksgiving Day/and day after

Christmas Day/and day before

Please check with the office as to any changes to these dates.

CONSTRUCTION CODE GROUP (CCG)

Administrative Information for Tuscola Township 2017

- 1. Application to Administer and Enforce**
- 2. Ordinance to Administer and Enforce**
- 3. County Commissioner Signature Page/CBA**
- 4. Appointment of CBA**
- 5. Joint Enforcement Agreement**
- 6. Amended Interlocal Agreement**
- 7. Amended By-Laws**
- 8. Employment Agreements**
- 9. Inspector Registrations**
- 10. Applications and Permits**
- 11. Plan Review Documents**
- 12. Access to Referenced Standards**
- 13. Miscellaneous Documents**
- 14. Annual Budget/CCG**

Application to Administer and Enforce
 Michigan Department of Licensing and Regulatory Affairs
 Bureau of Construction Codes / Office of Administrative Services
 P.O. Box 30254, Lansing, MI 48909
 517-335-2972
 E-Mail: bccoas@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

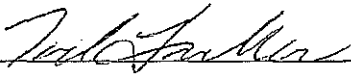
NAME OF GOVERNMENTAL SUBDIVISION Tuscola Township		CONTACT PERSON (Elected Official) Tod Fackler	
ADDRESS (Street Number and Name) 8561 Van Cleve Rd. (P.O. Box 1702, Vassar, MI 48768)			
CITY Vassar	COUNTY Tuscola	STATE MI	ZIP CODE 48768
TELEPHONE NUMBER (Include Area Code) (989) 871-4507	FAX NUMBER (include Area Code) (989) 871-6628	E-MAIL ADDRESS tuscolatownship@tds.net	

Code Adoption			
<input checked="" type="checkbox"/> To assume responsibility for the administration and enforcement of the act and the state code in accordance with Section 8b(6) of 1972 PA 230. Attach a copy of the certified adopted ordinance assuming responsibility for administration and enforcement of the act and the code.			
State Code(s) to be Enforced			
<input checked="" type="checkbox"/> Building	<input checked="" type="checkbox"/> Electrical	<input checked="" type="checkbox"/> Mechanical	<input checked="" type="checkbox"/> Plumbing

By checking the boxes below you are certifying the following:

- The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce this act and the code and all related acts and rules.
- Agency personnel are provided as necessary.
- Administrative services are provided.
- Plan review services are provided.
- Timely field inspection services will be provided.
- A Board of Appeals is in place per MCL 125.1514.
- Have immediate access to the codes & standards for which you have applied to administer & enforce.

BUILDING OFFICIAL INFORMATION	Name: Michael W. Setzer	Registration Number: 2434
--------------------------------------	-------------------------	---------------------------

Certification	
I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge.	
Name of Elected Official (Type or Print) <u>Tod Fackler</u>	Title <u>Supervisor</u>
Signature of Elected Official <u></u>	Date <u>9-20-2016</u>

Copies of all ordinances submitted with this application must include clear and visible identification of the governmental subdivision's department of building safety.

The conduct of the administration and enforcement of the Michigan codes shall be performed in accordance with the approved Application to Administer and Enforce and ordinance. Any changes in the approved ordinance must be submitted to the Bureau of Construction Codes for review and final approval prior to implementation by local departments of building safety.

TUSCOLA TOWNSHIP
TUSCOLA COUNTY, MICHIGAN

ORDINANCE NO. 2016-1

ADOPTED: SEPTEMBER 20, 2016

EFFECTIVE: JANUARY 1, 2017

An Ordinance to assume Township responsibility for administration and enforcement of the Stille-DeRossett Hale Single State Construction Code Act, 1972 PA 230, as amended, and the State Construction Code promulgated thereunder; to provide for the designation of an enforcing agency to discharge the responsibilities of the Township hereunder; to provide for the establishment of fees; to repeal all conflicting ordinances; to provide for severability; and to provide an effective date.

THE TOWNSHIP OF TUSCOLA
TUSCOLA COUNTY, MICHIGAN

ORDAINS:

SECTION 1

ASSUMPTION OF ADMINISTRATION AND
ENFORCEMENT RESPONSIBILITY

Pursuant to Section 8b(6) of the Stille-DeRossett Hale Single State Construction Code Act, 1972 PA 230, as amended, MCL 125.1508b(6), Tuscola Township, Tuscola County, Michigan, hereby assumes the responsibility to administer and enforce 1972 PA 230, as amended, and the State Construction Code adopted thereunder as the same is currently in effect and as may from time to time be amended. A government official registered in accordance with 1986 PA 54 shall be appointed to receive all fees, issue permits, plan reviews, notices, orders and certificates of use and occupancy. All personnel performing plan reviews and inspections shall be registered in accordance with 1986 PA 54.

SECTION 2

DESIGNATION OF ENFORCING AGENCY

In accordance with the Urban Cooperation Act (1967 P.A. Ex. Ses 7), Section 8b of the 1972 PA 230, as amended, and other pertinent Michigan statutes, the Township has

entered into an agreement with other governmental subdivisions for the joint administration and enforcement of 1972 PA 230, as amended, the State Construction Code and this Ordinance through a separate legal entity which is a public body corporate and is known as the Construction Code Group. Consistent with that agreement, the Township hereby designates the person(s) appointed and employed by the Construction Code Group as Building Official(s) as the enforcing agency to discharge the responsibility of the Township for the administration and enforcement of 1972 PA 230, as amended, the State Construction Code and this Ordinance.

SECTION 3

FEES

The Board of the Construction Code Group is hereby given the authority to establish by resolution at any public meeting a schedule of fees, rates and charges for the administration and enforcement of 1972 PA 230, as amended, the State Construction Code and this Ordinance, and for the conducting of various activities authorized by said Act/Code and this Ordinance; provided that the same shall be reasonable and bear a reasonable relationship to the cost and expense of such administration, enforcement and activity. The Board of the Construction Code Group shall further have the right to amend by resolution the aforementioned schedule from time to time within the foregoing limits of reasonableness.

SECTION 4

REPEAL OF CONFLICTING ORDINANCES AND SAVINGS CLAUSE

Any proceedings pending, including permits and prosecutions for violations, under any previous construction code administration in Tuscola Township shall not be affected by this Ordinance and may be continued pursuant to said previous administration. All ordinances and parts of ordinances in conflict herewith are hereby repealed.

SECTION 5

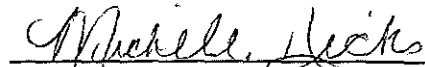
SEVERABILITY

Should any part of this Ordinance or the aforementioned Code being administered and enforced hereunder be declared unconstitutional, illegal or of no force and effect by a court of competent jurisdiction, such portion thereof shall not be deemed to affect the validity of any other part or portion thereof.

SECTION 6

EFFECTIVE DATE

This Ordinance shall be effective on January 1, 2017.



TUSCOLA TOWNSHIP

Michelle Hicks, Clerk

8805 Loren Road

Vassar, MI 48768

CERTIFICATE

I, Michelle Hicks, the Clerk for Tuscola Township, Tuscola County, Michigan certify that the foregoing is a true and complete copy of an Ordinance adopted by the Township Board of the Township of Tuscola at a regular meeting held on September, 20 2016 and I further certify that public notice of such meeting was given as provided by law.



Michelle Hicks, Clerk

Attested by:



Tod Fackler, Supervisor

CERTIFICATE OF ADOPTION

Michelle Hicks, Tuscola Township Clerk, hereby certifies that in pursuance of law and statute provided, the Board enacted and passed Ordinance No. 2016-1 at a regular meeting of the Township Board held on September 20, 2016, at the Township Hall, said Ordinance to become effective on January 1, 2017.

Motion by Hicks, support by Olson.

The following members voted "aye":

- Tod Fackler
- Michelle Hicks
- Shirley Olson
- Sarah Barber
- Robert Verbeek

The following members voted "nay":

The following member was absent:

I further certify that in accordance with Township Board direction the adopted Ordinance was published in the Tuscola County Advertiser on October 22, 2016, and that said Ordinance was recorded in the Ordinance book on October 26, 2016

DATED: 10-26-16

Michelle Hicks Clerk
Michelle Hicks, Clerk

Attest:

Tod Fackler, Supervisor
Tod Fackler, Supervisor

**Township of Tuscola
8861 Van Cleve Road
Vassar, MI 48768
Telephone: (989) 871-4507**

_____, 2016

_____, Chairperson
Tuscola County Board of Commissioners

Caro, MI _____

RE: Construction Board of Appeals – Tuscola Township.

Dear _____,

As you may be aware, local units of government enforcing the Still-DeRossett-Hale Single State Construction Code Act, Act 230 of 1972 are required under Section 125.1514 to have the construction board of appeals members appointed by the chief executive officer of the township and the chairperson of the County Board of Commissioners.

The attached approvals were executed by me upon approval by the Township Board as listed below. We are requesting your assistance in completing the Public Act 230 requirement.

Thomas A. Gerken-Licensed Builder, Mark A. Latch-Structural Engineer,
Patrick Peterson-Plumbing & Mechanical Contractor, Ronald J. Wheatley-Building Official,
Samuel Placher-Licensed Electrician, and
A professional engineer from a firm representing the Entity

Please sign below and return a copy to me at your earliest convenience. Your signature will indicate approval of the members as they are listed on this correspondence and return same in the enclosed self-addressed stamped envelope. Thank you for your assistance with this matter.

Michael Setzer
Building Official for
Three Entities

_____, Chairperson
Tuscola County Board of Commissioners

Enclosure

RESOLUTION NO. 2016-01

APPOINTMENT OF CONSTRUCTION BOARD OF APPEALS

WHEREAS, the Township of Tuscola adopted an ordinance assuming enforcement of the Michigan Construction Codes and the establishment of a Construction Board of Appeals, and

WHEREAS, the purpose of the Construction Board of Appeals shall be to provide an appeal or any person allegedly aggrieved by a decision of the Building Official or Code Inspector as it pertains to, but not limited to the construction, modification, alteration or abatement of a structure, and

WHEREAS, the Construction Board of Appeals shall consist of not less than three (3) nor more than seven (7) members that shall serve two-year terms, and

WHEREAS, in accordance with 1972 PA 230, as amended, the Chief Executive Office shall appoint members to the Construction Board of Appeals and shall be affirmed by the Township Board of Trustees.


NOW BE IT FURTHER RESOLVED, that the Township Board of Trustees, by an affirmative vote of its members, does hereby affirm the following appointees to the Township of Tuscola Construction Board of Appeals:

Thomas A. Gerken - Licensed Builder
Mark A. Latch - Structural Engineer
Patrick Peterson - Plumbing & Mechanical Contractor
Ronald J. Wheatley - Building Official
Samuel Placher - Licensed Electrician
Representative of Engineering Firm designated by the City

BE IT FURTHER RESOLVED, that the Township Board of Trustees, by an affirmative vote of its members, designate the appointments to the Township of Tuscola Board of Construction as a two year term, expiring March 30, 2018.

Action June 21, 2016

Date 6-21-2016



TOD FACKLER, SUPERVISOR



MICHELLE HICKS, CLERK

**Township of Tuscola
Construction Board of Appeals
June 21, 2016**

1. Representative of Engineering Firm designated by the City.

4. Patrick Peterson

[REDACTED]
Birch Run, MI. 48415
(989) [REDACTED]

2. Thomas A. Gerken
Licensed Builder

[REDACTED]
Bridgeport, MI. 48722
(989) [REDACTED]

5. Ronald Wheatley
Building Official

[REDACTED]
Birch Run, MI. 48415
(989) [REDACTED]

3. Mark A. Latch
Structural Engineer

[REDACTED]
Saginaw, MI. 48601
(989) [REDACTED]

6. Samuel Placher
Electrical Contractor

[REDACTED]
Bridgeport, MI. 48722
(989) [REDACTED]

I, Tod Fackler, being the Chief Executive Officer of the Township of Tuscola, do hereby appoint the above persons to a two year term on the Construction Board of Appeals for the Township of Tuscola. Said terms shall expire March 31, 2018. This appointment is in accordance with Public Act 230 of 1972, as amended.



Tod Fackler, Township Supervisor

Dated: 6-21-2016

UNAPPROVED MINU
TOWNSHIP BOARD HE

Joint enforcement
Agreement 11-8-2011

The meeting was called to ord

Roll call: Present-Bushong, Fa

Olson made a motion to appr
Carried.

Olson made a motion to app
Bishop. Carried.

Need Tuscola Copy

Bishop reported that the Planning Commission had a special meeting with Blasius, Inc. regarding their new addition.

Bushong reported that the Board of Appeals had completed their by-laws. Bushong also stated that the pavilion will be completed this fall.

Schmandt distributed the Zoning Administrator's blight list for November.

Fackler reported that the property at 4855 Byron Dr. has complied with the blight clean-up.

There was some discussion concerning the Cass River Greenway Water Trail Development. The project is nearing completion and the township will ask to meet with Spicer Group concerning the additional cost after that.

After some discussion concerning the clean-up of the septic tank grounds, Fackler made a motion to approve Dave Erbisch to restore this area not to exceed 16 hours and this motion was seconded by Bushong. Carried.

Fackler distributed a report from the Cass River Greenway regarding the Natural Lands Inventory for Lower Cass River-2011. This study was conducted by UM Flint and the Cass River Greenway.

There was discussion regarding the Construction Code Group By-laws and the Resolution of Understanding for the Joint Enforcement and Administration of Construction Codes. Tuscola Township will become a member of Construction Code Group which currently consist of the City of Frankenmuth, the Township of Blumfield and the Township of Frankenmuth effective January 1, 2012. Bushong made a motion authorizing Tod Fackler as signee of the agreement

Township of Frankenmuth

P.O. Box 245, Frankenmuth, MI 48734

RESOLUTION NO. 2011-11-28

RESOLUTION OF UNDERSTANDING FOR THE JOINT ENFORCEMENT AND ADMINISTRATION OF CONSTRUCTION CODES

WHEREAS, the City of Frankenmuth, the Township of Blumfield and the Township of Frankenmuth, all units of local government in Saginaw County, have provided for the joint administration and enforcement of construction codes within their respective limits by the creation of a Construction Code Group, hereinafter referred to as "Group", and

WHEREAS, upon review of the Interlocal Agreement creating the Group and the Group's By-laws it was determined that certain amendments to those documents should be made, and

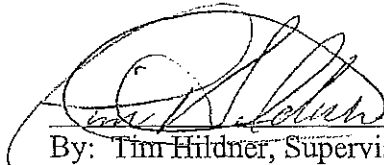
WHEREAS, the Township of Frankenmuth also agrees that the Interlocal Agreement and the Group's By-laws should be amended.

NOW, THEREFORE BE IT RESOLVED THAT THE TOWNSHIP OF FRANKENMUTH:

1. Hereby agrees to the Group's amended Interlocal Agreement as attached hereto, subject to the Agreement being adopted by the City of Frankenmuth and the Township of Frankenmuth.
2. Approves the Group's amended by-laws attached hereto.
3. Appoints Ronald Bell, Treasurer, as trustee and Timothy Hildner, Supervisor, as alternate trustee to serve as its representatives to said Group.
4. Authorizes the Township Supervisor to execute the attached amended Interlocal Agreement.

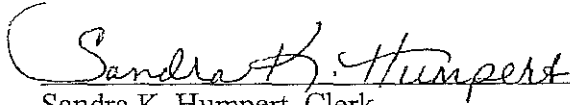
Ayes: 5
Nays: 0
Absent: 0

Action: Resolution Adopted
Dated: November 28, 2011


By: Tim Hildner, Supervisor

CERTIFICATION OF TOWNSHIP CLERK

I, Sandra K. Humpert, as clerk of the Township of Frankenmuth, hereby certify that the foregoing is a true resolution adopted by the Board of Trustees of the Township of Frankenmuth at a regular meeting thereof held on November 28, 2011, at the City & Township Government Center, 240 W. Genesee Street, Frankenmuth, Michigan.

A handwritten signature in cursive script that reads "Sandra K. Humpert". The signature is written in black ink and is positioned above a horizontal line.

Sandra K. Humpert, Clerk

Frankenmuth Township

November 28, 2011

Resolution No. 2011-11-28

**RESOLUTION OF UNDERSTANDING
FOR THE JOINT ENFORCEMENT
AND ADMINISTRATION OF CONSTRUCTION CODES**

WHEREAS, the City of Frankenmuth, the Township of Blumfield and the Township of Frankenmuth, all units of local government in Saginaw County, have provided for the joint administration and enforcement of construction codes within their respective limits by the creation of a Construction Code Group, hereinafter referred to as "Group", and

WHEREAS, upon review of the Interlocal Agreement creating the Group and the Group's By-laws it was determined that certain amendments to those documents should be made, and

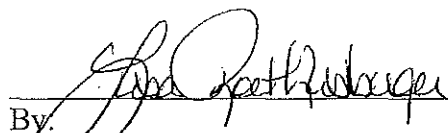
WHEREAS, the Township of Blumfield also agrees that the Interlocal Agreement and the Group's By-laws should be amended.

NOW, THEREFORE BE IT RESOLVED THAT THE TOWNSHIP OF BLUMFIELD:

1. Hereby agrees to the Group's amended Interlocal Agreement as attached hereto, subject to the Agreement being adopted by the City of Frankenmuth and the Township of Blumfield.
2. Approves the Group's amended by-laws attached hereto.
3. Appoints Ralph Frahm as trustee and Wesley Reinbold as alternate trustee to serve as its representatives to said Group.
4. Authorizes the Clerk to execute the attached amended Interlocal Agreement.

Action: 4 years 0 nays

Dated: 1/10/2012


By: _____
Its: Clerk

RESOLUTION NO. 2011-99
RESOLUTION OF UNDERSTANDING
FOR THE JOINT ENFORCEMENT
AND ADMINISTRATION OF CONSTRUCTION CODES

WHEREAS, the City of Frankenmuth, the Township of Blumfield and the Township of Frankenmuth, all units of local government in Saginaw County, have provided for the joint administration and enforcement of construction codes within their respective limits by the creation of a Construction Code Group, hereinafter referred to as "Group", and

WHEREAS, upon review of the Interlocal Agreement creating the Group and the Group's By-laws it was determined that certain amendments to those documents should be made, and

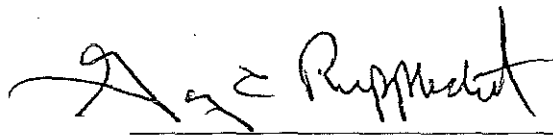
WHEREAS, the City of Frankenmuth also agrees that the Interlocal Agreement and the Group's By-laws should be amended.

NOW, THEREFORE BE IT RESOLVED THAT THE CITY OF FRANKENMUTH:

1. Hereby agrees to the Group's amended Interlocal Agreement as attached hereto, subject to the Agreement being adopted by the Township of Blumfield and the Township of Frankenmuth.
2. Approves the Group's amended by-laws attached hereto.
3. Appoints the City Manager as trustee and the City Treasurer as alternate trustee to serve as its representatives to said Group.
4. Authorizes the Mayor and Clerk to execute the attached amended Interlocal Agreement.

Action Approved

Date 11-9-2011



GARY C. RUPPRECHT, MAYOR



PHILLIP W. KERNS, CLERK

**AN AMENDED
INTERLOCAL AGREEMENT
ESTABLISHING
CONSTRUCTION CODE GROUP**

(MICHIGAN URBAN COOPERATION ACT 1967)

WHEREAS, the City of Frankenmuth, Township of Frankenmuth, and Township of Blumfield, all of Saginaw County, and the Township of Tuscola of Tuscola County, are participating units of government in this Interlocal Agreement and establishment of a Construction Code Group;

WHEREAS, the participating units of government have assumed enforcement authority of the Michigan Construction Codes under Public Act 230 of 1972, as amended, (hereinafter referred to as "construction codes") for regulating construction within each of said unit of government.

WHEREAS, it is the desire of the units of government to cooperate in providing for the joint enforcement and administration of provisions of the construction codes and other government ordinances; and

WHEREAS, it is the desire of the units of government to retain local control of construction code enforcement and, at the same time, provide prompt inspection services to owners and contractors.

NOW, THEREFORE, IT IS HEREBY AGREED AS FOLLOWS:

1. ESTABLISHMENT

The units of government agree to establish a Construction Code Group (hereinafter referred to as "Group"). Pursuant to MCLA 124.507, the Group is established as a separate body corporate.

2. PURPOSE.

The purpose of said Group shall be:

- 2.1 to administer and enforce certain construction codes and other ordinances adopted by each of the participating units of government;
- 2.2 to provide contractual inspection services and grant administration services to units of government;
- 2.3 to hire competent inspectors and other personnel necessary to accomplish the foregoing;

- 2.4 to establish appropriate policies and rules for the construction code enforcement program;
- 2.5 to arrange for a convenient location where records can be maintained and permits and inspections may be obtained;
- 2.6 to establish a uniform schedule of fees for permits and inspections; and
- 2.7 to maintain books of account for all receipts and expenditures by the Group.

3. ORGANIZATION.

Each participating unit of government shall appoint a trustee and alternate trustee to the Group. These trustees shall constitute the Group Board of Directors in accordance with the By-Laws of the Group. Each trustee shall serve a term of three (3) years. The trustee may be removed by the appointing governing body at will. The Board of Directors shall annually elect a chairperson, vice-chairperson, and secretary-treasurer. The Board of Directors shall appoint an administrator who will have the power to conduct the day-to-day business of the Group. The Board of Directors shall meet at least one time per year and shall provide minutes of its meetings to each participating unit of government.

4. FINANCES.

The Board of Directors shall annually prepare a proposed budget for the review and approval of each municipality. The proposed budget shall show the projected revenues and expenses during the next fiscal year beginning July 1. The proposed budget shall be based on a fee schedule designed to cover all projected expenses. Budget amendments shall be reviewed and approved by the Board of Directors. If for any reason the expenditures exceed the revenue during any fiscal year, the Group may require a contribution from all participating units of government in proportion to the number of permits issued for the unit of government in comparison to the total number of permits issued for all units of government which are members of the Group.

5. ENFORCEMENT.

The Group shall be responsible for enforcing the various construction codes specified by the units of government. However, any decision as to whether to institute Circuit Court action, and the cost thereof, shall be the responsibility of the individual unit of government in which the violation occurs.

6. CONSTRUCTION BOARD OF APPEALS.

A Construction Board of Appeals, made up of 3 members, shall be recommended by the Board of Directors to act for the participating units of government and shall be appointed by the

participating units of government. The terms of the members of the Construction Board of Appeals shall be five (5) years with the first appointees having staggered terms between one (1) and five (5) years. The Construction Board of appeals shall have such authority as is set forth in the various units of government ordinances and the authority specified in the State Construction Code Act (P.A. 230 of 1972 as amended). The Construction Board of Appeals shall establish the rules of procedure under which it operates, subject to approval by the participating units of government.

7. TERMS OF AGREEMENT.

The undersigned units of government hereby agree to be bound by the terms of this agreement. Each unit of government shall continue to be bound by this Agreement for each year thereafter unless the unit of government specifically terminates its participation, the unit of government is expelled, or the Group votes to dissolve.

8. TERMS OF MEMBERSHIP

(A) Termination shall be accomplished by delivery of written notification of termination to the Board of Directors at least one year in advance of the desired termination date. No assets shall be distributed to any terminating unit of government unless the Group discontinues operations entirely and in that case only if the terminating unit has been a member of the Group for at least 5 years.

(B) Only those members of the Group that have been members for at least 5 years may request a vote on whether the Group should dissolve and upon an affirmative vote by 2/3 of such members the Group shall be deemed dissolved. Subsequent to a decision to dissolve only those jobs that have been assigned will be completed and no new jobs will be started. After determining that all jobs have been completed and all expenses of the Group have been paid the administrator shall distribute the Group's remaining assets based on the percentage of revenue derived from each member's building permits averaged over the preceding 5 years. Distributions will only be made upon dissolution and only to those members eligible to vote on the question of whether to dissolve. No distribution will be made to any member who requests to terminate its membership.

~~(C) Any member may be expelled from the Group upon the unanimous vote of the other Trustees. Expulsion may be for any reason or for no reason. An expelled member is not entitled to any distribution from any fund balance accumulated by the Group. Expulsion will be effective no more than 180 days after an affirmative vote. An expelled member may request expulsion to be effective sooner. The Trustees may vote upon such request. Note: The above provision was not unanimously adopted by all units. Therefore, sub-section 8(c) is null and void.~~

9. ADDITIONAL MEMBERS.

Any unit of government in Michigan may request and upon approval by not less than two-thirds of the Trustees representing the original three members of the Group (Blumfield Township, City of Frankenmuth, and Frankenmuth Township) may become a member of the Group. Upon approval, the new member shall have the same rights and responsibilities as are provided for all other members; however, a new member shall have no right or interest in any

fund balance accumulated by the Group prior to the new member's admission if five (5) years have not elapsed since their becoming a member.

10. CONTRACTED SERVICES.

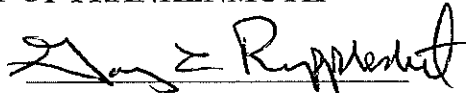
Services may be provided to nonmember units of government on a contract basis provided that such additional services shall not interfere with the services which are provided to the participating units of government.

11. AMENDMENTS.

This Agreement may be amended at any time by unanimous agreement of all participating units of government. Any proposed amendments must be submitted to the Board of Directors for initial review and comment.

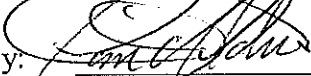
Dated: 11-9-2011

CITY OF FRANKENMUTH

By: 
Its: MAYOR

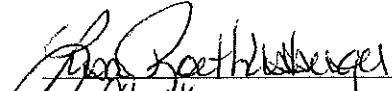
Dated: 12-5-11

TOWNSHIP OF FRANKENMUTH

By: 
Its: SUPERVISOR


Dated: 01-10-2012

TOWNSHIP OF BLUMFIELD

By: 
Its: Clerk

Dated: 11-08-2011

TOWNSHIP OF TUSCOLA

By: 
Its: Supervisor

**AMENDED BY-LAWS
of the
CONSTRUCTION CODE GROUP**

Article I. Office

The principal office of the Construction Code Group (the "Group") shall be located at a place which is determined by the Group Board of Directors (The "Board"), from time to time.

Article II. Fiscal Year

The fiscal year of the Group shall be the calendar year ending June 30.

Article III. Board Meetings

Section 1. Annual Meetings. The annual meeting of the Group Board of Directors (the "Board") shall be held during the third quarter in each fiscal year at a place and time designated by the Board.

Section 2. Regular Meetings. The regular meeting of the Board shall be its annual meeting.

Section 3. Open Meetings Act. All meetings of the Board shall be conducted at a public meeting held in compliance with Act No. 267 of the Public Acts of Michigan of 1976, as amended ("Open Meetings Act"). Public notice of the time, date and place of the meeting shall be given in the manner required by the Open Meetings Act.

Section 4. Special Meetings. Special meetings of the Board shall be held when called by the Chairperson or by one third (1/3) of the Trustees.

Section 5. Notice of Special Meetings. Written notice of special meetings of the Board, stating the time, date and place of meeting, shall be served upon each Trustee personally, or by leaving it at his or her place of residence at least twenty-four (24) hours prior to the time of such meeting, or by depositing the same in a United States Post Office Mail Box within the limits of the Group at least seventy-two (72) hours prior to the time of such meeting, enclosed in a sealed envelope properly addressed to him or her at his or her home or office address, with postage fully prepaid. Any meeting at which all Trustees are present shall be a valid meeting, and all action taken shall be valid, irrespective of lack of notice of the meeting.

Section 6. Notice of Annual Meetings. Written notice of annual meetings of the Board, stating the time, date and place where it is to be held, shall be served by depositing the same in a United States Post Office Mail Box within the limits of the Group at least five (5) days prior to the time of such meeting, properly addressed to him or her at his or her home or office address, with postage fully prepaid thereon. Any meeting at which all Trustees are present shall be a valid

meeting, and all action taken shall be valid, irrespective of lack of notice. No notice shall be required for regular meetings which are scheduled under Section 2 of this Article.

Section 7. Waiver of Notice of Meeting. Notice may be waived in writing either before or after a meeting.

Section 8. Quorum. At least a majority of the Trustees of the entire Board shall be required for a quorum.

Section 9. Voting. The Board shall act by motion, resolution, regulation or consent to action. An affirmative vote of a majority of the Trustees shall be sufficient for all actions unless otherwise be provided in these By-Laws.

Article IV. Intentionally Left Blank

Article V. Officers

- a. The officers of the Group shall consist of a Chairperson, Vice Chairperson, Secretary/Treasurer, and such other officers as the Board may from time to time deem advisable. All officers are required to be a member of the Board.
- b. The officers of the Group shall be elected by the Board at the regular annual meeting of the Board.
- c. Each officer shall hold office until the annual meeting of the Board next succeeding his or her election, and until his or her successor shall have been elected and qualified, or until his or her death, resignation or removal.
- d. Any officer may resign at any time by giving written notice, of such resignation to the Board or to the Chairperson or Secretary of the Group. Unless otherwise specified in such written notice, such resignation shall take effect upon receipt thereof by the Board, or by the Chairperson, and the acceptance of such resignation shall not be necessary to make it effective.
- e. Any officer may be removed, either with or without cause, and a successor elected by the Board at any time.
- f. A vacancy in the office by reason of death, resignation, inability to act, disqualification, or any other cause, may at any time be filled for the unexpired portion of the term by the Board.
- g. Officers of the Group shall, unless otherwise provided by the Board, each have such powers and duties as generally pertain to their respective offices as well as such powers and duties set forth in the Interlocal Agreement of the Group, or which may from time to time be specifically conferred or imposed by the Board. The Chairperson shall be the chief executive officer of the Group.

Article VI. Indemnification of Officers and Trustees

The Group shall indemnify every Group Trustee and Officer against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her as a consequence of his being made a party to or being threatened to be made a party to any threatened, pending or contemplated civil or administrative action, suit or proceeding, by reason of his being or having been a trustee or officer of the Group, except in such cases where he or she is adjudged guilty of willful and wanton misconduct or gross negligence in the performance of his or her duties or adjudged to have not acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interest of the Group and its members. If a trustee or officer claims reimbursement or indemnification hereunder based upon settlement of a matter, he or she shall be indemnified only if the Board (with any trustee seeking reimbursement abstaining) approves such settlement and reimbursement as being in the best interests of the Group and, if a majority of the members request it, such approval is based on an opinion of independent counsel supporting the propriety of such indemnification and reimbursement. The foregoing right of indemnification shall be in addition to and not exclusive of all other rights such trustee or officer may have. The Board shall notify all members that it has approved an indemnification payment at least ten (10) days prior to making such payment.

Article VII. Insurance

The Group shall, to the extent appropriate, carry liability insurance (including, without limitation, directors' and officers' coverage), workers' compensation insurance, if applicable, and such other insurance coverage as the Trustees may determine to be appropriate.

Article VIII. Rules of Order

The rules of the latest edition of Roberts Rules of Order shall govern the procedure of the Board except where such rules are contrary to the Articles of Incorporation, these By-Laws or the laws of the State of Michigan.

Article IX. Corporate Seal

The Group shall have a corporate seal upon which the words "Construction Code Group" shall be embossed. The seal, in the form impressed hereon is hereby adopted.

Article X. Committees

The Board, by resolution adopted by a majority of the entire Board, may from time to time designate from among its members an executive committee and such other committees, and alternate members thereof, as they deem desirable, each consisting of three (3) or more members,

with such powers and authority (to the extent permitted by law and the Articles of the Group) as may be provided by such resolution. Each such committee shall serve at the pleasure of the Board. At all meetings of a committee, the presence of a majority of the members of the committee shall be necessary to constitute a quorum for the transaction of business, except as otherwise provided in said resolution or by these By-Laws.

Article XI. Secretary/Treasurer's Bond

The Secretary/Treasurer shall provide the Group with a bond conditioned upon the faithful performance of the duties of his or her office as Treasurer. The cost of the bond shall be paid by the Group.

Article XII. Depositories

All monies of the Group shall be deposited in a bank or banks, to be designated by the Board, and all checks or other forms of withdrawals therefrom shall be signed by a person or persons designated by resolution of the Board.

Article XIII. Budgets and Apportionment of Costs

The Board shall prepare a proposed budget for the review and approval of each municipality prior to the first day of July of each fiscal year. The proposed budget shall be based on a fee schedule designed to cover all projected expenses. Budget amendments shall be reviewed and approved by the Board of Directors. If for any reason the expenditures exceed the revenue during any fiscal year, the Group may require a contribution from all participating units of government in proportion to the number of permits issued for the unit of government which are members of the Group.

Article XIV. Conflict of Interest

No Trustee may be a party to or may be interested in any contract or transaction of this Group.

Article XV. Amendment of By-Laws

These By-Laws shall take effect upon adoption. They may be amended by unanimous agreement of all participating units of government. Any proposed amendments must be submitted to the Board of Directors for initial review and comment.

The undersigned Trustees certify that they have adopted the foregoing By-Laws of the Group. They shall become effective upon approval by the Board and filing with the appropriate agency.

**BUILDING OFFICIAL/INSPECTOR AND PLANS EXAMINER
EMPLOYMENT AGREEMENT**

THIS AGREEMENT is made this 25th day of April, 2016 between the Construction Code Group, a public body corporate formed pursuant to 1967 PA 7 (Ex Sess), whose principal office is located at 240 W. Genesee Street, Frankenmuth, MI, (hereinafter referred to as "CCG"), and Michael W. Setzer (hereinafter referred to as "EMPLOYEE"), an individual whose address is [REDACTED] Birch Run, MI 48415.

WHEREAS CCG desires to employ EMPLOYEE in the capacity of Building Official/Inspector and Plans Examiner, (the "Position"), on the terms and conditions set forth herein, including Attachment A, (hereinafter referred to as the "Attachment"), which attachment is incorporated herein; and

WHEREAS, EMPLOYEE desires to perform for CCG the tasks required by the Position on the terms and conditions set forth herein;

NOW THEREFORE in consideration of the mutual covenants and agreements set forth below, the parties agree as follows:

EMPLOYEE agrees:

A1. When employed in the Position EMPLOYEE shall, other than the ten days of paid time off, (hereinafter referred to as "PTO"), referred to in paragraph B3, have no right to any fringe benefits such as a vacation, hospitalization or retirement plan.

A2. EMPLOYEE will secure and maintain the qualifications, certifications, registrations and licenses necessary to properly perform the Position and agrees to carry out the administrative and operational functions of the Position as required by law and as authorized by the Board of Directors of the CCG.

A3. EMPLOYEE shall perform the duties of the Position as set forth in the Attachment.

A4. EMPLOYEE shall serve the CCG loyally, diligently and effectively, and shall at all times exert his/her best efforts to complete the duties as herein required in a faithful manner, and will perform all of his/her duties with full and complete fidelity according to law.

A5. EMPLOYEE agrees that while employed in the Position he/she shall not engage in the installation of any building systems as a contractor or employee within the jurisdictional limits of the CCG without the prior written permission of the CCG.

A6. EMPLOYEE will provide original copies of all records pertaining to inspections and plan reviews to the CCG.

A7. EMPLOYEE will serve in the Position in compliance with the rules and regulations of the CCG as adopted by the CCG, either orally or in writing, and will carry out and perform orders, directions and policies announced to EMPLOYEE by the CCG administrator. EMPLOYEE specifically understands that the CCG shall have final authority and power to direct, control and supervise the manner and time in which EMPLOYEE fulfills the requirements of the Position.

CCG agrees:

B1. CCG will furnish all information necessary for EMPLOYEE to complete his/her duties.

B2. CCG will provide filing areas and clerical assistance to EMPLOYEE during regular business hours.

B3. CCG will pay EMPLOYEE a wage determined as follows: \$15,003.00 per year (spread over 26 bi-weekly pay periods) and \$59.45 per inspection. EMPLOYEE will also be paid a flat rate of 40% of the plan review fees collected for services rendered. EMPLOYEE may have up to ten days of PTO per year. EMPLOYEE shall be paid for unused PTO after December 31st each year. Notwithstanding the language of Section C6 concerning modification of this Agreement, Employee's pay may be modified by resolution of the CCG board of directors."

B4. EMPLOYEE will be covered by a policy similar, if not identical, to a policy procured by the City of Frankenmuth, (hereinafter referred to as the "City"), which policy will defend and indemnify EMPLOYEE for lawsuits and complaints brought against EMPLOYEE for actions arising out of his/her performance of the Position.

It is mutually agreed:

C1. This Agreement shall take effect when signed by both parties.

C2. This section is intentionally left blank.

C3. EMPLOYEE'S employment in the Position is at will and may be terminated by either party at any time, for any reason or for no reason, by giving thirty days written notice to the other party.

C4. EMPLOYEE shall have no rights to unemployment insurance, severance pay, other than as required in paragraph C3, or other benefits in the event of termination of this Agreement.

C5. The provisions of this agreement shall be deemed severable, the validity or unenforceability of any one or more provisions of this Agreement shall not affect the validity and enforceability of other provisions. This Agreement shall be construed in all respects as if such invalid or unenforceable provisions were omitted.

C6. It is understood and agreed that the terms of this Agreement are fully contained herein and EMPLOYEE'S employment is not based upon any oral promises or anything outside of the terms and conditions of this Agreement. This Agreement may only be modified by a writing signed by both parties.

C7. One or more waivers of any clause by CCG shall not be construed as a waiver of any further or subsequent breach of the same or any other clause.

C8. This Agreement shall extend to and bind the parties to this Agreement. EMPLOYEE shall not assign this Agreement. CCG may assign this Agreement in which case it shall be binding on that assignee.

C9. Michigan law shall govern the right and duties of the parties to this Agreement and the interpretation of its provision.

C10. The parties to this Agreement agree that the courts of the State of Michigan shall have personal jurisdiction over the parties for all actions or disputes between them which arise out of or relate to this Agreement.

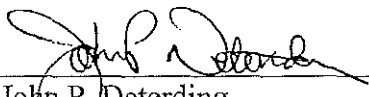
C11. Time is of the essence in the performance of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused the within agreement to be executed on their behalf by their duly authorized officers.

Approved and accepted:

CONSTRUCTION CODE GROUP


BY: Michael W. Setzer
EMPLOYEE


BY: John P. Deterding
Secretary/Treasurer

ATTACHMENT A
BUILDING OFFICIAL/INSPECTOR AND PLANS EXAMINER

As Building Official/Inspector, and Plans Examiner, EMPLOYEE agrees to perform all duties and responsibilities of the Building Official/Inspector, and Plans Examiner required by the CONSTRUCTION CODE GROUP as follows:

1. Reviewing plans for proposed new residential, commercial and industrial buildings or structures, or alterations and repairs to existing buildings or structures to assure compliance with codes enforced by the Construction Code Group.
2. Corresponding verbally and in writing as necessary with design professionals, homeowners, engineers and other agencies regarding corrections or modifications to planned buildings or structures, or planned changes in existing buildings or structures.
3. Assist in calculating the cost of installation or modifications to said buildings or structures and issue permits accordingly.
4. Scheduling and conducting on-site inspections of installation, erection, alteration, repair, relocation, replacement, additions to, use or maintenance of buildings and related structures within the Construction Code Group.
5. Issuing detailed orders for correction of such buildings or structures when necessary to bring them into compliance.
6. Assisting in preparing violation notices when building and other construction codes are not met and appearing in court to testify when necessary.
7. Making final inspections when building projects are completed to determine conformity to approved plans, codes, laws and ordinances.
8. Investigating and providing aid to resolve citizen concerns regarding the installation and repair to their buildings.
9. Compiling reports to the Construction Code Group or State of Michigan authorities as required and needed.
10. Preparing various forms and reports, and maintenance of accurate records of all code permits issued, correction notices issued, inspection approvals, inspections made, dates for re-inspections and other work done according to procedures and requirements.
11. Responding to concerns and supplying accurate answers to the inquiries from professionals, contractors, and the general public who come to the office of the Construction Code Group in person, or who make contact via telephone or in writing regarding codes and ordinances as such relate to buildings.
12. Enforcing housing regulations relative to code enforcement when directed to do so.
13. Performing related duties as assigned.

**BACK-UP BUILDING INSPECTOR AND PLANS EXAMINER
EMPLOYMENT AGREEMENT**

THIS AGREEMENT is made this 26th day of March, 2014 between the Construction Code Group, a public body corporate formed pursuant to 1967 PA 7 (Ex Sess), whose principal office is located at 240 W. Genesee Street, Frankenmuth, MI, (hereinafter referred to as "CCG"), and Jeffrey M. Hugo (hereinafter referred to as 'EMPLOYEE'), an individual whose address is [REDACTED] [REDACTED] Essexville, MI 48732.

WHEREAS CCG desires to employ EMPLOYEE in the capacity of back-up Building Inspector and Plans Examiner, (the "Position"), on the terms and conditions set forth herein, including Attachment A, (hereinafter referred to as the "Attachment"), which attachment is incorporated herein; and

WHEREAS, EMPLOYEE desires to perform for CCG the tasks required by the Position on the terms and conditions set forth herein;

NOW THEREFORE in consideration of the mutual covenants and agreements set forth below, the parties agree as follows:

EMPLOYEE agrees:

- A1. When employed in the Position EMPLOYEE shall have no right to any fringe benefits such as a vacation, hospitalization or retirement plan.
- A2. EMPLOYEE will secure and maintain the qualifications, certifications, registrations and licenses necessary to properly perform the Position and agrees to carry out the administrative and operational functions of the Position as required by law and as authorized by the Board of Directors of the CCG.
- A3. EMPLOYEE shall perform the duties of the Position as set forth in the Attachment.
- A4. EMPLOYEE shall serve the CCG loyally, diligently and effectively, and shall at all times exert his/her best efforts to complete the duties as herein required in a faithful manner, and will perform all of his/her duties with full and complete fidelity according to law.
- A5. EMPLOYEE agrees that while employed in the Position he/she shall not engage in the installation of any building systems as a contractor or employee within the jurisdictional limits of the CCG without the prior written permission of the CCG.
- A6. EMPLOYEE will provide original copies of all records pertaining to inspections and plan reviews to the CCG.
- A7. EMPLOYEE will serve in the Position in compliance with the rules and regulations of the CCG as adopted by the CCG, either orally or in writing, and will carry out and perform orders,

directions and policies announced to EMPLOYEE by the CCG administrator. EMPLOYEE specifically understands that the CCG shall have final authority and power to direct, control and supervise the manner and time in which EMPLOYEE fulfills the requirements of the Position.

CCG agrees:

B1. CCG will furnish all information necessary for EMPLOYEE to complete his/her duties.

B2. CCG will provide filing areas and clerical assistance to EMPLOYEE during regular business hours.

B3. CCG will pay EMPLOYEE a wage determined at a rate of Forty-five and 75/100 (\$45.75) Dollars per inspection and a rate of Forty-five and 75/100 (\$45.75) Dollars per hour for plan review services rendered. EMPLOYEE will submit an itemized statement of hours worked by the 5th day of each month for all services rendered to the CCG under this contract. The CCG hereby agrees that it shall thereafter compensate EMPLOYEE through its regular CCG bi-weekly payroll. Notwithstanding the language of Section C6 concerning modification of this Agreement, Employee's pay may be modified by resolution of the CCG board of directors."

B4. EMPLOYEE will be covered by a policy similar, if not identical, to a policy procured by the City of Frankenmuth, (hereinafter referred to as the "City"), which policy will defend and indemnify EMPLOYEE for lawsuits and complaints brought against EMPLOYEE for actions arising out of his/her performance of the Position.

It is mutually agreed:

C1. This Agreement shall take effect when signed by both parties.

C2. This section is intentionally left blank.

C3. EMPLOYEE'S employment in the Position is at will and may be terminated by either party at any time, for any reason or for no reason, by giving thirty days written notice to the other party.

C4. EMPLOYEE shall have no rights to unemployment insurance, severance pay, other than as required in paragraph C3, or other benefits in the event of termination of this Agreement.

C5. The provisions of this agreement shall be deemed severable, the validity or unenforceability of any one or more provisions of this Agreement shall not affect the validity and enforceability of other provisions. This Agreement shall be construed in all respects as if such invalid or unenforceable provisions were omitted.

C6. It is understood and agreed that the terms of this Agreement are fully contained herein and EMPLOYEE'S employment is not based upon any oral promises or anything outside of the terms and conditions of this Agreement. This Agreement may only be modified by a writing signed by both parties.

C7. One or more waivers of any clause by CCG shall not be construed as a waiver of any further or subsequent breach of the same or any other clause.

C8. This Agreement shall extend to and bind the parties to this Agreement. EMPLOYEE shall not assign this Agreement. CCG may assign this Agreement in which case it shall be binding on that assignee.

C9. Michigan law shall govern the right and duties of the parties to this Agreement and the interpretation of its provision.

C10. The parties to this Agreement agree that the courts of the State of Michigan shall have personal jurisdiction over the parties for all actions or disputes between them which arise out of or relate to this Agreement.

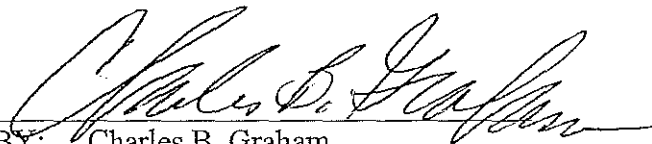
C11. Time is of the essence in the performance of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused the within agreement to be executed on their behalf by their duly authorized officers.

Approved and accepted:

CONSTRUCTION CODE GROUP


BY: Jeffrey M. Hugo
EMPLOYEE


BY: Charles B. Graham
Secretary/Treasurer

ATTACHMENT A
BUILDING INSPECTOR AND PLANS EXAMINER

As Building Inspector, and Plans Examiner, EMPLOYEE agrees to perform all duties and responsibilities of the Building Inspector, and Plans Examiner required by the CONSTRUCTION CODE GROUP as follows:

1. Reviewing plans for proposed new residential, commercial and industrial buildings or structures, or alterations and repairs to existing buildings or structures to assure compliance with codes enforced by the Construction Code Group.
2. Corresponding verbally and in writing as necessary with design professionals, homeowners, engineers and other agencies regarding corrections or modifications to planned buildings or structures, or planned changes in existing buildings or structures.
3. Assist in calculating the cost of installation or modifications to said buildings or structures and issue permits accordingly.
4. Scheduling and conducting on-site inspections of installation, erection, alteration, repair, relocation, replacement, additions to, use or maintenance of buildings and related structures within the Construction Code Group.
5. Issuing detailed orders for correction of such buildings or structures when necessary to bring them into compliance.
6. Assisting in preparing violation notices when building and other construction codes are not met and appearing in court to testify when necessary.
7. Making final inspections when building projects are completed to determine conformity to approved plans, codes, laws and ordinances.
8. Investigating and providing aid to resolve citizen concerns regarding the installation and repair to their buildings.
9. Compiling reports to the Construction Code Group or State of Michigan authorities as required and needed.
10. Preparing various forms and reports, and maintenance of accurate records of all code permits issued, correction notices issued, inspection approvals, inspections made, dates for re-inspections and other work done according to procedures and requirements.
11. Responding to concerns and supplying accurate answers to the inquiries from professionals, contractors, and the general public who come to the office of the Construction Code Group in person, or who make contact via telephone or in writing regarding codes and ordinances as such relate to buildings.
12. Enforcing housing regulations relative to code enforcement when directed to do so.
13. Performing related duties as assigned.

**ELECTRICAL INSPECTOR AND PLANS EXAMINER
EMPLOYMENT AGREEMENT**

THIS AGREEMENT is made this 25th day of April, 2016 between the Construction Code Group, a public body corporate formed pursuant to 1967 PA 7 (Ex Sess), whose principal office is located at 240 W. Genesee Street, Frankenmuth, MI, (hereinafter referred to as "CCG"), and Travis Cooper (hereinafter referred to as 'EMPLOYEE'), an individual whose address is [REDACTED] Millington, MI 48746.

WHEREAS CCG desires to employ EMPLOYEE in the capacity of Electrical Inspector and Plans Examiner, (the "Position"), on the terms and conditions set forth herein, including Attachment A, (hereinafter referred to as the "Attachment"), which attachment is incorporated herein; and

WHEREAS, EMPLOYEE desires to perform for CCG the tasks required by the Position on the terms and conditions set forth herein;

NOW THEREFORE in consideration of the mutual covenants and agreements set forth below, the parties agree as follows:

EMPLOYEE agrees:

A1. When employed in the Position EMPLOYEE shall have no right to any fringe benefits such as a vacation, hospitalization or retirement plan.

A2. EMPLOYEE will secure and maintain the qualifications, certifications, registrations and licenses necessary to properly perform the Position and agrees to carry out the administrative and operational functions of the Position as required by law and as authorized by the Board of Directors of the CCG.

A3. EMPLOYEE shall perform the duties of the Position as set forth in the Attachment.

A4. EMPLOYEE shall serve the CCG loyally, diligently and effectively, and shall at all times exert his/her best efforts to complete the duties as herein required in a faithful manner, and will perform all of his/her duties with full and complete fidelity according to law.

A5. EMPLOYEE agrees that while employed in the Position he/she shall not engage in the installation of any mechanical systems as a contractor or employee within the jurisdictional limits of the CCG without the prior written permission of the CCG.

A6. EMPLOYEE will provide original copies of all records pertaining to inspections and plan reviews to the CCG.

A7. EMPLOYEE will serve in the Position in compliance with the rules and regulations of the CCG as adopted by the CCG, either orally or in writing, and will carry out and perform orders,

directions and policies announced to EMPLOYEE by the CCG administrator. EMPLOYEE specifically understands that the CCG shall have final authority and power to direct, control and supervise the manner and time in which EMPLOYEE fulfills the requirements of the Position.

CCG agrees:

B1. CCG will furnish all information necessary for EMPLOYEE to complete his/her duties.

B2. CCG will provide filing areas and clerical assistance to EMPLOYEE during regular business hours.

B3. CCG will pay EMPLOYEE a wage determined at a rate of Forty-two and 00/100 (\$42.00) Dollars per inspection rendered. EMPLOYEE will also be paid a flat rate of 13.33% for electrical plan review fees collected for services rendered. EMPLOYEE will submit an itemized statement of hours worked the first Monday after each new pay period begins for all services rendered to the CCG under this contract. The CCG hereby agrees that it shall thereafter compensate EMPLOYEE through its regular CCG bi-weekly payroll. Notwithstanding the language of Section C6 concerning modification of this Agreement, Employee's pay may be modified by resolution of the CCG board of directors."

B4. EMPLOYEE will be covered by a policy similar, if not identical, to a policy procured by the City of Frankenmuth, (hereinafter referred to as the "City"), which policy will defend and indemnify EMPLOYEE for lawsuits and complaints brought against EMPLOYEE for actions arising out of his/her performance of the Position.

It is mutually agreed:

C1. This Agreement shall take effect when signed by both parties.

C2. This section is intentionally left blank.

C3. EMPLOYEE'S employment in the Position is at will and may be terminated by either party at any time, for any reason or for no reason, by giving thirty days written notice to the other party.

C4. EMPLOYEE shall have no rights to unemployment insurance, severance pay, other than as required in paragraph C3, or other benefits in the event of termination of this Agreement.

C5. The provisions of this agreement shall be deemed severable, the validity or unenforceability of any one or more provisions of this Agreement shall not affect the validity and enforceability of other provisions. This Agreement shall be construed in all respects as if such invalid or unenforceable provisions were omitted.

C6. It is understood and agreed that the terms of this Agreement are fully contained herein and EMPLOYEE'S employment is not based upon any oral promises or anything outside of the terms and conditions of this Agreement. This Agreement may only be modified by a writing signed by both parties.

C7. One or more waivers of any clause by CCG shall not be construed as a waiver of any further or subsequent breach of the same or any other clause.

C8. This Agreement shall extend to and bind the parties to this Agreement. EMPLOYEE shall not assign this Agreement. CCG may assign this Agreement in which case it shall be binding on that assignee.

C9. Michigan law shall govern the right and duties of the parties to this Agreement and the interpretation of its provision.

C10. The parties to this Agreement agree that the courts of the State of Michigan shall have personal jurisdiction over the parties for all actions or disputes between them which arise out of or relate to this Agreement.

C11. Time is of the essence in the performance of this Agreement.

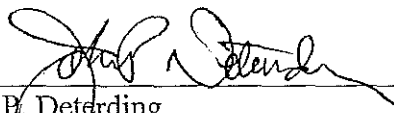
IN WITNESS WHEREOF, the parties hereto have caused the within agreement to be executed on their behalf by their duly authorized officers.

Approved and accepted:

CONSTRUCTION CODE GROUP



BY: Travis Cooper
EMPLOYEE



John P. Deterding
Secretary/Treasurer

ATTACHMENT A
ELECTRICAL INSPECTOR/PLAN REVIEWER'S DUTIES

As a contract employee performing Electrical Inspector/Plan Reviewer duties, EMPLOYEE agrees to perform all duties and responsibilities of the Electrical Inspector/Plan Reviewer as required by the CCG as follows:

1. Reviewing plans for proposed new residential, commercial and industrial electrical systems, or alterations and repairs to existing electrical systems to assure compliance with electrical codes enforced by the CCG.
2. Corresponding verbally and in writing as necessary with design professionals, homeowners, engineers and other agencies regarding corrections or modifications to planned systems or planned changes in existing systems.
3. Assist in calculating the cost of installation or modifications to systems and issue permits accordingly.
4. Scheduling and conducting on-site inspections of installation, erection, alteration, repair, relocation, replacement, additions to, use or maintenance of electrical systems and related equipment within the CCG.
5. Issuing detailed orders for correction of such systems when necessary to bring them into compliance.
6. Assisting in preparing violation notices when electrical codes are not met and appearing in court to testify as the Electrical Inspector/Plan Reviewer of the CCG, if necessary.
7. Making final inspections when electrical installations are completed to determine conformity to approved plans, codes, laws and ordinances.
8. Investigating and providing aid to resolve citizen concerns regarding the installation or repair of electrical systems.
9. Compiling reports to the CCG or State of Michigan authorities as required and needed.
10. Preparing various forms and reports, and maintenance of accurate records of electrical permits issued, correction notices issued, inspection approvals, inspections made, dates for re-inspections and other work done according to procedures and requirements.
11. Responding to concerns and supplying accurate answers to the inquiries from professionals, contractors, and the general public who come to the CCG Office in person, or who make contact via telephone or in writing regarding codes and ordinances as such relate to electrical systems.
12. Enforcing Housing Regulations relative to electrical code enforcement when directed to do so.
13. Performing related duties as assigned.

**BACK-UP ELECTRICAL INSPECTOR AND PLANS EXAMINER
EMPLOYMENT AGREEMENT**

THIS AGREEMENT is made this 25th day of April, 2016 between the Construction Code Group, a public body corporate formed pursuant to 1967 PA 7 (Ex Sess), whose principal office is located at 240 W. Genesee Street, Frankenmuth, MI, (hereinafter referred to as "CCG"), and Donald Pawlowski (hereinafter referred to as 'EMPLOYEE'), an individual whose address is [REDACTED]

WHEREAS CCG desires to employ EMPLOYEE in the capacity of Back-up Electrical Inspector and Plans Examiner, (the "Position"), on the terms and conditions set forth herein, including Attachment A, (hereinafter referred to as the "Attachment"), which attachment is incorporated herein; and

WHEREAS, EMPLOYEE desires to perform for CCG the tasks required by the Position on the terms and conditions set forth herein;

NOW THEREFORE in consideration of the mutual covenants and agreements set forth below, the parties agree as follows:

EMPLOYEE agrees:

A1. When employed in the Position EMPLOYEE shall have no right to any fringe benefits such as a vacation, hospitalization or retirement plan.

A2. EMPLOYEE will secure and maintain the qualifications, certifications, registrations and licenses necessary to properly perform the Position and agrees to carry out the administrative and operational functions of the Position as required by law and as authorized by the Board of Directors of the CCG.

A3. EMPLOYEE shall perform the duties of the Position as set forth in the Attachment.

A4. EMPLOYEE shall serve the CCG loyally, diligently and effectively, and shall at all times exert his/her best efforts to complete the duties as herein required in a faithful manner, and will perform all of his/her duties with full and complete fidelity according to law.

A5. EMPLOYEE agrees that while employed in the Position he/she shall not engage in the installation of any mechanical systems as a contractor or employee within the jurisdictional limits of the CCG without the prior written permission of the CCG.

A6. EMPLOYEE will provide original copies of all records pertaining to inspections and plan reviews to the CCG.

A7. EMPLOYEE will serve in the Position in compliance with the rules and regulations of the CCG as adopted by the CCG, either orally or in writing, and will carry out and perform orders,

directions and policies announced to EMPLOYEE by the CCG administrator. EMPLOYEE specifically understands that the CCG shall have final authority and power to direct, control and supervise the manner and time in which EMPLOYEE fulfills the requirements of the Position.

CCG agrees:

B1. CCG will furnish all information necessary for EMPLOYEE to complete his/her duties.

B2. CCG will provide filing areas and clerical assistance to EMPLOYEE during regular business hours.

B3. CCG will pay EMPLOYEE a wage determined at a rate of Forty-five and 75/100 (\$45.75) Dollars per inspection rendered. EMPLOYEE will also be paid a flat rate of 13.33% for electrical plan review fees collected for services rendered. EMPLOYEE will submit an itemized statement of hours worked the first Monday after each new pay period begins for all services rendered to the CCG under this contract. The CCG hereby agrees that it shall thereafter compensate EMPLOYEE through its regular CCG bi-weekly payroll. Notwithstanding the language of Section C6 concerning modification of this Agreement, Employee's pay may be modified by resolution of the CCG board of directors."

B4. EMPLOYEE will be covered by a policy similar, if not identical, to a policy procured by the City of Frankenmuth, (hereinafter referred to as the "City"), which policy will defend and indemnify EMPLOYEE for lawsuits and complaints brought against EMPLOYEE for actions arising out of his/her performance of the Position.

It is mutually agreed:

C1. This Agreement shall take effect when signed by both parties.

C2. This section is intentionally left blank.

C3. EMPLOYEE'S employment in the Position is at will and may be terminated by either party at any time, for any reason or for no reason, by giving thirty days written notice to the other party.

C4. EMPLOYEE shall have no rights to unemployment insurance, severance pay, other than as required in paragraph C3, or other benefits in the event of termination of this Agreement.

C5. The provisions of this agreement shall be deemed severable, the validity or unenforceability of any one or more provisions of this Agreement shall not affect the validity and enforceability of other provisions. This Agreement shall be construed in all respects as if such invalid or unenforceable provisions were omitted.

C6. It is understood and agreed that the terms of this Agreement are fully contained herein and EMPLOYEE'S employment is not based upon any oral promises or anything outside of the terms and conditions of this Agreement. This Agreement may only be modified by a writing signed by both parties.

C7. One or more waivers of any clause by CCG shall not be construed as a waiver of any further or subsequent breach of the same or any other clause.

C8. This Agreement shall extend to and bind the parties to this Agreement. EMPLOYEE shall not assign this Agreement. CCG may assign this Agreement in which case it shall be binding on that assignee.

C9. Michigan law shall govern the right and duties of the parties to this Agreement and the interpretation of its provision.


C10. The parties to this Agreement agree that the courts of the State of Michigan shall have personal jurisdiction over the parties for all actions or disputes between them which arise out of or relate to this Agreement.

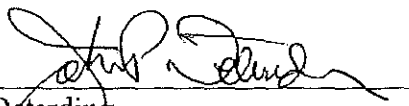
C11. Time is of the essence in the performance of this Agreement.

IN WITNESS WHEREOF, the parties hereto have caused the within agreement to be executed on their behalf by their duly authorized officers.

Approved and accepted:

CONSTRUCTION CODE GROUP


BY: Don Pawlowski
EMPLOYEE


John P. Deterding
Secretary/Treasurer

ATTACHMENT A
BACK-UP ELECTRICAL INSPECTOR/PLAN REVIEWER'S DUTIES

As a contract employee performing Back-up Electrical Inspector/Plan Reviewer duties, EMPLOYEE agrees to perform all duties and responsibilities of the Electrical Inspector/Plan Reviewer as required by the CCG as follows:

1. Reviewing plans for proposed new residential, commercial and industrial electrical systems, or alterations and repairs to existing electrical systems to assure compliance with electrical codes enforced by the CCG.
2. Corresponding verbally and in writing as necessary with design professionals, homeowners, engineers and other agencies regarding corrections or modifications to planned systems or planned changes in existing systems.
3. Assist in calculating the cost of installation or modifications to systems and issue permits accordingly.
4. Scheduling and conducting on-site inspections of installation, erection, alteration, repair, relocation, replacement, additions to, use or maintenance of electrical systems and related equipment within the CCG.
5. Issuing detailed orders for correction of such systems when necessary to bring them into compliance.
6. Assisting in preparing violation notices when electrical codes are not met and appearing in court to testify as the Electrical Inspector/Plan Reviewer of the CCG, if necessary.
7. Making final inspections when electrical installations are completed to determine conformity to approved plans, codes, laws and ordinances.
8. Investigating and providing aid to resolve citizen concerns regarding the installation or repair of electrical systems.
9. Compiling reports to the CCG or State of Michigan authorities as required and needed.
10. Preparing various forms and reports, and maintenance of accurate records of electrical permits issued, correction notices issued, inspection approvals, inspections made, dates for re-inspections and other work done according to procedures and requirements.
11. Responding to concerns and supplying accurate answers to the inquiries from professionals, contractors, and the general public who come to the CCG Office in person, or who make contact via telephone or in writing regarding codes and ordinances as such relate to electrical systems.
12. Enforcing Housing Regulations relative to electrical code enforcement when directed to do so.
13. Performing related duties as assigned.

**MECHANICAL & PLUMBING INSPECTOR AND PLANS EXAMINER
EMPLOYMENT AGREEMENT**

THIS AGREEMENT is made this 25th day of April, 2016 between the Construction Code Group, a public body corporate formed pursuant to 1967 PA 7 (Ex Sess), whose principal office is located at 240 W. Genesee Street, Frankenmuth, MI, (hereinafter referred to as "CCG"), and Merle E. West II (hereinafter referred to as 'EMPLOYEE'), an individual whose address is [REDACTED] Vassar, MI 48768.

WHEREAS CCG desires to employ EMPLOYEE in the capacity of Mechanical & Plumbing Inspector and Plans Examiner, (the "Position"), on the terms and conditions set forth herein, including Attachment A, (hereinafter referred to as the "Attachment"), which attachment is incorporated herein; and

WHEREAS, EMPLOYEE desires to perform for CCG the tasks required by the Position on the terms and conditions set forth herein;

NOW THEREFORE in consideration of the mutual covenants and agreements set forth below, the parties agree as follows:

EMPLOYEE agrees:

- A1. When employed in the Position EMPLOYEE shall have no right to any fringe benefits such as a vacation, hospitalization or retirement plan.
- A2. EMPLOYEE will secure and maintain the qualifications, certifications, registrations and licenses necessary to properly perform the Position and agrees to carry out the administrative and operational functions of the Position as required by law and as authorized by the Board of Directors of the CCG.
- A3. EMPLOYEE shall perform the duties of the Position as set forth in the Attachment.
- A4. EMPLOYEE shall serve the CCG loyally, diligently and effectively, and shall at all times exert his/her best efforts to complete the duties as herein required in a faithful manner, and will perform all of his/her duties with full and complete fidelity according to law.
- A5. EMPLOYEE agrees that while employed in the Position he/she shall not engage in the installation of any mechanical systems as a contractor or employee within the jurisdictional limits of the CCG without the prior written permission of the CCG.
- A6. EMPLOYEE will provide original copies of all records pertaining to inspections and plan reviews to the CCG.
- A7. EMPLOYEE will serve in the Position in compliance with the rules and regulations of the CCG as adopted by the CCG, either orally or in writing, and will carry out and perform orders,

directions and policies announced to EMPLOYEE by the CCG administrator. EMPLOYEE specifically understands that the CCG shall have final authority and power to direct, control and supervise the manner and time in which EMPLOYEE fulfills the requirements of the Position.

CCG agrees:

B1. CCG will furnish all information necessary for EMPLOYEE to complete his/her duties.

B2. CCG will provide filing areas and clerical assistance to EMPLOYEE during regular business hours.

B3. CCG will pay EMPLOYEE a wage determined at a rate of Forty-seven and 70/100 (\$47.70) Dollars per inspection rendered. EMPLOYEE will also be paid a flat rate of 13.33% for mechanical and 13.33% for plumbing plan review fees collected for services rendered. EMPLOYEE will submit an itemized statement of hours worked the first Monday after each new pay period begins for all services rendered to the CCG under this contract. The CCG hereby agrees that it shall thereafter compensate EMPLOYEE through its regular CCG bi-weekly payroll. Notwithstanding the language of Section C6 concerning modification of this Agreement, Employee's pay may be modified by resolution of the CCG board of directors."

B4. EMPLOYEE will be covered by a policy similar, if not identical, to a policy procured by the City of Frankenmuth, (hereinafter referred to as the "City"), which policy will defend and indemnify EMPLOYEE for lawsuits and complaints brought against EMPLOYEE for actions arising out of his/her performance of the Position.

It is mutually agreed:

C1. This Agreement shall take effect when signed by both parties.

C2. This section is intentionally left blank.

C3. EMPLOYEE'S employment in the Position is at will and may be terminated by either party at any time, for any reason or for no reason, by giving thirty days written notice to the other party.

C4. EMPLOYEE shall have no rights to unemployment insurance, severance pay, other than as required in paragraph C3, or other benefits in the event of termination of this Agreement.

C5. The provisions of this agreement shall be deemed severable, the validity or unenforceability of any one or more provisions of this Agreement shall not affect the validity and enforceability of other provisions. This Agreement shall be construed in all respects as if such invalid or unenforceable provisions were omitted.

C6. It is understood and agreed that the terms of this Agreement are fully contained herein and EMPLOYEE'S employment is not based upon any oral promises or anything outside of the terms and conditions of this Agreement. This Agreement may only be modified by a writing signed by both parties.

C7. One or more waivers of any clause by CCG shall not be construed as a waiver of any further or subsequent breach of the same or any other clause.

C8. This Agreement shall extend to and bind the parties to this Agreement. EMPLOYEE shall not assign this Agreement. CCG may assign this Agreement in which case it shall be binding on that assignee.

C9. Michigan law shall govern the right and duties of the parties to this Agreement and the interpretation of its provision.

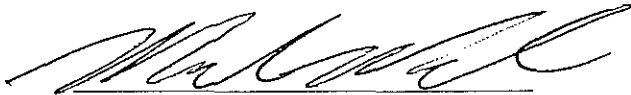
C10. The parties to this Agreement agree that the courts of the State of Michigan shall have personal jurisdiction over the parties for all actions or disputes between them which arise out of or relate to this Agreement.

C11. Time is of the essence in the performance of this Agreement.

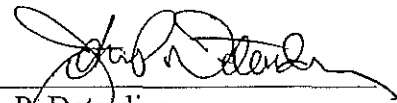
IN WITNESS WHEREOF, the parties hereto have caused the within agreement to be executed on their behalf by their duly authorized officers.

Approved and accepted:

CONSTRUCTION CODE GROUP



BY: Merle E. West II
EMPLOYEE



BY: John P. Deterding
Secretary/Treasurer

ATTACHMENT A

MECHANICAL & PLUMBING INSPECTOR & PLAN REVIEWER'S DUTIES

As part-time Mechanical & Plumbing Inspector, EMPLOYEE agrees to perform all duties and responsibilities of the Mechanical & Plumbing Inspector and Plan Reviewer, as it specifically pertains to fire suppression systems and back-up to the regular Mechanical & Plumbing Inspector, as required by the CCG as follows:

1. Reviewing plans for proposed new residential, commercial and industrial mechanical systems, or alterations and repairs to existing mechanical & plumbing systems to assure compliance with mechanical & plumbing codes enforced by the CCG.
2. Corresponding verbally and in writing as necessary with design professionals, homeowners, engineers and other agencies regarding corrections or modifications to planned systems or planned changes in existing systems.
3. Scheduling and conducting on-site inspections of installation, erection, alteration, repair, relocation, replacement, additions to, use or maintenance of mechanical & plumbing systems and related equipment within the CCG.
4. Issuing detailed orders for correction of such systems when necessary to bring them into compliance.
5. Assisting in preparing violation notices when mechanical and plumbing codes are not met, and appearing in court to testify as the Mechanical & Plumbing Inspector of the CCG.
6. Making final inspections when mechanical and plumbing installations are completed to determine conformity to approved plans, codes, laws and ordinances.
7. Investigating and providing aid to resolve citizen concerns regarding the installation or repair of mechanical systems.
8. Compiling reports to the CCG or State of Michigan authorities as required and needed.
9. Preparing various forms and reports, and maintenance of accurate records of mechanical & plumbing permits issued, specifically pertaining to fire suppression systems, correction notices issued, inspection approvals, inspections made, dates for re-inspections and other work done according to procedures and requirements.
10. Responding to concerns and supplying accurate answers to the inquiries from professionals, contractors, and the general public who come to the CCG Office in person, or who make contact via telephone or in writing regarding codes and ordinances as such relate to mechanical & plumbing systems.
11. Enforcing Housing Regulations relative to mechanical & plumbing code enforcement when directed to do so.
12. Performing related duties as assigned.

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORIES

BUILDING OFFICIAL
BUILDING INSPECTOR
PLAN REVIEWER

MICHAEL W SETZER

[REDACTED]
BIRCH RUN MI 48415

REGISTRATION NO.
002434

EXPIRATION DATE
09/16/18

RICK SNYDER
GOVERNOR

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY BUILDING OFFICIAL
BUILDING INSPECTOR
PLAN REVIEWER

MICHAEL W SETZER

[REDACTED]
BIRCH RUN MI 48415

REGISTRATION NO. EXPIRATION DATE
BCC-149 (Rev. 9/06) 002434 09/16/18

THIS DOCUMENT IS DULY
ISSUED UNDER THE LAWS OF
THE STATE OF MICHIGAN

RICK SNYDER
GOVERNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY BUILDING OFFICIAL
BUILDING INSPECTOR
PLAN REVIEWER

JEFFREY M HUGO

ESSEXVILLE MI 48732

REGISTRATION NO.

EXPIRATION DATE

BCC-149 (Rev. 9/06)

003608

09/16/18

THIS DOCUMENT IS DULY
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THE STATE OF MICHIGAN

MUST BE DISPLAYED IN CONSPICUOUS PLACE

RICK SNYDER
GOVERNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY ELECTRICAL INSPECTOR
PLAN REVIEWER

RAVIS J COOPER

[REDACTED]
MILLINGTON MI 48746

REGISTRATION NO

EXPIRATION DATE

THIS DOCUMENT IS DULY
ISSUED UNDER THE LAWS OF
THE STATE OF MICHIGAN

EC-149 (REV. 9/00)

005773

09/16/18

RICK SNYDER
GOVERNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY ELECTRICAL INSPECTOR
PLAN REVIEWER

DONALD E PAWLOWSKI

FRANKENMUTH MI 48734

REGISTRATION NO.

EXPIRATION DATE

BCC-149 (Rev. 9/06)

004911

09/16/18

THIS DOCUMENT IS DULY
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THE STATE OF MICHIGAN

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORIES
ELECTRICAL INSPECTOR
PLAN REVIEWER

DONALD E PAWLOWSKI

FRANKENMUTH MI 48734

REGISTRATION NO.

EXPIRATION DATE

004911

09/16/18

MICHIGAN DEPARTMENT OF LICENSING REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORIES

MECHANICAL INSPECTOR
PLUMBING INSPECTOR
PLAN REVIEWER

MERLE E WEST, II

VASSAR MI 48768

REGISTRATION NO:
004108

EXPIRATION DATE:
09/16/18

RICK SNYDER
GOVERNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY MECHANICAL INSPECTOR
PLUMBING INSPECTOR
PLAN REVIEWER

MERLE E WEST, II

VASSAR MI 48768

REGISTRATION NO:

EXPIRATION DATE:

BCC-149 (Rev. 9/06) 004108 456

09/16/18

THIS DOCUMENT IS DULY
ISSUED UNDER THE LAWS OF
THE STATE OF MICHIGAN

BUILDING PERMIT APPLICATION

Construction Code Group
 Blumfield Township Frankenmuth City Frankenmuth Township
 240 W. Genesee Street
 Frankenmuth, MI 48734-1398
 Phone: (989) 652-3430, x113 Fax: (989) 652-3451
 www.frankenmuthcity.com

Authority: 1972 PA 230. Penalty: No Permit Issued. Completion: Mandatory to obtain permit.

Applicant to Complete All Items in Sections I, II, III, IV, V, VI, VII & VIII.
Note: Separate Permit Applications Must Be Completed for Electrical, Mechanical and Plumbing Work.

I. Project Information			
Name of Project		City/Township (check one): <input type="checkbox"/> Blumfield Twp. <input type="checkbox"/> Frankenmuth City <input type="checkbox"/> Frankenmuth Twp.	
Street Address & Job Location (Street No. & Name)		City, State, Zip	
Between _____ and _____		Date _____	
II. Identification			
A. OWNER OR LESSEE			
Name _____		Address _____	
City _____	State _____	Zip _____	Telephone Number _____
B. ARCHITECT OR ENGINEER			
Name _____		Address _____	
City _____	State _____	Zip _____	Telephone Number _____
License Number _____		Expiration Date _____	
C. CONTRACTOR			
Name _____		Address _____	
City _____	State _____	Zip _____	Telephone Number _____
Builder's License Number _____		Expiration Date _____	
Federal Employer ID Number (or reason for exemption) _____		MESC Employer No. (or reason for exemption) _____	
Worker's Compensation Insurance Carrier (or reason for exemption) _____			
III. Type of Improvement & Plan Review			
A. TYPE OF IMPROVEMENT			
<input type="checkbox"/> New Building	<input type="checkbox"/> Alteration	<input type="checkbox"/> Demolition	<input type="checkbox"/> Foundation Only
<input type="checkbox"/> Addition	<input type="checkbox"/> Repair	<input type="checkbox"/> Premanufacture	<input type="checkbox"/> Special Inspection
<input type="checkbox"/> Relocation <input type="checkbox"/> Other			
B. PLAN REVIEW REQUIRED			
Plans must be submitted with an Application for Plan Examination and the fee before a permit can be issued, except as listed below. Plans are not required for alterations & repair work determined by the building official to be of a minor nature. Plans are required for all other building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to 1980 PA 299 & shall bear that architect's or engineer's seal and signature.			

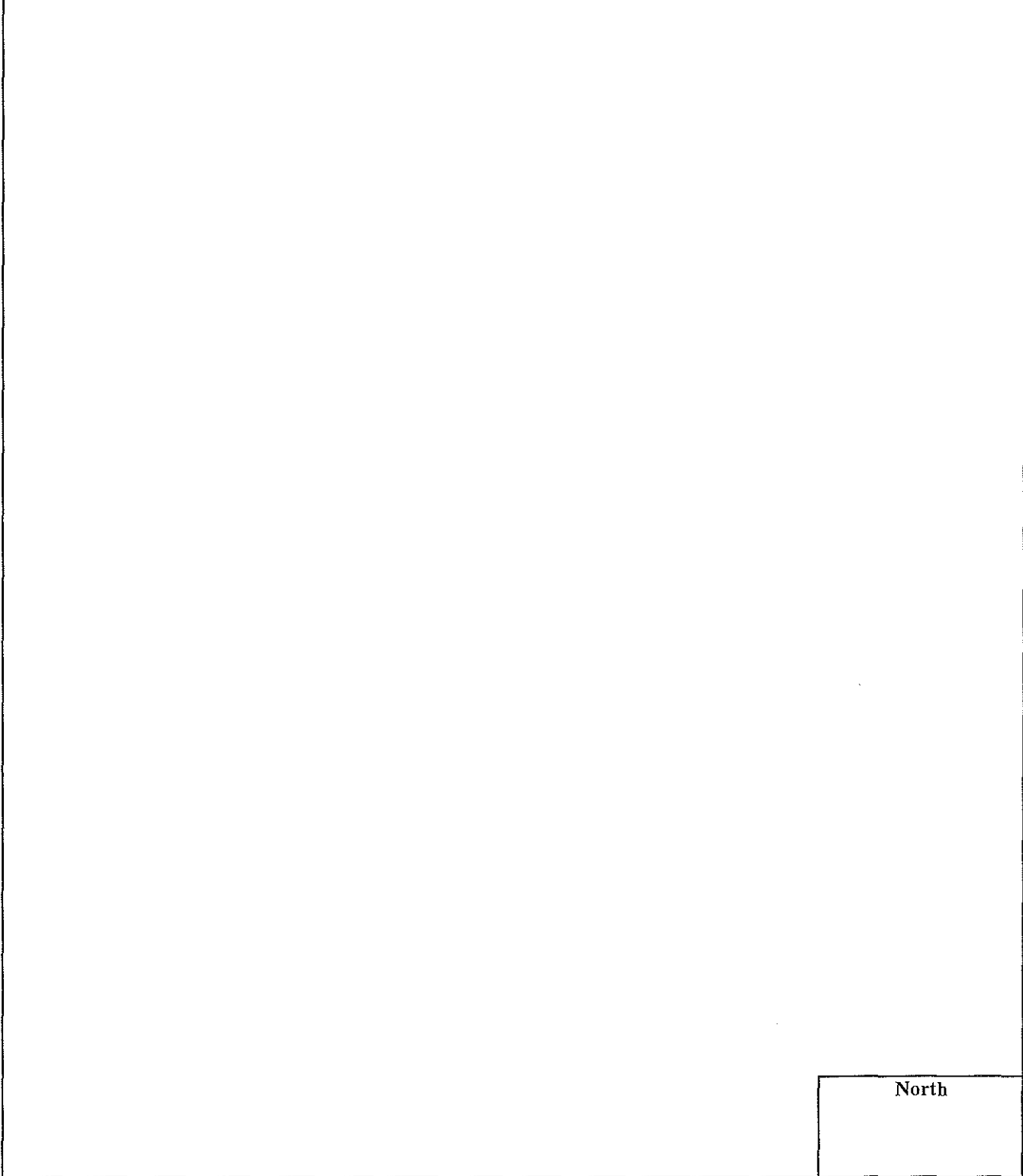
IV. Proposed Use of Building/Setbacks				
A. RESIDENTIAL				
<input type="checkbox"/> One Family	<input type="checkbox"/> Hotel, Motel - No. of Units _____		<input type="checkbox"/> Detached Garage	
<input type="checkbox"/> Two or more family - No. of Units	<input type="checkbox"/> Attached Garage		<input type="checkbox"/> Other	
B. NON-RESIDENTIAL				
<input type="checkbox"/> Amusement	<input type="checkbox"/> Service Station		<input type="checkbox"/> Library, Educational	
<input type="checkbox"/> Church, Religious	<input type="checkbox"/> Hospital, Institutional		<input type="checkbox"/> Store, Mercantile	
<input type="checkbox"/> Industrial	<input type="checkbox"/> Office, Bank, Professional		<input type="checkbox"/> Tanks, Towers	
<input type="checkbox"/> Parking Garage	<input type="checkbox"/> Public Utility		<input type="checkbox"/> Other	
Describe in detail the proposed construction and use of the building. If use of building is being changed, also describe.				
C. SETBACKS				
Front	Side (1)	Side (2)	Rear	

V. Selected Characteristics of Building				
A. PRINCIPAL TYPE OF FRAME				
<input type="checkbox"/> Masonry, Wall Bearing	<input type="checkbox"/> Wood frame	<input type="checkbox"/> Structural Steel	<input type="checkbox"/> Reinforced Steel	<input type="checkbox"/> Other
B. PRINCIPAL TYPE OF HEATING FUEL				
<input type="checkbox"/> Gas	<input type="checkbox"/> Oil	<input type="checkbox"/> Electricity	<input type="checkbox"/> Coal	<input type="checkbox"/> Other
C. TYPE OF SEWAGE DISPOSAL				
<input type="checkbox"/> Public or Private Company _____		<input type="checkbox"/> Septic System		
D. TYPE OF WATER SUPPLY				
<input type="checkbox"/> Public or Private Company _____		<input type="checkbox"/> Private Well or Cistern		
E. TYPE OF MECHANICAL				
Will there be air conditioning? <input type="checkbox"/> Yes. <input type="checkbox"/> No.		Will there be fire suppression? <input type="checkbox"/> Yes. <input type="checkbox"/> No.		
F. DIMENSIONS/DATA				
Number of Stories _____	Floor Area	Existing	Alterations	New
Use Group _____	Basement	_____	_____	_____
Construction Type _____	1st	_____	_____	_____
No. of Occupants _____	2nd	_____	_____	_____
	3rd/above	_____	_____	_____
G. NUMBER OF OFF-STREET PARKING SPACES				
Outdoors	Enclosed	Other		

VI. Applicant Information			
Applicant is responsible for the payment of all fees and charges applicable to this application and must provide the following information.			
Name		Address	
City	State	Zip	Telephone Number
Federal I.D. or Social Security Number			
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 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. 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.			
Signature of Applicant			Date

VII. Site Plan or Plot Plan (sketch only).

Check here if additional plans/prints submitted.



North

Indicate front, side and rear setbacks. Indicate North arrow in box.

VIII. Calculation of Permit Cost.

The total cost of the improvement provides the basis for the fee schedules. The cost of the improvement will be based on the latest version of the ICC's Building Valuation Data Table and will be calculated for you at the time you submit this application. In addition, the applicant may be required to provide a copy of a signed contract to verify the cost of the project. Pre-manufactured unit fees are based on 50% of the normal on-site construction permit fees.

When submittal documents are required by Section 107 of the MI Building Code (2009 Edition), a plan review fee shall be paid at the time of submitting the said documents for plan review. Said plan review fee shall be fifty percent (50%) of the building permit fee as shown below. The plan review fees specified in this section are separate fees from the permit fees specified in Section 109 of said code and are in addition to the permit fees. When submittal documents are incomplete or changed so as to require additional plan review or when the project involves deferred submittal items as defined in Section 107 of said code, the Building Official has the authority to charge a \$65 per hour fee (or the actual cost plus a 10% administration fee if outside professional assistance is necessary) for plan review submittals which exceed the 1st revision per trade.

Contractor Registration Fee.....\$15.00

The below listed fee schedule can be used for remodels/alterations, subject to approval by the building official.

Up to \$1,000.....\$ 75.00
 \$1,001-\$10,000.....\$ 75.00 base fee plus \$7.00 per \$1,000 of construction
 \$10,001-\$50,000.....\$138.00 base fee plus \$6.00 per \$1,000 of construction
 \$50,001 and above.....\$378.00 base fee plus \$5.00 per \$1,000 of construction
 Additional inspection(s)/Re-inspections or Administrative Fees are \$75 each (per hour minimum of one (1) hour.

Building Permit Fee Attached \$ _____	Cost of Construction \$ _____
Make Checks Payable to "City of Frankenmuth"	

IX. Local Governmental Agency to Complete This Section

Environmental Control Approvals

	Required?	Approved	Date	Number	By
A. Zoning	<input type="checkbox"/> Yes <input type="checkbox"/> No				
B. Saginaw County Road Comm./MDOT	<input type="checkbox"/> Yes <input type="checkbox"/> No				
C. Soil Erosion	<input type="checkbox"/> Yes <input type="checkbox"/> No				
D. Flood Zone	<input type="checkbox"/> Yes <input type="checkbox"/> No				
E. Water Supply/Well	<input type="checkbox"/> Yes <input type="checkbox"/> No				
F. Sewer/Septic System	<input type="checkbox"/> Yes <input type="checkbox"/> No				
G. Zoning Board of Appeals Variance Granted	<input type="checkbox"/> Yes <input type="checkbox"/> No				
H. Historic Preservation District Approval	<input type="checkbox"/> Yes <input type="checkbox"/> No				
I. Other	<input type="checkbox"/> Yes <input type="checkbox"/> No				

X. Validation - For Departmental Use Only

Use Group _____	Base Fee _____
Type of Construction _____	No. of Inspections _____
Square Feet _____	Computed Cost \$ _____
Approved By _____	Title _____ Date _____

File Name: Phil's Excel Files/2012 CCG Permit Applications (12/11)

ELECTRICAL PERMIT APPLICATION

Construction Code Group

Blumfield Township Frankenmuth City Frankenmuth Township

240 W. Genesee Street

Frankenmuth, MI 48734-1398

Phone: (989) 652-3430, x113 Fax: (989) 652-3451

www.frankenmuthcity.com

I. Job Location

Name of Owner/Agent	Owner's Telephone/Cell No.	Authority: 1972 PA 230. Penalty: No Permit Issued. Completion: Mandatory to obtain permit.
Street Address & Job Location (Street No. & name)		Has a building permit been obtained? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required
		City/Township (check one): <input type="checkbox"/> Blumfield Twp. <input type="checkbox"/> Frankenmuth City <input type="checkbox"/> Frankenmuth Twp.

II. Contractor/Homeowner Information

<input type="checkbox"/> Contractor <input type="checkbox"/> Homeowner	Name	State License No.	Expiration
Address (Street No. & Name)			
City		State	Zip
Telephone/Cell No. ()		Federal Employer ID Number (or reason for exemption)	
Worker's Compensation Insurance Carrier (or reason for exemption)		MESCC Employer No. (or reason for exemption)	

III. Type of Job

<input type="checkbox"/> Single Family	<input type="checkbox"/> New	<input type="checkbox"/> Service Only	<input type="checkbox"/> Other
<input type="checkbox"/> Other	<input type="checkbox"/> Alteration	<input type="checkbox"/> Special Inspection	<input type="checkbox"/> Premanufactured

IV. Plan Review Required

Plans must be submitted with an Application for Plan Examination and the appropriate fee before a permit can be issued, except as listed below. Plans are not required for the following:

1. When the electric system rating does not exceed 400 amps and the building is not over 3,500 square feet in area.
2. Work completed by a governmental subdivision or state agency costing less than \$15,000.00.

If work being performed is described above, check box below "Plans Not Required".

What is the rating of the service or feeder in ampere? _____

What is the building size in square footage? _____

Plans are required for all other building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to 1980 PA 299 and shall bear that architect's or engineer's seal and signature.

Plans Not Required

V. Applicant Signature

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.

Signature of Licensee or Homeowner (Homeowner signature indicates compliance with Section VI.)	Date
--	------

VI. Homeowner Affidavit

I hereby certify the electrical work described on this permit application shall be installed by myself in my home in which I am living or about to occupy. All work shall be installed in accordance with the State Electrical Code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the Electrical Inspector. I will cooperate with the Electrical Inspector and assume the responsibility to arrange for necessary inspections.

VII. Fee Chart. Enter the number of items being installed, multiply by the unit price and total for fee. A separate permit is required for each unit of a multiple dwelling when such unit is served by a separate entrance. **The base permit fees include only ONE final inspection. If additional inspections are necessary, add that cost in line 22 below, per inspection.**

	FEE	#/ITEMS	TOTAL
Contractor's Registration Fee	\$15.00	1	
1. APPLICATION FEE (Non-refundable)	\$30.00	1	\$30.00
2. Circuits, each	\$4.00		
3. Control wiring	\$50.00		
4. Dishwasher	\$7.00		
5. Disposal/Garbage grinder	\$7.00		
6. Dryer	\$7.00		
7. Feeder, Bus Ducts, etc. - per 50 feet	\$7.00		
8. Fire alarm (a) up to 10 devices	\$55.00		
(b) greater than devices/station (each)	\$7.00		
9. Fixtures (per 25 and/or fraction thereof)	\$7.00		
10. Furnace, Unit Heater	\$7.00		
11. Heating Unit (electrical baseboard)	\$7.00		
12. Mobile or Modular Home	\$25.00		
13. Power Outlet, ea. (220 volt outlets other than dryers and ranges)	\$8.00		
14. Range	\$7.00		
15. Rated Equipment - including air conditioning			
(a) Up to 20 KVA or hp	\$8.00		
(b) 21-50 KVA or hp	\$12.00		
(c) 51 KVA or hp or over	\$18.00		
16. Service (a) Temporary	\$15.00		
(b) Up to 200 amp	\$15.00		
(c) 201 amp to 600 amp	\$25.00		
(d) 601 amp to 800 amp	\$30.00		
(e) Over 800 amp	\$35.00		
Energy Request #			
17. Sign	\$10.00		
18. Sump Pump	\$7.00		
19. Swimming Pool	\$25.00		
20. Unit Heater	\$7.00		
21. Water Heater	\$7.00		
22. Additional/Re-inspection/Corrective Inspection, per inspection	\$45.00		
23. FINAL INSPECTION (includes only one final)	\$45.00	1	\$45.00
24. Plan Review - Hourly - one hour minimum	\$65.00		
MAKE CHECKS PAYABLE TO "CITY OF FRANKENMUTH"	Total		

VIII. INSTRUCTIONS FOR COMPLETING APPLICATION

General: Electrical work shall not be started until the application for permit has been filed with the Construction Code Group. All installations shall be installed in conformance with the State Electrical Code. **No work shall be concealed until it has been inspected.** When ready for an inspection, call the inspector providing as much advanced notice as possible. The inspector will need the job location and permit number.

EXPIRATION OF PERMIT:

A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if the authorized work is not commenced within six months after issuance of the permit or if the authorized work is suspended or abandoned for a period of six months after the time of commencing work. **A PERMIT WILL BE CANCELLED WHEN NO INSPECTIONS ARE REQUESTED AND CONDUCTED WITHIN SIX MONTHS OF THE DATE OF ISSUANCE OR THE DATE OF A PREVIOUS INSPECTION. CANCELLED PERMITS CANNOT BE REFUNDED OR REINSTATED.**

MECHANICAL PERMIT APPLICATION

Construction Code Group
Blumfield Township Frankenmuth City Frankenmuth Township
240 W. Genesee Street
Frankenmuth, MI 48734-1398
Phone: (989) 652-3430, x113 Fax: (989) 652-3451
www.frankenmuthcity.com

I. Job Location

		Authority: 1972 PA 230. Penalty: No Permit Issued. Completion: Mandatory to obtain permit.
Name of Owner/Agent	Owner's Telephone/Cell No.	Has a building permit been obtained? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required
Street Address & Job Location (Street No. & name)		City/Township (check one): <input type="checkbox"/> Blumfield Twp. <input type="checkbox"/> Frankenmuth City <input type="checkbox"/> Frankenmuth Twp.

II. Contractor/Homeowner Information

<input type="checkbox"/> Contractor <input type="checkbox"/> Homeowner	Name	State License No.	Expiration
Address (Street No. & Name)			
City		State	Zip
Telephone/Cell No. ()		Federal Employer ID Number (or reason for exemption)	
Worker's Compensation Insurance Carrier (or reason for exemption)		MESC Employer No. (or reason for exemption)	

III. Type of Job

<input type="checkbox"/> Single Family	<input type="checkbox"/> New	<input type="checkbox"/> Service Only	<input type="checkbox"/> Other
<input type="checkbox"/> Other	<input type="checkbox"/> Alteration	<input type="checkbox"/> Special Inspection	<input type="checkbox"/> Premanufactured

IV. Plan Review Required

Plans must be submitted with an Application for Plan Examination and the appropriate fee before a permit can be issued, except as listed below. Plans are not required for the following:

1. One- and two-family dwellings when the total building heating/cooling system input rating is 375,000 Btu's or less.
2. Alterations and repair work determined by the mechanical official to be of a minor nature.
3. Business, mercantile, and storage buildings having HVAC equipment only, with one fire area and not more than 3,500 square feet.
4. Work completed by a governmental subdivision or state agency costing less than \$15,000.00

If work being performed is described above, check box below "Plans Not Required".

What is the building size in square footage? _____

What is the input rating of the heating system in this building? _____

Plans are required for all other building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to 1980 PA 299 and shall bear that architect's or engineer's seal and signature.

Plans Not Required

V. Applicant Signature

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.

Signature of Licensee or Homeowner (Homeowner signature indicates compliance with Section VI.	Date
---	------

VI. Homeowner Affidavit

Thereby certify the mechanical work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the State Mechanical Code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the Mechanical Inspector. I will cooperate with the Mechanical Inspector and assume the responsibility to arrange for necessary inspections.

VII. Fee Chart. Enter the number of items being installed, multiply by the unit price and total for fee. A separate permit is required for each unit of a multiple dwelling when such unit is served by a separate entrance. **The base permit fees include only ONE final inspection.** If an additional inspection(s) is necessary, add that cost to line 24 below, per inspection.

	FEE	#/ITEMS	TOTAL
Contractor's Registration Fee	\$15.00	1	
1. APPLICATION FEE (Non-refundable)	\$30.00	1	\$30.00
2. In-floor Heating - includes piping	\$35.00		
3. Furnace - includes duct and piping	\$25.00		
4. Gas/Oil Burning Equipment	\$40.00		
5. Residential Boiler - boiler installer license required	\$40.00		
6. Water Heater	\$7.00		
7. Flue/Vent Damper	\$7.00		
8. Decorative Appliance/gas log/pre-manufactured fireplace	\$25.00		
9. Gas piping - NEW INSTALLATION - each opening (see #16 below for add'l.)	\$4.00		
10. A/C - including split system	\$30.00		
11. Chimney - factory built installed separately	\$25.00		
12. Bath/Kitchen Exhaust - each	\$7.00		
13. Dryer	\$7.00		
14. LP Tank Hook-up - Flat rate - No Application Fee Due	\$35.00		
15. Humidifiers	\$6.00		
16. Gas Piping/Process Piping - minimum \$25.00	.05/ft.		
17. Duct - minimum \$25.00	.10/ft.		
18. Air Handler - under 10,000 CFM	\$22.00		
19. Air Handler - over 10,000 CFM	\$60.00		
20. Miscellaneous Items: Heat Recovery Units, V.A.V. Boxes, Unit Heaters, Unit Ventilators, InfraRed Heaters, Wall Heater, Radiant Heater, Supplemental Heating Device, Pool Heater (includes piping & vent)	\$15.00		
21. Miscellaneous Items: Refrigeration Split System, Hoods with Suppression System, Make-up air Louver, Evaporation Cooler	\$35.00		
22. Fire Suppression - \$80.00 plus	.80/head		
23. Heat Pump	\$30.00		
24. Additional Inspection/Re-inspection/Corrective Inspection, per inspection	\$45.00		
25. FINAL INSPECTION	\$45.00	1	\$45.00
26. Plan Review - hourly - minimum one hour	\$65.00		
MAKE CHECKS PAYABLE TO "CITY OF FRANKENMUTH"	Total		

VIII. INSTRUCTIONS FOR COMPLETING APPLICATION

General: Mechanical work shall not be started until the application for permit has been filed with the Construction Code Group. All installations shall be installed in conformance with the State Mechanical Code. **No work shall be concealed until it has been inspected.** When ready for an inspection, call the inspector providing as much advanced notice as possible. The inspector will need the job location and permit number.

EXPIRATION OF PERMIT:

A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if the authorized work is not commenced within six months after issuance of the permit or if the authorized work is suspended or abandoned for a period of six months after the time of commencing work. **A PERMIT WILL BE CANCELLED WHEN NO INSPECTIONS ARE REQUESTED AND CONDUCTED WITHIN SIX MONTHS OF THE DATE OF ISSUANCE OR THE DATE OF A PREVIOUS INSPECTION. CANCELLED PERMITS CANNOT BE REFUNDED OR REINSTATED.**

PLUMBING PERMIT APPLICATION

Construction Code Group
 Blumfield Township Frankenmuth City Frankenmuth Township
 240 W. Genesee Street
 Frankenmuth, MI 48734-1398
 Phone: (989) 652-3430, x113 Fax: (989) 652-3451
 www.frankenmuthcity.com

Authority: 1972 PA 230. Penalty: No Permit Issued. Completion: Mandatory to obtain permit.	
Has a building permit been obtained? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	
City/Township (check one): <input type="checkbox"/> Blumfield Twp. <input type="checkbox"/> Frankenmuth City <input type="checkbox"/> Frankenmuth Twp.	

I. Job Location

Name of Owner/Agent	Owner's Telephone/Cell No.
Street Address & Job Location (Street No. & Name)	

II. Contractor/Homeowner Information

<input type="checkbox"/> Contractor <input type="checkbox"/> Master Plumber <input type="checkbox"/> Homeowner <input type="checkbox"/> Water Treatment Installer		Name of Plumbing Contractor or Homeowner		Contractor License Number		Expiration Date			
Address (Street No. & Name)				City		State		Zip	
Telephone/Cell No. ()				Federal Employer ID Number (or reason for exemption)					
Worker's Compensation Insurance Carrier (or reason for exemption)				MESCC Employer No. (or reason for exemption)					
Name of Master Plumber				Master License No.		Expiration Date			
Business/Branch Address				City		State		Zip	

III. Type of Job

<input type="checkbox"/> Single Family	<input type="checkbox"/> New	<input type="checkbox"/> Sewer Only	<input type="checkbox"/> Water Service Only	<input type="checkbox"/> Other
<input type="checkbox"/> Other	<input type="checkbox"/> Alteration	<input type="checkbox"/> Special Inspection	<input type="checkbox"/> Premanufactured	

IV. Plan Review Required

Plans must be submitted with an Application for Plan Examination and the appropriate fee before a permit can be issued, except as listed below. Plans are not required for the following:

1. One- and two-family dwelling containing not more than 3,500 square feet of building area.
2. Alterations and repair work determined by the plumbing official to be of a minor nature.
3. Buildings with a required plumbing fixture count less than 12.
4. Work completed by a governmental subdivision or state agency costing less than \$15,000.00.

If work being performed is described above, check box below "Plans Not Required."

Plans are required for all other building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to 1980 PA 299 and shall bear that architect's or engineer's seal and signature.

Plans Not Required

V. Applicant Signature

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.

Signature of Contractor, Plumber, Water Treatment Installer, or Homeowner (Homeowner indicates compliance with Section VI.)	Date
---	------

VI. Homeowner Affidavit

I hereby certify the plumbing work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the State Plumbing Code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the Plumbing Inspector. I will cooperate with the Plumbing Inspector and assume the responsibility to arrange for necessary inspections.

VII. Clarification

ITEM #14 - SPECIAL FIXTURES INCLUDE:			
Autopsy	Drinking Fountain	Ice Making Machine	Water connected to any:
Bed Pan Washer	Embalming Table	Plaster Trap	Beverage Dispenser
Bidet	Emergency Eye Wash	Refrigerator	Heating System
Condensate Drain	Emergency Shower	Roof Drain	Make-up Water Tank
Cuspidor	Grease Trap	Starch Trap	Sterilizer
OR ANY OTHER FIXTURE, DRAIN, OR WATER CONNECTED APPLIANCE NOT SPECIFICALLY LISTED			

VII. Fee Chart. Enter the number of items being installed, multiply by the unit price and total for fee. A separate permit is required for each unit of a multiple dwelling when such unit is served by a separate entrance. **The base permit fees include only ONE final inspection.** If an additional inspection(s) is necessary, add that cost to line 23 below, per inspection.

	FEE	#/ITEMS	TOTAL
Contractor's Registration Fee	\$15.00		
1. APPLICATION FEE (Non-refundable)	\$30.00	1	\$30.00
2. Bathtub/Hot Tub/Spa	\$7.00		
3. Dishwasher	\$7.00		
4. Floor Drain	\$7.00		
5. Garbage Grinder	\$7.00		
6. Interceptor/Ejector	\$7.00		
7. Laundry Tray	\$7.00		
8. Lavatory	\$7.00		
9. Lawn Sprinkler - including water piping & backflow preventer FLAT FEE	\$75.00		
10. Mobile or Modular Home	\$25.00		
11. Sewer	\$7.00		
12. Shower	\$7.00		
13. Sink	\$7.00		
14. Special Fixture (specify) - See Section VII above.	\$7.00		
15. Stacks	\$7.00		
16. Standpipe	\$7.00		
17. Sump	\$7.00		
18. Urinal	\$7.00		
19. Water Distribution System	\$7.00		
20. Water Closet	\$7.00		
21. Water Heater	\$7.00		
22. Water Piping	\$10.00		
23. Additional Inspection/Re-inspection/Corrective Inspection, per inspection	\$45.00		
24. FINAL INSPECTION	\$45.00	1	\$45.00
25. Plan Review - hourly - one hour minimum	\$65.00		
MAKE CHECKS PAYABLE TO "CITY OF FRANKENMUTH"	Total		

VIII. INSTRUCTIONS FOR COMPLETING APPLICATION

General: Plumbing work shall not be started until the application for permit has been filed with the Construction Code Group. All installations shall be installed in conformance with the State Plumbing Code. **No work shall be concealed until it has been inspected.** When ready for an inspection, call the inspector providing as much advanced notice as possible. The inspector will need the job location and permit number.

EXPIRATION OF PERMIT:

A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if the authorized work is not commenced within six months after issuance of the permit or if the authorized work is suspended or abandoned for a period of six months after the time of commencing work. **A PERMIT WILL BE CANCELLED WHEN NO INSPECTIONS ARE REQUESTED AND CONDUCTED WITHIN SIX MONTHS OF THE DATE OF ISSUANCE OR THE DATE OF A PREVIOUS INSPECTION. CANCELLED PERMITS CANNOT BE REFUNDED OR REINSTATED.**

CONSTRUCTION CODE GROUP

240 W. GENESSEE STREET

FRANKENMUTH, MI 48734-1398

Phone: (989) 652-3430 x113

Fax: (989) 652-3451

Issued: 08/05/2015

Please call (989) 652-3430 x 113 for
an inspection 24 hours in advance

Const. value: 155,000.00

Expires: 02/01/2016

Zoning:
Sec. No.

APPLICANT
Elite Construction Company 184 N Venner Rd Midland MI 48640 Phone: (989) 837 0686 Fax:
OWNER
LAIL, DONNA FRANKENMUTH MI 48734 Phone: Fax:

LOCATION
12091 E Tuscola 03-11-6-25-2157-005 Lot: Plat/Sub: R-PUD
OCCUPANT
LAIL, DONNA FRANKENMUTH MI 48734 Phone: Fax:

Work Description: Single Family / New Home
Stipulations:

Permit Item	Work Type	Fee Basis	Item Total
01 Contractor's Registration Fee	STANDARD ITEM	1.00	15.00
Zoning Fee	Standard Item	1.00	43.00
03 New Construction	Standard Item	1.00	878.00

Michael Setzer/012
Inspector

Fee Total: \$936.00
Amount Paid: \$936.00
Balance Due: \$0.00

MINIMUM OF SEVEN INSPECTIONS REQUIRED FOR ALL CONSTRUCTION WORK

1. FOOTINGS - (Prior to placement of concrete)
2. POURED WALL REINFORCEMENT INSPECTION - (Prior to placing concrete in forms)
3. FOUNDATION - (Prior to backfilling)
4. EXTERIOR WALL WEATHER RESISTIVE SHEATHING PAPER/FLASHING - (Prior to installing exterior wall coverings)
5. ROUGH FRAMING INSPECTION - (Prior to installing insulation)
6. MICHIGAN 2009 ENERGY CODE - (Prior to dry-walling)
7. FINAL INSPECTION - (Prior to occupancy of the building)

I agree this permit is only for the work described, and does not grant permission for additional or related work which requires separate permits. I understand that this permit will expire, and become null and void if work is not started within 180 days, or if work is suspended or abandoned for a period of 180 days anytime after work has commenced; and that I am responsible for assuring all required inspections are requested in conformance with the applicable code. I hereby certify that the proposed work is authorized by the owner, and that I am authorized by the owner to make this application as the authorized agent. I agree to conform to all applicable laws of the State of Michigan and the local jurisdiction. All information on the permit application is accurate to the best of my knowledge.

Payment of permit fee constitutes acceptance of the above terms. *ck #1012 \$1300*

POST THIS CARD SO IT IS VISIBLE FROM STREET

CONSTRUCTION CODE GROUP

240 W. GENESSEE STREET

FRANKENMUTH, MI 48734-1398

Phone: (989) 652-3430 x113

Fax: (989) 652-3451

Issued: 08/26/2015
Expires: 02/22/2016

Please call (989) 652-3430 x 113 for
an inspection 24 hours in advance

Const. value: 0.00
Zoning:
Sec. No.

APPLICANT
Finney Electric LLC 3135 N Antique Ct Sanford MI 48657 Phone: (989) 205 4610 Fax:
OWNER
LAIL, DONNA FRANKENMUTH MI 48734 Phone: Fax:

LOCATION
12091 E Tuscola 03-11-6-25-2157-005 Lot: Plat/Sub: R-PUD
OCCUPANT
LAIL, DONNA FRANKENMUTH MI 48734 Phone: Fax:

Work Description: Single Family / New Home / #1031464810
Stipulations:

Permit Item	Work Type	Fee Basis	Item Total
25 Contractors Reg. Fee	Standard	1.00	15.00
01 APPLICATION FEE (Non-refundable)	Standard Item	1.00	30.00
02 Circuits, each	Standard Item	16.00	64.00
04 Dishwasher	Standard Item	1.00	7.00
06 Dryer	Standard Item	1.00	7.00
09 Fixtures (per 25 &/or fraction of)	Standard Item	1.00	7.00
10 Furnace/Unit Heater	Standard Item	1.00	7.00
13 Power Outlet (each)	Standard Item	2.00	16.00
14 Range	Standard Item	1.00	7.00
16a Service (Temporary)	Standard Item	1.00	15.00
16b Service (up to 200 amp)	Standard Item	1.00	15.00
21 WATER HEATER	Standard Item	1.00	7.00
23 FINAL INSPECTION -only 1 final incl'd	Standard Item	1.00	45.00

Donald Pawlowski
Inspector

Fee Total: \$242.00
Amount Paid: \$242.00
Balance Due: \$0.00

I agree this permit is only for the work described, and does not grant permission for additional or related work which requires separate permits. I understand that this permit will expire, and become null and void if work is not started within 180 days, or if work is suspended or abandoned for a period of 180 days anytime after work has commenced; and that I am responsible for assuring all required inspections are requested in conformance with the applicable code. I hereby certify that the proposed work is authorized by the owner, and that I am authorized by the owner to make this application as the authorized agent. I agree to conform to all applicable laws of the State of Michigan and the local jurisdiction. All information on the permit application is accurate to the best of my knowledge.

Payment of permit fee constitutes acceptance of the above terms. *OK # 1500 # 1500 OK # 1500 # 1500*

CONSTRUCTION CODE GROUP

240 W. GENESSEE STREET

FRANKENMUTH, MI 48734-1398

Phone: (989) 652-3430 x113

Fax: (989) 652-3451

Issued: 11/09/2015
Expires: 05/07/2016

Please call (989) 652-3430 x 113 for
an inspection 24 hours in advance

Const. value: 0.00
Zoning:
Sec. No.

APPLICANT
Barnes Central Htg/Energy Concepts 9875 Beech Tree Ln Frankenmuth MI 48734 Phone: (989) 293 9003 Fax:
OWNER
LAIL, DONNA [REDACTED] FRANKENMUTH MI 48734 Phone: Fax:

LOCATION
12091 E Tuscola 03-11-6-25-2157-005 Lot: Plat/Sub: R-PUD
OCCUPANT
LAIL, DONNA [REDACTED] FRANKENMUTH MI 48734 Phone: Fax:

Work Description: Single Family / New Home
Stipulations:

Permit Item	Work Type	Fee Basis	Item Total
27 Contractor's Fee	Standard Item	1.00	15.00
01 Application Fee (Non-refundable)	Standard Item	1.00	30.00
03 Furnace	Standard Item	1.00	25.00
08 Decorative Appl./Gas Log/Pre-Manf. FP	Standard Item	1.00	25.00
10 A/C - Incl Split System	Standard Item	1.00	30.00
12 Bath/Kitchen Exhaust -each	Standard Item	3.00	21.00
13 Dryer	Standard Item	1.00	7.00
24 Additional Insp's/Re-insp/per insp	Standard Item	2.00	90.00
25 Final Inspection	Standard Item	1.00	45.00

Meredith Swast/Siz
Inspector

Fee Total: \$288.00
Amount Paid: \$288.00
Balance Due: \$0.00

I agree this permit is only for the work described, and does not grant permission for additional or related work which requires separate permits. I understand that this permit will expire, and become null and void if work is not started within 180 days, or if work is suspended or abandoned for a period of 180 days anytime after work has commenced; and that I am responsible for assuring all required inspections are requested in conformance with the applicable code. I hereby certify that the proposed work is authorized by the owner, and that I am authorized by the owner to make this application as the authorized agent. I agree to conform to all applicable laws of the State of Michigan and the local jurisdiction. All information on the permit application is accurate to the best of my knowledge.

Payment of permit fee constitutes acceptance of the above terms.

OK #10-40 \$288.00
OK #10-59 \$105.00

CONSTRUCTION CODE GROUP

240 W. GENESSEE STREET

FRANKENMUTH, MI 48734-1398

Phone: (989) 652-3430 x113

Fax: (989) 652-3451

Issued: 08/24/2015
Expires: 02/20/2016

Please call (989) 652-3430 x 113 for an inspection 24 hours in advance

Const. value: 0.00
Zoning:
Sec. No.

APPLICANT
Bedford Plumbing & Heating LLC 4353 Beckett Pl Saginaw MI 48603 Phone: (989) 907 9896 Fax:
OWNER
LAIL, DONNA FRANKENMUTH MI 48734 Phone: Fax:

LOCATION
12091 E Tuscola 03-11-6-25-2157-005 Lot: Plat/Sub: R-PUD
OCCUPANT
LAIL, DONNA FRANKENMUTH MI 48734 Phone: Fax:

Work Description: Single Family / New Home
Stipulations:

Permit Item	Work Type	Fee Basis	Item Total
01 Application Fee	Standard Item	1.00	30.00
02 Bath tub/Hot Tub/Spa	Standard Item	1.00	7.00
03 Dishwasher	Standard Item	1.00	7.00
05 Garbage Grinder	Standard Item	1.00	7.00
08 Lavatory	Standard Item	4.00	28.00
11 Sewer	Standard Item	1.00	7.00
12 Shower	Standard Item	1.00	7.00
15 Stacks	Standard Item	2.00	14.00
17 Sump	Standard Item	1.00	7.00
20 Water Closet	Standard Item	3.00	21.00
21 Water Heater	Standard Item	1.00	7.00
22 Water Piping	Standard Item	1.00	10.00
23 Add'l Insp./Re-insp/Adm fee/per insp	Standard Item	1.00	45.00
24 FINAL INSPECTION (1 Insp Incl'd Only	Standard Item	1.00	45.00

Fee Total: \$242.00
Amount Paid: \$242.00
Balance Due: \$0.00

Mark Sweet
Inspector

I agree this permit is only for the work described, and does not grant permission for additional or related work which requires separate permits. I understand that this permit will expire, and become null and void if work is not started within 180 days, or if work is suspended or abandoned for a period of 180 days anytime after work has commenced; and that I am responsible for assuring all required inspections are requested in conformance with the applicable code. I hereby certify that the proposed work is authorized by the owner, and that I am authorized by the owner to make this application as the authorized agent. I agree to conform to all applicable laws of the State of Michigan and the local jurisdiction. All information on the permit application is accurate to the best of my knowledge.

Payment of permit fee constitutes acceptance of the above terms.

CONSTRUCTION BOARD OF APPEALS

Application for a Variance, or Appeal

Fee: \$650.00 Non-Refundable

Section I: Applicant Information

Name: _____

Address: _____

Phone Number: () _____ Home () _____ Work _____

Section II: Property Owner Information (If not applicant)

Name: _____

Address: _____

Phone Number: () _____

Section III: Property Information

The property in question is located at _____,
_____, Michigan 48____, being legally described as: _____

Section IV: Previous Appeal

A previous appeal has () or has not () been made with respect to this property and this matter.

If yes, previous case number was _____ dated _____,

(To be completed by the Local Clerk)

Decision on previous appeal: _____

Section V: Reason(s) for Application (Please check)

___ A. Variance

____(1) To grant a specific variance to a substantive requirement of the code.

Specifically state your request under this section (Attach additional documentation deemed pertinent): _____

Section VI: Authorization to Access Property

I (we), the legal owners of the property described in Section II above, do hereby grant the members of the Construction Board of Appeals and the Village employees or their agents or representative permission to access and review the site for the purpose of this appeal.

Signature of Property Owner Date

Signature of Property Owner Date

Section VII: Execution of Application

I (we), the above named applicant(s), hereby make the aforementioned appeal to the _____ Construction Board of Appeals in accordance with the Single State Construction Code Act, 1972 PA 230.

Signature of Applicant Date

Signature of Applicant Date

Section VIII: Representation at Public Hearing

I (we), the above named applicant(s) can not personally appear before the Construction Board of Appeals; and such, authorize _____ to be my (our) representation for the aforementioned appeals.

Signature of Applicant Date

Signature of Applicant Date

I have read the above application and understand that once the Construction Board of Appeals meeting has been scheduled, the administrative fee will not be refunded under any circumstances.

Signature _____ Date _____

For Office Use Only

Date Received: _____

Fee Received: _____ Ck # _____

Case Number: _____

Public notice placed in _____ (Newspaper) on _____.

Posted in Public Locations:

Notice mailed to property owners within 300 ft (Attach list of property owners) on: _____.

Property is zoned: _____

Action by CBA: _____

**CONSTRUCTION CODE GROUP
PLAN REVIEW RESPONSE**

Date: 00/00/0000

From: Michael Setzer/Building Inspector

- | | | | |
|--|-------------------------------|---------------------------------------|--|
| <input type="checkbox"/> Building | <input type="checkbox"/> Fire | <input type="checkbox"/> City Manager | <input type="checkbox"/> Mech/Plumbing |
| <input type="checkbox"/> City Engineer | <input type="checkbox"/> Elec | <input type="checkbox"/> Police Chief | <input type="checkbox"/> DPW |

Project: new project

1. STATUS OF PLAN REVIEW. Please "X" applicable statement

- APPROVE** prints as submitted. See Section 2 below.
- DISAPPROVE** prints as submitted. See Section 3 below.
- UNABLE TO BE COMPLETED.** See Section 3 below.

2. APPROVED WITH COMMENTS. Although Plan Review approval may be issued, the following information must be provided, prior to obtaining a building permit.

- Please "X" here if information has been attached on a separate sheet.

3. DISAPPROVED WITH COMMENTS. In the space provided below, please explain (1) why the prints have been disapproved or why the review has not been completed and (2) what action(s) must be taken in order for the prints to be resubmitted for additional review.

- Please "X" here if information has been attached on a separate sheet.

Signature _____ Title _____

.....
If we do not receive your written comments on the attached form by 00/00/0000 we must assume that a favorable review has taken place and there are no additional requirements per your authority.

CONSTRUCTION DOCUMENTS CHECKLIST
for the
2012 Michigan Building Code
Including Building Permit Application Checklist

This checklist is a convenient reference to the 2012 Michigan Building Code. The checklist summarizes the minimum data required by the MBC to be on construction documents for the examination and approval of a building permit application for non-residential and multi-family projects. Depending on the type and complexity of the project, additional information not indicated on this checklist may be required by the MBC or the Building Official [105.3(7),107.1] Applicants are encouraged to indicate if the required data is applicable to the project, or not applicable, and attach a copy of the completed checklist to the construction documents. Please contact the local building department for requirements regarding phased construction or tenant finishes. Thank you for taking the time to complete this checklist. Having the necessary information at the beginning of the plan review process will help expedite the issuance of a building permit.

DATE SUBMITTED

PROJECT NAME

PROJECT ADDRESS

JOB NO. / TRACKING NO.

CHECKLIST PREPARED BY

REPRESENTING

INFORMATION REQUIRED ON THE CONSTRUCTION DOCUMENTS 105.3(4)

Provided Dwg / Spec	Not Applicable	
		Indicate the project name and address on the plans if available (105.3.(2); 107.2.1)
		Owner's name & mailing address
		Name of the registered design professional
		Address of registered design professional
		Telephone number of the registered design professional
		Fax number of the registered design professional
		Name, Michigan license number, address, telephone number and fax number of the registered design professional in responsible charge (unless waived by the Building Official) (107.3.4)
		Name of individual to receive review comments
		Address of individual to receive review comments
		Telephone number of individual to receive review comments
		The Michigan licensed Registered Design Professional must provide original signature, seal and date on all sheets of the drawings and specification manual or on the index sheet of the drawings and specification manual only when the index sheet covers all the sheets that make up the drawing set and specification manual (107.1, 107.3,4)
		List codes applicable to project (107.2.1) The MBC or the MBC Section 34, or the Michigan Rehab Code may be used for existing buildings
		List of all proposed deferred submittal documents (107.3.4.1)
		SITE PLANS (107 2.5)
		Identify all existing and proposed construction
		Show property lines, identify building distances from property lines and from other buildings on-site
		Identify all structures to be demolished
		Identify the total number of parking spaces provided
		Identify the total number of accessible parking spaces provided, including van accessible spaces (1106.1, 1106.5)
		Show proposed finish grades, grade floor elevations, street elevations
		Show flood plain elevations and boundaries
		Indicate the occasion of all new and existing utilities including the entrance points into the building and the FDC location
		Show site grading (slope away) of the ground immediately adjacent to the foundation of the building
		Provide complete dimensions, running slope and cross slope of all accessible parking spaces and accessible parking to the accessible entrances (107.2.1, 1104.1)

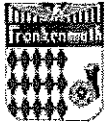
BUILDING PLANS	
	Indicate Use Group, Indicate mixed use option if applicable (302.1)
	Indicate Type of Construction (602.1)
	Indicate the use of all rooms and spaces. Indicate number of occupants on every floor, room and space. Show method used to determine the occupant load and means of egress requirements (107.2.1, 107.2.3 1004.1)
	Provide Key Plan if needed to identify the location of the proposed work (107.2.1)
	Indicate total area of building, number of stories, and provide height and area calculations including open perimeter & fire suppression increases (501.1, 503.1)
	Indicate if a full or limited area Fire Suppression system & Fire Alarm system will be installed and provide deferred submittals. (903; 907; 901.6; 107)
	Show location and provide details of all fire and smoke rated assemblies and protection of penetrations, including permanent markings and identifications. Provide U.L. design number or other approval rating (107.2.1, 701.1, 703.6, 712.1, 713.1)
	Show location of portable fire extinguishers (906.1)
	Provide details showing the proposed assembly of all walls, floors, roofs and stairs (107.2.1, 107.2.3, 107.2.4)
	Show location and hourly rating of all fire doors, fire dampers and fire windows (715.1)(716.1)
	Provide details of room finishes including type of materials with flame spread and smoke development ratings indicated for all materials. (801.1)(803)(107.2.1)(2603.1) Documentation for the flame spread and smoke development of all materials must be provided at field inspection
	Provide flame spread and smoke development documentation for all foam plastics and details on the foam plastic insulation thermal barriers (107.2.1, 2603.1)
	Provide complete dimensions for all rooms and spaces including stairs, aisles, passageways, corridors, areas around counters, fixtures, all circulation and egress paths, and maneuvering clearance at all doors (107.2.1, 1003.1, 1101.2)
	Provide door hardware, door and window details including type, size, material and hourly rating required (107.2.1, 1008.1)
	Show masonry sizes, grades, reinforcement, anchorages, loads and compressive strengths, provide masonry fireplace details and clearances. 2101.2, 2101.3(1) thru (9), 2101.3.1)
	Provide stairway details with all guard and handrail details (1009)
	Show location of all exit signs and means of egress lighting (1006.1, 1011.1)
	Show type and thickness of all glazing materials and safety glazing where required (2401.1)
	Provide accessibility details (107.2.1; 1101.2)
	Provide dimensions and details for all interior accessible routes within the building. Include the maneuvering clearance required at all doors (1104)
	Indicate heights, clearances and turning radii along all accessible routes (1104)
	Provide plumbing fixture and accessory details (1109)
	Provide dimensions and details for all use group requirements. Include features and facilities required to be accessible (1107)(1108)(1109)
	Provide signage details including location, wording, size and mounting height (1110)
	Show exterior wall details (107.2.1; 107.2.4; 1401.1)
	All base, sill, jamb and head flashings
	Intersection with dissimilar materials
	Corners
	End conditions
	Control joints
	Intersection at roof, eaves, or parapets
	Details around openings
	Construction space venting
	Means of water drainage
	Roof overflow drains (P 1105; P 1108)
	Water-resistive membrane

		STRUCTURAL PLANS (107.2.1; 1603.1)
		Indicate design loads (1603.1)
		Roof Live Load (1603.1.2)
		Floor Live Load (1603.1.1)
		Ground Snow Load (1603.1.3)
		Roof Snow Load (1603.1.3)
		Wind Design Data (1603.1.4)
		Earthquake Design Data (1603.1.5)
		Indicate load bearing value of soils (1603.1.6; 1801.2; 1803.6 (5))
		Guard and Handrail (1607.8.1)
		Indicate any Special Loads (1603.1.8)
		Show foundation dimensions and details (107.2.1; 1601.1; 1603.1)
		List all Design / Construction Standards and material specifications (107.2.1)
		Indicate the location, size and cross section of all structural members with dimensions, column centers and offsets (1603.1)
		Identify lateral resistive system(s) including lateral bracing and transfer and collection systems (1604.4; 1604.9)
		ELECTRICAL PLANS (106.1.1)
		Electrical layout (Michigan Part 8 – 80.21)
		Wattage Schedule (Michigan Part 8 – 80.21)
		Short circuit calculations for circuit breaker installation
		Service Location and Riser Diagram (Michigan Part 8-80.21)
		Show lighting system design, circuits, switches, materials, equipment listing, light fixtures and installation instructions (2701.1 NEC 110.2, 110.3)
		Show power system design, circuits, switches, materials, equipment listing, light fixtures and installation instructions (2701; NEC 110.2, 110.3)
		Single line diagram including available fault current and bus bracing
		Light fixture schedule
		Show exit signs and lighting and power supply (1001.1, 1011.1)
		Show egress emergency lighting (1001.1, 1006.1, 1011.1)
		Indicate ratings of materials installed in wet locations (NEC 358)
		Indicate wiring and materials in ducts, plenums and equipment
		Indicate wiring methods, conduits and materials (NEC 300)
		Show service conductors, conductor sizes, ratings and insulation (NEC 230)
		Indicate interrupting rating (NEC 110.9, 110.10, 230, 240.2)
		Verify working space in front of equipment (NEC 110.26, 110.32, 110.34)
		Indicate means of disconnect and number and location (NEC 230.70, 240.13)
		Show ground fault protection (NEC 230.95)
		Show hazardous locations and materials used
		Indicate protection of conductors (NEC 240.3)
		Indicate grounding of electrical system (NEC 250)
		Show design of emergency electrical system (NEC 700)
		PLUMBING PLANS (P106.3.1)
		Show all underground plumbing and building riser diagram (P106.3.1)
		Show design of water supply and distribution including sizes, depths and materials (P601.1)
		Show plumbing fixture layout (P401.1, P106.3.1)
		Provide water use calculations (P106.3.1)
		Show all backflow prevention devices and type of device (P106.3.1, 601.1, 608)
		Provide occupancy calculations for plumbing fixtures provided (Table P403.1)
		Show locations, equipment sizes and hookups for all boilers and water heaters (M101.2)
		Provide details of water system design (P601.1)

		PLUMBING PLANS, CONT -
		Indicates water temperature control devices (P607.1)
		Show hot water return circulation (if required) (P607.1)
		Indicate control of thermal expansion (P607.3)
		Indicate hot water heater relief valve discharge (P504)
		Show design and location of sanitary drains and vent systems including sizes, depths, slopes, materials and cleanouts (P701.1)
		Show details for any hazardous waste system (P702.5)
		Show design of storm water management system including sizes, depths, slopes, materials and cleanouts (P1101.2)
		Provide calculations for rainfall rates and water retention amounts(P1101.7, 1105, 1106, 1107)
		MECHANICAL PLANS (M106.3.1)
		Show compliance with International Energy Conservation Code (M301.2)
		Show protection of penetrations through all rated assemblies (302.2)
		Show equipment locations, service clearances and service access (M306.1)
		Show heating and cooling load calculations (M106 3.1; 312.1)
		Provide calculations for combustion air and exhaust air (M701.1)
		Hydronic Systems
		Show complete process piping diagram (M1201.1, 1201.2)
		Show provisions for combustion air supply and venting (M701.1)
		HVAC systems
		Show provisions for ventilation air, natural or mechanical (M401.2; 401.4)
		Show energy loads, equipment locations and equipment specifications including cfm and system static (M301.2, 303.1, 304.1)
		Show fire / smoke damper locations and details including rating (607.1)
		Show locations of smoke duct detectors in both return and supply ducts (M606.1)
		Show ductwork layout including gauges, hangers and sizing (M603.1)
		Show duct insulation details including R-factor and Perm. Rating (M604.1)
		Show location of vents for all fuel fired appliances (M804)
		Fuel piping systems
		Provide piping layout, load calculations and meter location (IFGC 402)
		Provide system operating pressure and pressure regulator detail (IFGC 402 416)
		Exhaust and ventilation systems (M501.1, M401.1)
		Show method of smoke control (M513)
		Provide documentation for Special Inspector (M513.3)
		Show hazardous exhaust systems (M510.1)
		Determine design class as hazardous or non-hazardous Provide MCDS data sheets to support hazardous level indicated (M510.1)
		Show locations for inlets, outlets and heights for exhaust equipment and hoods 502
		Provide exhaust equipment specifications, cfm and static pressure (M106.3.1)
		Commercial kitchen hoods Type 1 and Type 2 (M507.1)
		Provide duct layout, grease door location and method of attachment (M506.3)
		Provide velocity cfm and location of ventilation equipment (507.1(3))
		Provide fire protection for Type 1 hoods (M509)
		Provide make-up air and equipment control diagram (M508.1)
		Provide hood sizing show top, side and front views (M507.4, 507.5, 507.11, 507.12)
		Provide complete appliance lineup under Type 1 hoods (M507.13)
		Provide Type 2 hoods for dishwashers (M507.2.2)
		Provide ratings for all hoods (M507.1)
		Refrigeration (1101.1)
		Provide classification for refrigeration system (M1103.3)
		Provide refrigerant classification (M1103.1)
		Provide occupancy classification (M1103.2)
		Provide quantity of maximum allowable refrigerant (M1103.1)
		Provide details for refrigeration system enclosure requirements (M1105)
		Provide pressure tests for all non-factory or field erected equipment & appliances
		Provide refrigerant piping diagram (1107.1)

BUILDING PERMIT APPLICATION CHECKLIST

		Please contact the local jurisdiction to determine what additional information may be required, the number of sets of documents to be submitted and/or the requirements for phased construction or tenant finish permits
		Contact information provided: Name, Address, Business phone, Cell phone Fax number and Email address
		Building Permit Application filled out completely and signed by the Applicant (105.1, 105.3)
		Construction Documents and Specification Manual, if used – Signed, sealed and dated by a State Licensed Registered Design Professional (107.1)
		Describe the business use and its intended operation (105.3)
		Statement of Special Inspections – Include a complete list of materials and work requiring special inspections, the inspections to be performed and their frequencies. Provide a list of agencies and firms you propose to conduct each of the inspections and the qualifications, credentials and experience for each of the individuals (1704.1)
		Soils Report – Prepared by a State Licensed Registered Design Professional. The reports must have the State Licensed Registered Design Professional’s original signature, seal and date. (1803.6)
		Energy Calculations and details to show compliance to the Michigan Uniform Energy Code Part 10a rules R408.31087a to R408.31099. ASHRAE/IESNA Standard 90.1
		Structural Calculations – For all structural members and foundations. Include the deflection limits and all load calculations. All calculations must have the State Licensed Registered Design Professional’s original signature, seal and date. (107.1)
		Hazardous Materials – If hazardous materials are to be stored, dispensed, or used for manufacturing or processing, describe the type, use, quantity, location and method of storage of all materials. Material Safety Data Sheets (MSDS) must be submitted. The construction drawings shall address the requirements of the MBC for high hazard use if quantities above the exempt amounts are proposed. Hazardous materials will also be reviewed by the Fire Department (107.2.1; 307.1)
		Valuation. State the valuation of the proposed work. (105.3 #5)
NOTE: The review of premanufactured housing requires a copy of the building systems approval report, a copy of the original plans and a site plan.		



Phil Kerns <pkerns@frankenmuthcity.com>

MADCAD.com Online Library Access Information

1 message

Erdem Dedebras <ededebas@madcad.com>
To: pkerns@frankenmuthcity.com

Tue, Feb 2, 2016 at 10:21 AM

Saginaw Valley Chapter - Referenced Standards Library Access Information

Dear Phil;

I wanted to let you know that we have created an online library for SVCICC members to access most used Michigan Referenced Standards. This account is now ready for access.

You can see the list of available codes & standards from the link below:

Referenced Standards Available at SVCICC - MADCAD.com Account

You can use the login information below to access your library.

MADCAD.com Account Access Information**Username:** [REDACTED]**Password:** [REDACTED]**Login:** <http://www.madcad.com/login/>

You can download an informational MADCAD.com brochure from the link below:

MADCAD.com Informational Brochure

If you have any questions on how to use the eLibrary, please feel free to email me at ededebas@madcad.com or call me at **202-265-1940 x 207**. For other questions, you can also communicate with Steve Taglauer at staglaue@midland-mi.org.

Best regards,

Erdem Dedebras

Erdem Dedebras | Vice President, Sales & Operations**MADCAD.com by Compu.tecture, Inc.**3000 Connecticut Avenue NW, Suite 200 | Washington, DC 20008 | www.madcad.com
o 202 265 1940 ext. 207 | m 301 257 4101 | f 202 265 1941 | ededebas@madcad.com

Codes & Standards Included in MADCAD.com Online Library – 01/26/2016

ASCE

- ASCE/SEI 7 Minimum Design Loads for Buildings and Other Structures, Third Printing / 2010
- SEI/ASCE Standard 32 Design and Construction of Frost-Protected Shallow Foundations / 2001
- ASCE/SEI Standard 24 Flood Resistant Design and Construction / 2005

ASHRAE

- ASHRAE Standard 90.1-2007 Energy Standard for Buildings Except Low-Rise Residential Buildings (I-P Edition) (ANSI Approved; IESNA Co-sponsored) / 2007
- ASHRAE Standard 15-2010 Safety Standard for Refrigeration Systems and Standard 34-2010 - Designation and Classification of Refrigerants / 2010
- ASHRAE Standard 62.1-2010 Ventilation for Acceptable Indoor Air Quality / 2010
- ASHRAE Standard 140 Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs (ANSI Approved) / 2007
- ASHRAE Standard 119-1988 (RA 2004) Air Leakage Performance for Detached Single-Family Residential Buildings (ANSI Approved) / 1988

ASME

- ASME A112.4.1 Water Heater Relief Valve Drain Tubes / 1993
- ASME A112.4.3 Plastic Fittings for Connecting Water Closets to the Sanitary Drainage System / 1999
- ASME A112.4.2 Water Closet Personal Hygiene Devices / 2009
- ASME A112.36.2M Cleanouts / 1991
- ASME A112.21.2M Roof Drains / 1983
- ASME A112.6.3 Floor And Trench Drains / 2001
- ASME A112.19.7 Hydromassage Bathtub Appliances / 2006
- ASME A112.3.4 Macerating Toilet Systems and Related Components / 2000
- ASME B31.1 Power Piping / 2010
- ASME B31.3 Process Piping / 2010

- ASME B36.10M Welded and Seamless Wrought Steel Pipe / 2004
- ASME CSD 1 Control and Safety Devices for Automatically Fired Boilers / 2009
- ASME A112.19.5 Trim for Water-Closet Bowls, Tanks and Urinals / 2005
- ASME B16.26 Standard for Cast Copper Alloy Fittings for Flared Copper Tubes / 2006
- ASME B16.12 Cast Iron Threaded Drainage Fittings / 1998
- ASME B16.18 Cast Copper Alloy Solder Joint Pressure Fittings / 2001
- ASME A17.1/CSA B44 Safety Code for Elevators and Escalators / 2007
- ASME B16.22 Wrought Copper And Copper Alloy Solder Joint Pressure Fittings / 2001
- ASME A112.14.4 Grease Removal Devices / 2001
- ASME A112.18.1 Plumbing Supply Fittings / 2005
- ASME A112.18.2 Plumbing Waste Fittings / 2005
- ASME A112.14.3 Grease Interceptors / 2000
- ASME A112.14.1 Backwater Valves / 2003
- ASME A112.19.4M Porcelain Enameled Formed Steel Plumbing Fixtures / 1994
- ASME A112.1.3 Air Gap Fittings for Use with Plumbing Fixtures, Appliances and Appurtenances / 2000
- ASME A112.18.3 Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings / 2002
- ASME A112.1.2 Air Gaps in Plumbing Systems (For Plumbing Fixtures and Water-Connected Receptors) / 2004
- ASME A112.19.1 Enameled Cast Iron Plumbing Fixtures / 1994
- ASME A112.19.2 Ceramic Plumbing Fixtures / 2008
- ASME A112.19.3/CSA B45.4 Stainless Steel Plumbing Fixtures / 2008
- ASME A112.18.6 Flexible Water Connectors / 2009
- ASME A112.19.19 Vitreous China Nonwater Urinals / 2006
- ASME A112.19.15 Bathtub/Whirlpool Bathtubs with Pressure Sealed Doors / 2005
- ASME A112.18.7 Deck mounted Bath/Shower Transfer Valves with Integral Backflow Protection / 1999

ASTM

- A74-09 Standard Specification for Cast Iron Soil Pipe and Fittings
- A888-09 Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications
- B32-08 Standard Specification for Solder Metal
- B42-02e1 Standard Specification for Seamless Copper Pipe, Standard Sizes
- B687-99(2005)e1 Standard Specification for Brass, Copper, and Chromium-Plated Pipe Nipples
- B75-02 Standard Specification for Seamless Copper Tube
- B813-00(2009) Standard Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube
- B828-02 Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings
- B88-03 Standard Specification for Seamless Copper Water Tube
- C1261-07 Standard Specification for Firebox Brick for Residential Fireplaces
- C1277-08 Standard Specification for Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings
- C1283-07a Standard Practice for Installing Clay Flue Lining
- C129-06 Standard Specification for Nonloadbearing Concrete Masonry Units
- C1396/C1396M-13 Standard Specification for Gypsum Board
- C14-07 Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe
- C143/C143M-08 Standard Test Method for Slump of Hydraulic-Cement Concrete
- C1461-08 Standard Specification for Mechanical Couplings Using Thermoplastic Elastomeric (TPE) Gaskets for Joining Drain, Waste, and Vent (DWV), Sewer, Sanitary, and Storm Plumbing Systems for Above and Below Ground Use
- C1540-08 Standard Specification for Heavy Duty Shielded Couplings Joining Hubless Cast Iron Soil Pipe and Fittings
- C28/C28M-00(2005) Standard Specification for Gypsum Plasters
- C296-00(2004)e1 Standard Specification for Asbestos-Cement Pressure Pipe
- C33-03 Standard Specification for Concrete Aggregates
- C475/C475M-02(2007) Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board
- C476-08 Standard Specification for Grout for Masonry

- C55-01 Standard Specification for Concrete Brick
- C55-06e1 Standard Specification for Concrete Building Brick
- C564-08 Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings
- C59/C59M-00(2006) Standard Specification for Gypsum Casting Plaster and Gypsum Molding Plaster
- C62-08 Standard Specification for Building Brick (Solid Masonry Units Made From Clay or Shale)
- C630/C630M-03 Standard Specification for Water-Resistant Gypsum Backing Board
- C73-05 Standard Specification for Calcium Silicate Brick (Sand-Lime Brick)
- C90-00 Standard Specification for Loadbearing Concrete Masonry Units
- C90-08 Standard Specification for Loadbearing Concrete Masonry Units
- C91-05 Standard Specification for Masonry Cement
- C94/C94M-09 Standard Specification for Ready-Mixed Concrete
- D1785-06 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
- D1970-01 Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection
- D2235-04 Standard Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings
- D2239-03 Standard Specification for Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter
- D2466-06 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
- D2609-02 Standard Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe
- D2657-07 Standard Practice for Heat Fusion Joining of Polyolefin Pipe and Fittings
- D2661-06 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe and Fittings
- D2665-09 Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings

- D2672-96a(2003) Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement
- D2737-03 Standard Specification for Polyethylene (PE) Plastic Tubing
- D2751-05 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings (Redline)
- D2846/D2846M-09 Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
- D2949-01a(2008) Standard Specification for 3.25-in. Outside Diameter Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
- D3462-09 Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules
- D3679-09 Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Siding
- D3957-06 Standard Practices for Establishing Stress Grades for Structural Members Used in Log Buildings
- D4869-05e1 Standard Specification for Asphalt-Saturated Organic Felt Underlayment Used in Steep Slope Roofing
- D6380-03(2009) Standard Specification for Asphalt Roll Roofing (Organic Felt)
- D7032-08 Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails)
- E283-04 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
- E814-08b Standard Test Method for Fire Tests of Penetration Firestop Systems
- E84-09 Standard Test Method for Surface Burning Characteristics of Building Materials
- E90-04 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
- F1281-07 Standard Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe
- F1282-06 Standard Specification for Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure Pipe
- F1346-91(2003) Standard Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools, Spas and Hot Tubs

- F1554-07a Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength
- F1667-05 Standard Specification for Driven Fasteners: Nails, Spikes, and Staples
- F1807-08 Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing
- F1866-07 Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings
- F1960-09 Standard Specification for Cold Expansion Fittings with PEX Reinforcing Rings for Use with Cross-linked Polyethylene (PEX) Tubing
- F1974-08 Standard Specification for Metal Insert Fittings for Polyethylene/Aluminum/Polyethylene and Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Composite Pressure Pipe
- F1986-01(2006) Standard Specification for Multilayer Pipe Type 2, Compression Fittings, and Compression Joints for Hot and Cold Drinking-Water Systems
- F2080-08 Standard Specification for Cold-Expansion Fittings With Metal Compression-Sleeves for Cross-Linked Polyethylene (PEX) Pipe
- F2090-08 Standard Specification for Window Fall Prevention Devices With Emergency Escape (Egress) Release Mechanisms
- F2098-08 Standard Specification for Stainless Steel Clamps for Securing SDR9 Cross-linked Polyethylene (PEX) Tubing to Metal Insert and Plastic Insert Fittings
- F2159-05 Standard Specification for Plastic Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing
- F2262-05 Standard Specification for Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene Tubing OD Controlled SDR9
- F2434-08 Standard Specification for Metal Insert Fittings Utilizing a Copper Crimp Ring for SDR9 Cross-linked Polyethylene (PEX) Tubing and SDR9 Cross-linked Polyethylene/Aluminum/Cross-linked Polyethylene (PEX-AL-PEX) Tubing
- F405-05 Standard Specification for Corrugated Polyethylene (PE) Pipe and Fittings
- F409-02(2008) Standard Specification for Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings
- F437-06 Standard Specification for Threaded Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80

- F441/F441M-02(2008) Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
- F493-04 Standard Specification for Solvent Cements for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
- F628-08 Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe With a Cellular Core
- F656-08 Standard Specification for Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings
- F876-08b Standard Specification for Crosslinked Polyethylene (PEX) Tubing
- F877-07 Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems

AWWA

- AWWA C511-07: Reduced Pressure Principle Backflow Prevention Assembly / 2007
- AWWA C510-07: Double Check Valve Backflow Prevention Assembly / 2007

FEMA

- FEMA TB-2 - Flood Damage-Resistant Materials Requirements / 2008
- FEMA TB-11 - Crawlspace Construction for Buildings Located in Special Flood Hazard Areas (FIA-TB-11) / 2001

ICC

- International Fire Code / 2012
- International Fuel Gas Code / 2012
- International Private Sewage Disposal Code / 2012
- ICC 500:Standard for the Design and Construction of Storm Shelters / 2008
- International Property Maintenance Code / 2012
- ICC 400-2012: Standard on the Design and Construction of Log Structures / 2012
- ICC/ANSI A117.1 / 2003
- ICC A117.1 Accessible and Usable Buildings and Facilities / 2009
- ICC 300-2012: Bleachers, Folding and Telescopic Seating, and Grandstands / 2012

- Michigan Rehabilitation of Existing Building Code / 2009
- Michigan Residential Code / 2009
- Michigan Mechanical Code / 2012
- Michigan Plumbing Code / 2012
- Michigan Uniform Energy Code / 2009
- Michigan Building Code / 2009

NFPA

- 2009 NFPA 1: Fire Code
- 2012 NFPA 1: Fire Code
- 2015 NFPA 1: Fire Code
- 2007 NFPA 10: Standard for Portable Fire Extinguishers
- 2010 NFPA 10: Standard for Portable Fire Extinguishers
- 2013 NFPA 10: Standard for Portable Fire Extinguishers
- 2006 NFPA 101: Life Safety Code
- 2000 NFPA 101: Life Safety Code
- 2009 NFPA 101: Life Safety Code
- 2012 NFPA 101: Life Safety Code
- 2015 NFPA 101®: Life Safety Code®
- 2010 NFPA 105: Standard for Smoke Door Assemblies and Other Opening Protectives
- 2010 NFPA 11: Standard for Low-, Medium-, and High-Expansion Foam
- 2005 NFPA 110: Standard for Emergency and Standby Power Systems
- 2010 NFPA 110: Standard for Emergency and Standby Power Systems
- 2013 NFPA 110: Standard for Emergency and Standby Power Systems
- 2010 NFPA 111: Standard on Stored Electrical Energy Emergency and Standby Power Systems
- 2006 NFPA 1124: Code for the Manufacturing, Transportation, Storage and Retail Sale of Fireworks and Pyrotechnic Articles
- 2011 NFPA 12: Standard on Carbon Dioxide Extinguishing Systems
- 2010 NFPA 120: Standard for Fire Prevention and Control in Coal Mines
- 2009 NFPA 12A: Standard on Halon 1301 Fire Extinguishing Systems
- 2007 NFPA 13: Installation of Sprinkler Systems
- 2016 NFPA 13: Standard for the Installation of Sprinkler Systems

- 2010 NFPA 13: Automatic Sprinkler Systems Handbook
- 2013 NFPA 13: Standard for the Installation of Sprinkler System
- 2007 NFPA 13D: Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes
- 2010 NFPA 13D: Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes
- 2016 NFPA 13D: Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes
- 2013 NFPA 13D: Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes,
- 2007 NFPA 13R: Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height
- 2010 NFPA 13R: Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height
- 2016 NFPA 13R: Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies
- 2013 NFPA 13R: Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies,
- 2007 NFPA 14: Standard for the Installation of Standpipe and Hose Systems
- 2010 NFPA 14: Standard for the Installation of Standpipe and Hose Systems
- 2013 NFPA 14: Standard for the Installation of Standpipe and Hose Systems
- 2011 NFPA 16: Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems
- 2009 NFPA 17: Standard for Dry Chemical Extinguishing Systems
- 2009 NFPA 170: Standard for Fire Safety Symbols
- 2009 NFPA 17A: Standard for Wet Chemical Extinguishing Systems
- 2007 NFPA 20: Standard for the Installation of Stationary Fire Pumps for Fire Protection
- 2010 NFPA 20: Standard for the Installation of Stationary Pumps for Fire Protection
- 2013 NFPA 20: Standard for the Installation of Stationary Pumps for Fire Protection
- NFPA 2001: Clean Agent Fire Extinguishing Systems



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- 2006 NFPA 211: Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances
- 2010 NFPA 211: Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances
- 2013 NFPA 211: Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances
- 2009 NFPA 221: Standard for Fire Walls and Fire Barrier Walls
- 2012 NFPA 252: Standard Methods of Fire Tests of Door Assemblies
- 2011 NFPA 253: Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
- 2012 NFPA 257: Standard on Fire Test for Window and Glass Block Assemblies
- 2008 NFPA 259: Standard Test Method for Potential Heat of Building Materials
- 2011 NFPA 265: Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile or Expanded Vinyl Wall Coverings on Full Height Panels and Walls
- 2012 NFPA 268: Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source
- 2009 NFPA 275: Standard Method of Fire Tests for the Evaluation of Thermal Barriers Used Over Foam Plastic Insulation
- 2012 NFPA 285: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components
- 2011 NFPA 286: Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth
- 2012 NFPA 288: Standard Methods of Fire Tests of Horizontal Fire Door Assemblies Installed in Horizontal Fire Resistance-Rated Assemblies
- 2009 NFPA 289: Standard Method of Fire Test for Individual Fuel Packages
- 2008 NFPA 30: Flammable and Combustible Liquids Code
- 2012 NFPA 30: Flammable and Combustible Liquids Code
- 2015 NFPA 30: Flammable and Combustible Liquids Code
- 2006 NFPA 31: Standard for the Installation of Oil-Burning Equipment
- 2011 NFPA 31: Standard for the Installation of Oil-Burning Equipment
- 2011 NFPA 32: Standard for Drycleaning Plants
- 2011 NFPA 40: Standard for the Storage and Handling of Cellulose Nitrate Film

- 2011 NFPA 409: Standard on Aircraft Hangars
- 2011 NFPA 418: Standard for Heliports
- 2009 NFPA 484: Standard for Combustible Metals
- 2012 NFPA 484: Standard for Combustible Metals
- 2015 NFPA 484: Standard for Combustible Metals
- 2001 NFPA 50: Standard for Bulk Oxygen Systems at Consumer Sites
- 2007 NFPA 51: Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes
- 2009 NFPA 54: National Fuel Gas Code
- 2012 NFPA 54: National Fuel Gas Code
- 2015 NFPA 54: National Fuel Gas Code
- 2008 NFPA 58: Liquefied Petroleum Gas Code
- 2011 NFPA 58: Liquefied Petroleum Gas Code
- 2014 NFPA 58: LP-Gas Code Handbook
- 2008 NFPA 61: Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities
- 2013 NFPA 654: Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids
- 2012 NFPA 655: Standard for Prevention of Sulfur Fires and Explosions
- 2012 NFPA 664: Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities
- 2008 NFPA 70: National Electrical Code
- 2005 NFPA 70: National Electrical Code
- 2011 NFPA 70: National Electrical Code
- 2014 NFPA 70: National Electrical Code (NEC)
- 2010 NFPA 701: Standard Methods of Fire Tests for Flame Propagation of Textiles and Films
- 2012 NFPA 704: Standard System for the Identification of the Hazards of Materials for Emergency Response
- 2007 NFPA 72: National Fire Alarm Code
- 2013 NFPA 72: National Fire Alarm and Signaling Code
- 2010 NFPA 72: National Fire Alarm and Signaling Code
- 2009 NFPA 720: Standard for the Installation of Household Carbon Monoxide (CO) Warning Equipment

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- 2010 NFPA 80: Standard for Fire Doors and Other Opening Protectives
- 2011 NFPA 85: Boiler and Combustion Systems Hazards Code
- 2009 NFPA 92B: Standard for Smoke Management Systems in Malls, Atria, and Large Areas
- 2008 NFPA 96: Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations
- 2012 NFPA 99: Health Care Facilities Code
- 2012 NFPA 5000: Building Construction and Safety Code
- 2015 NFPA 5000®: Building Construction and Safety Code®

SMACNA

- SMACNA Fibrous Glass Duct Construction Standards, 7th Edition / 2003
- SMACNA HVAC Duct Construction Standards - Metal and Flexible, 3rd Edition / 2005

Construction Code Group

Blumfield Township • Frankenmuth City • Frankenmuth Township • Tuscola Township

240 W. Genesee Street

Frankenmuth, MI 48734-1398

Telephone: (989) 652-3430, x113 • Fax: (989) 652-3451

Website: www.frankenmuthcity.com

INSPECTION NOTICE

Job Location _____ Permit # _____

Name of Permit Holder _____

Address _____

Inspection: Building Electrical Fire Mechanical Plumbing

Type: Footing Foundation Underground Service Rough Insulation

Exterior Wall/Flashing Final Progress

Other _____

Status: Approved Not Approved – See Comment(s) Below Other _____

Upon inspection for compliance with the Construction Code, the following correction(s) is (are) required:

Please call to schedule a re-inspection at (989) 652-3430, x113 when the correction(s) has (have) been completed. The above corrections must be inspected and approved before any work is covered.

Date of Inspection _____ Inspector _____

Construction Code Group
Blumfield Township • Frankenmuth City • Frankenmuth Township
240 W. Genesee Street
Frankenmuth, MI 48734-1398
Phone: (989) 652-3430, x113
Fax: (989) 652-3451
Website: www.frankenmuthcity.com
Fee: \$15.00

CONTRACTOR REGISTRATION FORM

Date: _____ Registration: Number _____

Company Name: _____

Address: _____ City: _____ State: _____ Zip: _____

Telephone: _____ Email Address: _____

Trade: Building Electrical Plumbing Mechanical Other: _____

1. Occupational License Number: _____

Expiration Date: _____

2. Worker's Disability Compensation Insurance Carrier: _____

(a.) Work Comp #: _____ (provide a copy of Workman's Comp Certificate)

(b.) **OR** - Reason for Exemption: No Employee's **or** (provide a 'NOTICE OF EXCLUSION' form which can be acquired by calling (517) 322-1195 Compliance & Employer Records Division)

3. Internal Revenue Code, Employer Identification Number: _____

Reason for Exemption: _____

4. Michigan Employment Security Commission Number: _____

Reason for Exemption: _____

Section 23a of the State Construction Code Act of 1972, Act No. 230 of the public acts of 1972, being section 125.1523a of the Michigan Compiled Laws 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.

Applicant's Signature: _____

TO BE PROVIDED: 1.) COPY OF STATE LICENSE 2.) PICTURE ID (I.E. DRIVERS LICENSE, COMPANY I.D.) 3. IF NOT MARKING 'NO EMPLOYEE'S' ABOVE THEN SUPPLY A WORKMANS COMP. CERTIFICATE (OR) PROVIDE A NOTICE OF EXCLUSION FORM (PER 2B ABOVE)

Filing a Complaint

The Bureau of Construction Codes (BCC) is responsible for the investigation of consumer complaints only in those areas within its regulatory authority. BCC has authority to review and investigate licensing complaints against electricians, mechanical contractors, and plumbers. The bureau does not have statutory authority to investigate or regulate contractual issues. If a local code enforcing agency has jurisdiction over the allegations described in your complaint, the complaint will be forwarded to the local jurisdiction.

There are three levels of jurisdiction (state, county, local) for each of the code disciplines (electrical, mechanical, and plumbing). The bureau's Statewide Jurisdiction List shows the enforcing agency for all units of government in Michigan.

LOCAL (city, township, or village); the unit of government has their own code enforcement program.

COUNTY; the unit of government receives code enforcement services from a county enforcing agency.

STATE; the Bureau of Construction Codes is responsible for code enforcement in that unit of government.

If code activities for your unit of government are enforced at the local or county level, you should first contact the local enforcing agency to see if the matter can be resolved before submitting a complaint to the state. When filing a complaint that alleges code violations, you must contact the local code enforcement official and request a signed inspection report verifying construction code violations.

To file a complaint, please submit the following information. **KEEP COPIES OF ALL DOCUMENTS SENT TO THE BUREAU.**

- A completed Statement of Complaint form, letter, or email in which you fully describe the factual basis for the allegation. This form is located on our website www.michigan.gov/bcc.
- Copies of any correspondence you sent or hand delivered to the respondent.
- Copies of any written response received from the respondent. If you received a verbal response only, indicate who you spoke with, what you were told and the date.
- Copies of any documents which support your complaint which may include, but are not limited to:
 - Description of work performed
 - Notes you may have taken
 - Permit and inspection records from the local unit of government
 - Advertisements
 - Proof of payment for work performed (canceled check, receipt, closing statement)
 - Court documents if applicable

Do not include any information that you do not want to be released to the respondent, such as your social security number or other personal information. Do not send bulky material. We will request additional information if needed.

Please mail your complaint to the following address:

Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes
Office of Administrative Services
P.O. Box 30254
Lansing, Michigan 48909
Email: bccoas@michigan.gov

You will receive a letter acknowledging receipt of your complaint. Subsequently, your complaint will be reviewed to determine if an investigation should be initiated or if additional information is required. You will receive information notifying you of the disposition of your complaint.

BCC-3015 (Rev. 03/15)

Statement of Complaint
 Michigan Department of Licensing and Regulatory Affairs
 Bureau of Construction Codes/Office of Administrative Services
 PO Box 30254, Lansing, MI 48909
 517-335-2972
 www.michigan.gov/bcc
 E-Mail: bccoas@michigan.gov

COMPLAINT NUMBER - FOR OFFICIAL USE ONLY

Authority: 1972 PA 230, 1956 PA 217, 1984 PA 192, 2002 PA 733 Penalty: Failure to provide the information may result in denial of your request.	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
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NOTE: The Bureau does not assist with reimbursement claims due to contractual disputes.

Instructions to the Complainant:

- Please read form in its entirety before completing.
- Be sure to sign and date complaint form.
- Mail form and all applicable attachments to the address listed above.

The Bureau's jurisdiction is limited to certain matters involving consumers and licensees. It is suggested you first contact the person or firm about whom you have a complaint to see if a settlement can be reached. If this is unsuccessful, you may want to consult an attorney to determine your civil options, file an action in Small Claims Court, or contact your local prosecutor. This may be done in conjunction with or in lieu of filing a complaint with this Department.

I. Complainant Information

YOUR NAME: (Last, First, Middle Initial)	E-MAIL ADDRESS:		
YOUR STREET ADDRESS:	CITY:	STATE:	ZIP CODE:
COUNTY:	TELEPHONE NUMBER (Include Area Code):	FAX NUMBER (Include Area Code):	
Preferred Method of Contact: <input type="checkbox"/> Regular Mail <input type="checkbox"/> E-Mail (Note: Larger-sized responses may need to be sent via regular mail)			

II. Complaint Information

NAME OF BUSINESS OR INDIVIDUAL COMPLAINT IS REGARDING:	LICENSE NUMBER (if Known):		
CONTACT PERSON:	TELEPHONE NUMBER (Include Area Code):	COUNTY:	
STREET ADDRESS:	CITY:	STATE: MI	ZIP CODE:
THIS COMPLAINT RELATES TO THE FOLLOWING: <input type="checkbox"/> Electrical <input type="checkbox"/> Mechanical <input type="checkbox"/> Plumbing			
Have you contacted the above named business or individual regarding your complaint? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, what was the result? (Please provide copies of any documents related to the above contact)			

Have you contacted the local unit of government responsible for code enforcement? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, what was the result?	
NAME OF THE CODE OFFICIAL:	NAME OF LOCAL JURISDICTION:
Did you file a claim with any other agency, or start legal action? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, where?	Case Number:
Current Status of Claim:	
Explain how you would like to see this complaint resolved:	

III. Details of Complaint - Briefly explain your complaint. Attach additional sheets if necessary to clearly document the violations you believe have occurred.

DATE THE WORK/ISSUE OCCURRED?	HAS THE PHYSICAL EVIDENCE BEEN PRESERVED (if applicable)? <input type="checkbox"/> Yes <input type="checkbox"/> No
Explanation of Complaint:	

IV. Attachments Supporting Complaint - Please indicate which documents have been attached.

<input type="checkbox"/> Contracts/Price Quotes/Estimates	<input type="checkbox"/> Proof of payment for work performed (cancelled check, receipt, closing statement)
<input type="checkbox"/> Notes you have taken	<input type="checkbox"/> Advertisements
<input type="checkbox"/> Permit and inspection records from the local unit of government	<input type="checkbox"/> Clear photographs showing the alleged violation and the date photos were taken
<input type="checkbox"/> Court documents (if applicable)	
<input type="checkbox"/> Other: _____	
Note: Additional documentation may be requested to support your complaint.	

V. Signature

SIGNATURE:	DATE:
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CERTIFICATE OF OCCUPANCY

Construction Code Group

240 W. Genesee

Frankenmuth, MI 48734

City of Frankenmuth

THIS IS TO CERTIFY that a "CERTIFICATE OF OCCUPANCY" is hereby issued in accordance with applicable 2009 Edition Michigan Construction Code series to:

Owner:

LAIL, DONNA

FRANKENMUTH MI 48734

Applicant:

LAIL, DONNA

FRANKENMUTH MI 48734

Address of Proposed Occupancy: 12091 E Tuscola

Tax I.D: 03-11-6-25-2157-005

Building Use: R-3

Type of Construction: 5B

Fire Supression System:

Special stipulations and/or conditions:

CERTIFICATE OF OCCUPANCEY IN REGARDS TO NEW HOME

This Certificate of Occupancy is issued for that structure and occupancy stated above and is void if there is any change in either the occupancy or structure.

Associated Permits

PB150056

PE150092

PM150116

PP150035


Michael Setzer, Building Official

3-2-2016
Date

Annual Budget

City of Frankenmuth



Fiscal Year July 01, 2016 – June 30, 2017

(Introduced 03.01.16)

2/24/2016

www.frankenmuthcity.com



City of Frankenmuth
Budget 2016-17

ACCOUNT NUMBER	Building Department Fund		Actual 2013-14	Actual 2014-15	Budget 2015-16	Estimated Actual 2015-16	Manager Recommends 2016-17	Comments Adjustments
	DESCRIPTION							
	REVENUES							
249-000-451-000	Building Permits		126,419	84,494	65,000	70,000	72,000	
249-000-452-000	Plumbing Permits		14,959	9,476	9,200	9,500	10,000	
249-000-453-000	Electrical Permits		25,941	19,002	16,000	17,000	17,500	
249-000-454-000	Mechanical Permits		26,036	27,191	20,000	20,000	21,000	
249-000-640-249	Sprinkler Inspection Program Fee		2,572	2,580	2,600	2,600	2,600	
249-000-664-000	Interest Earnings		41	54	100	100	100	
249-000-683-000	Misc.		1,634	1,380	1,000	1,000	1,000	
249-000-390-000	Prior year's carryover		0	0	0	0	3,050	
	TOTAL REVENUES		197,602	144,177	113,900	120,200	127,250	
	EXPENDITURES							
249-215-705-000	Administration/Overhead		7,500	8,000	9,000	9,000	10,000	
249-215-712-000	Fringes		5,252	5,993	5,500	6,000	6,200	
249-215-727-000	Office Supplies		1,048	782	1,100	1,100	1,100	
249-215-814-000	Computer Services		712	5,972	1,000	1,100	1,100	
249-215-826-000	Attorney Services		290	0	250	250	250	
249-215-829-000	Membership & Dues (GIS)		4,439	3,500	4,750	4,750	5,000	
249.215.853.000	Telephone Charges		1,083	572	1,200	1,000	1,000	
249-215-864-000	Education & Training		1,568	2,482	1,600	1,600	1,600	
249-215-910-000	Insurance		822	790	1,200	800	1,000	
249-215-911-000	Workers Comp Insurance		1,968	2,389	2,600	1,800	2,000	
249-215-955-000	Miscellaneous		313	211	500	500	500	
249-215-980-100	Equipment				1,200	1,200	6,500	



City of Frankenmuth
Budget 2016-17

ACCOUNT NUMBER	Building Department Fund		Actual 2013-14	Actual 2014-15	Budget 2015-16	Estimated Actual 2015-16	Manager Recommends 2016-17	Comments Adjustments
	DESCRIPTION							
	Building Dept							
249-380-708-000	Inspection Fees		43,730	47,886	47,000	50,000	52,000	
	Plumbing/Mechanical							
249-381-708-000	Inspection Fees		19,111	25,293	22,000	22,000	23,000	
	Electrical							
249-383-708-000	Inspection Fees		14,305	13,790	15,000	15,000	16,000	
	TOTAL EXPENDITURES		<u>102,141</u>	<u>117,660</u>	<u>113,900</u>	<u>116,100</u>	<u>127,250</u>	
	Fundbalance Beginning		167,188	262,649	289,166	289,166	293,266	
	Fundbalance Ending		262,649	289,166	289,166	293,266	290,216	

CITY OF FRANKENMUTH
Frankenmuth, Michigan

Financial Statements
June 30, 2015



**Gardner | Provenzano
Thomas & Luplow**

CONFIDENTIAL PUBLIC ACCOUNTANTS

City of Frankenmuth
Component Unit
 Construction Codes Group Authority
 Balance Sheets
 June 30, 2015 and 2014

	<u>Assets</u>	<u>2015</u>	<u>2014</u>
Cash		\$ 286,290	\$ 259,896
Accounts Receivable		312	274
Due from other funds		5	5
Prepaid expenditures		3,258	3,547
Total Assets		\$ 289,865	\$ 263,722
<u>Liabilities and Fund Balance</u>			
Liabilities			
Accounts Payable		\$ 312	\$ 674
Due to other funds		387	399
Total Liabilities		699	1,073
Fund balance-Assigned		289,166	262,649
Total Liabilities and Fund Balance		\$ 289,865	\$ 263,722

The accompanying notes are an integral part of these financial statements.

City of Frankenmuth
Component Unit
 Construction Codes Group Authority
 Statement of Revenues, Expenditures and Changes in Fund Balance
 Budget and Actual
 For the Year Ended June 30, 2015
 (With Comparative Actual Amounts for the Year Ended June 30, 2014)

	2015		Over (Under) Budget	2014
	Budget	Actual		Actual
Revenues				
Building permits and plan reviews	\$ 65,000	\$ 84,494	\$ 19,494	\$ 126,419
Plumbing permits and plan reviews	9,200	9,476	276	14,959
Electrical permits and plan reviews	16,000	19,002	3,002	25,941
Mechanical permits and plan reviews	20,000	27,191	7,191	26,036
Interest	100	54	(46)	41
Miscellaneous	3,600	3,960	360	4,206
Total Revenues	<u>113,900</u>	<u>144,177</u>	<u>30,277</u>	<u>197,602</u>
Expenditures				
Administration	32,300	30,691	(1,609)	24,995
Building Inspection	45,000	47,886	2,886	43,730
Plumbing/Mechanical Inspections	20,000	25,293	5,293	19,111
Electrical Inspections	14,000	13,790	(210)	14,305
Total Expenditures	<u>111,300</u>	<u>117,660</u>	<u>6,360</u>	<u>102,141</u>
Excess (Deficiency) of revenues over expenditures	<u>2,600</u>	<u>26,517</u>	<u>23,917</u>	<u>95,461</u>
Fund Balance, Beginning	262,649	262,649		167,188
Fund Balance, Ending	<u>\$ 265,249</u>	<u>\$ 289,166</u>	<u>\$ 23,917</u>	<u>\$ 262,649</u>

The accompanying notes are an integral part of these financial statements.

Construction Code Group

Blumfield Twp. Frankenmuth City Frankenmuth Twp. Tuscola Twp.

240 W. Genesee Street

Frankenmuth, MI. 48734

Telephone: (989) 652-3430, x 113 Fax: (989) 652-3451

Website: www.frankenmuthcity.com

PLAN REVIEW PAY VOUCHER

JOB NAME: _____

JOB ADDRESS: _____

AMOUNT OF BUILDING PERMIT: \$ _____

AMOUNT OF PLAN REVIEW FEE: \$ _____
(50% of Building Permit Fee)

ADMINISTRATION: -20%: \$ _____
(deduct this amount from plan review)

GROSS TOTAL: \$ _____

PAY TO BUILDING INSPECTOR: \$ _____
(50% of gross total)

NET TOTAL: \$ _____
(subtracted from building inspector-
divide this line by 3)

PAY TO ELECTRICAL INSPECTOR: \$ _____
(1/3 of net total)

PAY TO MECHANICAL INSPECTOR: \$ _____
(1/3 of net total)

PAY TO PLUMBING INSPECTOR: \$ _____
(1/3 of net total)

BALANCE: \$ _____
(should be zero)



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

SHELLY EDGERTON
DIRECTOR

April 28, 2017

Mr. Tod Fackler, Supervisor
Tuscola Township
8561 Van Cleve Rd., P.O. Box 1702
Vassar, MI 48768

RE: Application to Administer and Enforce Michigan Building, Electrical, Mechanical and Plumbing Codes

Dear Mr. Fackler:

At the April 12, 2017 Construction Code Commission meeting, the Commission postponed consideration of Tuscola Township's Application to Administer and Enforce until the July 12, 2017 meeting to allow time for the Commission to review the additional documentation submitted at the meeting.

The July 12, 2017 meeting will be located at 611 West Ottawa Street, Lansing, MI 48933 in the Upper Level Conference Room #4. The public entrance is on the south side of the building. The meeting will begin at 9:30 a.m.

You or your representative are encouraged to attend the July 12, 2017 meeting should the Commission require additional information during their review. If you would like to submit additional supplemental material for your application for the Commission's review, it must be provided no later than June 7, 2017. If you have any questions, please contact the Administrative Services Division at (517) 241-9303.

cc: Mr. Michael Setzer, Building Official
Tuscola Township Clerk
Tuscola County Clerk
BCC Building Division
BCC Electrical Division
BCC Mechanical Division
BCC Plumbing Division
BCC Permits and Plan Review Division
BCC Licensing and Complaints Division



STATE OF MICHIGAN

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

RICK SNYDER
GOVERNOR

SHELLY EDGERTON
DIRECTOR

January 18, 2017

Todd Fackler, Supervisor
Tuscola Township
8561 Van Cleve Rd.
P.O. Box 1702
Vassar, MI 48768

Dear Mr. Fackler:

The Tuscola Township Application to Administer and Enforce was received by the Construction Code Commission on January 11, 2017, and will be on the agenda for the April 12, 2017, Construction Code Commission meeting. You or your representative, along with enforcing agency personnel should plan to be in attendance at this meeting to respond to Commission inquiries regarding your application.

Issues to be addressed by the Commission may include, but not be limited to, the following:

- Reason for application
- Your proposed program budget
- Proposed public facing documents i.e.:
 - o Permits, correction/violation notices, certificates of occupancy, stop work orders, etc.
- Drafts of proposed fees for permits, plan reviews, inspections, etc.
- Communication process with enforcing agencies
- Registration of governmental subdivision and enforcing agency personnel
- Board of Appeal members per MCL 125.1514
- Administrative personnel and services provided i.e.:
 - o FOIA, retention schedule, location of official records/documents, etc.
- Processes for establishing fees and variance of code process
- Agency personnel are provided as necessary.
- Plan review services are provided and timely field inspection services will be provided.
- Access to the codes & standards for which you have applied to administer & enforce.
- Your understanding of the Administration and enforcement of 1972 PA 230 (the Act) and the state construction code, pursuant to Section 8b(6) of the Act.

If you have questions regarding this issue please feel free to contact me at (517) 241-6479.

Sincerely,

Dianne Barmes, Administrative Manager
Licensing and Complaints Division

Providing for Michigan's Safety in the Built Environment

LARA is an equal opportunity employer
Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
P.O. BOX 30254 • LANSING, MICHIGAN 48909
www.michigan.gov/bcc • Telephone (517) 241-9302 • Fax (517) 241-9570

**TUSCOLA TOWNSHIP
TUSCOLA COUNTY, MICHIGAN**

NOTICE OF ADOPTION OF ORDINANCE

TO: THE RESIDENTS AND PROPERTY OWNERS OF THE TOWNSHIP OF TUSCOLA, TUSCOLA COUNTY, MICHIGAN AND ANY OTHER INTERESTED PERSONS:

PLEASE TAKE NOTICE that the following is a summary of Tuscola Township Ordinance No. 2016-1, which was adopted by the Tuscola Township Board on September 20, 2016:

SECTION 1. ASSUMPTION OF ADMINISTRATION AND ENFORCEMENT RESPONSIBILITY. Tuscola Township assumes responsibility for the administration and enforcement within its jurisdiction of Act 230 of the Public Acts of Michigan of 1972, as amended, and the State Construction Code adopted thereunder.

SECTION 2. DESIGNATION OF ENFORCING AGENCY. The Township designates the person(s) appointed and employed by the Construction Code Group as Building Official(s) as the enforcing agency to discharge the responsibility of the Township for the administration and enforcement of the Construction Code Act, the State Construction Code and this Ordinance.

SECTION 3. FEES. The Board of the Construction Code Group is given the authority to establish by resolution a schedule of fees, rates and charges for the administration and enforcement of the aforementioned Construction Code Act, the State Construction Code and this Ordinance.

SECTION 4. REPEAL OF CONFLICTING ORDINANCES AND SAVINGS CLAUSE. All ordinances or parts of ordinances in conflict with this Ordinance are repealed; provided, however, that any proceedings pending under previous Construction Code administration in the Township shall not be invalidated by this Ordinance and may be continued under the previous administration.

SECTION 5. SEVERABILITY. The provisions of this Ordinance are severable.

SECTION 6. EFFECTIVE DATE. This Ordinance shall take effect on January 1, 2017.

PLEASE TAKE FURTHER NOTICE that the full text of this Ordinance has been posted in the office of the Tuscola Township Clerk at the address set forth below and that copies of this Ordinance may be purchased or inspected at the office of the Tuscola Township Clerk during regular business hours of regular working days following the date of this publication.

Michelle Hicks, Clerk
Tuscola Township
8805 Loren Road
Vassar, MI 48768
989-871-4507

RECEIVED

NOV 01 2016

OFFICE OF
ADMINISTRATIVE SERVICES

6-6-17

TO: CONSTRUCTION CODE COMMISSION

FROM: VILLAGE OF BURLINGTON

THE VILLAGE OF BURLINGTON IS ENTERING INTO A CONTRACT WITH SAFE BUILT INC. TO PROVIDE FULL SERVICE, FULL TIME BUILDING DEPARTMENT SERVICES TO OUR COMMUNITY. WE BELIEVE THIS WILL IMPROVE THE RESPONSE TIME FOR INSPECTION SERVICES SINCE THEY OFFER A NEXT BUSINESS DAY INSPECTIONS. SAFE BUILT WILL PROVIDE THESE SERVICES FROM THEIR EXISTING HUB OFFICE IN ATHENS MI WHICH IS APPROX. 10 MILES FROM THE VILLAGE. SAFE BUILT CURRENTLY SERVES 14 OTHER MUNICIPALITIES FROM THAT LOCATION.

SAFE BUILT WILL PAID 100% OF THE PERMIT FEES GENERATED TO COVER ALL EXPENSES.

SEE ATTACHED FEE SCHEDULE FROM SAFE BUILT AS ADOPTED BY THE VILLAGE. WE ANTICIPATE APPROX. \$2,500 IN ANNUAL PERMIT REVENUE WHICH WILL GENERATE \$2,500 IN EXPENSES FROM SAFE BUILT.

THE BUILDING OFFICIAL (GLENN LINDSEY REG. # 4936) WILL REPORT DIRECTLY TO THE VILLAGE PRESIDENT. ALL ENFORCING AGENCY PERSONNEL ARE PUBLIC ACT 54 REGISTERED.

SAFE BUILT INC. HAS ACCESS TO THE CODES AND STANDARDS NEEDED TO ADMINISTER AND ENFORCE THROUGH SHARED CODES AND STANDARDS WITHIN THEIR MICHIGAN LOCATIONS.

PLEASE ALSO FIND ATTACHED THE OTHER PUBLIC FACING DOCUMENTS THAT THE VILLAGE WILL BE USING.

OUR BUILDING OFFICIAL, GLENN LINDSEY WILL BE PRESENT AT THE JULY 12TH MEETING TO ANSWER ANY QUESTIONS YOU MAY HAVE.

SINCERELY,

VILLAGE OF BURLINGTON

BUILDING & ZONING PERMIT FEE SCHEDULE

269-729-9254 (OFFICE) 269-729-9254 (FAX) ATHENSMI@SAFEBUILT.COM (EMAIL) WWW.CORNERSTONEMI.NET (WEBSITE)

RESIDENTIAL BUILDING PERMITS

1 & 2 STORY STICK BUILT HOMES ON BASEMENT OR CRAWL SPACE 5 INSPECTIONS (FOOTING, BACKFILL, FRAMING, ENERGY CODE, FINAL)	\$355.00*
1 & 2 STORY STICK BUILT HOMES ON SLAB 4 INSPECTIONS (FOOTING, FRAMING, ENERGY CODE, FINAL)	\$284.00*
HUD OR PREMANUFACTURED HOME ON BASEMENT OR CRAWL SPACE 3 INSPECTIONS (FOOTING, BACKFILL, FINAL)	\$213.00*
HUD OR PREMANUFACTURED HOME ON SLAB 3 INSPECTIONS (FOOTING, TIEDOWN, FINAL)	\$213.00*
HUD OR PREMANUFACTURED HOME IN MOBILE HOME COMMUNITY W/EXISTING FOUNDATION 2 INSPECTIONS (TIE DOWN, FINAL)	\$142.00*
POLE BARN UNFINISHED 2 INSPECTIONS (FOOTING, FINAL)	\$142.00*
POLE BARN FINISHED 3 INSPECTIONS (FOOTING, FRAMING, FINAL)	\$213.00*
ACCESSORY STRUCTURE 200 SQ FT AND UNDER	ZONING PERMIT ONLY - NO BLDG. PERMIT REQUIRED
ACCESSORY STRUCTURE 201 SQ FT - 600 SQ FT 1 INSPECTION (FINAL)	\$ 71.00*
ACCESSORY STRUCTURE 601 SQ FT AND OVER 2 INSPECTIONS (FOOTING, FINAL)	\$142.00*
DECK /PORCH SERVING AS MEANS OF EGRESS (POINT OF EXIT AND ENTRY) 2 INSPECTIONS (FOOTING, FINAL)	\$142.00*
DECK /PORCH NOT SERVING AS MEANS OF EGRESS 1 INSPECTION (FINAL)	\$ 71.00*
ROOFING & RESHINGLING (ENFORCED PER MUNICIPALITY REQUEST) 2 INSPECTIONS (ROUGH-inspected when boards are off, FINAL)	1 INSPECTION (FINAL) Re Shingle \$ 71.00 Re Shingle & Roofing Board Replacement \$142.00
SWIMMING POOLS	CALL OUR OFFICE \$ 61.00

ZONING PERMIT

PRICED BY THE BLDG. INSPECTOR**

COMMERCIAL BUILDING PERMITS

ASK FOR 3 TO 4 SETS OF PRINTS STAMPED, SEALED, & SIGNED BY A STATE OF MICHIGAN LICENSED ARCHITECT OR ENGINEER

ALL COMMERCIAL JOBS ARE SUBJECT TO AN \$86.00 ADMINISTRATIVE FEE

<u>USE GROUP</u>	<u>UNIT COST/PER SQ. FT.</u>	<u>USE GROUP</u>	<u>UNIT COST/PER SQ. FT.</u>
A-1	\$0.56	I-3	\$0.50
A-2, A-3, A-4	\$0.40	M	\$0.30
A-5	\$0.35	R-1	\$0.37
B	\$0.36	R-2	\$0.32
E	\$0.39	S-1, S-2, U	\$0.19
F-1, F-2, H	\$0.21	All Groups Remodel	\$0.12
I-1	\$0.35	All Groups Demo	\$0.07
I-2, I-4	\$0.55	Roofing	\$0.06 <over 8K Sq Ft = .03/Sq Ft

(COMMERCIAL ONLY)
FOR ESTIMATING PURPOSES USE
THE FOLLOWING FORMULA:
 SQ. FT. OF PROJECT
 X UNIT COST
 = SUBTOTAL +
\$86.00 APPLICATION FEE
 = TOTAL

Zoning Approval: ALL BUILDING PROJECTS REQUIRE ZONING APPROVAL FROM THE MUNICIPALITY'S ZONING ADMINISTRATOR. IF WE PROCESS THE ZONING, THE "ZONING PERMIT" CHARGE DEPICTED ABOVE IS APPLICABLE. IF WE DON'T, THE CHARGE IS NOT APPLICABLE AND APPLICANT MUST PROVIDE PROOF OF ZONING APPROVAL.

NOTE: ANY RESIDENTIAL STRUCTURE WITH 3,500+ SQ. FT. OF OCCUPIABLE SPACE WILL REQUIRE 3 TO 4 COMPLETE SETS OF STRUCTURAL, ELECTRICAL, MECHANICAL AND PLUMBING PRINTS SIGNED, SEALED AND STAMPED BY A STATE OF MICHIGAN LICENSED ARCHITECT OR ENGINEER

*RESIDENTIAL PROJECT MAY REQUIRE PLAN REVIEW. SEE SEPARATE PRICING LIST LABELED "PLAN REVIEW FEE SCHEDULE"

**COMMERCIAL PROJECTS MAY REQUIRE PLAN REVIEW BASED UPON SIZE OF JOB AND SCOPE OF WORK. RATES WILL BE ESTABLISHED BY THE BUILDING INSPECTOR IN ACCORDANCE WITH A PRE-DETERMINED FEE SCHEDULE

SAFEbuilt.

107 S. Capital Ave., P.O. Box 190, Athens, MI 49011
Phone: 269-729-9244 Fax: 269-729-9254 Email: athensmi@safebuilt.com
Web Site: www.cornerstonemi.net

PLAN REVIEW FEE SCHEDULE

RESIDENTIAL PLAN REVIEW

HUD OR PREMANUFACTURED HOME		44.00
SWIMMING POOL (INGROUND ONLY - No Plan Review on Pre-manufactured)		32.00
NEW HOME, ADDITION, REMODEL, DECK, POLE BARN, GARAGE	UNDER 100 SQ. FT.	NONE REQUIRED
	101 SQ. FT. TO 600 SQ. FT.	32.00
	601 SQ. FT. TO 1000 SQ. FT.	44.00
	1001 SQ. FT. TO 1500 SQ. FT.	59.00
	1501 SQ. FT. TO 2000 SQ. FT.	74.00
	2001 SQ. FT. TO 2500 SQ. FT.	89.00
	2501 SQ. FT. TO 3500 SQ. FT.	104.00
	3501 SQ. FT. AND OVER	.06/SQ. FT.

3501 SQ. FT. AND UP OF OCCUPIABLE SPACE REQUIRES 4 FULL SETS OF STRUCTURAL, ELECTRICAL, PLUMBING, AND MECHANICAL PRINTS SIGNED AND SEALED BY AN ARCHITECT OR ENGINEER, LICENSED IN THE STATE OF MICHIGAN

COMMERCIAL PLAN REVIEW

FEEES ARE BASED UPON SIZE OF PROJECT AND SCOPE OF WORK
FOR ESTIMATING PURPOSES, USE THE SQUARE FOOTAGE OF PROJECT X PRICE PER SQ. FT. BELOW.

BUILDING	UNDER 600 SQ. FT.	\$32.00
	601 TO 1000 SQ. FT.	.057/SQ. FT.
	1001 TO 2000 SQ. FT.	.042/SQ. FT.
	2001 TO 3000 SQ. FT.	.032/SQ. FT.
	3001 TO 4000 SQ. FT.	.027/SQ. FT.
	4001 TO 5000 SQ. FT.	.024/SQ. FT.
	5001 TO 7500 SQ. FT.	.021/SQ. FT.
	7501 TO 10000 SQ. FT.	.019/SQ. FT.
	10001 AND MORE	.017/SQ. FT.
*ELECTRICAL	25% OF BLDG PLAN REVIEW COST	
*MECHANICAL	25% OF BLDG PLAN REVIEW COST	
*PLUMBING	25% OF BLDG PLAN REVIEW COST	
*BARRIER FREE	.014 X TOTAL SQ. FT. OF BLDG. PROJECT	
*FIRE PROTECTION	.027 X TOTAL SQ. FT. OF BLDG. PROJECT	
*PUBLIC SWIMMING POOL	.012 X TOTAL SQ. FT. OF POOL	

*MINIMUM OF \$44.00

CONSTRUCTION BOARD OF APPEALS PROCEDURES

THE APPEAL FORM SHALL BE SUBMITTED IN SIX (6) COPIES, FILLED OUT ENTIRELY, AND SHALL BE ACCOMPANIED BY A CHECK IN THE AMOUNT OF \$400.00, MADE PAYABLE TO THE MUNICIPALITY IN WHICH THE PROJECT IS LOCATED.

IN ADDITION TO THE APPEAL FORM, SIX (6) COPIES OF PLANS DRAWN TO SCALE SHOWING THE SIZE, CONSTRUCTION MATERIALS AND METHOD OF CONSTRUCTION, SHALL BE FURNISHED. THE PLANS SHALL DEPICT A CLEAR AND ACCURATE DESCRIPTION OF THE PORTION OF THE PROPOSED STRUCTURE UPON WHICH THE APPEAL IS BASED.

BUSINESS OF THE CONSTRUCTION BOARD OF APPEALS WILL BE CONDUCTED AT A PUBLIC MEETING HELD IN COMPLIANCE WITH THE **OPEN MEETINGS ACT, PA 267 OF 1976**.

THE APPELLANT SHALL BE GIVEN NOTICE OF TIME AND DATE OF THE PUBLIC HEARING NOT LESS THAN FIVE (5) DAYS PRIOR TO SUCH HEARING BY FIRST CLASS MAIL.

FAILURE OF THE APPEALANT OR HIS/HER AUTHORIZED AGENT TO APPEAR BEFORE THE BOARD AS SCHEDULED SHALL BE DEEMED AS JUSTIFIABLE CAUSE TO DISMISS THE CASE, WITHOUT PREJUDICE, WITH NO REFUND OF THE APPEAL FEE.

THE BOARD OF APPEALS SHALL HEAR THE CASE, RENDER AND FILE THE DECISION, WITH A STATEMENT OF THE REASONS FOR THE DECISION, WITH THE ENFORCING AGENCY FROM WHOM THE APPEAL WAS TAKEN **NOT MORE THAN 30 DAYS AFTER THE SUBMISSION OF THE APPEAL**.

THE STATE CONSTRUCTION CODE ACT OF 1972 (P.A. 230 OF 1972) STATES:

SEC. 15.(1) AFTER A PUBLIC HEARING, A BOARD OF APPEALS MAY GRANT A SPECIFIC VARIANCE TO A SUBSTANTIVE REQUIREMENT OF THE CODE IF THE LITERAL APPLICATION OF THE SUBSTANTIVE REQUIREMENT WOULD RESULT IN AN EXCEPTIONAL, PRACTICAL DIFFICULTY TO THE APPLICANT, AND IF BOTH OF THE FOLLOWING REQUIREMENTS ARE SATISFIED:

(A) THE PERFORMANCE OF THE PARTICULAR ITEM OR PART OF THE BUILDING OR STRUCTURE WITH RESPECT TO WHICH THE VARIANCE IS GRANTED SHALL BE ADEQUATE FOR ITS INTENDED USE AND SHALL NOT SUBSTANTIALLY DEVIATE FROM THE PERFORMANCE REQUIRED BY THE CODE OF THAT PARTICULAR ITEM OR PART FOR THE HEALTH, SAFETY, AND WELFARE OF THE PEOPLE OF THIS STATE.

(B) THE SPECIFIC CONDITION JUSTIFYING THE VARIANCE SHALL BE NEITHER SO GENERAL NOR RECURRENT IN NATURE AS TO MAKE AN AMENDMENT OF THE CODE WITH RESPECT TO THE CONDITION REASONABLY PRACTICAL OR DESIRABLE.

(2) A BOARD OF APPEALS MAY ATTACH IN WRITING ANY CONDITION IN CONNECTION WITH THE GRANTING OF A VARIANCE THAT IN ITS JUDGEMENT IS NECESSARY TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THE PEOPLE OF THIS STATE. THE BREACH OF A CONDITION SHALL AUTOMATICALLY INVALIDATE THE VARIANCE AND ANY PERMIT, LICENSE AND CERTIFICATE GRANTED ON THE BASIS OF IT. IN NO CASE SHALL MORE THAN THE MINIMUM VARIANCE FROM THE CODE BE GRANTED THAN IS TO ALLEVIATE THE EXCEPTIONAL, PRACTICAL DIFFICULTY.

CONSTRUCTION BOARD OF APPEALS APPLICATION

APPEAL COORDINATOR-GLENN LINDSEY

PO BOX 190

ATHENS MI 49011

(269) 729-9244 PHONE

(269) 729-9254 FAX

APPEAL APPLICATIONS MUST BE SUBMITTED TO SAFEbuilt Inc. AT THE ABOVE ADDRESS, FOR PROCESSING ALONG WITH PAYMENT IN THE AMOUNT OF \$400.00 MADE PAYABLE TO THE MUNICIPALITY IN WHICH THE PROJECT IS LOCATED.

REQUEST IS HEREBY MADE FOR PERMISSION TO CONSTRUCT, ENLARGE, ALTER, REPAIR, EXTEND, OR SUBSTITUTE MATERIAL IN OR ON A STRUCTURE THAT MAY BE CONTRARY TO THE PROVISIONS OF THE ADOPTED CODE OF THE MUNICIPALITY.

NAME OF APPLICANT :

OWNER OR AUTHORIZED AGENT

ADDRESS:

PHONE: _____

NAME OF OWNER:

ADDRESS:

PHONE: _____

LOCATION OR ADDRESS
OF STRUCTURE:

LIST BELOW A BRIEF DESCRIPTION OF YOUR APPEAL:

ATTACH ADDITIONAL INFORMATION IF NECESSARY

BY SIGNING THIS APPLICATION, I CERTIFY THAT THE INFORMATION PROVIDED IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE. FURTHER, I UNDERSTAND MY RIGHT TO APPEAL A DECISION OF THE BOARD OF APPEALS TO THE CONSTRUCTION CODE COMMISSION. SUCH APPEAL MUST BE MADE WITHIN TEN (10) BUSINESS DAYS AFTER THE FILING OF THE DECISION WITH THE ENFORCING AGENCY OR, IN CASE OF AN APPEAL BECAUSE OF FAILURE OF A BOARD OF APPEALS TO ACT WITHIN THE PRESCRIBED TIME, AT ANY TIME BEFORE THE FILING OF THE DECISION.

SIGNATURE OF APPLICANT: _____

FOR USE BY CONSTRUCTION BOARD OF APPEALS

DATE NOTICE SENT TO APPLICANT: _____

DATE CASE HEARD: _____

MEMBERS PRESENT: _____

OTHERS PRESENT: _____

ACTION TAKEN BY THE BOARD: _____



CORNERSTONE INSPECTION SVCS LLC
107 S. Capital Ave., P.O. Box 190, Athens, MI 49011

Office: 269-729-9244 **Fax:** 269-729-9254 **Email:** athensmi@safebuilt.com **Website:** www.cornerstonemi.net

INSPECTORS AND BUILDING BOARD OF APPEALS MEMBERS

INSPECTORS

Glenn Lindsey Reg. #4936	Building, Plan Review, Ordinance, Property Maintenance, Zoning
Steve Buller Reg. #3814	Mechanical, Building, Mechanical & Building Plan Review
Charles Girolami Reg. #2233	Plumbing, Plumbing Plan Review
Rick Hamilton Reg. #5931	Electrical, Electrical Plan Review

BUILDING BOARD OF APPEALS MEMBERS

Lonnie Smith, Mechanical Contractor License No. 7111738
 [Redacted]
 Union City, MI 49094
 Home: 517-741-8175

Andy Kelley, Retired Plumbing Contractor
 [Redacted]
 Bronson, MI 49028
 Cell: 517-[Redacted]

Mike Poortenga, Builder License No. 2101151780
 [Redacted]
 Colon, MI 49040
 Home: 269-[Redacted]



CORNERSTONE INSPECTION SVCS LLC
107 S. Capital Ave., P.O. Box 190, Athens, MI 49011

Office: 269-729-9244 **Fax:** 269-729-9254 **Email:** athensmi@safebuilt.com **Website:** www.cornerstonemi.net

CHIEF INSPECTORS AND CREDENTIALS

Glenn Lindsey Reg. #4936 **Building, Plan Review, Ordinance Enforcement, Property Maintenance, Zoning**

- Became registered as a Building Inspector and Plan Reviewer in 2002
- Became registered as a Building Code Official in 2007
- Zoning Administrator experience for 7 years within 10 different municipalities
- Property Maintenance and Ordinance Enforcement for 7 years within multiple municipalities
- Expert witness for court proceedings on multiple occasions
- Licensed as a Building Contractor for 12 years
- 20 years' experience in the building trade

Steve Buller Reg. #3814 **Building and Mechanical, Building and Mechanical Plan Review**

- Became registered as a Building & Mechanical Inspector in 1996
- Became registered as a Building Code Official in 1998
- Property Maintenance and Ordinance Enforcement since 1996 within multiple municipalities
- Expert witness for court proceedings
- 38+ years' experience in the mechanical and building trades
- Licensed as a Mechanical Contractor since 1990

Rick Hamilton Reg. #5931 **Electrical and Electrical Plan Review**

- 39+ years' experience in the electrical trade
- 31 years' specialty experience working with commercial and industrial electrical applications
- Became licensed as an Electrical Contractor in 1982

Charles Girolami Reg. #2233 **Plumbing, Plumbing Plan Review**

- Became registered as a Plumbing Inspector and Plan Reviewer in 1989
- 39+ years' experience in the plumbing trade
- Formerly licensed as a Plumbing Contractor since 1974

PROCEDURE FOR THE ADMINISTRATION AND ENFORCEMENT OF CODE

- APPLICATIONS RECEIVED ARE REVIEWED FIRST BY THE CLERK TO ENSURE APPLICANT HAS COMPLETED NECESSARY INFORMATION. SHOULD APPLICANT BE A LICENSED CONTRACTOR, A SEPARATE FORM IS COMPLETED (SEE ATTACHED, "CONTRACTOR REGISTRATION FORM") WHEREUPON CLERK VERIFIES CONTRACTOR LICENSE(S) IS ISSUED BY THE STATE OF MICHIGAN AND CURRENT. PHOTO IDENTIFICATION IS REQUESTED BY CLERK. CLERK WILL ALSO ACCEPT PLANS FOR THE PROJECT, IF APPLICABLE.
- PRICING FOR RESIDENTIAL PROJECTS IS DETERMINED BY THE CLERK AND PAYMENT IS ACCEPTED WITH CHECKS MADE PAYABLE TO THE MUNICIPALITY IN WHICH THE PROJECT IS LOCATED. PRICING FOR COMMERCIAL PROJECTS IS NOT DETERMINED NOR COLLECTED AT THIS TIME.
- CLERK INPUTS DATA FOR PERMIT AND CONTRACTOR REGISTRATION INTO A COMPUTER EQUIPPED WITH PERMIT TRACKING SOFTWARE
- CLERK WILL FILE COMPLETED "CONTRACTOR REGISTRATION FORM" (IF APPLICABLE) WITHIN A SEPARATE ALPHABETICAL OFFICE FILING SYSTEM
- IF A COMMERCIAL PROJECT, PLANS AND APPLICATION ARE REVIEWED BY THE CODE OFFICIAL THEN PRICING IS DETERMINED.
 - IF VIOLATIONS EXIST WITHIN THE PLANS, CODE OFFICIAL WILL CONTACT THE APPLICANT TO ADVISE OF REVISIONS NEEDED, WHEREUPON APPLICANT IS REQUIRED TO SUBMIT REVISED PLANS
 - CODE OFFICIAL REVIEWS REVISED PLANS
- APPLICANT IS NOTIFIED OF PRICE AND READINESS OF PERMIT WHEREUPON PERMIT IS ISSUED ONCE PAYMENT IS RECEIVED
- THE CLERK PREPARES AN ADDRESS- LABELED FILE FOLDER TO KEEP WITHIN THE OFFICE FILING SYSTEM. REFERRED TO AS A 'STREET FILE' HEREAFTER.
 - FOLDER IS FILED IN ALPHABETICAL ORDER AS TO STREET LOCATION. CONTAINED WITHIN THE FOLDER IS CHRONOLOGICAL INFORMATION PERTAINING TO SITE.
- CONTAINED WITHIN THE PRINTED PERMIT, APPLICANT IS NOTIFIED OF; HOW MANY, WHAT KIND OF, AND IN WHAT ORDER, INSPECTIONS SHOULD BE REQUESTED. THE TOLL FREE NUMBER FOR APPLICANT TO CALL FOR INSPECTION IS ALSO PRINTED ON THE ISSUED PERMIT.
- ONCE INSPECTION IS REQUESTED BY APPLICANT, INSPECTOR VISITS SITE AND REPORTS HIS FINDINGS ON A "FIELD INSPECTION REPORT" (COPY ATTACHED - A TRUE F.I.R. IS CARBONED).
 - A COMPLETED COPY OF THE F.I.R. REMAINS ON SITE AND ORIGINAL IS PROVIDED TO THE OFFICE FOR STREET FILE
 - IF VIOLATIONS EXIST, THE INSPECTION IS NOTED AS 'PENDING' . THE VIOLATED CODE NUMBER AND DEFINITION ARE SPECIFIED AND A REINSPECTION FEE IS NOTED AS BEING DUE. REINSPECTION FEES MUST BE RECEIVED BY THE OFFICE BEFORE A REINSPECTION REQUEST FROM THE APPLICANT WILL BE CONSIDERED.
 - IF VIOLATIONS DO NOT EXIST, THE INSPECTION IS NOTED AS 'APPROVED'
- ONCE ALL PERMITS ASSOCIATED WITH A BUILDING PROJECT HAVE BEEN APPROVED FOR FINAL, A CERTIFICATE OF OCCUPANCY WILL BE ISSUED.
 - CLERK WILL GENERATE A PRINTED CERTIFICATE USING THE PERMIT TRACKING SOFTWARE
 - BUILDING CODE OFFICIAL WILL REVIEW AND SIGN CERTIFICATE
 - COPY OF SIGNED CERTIFICATE IS MADE - ORIGINAL IS MAILED TO APPLICANT AND COPY IS FILED WITHIN STREET FILE.
 - STREET FILES ARE KEPT INDEFINATELY BY OFFICE OR ARE PROVIDED TO MUNICIPALITY UPON REQUEST

INSPECTION SCHEDULING PROCESS

AFTER A PERMIT IS ISSUED, A COPY IS MAILED TO THE APPLICANT. LOCATED AT THE TOP CENTER AND THE BOTTOM RIGHT OF THE PERMIT, IS A TOLL FREE INSPECTION SCHEDULING PHONE NUMBER. THIS IS A 24-HOUR, 7 DAYS PER WEEK, INSPECTION SCHEDULING HOTLINE WHICH IS 877-721-9266.

- IF YOU CALL FOR INSPECTION ON A BUSINESS MORNING, BEFORE 7:00AM, THE INSPECTOR WILL BE ON SITE THE SAME DAY
- IF YOU CALL FOR INSPECTION ON A BUSINESS MORNING, AFTER 7:00AM, THE INSPECTION WILL BE SCHEDULED FOR THE FOLLOWING BUSINESS DAY
- YOU MAY ALSO CALL THE LINE SEVERAL DAYS IN ADVANCE TO NEEDING YOUR INSPECTION, BUT IN THIS CASE, PLEASE BE SURE TO LEAVE A SPECIFIC DATE FOR WHICH YOU ARE REQUESTING AN INSPECTION
- SHOULD THE INSPECTION SITE BE SECURE AND/OR SPECIAL ENTRY INSTRUCTIONS ARE IN ORDER, CONVEY SUCH INSTRUCTIONS ON THE INSPECTION LINE WHEN YOU REQUEST YOUR INSPECTION (I.E. KEY HIDDEN IN J-CHANNEL AT SOUTH ENTRY DOOR OR BACK DOOR UNLOCKED, ETC.)
- WE CANNOT COMMIT TO AN EXACT TIME OF INSPECTION, THOUGH WE CAN COMMIT TO A SPECIFIC DATE
- IF AN INSPECTION REQUEST CANNOT BE MET, OUR OFFICE WILL CALL YOU IMMEDIATELY TO MAKE OTHER ARRANGEMENTS
- INSPECTIONS TAKE PLACE BETWEEN THE HOURS OF 8:00AM AND 6:00PM, UNLESS PRIOR AND OTHERWISE ARRANGED
- PLEASE DO NOT ATTEMPT TO SCHEDULE AN INSPECTION BY CALLING AN INSPECTOR'S CELL PHONE NUMBER - YOUR INSPECTION WILL NOT OCCUR



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CURRENTLY PROVIDING INSPECTION SERVICES TO THE FOLLOWING MUNICIPALITIES

- ❖ **City of Albion**
- ❖ **Village of Athens**
- ❖ **Township of Burlington**
- ❖ **Township of Burr Oak**
- ❖ **Village of Burr Oak**
- ❖ **Village of Centreville**
- ❖ **City of Coldwater**
- ❖ **Township of Colon**
- ❖ **Village of Homer**
- ❖ **NHBP (Nottawaseppi Huron Band of the Potawatomi)**
- ❖ **Township of Sherwood**
- ❖ **Township of Tekonsha**
- ❖ **Village of Tekonsha**
- ❖ **City of Three Rivers**

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 WEBSITE: www.cornerstonemi.net
 Authority: 1972 PA 230
 Completion: Mandatory to obtain permit
 Penalty: Permit cannot be issued

Permit # _____
 Fee _____
 Method of Payment _____
 Receipt # _____

**MAKE CHECK PAYABLE TO THE MUNICIPALITY
 IN WHICH YOUR PROJECT IS LOCATED**

BUILDING PERMIT & PLANS EXAMINATION APPLICATION

I. Project Information					
JOB Address			Name of Owner		
Name of City, Village or Township in which job is located: <input type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Township OF:				County	Zip Code
Between		And			
II. Identification					
A. Owner or Lessee					
Name		Address		City	
State, Zip	Telephone	Work/Cell Phone	Fax	Email	
B. Contractor					
Name		Address		City	
State, Zip	Telephone	Work/Cell Phone	Fax	Email	
Builders License #		Expiration Date	Federal Employer ID # (or reason for exemption)		
Workers Comp Insurance Carrier (or reason for exemption)			MESC # (or reason for exemption)		
C. Architect or Engineer					
Name		Address		City	
State, Zip	Telephone	Work/Cell Phone	Fax	Email	
License #			Expiration Date		
III. Type of Improvement					
<input type="checkbox"/> New	<input type="checkbox"/> Interior Alteration/Remodel	<input type="checkbox"/> Metal Roofing Only	<input type="checkbox"/> Foundation Only		
<input type="checkbox"/> Addition	<input type="checkbox"/> Exterior Alteration/Remodel	<input type="checkbox"/> Roofing Re-Deck & Shingles	<input type="checkbox"/> Demolition		
<input type="checkbox"/> Siding Only	<input type="checkbox"/> Mobile Home/Pre-manufactured	<input type="checkbox"/> Roofing Shingles Only	<input type="checkbox"/> Special Inspection		
IV. Proposed Use of Building					
A. Residential					
<input type="checkbox"/> One Family Home	<input type="checkbox"/> Deck/Porch <u>Circle One</u> (Attached/Detached) <u>Circle One</u>	<input type="checkbox"/> Pool(Above/Below Ground)			
<input type="checkbox"/> Two Family Home	<input type="checkbox"/> Outbuilding (Barn/Shed/Carport) <u>Circle One</u>	<input type="checkbox"/> Other _____			
<input type="checkbox"/> More than Two Family Home	<input type="checkbox"/> Garage (Attached/Detached) <u>Circle One</u>				
B. Non-Residential					
<input type="checkbox"/> Amusement	<input type="checkbox"/> Service Station	<input type="checkbox"/> School, Library, Educat.			
<input type="checkbox"/> Church, Religion	<input type="checkbox"/> Hospital, Institutional	<input type="checkbox"/> Store, Mercantile			
<input type="checkbox"/> Industrial	<input type="checkbox"/> Office, Bank, Professional	<input type="checkbox"/> Tanks, Towers			
<input type="checkbox"/> Parking Garage	<input type="checkbox"/> Public Utility	<input type="checkbox"/> Other _____			

Non-Residential: Describe in detail proposed use of building, E.G., food processing plant, machine shop, laundry building at hospital, elementary school, secondary school, college, parochial school, parking garage for department store, rental office building, office building at industrial plant. If use of existing building is being changed, enter proposed use.

V. Selected Characteristics of Building

A. Principal Type of Foundation and Frame

Foundation: Basement Pour/Block (Circle One) Crawl Space Pour/Block (Circle One) Piers Other _____

Frame: Masonry Wood Structural Steel Reinforced Concrete Other _____

B. Principal Type of Heating Fuel

Gas Oil Electricity Coal Other _____

C. Type of Sewage Disposal

City Sewer Septic System

D. Type of Water Supply

City Water Private Well or Cistern

E. Type of Mechanical

Will there be Air Conditioning? Yes No Commercial Question: Will there be Fire Suppression? Yes No

Will there be a fire place? Yes No Will it be masonry? Yes No Type of fuel burned in fire place: Wood Gas

F. Dimensions/Data (Include only project dimensions of altered, remodeled or new square footage)

Will any part of the basement be finished? Yes No If so, how much? _____ Square Feet

Number of Stories _____

NEW OR REMODELED OR ALTERED PROJECT INFORMATION

Height of Project	Project Length	Project Width	Square Feet
No. of Bedrooms _____ (New/Altered)	_____	_____	_____
No. of Full Baths _____ (New/Altered)	_____	_____	_____
No. of 1/2 Baths _____ (New/Altered)	_____	_____	_____
Basement Area	_____	_____	_____
1 st Floor Area	_____	_____	_____
2 nd Floor Area	_____	_____	_____
3 rd Floor & Above	_____	_____	_____
Outbuilding/Other _____	_____	_____	_____
Deck/Porch (Attached/Detached)	_____	_____	_____
Garage (Attached/Detached)	_____	_____	_____
			Total Sq. Ft. _____

G. Number of Off Street Parking Spaces FOR COMMERCIAL USE ONLY

Enclosed _____ Outdoors _____

VI. Applicant Information

Applicant is responsible for the payment of all fees and charges applicable to this application and must provide the following information:

Name	Address	City
State, Zip Code	Telephone (including area code)	Federal Employer ID# (or reason for exemption)

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 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.

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 to persons who are to perform work on a residential building or a residential structure. Violators of section 23a are subjected to civil fines.

SIGNATURE OF APPLICANT:

DATE:

VII. Local Government Agency to Complete This Section					
ENVIRONMENTAL CONTROL APPROVALS					
	Required	Approved	Date	Number	By
Zoning	<input type="checkbox"/> Yes <input type="checkbox"/> No				
Soil Erosion	<input type="checkbox"/> Yes <input type="checkbox"/> No				
Flood Zone	<input type="checkbox"/> Yes <input type="checkbox"/> No				
Water Supply	<input type="checkbox"/> Yes <input type="checkbox"/> No				
Septic System	<input type="checkbox"/> Yes <input type="checkbox"/> No				
Driveway	<input type="checkbox"/> Yes <input type="checkbox"/> No				
VIII. Validation For Department Use Only					
Use Group _____		Review to be Performed _____			
Type of Construction _____		Number of Inspections _____			
Square Feet _____		Bldg Permit Fee _____		Plan Exam Fee _____	
Type of Foundation _____					
Approval Signature: _____					
Title _____			Date _____		

THIS APPLICATION IS FOR BUILDING PROJECTS – BOTH RESIDENTIAL AND COMMERCIAL

ISSUED PERMITS EXPIRE 180 DAYS FROM THE ISSUED DATE. NO REFUNDS WILL BE GIVEN FOR EXPIRED PERMITS. AN ADMINISTRATIVE FEE OF \$71.00 AS WELL AS THE COST OF PLAN REVIEW (IF APPLICABLE) WILL BE RETAINED FOR CANCELLED/TERMINATED PERMITS OR APPLICATIONS.

ALL COMMERCIAL BUILDING PERMITS ARE SUBJECT TO AN \$86.00 APPLICATION FEE. COMMERCIAL BUILDING PERMIT FEES ARE CALCULATED BY THE BUILDING INSPECTOR.

WORK THAT IS STARTED WITHOUT A PERMIT MAY BE SUBJECT TO A \$71.00 VIOLATION FEE IN ADDITION TO THE REQUIRED PERMIT FEE

REINSPECTIONS OF DOCUMENTED CODE VIOLATIONS ARE SUBJECT TO A \$71.00 REINSPECTION FEE - PAYABLE PRIOR TO SCHEDULING THE REINSPECTION

MAKE CHECK PAYABLE TO THE MUNICIPALITY IN WHICH YOUR PROJECT IS LOCATED

RETURNED CHECKS ARE SUBJECT TO FEES IN ACCORDANCE WITH THE APPROPRIATE MUNICIPALITY'S RETURNED CHECK POLICY.

107 S. CAPITAL AVE., P.O. BOX 190, ATHENS, MI 49011
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 Authority: 1972 PA 230
 Completion: Mandatory to obtain permit
 Penalty: Permit cannot be issued

Permit # _____
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 Method of Payment _____
 Receipt # _____

**MAKE CHECK PAYABLE TO THE MUNICIPALITY
 IN WHICH YOUR PROJECT IS LOCATED**

RESIDENTIAL ELECTRICAL PERMIT APPLICATION

I. Job Location			
JOB Address		Has a building permit been obtained for this project? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	
Name of Owner		Name of City, Village or Township in which job is located: <input type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Township OF:	County
Owner Telephone			
II. Contractor/Homeowner Information			
<input type="checkbox"/> Contractor <input type="checkbox"/> Owner		Contractor License #	Expiration Date
Address		Master License #	Expiration Date
City	State	Zip	Email
Telephone	Work/Cell		Fax
Federal Employer ID # (or reason for exemption)	Workers Comp Ins Carrier (or reason for exemption)		MESC # (or reason for exemption)
III. Type of Job			
		Power Company _____	Request/Work Order # _____
Single Family <input type="checkbox"/> New	<input type="checkbox"/> Service Only	<input type="checkbox"/> Premanuf. Home Setup (State Approved)	<input type="checkbox"/> Accessory Building
<input type="checkbox"/> Alteration	<input type="checkbox"/> Special Inspection	<input type="checkbox"/> HUD Mobile Home Setup	<input type="checkbox"/> Other _____
IV. Plan Review Required			
Plans and specifications must be submitted when the wiring or alteration to an electrical system is over 400 amps and is in excess of 3,500 square feet in all buildings.			
What is the rating of the service or feeder in ampere? _____		What is the building size in square feet? _____	
Have plans been submitted? <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> not required			
Plans are required for all building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to Act No. 299 of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's signature and seal, except:			
<ol style="list-style-type: none"> 1. When the electrical system rating does not exceed 400 amps and the building is not over 3,500 square feet in area 2. Work completed by a governmental subdivision or state agency costing less than \$15,000.00 			
V. Signature			
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 subjected to civil fines.			
Signature of Contractor or Homeowner (Homeowner signature indicates compliance with Section VI, Homeowner Affidavit)			Date
VI. Homeowner Affidavit: I hereby certify the electrical work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the Michigan Electrical Code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the electrical inspector. I will cooperate with the electrical inspector and assume the responsibility to arrange for necessary inspections.			

RESIDENTIAL ELECTRICAL PERMIT FEE & ITEMIZATION GRID

Permit fee is based upon the number of inspections required (\$71.00 per inspection)
 Multiply Number of **Inspections** from Grid Below ____ x \$71.00/each = ____ (Total Permit Fee)

PLEASE USE THE GRID BELOW TO ITEMIZE THE JOB - ITEMIZATION IS REQUIRED

	QTY		QTY
Service		K.V.A & H.P.	
through 200amp		Units up to 20	
over 200amp, through 600amp		Units 21 to 50 K.V.A. or H.P.	
over 600amp, through 800amp		Smoke Detectors	
over 800 amp, through 1200amp		Up to 10 devices	
Circuits		11 to 20 devices	
Lighting Fixtures (per 25)		Data/Telecommunication Outlets	
Dishwasher		1-19 devices	
Furnace-Unit Heater		20+ devices	
Air Conditioner		MISC. (INDICATE BELOW ITEMS(S) BEING INSTALLED)	
Water Heater			
Subpanel		Inspections (Add QTY column & transfer # above)	
Electrical-Heating Units (baseboard)		Temporary Service	
Power Outlets (ranges, dryers, etc)		Service	
Feeders-Bus Ducts, etc. -per 50 feet		Underground	
Mobile Home Park Site		Rough-In	
Conduit Only or Grounding Only		Re-Rod Grounding	
Pool Bonding/Whirlpool Tub		Special/Safety Inspection	
Generator		Final	
Solar Panel(s)		Additional Inspection	
		Other – Indicate Here: _____	

THIS APPLICATION IS FOR RESIDENTIAL ELECTRICAL PROJECTS

ISSUED PERMITS EXPIRE 180 DAYS FROM THE ISSUED DATE. NO REFUNDS WILL BE GIVEN FOR EXPIRED PERMITS. AN ADMINISTRATIVE FEE OF \$71.00 WILL BE RETAINED FOR CANCELED/TERMINATED PERMITS OR APPLICATIONS.

WORK THAT IS STARTED WITHOUT A PERMIT MAY BE SUBJECT TO A \$71.00 VIOLATION FEE IN ADDITION TO THE REQUIRED PERMIT FEE

REINSPECTIONS OF DOCUMENTED CODE VIOLATIONS ARE SUBJECT TO A \$71.00 REINSPECTION FEE - PAYABLE PRIOR TO SCHEDULING THE REINSPECTION

MAKE CHECK PAYABLE TO THE MUNICIPALITY IN WHICH YOUR PROJECT IS LOCATED

RETURNED CHECKS ARE SUBJECT TO FEES IN ACCORDANCE WITH THE APPROPRIATE MUNICIPALITY'S RETURNED CHECK POLICY

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 Fee _____
 Method of Payment _____
 Receipt # _____

**MAKE CHECK PAYABLE TO THE MUNICIPALITY
 IN WHICH YOUR PROJECT IS LOCATED**

COMMERCIAL ELECTRICAL PERMIT APPLICATION

I. Location			
JOB Address		Has a building permit been obtained for this project? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	
Name of Owner		Name of City, Village or Township in which job is located: <input type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Township OF:	County
Owner Telephone			
II. Contractor Information			
Name		Contractor License #	Expiration Date
Address		Master License #	Expiration Date
City	State	Zip	Email
Telephone	Work/Cell		Fax
Federal Employer ID # (or reason for exemption)	Workers Comp Ins Carrier (or reason for exemption)		MESC # (or reason for exemption)
III. Type of Job			
Commercial <input type="checkbox"/> New <input type="checkbox"/> Alteration	<input type="checkbox"/> Service Only <input type="checkbox"/> Accessory Building <input type="checkbox"/> Special Inspection <input type="checkbox"/> Other	Power Company _____ Request/Work Order # _____	
IV. Plan Review Required			
Plans and specifications must be submitted when the wiring or alteration to an electrical system is over 400 amps and is in excess of 3,500 square feet in all buildings.			
What is the rating of the service or feeder in ampere? _____		What is the building size in square feet? _____	
Have plans been submitted? <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> not required			
Plans are required for all building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to Act No. 299 of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's signature and seal, except:			
<ol style="list-style-type: none"> 1. When the electrical system rating does not exceed 400 amps and the building is not over 3,500 square feet in area 2. Work completed by a governmental subdivision or state agency costing less than \$15,000.00 			
V. Signature			
Signature of Contractor		Date	

COMMERCIAL ELECTRICAL PERMITS FEE GRID

**ALL COMMERCIAL ELECTRICAL PERMITS HAVE A MINIMUM FEE OF \$127.00
PLEASE USE THE GRID BELOW TO ITEMIZE THE JOB - ITEMIZATION IS REQUIRED**

	FEE	QTY	TOTAL		FEE	QTY	TOTAL
Application Fee	\$56.00	1	\$56.00	K.V.A & H.P.			
Service				Units up to 20	\$6.00		
Through 200amp	\$10.00			Units 21 to 50 K.V.A. or H.P.	\$10.00		
Over 200 - 600amp	\$15.00			Units 51 K.V.A. or H.P. & over	\$12.00		
Over 600 - 800amp	\$20.00			Fire Alarm Systems (not smoke detectors)			
Over 800 - 1200amp	\$25.00			Up to 10 devices	\$50.00		
Over 1200amp (GFI only)	\$50.00			11 to 20 devices	\$100.00		
Circuits	\$5.00			Over 20 devices	\$5.00		
Lighting Fixtures (per 25)	\$6.00			Data/Telecommunication Outlets			
Dishwasher	\$5.00			1-19 devices	\$5.00		
Furnace-Unit Heater	\$5.00			20-300 devices	\$100.00		
Electrical-Heating Units (baseboard)	\$4.00			Feeders-Bus Ducts, etc. -per 50 feet	\$6.00		
Power Outlets	\$7.00			Conduit only or Grounding only	\$45.00		
Signs				Pool Bonding/Whirlpool Tub	\$10.00		
Unit	\$10.00			Inspections			
Letter	\$15.00			Special/Safety Inspection	\$71.00		
Solar Panel	\$20.00			Service (New or Upgrade-Circle One)	\$71.00		
Generator	\$15.00			Underground	\$71.00		
Smoke Detector	\$2.00			Additional Inspection	\$71.00		
Subpanel (Each)	\$10.00			Rough-In	\$71.00		
Mobile Home Park Site	\$6.00			Final Inspection	\$71.00	1	\$71.00
Recreational Vehicle Park Site	\$4.00						
						TOTAL	

THIS APPLICATION IS FOR COMMERCIAL ELECTRICAL PROJECTS

ISSUED PERMITS EXPIRE 180 DAYS FROM THE ISSUED DATE. NO REFUNDS WILL BE GIVEN FOR EXPIRED PERMITS. AN ADMINISTRATIVE FEE OF \$71.00, THE APPLICATION FEE OF \$56.00 AS WELL AS THE COST OF PLAN REVIEW WILL BE RETAINED FOR CANCELED/TERMINATED PERMITS OR APPLICATIONS.

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MAKE CHECK PAYABLE TO THE MUNICIPALITY IN WHICH YOUR PROJECT IS LOCATED

RETURNED CHECKS ARE SUBJECT TO FEES IN ACCORDANCE WITH THE APPROPRIATE MUNICIPALITY'S RETURNED CHECK POLICY.

CONTRACTOR REGISTRATION FORM

SAFEbuilt.

107 S. Capital Ave., P.O. Box 190, Athens, MI 49011



Office: 269-729-9244 Fax: 269-729-9254 Email: athensmi@safebuilt.com Website: www.cornerstonemi.net

BUSINESS NAME: _____ EIN OR SS# _____

ADDRESS: _____
Number Street Name City State Zip

PHONE: _____ FAX: _____ CELL: _____

EMAIL: _____ OWNER'S NAME: _____ SIGNATURE: _____
Printed

THE FOLLOWING TRADE LICENSES ARE THE LEGAL LICENSES ASSOCIATED WITH ABOVE-REFERENCED BUSINESS AND ARE ISSUED THROUGH THE STATE OF MICHIGAN TO BE UTILIZED FOR THE PURPOSES OF PROCUREMENT OF PERMITS FOR CONSTRUCTION AND/OR INSTALLATION

→ ELECTRICAL CONTRACTOR LICENSE # _____ EXPIRES _____ MASTER# _____ EXPIRES _____
LICENSEE SIGNATURE _____ LICENSEE PRINTED NAME _____

→ PLUMBING CONTRACTOR LICENSE # _____ EXPIRES _____ MASTER _____ EXPIRES _____
LICENSEE SIGNATURE _____ LICENSEE PRINTED NAME _____

→ MECHANICAL CONTRACTOR LICENSE # _____ EXPIRES _____
LICENSEE SIGNATURE _____ LICENSEE PRINTED NAME _____

→ BOILER INSTALL CONTRACTOR LICENSE # _____ EXPIRES _____
LICENSEE SIGNATURE _____ LICENSEE PRINTED NAME _____

→ INSTALLER CONTRACTOR LICENSE # _____ EXPIRES _____
LICENSEE SIGNATURE _____ LICENSEE PRINTED NAME _____

→ RESIDENTIAL BLDG LICENSE # _____ EXPIRES _____
LICENSEE SIGNATURE _____ LICENSEE PRINTED NAME _____

→ MAINTENANCE/ALTERATION LICENSE# _____ EXPIRES _____
LICENSEE SIGNATURE _____ LICENSEE PRINTED NAME _____

- CATEGORIES:
- | | | |
|--|--|--|
| <input type="checkbox"/> House Wrecking | <input type="checkbox"/> Insulation Work | <input type="checkbox"/> Masonry |
| <input type="checkbox"/> Painting/Decorating | <input type="checkbox"/> Roofing | <input type="checkbox"/> Screen/Sash Install |
| <input type="checkbox"/> Siding/Gutters Install | <input type="checkbox"/> Swimming Pool Install | <input type="checkbox"/> Tile/Marble Work |
| <input type="checkbox"/> Waterproofing Basements | | |

PLEASE COMPLETE THIS FORM AND RETURN IT WITH A COPY OF YOUR CONTRACTOR LICENSE(S), DRIVER'S LICENSE AND CERTIFICATE OF LIABILITY INSURANCE. YOUR CONTRACTOR LICENSE(S) MUST HAVE YOUR COMPANY NAME LISTED IN ORDER FOR US TO ISSUE YOU A PERMIT. YOU MAY FAX, MAIL OR E-MAIL ALL REQUESTED INFORMATION TO US.



STATE OF MICHIGAN

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

RICK SNYDER
GOVERNOR

SHELLY EDGERTON
DIRECTOR

February 11, 2017

Darlene Mack
Village of Burlington
215 W. Leroy Street
Burlington, MI 49029

Dear Ms. Mack:

The Village of Burlington Application to Administer and Enforce was received by the Construction Code Commission on January 11, 2017, and will be on the agenda for the April 12, 2017, Construction Code Commission meeting. You or your representative, along with enforcing agency personnel should plan to be in attendance at this meeting to respond to Commission inquiries regarding your application.

Issues to be addressed by the Commission may include, but not be limited to, the following:

- Reason for application
- Your proposed program budget
- Proposed public facing documents i.e.:
 - o Permits, correction/violation notices, certificates of occupancy, stop work orders, etc.
- Drafts of proposed fees for permits, plan reviews, inspections, etc.
- Communication process with enforcing agencies
- Registration of governmental subdivision and enforcing agency personnel
- Board of Appeal members per MCL 125.1514
- Administrative personnel and services provided i.e.:
 - o FOIA, retention schedule, location of official records/documents, etc.
- Processes for establishing fees and variance of code process
- Agency personnel are provided as necessary.
- Plan review services are provided and timely field inspection services will be provided.
- Access to the codes & standards for which you have applied to administer & enforce.
- Your understanding of the Administration and enforcement of 1972 PA 230 (the Act) and the state construction code, pursuant to Section 8b(6) of the Act.

If you have questions regarding this issue please feel free to contact me at (517) 241-6479.

Sincerely,

Dianne Barnes, Administrative Manager
Licensing and Complaints Division

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P.O. BOX 30254 • LANSING, MICHIGAN 48909
www.michigan.gov/bcc • Telephone (517) 241-9302 • Fax (517) 241-9570



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

SHELLY EDGERTON
DIRECTOR

December 21, 2016

Darlene Mack
Village of Burlington
215 W. Leroy Street
Burlington, MI 49029

Dear Ms. Mack:

The Village of Burlington Application to Administer and Enforce was received by the Bureau of Construction Codes on Tuesday, December 20, 2016.

Pursuant to statutory requirements the application will be presented to the Construction Code Commission at their January 11, 2017, meeting for their review and decision on the matter. You or your representative are welcome to be in attendance at this meeting to support your application. You will be notified within 90 days of the January 11, 2017, Commission meeting of their decision.

The State of Michigan, Bureau of Construction Codes will continue to administer and enforce the Act and the Mechanical Code within the Township until the Commission renders its decision. If you have questions regarding this issue please feel free to contact me at (517) 241-6479.

Sincerely,

Dianne Barmes, Administrative Manager
Licensing and Complaints Division
Bureau of Construction Codes

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Application to Administer and Enforce
Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes / Office of Administrative Services
P.O. Box 30254, Lansing, MI 48909
517-335-2972
E-Mail: bccoas@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

NAME OF GOVERNMENTAL SUBDIVISION Village of Burlington		CONTACT PERSON (Elected Official) Darlene Mack	
ADDRESS (Street Number and Name) 215 W. Leroy St.			
CITY Burlington	COUNTY Calhoun	STATE MI	ZIP CODE 49029
TELEPHONE NUMBER (Include Area Code) (517) 705-2222	FAX NUMBER (Include Area Code) (517) 705-2223	E-MAIL ADDRESS	

Code Adoption			
<input checked="" type="checkbox"/> To assume responsibility for the administration and enforcement of the act and the state code in accordance with Section 8b(6) of 1972 PA 230. Attach a copy of the certified adopted ordinance assuming responsibility for administration and enforcement of the act and the code.			
State Code(s) to be Enforced			
<input checked="" type="checkbox"/> Building	<input checked="" type="checkbox"/> Electrical	<input checked="" type="checkbox"/> Mechanical	<input checked="" type="checkbox"/> Plumbing

By checking the boxes below you are certifying the following:

- The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce this act and the code and all related acts and rules.
- Agency personnel are provided as necessary.
- Administrative services are provided.
- Plan review services are provided.
- Timely field inspection services will be provided.
- A Board of Appeals is in place per MCL 125.1514.
- Have immediate access to the codes & standards for which you have applied to administer & enforce.

BUILDING OFFICIAL INFORMATION	Name: Glenn Lindsey	Registration Number: 4936
--------------------------------------	---------------------	---------------------------

Certification	
I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge.	
Name of Elected Official (Type or Print) <u>ROBERT E WEAVER JR</u>	Title <u>President</u>
Signature of Elected Official <u><i>Robert E Weaver Jr</i></u>	Date <u>10-19-16</u>

Copies of all ordinances submitted with this application must include clear and visible identification of the governmental subdivision's department of building safety.

The conduct of the administration and enforcement of the Michigan codes shall be performed in accordance with the approved Application to Administer and Enforce and ordinance. Any changes in the approved ordinance must be submitted to the Bureau of Construction Codes for review and final approval prior to implementation by local departments of building safety.

RECEIVED

DEC 20 2016

**OFFICE OF
ADMINISTRATIVE SERVICES**

VILLAGE OF BURLINGTON
ORDINANCE NUMBER 2016-16-17A OF 2016

AN ORDINANCE TO DESIGNATE AN ENFORCING AGENCY TO DISCHARGE THE RESPONSIBILITY OF THE VILLAGE OF BURLINGTON UNDER THE PROVISIONS OF THE STILLE-DEROSSETT-HALE SINGLE STATE CONSTRUCTION CODE ACT, 1972 PA 230.

THE VILLAGE OF BURLINGTON ORDAINS:

SECTION 1. ENFORCING AGENCY DESIGNATED. Pursuant to Section 8b(6) of The Stille-DeRossett-Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1508b(6), the Village of Burlington hereby elects to administer and enforce the 1972 PA 230 and the Michigan Building, Electrical, Mechanical, and Plumbing Codes. The Village of Burlington shall also administer and enforce the respective provisions of the Michigan Residential, Rehabilitation, and Uniform Energy Codes and all applicable laws and ordinances. A government official registered in accordance with 1986 PA 54 shall be appointed to receive all fees, issue permits, plan reviews, notices, orders, and certificates of use and occupancy. All personnel performed plan reviews and inspections shall be registered in accordance with 1986 PA 54.

SECTION 2. REPEAL. All ordinances or parts of ordinances inconsistent with the provisions of this ordinance are hereby repealed.

SECTION 3. SEVERABILITY OF INVALID PROVISIONS. If any provision of this ordinance shall be invalid, its invalidity shall not affect any other provisions of this ordinance that can be given effect without the invalid provision, and for this purpose the provisions of this Ordinance are hereby declared to be severable.

SECTION 4. EFFECTIVE DATE. This Ordinance shall take effect twenty (20) days after the date of passage pursuant to MCL 66.1, which publication shall take place within fifteen (15) days after the ordinance is passed, and shall be in a local newspaper of general circulation in the village. Pursuant to MCL 66.4, the Clerk is permitted to publish the Ordinance or a synopsis of the Ordinance.

This Ordinance is hereby declared to have been passed and adopted by the Village of Burlington, County of Calhoun, State of Michigan, at a regularly scheduled meeting thereof duly called and held on this 17th day of October, 2016, and will become effective on the 16th day of November, 2016.


Robert Weaver, Jr., Village President

ATTEST:


Darlene Mack, Village Clerk

RECEIVED

DEC 23 2016

OFFICE OF
ADMINISTRATIVE SERVICES



STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

RICK SNYDER
GOVERNOR

SHELLY EDGERTON
DIRECTOR

January 18, 2017

Richard Pierce
Village of Emmett
3119 Main
Emmett, MI 48022

Dear Mr. Pierce:

The Village of Emmett Application to Administer and Enforce was received by the Bureau of Construction Codes on Tuesday, January 12, 2017.

Pursuant to statutory requirements the application will be presented to the Construction Code Commission at their April 12, 2017, meeting for their review and decision on the matter. You or your representative are welcome to be in attendance at this meeting to support your application. You will be notified within 90 days of the April 12, 2017, Commission meeting of their decision.

The State of Michigan, Bureau of Construction Codes will continue to administer and enforce the Act and the codes within the Village until the Commission renders its decision. If you have questions regarding this issue please feel free to contact me at (517) 241-6479.

Sincerely,

A handwritten signature in cursive script that reads "Dianne Barmes".

Dianne Barmes, Administrative Manager
Licensing and Complaints Division
Bureau of Construction Codes

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www.michigan.gov/bcc • Telephone (517) 241-9302 • Fax (517) 241-9570

Application to Administer and Enforce
Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes / Office of Administrative Services
P.O. Box 30254, Lansing, MI 48909
517-335-2972
www.michigan.gov/bcc

Authority: 1972 PA 230 Completion: Mandatory Penalty: Governmental subdivisions will not be approved to administer and enforce code(s)	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
--	--

NAME OF GOVERNMENTAL SUBDIVISION <i>Village of Emmett</i>		CONTACT PERSON (Elected Official) <i>Richard Pierce</i>	
ADDRESS (Street Number and Name) <i>3119 Main</i>			
CITY <i>Emmett</i>	COUNTY <i>Saint Clair</i>	STATE MI	ZIP CODE <i>48822</i>
TELEPHONE NUMBER (include Area Code) <i>(810) 329-2781</i>	FAX NUMBER (include Area Code) <i>810-384-8801</i>	E-MAIL ADDRESS	

A. Code Adoption

To assume responsibility for the administration and enforcement of the act and the state code in accordance with Section 8b(6) of 1972 PA 230. Attach a certified copy of the adopted ordinance assuming responsibility for administration and enforcement of the act and the code.

State Code(s) to be Enforced

Building Mechanical Electrical Plumbing

B. Enforcing Agency Personnel

(Attorney General Opinion No. 4885, dated August 15, 1975, provides that an enforcing agency must be a public official or governmental agency. Inspection functions or other technical assistance may be performed under contract with a private organization; but all decisions and official actions based on such inspection or technical advice must be made by the enforcing agency. Any formal actions such as the issuance, suspension, revocation, or cancellation of permits is exclusively within the purview of the governmental entity. Decision making by a non-governmental entity in which government is not the final authority is in violation of the Michigan Constitution.)

Attach copies of the valid registrations for all code officials/inspectors/plan reviewers registered in accordance with 1986 PA 54 and employed by the governmental subdivision listed above.

Attach all employment agreements with enforcing agency personnel

Attach all documents verifying direct employment relationship to governmental subdivision for all enforcing agency personnel

Attach all methods and means of compensation for enforcing agency personnel

Attach all employment contracts with enforcing agency personnel

Name of Inspector(s) <i>(Attach additional sheet, if necessary)</i> <i>Jim Waddy</i> <i>Paul Pascevic</i> <i>Daniel W. Jex</i> <i>Daniel W. Jex</i>	Registration Number _____ _____ _____ _____	Categories <i>Building</i> <i>Electrical</i> <i>Mechanical</i> <i>Plumbing</i>
Name of Plan Reviewer(s) <i>(Attach additional sheet, if necessary)</i> 	Registration Number _____ _____ _____	Categories

RECEIVED

JAN 12 2017

C. Enforcing Agency Responsibilities

Please submit two (2) complete copies of the Application to Administer and Enforce and all related documentation identified below tabbed and indexed.

1. Operations

- a) Department of Building Safety budget including but not limited to enforcing agency and administrative staff salaries and benefits, direct and indirect costs, overhead, including calculations and formulas utilized for development of fee schedules and determination of the level of fees for services related to administration and enforcement of 1972 PA 230
- b) Schedule of Fees
- c) Account Management for Department of Building Safety Funds
- d) Specific cost breakdown for providing Plan Reviews and Inspections
- e) Listing of Codes and Standards with written assurance that they are in your possession or immediately available to the public and your inspectors.
- f) Copies of Ordinances
- g) Hours of Operation for Department of Building Safety

2. Procedures

- a) Permit Application Review Procedures
- b) Plan Review Procedures
- c) Permit Issuance Procedures
- d) Field Inspection Procedures
- e) Code Violation/Correction Notice Procedures
- f) Certificate of Use and Occupancy Procedures
- g) Construction Board of Appeals Procedures
- h) Construction Board of Appeals Member's Names and Qualifications
- i) Floodplain and Wetlands Management Procedures
- j) Registration of Contractor Licenses Procedures
- k) Complaint Processing and Resolution Procedures

3. Forms

- ✓ a) Building, Electrical, Mechanical and Plumbing Permit Application Forms
- b) Plan Review Report Form
- ✓ c) Building, Electrical, Mechanical and Plumbing Permit Forms
- d) Field Inspection Report Forms
- e) Code Violation/Correction Notice Form
- f) Certificate of Use and Occupancy Form
- g) Construction Board of Appeals Request for Hearing Application Form
- h) Contractor License Registration Form
- i) Complaint Submission Form

D. Certification

I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge.

Name of Elected Official (Type or Print) Richard Pierce Title Village President
Signature of Elected Official Richard Pierce Date 1-6-17

Copies of all documents, forms, policies and procedures attached to or submitted with this application must include clear and visible identification of the governmental subdivision's department of building safety.

An Application to Administer and Enforce that does not include attachments and supplemental documentation shall be deemed as an incomplete submission and shall be presented to the State Construction Code Commission in accordance with Section 8b (6) of 1972 PA 230.

The conduct of the administration and enforcement of the Michigan codes shall be performed in accordance with the approved Application to Administer and Enforce and ordinance. Changes in enforcing agency personnel must be immediately reported to the Bureau of Construction Codes. Any changes in the approved ordinance and all procedures, forms, policies and practices must be submitted to the Bureau of Construction Codes for review and final approval prior to implementation by local departments of building safety.

RECEIVED
JAN 12 2017
OFFICE OF
ADMINISTRATIVE SERVICES

January 5, 2017

Village of Emmett
3119 Main
Emmett, MI 48022-0127

State of Michigan
Bureau of Construction Codes:

The Village of Emmett in Emmett Township, Saint Clair County, Michigan requests to be released from State of Michigan Building Inspections from the Department of Building & Construction Codes.

Emmett Township, inside which our Village is located has agreed to take over all building inspections, applications, billing of fees & enforcement of building codes. Emmett Township is already registered with the State, has certified Building Inspectors, Building and Safety budget and Account.

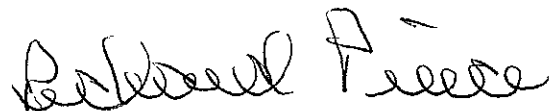
We do not have a budget or account set up for a Building Department. Emmett Township would be handling all applications, fees, permits and inspections according to their schedule.

The Village would still review site plans for zoning.

Our reason for this request is that we feel local enforcement will be more expedient for our residents and help keep their building projects on schedule. At this time we feel this would be the right move for our residents.

Please contact me with any questions or concerns.

Thank you for your attention,
sincerely



Richard Pierce, Village President
Emmett, MI

(810) 329-2781 daytime phone

RECEIVED

JAN 12 2017

OFFICE OF
ADMINISTRATIVE SERVICES

Village of Emmett

8/12/2016

3119 Main Street

Emmett, MI 48022

810-384-8801

The Village of Emmett has passed Ordinance # Article 4, 4.10 at the Council meeting of August 8th, 2016.

Synopsis: The Village of Emmett elects to administer and enforce Michigan Mechanical and Uniform Energy Codes. To issue permits, plan reviews, building inspections & occupancy permits according to Michigan State Construction Codes. Ordinance to take effect September 1st, 2016.

Full copy available at Emmett Village Hall 3119 Main, Emmett< MI 48022.

Phone: Office: 810-384-8801, Clerk 810-304-2012.

RECEIVED

JAN 12 2017

**OFFICE OF
ADMINISTRATIVE SERVICES**

Village of Emmett

Ordinance Number: Article 4, 4.10

An Ordinance to designate an enforcing agency to discharge the responsibility of the Village of Emmett under the provisions of the Stille-DeRossett Hale Single State Construction Code Act, 1972 PA 230.

The Village of Emmett ordains:

Section 1. ENFORCING AGENCY DESIGNATED. Pursuant to Section 8b(6) of the Stille-DeRossett Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1508b(6), the Village of Emmett hereby elects to administer and enforce the 1972 PA 230 and the Michigan Mechanical Code. The Village of Emmett shall also administer and enforce the respective provisions of the Michigan Residential, Rehabilitation, and Uniform Energy Codes and all applicable laws and ordinances. A government official registered in accordance with 1986 PA 54 shall be appointed to receive all fees, issue permits, plan reviews, notices, orders and certificates of use and occupancy. All personnel performing plan reviews and inspections shall be registered in accordance with 1986 PA 54.

Section 2. REPEALS . All ordinances inconsistent with the provisions of this ordinance are hereby repealed.

Section 3. PUBLICATION. This ordinance shall be effective after legal publication and in accordance with provisions of the Act governing same.

This ordinance duly adopted on 8-8-2016 at a regular meeting of the Emmett Village Council and will become effective on September 1, 2016.

Signed Richard Pierce
Richard Pierce, President, Village of Emmett

Kathleen Pratt, Clerk, Village of Emmett

**Table 10-3
Site Development Requirements^A**

Zoning District	Minimum Lot Area	Minimum Lot Width and Frontage ^E	Maximum Building Height	Maximum Lot Coverage	Minimum Yard Setback		
					Front Yard	Side Yard	Rear Yard
RR Rural Residential	2 acres, except 10 acres for a farm	200 ft.	35 ft. ^B	25%	60 ft.	15 ft.	50 ft.
R-1 Suburban Residential	1 acre	100 ft.	35 ft.	30%	40 ft.	15 ft.	50 ft.
R-2 Urban Residential	SFD: 1 acres without public sewer, otherwise 20,000 sq. ft.; TFD: 1.5 acres without public sewer, otherwise 30,000 sq. ft.	100 ft. without public sewer, otherwise 75 ft.	35 ft.	35%	35 ft.	10 ft.	50 ft.
R-MHC Manufact. Hous. Comm.	See Section 10.07						
B-1 Local Business	10,000 sq. ft.	80 ft.	35 ft.	70%	None Required	None Required ^C	20 ft.
B-2 General Business	2 acres	200 ft.	35 ft.	35%	50 ft.	20 ft. ^C	40 ft. ^D
I-1 Light Industrial	1 acre	200 ft.	35 ft.	50%	50 ft.	20 ft. ^C	40 ft. ^D

SFD = single family dwelling; TFD = two family dwelling; sq. ft. = square feet; 1 acre = 43,560 sq. ft.

Footnotes for Table 10-3

- A. All uses shall comply with the site development requirements in Table 10-3, unless otherwise specified by Article 11 – Standards for Specific Special Land Uses, or Article 20 – General Provisions. In addition, all uses shall comply with all other applicable site development provisions of this Ordinance, including, but not limited to, the following Articles: Article 15 - Signs; Article 16 - Off-Street Parking and Loading; Article 17 - Landscaping and Screening; and Article 18 - Environmental Standards.
- B. The maximum height of farm buildings and structures shall be one hundred (100) feet. All farm buildings and structures over eighty (80) feet shall be set back from a lot line a distance at least equal to one half the height of the building.
- C. Minimum setback to be increased to 20 feet in the B-1 District, and 50 feet in all other Districts, in the case where the side yard abuts a Residential District.
- D. Minimum setback to be increased to 70 feet in the case where the rear yard abuts a Residential District.
- E. The depth of a lot shall not exceed 4 times its width.

RECEIVED
JAN 12 2017

EMMETT TOWNSHIP
ST. CLAIR COUNTY, MICHIGAN

BUILDING PERMIT FEE SCHEDULE
EFFECTIVE: 5-01-2006
ADOPTED / EFFECTIVE: 1-13-2016**

RESIDENTIAL HOUSES & ADDITIONS (up to 2000 sq. ft.):

- \$ 75.00 - PLAN REVIEW FEE
- \$ 100.00 - BASE PERMIT FEE, PLUS REQUIRED INSPECTIONS
- \$ 60.00 - PER INSPECTION REQUIRED**
- \$ 500.00 - BOND FOR NEW HOMES
- \$ 500.00 - BOND FOR ADDITIONS & ALTERATIONS

HOMES 2001 to 3000 SQ. FT. :

- \$ 100.00 - PLAN REVIEW FEE
- \$ 125.00 - BASE PERMIT FEE, PLUS REQUIRED INSPECTIONS
- \$ 60.00 - PER INSPECTION REQUIRED**
- \$ 500.00 - BOND FOR NEW HOMES
- \$ 500.00 - BOND FOR ADDITIONS & ALTERATIONS

HOMES OVER 3000 SQ. FT. :

- \$ 125.00 - PLAN REVIEW FEE
- \$ 150.00 - BASE PERMIT FEE, PLUS REQUIRED INSPECTIONS
- \$ 60.00 - PER INSPECTION REQUIRED **
- \$ 500.00 - BOND FOR NEW HOMES
- \$ 500.00 - BOND FOR ADDITIONS & ALTERATIONS

POLE BUILDINGS, GARAGES & SHEDS:

- \$ 35.00 - PLAN REVIEW FEE**
- \$ 75.00 - BASE PERMIT FEE, PLUS REQUIRED INSPECTIONS
- \$ 60.00 - PER INSPECTION REQUIRED**
- \$ 250.00 - BOND

DECKS, PORCHES, & HANDICAP RAMPS:

- \$ 25.00 - PLAN REVIEW FEE**
- \$ 35.00 - BASE PERMIT FEE, PLUS REQUIRED INSPECTIONS
- \$ 60.00 - PER INSPECTION REQUIRED**
- \$ 250.00 - BOND

*NOTE: IF NOT INCLUDED ON ORIGINAL HOUSE PLANS.

POOLS:

- \$ 25.00 - PLAN REVIEW FEE**
- \$ 50.00 - BASE PERMIT FEE, PLUS REQUIRED INSPECTIONS
- \$ 60.00 - PER INSPECTION REQUIRED**
- \$ 250.00 - BOND

RECEIVED

JAN 12 2017

OFFICE OF
ADMINISTRATIVE SERVICES

BUILDING INSPECTOR: (810) 650-1714
HALL TELEPHONE: (810) 384-8070

EMMETT TOWNSHIP
ST. CLAIR COUNTY, MICHIGAN

BUILDING PERMIT FEE SCHEDULE

EFFECTIVE: 5-01-2006

ADOPTED / EFFECTIVE: 1-13-2016**

TEMPORARY OCCUPANCY PERMIT:

\$ 60.00 - PER INSPECTION REQUIRED**

COMMERCIAL:

\$ 150.00 - PLAN REVIEW FEE PLUS \$25.00 PER 1000 SQ.FT., OVER
1000 SQ. FT.**

\$ 150.00 - BASE PERMIT FEE, UP TO 1000 SQ. FT., WITH ADDITIONAL
CHARGE OF \$25.00 PER 1000 SQFT., ON BALANCE OF FOOTAGE
PLUS, REQUIRED INSPECTIONS**

\$ 75.00 - PER INSPECTION REQUIRED**

\$ 1,000.00 - BOND

*NOTE: REQUIRES STAMPED DRAWINGS FROM REGISTERED DESIGN
PROFESSIONAL.**

COMMERCIAL SIGNS:

\$ 25.00 - PLAN REVIEW FEE

\$ 50.00 - BASE PERMIT FEE, PLUS REQUIRED INSPECTIONS

\$ 60.00 - PER INSPECTION REQUIRED**

\$ 250.00 - BOND

MOVING OF BUILDING:

\$ 100.00 - FEE, PLUS MILEAGE AT CURRENT RATE

*NOTE: BUILDING PERMIT AND \$ 1000.00 BOND REQUIRED BEFORE
BUILDING IS MOVED INTO THE TOWNSHIP.

TEMPORARY TRAILER PERMIT:

\$ 25.00 - SITE PLAN REVIEW FEE**

\$ 100.00 - BASE PERMIT FEE

\$ 60.00 - PER INSPECTION REQUIRED**

\$ 1,000.00 - BOND

*NOTE: BUILDING PERMIT & HOUSE BOND REQUIRED BEFORE PERMIT IS
ISSUED.

DEMOLITION OF BUILDINGS :

\$ 25.00 - SITE PLAN REVIEW FEE**

\$ 10.00 - BASE PERMIT FEE, PLUS REQUIRED INSPECTIONS

\$ 60.00 - PER INSPECTION REQUIRED***

*NOTE: DEBRIS MUST BE REMOVED FROM SITE.

RECEIVED

JAN 12 2017

OFFICE OF
ADMINISTRATIVE SERVICES

BUILDING INSPECTOR: (810) 650-1714
HALL TELEPHONE: (810) 384-8070

EMMETT TOWNSHIP
ST. CLAIR COUNTY, MICHIGAN

BUILDING PERMIT FEE SCHEDULE

EFFECTIVE: 5-01-2006

ADOPTED / EFFECTIVE: 1-13-2016**

VIOLATIONS:

- STARTING WORK WITHOUT A PERMIT: ADMINISTRATION FEES:
 - \$ 400.00 - COMMERCIAL, HOUSES AND ADDITIONS
 - \$ 100.00- ACCESSORY BUILDINGS
- STOP WORK ORDER FEE - \$ 60.00**
- UNSAFE STRUCTURES - \$ 60.00**

REINSPECTIONS AND ADDITIONAL INSPECTIONS:

\$ 60.00 - PER INSPECTION REQUIRED**

CANCELLED PERMITS:

- ADMINISTRATION FEE CHARGED - \$ 25.00
- PLAN REVIEW FEE WILL **NOT** BE RETURNED
- ANY UNUSED PORTION OF THE PERMIT FEES WILL BE RETURNED**

**NOTE: "Any permit issued shall become invalid if the authorized work is not commenced within six months after the issuance of the permit, or if the authorized work is suspended or abandoned for a period of six months after the time of commencing the work."

NOTES:

BUILDING OFFICIAL MAY CONTRACT OUT PLAN REVIEW SERVICES AT THE APPLICANT'S EXPENSE.**

BUILDING OFFICIAL WILL LIST REQUIRED INSPECTIONS ON EACH PERMIT ISSUED.**

BUILDING OFFICIAL / DEPARTMENT HAS DISCRETION TO LOWER PERMIT FEES ON SMALLER PROJECTS.**

BUILDING INSPECTOR: (810) 650-1714
HALL TELEPHONE: (810) 384-8070

RECEIVED

JAN 12 2017

OFFICE OF
ADMINISTRATIVE SERVICES

EMMETT TOWNSHIP
ST. CLAIR COUNTY, MICHIGAN

BUILDING PERMIT FEE SCHEDULE
EFFECTIVE: 5-01-200
ADOPTED / EFFECTIVE: 1-13-2016**

ZONING PERMITS:

AGRICULTURAL BUILDINGS:
\$ 60.00 - PLAN REVIEW FEE **

PONDS:
\$ 25.00 - SITE PLAN REVIEW FEE**
\$ 50.00 - BASE PERMIT FEE, PLUS REQUIRED INSPECTIONS
\$ 60.00 - PER INSPECTION REQUIRED**
\$ 250.00 - BOND

RECEIVED

JAN 12 2017

OFFICE OF
ADMINISTRATIVE SERVICES

BUILDING INSPECTOR: (810) 650-1714
HALL TELEPHONE: (810) 384-8070

Building Application Emmett Township

11100 Dunnigan, Emmett, MI 48022
(810) 384-8070 • (810) 384-8071 • Fax: (810) 384-6138

60.00
Re-inspection Fee ~~\$50.00~~. Administration fee for starting work without a Building Permit is \$400.00 includes: houses, additions, alterations, commercial structures, pre-manufactured units. \$100.00 fee for starting work without a permit for any accessory structures and demolitions.

AUTHORITY: COMPLETION: PENALTY:	P.A. 230 OF 1972. AS AMENDED MANDATORY TO OBTAIN PERMIT APPLICATION MUST BE COMPLETED. SIGNED PROPER FEE ENCLOSED OR PERMIT WILL NOT BE ISSUED.	THE BUILDING DEPT. WILL NOT DISCRIMINATE AGAINST ANY INDIVIDUAL OR GROUP BECAUSE OF RACE, SEX, RELIGION, AGE, NATIONAL ORI- GIN, COLOR, MARITAL STATUS, HANDICAP, OR POLITICAL BELIEFS.
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APPLICANT TO COMPLETE ALL ITEMS IN SECTION I, II, III, IV, V, VI, AND IX (In Red)
NOTE: SEPARATE APPLICATIONS MUST BE MADE TO THE APPROPRIATE DIVISION
FOR PLUMBING, MECHANICAL AND ELECTRICAL WORK PERMITS.

I. LOCATION OF BUILDING			
ADDRESS:		ACREAGE:	
CITY, VILLAGE:	EMMETT	TOWNSHIP:	EMMETT
COUNTY:	ST. CLAIR	ZIP CODE:	48022
BETWEEN:	AND:	TAX I.D. #: 74-19-	
II. IDENTIFICATION			
A. OWNER OR LESSEE			
NAME:		TELEPHONE NO.:	
ADDRESS:	CITY:	STATE:	ZIP CODE:
B. ARCHITECT OR ENGINEER			
NAME:		TELEPHONE NO.:	
ADDRESS:	CITY:	STATE:	ZIP CODE:
LICENSE NUMBER:	EXPIRATION DATE:		
C. CONTRACTOR			
NAME:		TELEPHONE NO.:	
ADDRESS:	CITY:	STATE:	ZIP CODE:
BUILDERS LICENSE NUMBER:	EXPIRATION DATE:		
FEDERAL EMPLOYER ID NUMBER OR REASON FOR EXEMPTION:		<div style="font-size: 2em; opacity: 0.5;">RECEIVED</div> <div style="font-size: 1.2em; margin-top: 5px;">JAN 13 2017</div>	
WORKERS COMP. INSURANCE CARRIER OR REASON FOR EXEMPTION:			
MISC EMPLOYER NUMBER OR REASON FOR EXEMPTION:			
III. TYPE OF IMPROVEMENT AND PLAN REVIEW			
OFFICE OF ADMINISTRATIVE SERVICES			
A. TYPE OF IMPROVEMENT			
1. <input type="checkbox"/> HOUSE	2. <input type="checkbox"/> ADDITION	3. <input type="checkbox"/> ALTERATION	4. <input type="checkbox"/> REPAIR
5. <input type="checkbox"/> WRECKING	6. <input type="checkbox"/> MOBILE HOME SET-UP	7. <input type="checkbox"/> FOUNDATION ONLY	8. <input type="checkbox"/> PREMANUFACTURE
9. <input type="checkbox"/> RELOCATION	10. <input type="checkbox"/> POLE BARN	11. <input type="checkbox"/> GARAGE	12. <input type="checkbox"/> ACCESSORY BLDG.
13. <input type="checkbox"/> DECKS	14. <input type="checkbox"/> POOL	15. <input type="checkbox"/> WHIRLPOOL/HOT TUB	
B. REVIEW(S) TO BE PERFORMED USING MICHIGAN BUILDING CODE.			
<input type="checkbox"/> BUILDING	<input type="checkbox"/> PLUMBING	<input type="checkbox"/> MECHANICAL	<input type="checkbox"/> ELECTRIC
		<input type="checkbox"/> ENERGY	

IV. PROPOSED USE OF BUILDING				
A. RESIDENTIAL				
1. <input type="checkbox"/> BUILDING	3. <input type="checkbox"/> HOTEL, MOTEL (NO. OF UNITS _____)	5. <input type="checkbox"/> DETACHED GARAGE		
2. <input type="checkbox"/> TWO OR MORE FAMILY (NO. OF UNITS _____)	4. <input type="checkbox"/> ATTACHED GARAGE	6. <input type="checkbox"/> OTHER		
B. NONRESIDENTIAL				
7. <input type="checkbox"/> AMUSEMENT	11. <input type="checkbox"/> SERVICE STATION	15. <input type="checkbox"/> SCHOOL, LIBRARY, EDUCATIONAL		
8. <input type="checkbox"/> CHURCH, RELIGION	12. <input type="checkbox"/> HOSPITAL, INSTITUTIONAL	16. <input type="checkbox"/> STORE, MERCANTILE		
9. <input type="checkbox"/> INDUSTRIAL	13. <input type="checkbox"/> OFFICE, BANK, PROFESSIONAL	17. <input type="checkbox"/> TANKS, TOWERS		
10. <input type="checkbox"/> PARKING GARAGE	14. <input type="checkbox"/> PUBLIC UTILITY	18. <input type="checkbox"/> OTHER		
NONRESIDENTIAL - DESCRIBE IN DETAIL PROPOSED USE OF BUILDING, E.G. FOOD PROCESSING PLANT, MACHINE SHOP, LAUNDRY BUILDING AT HOSPITAL, ELEMENTARY SCHOOL, SECONDARY SCHOOL, COLLEGE, PAROCHIAL SCHOOL, PARKING GARAGE FOR DEPARTMENT STORE, RENTAL OFFICE BUILDING, OFFICE BUILDING AT INDUSTRIAL PLANT. IF USE OF EXISTING BUILDING IS BEING CHANGED, ENTER PROPOSED USE.				
V. SELECTED CHARACTERISTICS OF BUILDING				
A. FOUNDATION FRAME				
<input type="checkbox"/> BASEMENT	FOOTING DIMENSIONS _____			
<input type="checkbox"/> CRAWL SPACE	USE OF BASEMENT _____			
B. MATERIAL IN FOUNDATION WALLS				
<input type="checkbox"/> BLOCK TYPE	WIDTH IN INCHES	<input type="checkbox"/> WOLMANIZED	<input type="checkbox"/> POURED CEMENT	WIDTH IN INCHES <input type="checkbox"/> PRECAST
C. PRINCIPAL TYPE OF FRAME ABOUT FINISH GRADE				
1. <input type="checkbox"/> MASONRY WALL BEARING	2. <input type="checkbox"/> WOOD FRAME	3. <input type="checkbox"/> STRUCTURAL STEEL	4. <input type="checkbox"/> REINFORCED CONCRETE	5. <input type="checkbox"/> OTHER
D. PRINCIPAL TYPE OF HEATING FUEL				
6. <input type="checkbox"/> GAS	7. <input type="checkbox"/> OIL	8. <input type="checkbox"/> ELECTRICITY	9. <input type="checkbox"/> COAL	10. <input type="checkbox"/> OTHER
WILL THERE BE A FIRE PLACE <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES WHAT TYPE _____				
E. TYPE OF SEWAGE DISPOSAL				
11. <input type="checkbox"/> PUBLIC OR PRIVATE COMPANY	12. <input type="checkbox"/> SEPTIC SYSTEM			
F. TYPE OF WATER SUPPLY				
13. <input type="checkbox"/> PUBLIC OR PRIVATE COMPANY	14. <input type="checkbox"/> PRIVATE WELL OR CISTERN			
G. TYPE OF MECHANICAL				
15. WILL THERE BE AIR CONDITIONING? <input type="checkbox"/> YES <input type="checkbox"/> NO		16. WILL THERE BE AN ELEVATOR? <input type="checkbox"/> YES <input type="checkbox"/> NO		
H. DIMENSIONS				
(Omit cents)				
17. COST OF IMPROVEMENTS.....\$ _____ <i>To be installed but not included in the above cost</i>		18. NUMBER OF STORIES _____		
a. Electrical..... _____		19. FLOOR AREA: 1ST & 2ND FLOOR _____		
b. Plumbing..... _____		3RD - 10TH FLOOR _____		
c. Heating, air conditioning..... _____		11TH - ABOVE FLOOR _____		
d. Other (elevator, ect.)..... _____		TOTAL AREA _____		
TOTAL COST OF IMPROVEMENT...\$ _____		20. GARAGE & SIZE _____		
I. NUMBER OF OFF STREET PARKING SPACES				
21. ENCLOSED _____		22. OUTDOORS _____		

VI. APPLICANT INFORMATION

APPLICANT IS RESPONSIBLE FOR THE PAYMENT OF ALL FEES AND CHARGES APPLICABLE TO THIS APPLICATION AND MUST PROVIDE THE FOLLOWING INFORMATION.

NAME:		TELEPHONE NO.:	
ADDRESS:	CITY:	STATE:	ZIP CODE:
FEDERAL I.D. NUMBER/SOCIAL SECURITY NUMBER:			

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 AS HIS 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.

SECTION 23A OF THE STATE CONSTRUCTION CODE ACT OF 1972, ACT NO. 230 OF THE PUBLIC ACTS OF 1972, BEING SECTION 125.1523A OF THE MICHIGAN COMPILED LAWS, 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:

VII. LOCAL GOVERNMENTAL AGENCY TO COMPLETE THIS SECTION

ENVIRONMENTAL CONTROL APPROVALS

	REQUIRED?	APPROVED	DATE	NUMBER	BY
A - ZONING	<input type="checkbox"/> YES <input type="checkbox"/> NO				
B - FIRE DISTRICT	<input type="checkbox"/> YES <input type="checkbox"/> NO				
C - POLLUTION CONTROL	<input type="checkbox"/> YES <input type="checkbox"/> NO				
D - NOISE CONTROL	<input type="checkbox"/> YES <input type="checkbox"/> NO				
E - SOIL EROSION	<input type="checkbox"/> YES <input type="checkbox"/> NO				
F - FLOOD ZONE	<input type="checkbox"/> YES <input type="checkbox"/> NO				
G - WATER SUPPLY	<input type="checkbox"/> YES <input type="checkbox"/> NO				
H - SEPTIC SYSTEM	<input type="checkbox"/> YES <input type="checkbox"/> NO				
I - VARIANCE GRANTED	<input type="checkbox"/> YES <input type="checkbox"/> NO				
J - CULVERT	<input type="checkbox"/> YES <input type="checkbox"/> NO				
K - HOUSE NUMBERS	<input type="checkbox"/> YES <input type="checkbox"/> NO				
L - OTHER	<input type="checkbox"/> YES <input type="checkbox"/> NO				

VIII. VALIDATION - FOR DEPARTMENT USE ONLY

NOTES AND DATA:

RECEIVED

JAN 19 2017

OFFICE OF
ADMINISTRATIVE SERVICES

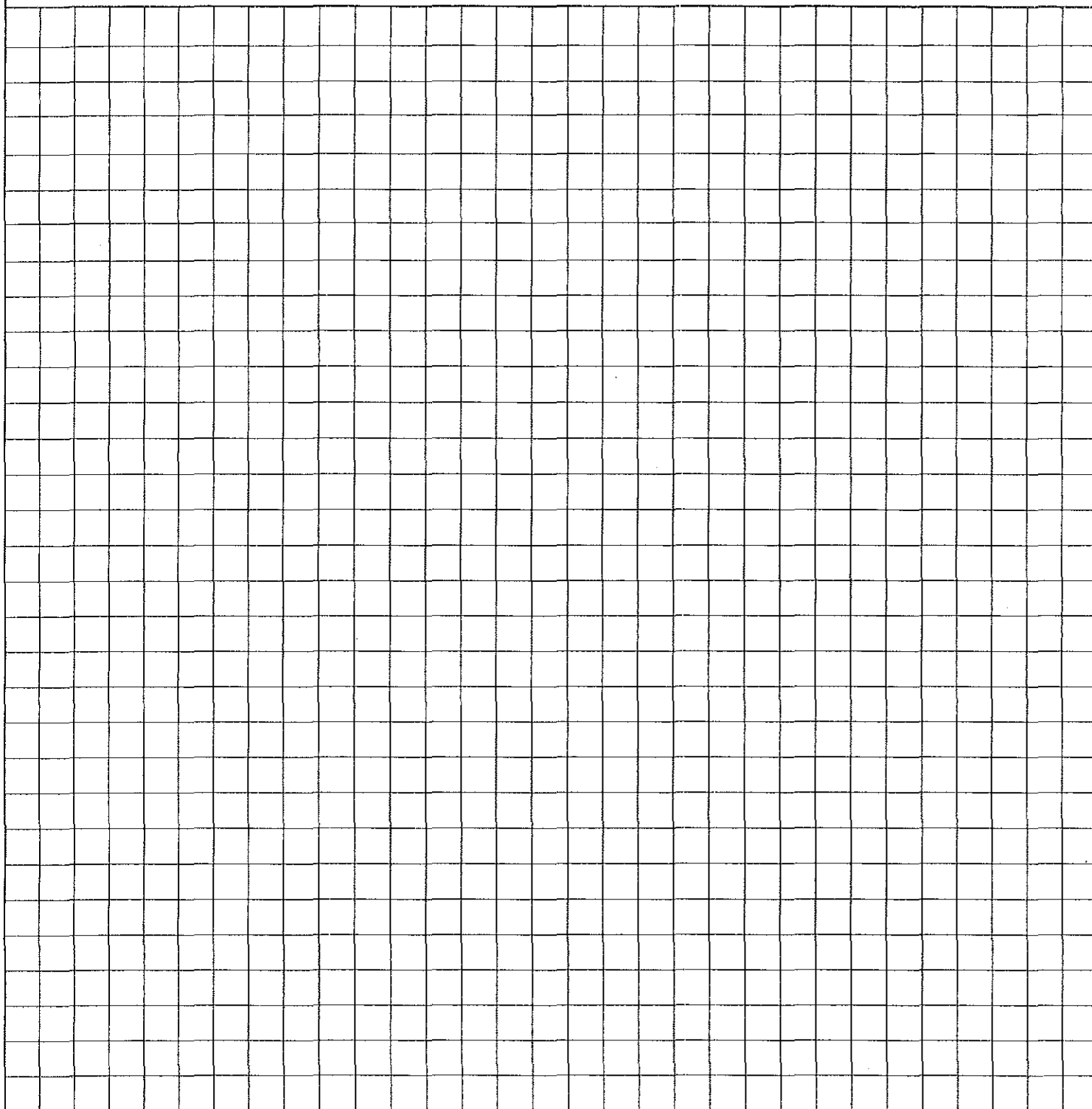
BUILDING PERMIT NUMBER:	APPROVAL SIGNATURE:	
ISSUE DATE:		
PERMIT FEE:		
PLAN REVIEW FEE:	BOND:	DATE:

MINIMUM BUILDING SETBACK MUST BE

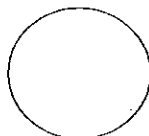
1. 100' OFF ROAD RIGHT -OF- WAY
2. 25' OFF SIDE EASEMENT
3. 50' OFF REAR EASEMENT

MUST SHOW ALL BUILDING ON SITE OR PLOT PLAN, MUST SHOW ALL 4 SIDES DISTANCE TO PROPERTY LINES & CORNER, LOTS REQUIRE BOTH ROAD SETBACK. MUST HAVE PRIVATE SEWAGE DISPOSAL SYSTEM, WELL, EDISON POLES CLEARLY MARKED.

IX. SITE OR PLOT PLAN - FOR APPLICANT USE

A large grid for drawing a site or plot plan. The grid consists of 20 columns and 30 rows of squares, providing a space for the applicant to draw the site layout, including buildings, setbacks, and other features.

INDICATE DIRECTION OF NORTH WITHIN THE CIRCLE:



ZONING APPROVAL SIGNATURE:

DATE:

ELECTRICAL PERMIT APPLICATION
EMMETT TOWNSHIP
 11100 DUNNIGAN ROAD, EMMETT, MI 48022

PAUL RAICEVICH ELECTRICAL INSPECTOR
 FOR INSPECTIONS CALL 586 873-2660

ELECTRICAL PERMIT # _____ Date _____
 BUILDING PERMIT # _____ Date _____

1. JOB LOCATION:
 NAME OF OWNER/AGENT _____

STREET ADDRESS & JOB LOCATION (Street Number & Name) _____ City _____ State _____ Zip _____

BETWEEN WHAT ROADS: _____

2. CONTRACTORS/HOME OWNER INFORMATION:

CONTRACTOR _____ HOMEOWNER NAME _____ (check appropriate box) _____ LICENSE NO. _____ EXPIRATION DATE _____

STREET ADDRESS (Street Number & Name) _____ City _____ State _____ Zip _____

PHONE NUMBER _____ FEDERAL ID NUMBER (or exemption) _____

WORKERS COMPENSATION Ins. Carrier (or exemption) _____ MESC EMPLOYERS ID NO. (or exemption) _____

SIGNATURE OF LICENSEE OR HOMEOWNER (Homeowner Must Sign Affidavit Below) _____

3. TYPE OF JOB:

SINGLE FAMILY 1. NEW 2. REMODEL
 OTHER 3. NEW 4. REMODEL 5. SPECIAL INSPECTION
 6. MOBILE HOME SETUP 7. MODULAR HOME SETUP

4. PLAN REVIEW REQUIRED

A PLAN REVIEW MAY BE REQUIRED BEFORE WORK IS STARTED ON ANY BUILDING OTHER THAN A SINGLE DWELLING LESS THAN 3,500 SQUARE FEET. HAVE PLANS BEEN SUBMITTED FOR REVIEW
 YES NO NOT REQUIRED

5. FEE CHART: Enter the number of items being installed, multiply by the unit price & enter total fee.

FEE ITEMS			TOTAL	FEE ITEMS			TOTAL
1. APPLICATION FEE	\$50.00	1	\$ 50.00	GENERATORS			
2. SERVICE thru 200 Amp.	25.00			19. UNITS Up to 20 K.V.A. & H.P.	20.00		\$
3. Over 200 Amp thru 600 Amp.	30.00			20. UNITS 21 to 50 K.V.A. & H.P.	25.00		
4. Over 600 Amp thru 800 Amp.	35.00			21. UNITS 50 & over K.V.A. & H.P.	30.00		
5. Over 800 Amp thru 1200 Amp.	40.00			22. FIRE ALARMS up to 10 Devices	50.00		
6. Over 1200 Amp. GFI ONLY	50.00			23. Alarms 11 to 20 Devices	100.00		
7. CIRCUITS	5.00			24. Alarms over 20 Devices	\$5/ ea.		
8. LIGHT FIXTURES/Outlets- Per 25	10.00			25. ENERGY RETROFIT - Temp Control	45.00		
9. DISHWASHER	8.00			26. CONDUIT Only or Ground Only	45.00		
10. FURNACE - Unit Heater	8.00			27. Special Safety Insp. (Incl .Cert. Fee)	50.00		
11. ELECT. HEATING UNITS baseboard	10.00			K.V.A., H.P., WIND TURBINES, *** EVSE and ****PV MODULES:			
12. POWER OUTLETS range-dryer-etc.	10.00			28. Units up to 20 K.V.A. or H.P./			
13. SIGNS - Per Unit	10.00			Per PV Module	6.00		
14. Letter - Each	15.00			29. Units 21 to 50 K.V.A. or H.P./			
15. Neon - Each 25 feet	20.00			Per PV Module	10.00		
16. Feeders-Bus Ducts, etc. - Per 50'	10.00			30. Units 50 & over K.V.A. or H.P. /			
17. Mobile Home Park Site	25.00			Per PV Module	12.00		
18. Recreational Vehicle Park Site	20.00			31. ADDITIONAL INSPECTION	50.00		
				32. FINAL INSPECTION	50.00	1	\$ 50.00

MAKE CHECKS PAYABLE TO: EMMETT TOWNSHIP

TOTAL FEES

6. HOMEOWNER AFFIDAVIT:

I hereby certify the electrical work described on this permit application shall be installed by myself in my home in which I am living or about to occupy. All work shall be installed in accordance with the State Electrical Code and shall not be enclosed, covered up or put into operation until it has been inspected and approved with the Township Electrical Inspector. I will cooperate with the Township Electrical Inspector and assume the responsibility to arrange for necessary inspections.

SIGNATURE _____

JAN 12 2012
 *** EVSE - Elect vehicle supply eqpt
 **** PV MODULES - Photovoltaic

OFFICE OF
 ADMINISTRATIVE SERVICES

MECHANICAL PERMIT APPLICATION

Emmett Township, Emmett, MI 48022

AUTHORITY: ACT 230, PA 1972, as Amended
 COMPLETION: Installation Shall Not Be Started
 Until Application is Filed
 PENALTY: Written Order To Stop Construction

Date of Application:
Permit No.
Property I.D. #

I. JOB LOCATION

Name of Owner/Agent	Has a building permit been obtained for this project? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not required		
Street Address & Location (Street No. and Name)	City/Village	Township	County

II. CONTRACTOR/HOMEOWNER INFORMATION

<input type="checkbox"/> Contractor <input type="checkbox"/> Homeowner Name (Check Appropriate Box)		License Number	Expiration Date
Address (Street No. and Name)		City	State
Telephone Number	Date of Birth	Federal Employer ID Number (or reason for exemption)	
Workers Compensation Insurance Carrier (or reason for exemption)		MESC Employer Number (or reason for exemption)	

III. TYPE OF JOB

<input type="checkbox"/> Single Family	<input type="checkbox"/> New	<input type="checkbox"/> Premanufactured Home Setup (State Approved)
<input type="checkbox"/> Other	<input type="checkbox"/> Alterations	<input type="checkbox"/> Manufactured Home Setup (HUD Mobile Home)

IV. PLAN REVIEW REQUIRED

See Section VII. for plan review requirements before completing this section.		
<input type="checkbox"/> A. Plans not required.	<input type="checkbox"/> C. Plans required but not yet submitted.	
<input type="checkbox"/> B. Plans Required and Submitted.		

V. APPLICANT SIGNATURE

Section 23a of the State Construction Act of 1972, Act No. 230 of the Public Acts of 1972, being section 125.1523a of the Michigan Compiled Laws, 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 Licensee or Homeowner	(Homeowner must also sign affidavit below)

VI. HOMEOWNER AFFIDAVIT

I hereby certify the mechanical work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the State Mechanical Code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the Township Mechanical Inspector. I will cooperate with the Township Mechanical Inspector and assume responsibility to arrange for necessary inspections.
Signature of Homeowner

VII. PLAN REVIEW REQUIREMENT

Plans and specifications for new construction work, alteration, repair, expansion, addition, or modification work shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to Act No. 299 of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's signature and seal. A PLAN REVIEW IS REQUIRED BEFORE A PERMIT CAN BE ISSUED. Exception 1: Alterations and repair work determined by the mechanical official to be of a minor nature. Exception 2: Work completed by a governmental subdivision or state agency costing less than \$15,000.00. Exception 3: A building of use group R-2, R-3, or R-4 containing not more than 3,500 square feet of building area. Exception 4: A building of use group B, M or S-2 having HVAC equipment only, with one fire area and not more than 3,500 square feet.

COMPLETE APPLICATION ON BACK SIDE

VIII. FEE CLARIFICATIONS

ITEM #2, RESIDENTIAL HEATING SYSTEM:

This item is used for the installation of a heating system in a new residential structure, Items #10; Gas Piping and #18; Duct **SHOULD NOT BE** charged. Replacement systems should be itemized.

IX. FEE CHART - Enter the number of items being installed, multiply by the unit price for total fee.

	FEE	#ITEM	TOTAL
1. Application Fee (non-refundable)	\$50.00	1	\$50.00
2. Residential Heating System (includes duct & pipe)	\$50.00		
3. Gas/Oil burning Equipment New and/or Conversion Units	\$30.00		
4. Residential Boiler	\$30.00		
5. Water Heater	\$5.00		
6. Flue/Vent Damper	\$5.00		
7. Solid Fuel Equip. (includes chimney) <input type="checkbox"/> Gas Burning Fireplace	\$30.00		
8. Chimney, Factory built-installed separately	\$25.00		
9. Solar; set of 3 panels (includes piping)	\$20.00		
10. Gas piping; each opening - new installation	\$5.00		
11. Air Conditioning	\$30.00		
12. Heat Pumps; Geo Thermal	\$30.00		
13. Bath & Kitchen exhaust Tanks	\$5.00		
14. Above ground	\$20.00		
15. Below ground	\$25.00		
16. Humidifiers	\$10.00		
17. Piping - minimum \$25.00	\$. 05 / ft.		
18. Duct - minimum \$25.00	\$. 10 / ft.		

	FEE	#ITEM	TOTAL
19. Heat Pumps; Commercial (pipe not included)	\$20.00		
Air Handlers/Heat Wheels			
20. Under 10,000 CFM	\$20.00		
21. Over 10,000 CFM	\$60.00		
22. Commercial Hoods	\$15.00		
23. Heat Recovery Units	\$10.00		
24. V.A.V. Boxes	\$10.00		
25. Unit Ventilators	\$10.00		
26. Unit Heaters (Terminal Units)	\$15.00		
27. Fire Suppression/Protection - minimum \$20.00	\$. 75 per head		
28. Evaporator Coils	\$30.00		
29. Refrigeration (Split System)	\$30.00		
30. Chiller	\$30.00		
31. Cooling Towers	\$30.00		
32. Compressor	\$30.00		
33. Special/Safety Inspection	\$50.00		
34. Rough & Additional Inspection	\$50.00		
35. Final Inspection	\$50.00		
36. Plan Review:(per hour)	\$50.00		

TOTAL FEES

X. INSTRUCTIONS FOR COMPLETING APPLICATION

GENERAL: Mechanical work shall not be started until the application for permit has been filed with the Township. All installations shall be in conformance with the State Mechanical Code. No work shall be concealed until it has been inspected.

The name of the inspector and the telephone number will be provided on the permit form. When ready for an inspection, call the inspector providing as much advance notice as possible. The inspector will need the location and permit number.

EXPIRATION OF PERMIT: A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if the authorized work is not commenced within six months after issuance of the permit or if the authorized work is suspended or abandoned for a period of six months after the time of commencing the work. **A PERMIT WILL BE CANCELLED WHEN NO INSPECTIONS ARE REQUESTED AND CONDUCTED WITHIN SIX MONTHS OF THE DATE OF ISSUANCE OR THE DATE OF A PREVIOUS INSPECTION. CANCELLED PERMITS CANNOT BE REFUNDED OR REINSTATED.**

MAKE CHECKS PAYABLE TO:

EMMETT TOWNSHIP

SEND APPLICATIONS TO:

EMMETT TOWNSHIP
11100 DUNNIGAN ROAD
EMMETT, MI 48022

FOR INSPECTIONS CALL:

RECEIVED
DANIEL W. JEX
(810) 531-3030
(810) 982-8419 2017

WHEN PROPERLY VALIDATED (IN SPACE BELOW) THIS IS YOUR PERMIT

OFFICE OF ADMINISTRATIVE SERVICES

RECEIPT NO: _____

DATE ISSUED: _____

CASH CHECK NO: _____

PLUMBING PERMIT APPLICATION
 Emmett Township, Emmett, MI 48022

AUTHORITY: ACT 230, PA 1972, as Amended
 COMPLETION: Installation Shall Not Be Started
 Until Application is Filed
 PENALTY: Written Order To Stop Construction

Date of Application:
 Permit No.
 Property I.D.#

I. JOB LOCATION

Name of Owner/Agent	Has a building permit been obtained for this project? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not required		
Street Address & Location (Street No. and Name)	City/Village	Township	County

II. CONTRACTOR/HOMEOWNER INFORMATION

<input type="checkbox"/> Contractor <input type="checkbox"/> Homeowner Name (Check Appropriate Box)		License Number	Expiration Date
Address (Street No. and Name)		City	State
Telephone Number	Date of Birth	Federal Employer ID Number (or reason for exemption)	
Workers Compensation Insurance Carrier (or reason for exemption)		MBSC Employer Number (or reason for exemption)	

III. TYPE OF JOB

<input type="checkbox"/> Single Family	<input type="checkbox"/> New	<input type="checkbox"/> Premanufactured Home Setup (State Approved)
<input type="checkbox"/> Other	<input type="checkbox"/> Alterations	<input type="checkbox"/> Manufactured Home Setup (HUD Mobile Home)

IV. PLAN REVIEW REQUIRED

See Section VII. for plan review requirements before completing this section.
 A. Plans not required. C. Plans required but not yet submitted.
 B. Plans Required and Submitted

V. APPLICANT SIGNATURE

Section 23a of the State Construction Act of 1972, Act No. 230 of the Public Acts of 1972, being section 125.1523a of the Michigan Compiled Laws, 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 Licensee or Homeowner (Homeowner must also sign affidavit below)

VI. HOMEOWNER AFFIDAVIT

I hereby certify the plumbing work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the State Plumbing Code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the Township Plumbing Inspector. I will cooperate with the Township Plumbing Inspector and assume responsibility to arrange for necessary inspections.

Signature of Homeowner

VII. PLAN REVIEW REQUIREMENT

Plans and specifications for new construction work, alteration, repair, expansion, addition, or modification work shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to Act No. 299 of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's signature and seal.
A PLAN REVIEW IS REQUIRED BEFORE A PERMIT CAN BE ISSUED.
 Exception 1: Alterations and repair work determined by the Plumbing official to be of a minor nature.
 Exception 2: Work completed by a governmental subdivision or state agency costing less than \$15,000.00.
 Exception 3: One or two family dwelling containing not more than 3,500 square feet of building area.
 Exception 4: Assembly, Business, Mercantile and Storage buildings with a required plumbing fixture count less than 12.

COMPLETE APPLICATION ON BACK SIDE

VIII. LEAD FREE NOTICE

The State Construction Code Act, Act No. 230 of the Public Acts of 1972, as amended, requires pipes, pipe fittings, solder or flux, which are used in the installation or repair of a plumbing system in a building or structure, providing water for human consumption or a public water system, be lead free. Lead free is defined as solder or flux containing not more than 0.2% lead; and pipe and pipe fittings containing not more than 8% lead. These provisions do not apply to leaded joints necessary for the repair of cast iron pipes.

IX. FEE CLARIFICATIONS

ITEM #3, FIXTURES, FLOOR DRAINS, SPECIAL DRAINS, & WATER CONNECTED APPLIANCES INCLUDE:

Water Closets	Sink (any description)	Slop Sink	Drinking Fountain	Floor Drain	Water Outlet or connection to any Make-up Water Tank
Bathtub	Emergency Eye Wash	Bidet	Condensate Drain	Roof Drain	Water Outlet or connection to Heating System
Lavatories	Emergency Shower	Cuspidor	Washing Machine	Grease Trap	Water Outlet or connection to Filters
Shower Stall	Garbage Grinder	Dishwasher	Acid Waste Drain	Starch Trap	Connection to Sprinkler System (Irrigation)
Laundry Tray	Water Outlet Cooler	Refrigerator	Embalming Table	Plaster Trap	Water Connected Sterilizer
Urinal	Ice Making Machine	Water Heater	Bed Pan Washer	Water Softener	Water Connected Dental Chair
Autopsy	Water Connected Still				Water Connection to Carbonated Beverage Dispensers

PLUS ANY OTHER FIXTURE, DRAIN, OR WATER CONNECTED APPLIANCE NOT SPECIFICALLY LISTED

X. FEE CHART - Enter the number of items being installed, multiply by the unit price for total fee.

	FEE	#ITEM	TOTAL
1. Application Fee (non-refundable)	\$50.00	1	\$50.00
2. Air admittance valve	\$5.00 each		
3. Fixtures, floor drains, special drains, water connected appliances	\$5.00 each		
4. Stacks (soil, waste, vent and conductor)	\$3.00 each		
5. Sewage ejectors, sumps	\$5.00 each		
6. Sub-soil drains	\$5.00 each		
Water Service			
7. Less than 2"	\$ 5.00		
8. 2" to 6"	\$25.00		
9. Over 6"	\$50.00		
10. Connection bldg. drain - bldg. sewers	\$ 5.00		
Sewers (sanitary, storm, or combined)			
11. Less than 6"	\$ 5.00		
12. 6" & Over	\$25.00		
13. Manholes, Catch Basins	\$5.00 each		
14. Domestic water treatment and filtering equipment	\$ 5.00		

	FEE	#ITEM	TOTAL
15. Medical Gas Systems	\$45.00		
Watering Distributing Pipe (system)			
16. 3/4" Water Distribution Pipe	\$ 5.00		
17. 1" Water Distribution Pipe	\$10.00		
18. 1 1/4" Water Distribution Pipe	\$15.00		
19. 1 1/2" Water Distribution Pipe	\$20.00		
20. 2" Water Distribution Pipe	\$25.00		
21. Over 2" Water Distribution Pipe	\$30.00		
22. Reduced pressure zone back-flow preventer	\$5.00 each		
23. Special/Safety Inspection	\$50.00		
24. Rough & Underground Inspection	\$50.00		
25. Final Inspection	\$50.00		50.00
26. Plan Review (per hour)	\$50.00		

TOTAL FEES

MAKE CHECKS PAYABLE TO:

EMMETT TOWNSHIP

SEND APPLICATIONS TO:

**EMMETT TOWNSHIP
11100 DUNNIGAN ROAD
EMMETT, MI 48022**

FOR INSPECTIONS CALL:

**DANIEL W. JEX
(810) 531-3030
(810) 982-8419**

OFFICE OF ADMINISTRATIVE SERVICES

XI. INSTRUCTIONS FOR COMPLETING APPLICATION

GENERAL: Plumbing work shall not be started until the application for permit has been filed with the Township. All installations shall be in conformance with the State Plumbing Code. No work shall be concealed until it has been inspected.

The name of the inspector and the telephone number will be provided on the permit form. When ready for an inspection, call the inspector providing as much advance notice as possible. The inspector will need the location and permit number.

EXPIRATION OF PERMIT: A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if the authorized work is not commenced within six months after issuance of the permit or if the authorized work is suspended or abandoned for a period of six months after the time of commencing the work. **PERMIT WILL BE CANCELLED WHEN NO INSPECTIONS ARE REQUESTED AND CONDUCTED WITHIN SIX MONTHS OF THE DATE OF ISSUANCE OR THE DATE OF A PREVIOUS INSPECTION. CANCELLED PERMITS CANNOT BE REFUNDED OR REINSTATED.**

WHEN PROPERLY VALIDATED (IN SPACE BELOW) THIS IS YOUR PERMIT

RECEIPT NO: _____ DATE ISSUED: _____ CASH CHECK NO: _____



City of Grand Blanc

203 E. Grand Blanc Rd.
Grand Blanc, MI 48439

www.cityofgrandblanc.com

810-694-1118
Fax 810-694-9517

MAYOR

Susan J. Soderstrom

CITY COUNCIL

Paula L. Nas - Mayor Pro-Tem
Lisa A. Blondell
John W. Creasey
Chris Douglas
Julie M. Nielsen

CITY MANAGER

Wendy L. Jean-Buhrer

**CITY CLERK-
ASST. CITY MANAGER**

Bethany J. Smith

**FINANCE DIRECTOR-
TREASURER**

Dianne M. Waterworth

CITY ASSESSOR

Tonya Lall

CITY ATTORNEY

Walter P. Griffin

April 12, 2017

Construction Code Commission
611 W. Ottawa
Lansing, MI 48933

Re: Application to Administer and Enforce

Dear Commission Members:

The City of Grand Blanc submitted the Application to Administer and Enforce In January 2017. The City was notified on March 15, 2017, regarding additional requirements. I am responding to the reasoning behind the local administration and enforcement of the electrical, plumbing and mechanical code.

The City currently administers the building code. In 2012, City Council passed the resolution to administer and enforce the electrical, plumbing and mechanical codes, as well as directing administration to proceed with Construction Code Commission approval processes. In 2015, City administration changed; and offering the remaining trades within the City's departments became a priority.

The City's goal is to improve the service provided to builders, contractors and homeowners as the plan review, permitting and inspections will be conducted by one governmental unit instead of two. The City has currently adopted the latest Building, Mechanical, Electrical and Plumbing codes.

The City has also become engaged as a Redevelopment Ready Community through Michigan Economic Development Corporation's program. Lessening the time for the trades to be reviewed and inspected means businesses are in the community operating faster.

If you have any questions, please feel free to contact me.

Thank you,

Wendy L. Jean-Buhrer
City Manager

CITY OF GRAND BLANC
 FY 2016-2017 FINAL AMENDED BUDGET
 FY 2017-2018 AMENDED BUDGET
 FY 2018-2019 ORIGINAL BUDGET

* = Proposed Amended and Original - Finance Committee

GL NUMBER	DESCRIPTION	Date of Action:						
		FY 2015-2016	FY 2016-2017	AMENDED 1/11/2017 FY 2016-2017	AMENDED * FY 2016-2017	ORIGINAL 5/11/2016 FY 2017-2018	REQUESTED AMENDED * FY 2017-2018	REQUESTED ORIGINAL * FY 2018-2019
		ACTUAL 5/31/2016	ACTUAL 3/16/2017	AMENDED BUDGET	AMENDED BUDGET	ORIGINAL BUDGET	AMENDED BUDGET	ORIGINAL BUDGET
Fund 101 - GENERAL FUND								
Revenues								
Dept 000-REVENUE								
101-000-403.000	CURRENT TAXES	2,179,225	2,087,303	2,127,000	2,127,000	2,148,000	2,175,000	2,218,500
101-000-405.000	PAYMENT IN LIEU OF TAXES	1,935	0	0	0	0	0	0
101-000-446.000	PENALTIES & INTEREST	11,282	13,330	21,000	21,000	21,000	21,000	21,000
101-000-501.000	NON-BUSINESS LICENSES	170,517	125,663	168,000	168,000	168,000	168,000	168,000
101-000-504.000	BUILD., ELEC., MECH., PLUM. REV	80,057	55,446	105,000	95,000	155,000	195,000	215,000
101-000-553.000	TRANSFER FROM - SEWER	0	16,458	16,455	16,455	0	0	0
101-000-554.000	TRANSFER FROM - WATER	0	16,458	16,455	16,455	0	0	0
101-000-570.000	LIQUOR LICENSES	7,096	6,873	7,500	6,900	7,500	7,500	7,500
101-000-574.000	MICHIGAN REVENUE SHARING	669,029	471,885	698,280	649,760	667,080	649,760	649,760
	EVIP/CVT Revenue Sharing/Statutory		0		44,280	44,280	44,280	44,280
101-000-607.202	MAJOR STREET ADMINISTRATION FEE	12,500	12,500	12,500	12,500	12,500	12,500	12,500
101-000-607.203	LOCAL STREET ADMINISTRATION FEE	7,000	7,000	7,000	7,000	7,000	7,000	7,000
101-000-607.248	DDA ADMINISTRATION FEE	500	500	500	500	500	500	500
101-000-607.590	SEWER ADMINISTRATION FEE	19,000	9,500	9,500	9,500	9,500	9,500	9,500
101-000-607.591	WATER ADMINISTRATION FEE	35,000	17,500	17,500	17,500	17,500	17,500	17,500
101-000-618.000	COLLECTION FEES	100,119	102,580	102,000	104,000	99,000	104,000	104,000
101-000-622.000	REZONING FEES	8,490	5,702	6,500	6,500	6,500	6,500	6,500
101-000-627.000	ACCIDENT REPORTS	4,724	5,679	4,500	6,000	4,500	5,000	5,000
101-000-638.000	GB SCHOOL REIMBURSEMENT	45,000	0	45,000	45,000	45,000	45,000	45,000

CITY OF GRAND BLANC
 FY 2016-2017 FINAL AMENDED BUDGET
 FY 2017-2018 AMENDED BUDGET
 FY 2018-2019 ORIGINAL BUDGET

* = Proposed Amended and Original - Finance Committee

GL NUMBER	DESCRIPTION	Date of Action: FY 2015-2016 ACTUAL 5/31/2016	FY 2016-2017 ACTUAL 3/16/2017	AMENDED	AMENDED	ORIGINAL	REQUESTED	REQUESTED
				1/11/2017 FY 2016-2017 AMENDED BUDGET	* FY 2016-2017 AMENDED BUDGET	5/11/2016 FY 2017-2018 ORIGINAL BUDGET	* FY 2017-2018 AMENDED BUDGET	* FY 2018-2019 ORIGINAL BUDGET
101-000-660.000	POLICE FINES	11,964	10,764	15,000	15,000	15,000	15,000	15,000
101-000-673.000	INTEREST	10,109	1,561	9,700	9,700	9,700	9,700	9,700
101-000-676.001	LOCAL ST - EQUIP RENTAL AND WAGES	29,607	24,888	60,000	50,000	60,000	60,000	60,000
101-000-676.002	MAJOR ST - EQUIP RENTAL AND WAGES	29,684	38,306	45,000	50,000	40,000	50,000	40,000
101-000-677.000	RENTALS	7,405	2,275	8,600	5,600	8,600	8,600	8,600
101-000-678.000	DEBT SERVICE PAYMENT FROM LOCAL ST	100,000	0	0	0	0	0	100,000
101-000-680.000	SALE OF FIXED ASSETS	0	0	150,000	150,000	0	0	0
101-000-690.000	EMPLOYEE HEALTH INSURANCE	22,542	909	1,800	900	22,000	10,000	10,000
101-000-693.003	INSURANCE REBATES	17,399	27,545	26,500	27,500	15,000	15,000	15,000
101-000-693.007	FARMERS MARKET SPONSORSHIPS/DON.	11,112	8,719	10,700	10,700	10,700	10,700	10,700
101-000-694.000	MISCELLANEOUS	8,457	5,282	1,100	5,200	1,000	1,000	1,000
101-000-696.000	REFUSE CHARGES	298,807	205,244	300,000	308,000	315,610	315,610	325,080
101-000-696.001	REFUSE PENALTIES	5,387	4,665	5,600	5,600	5,600	5,600	5,600
Total Dept 000-REVENUE								
TOTAL Revenues		3,903,947	3,284,534	3,998,690	3,991,550	3,916,070	3,969,250	4,132,220

CITY OF GRAND BLANC
 FY 2016-2017 FINAL AMENDED BUDGET
 FY 2017-2018 AMENDED BUDGET
 FY 2018-2019 ORIGINAL BUDGET

* = Proposed Amended and Original - Finance Committee

GL NUMBER	DESCRIPTION	Date of Action:		AMENDED	AMENDED	ORIGINAL	REQUESTED	REQUESTED
		FY 2015-2016	FY 2016-2017	1/11/2017 FY 2016-2017	* FY 2016-2017	5/11/2016 FY 2017-2018	* FY 2017-2018	* FY 2018-2019
		ACTUAL 5/31/2016	ACTUAL 3/16/2017	AMENDED BUDGET	AMENDED BUDGET	ORIGINAL BUDGET	AMENDED BUDGET	ORIGINAL BUDGET
Dept 371-BUILD., ELECT, MECH, PLUM, CODE ENFORC								
101-371-703.000	SALARIES - CODE ENFORCEMENT	22,966	17,049	28,800	28,800	29,400	29,870	30,470
101-371-703.001	CONTRACTUAL - PLUMBING	0	0	0	0	0	20,000	30,000
101-371-703.002	CONTRACTUAL - ELECTRICAL	0	0	0	0	0	20,000	30,000
101-371-707.000	SALARIES - ADMINISTRATOR PT	42,366	33,677	54,600	54,600	55,700	56,400	57,530
101-371-715.000	SOCIAL SECURITY	4,998	3,881	5,850	5,850	6,000	6,500	6,500
101-371-717.000	DENTAL PLAN	1,914	1,832	2,000	2,000	2,200	2,220	2,470
101-371-719.000	HOSPITALIZATION	544	3,860	550	3,900	600	610	670
101-371-720.000	LIFE INSURANCE	742	574	1,000	1,000	1,100	1,460	1,620
101-371-727.000	OFFICE SUPPLIES	1,554	418	3,000	3,000	3,000	4,500	5,000
101-371-757.000	OPERATING SUPPLIES	260	1,354	1,000	1,500	1,000	2,500	3,000
101-371-864.000	CONFERENCES & MEETINGS	55	1,130	1,130	1,130	1,000	2,000	2,000
101-371-958.000	MEMBERSHIPS	523	40	1,000	1,000	600	900	900
101-371-985.000	CAPITAL OUTLAY	16,620	567	600	600	0	8,000	7,500
Total Dept 371-BUILDING INSPECTION/CODE ENFORCEMENT		92,542	64,381	99,530	103,380	100,600	154,960	177,660

City of Grand Blanc

203 East Grand Blanc Road • Grand Blanc, MI 48439

Ph: (810) 694-1118 Fax: (810) 694-9517

- Electrical Mechanical Plumbing Building DPW
- Foundation Backfill Rough Footing Sewer
- Overhead Underground Underslab Safety Site
- Service Above Ceiling DPW Final Masonary Insulation
- Other _____ Address: _____

Comments: _____

Date _____ Permit # _____ Insp. _____

City of Grand Blanc

Ph: (810) 694-1118 Fax: (810) 694-9517

Notice of Correction

Electrical Mechanical Plumbing Building DPW

Reason

Date _____ Permit # _____ Insp. _____

City of Grand Blanc

203 East Grand Blanc Road • Grand Blanc, MI 48439

Ph: (810) 694-1118 Fax: (810) 694-9517

Electrical Mechanical Plumbing Building

Fire Suppression Ansul DPW Site

FINAL

Comments:

Date: _____ Permit # _____ Insp. _____

CERTIFICATE OF OCCUPANCY



CITY OF GRAND BLANC
STATE OF MICHIGAN

Theodore Szczepanski, CBO
(810) 694-1118

Certificate Number **OF16-0007**

Premises Located At:

Issued: 06/22/2016

**CLIFF SUMMIT LLC
12341 WORTHINGTON CT
GRAND BLANC, MI 48439**

This is to certify that the occupancy of the structure at the noted location, having complied with the requirements of the ordinance(s) and building code, is approved for the occupancy by the City of Grand Blanc Building Department.

Building Permit Number

Use Group: **R-3**

Building Code In Effect

PB15-079

Construction Type: **V-B**

2015 MBC/MRC

Parcel ID#: **56-22-626-032**

Permit Type:

Building

Contractor: **Boulder Custom**

Type of Construction:

Residential New Construction

Lot Number:

Dwelling Units:

01

Square Feet: **1,623**

Automatic Sprinkler System

Required/Provided

Occupancy Load: **00**

Stipulations:

FULL OCCUPANCY FOR CLIFF SUMMIT LLC

In accordance with section 110.1 Michigan Building Code, 2012 Edition or Section R-110.1 Michigan Residential Code, 2015 Edition. This Certificate of Occupancy is issued for work completed and inspected per the issued building permit as noted above. This Certificate is valid only for the structures (s) and/or work authorized, completed and inspected for compliance.

Building Official Signature

Date: 04/03/2017

LEGAL NOTICE

Date _____

WHEREAS, violations of { Article _____, Section _____ of the Zoning Ordinance }
{ Article _____, Section _____ of the Building Code } have been found on
{ Article _____, Section _____ of the _____ Code }

these premises, IT IS HEREBY ORDERED in accordance with the above Code that all persons cease, desist from, and

STOP WORK

at once pertaining to construction, alterations or repairs on these premises
known as _____

All persons acting contrary to this order or removing or mutilating this notice are liable to arrest unless such action is authorized by the Department.

BUILDING OFFICIAL

CONDEMNED

AS

Dangerous and Unsafe

This Structure Known as _____

DANGER - KEEP OUT

All persons are hereby notified to keep out as long as this notice remains posted.
Any persons willfully destroying, mutilating or removing this card will be punished to the full extent of the law.

Posted under authority granted in Article _____ Section _____ of the _____ Code.

DATE POSTED

CODE OFFICIAL



FIELD CORRECTION NOTICE

LOCATION _____ PERMIT NO. _____

ISSUED TO _____
PERMIT HOLDER AND/OR ALL RESPONSIBLE PARTIES.

NOTICE DELIVERED TO _____

Upon inspection, violations of the _____ Sec. _____ were in evidence.

The following orders are hereby issued for their correction: _____

PLEASE CALL FOR INSPECTION WHEN CORRECTIONS HAVE BEEN COMPLETED. ACCEPTANCE AND APPROVAL BY AN INSPECTOR OF THIS DEPARTMENT IS REQUIRED. ALL CORRECTIONS MUST BE

MADE ON OR BEFORE _____.

DATE _____

BY _____

INSPECTOR

ORIGINAL

**CITY OF GRAND BLANC
RECORD OF BUILDING INSPECTIONS**

Permit No. _____ Date _____ Lot No. _____

Subdivision _____

Street No. _____

Inspection _____

Building Inspector _____

CERTIFICATION REQUESTING RESIDENTIAL SESC WAIVER EXEMPT PROJECTS

I, _____, the owner of the property located at _____, in the City/Township/Village of _____, Michigan, or the designated agent¹ of the owner of the property, do hereby affirm that I am requesting a soil erosion and sedimentation permit waiver based upon the one or more of the following:

Please check one or more of the following as applicable:

- The proposed project involves an earth change² that will disturb less than two hundred twenty-five feet square feet (225 ft²) and the earth change will not contribute sediment to lakes or streams. (See R323.1705(2)).
- The proposed project is a beach nourishment project permitted under part 325 of Act No. 451 of the Public Acts of 1994, as amended, being MCL § 324.32501 *et. seq.* (See R323.1705(1) (a)).
- the proposed project is for normal road and driveway maintenance, such as grading or leveling, that does not increase the width or length of the road or driveway and that will not contribute sediment to lakes or streams. (See R323.1705 (l) (b)).
- the proposed project involves an earth change of a minor nature that will be stabilized within twenty-four (24) hours of the initial earth disturbance and that will not contribute sediment to lakes or streams. (See R323.1705 (l) (c)).
- The proposed project consists of the installation of oil, gas, and mineral wells under permit from the supervisor of wells if the owner-operator is in compliance with the conditions of Part 91, of Act No. 451 of the Public Acts of 1994, as amended, being MCL § 324.32501 *et. seq.* as determined by the supervisor of wells. (See R323.1705 (l) (d)).
- The proposed project involves the planting of trees, shrubs, or other similar plants and soil erosion and sedimentation controls will be implemented as required, the earth change will be stabilized within twenty-four (24) hours of the initial earth disturbance, and soil erosion or sedimentation will not reasonably occur to any adjacent properties or the waters of the state. (See MCL § 324.9115a (l) (e) (i)).

¹ Designated agent is defined as "a person who has written authorization from the landowner to sign the application and secure a permit in the landowner's name." (See R323.1705(1) (c)).

² Earth change is defined as "a human-made change in the natural cover or topography of land, including cut and fill activities, which may result in or contribute to soil erosion or sedimentation of the waters of the state. Earth change does not include the practice of plowing and tilling soil for the purpose of crop production."

- o The proposed project involves the seeding or reseeding of lawns of less than one (1) acre, the seeded area is at least one hundred feet (100') from the waters of the state, and soil erosion and sedimentation controls will be implemented as required, the earth change will be stabilized within twenty-four (24) hours of the initial earth disturbance, and soil erosion or sedimentation will not reasonably occur to any adjacent properties or the waters of the state. (See M C L § 324.9115a(l)(e)(ii)).
- o The proposed project involves the seeding or reseeding of lawns closer than one hundred feet (100') from the waters of the state if the area to be seeded or reseeded does not exceed one hundred square feet (100 ft²), and soil erosion and sedimentation controls will be implemented as required, the earth change will be stabilized within twenty-four (24) hours of the initial earth disturbance, and soil erosion or sedimentation will not reasonably occur to any adjacent properties or the waters of the state. (See MCL § 324.9115a(l)(e)(iii)).
- o The proposed project involves the temporary stockpiling of soil, sand, or gravel not greater than a total of ten cubic yards (10 yds³) on the property, the stockpiling will occur at least one hundred feet (100') from the waters of the state, and soil erosion and sedimentation controls will be implemented as required, the earth change will be stabilized within twenty-four (24) hours of the initial earth disturbance, and soil erosion or sedimentation will not reasonably occur to any adjacent properties or the waters of the state. (See MCL § 324.9115a(l)(e)(iv)).
- o The proposed project involves seawall maintenance that does not exceed one hundred square feet (100 ft²), and soil erosion and sedimentation controls will be implemented as required, the earth change will be stabilized within twenty-four (24) hours of the initial earth disturbance, and soil erosion or sedimentation will not reasonably occur to any adjacent properties or the waters of the state. (See MCL § 324.9115a(l)(e)(v)).

Brief description of the project:

I understand that if a soil erosion and sedimentation control permit OR a waiver of a soil erosion and sedimentation control permit is issued, the above-mentioned property is not exempt from enforcement procedures under Part 91, of Act No. 451 of the Public Acts of 1994, as amended, being MCL § 324.32501 *et. seq.*

I hereby acknowledge that if a soil erosion and sedimentation control permit OR a waiver of a soil erosion and sedimentation control permit is issued, I hereby voluntarily grant the employees of the Genesee County Drain Commissioner's Office, Division of Water and Waste Services, or their designated agents permission to enter onto my property as set forth herein to ensure that the project conforms to the reason stated above as to why the proposed project qualifies for a soil erosion and sedimentation permit waiver. I further understand that if I revoke my consent for the employees of the Genesee County Drain Commissioner's Office, Division of Water and Waste Services, or their designated agents to enter onto the property set forth herein, the permit waiver is automatically revoked, I will need to resubmit a new soil erosion and sedimentation permit application or waiver certification, and I must cease all earth moving activities on the property.

I further understand that if I continue to perform earth moving activities on the property after revoking my consent for the employees of the Genesee County Drain Commissioner's Office, Division of Water and Waste Services, or their designated agents to enter onto the property set forth herein, I may be subject to one or more of the enforcement procedures set forth in Part 91 of Act No. 451 of the Public Acts of 1994, as amended, and the administrative rules promulgated thereunder.

I hereby acknowledge that the information contained herein is truthful and accurate to the best of my knowledge. I understand that if I knowingly make any false statement in this application it may result in a civil fine of not more than \$10,000.00 per day for each violation.

SIGNATURE OF PROPERTY OWNER: _____

Date Signed: _____

Printed Name of Property Owner: _____



CITY OF GRAND BLANC BUILDING DEPARTMENT FEE SCHEDULE

CONTRACTOR LICENSE REGISTRATION FEE - \$15.00

Subject to renewal at time of license expiration. New registration form and license copies required.

NOTE: Any regulated activity started prior to the applicant securing the permit will be charged an administrative charge at the same rate as the required permit fee not to exceed \$100. This shall be paid prior to the issuance of the required permit.

BUILDING PERMIT – CONSTRUCTION FEES (New construction, Additions & Alterations)

VALUES shall be based upon the greater of #1 or #2 as follows:

1. Valuation data found in the quarterly "Building Official & Code Administrator Publication" and as amended 5/8/03
2. Actual cost of construction when special features and upgrades not typical of normal construction are used

PERMIT FEE CALCULATION INFORMATION – Single Family Dwelling

1. The adjusted gross area modifier is 111 for new residential only (as amended 5/8/03)
2. Plan review is charged by square feet (see chart below)
3. An additional \$80.00 fee is charged for inspections
4. The re-inspection fee is \$80.00, payable prior to additional inspections for that permit

SETBACK/GRADE PERMIT REQUIRED – New Residential Construction

\$100 for the first acre plus \$25 for each additional acre
(exception: Metes and Bounds parcels five (5) acres or larger with single-family residential uses)

BUILDING PERMIT FEE COMPUTATION

Construction Fee Range			Permit Fee Computation Method/Rates
\$ 1.00	to	\$ 1,000.00	Base Fee - \$75.00
\$ 1,0001.00	to	\$ 100,000.00	\$100.00 + \$7.50/\$1,000 or part thereof over \$1,001 construction cost
\$ 100,001.00	to	\$ 500,000.00	\$842.00 + \$6.50/\$1,000 or part thereof over \$100,001 construction cost
\$ 500,001.00	and	OVER	\$4,086.00 + \$6.00/\$1,000 or part thereof over \$500,001 construction cost

TRADE PERMIT FEE COMPUTATION – SEE ADOPTED PERMIT APPLICATION FOR FEE SCHEDULE

BUILDING PLAN REVIEW FEES/RESIDENTIAL & COMMERCIAL

Use Group R-3 & R-4 – New Construction and Additions

0-1,000 sq. ft.	\$125.00	2,001-3,500 sq. ft.	\$175.00
1,001-2,000 sq. ft.	\$150.00	3,500 sq. ft. and OVER	\$(Construction cost x .0006)

All Other Use Groups* by Construction Cost (Plan review by a consultant is a pass-through charge)

Project "minor in nature" (as determined by Building Official)	\$100
Up to \$500,000.00	0.0019 of building valuation but not less than \$200
Over \$500,000.00	\$950 + 0.0006 of the building valuation over \$500,000

***Plan review fees for assembly, institutional uses, mercantile, covered mall, buildings with smoke control systems, motels, hotels and buildings greater than 2 stories shall be 1.5 times the fee as calculated above.**

ELECTRICAL, MECHANICAL and PLUMBING – RESIDENTIAL ONLY

3,500 – 5,000 sq. ft.	\$125.00	7,501 sq. ft. and OVER	\$150.00 + \$30/1,000 sq. ft.
5,001 – 7,500 sq. ft.	\$150.00		

ELECTRICAL, MECHANICAL & PLUMBING – COMMERCIAL ONLY

Plan review – ¼ building plan review amount for EACH trade (**\$100 per trade MINIMUM**)

FIRE SUPPRESSION – Includes review of Fire Pumps, Hose Stations and Stand Pipes

0-20 Heads	\$110.00	201-300 Heads	\$235.00
21-50 Heads	\$135.00	301-400 Heads	\$260.00
51-75 Heads	\$160.00	401-500 Heads	\$285.00
76-100 Heads	\$185.00	501 Heads and OVER	\$285 + 0.25 per add'l head
101-200 Heads	\$210.00		

Construction cost is based on the fee computed for the permits or submitted value, whichever is greater.

Limited Area Fire Suppression System - \$125.00	Fire Suppression System for Hood - \$125.00
---	---

MISCELLANEOUS PERMIT FEES			
Demolition			
Sheds, Garages & Accessory Structures over 100 sq. ft.		\$50.00	
Residential – Dwelling Structures		\$75 + \$5.00/1,000 sq. ft.	
Required Bond Payment		\$500 Refundable Bond	
Commercial & Industrial Structures		\$125 + \$5.00/1,000 sq. ft.	
Required Bond Payment		\$1,000 Refundable Bond	
Shed Permit – Building OR Planning/Zoning as follows:			
Zoning Compliance Permit from Planning/Zoning required for Residential use sheds 200 sq. ft. or less			
Zoning Compliance Permit from Planning/Zoning required for commercial/industrial sheds 120 sq. ft. or less			
All other sizes sheds/barns require Building Permit – Refer to permit fee computation schedule			
Mobile Home Set-Up (park Site)		\$275.00 per site	
Landfill/Excavation Permits		\$50 first acre + \$25 each additional acre	
Building Board of Appeals		\$400.00	
Cancelled or Voided Permits are subject to the following fees:			
Administrative Fee		\$75.00	
Plan Review		According to schedule above	
Inspections performed prior to voiding of permit		\$75 for each inspection performed	
GENERAL INSPECTION INFORMATION			
Most commonly requested and/or required inspections:			
Foundation Inspection	Backfill Inspection	Garage Footing Inspection	
Pea Rock/Sump & Drainage Insp.	Masonry Inspection	Rough Inspection	
Underslab/Visqueen	Insulation Inspection	Final Inspection	
A	Inspections will be made during regular working hours 9:00 AM – 5:00 PM, Monday through Friday		
B	Permit must be secured prior to commencement of any work		
C	Any special inspections or re-inspection: \$80 per hour/one (1) hour minimum		
D	Overtime inspections: \$80 per hour/two (2) hour minimum		
E	Removal of Stop Work Order: \$80		
REQUESTED INSPECTION FOR:			
Existing Structure for Code Violations (only at request of owner or tenant)			
Single Family Residential		\$300 each unit	
Multi-Family Residential		\$300 each unit	
Commercial/Industrial Building		\$400 + \$25/1,000 sq. ft.	
Payment of the required fee provides for Building, Electrical, Mechanical and/or Plumbing inspections to an existing structure, to be specified at time of application. One appointment will be scheduled and all inspections will be done simultaneously.			
Occupancy Inspection Only (Building Inspection Only)	Residential	\$100.00	PERMIT REQUIRED PRIOR TO SCHEDULING
	Commercial/Industrial	\$250.00	
Temporary C of O – Refundable Bond	Residential	\$2,500.00	Bond charge is \$2,500 or 110% of value of uncompleted items as estimated by Building Official, whichever is greater.
	Commercial/Industrial	\$2,500.00	
Temporary Occupancy will not be issued if code violations exist			
Lawn Mowing Services Rendered	Up to one (1) acre: \$165 + \$165 per additional acre		
Charges for debris removal will be charged pursuant to the contract with the selected mowing contractor.			
Administrative Costs:			
A 15% fee will be added to all invoices where City of Grand Blanc expends monies from the General Fund. Example: Board-ups, Fencing, Pool Draining, Lawn Mowing or Fire Clean-up			

FIRE PREVENTION



NEW CONSTRUCTION PERMIT APPLICATION

Charter Township Of Grand Blanc FIRE PREVENTION BUREAU

5371 South Saginaw Street, P.O. Box 1833, Grand Blanc, MI 48480
 Administrative / Inspections: (810) 424-2630 Fax: (810) 424-2631

BUILDING INFORMATION:

Business/Occupant Name: _____ Square Footage: _____
 Building Location: _____ Use Group: _____
 Building Owner: _____ Construction Type: _____

APPLICANT INFORMATION:

Application / Contractor: _____ Contact Name: _____
 Address: _____ Business Phone: _____
 _____ Cell Phone: _____
 License Number: _____ State Registration Number: _____
 Expiration Date: _____ Expiration Date: _____

PLAN REVIEW FEE SCHEDULE:

Fire Suppression Systems - Water

	Item #	Total
<input type="checkbox"/> 0 - 20 Heads	\$	_____
<input type="checkbox"/> 21 - 50 Heads	\$	_____
<input type="checkbox"/> 51 - 75 Heads	\$	_____
<input type="checkbox"/> 76 - 100 Heads	\$	_____
<input type="checkbox"/> 101 - 200 Heads	\$	_____
<input type="checkbox"/> 201 - 300 Heads	\$	_____
<input type="checkbox"/> 301 - 400 Heads	\$	_____
<input type="checkbox"/> 401 - 500 Heads	\$	_____
<input type="checkbox"/> 501 Heads & Above	\$	_____

**Total
Plan Review Fee:**

Other Types Of Systems

	Item #	Total
<input type="checkbox"/> Ansul	\$	_____
<input type="checkbox"/> Fire Pumps	\$	_____
<input type="checkbox"/> Stand Pipes	\$	_____
<input type="checkbox"/> Fire Alarm Systems	\$	_____
<input type="checkbox"/> Hazardous Materials	\$	_____
<input type="checkbox"/> Industrial Ovens	\$	_____
<input type="checkbox"/> Compressed Gases	\$	_____
<input type="checkbox"/> Painting & Dipping Systems	\$	_____

All Additional Plan Reviews Are Based On \$100.00 Per Review Plus \$50.00 Per Hour

NEW CONSTRUCTION FEE SCHEDULE:

Automatic Fire Suppression

- Water Riser \$100.00 Add \$40.00 Per 100 Heads
- Range Hood System \$50.00 Per System / Per 20 Heads
- Other \$100.00 Per System / Per 20 Heads
- Fire Pumps \$100.00 Per Pump
- Stand Pipes \$100.00 Per Riser

Item #	Total
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____

Total
Permit Fee:

Other Types Of Systems

- Compressed Gases \$100.00 Per System
- Fire Alarm Systems \$100.00 Add \$1.00 Per Device
- Flammable Materials \$100.00 Minimum or SQ FT x \$.009 (Whichever Is Greater)
- Hazardous Materials \$100.00 Minimum or SQ FT x \$.013 (Whichever Is Greater)
- Industrial Ovens \$100.00 Per Oven
- LP Gas Systems \$100.00 Per System

Item #	Total
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____

Permit Fee Includes Two (2) Inspections. There Will Be A \$50.00 Fee For Each Additional Inspection Required.

DESCRIPTION OF WORK:

APPLICANT SIGNATURE:

Signature: _____

Date: _____

Print Name: _____

DISCLOSURE:

This Department Will Not Discriminate Against Any Individual Or Group Because Of Race, Sex, Religion, Age, National Origin, Color, Martial Status, Handicap Or Political Beliefs.

AUTHORITY -- Public Act 207 of 1941, As Amended

COMPLETION -- Mandatory To Obtain Permit

PENALTY -- Permit Cannot Be Issued

FOR FIRE PREVENTION BUREAU USE ONLY:

Application Approved As Submitted

Application Denied As Submitted Due To: _____

Approval Signature: _____

Date: _____

The City will be contracting with individuals to perform electrical, plumbing and mechanical services. No third party or other governmental agency will be contracted with.

**AGREEMENT FOR
INDEPENDENT BUILDING INSPECTION FOR
ELECTRICAL/PLUMBING/MECHANICAL AND SITE PLAN REVIEW SERVICE**

This Agreement, entered into this _____ by and between the City of Grand Blanc, a Michigan City, located in Genesee County, Michigan at 203 E. Grand Blanc Road, Grand Blanc, Michigan, hereafter referred to as The City, and _____ referred to as The Independent Contractor for the City of Grand Blanc.

The parties hereby stipulate and agree as follows that:

The Independent Contractor will perform inspection and review services only at the request of the City Building Official.

The Independent Contractor serves at the pleasure of the City Manager. Any code referenced to a "code official" is inapplicable to the Independent Contractor. Any code adopted by the City that refers to a "code official" is inapplicable to the Independent Contractor.

The term of this agreement is for a period of one (1) year from the date of its execution and shall renew annually, unless terminated at any time by The City, the Building Official, or the Independent Contractor.

The Independent Contractor will provide their own tools and vehicles to carry out the duties described below:

The City will pay the contractor fifteen (\$15.00) dollars per hour for any related duties as may be determined from time to time by the Building Official. Residential home plan review will be paid at one half (1/2) of the current Council approved fee schedule. Commercial plan review fees for the Building Inspector shall be paid at one half (1/2) of the current Council approved fee schedule. Commercial plan review fees for the Trade Inspectors (Electrical, Mechanical, and Plumbing) shall be paid at one quarter (1/4) of the current Council approved fee schedule. Should electrical, mechanical and/or plumbing plan review be required for a new house (over 3,500 square feet, meeting the criteria for electrical, mechanical, and/or plumbing plan review), the Trade Independent Contractor will be paid one half (1/2) of the current fee schedule as approved by the City Council.

The Independent Contractor is not a City employee and not eligible for health insurance, worker's compensation, pension or any other benefits.

The Independent Contractor is free to provide similar services to any other municipality or individual, but shall not solicit clients while performing inspections for the City.

This is the entire Agreement between the Independent Contractor and the City.

Acknowledgement:

Signed this _____ day of _____, 20__

Independent Contractor:

THE CITY OF
GRAND BLANC:

City Manager

City Clerk

RICK SNYDER
RNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY BUILDING OFFICIAL
BUILDING INSPECTOR
PLAN REVIEWER

THEODORE J SCZEPANSKI

GRAND BLANC MI 48439

BCC-149 (Rev. 9/06) REGISTRATION NO. EXPIRATION DATE
002112 09/16/18

THIS DOCUMENT IS DULY
ISSUED UNDER THE LAWS OF
THE STATE OF MICHIGAN



THEODORE SCZEPANSKI
CERTIFIED BUILDING OFFICIAL

The individual named hereon is CERTIFIED in the category shown,
having been so certified pursuant to successful completion of the
prescribed written examination(s).

Expiration date: January 12, 2018

No. 5216477

Theodore Sczepanski

Not valid unless signed by certificate holder.

ICC certification attests to competent knowledge of codes and standards

Glenn Thomas 2015 - 2018 Case cycle

RICK SNYDER
GOVERNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY MECHANICAL INSPECTOR
PLUMBING INSPECTOR
PLAN REVIEWER

GLENN A THOMAS

GENESEE MI 48437

REGISTRATION NO.

EXPIRATION DATE

THIS DOCUMENT IS DULY
ISSUED UNDER THE LAWS OF
THE STATE OF MICHIGAN

BCC-149 (Rev. 9/06)

004299

09/16/18

RICK SNYDER
GOVERNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY ELECTRICAL INSPECTOR
PLAN REVIEWER

MICHAEL R KYLE

HOLLY MI 48442

REGISTRATION NO.

EXPIRATION DATE

BCC-149 (Rev. 9/06)

000974

09/16/18

THIS DOCUMENT IS DULY
ISSUED UNDER THE LAWS OF
THE STATE OF MICHIGAN

Building Board of Appeals – Appointed by Township Board for 4-year term [from Oct 1 to Sep 30] [On March 24, 1988, the Township Board authorized them to serve for City] Appointments from Township Board Minutes of September 2004 and February 9, 2006. Appointments updated on September 22, 2009.

Compensation

*Jeff Bennett (01-98)	[REDACTED]	[REDACTED]	[REDACTED]	FAX 767-1650		10-09 to 09-13
Mike Wise (01-98)	[REDACTED] Holly 48442 [REDACTED] Clarkston, MI 48346	[REDACTED]	(248) [REDACTED] [REDACTED]	FAX (248) 634-6646		10-09 to 09-13
Steve Edwards (12-95)	[REDACTED] Linden, MI 48451	[REDACTED]	[REDACTED]	FAX 735-8000		10-12 to 09-16
Gregory Goodheart (01-98)	[REDACTED] Grand Blanc, MI 48439	[REDACTED]	[REDACTED]		[REDACTED]@comcast.net	10-12 to 09-16
David Wardine (Reg 09-09) (Alt 01-94)	[REDACTED] Clarkston, MI 48346	[REDACTED]	(248) [REDACTED] [REDACTED]	FAX (248) 625-7110	[REDACTED]@kieferteng.com	10-12 to 09-16
Dan Park (Alt) (01-98)	[REDACTED] Grand Blanc, MI 48439	[REDACTED]	[REDACTED]	FAX 695- 6436		10-09 to 09-13
Debbie Honea (Alt)	[REDACTED] Flint, MI 48507	[REDACTED]	[REDACTED]	444-0256	[REDACTED]@aol.com	

Election Commission – Appointed by Township Board [MCL 42.4] State mandates Clerk is the Chairperson of the Election Commission with two Trustees Subject to the Open Meetings Act. Meets in accordance with State Law – minimal at least once for each election. No additional compensation.

Appointed	Members	Term
January 12, 2017	Clerk Lane, Trustee Joe Massey, and Trustee Ken Thomas	

City of Grand Blanc

FOIA Procedures and Guidelines

Preamble: Statement of Principles

It is the policy of the City of Grand Blanc that all persons, except those incarcerated, consistent with the Michigan Freedom of Information Act (FOIA), are entitled to full and complete information regarding the affairs of government and the official acts of those who represent them as public officials and employees. The people shall be informed so that they fully participate in the democratic process.

The City's policy with respect to FOIA requests is to comply with State law in all respects and to respond to FOIA requests in a consistent, fair, and even-handed manner regardless of who makes such a request.

The City acknowledges that it has a legal obligation to disclose all nonexempt public records in its possession pursuant to a FOIA request. The City acknowledges that sometimes it is necessary to invoke the exemptions identified under FOIA in order to ensure the effective operation of government and to protect the privacy of individuals.

Grand Blanc City will protect the public's interest in disclosure, while balancing the requirement to withhold or redact portions of certain records. The City's policy is to disclose public records consistent with and in compliance with State law.

The City Council has established the following written procedures and guidelines to implement the FOIA and will create a written public summary of the specific procedures and guidelines relevant to the general public regarding how to submit written requests to the public body and explaining how to understand a public body's written responses, deposit requirements, fee calculations, and avenues for challenge and appeal. The written public summary will be written in a manner so as to be easily understood by the general public.

Section 1: General Policies

The City Council, acting pursuant to the authority at MCL 15.236, designates the City Clerk/Treasurer as the FOIA Coordinator. He or she is authorized to designate other City staff to act on his or her behalf to accept and process written requests for the City's public records and approve denials.

If a request for a public record is received by fax or email, the request is deemed to have been received on the following business day. If a request is sent by email and delivered to a City spam or junk-mail folder, the request is not deemed received until one day after the FOIA Coordinator first becomes aware of the request. The FOIA Coordinator shall note in the FOIA log both the date the request was delivered to the spam or junk-mail folder and the date the FOIA Coordinator became aware of the request.

The FOIA Coordinator shall review City spam and junk-mail folders on a regular basis, which shall be no less than once a month. The FOIA Coordinator shall work with City Information Technology staff to develop administrative rules for handling spam and junk-mail so as to protect City systems from computer attacks which may be imbedded in an electronic FOIA request.

The FOIA Coordinator may, in his or her discretion, implement administrative rules, consistent with State law and these Procedures and Guidelines to administer the acceptance and processing of FOIA requests.

The City is not obligated to create a new public record or make a compilation or summary of information which does not already exist. Neither the FOIA Coordinator nor other City staff are obligated to provide answers to questions contained in requests for public records or regarding the content of the records themselves.

The FOIA Coordinator shall keep a copy of all written requests for public records received by the City on file for a period of at least one year.

The City will make this Procedures and Guidelines document and the Written Public Summary publicly available without charge. If it does not, the City cannot require deposits or charge fees otherwise permitted under the FOIA until it is in compliance.

A copy of this Procedures and Guidelines document and the City's Written Public Summary must be publicly available by providing free copies both in the City's response to a written request and upon request by visitors at the City's office.

This Procedures and Guidelines document and the City's Written Public Summary will be maintained on the City's website at: www.cityofgrandblanc.com, so a link to those documents will be provided in lieu of providing paper copies of those documents.

Section 2: Requesting a Public Record

No specific form to submit a request for a public record is required. However the FOIA Coordinator may make available a FOIA Request Form for use by the public.

Requests to inspect or obtain copies of public records prepared, owned, used, possessed or retained by the City may be submitted on the City's FOIA Request Form, in any other form of writing (letter, fax, email, etc.), or by verbal request.

Verbal requests for records may be documented by the City on the City's FOIA Request Form.

If a person makes a verbal, non-written request for information believed to be available on the City's website, where practicable and to the best ability of the employee receiving the request, shall be informed of the pertinent website address.

A request must sufficiently describe a public record so as to enable City personnel to identify and find the requested public record.

Written requests for public records may be submitted in person or by mail to any City office. Requests may also be submitted electronically by fax and email. Upon their receipt, requests for public records shall be promptly forwarded to the FOIA Coordinator for processing.

A person may request that public records be provided on non-paper physical media, emailed or otherwise provided to him or her in digital form in lieu of paper copies. The City will comply with the request only if it possesses the necessary technological capability to provide records in the requested non-paper physical media format.

A person may subscribe to future issues of public records that are created, issued or disseminated by the City on a regular basis. A subscription is valid for up to 6 months and may be renewed by the subscriber.

A person serving a sentence of imprisonment in a local, state or federal correctional facility is not entitled to submit a request for a public record. The FOIA Coordinator will deny all such requests.

Section 3: Processing a Request

Unless otherwise agreed to in writing by the person making the request, the City will issue a response within 5 business days of receipt of a FOIA request. If a request is received by fax, email or other electronic transmission, the request is deemed to have been received on the following business day.

The City will respond to a request in one of the following ways:

- Grant the request.
- Issue a written notice denying the request.
- Grant the request in part and issue a written notice denying in part the request.
- Issue a notice indicating that due to the nature of the request the City needs an additional 10 business days to respond for a total of no more than 15 business days. Only one such extension is permitted.
- Issue a written notice indicating that the public record requested is available at no charge on the City's website.

When a request is granted:

If the request is granted, or granted in part, the FOIA Coordinator will require that payment be made in full for the allowable fees associated with responding to the request before the public record is made available.

The FOIA Coordinator shall provide a detailed itemization of the allowable costs incurred to process the request to the person making the request.

A copy of these Procedures and Guidelines and the Written Public Summary will be provided to the requestor free of charge with the response to a written request for public records, provided however, that because these Procedures and Guidelines, and the Written Public Summary are maintained on the City's website at: www.cityofgrandblanc.com, a link to the Procedures and Guidelines and the Written Public Summary will be provided in lieu of providing paper copies of those documents.

If the cost of processing a FOIA request is \$50 or less, the requester will be notified of the amount due and where the documents can be obtained.

If the cost of processing a FOIA request is expected to exceed \$50 based on a good-faith calculation, or if the requestor has not paid in full for a previously granted request, the City will require a good-faith deposit pursuant to Section 4 of this policy before processing the request.

In making the request for a good-faith deposit the FOIA Coordinator shall provide the requestor with a detailed itemization of the allowable costs estimated to be incurred by the City to process the request and also provide a best efforts estimate of a time frame it will take the City to provide the records to the requestor. The best efforts estimate shall be nonbinding on the City, but will be made in good faith and will strive to be reasonably accurate, given the nature of the request in the particular instance, so as to provide the requested records in a manner based on the public policy expressed by Section 1 of the FOIA.

When a request is denied or denied in part:

If the request is denied or denied in part, the FOIA Coordinator will issue a Notice of Denial which shall provide in the applicable circumstance:

- An explanation as to why a requested public record is exempt from disclosure; or
- A certificate that the requested record does not exist under the name or description provided by the requestor, or another name reasonably known by the City; or
- An explanation or description of the public record or information within a public record that is separated or deleted from the public record; and
- An explanation of the person's right to submit an appeal of the denial to either the office of the Mayor or seek judicial review in the Genesee County Circuit Court; and
- An explanation of the right to receive attorneys' fees, costs, and disbursements as well actual or compensatory damages, and punitive damages of \$1,000, should they prevail in Circuit Court.
- The Notice of Denial shall be signed by the FOIA Coordinator.

If a request does not sufficiently describe a public record, the FOIA Coordinator may, in lieu of issuing a Notice of Denial indicating that the request is deficient, seek clarification or amendment of the request by the person making the request. Any clarification or amendment will be considered a new request subject to the timelines described in this Section.

Requests to inspect public records:

The City shall provide reasonable facilities and opportunities for persons to examine and inspect public records during normal business hours. The FOIA Coordinator is authorized to promulgate rules regulating the manner in which records may be viewed so as to protect City records from loss, alteration, mutilation or destruction and to prevent excessive interference with normal City operations.

Requests for certified copies:

The FOIA Coordinator shall, upon written request, furnish a certified copy of a public record at no additional cost to the person requesting the public record.

Section 4: Fee Deposits

If the fee estimate is expected to exceed \$50.00 based on a good-faith calculation, the requestor will be asked to provide a deposit not exceeding one-half of the total estimated fee.

If a request for public records is from a person who has not paid the City in full for copies of public records made in fulfillment of a previously granted written request, the FOIA Coordinator will require a deposit of 100% of the estimated processing fee before beginning to search for a public record for any subsequent written request by that person when all of the following conditions exist:

- The final fee for the prior written request is not more than 105% of the estimated fee;
- The public records made available contained the information sought in the prior written request and remain in the City's possession;
- The public records were made available to the individual, subject to payment, within the time frame estimated by the City to provide the records;
- Ninety (90) days have passed since the FOIA Coordinator notified the individual in writing that the public records were available for pickup or mailing;
- The individual is unable to show proof of prior payment to the City; and
- The FOIA Coordinator has calculated a detailed itemization that is the basis for the current written request's increased estimated fee deposit.

The FOIA Coordinator will not require an increased estimated fee deposit if any of the following apply:

- The person making the request is able to show proof of prior payment in full to the City;
- The City is subsequently paid in full for the applicable prior written request; or
- Three hundred sixty five (365) days have passed since the person made the request for which full payment was not remitted to the City.

Section 5: Calculation of Fees

A fee may be charged for the labor cost of copying/duplication.

A fee will *not* be charged for the labor cost of search, examination, review and the deletion and separation of exempt from nonexempt information *unless* failure to charge a fee would result in unreasonably high costs to the City because of the nature of the request in the particular instance, and the City specifically identifies the nature of the unreasonably high costs.

Costs for the search, examination review, and deletion and separation of exempt from non-exempt information are “unreasonably high” when they are excessive and beyond the normal or usual amount for those services (Attorney General Opinion 7083 of 2001) compared to the costs of the City’s usual FOIA requests, not compared to the City’s operating budget. (*Bloch v. Davison Community Schools*, Michigan Court of Appeals, Unpublished, April 26, 2011)

The following factors shall be used to determine an unreasonably high cost to the City:

- Volume of the public record requested
- Amount of time spent to search for, examine, review and separate exempt from non-exempt information in the record requested.
- Whether the public records are from more than one City department or whether various City offices are necessary to respond to the request.
- The available staffing to respond to the request.
- Any other similar factors identified by the FOIA Coordinator in responding to the particular request.

The Michigan FOIA statute permits the City to charge for the following costs associated with processing a request:

- Labor costs associated with copying or duplication, which includes making paper copies, making digital copies, or transferring digital public records to non-paper physical media or through the Internet.
- Labor costs associated with searching for, locating and examining a requested public record, when failure to charge a fee will result in unreasonably high costs to the City.
- Labor costs associated with a review of a record to separate and delete information exempt from disclosure, when failure to charge a fee will result in unreasonably high costs to the City.
- The cost of copying or duplication, not including labor, of paper copies of public records. This may include the cost for copies of records already on the City’s website if you ask for the City to make copies.
- The cost of computer discs, computer tapes or other digital or similar media when the requester asks for records in non-paper physical media. This may include the cost for copies of records already on the City’s website if you ask for the City to make copies.
- The cost to mail or send a public record to a requestor.

Labor costs will be calculated based on the following requirements:

- All labor costs will be estimated and charged in 15-minute increments, with all partial time increments rounded down. If the time involved is less than 15 minutes, there will be no charge.
- Labor costs will be charged at the hourly wage of the lowest-paid City employee capable of doing the work in the specific fee category, regardless of who actually performs work.
- Labor costs will also include a charge to cover or partially cover the cost of fringe benefits.
- The City may add up to 50% to the applicable labor charge amount to cover or partially cover the cost of fringe benefits, but in no case may it exceed the actual cost of fringe benefits.
- Overtime wages will not be included in labor costs unless agreed to by the requestor; overtime costs will not be used to calculate the fringe benefit cost.
- Contracted labor costs will be charged at the hourly rate of \$48.90 (6 times the state minimum hourly wage).

The cost to provide records on non-paper physical media when so requested will be based on the following requirements:

- Computer disks, computer tapes or other digital or similar media will be at the actual and most reasonably economical cost for the non-paper media.
- This cost will only be assessed if the City has the technological capability necessary to provide the public record in the requested non-paper physical media format.
- The City will procure any non-paper media and will not accept media from the requestor in order to ensure integrity of the City's technology infrastructure.

The cost to provide paper copies of records will be based on the following requirements:

- Paper copies of public records made on standard letter (8 ½ x 11) or legal (8 ½ x 14) sized paper will not exceed \$.10 per sheet of paper. Copies for non-standard sized sheets of paper will reflect the actual cost of reproduction. The City will provide records using double-sided printing, if it is cost-saving and available.

The cost to mail records to a requestor will be based on the following requirements:

- The actual cost to mail public records using a reasonably economical and justified means.
- The City may charge for the least expensive form of postal delivery confirmation.
- No cost will be made for expedited shipping or insurance unless specified by the requestor.

If the FOIA Coordinator does not respond to a written request in a timely manner, the City must:

- Reduce the labor costs by 5% for each day the City exceeds the time permitted under FOIA up to a 50% maximum reduction, if *any* of the following applies:
 - The City's late response was willful and intentional,
 - The written request conveyed a request for information within the first 250 words of the body of a letter facsimile, email or email attachment, or
 - The written request included the words, characters, or abbreviations for "freedom of information," "information," "FOIA," "copy" or a recognizable misspelling of such, or legal code reference to MCL 15. 231, et seq. or 1976 Public Act 442 on the front of an envelope or in the subject line of an email, letter or facsimile cover page.
- Fully note the charge reduction in the Detailed Itemization of Costs Form.

Section 6: Waiver of Fees

The cost of the search for and copying of a public record may be waived or reduced if in the sole judgment of the FOIA Coordinator a waiver or reduced fee is in the public interest because it can be considered as primarily benefitting the general public. The City Council may identify specific records or types of records it deems should be made available for no charge or at a reduced cost.

Section 7: Discounted Fees

Indigence

The FOIA Coordinator will discount the first \$20.00 of the processing fee for a request if the person requesting a public record submits an affidavit stating that they are:

- Indigent and receiving specific public assistance, or
- If not receiving public assistance, stating facts demonstrating an inability to pay because of indigence.

An individual is not eligible to receive the waiver if:

- The requestor has previously received discounted copies of public records from the City twice during the calendar year; or
- The requestor requests information in connection with other persons who are offering or providing payment to make the request.

An affidavit is sworn statement. The FOIA Coordinator may make a Fee Waiver Affidavit Form available for use by the public.

Nonprofit organization advocating for developmentally disabled or mentally ill individuals

The FOIA Coordinator will discount the first \$20.00 of the processing fee for a request from:

- A nonprofit organization formally designated by the state to carry out activities under subtitle C of the federal developmental disabilities assistance and bill of rights act of 2000, Public Law 106-402, and the protection and advocacy for individuals with mental illness act, Public Law 99-319, or their successors, if the request meets all of the following requirements:
 - Is made directly on behalf of the organization or its clients.
 - Is made for a reason wholly consistent with the mission and provisions of those laws under section 931 of the mental health code, 1974 PA 258, MCL 330.1931.
 - Is accompanied by documentation of its designation by the state, if requested by the public body.

Section 8: Appeal of a Denial of a Public Record

When a requestor believes that all or a portion of a public record has not been disclosed or has been improperly exempted from disclosure, he or she may appeal to the City Council by filing an appeal of the denial with the office of the City Manager.

The appeal must be in writing, specifically state the word "appeal" and identify the reason or reasons the requestor is seeking a reversal of the denial. The City FOIA Appeal Form (To Appeal a Denial of Records), may be used.

The City Council is not considered to have received a written appeal until the first regularly scheduled City Council meeting following submission of the written appeal.

Within 10 business days of receiving the appeal the City Council will respond in writing by:

- Reversing the disclosure denial;
- Upholding the disclosure denial; or
- Reverse the disclosure denial in part and uphold the disclosure denial in part; or
- Under unusual circumstances, issue a notice extending for not more than 10 business days the period during which the City Council shall respond to the written appeal. The City Council shall not issue more than 1 notice of extension for a particular written appeal.

If the City Council fails to respond to a written appeal, or if the City Council upholds all or a portion of the disclosure denial that is the subject of the written appeal, the requesting person may seek judicial review of the nondisclosure by commencing a civil action in Circuit Court.

Whether or not a requestor submitted an appeal of a denial to the City Council, he or she may file a civil action in Genesee County Circuit Court within 180 days after the City's final determination to deny the request.

If a court that determines a public record is not exempt from disclosure, it shall order the City to cease withholding or to produce all or a portion of a public record wrongfully withheld, regardless of the location of the public record. Failure to comply with an order of the court may be punished as contempt of court.

If a person asserting the right to inspect, copy, or receive a copy of all or a portion of a public record prevails in such an action, the court shall award reasonable attorneys' fees, costs, and disbursements. If the person or City prevails in part, the court may, in its discretion, award all or an appropriate portion of reasonable attorneys' fees, costs, and disbursements.

If the court determines that the City has arbitrarily and capriciously violated this act by refusal or delay in disclosing or providing copies of a public record, the court shall order the City to pay a civil fine of \$1,000.00, which shall be deposited into the general fund of the state treasury. The court shall award, in addition to any actual or compensatory damages, punitive damages in the amount of \$1,000.00 to the person seeking the right to inspect or receive a copy of a public record. The damages shall not be assessed against an individual, but shall be assessed against the next succeeding public body that is not an individual and that kept or maintained the public record as part of its public function.

Section 9: Appeal of an Excessive FOIA Processing Fee

"Fee" means the total fee or any component of the total fee calculated under section 4 of the FOIA, including any deposit.

If a requestor believes that the fee charged by the City to process a FOIA request exceeds the amount permitted by state law or under this policy, he or she must first appeal to the City Council by submitting a written appeal for a fee reduction to the office of the City Manager.

The appeal must be in writing, specifically state the word "appeal" and identify how the required fee exceeds the amount permitted. The City FOIA Appeal Form (To Appeal an Excess Fee) may be used.

The City Council is not considered to have received a written appeal until the first regularly scheduled City Council meeting following submission of the written appeal.

Within 10 business days after receiving the appeal, the City Council will respond in writing by:

- Waiving the fee;
- Reducing the fee and issuing a written determination indicating the specific basis that supports the remaining fee;
- Upholding the fee and issuing a written determination indicating the specific basis that supports the required fee; or
- Issuing a notice detailing the reason or reasons for extending for not more than 10 business days the period during which the City Council will respond to the written appeal. The City Council shall not issue more than 1 notice of extension for a particular written appeal.

Where the City Council reduces or upholds the fee, the determination must include a certification from the City Council that the statements in the determination are accurate and that the reduced fee amount complies with its publicly available procedures and guidelines and Section 4 of the FOIA.

Within 45 days after receiving notice of the City Council's determination of an appeal, the requesting person may commence a civil action in Genesee County Circuit Court for a fee reduction.

If a civil action is commenced against the City for an excess fee, the City is not obligated to complete the processing of the written request for the public record at issue until the court resolves the fee dispute.

An action shall not be filed in circuit court unless *one* of the following applies:

- The City does not provide for appeals of fees,
- The City Council failed to respond to a written appeal as required, or
- The City Council issued a determination to a written appeal.

If a court determines that the City required a fee that exceeds the amount permitted under its publicly available procedures and guidelines or Section 4 of the FOIA, the court shall reduce the fee to a permissible amount. Failure to comply with an order of the court may be punished as contempt of court.

If the requesting person prevails in court by receiving a reduction of 50% or more of the total fee, the court may, in its discretion, award all or an appropriate portion of reasonable attorneys' fees, costs, and disbursements. The award shall be assessed against the public body liable for damages.

If the court determines that the City has arbitrarily and capriciously violated the FOIA by charging an excessive fee, the court shall order the City to pay a civil fine of \$500.00, which shall be deposited in the general fund of the state treasury. The court may also award, in addition to any actual or compensatory damages, punitive damages in the amount of \$500.00 to the person seeking the fee reduction. The fine and any damages shall not be assessed against an individual, but shall be assessed against the next succeeding public body that is not an individual and that kept or maintained the public record as part of its public function.

Section 10: Conflict with Prior FOIA Policies and Procedures; Effective Date

To the extent that these Procedures and Guidelines conflict with previous FOIA policies promulgated by City Council or the City Administration these Procedures and Guidelines are controlling. To the extent that any administrative rule promulgated by the FOIA Coordinator subsequent to the adoption of this resolution is found to be in conflict with any previous policy promulgated by the City Council or the City Administration, the administrative rule promulgated by the FOIA Coordinator is controlling.

To the extent that any provision of these Procedures and Guidelines or any administrative rule promulgated by the FOIA Coordinator pertaining to the release of public records is found to be in conflict with any State statute, the applicable statute shall control. The FOIA Coordinator is authorized to modify this policy and all previous policies adopted by the City Council or the City Administration, and to adopt such administrative rules as he or she may deem necessary, to facilitate the legal review and processing of requests for public records made pursuant to Michigan's FOIA statute, provided that such modifications and rules are consistent with State law. The FOIA Coordinator shall inform the City Council of any change these Policies and Guidelines.

These FOIA Policies and Guidelines become effective July 1, 2015.

Section 11: Appendix of Grand Blanc City FOIA Forms

- Request for Public Records Form
- Notice to Extend Response Time Form
- Notice of Denial Form
- Detailed Cost Itemization Form
- Appeal of Denial of Records Form
- Appeal of Excess Fee Form

FOIA Appeal Form—To Appeal a Denial of Records
Michigan Freedom of Information Act, Public Act 442 of 1976, MCL 15.231,

Request No.: _____ **Date Received:** _____ Check if received via: Email Fax
 Other Electronic Method

Date of This Notice: _____ **Date delivered to junk/spam folder:** _____
 (Please Print or Type) **Date discovered in junk/spam folder:** _____

Name	Phone
Firm/Organization	Fax
Street	Email
City	State Zip

Request for: Copy Certified copy Record inspection Subscription to record issued on regular basis
Delivery Method: Will pick up Will make own copies onsite Mail to address above
 Email to address above
 Deliver on digital media provided by the City: _____

Record(s) You Requested: (Listed here or see attached copy of original request)

Reason(s) for Appeal:

The appeal must specifically identify how the required fee(s) exceed the amount permitted. You may use this form or attach additional sheets:

Requestor's Signature:

Date: _____

City Response:

The City must provide a response within 10 business days after receiving this appeal, including a determination or taking one 10-day extension.

City Extension: We are extending the date to respond to your FOIA fee appeal for no more than 10 business days, until _____ (month, day, year). Only one extension may be taken per FOIA appeal.

Unusual circumstances warranting extension:

If you have any questions regarding this extension, contact: _____

City Determination:

Denial Reversed Denial Upheld Denial Reversed in Part and Upheld in Part

The following previously denied records will be released:

Notice of Requestor's Right to Seek Judicial Review

You are entitled under Section 10 of the Michigan Freedom of Information Act, MCL 15.240, to appeal this denial to the City board or to commence an action in the Circuit Court to compel disclosure of the requested records if you believe they were wrongfully withheld from disclosure. If, after judicial review, the court determines that the City has not complied with MCL 15.235 in making this denial and orders disclosure of all or a portion of a public record, you have the right to receive attorneys' fees and damages as provided in MCL 15.240. (See back of this form for additional information on your rights.)

Signature of FOIA Coordinator:

FOIA Appeal Form—To Appeal an Excess Fee
Michigan Freedom of Information Act, Public Act 442 of 1976, MCL 15.231, et seq.

Request No.: _____ **Date Received:** _____ Check if received via: Email Fax Other Electronic Method

Date of This Notice: _____ **Date delivered to junk/spam folder:** _____
 (Please Print or Type) **Date discovered in junk/spam folder:** _____

Name	Phone
Firm/Organization	Fax
Street	Email
City	State Zip

Request for: Copy Certified copy Record inspection Subscription to record issued on regular basis
Delivery Method: Will pick up Will make own copies onsite Mail to address above Email to address above
 Deliver on digital media provided by the city: _____
Record(s) You Requested: (Listed here or see attached copy of original request)

Reason(s) for Appeal:

The appeal must specifically identify how the required fee(s) exceed the amount permitted. You may use this form or attach additional sheets:

Requestor's Signature: _____ **Date:** _____

City Response:

The city must provide a response within 10 business days after receiving this appeal, including a determination or taking one 10-day extension.

City Extension: We are extending the date to respond to your FOIA fee appeal for no more than 10 business days, until _____ (month, day, year). Only one extension may be taken per FOIA appeal.

Unusual circumstances warranting extension:

If you have any questions regarding this extension, contact: _____

City Determination: Fee Waived Fee Reduced Fee Upheld

Written basis for city determination:

Notice of Requestor's Right to Seek Judicial Review

You are entitled under Section 10a of the Michigan Freedom of Information Act, MCL 15.240a, to appeal a FOIA fee that you believe exceeds the amount permitted under the city's written Procedures and Guidelines to the city board or to commence an action in the Circuit Court for a fee reduction within 45 days after receiving the notice of the required fee or a determination of an appeal to the city board. If a civil action is commenced in court, the city is not obligated to compete processing the request until the court resolves the fee dispute. If the court determines that the city required a fee that exceeded the permitted amount, the court shall reduce the fee to a permissible amount. (See back of this form for additional information on your rights.)

Signature of FOIA Coordinator: _____ **Date** _____

Consent to Non-Statutory Extension of City's Response Time

I have requested a copy of records or a subscription to records or the opportunity to inspect records, pursuant to the Michigan Freedom of Information Act, Public Act 442 of 1976, MCL 15.231, *et seq.* I understand that the city must respond to this request within five (5) business days after receiving it, and that response may include taking a 10-business day extension. However, I hereby agree and stipulate to extend the city's response time for this request until: _____ (month, day, year).

Requestor's Signature

Date

(Complete both sides)

Records Located on Website

If the city directly or indirectly administers or maintains an official internet presence, any public records available to the general public on that internet site at the time the request is made are exempt from any labor charges to redact (*separate exempt information from non-exempt information*).

If the FOIA coordinator knows or has reason to know that all or a portion of the requested information is available on its website, the city must notify the requestor in its written response that all or a portion of the requested information is available on its website. The written response, to the degree practicable in the specific instance, must include a specific webpage address where the requested information is available. On the detailed cost itemization form, the city must separate the requested public records that are available on its website from those that are not available on the website and must inform the requestor of the additional charge to receive copies of the public records that are available on its website.

If the city has included the website address for a record in its written response to the requestor and the requestor thereafter stipulates that the public record be provided to him or her in a paper format or other form, including digital media, the city must provide the public records in the specified format (if the city has the technological capability) but may use a fringe benefit multiplier greater than the 50%, not to exceed the actual costs of providing the information in the specified format.

Request for Copies/Duplication of Records on City Website

I hereby stipulate that, even if some or all of the records are located on a city website, I am requesting that the city make copies of those records on the website and deliver them to me in the format I have requested above. I understand that the FOIA fees may apply.

Requestor's Signature

Date

Overtime Labor Costs

Overtime wages shall not be included in the calculation of labor costs unless overtime is specifically stipulated by the requestor and clearly noted on the detailed cost itemization form.

Consent to Overtime Labor Costs

I hereby agree and stipulate to the city using overtime wages in calculating the following labor costs as itemized in the following categories:

- 1. Labor to copy/duplicate labor to redact
- 2. Labor to locate
- 3a. Labor to redact
- 3b. Contract
- 6b. Labor to copy/duplicate records already on city's website

Requestor's Signature

Date

Request for Discount: Indigence

A public record search **must** be made and a copy of a public record **must** be furnished **without charge for the first \$20.00 of the fee** for each request by an individual who is entitled to information under this act and who:

- 1) Submits an affidavit stating that the individual is indigent and receiving specific public assistance, **OR**
- 2) If not receiving public assistance, stating facts showing inability to pay the cost because of indigence.

If a requester is ineligible for the discount, the public body shall inform the requestor specifically of the reason for ineligibility in the public body's written response. An individual is ineligible for this fee reduction if **ANY** of the following apply:

- (i) The individual has previously received discounted copies of public records from the same public body twice during that calendar year,
- (ii) The individual requests the information in conjunction with outside parties who are offering or providing payment or other remuneration to the individual to make the request. A public body may require a statement by the requestor in the affidavit that the request is not being made in conjunction with outside parties in exchange for payment or other remuneration.

Office Use: Affidavit Received Eligible for Discount Ineligible for Discount

I am submitting an affidavit and requesting that I receive the discount for indigence for this FOIA request:

Date:

Requestor's Signature:

Request for Discount: Nonprofit Organization

A public record search **must** be made and a copy of a public record **must** be furnished **without charge for the first \$20.00 of the fee** for each request by a nonprofit organization formally designated by the state to carry out activities under subtitle C of the Developmental Disabilities Assistance and Bill of Rights Act of 2000 and the Protection and Advocacy for Individuals with Mental Illness Act, if the request meets **ALL** of the following requirements:

- (i) Is made directly on behalf of the organization or its clients.
- (ii) Is made for a reason wholly consistent with the mission and provisions of those laws under section 931 of the Mental Health Code, 1974 PA 258, MCL 330.1931.
- (iii) Is accompanied by documentation of its designation by the state, if requested by the township.

Office Use: Documentation of State Designation Received Eligible for Discount

Ineligible for Discount

I declare that I am a designated agent for the nonprofit organization making this FOIA request and that this request is made directly on behalf of the organization or its clients and is made for a reason wholly consistent with the mission and provisions of those laws under section 931 of the Mental Health Code, 1974 PA 258, MCL 330.1931:

Requestor's Signature:

Notice of Denial of FOIA Request
Michigan Freedom of Information Act, Public Act 442 of 1976, MCL 15.231,

Request No.: _____ **Date Received:** _____ **Check if received via:** Email Fax Other Electronic Method
Date of This Notice: _____ **Date delivered to junk/spam folder:** _____
(Please Print or Type) **Date discovered in junk/spam folder:** _____

Name	Phone
Firm/Organization	Fax
Street	Email
City	State Zip

Request for: Copy Certified copy Record inspection Subscription to record issued on regular basis
Delivery Method: Will pick up Will make own copies onsite Mail to address above
 Email to address above
 Deliver on digital media provided by the city: _____
Record(s) You Requested: *(Listed here or see attached copy of original request)*

All OR **Part** of your request for records has been denied. Please refer to this form for an explanation. If you have any questions regarding this denial, contact _____ at _____

Reason for Denial:

1. Exempt from Disclosure: This item is exempt from disclosure under FOIA Section 13, Subsection _____ *(insert number)*, because: _____

2. Record Does Not Exist: This item does not exist under the name provided in your request or by another name reasonably known to the city. A certificate that the public record does not exist under the name given is attached. If you believe this record does exist, provide a description that will enable us to locate the record:

3. Redaction: A portion of the requested record had to be separated or deleted (redacted) as it is exempt under FOIA Section 13, Subsection _____ *(insert number)*, because:

_____ A brief description of the information that had to be separated or deleted:

Notice of Requestor's Right to Seek Judicial Review

You are entitled under Section 10 of the Michigan Freedom of Information Act, MCL 15.240, to appeal this denial to the city board or to commence an action in the Circuit Court to compel disclosure of the requested records if you believe they were wrongfully withheld from disclosure. If, after judicial review, the court determines that the city has not complied with MCL 15.235 in making this denial and orders disclosure of all or a portion of a public record, you have the right to receive 'attorneys' fees and damages as provided in MCL 15.240. *(See back of this form for additional information on your rights.)*

Signature of FOIA Coordinator: _____

Date: _____

Notice to Extend Response Time for FOIA Request
Michigan Freedom of Information Act, Public Act 442 of 1976, MCL 15.231,

Request No.: _____ **Date Received:** _____ Check if received via: Email Fax
 Other Electronic Method

Date of This Notice: _____ **Date delivered to junk/spam folder:** _____
(Please Print or Type) **Date discovered in junk/spam folder:** _____

Name	Phone
Firm/Organization	Fax
Street	Email
City	State Zip

Request for: Copy Certified copy Record inspection Subscription to record issued on regular basis

Delivery Method: Will pick up Will make own copies onsite Mail to address above
 Email to address above Deliver on digital media provided by the city:

Record(s) You Requested: (Listed here or see attached copy of original request)

We are extending the date to respond to your FOIA request for no more than 10 business days, until _____ (month, day, year). Only one extension may be taken per FOIA request. If you have any questions regarding this extension, contact _____ at _____

Estimated Time Frame to Provide Records: _____ (days or date)

The time frame estimate is nonbinding upon the city, but the city is providing the estimate in good faith. Providing an estimated time frame does not relieve a public body from any of the other requirements of this act.

Reason for Extension:

1. The city needs to search for, collect, or appropriately examine or review a voluminous amount of separate and distinct public records pursuant to your request. Specifically, the city must:

2. The city needs to collect the requested public records from numerous field offices, facilities, or other establishments that are located apart from the city office. Specifically, the city must coordinate documents from the following locations:

3. Other (describe):

Signature of FOIA Coordinator:

Date



City of Grand Blanc

203 E. Grand Blanc Rd.
Grand Blanc, MI 48439

www.cityofgrandblanc.com

810-694-1118
Fax 810-694-9517

MAYOR
Michael N. Matheny

CITY COUNCIL
James E. Bappert
John A. Freel
Connie S. Lesley
Susan J. Soderstrom
Steven J. Robinson
Michael R. Wolfgram

CITY MANAGER
Randall D. Byrne

**CITY CLERK-
TREASURER**
Bethany J. Smith

**FINANCE DIRECTOR-
ASST. CITY MGR.**
Wendy L. Jean-Buhrer

CITY ASSESSOR
Marie Collias

CITY ATTORNEY
Walter P. Griffin

City of Grand Blanc Resolution 02-01-11

Adopting State of Michigan Retention Schedules

WHEREAS, in accordance with MCL 399.5 and MCL 750.491, public records can only be disposed of in accordance with the provisions of an approved Retention and Disposal Schedule; and

WHEREAS, the City of Grand Blanc has been disposing and archiving its records in accordance with a General Record Retention and Disposal Schedule #8 for Cities and Villages approved by the Michigan Department of State on January 17, 1984, and

WHEREAS, the Michigan Department of History, Arts and Libraries, Records Management Services (State Archives); has updated and approved Schedule #8 and has further approved several other retention schedules to meet the administrative, legal fiscal and archival requirements of the State of Michigan; and

WHEREAS, although there is no legal requirement to formally adopt the State of Michigan's approved Retention Schedules prior to implementing, it is highly recommended.

NOW, THEREFORE BE IT RESOLVED, the City of Grand Blanc does hereby adopt the Retention Schedules approved by the Michigan Records Management Services with the exception of Chapter 2 (Airport), Chapter 8 (District Court), Chapter 9 (Fire Department), and Chapter 13 (Parks and Recreation).

BE IT FURTHER RESOLVED, that any amendments to these Retention Schedules or any additional Retention Schedules approved by the Michigan Records Management Services pertinent to public records created and stored by the City of Grand Blanc, are hereby incorporated herein and will need no separate approval prior to implementation.

BE IT FURTHER RESOLVED, that the City Clerk, as "official keeper of the records" shall



City of Grand Blanc

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MAYOR

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CITY ASSESSOR

Marie Collias

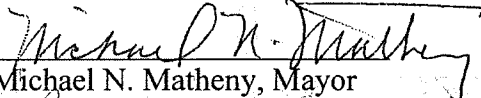
CITY ATTORNEY

Walter P. Griffin

1. Ensure that all City Departments have a copy of the General Schedules and copies of any agency specific schedules for their use.
2. Ensure confidential records are destroyed properly.

Motion by Bappert supported by Lesley to approve Resolution 02-01-11.
Motion carried.

Adopted this 22nd of February, 2011.


Michael N. Matheny, Mayor


Bethany J. Smith, City Clerk

City of Grand Blanc Fee Schedule



Updated 8/12/2015

DEPARTMENT	PERMIT OR SERVICE	Description	FEE OR PRICE PER HOUR
CLERKS OFFICE	COPIES	MISCELLANEOUS	1.00 PER COPY
	WATER BILL		\$1.00
	TAX BILL		\$1.00
	RETURNED CHECK FEE		\$39.00
	NOTARY SERVICES	FOR CITY RESIDENTS ONLY	FREE
	FOIA REQUEST	BASED ON COST OF LABOR PLUS	.05 CENTS PER COPY
	GARAGE SALES	3 DAY PERIOD TWICE PER YEAR	\$5.00
	LAWN MOWING	COST + 50%	VARIES
	PEDDLER PERMIT	INVESTIGATION FEE	\$20.00 each
		PERMIT FEE	\$40 PER WEEK \$100 MO.
	GOING OUT OF BUSINESS SALE	INVENTORY LIST REQUIRED	\$50.00 FOR 30 DAYS
	PERFORMANCE BONDS	PERCENTAGE OF COST FOR PROJECT	DETERMINED BY COUNCIL
	COPY OF CHARTER		\$30.00
	COPY OF AUDIT		\$30.00
	COPY OF BUDGET		\$30.00
	PARK PAVILION RENTAL	RUST PARK - RESIDENT	\$75.00
	* DEPOSIT FOR ALL PARKS \$75.00	RUST PARK - NON RESIDENT	\$120.00
	PHYSICIANS PARK - RESIDENT	\$100.00	
	PHYSICIANS PARK - NON RESIDENT	\$150.00	
WATER DEPT	GARBAGE BAGS	BOX OF 80	\$20.00
	LAWN & LEAF BAGS	5 IN A PACKAGE	\$2.25
	WATER SHUT OFF	BEFORE 4:00 PM ON DAY OF SHUT OFF	\$50.00
	WATER METER	1" METER	\$275.00
	BULK WATER	EACH 500 GALLONS	\$50.00
	WATER RATES	READY TO SERVE	\$11.00
		PER 100 CUBIC FEET	\$2.50
		SEWER RATES	READY TO SERVE
		PER 100 CUBIC FEET	\$2.96
	GARBAGE COLLECTION	BI-MONTHLY	\$21.60
	WATER TAP -IN	\$800 AFTER 1ST TAP - IN	\$1,500.00
	SEWER TAP- IN	\$800 AFTER 1ST TAP - IN	\$1,500.00
	WATER TAP -IN	DDA DISTRICT AND B-2	\$500.00
	SEWER TAP- IN	DDA DISTRICT AND B-2	\$500.00
	WATER DEPOSIT	FOR RENTER WITH AFFIDAVIT	\$400.00
	RIGHT OF WAY PERMIT		\$500.00
	AUTOMATIC METER READ OPT OUT FEE		\$80.00 PER BILLING PERIOD

Initial fees have been calculated based on estimates of services provided. Beginning in January 2018, fees will be reviewed annually to determine cost coverage.

STILLE-DEROSSETT-HALE SINGLE STATE CONSTRUCTION CODE ACT (EXCERPT)
Act 230 of 1972

125.1514 Construction board of appeals; creation; appointment, qualifications, and terms of members; appeal to board; hearing; decision; statement of reasons for decision; appeal to commission; copy of decision; additional powers or duties; procedures; conducting business at public meeting; notice; availability of certain writings to public.

Sec. 14. (1) A construction board of appeals for each governmental subdivision enforcing the code shall be created consisting of not less than 3 nor more than 7 members, as determined by the governing body of the governmental subdivision. Unless otherwise provided by local law or ordinance, the members of the board of appeals shall be appointed for 2-year terms by the chief executive officer of a city, village, or township and the chairperson of the county board of commissioners of a county. A member of the board of appeals shall be qualified by experience or training to perform the duties of members of the board of appeals. A person may serve on the board of appeals of more than 1 governmental subdivision. If an enforcing agency refuses to grant an application for a building permit, or if the enforcing agency makes any other decision pursuant or related to this act, or the code, an interested person, or the person's authorized agent, may appeal in writing to the board of appeals. The board of appeals shall hear the appeal and render and file its decision with a statement of reasons for the decision with the enforcing agency from whom the appeal was taken not more than 30 days after submission of the appeal. Failure by the board of appeals to hear an appeal and file a decision within the time limit is a denial of the appeal for purposes of authorizing the institution of an appeal to the commission. A copy of the decision and statement of the reasons for the decision shall be delivered or mailed, before filing, to the party taking the appeal.

(2) This act does not prevent a governmental subdivision from granting its board of appeals additional powers or duties not inconsistent with this act, or from establishing procedures to be followed by its board of appeals insofar as the procedures do not conflict with this act. Except as otherwise provided by this act, or by other laws or ordinances, a board of appeals may by rules establish its own procedures.

(3) The business which the board of appeals may perform shall be conducted at a public meeting of the board of appeals held in compliance with Act No. 267 of the Public Acts of 1976. Public notice of the time, date, and place of the meeting shall be given in the manner required by Act No. 267 of the Public Acts of 1976.

(4) A record of decisions made by the board of appeals, properly indexed, and any other writing prepared, owned, used, in the possession of, or retained by the board of appeals in the performance of an official function shall be made available to the public in compliance with Act No. 442 of the Public Acts of 1976.

History: 1972, Act 230, Eff. Jan. 1, 1973;—Am. 1977, Act 195, Imd. Eff. Nov. 17, 1977;—Am. 1978, Act 442, Imd. Eff. Oct. 9, 1978.

Popular name: Act 230

Popular name: Uniform Construction Code

**AGREEMENT FOR
INDEPENDENT BUILDING INSPECTION FOR
ELECTRICAL/PLUMBING/MECHANICAL AND SITE PLAN REVIEW SERVICE**

This Agreement, entered into this _____ by and between the City of Grand Blanc, a Michigan City, located in Genesee County, Michigan at 203 E. Grand Blanc Road, Grand Blanc, Michigan, hereafter referred to as The City, and _____ referred to as The Independent Contractor for the City of Grand Blanc.

The parties hereby stipulate and agree as follows that:

The Independent Contractor will perform inspection and review services only at the request of the City Building Official.

The Independent Contractor serves at the pleasure of the City Manager. Any code referenced to a "code official" is inapplicable to the Independent Contractor. Any code adopted by the City that refers to a "code official" is inapplicable to the Independent Contractor.

The term of this agreement is for a period of one (1) year from the date of its execution and shall renew annually, unless terminated at any time by The City, the Building Official, or the Independent Contractor.

The Independent Contractor will provide their own tools and vehicles to carry out the duties described below:

The City will pay the contractor fifteen (\$15.00) dollars per hour for any related duties as may be determined from time to time by the Building Official. Residential home plan review will be paid at one half (1/2) of the current Council approved fee schedule. Commercial plan review fees for the Building Inspector shall be paid at one half (1/2) of the current Council approved fee schedule. Commercial plan review fees for the Trade Inspectors (Electrical, Mechanical, and Plumbing) shall be paid at one quarter (1/4) of the current Council approved fee schedule. Should electrical, mechanical and/or plumbing plan review be required for a new house (over 3,500 square feet, meeting the criteria for electrical, mechanical, and/or plumbing plan review), the Trade Independent Contractor will be paid one half (1/2) of the current fee schedule as approved by the City Council.

The Independent Contractor is not a City employee and not eligible for health insurance, worker's compensation, pension or any other benefits.

The Independent Contractor is free to provide similar services to any other municipality or individual, but shall not solicit clients while performing inspections for the City.

This is the entire Agreement between the Independent Contractor and the City.

Acknowledgement:

Signed this _____ day of _____, 20__

Independent Contractor:

THE CITY OF
GRAND BLANC:

City Manager

City Clerk

Approved 1/11/2017

ACCESSIBILITY

Note: Numerals indicated in parenthesis are applicable code sections of the *International Building Code/2015* (IBC) and *ICC/ANSI A117.1-2009* (ICC A117.1) unless otherwise noted. ICC A117.1 section numbers are shown in italics, preceded by "ICC." Section 1101.2 of the IBC limits the application of ICC A117.1 to the items specifically identified in the code. Items such as accessible telephones and ATM machines, while covered by ICC A117.1, are not within the prescribed extent of application based on the IBC. As such, these and similar items are beyond the scope of this review.

New Construction

- _____ Occupancy
- _____ Scope (1101.1, 1103.1, 1107.3, 1108.1)

Areas not required to be accessible

- _____ Building areas (1103.2 - 1103.2.14, 1104.3.1)
- _____ Building levels (1104.3, 1104.3.2, 1104.4, 1107.1, 1108.2.4, 1108.2.9, 1110.4)

(User Note: Continue with Facility Access and remainder of Review Form)

Existing Buildings: Change of Occupancy, Alterations and Additions

Note: Numerals indicated in parenthesis are applicable code sections of the *International Existing Building Code/2015* (IEBC)

- _____ Occupancy
- _____ Scope (IEBC 410.1, 410.6, 410.8, 410.9, 605, 705, 806, 906, 1006, 1012.8, 1105, 1205.15)
- _____ Primary function area/Accessible route (IEBC 410.7, 705.2, 1012.8.2, 1105.1)

Areas not required to be accessible

- _____ Building areas (IEBC 410.3, 410.9, 1205.15)
- _____ Building levels (IEBC 410.3, 410.9.2)
- _____ Dwelling or sleeping units (IEBC 410.4, 410.4.2, 410.8.6, 410.8.7, 410.8.8, 410.9, 705.1.7, 705.1.8, 705.2, 906.2, 1012.8, 1105.2, 1105.3, 1105.4, 1205.15)
- _____ Technically infeasible (IEBC 202 (definition), 410.4.2, 410.6, 410.8.10, 410.8.11, 410.9, 705.1, 705.1.9, 705.1.10, 1012.8.2, 1205.15)

(User Note: Continue with Facility Access and remainder of Review Form)

Facility Access

Exterior Accessible Routes

(User Note: For ramps, lifts and elevators, see Vertical Conveyance)

- _____ Where required
(1009.1, 1009.2, 1104.1 - 1104.3, 1104.5, 1106.6, 1107.4, 1110)
- Route _____ Criteria (1003.4; *ICC 302, 303, 403*)
- _____ Dropoffs (1015.2, 1015.4, 1109.10; *ICC 705*)
- _____ Protruding objects (1003.3, *ICC 307, 1101.3*)
- _____ Recreational facilities (1110)
- Curb ramps _____ Location (1003.5; *ICC 406.6, 406.8, 406.10, 406.11*)
- _____ Criteria (*ICC 406.2 - 406.5, 406.7, 406.10, 406.11*)

Exterior Accessible Routes—(continued)

Parking spaces _____ Location (1106.2, 1106.6, 1107.4)
_____ Number (1106.1 - 1106.5)
_____ Criteria (1111.1; *ICC 502*)

Passenger loading zone _____ Location (1106.7.1 - 1106.7.4)
_____ Criteria (1111.1; *ICC 503*)

Accessible Entrances

_____ Criteria (1105.1, 1107.4)

Accessible Means of Egress

_____ Criteria (1009.1 - 1009.5)
_____ Areas of refuge/Area of rescue assistance (1009.6 - 1009.6.4, 1009.7 - 1009.7.4)
_____ Communication/Signage (1009.6.5, 1009.8, 1009.9 - 1009.11, 1111.3; *ICC 703*)

Interior Accessible Routes

_____ Where required (1009.2, 1104.3, 1104.3.1, 1104.4, 1104.5, 1107.4 *ICC 401.1*)
_____ Criteria (1003.4, 1003.5, 1104.6; *ICC 302 - 304, 403*)

Doors _____ Clear width and height (1010.1.1, 1010.1.1.1; *ICC 404.2.1, 404.2.2, 404.3.1*)
_____ Direction of swing, separation, access
(1010.1.2, 1010.1.8; *ICC 404.2.3, 404.2.5, 404.3.2, 404.3.4, 405.7.5*)
_____ Hardware (1010.1.9; *ICC 404.2.6 - 404.2.10, 404.3.5*)
_____ Threshold (1010.1.5, 1010.1.7, *ICC 404.2.4, 404.3.3*)

_____ Dropoffs (1015.2, 1015.5, 1109.10; *ICC 705*)
_____ Protruding objects (1003.3, 1012.5.2, 1014.8; *ICC 307, 1101.3*)

Signage

_____ Criteria (1013.4, 1111; *ICC 502.7, 703*)

Vertical Conveyance

Ramps

_____ Dimensions (1012.5; *ICC 307.5, 405.5, 405.6*)
_____ Maximum slope (1012.1, 1012.2, 1012.3, *ICC 405.1 - 405.3*)
_____ Landings (1012.4, 1012.6; *ICC 405.7*)
_____ Guards/handrails (1012.8, 1012.9; *ICC 405.8, 505*)
_____ Edge protection (1012.10; *ICC 405.9*)
_____ Ramp construction (1003.5, 1012.7; *ICC 405.4, 405.10*)

Lifts

_____ Criteria (1009.2, 1009.5, 1109.8, *ICC 410*)

Elevators

_____ Criteria (1009.2.1, 1009.4, 1109.7, 1111.2, 3001.2, 3001.3, *ICC 407, 408*)

Features and Facilities

- _____ Alarms (907.4.2.2, 907.5.2.1, 907.5.2.3; *ICC 702, 1006.3, 1006.4*)
 - _____ Storage or locker facilities (1109.9; *ICC 603.4, 803.5, 905*)
 - _____ Controls (1109.13, 1109.14; *ICC 309, 404.3.5*)
 - _____ Counters and work surfaces (1109.11; *ICC 902*)
 - _____ Dressing, fitting and locker rooms (1109.12.1, 1111.1, *ICC 803, 903*)
 - _____ Service counters (1109.12.3; *ICC 904.3*)
 - _____ Check-out aisles (1109.12.2, 1110.1; *ICC 904.4*)
 - _____ Food service lines (1109.12.4; *ICC 308, 309, 904.5*)
 - _____ Queuing lines (1109.12.5; *ICC 304.3, 403.5, 403.5.1*)
 - _____ Recreational facilities (1110.1; *ICC Chapter 11*)
-

Plumbing Facilities — other than within dwelling and sleeping units

- _____ Toilet and bathing rooms (1109.2, 1109.2.1, *ICC 305, 306, 309, 603*)
 - _____ Family or assisted use toilet and bathing rooms (1109.2.1 - 1109.2.1.7)
 - _____ Water closets (*ICC 604, 609*)
 - _____ Water closet compartments (1109.2.2; *ICC 404, 604.9, 609*)
 - _____ Urinals (1109.2; *ICC 605*)
 - _____ Lavatories (1109.2.3, *ICC 606*)
 - _____ Bathtubs (*ICC 607, 609, 610.2*)
 - _____ Showers (*ICC 608, 609, 610.3*)
 - _____ Drinking fountains (1003.3.3, 1109.5; *ICC 602*)
 - _____ Sinks (1109.3; *ICC 606*)
 - _____ Kitchens and kitchenettes (1109.4; *ICC 804*)
-

Special Occupancies

Assembly (1108.2, 1109.11)

- _____ Services (1108.2.1; *ICC 902, 904*)
 - _____ Listening systems (1108.2.7, 1110.3; *ICC 706*)
 - _____ Wheelchair spaces and companion seats (1108.2.2 - 1108.2.4, *ICC 802*)
 - _____ Lawn seating (1108.2.6)
 - _____ Designated aisle seats (1108.2.5; *ICC 802.8*)
 - _____ Performance areas (1108.2.8)
 - _____ Dining areas (1108.2.9, 1109.11; *ICC 902*)
 - _____ **Press boxes** (1104.3.2)
 - _____ **Self-service storage facilities** (1108.3; *ICC 905*)
 - _____ **Judicial facilities** (1103.2.13, 1108.4 - 1108.4.2, 1109.11)
-

DWELLING UNITS AND SLEEPING UNITS - SCOPING

Institutional living facilities (1107.5)

- _____ Group I-1 (1107.5.1) _____ Total number of units
_____ Accessible units (1107.5.1.1)
_____ Units with visible alarms (907.5.2.3.2)
_____ Type B units (1107.5.1.2)
_____ Exempted units (1107.7 - 1107.7.5)
- _____ Group I-2 (1107.5.2, 1107.5.3, 1107.5.4) _____ Total number of units
_____ Accessible units (1107.5.2.1, 1107.5.3.1, 1107.5.4)
_____ Yes _____ No - "Intended to be occupied as a residence" (1102)
_____ Type B units (1107.5.2.2, 1107.5.3.2)
_____ Exempted units (1107.7 - 1107.7.5)
- _____ Group I-3 (1107.5.5) _____ Total number of units
_____ Accessible units (1107.5.5.1, 1107.5.5.2, 1107.5.5.3)

Residential living facilities (1107.6)

- _____ Group R-1 (1107.6.1) _____ Total number of units
_____ Accessible units (1107.6.1.1)
_____ Units with visible alarms (907.5.2.3.2)
_____ Yes _____ No - "Intended to be occupied as a residence" (1102)
_____ Type B units (1107.6.1.2)
_____ Exempted units (1107.7 - 1107.7.5)
- _____ Group R-2 live/work units (1107.6.2.1) _____ Total number of units
- _____ Group R-2 apartment houses, monasteries and convents (1107.6.2.2) _____ Total number of units
_____ Type A units (1107.6.2.2.1)
_____ Units w/ support for visible alarm notification appliances (907.5.2.3.3; *ICC 1006.4*)
_____ Type B units (1107.6.2.2.2)
_____ Exempted units (1107.7 - 1107.7.5)
- _____ Group R-2 other than live/work units, apartment houses, monasteries and convents (1107.6.2.3) _____ Total number of units
_____ Accessible units (1107.6.2.3.1)
_____ Units w/ support for visible alarm notification appliances (907.5.2.3.3; *ICC 1006.4*)
_____ Type B units (1107.6.2.3.2)
_____ Exempted units (1107.7 - 1107.7.5)

Residential living facilities—(continued)

_____ Group R-3 (1107.6.3, R320.1*) _____ Total number of units

_____ Type B units (1107.6.3)

_____ Exempted units (1107.7 - 1107.7.5)

_____ Group R-4 (1107.6.4) _____ Total number of units

_____ Accessible units (1107.6.4.1)

_____ Type B units (1107.6.4.2)

_____ Exempted units (1107.7 - 1107.7.5)

(*2015 International Residential Code)

Dwelling unit and Sleeping Units - Technical Criteria

Accessible Unit

_____ Primary entrance
(1105.1.7, 1107.4; ICC 1002.2)

_____ Accessible route (ICC 1002.3, 1002.4)

_____ Doors and doorways (ICC 1002.5)

_____ Windows (ICC 1002.13)

_____ Ramps (ICC 1002.6)

_____ Elevators and lifts (ICC 1002.7, 1002.8)

_____ Operable parts (ICC 1002.9)

_____ Laundry equipment (ICC 1002.10)

_____ Toilet and bathing facilities (ICC 1002.11)

_____ Kitchen (ICC 1002.12)

_____ Storage facilities (ICC 1002.14)

_____ Ramps (ICC 1003.6)

_____ Elevators and lifts (ICC 1003.7, 1003.8)

_____ Operable parts (ICC 1003.9)

_____ Laundry equipment (ICC 1003.10)

_____ Toilet and bathing facilities (ICC 1003.11)

_____ Kitchen (ICC 1003.12)

_____ Storage facilities (ICC 1003.14)

Type B Unit

_____ Primary entrance
(1105.1.7, 1107.4; ICC 1004.2)

_____ Accessible route (ICC 1004.3, 1004.4)

_____ Doors and doorways (ICC 1004.5)

_____ Ramps (ICC 1004.6)

_____ Elevators and lifts (ICC 1004.7, 1004.8)

_____ Operable parts (ICC 1004.9)

_____ Laundry equipment (ICC 1004.10)

_____ Toilet and bathing facilities (ICC 1004.11)

_____ Kitchen (ICC 1004.12)

Type A Unit

_____ Primary entrance
(1105.1.7, 1107.4; ICC 1003.2)

_____ Accessible route (ICC 1003.3, 1003.4)

_____ Doors and doorways (ICC 1003.5)

_____ Windows (ICC 1003.13)

APPENDIX E

_____ Appendices adopted (101.2.1)

_____ Compliance verified

BUILDING PLANNING (Chapter 3)

DESIGN CRITERIA [Table R301.2(1)]

- | | |
|--|--|
| <p>Floor live load (Table R301.5) _____ psf</p> <p>Roof live load (Table R301.6) _____ psf</p> <p>Ground snow load _____ psf</p> <p>Ultimate design wind speed _____ mph</p> <p>Wind exposure category (R301.2.1.4) _____</p> <p>High wind design criteria applicable (R301.2.1.1) _____</p> <p>Seismic design category (SDC) [Figure R301.2(2)] _____</p> <p>SDC C&D provisions (R301.2.2) _____</p> <p>Weathering _____</p> <p>Frost line depth _____</p> <p>Termite area _____</p> <p>Decay area _____</p> <p>Winter design temperature _____</p> <p>Ice barrier underlayment required _____</p> <p>Flood hazards _____</p> | <p>_____ Parapets and construction (R302.2.2, R302.2.3)</p> <p>_____ Two-family dwelling separation (R302.3)</p> <p>_____ Dwelling unit penetrations (R302.4)</p> <p>_____ Dwelling/garage opening/penetration protection (R302.5)</p> <p>_____ Dwelling/garage fire separation (R302.6)</p> <p>_____ Under-stair protection (R302.7)</p> <p>_____ Wall and ceiling finishes (R302.9)</p> <p>_____ Flame spread index (R302.9.1)</p> <p>_____ Smoke-developed index (R302.9.2)</p> <p>_____ Testing (R302.9.3, R302.9.4)</p> <p>_____ Insulation (R302.10)</p> <p>_____ Flame spread/smoke-developed (R302.10.1, R302.10.2)</p> <p>_____ Cellulose loose-fill and exposed attic insulation (R302.10.3, R302.10.4)</p> <p>_____ Testing (R302.10.5)</p> |
|--|--|

FIRE-RESISTANT CONSTRUCTION (R302)

- | | |
|--|---|
| <p>_____ Exterior walls [R302.1, Tables R302.1(1) and R302.1(2)]</p> <p>_____ Townhouse separation (R302.2)</p> <p>_____ Continuity and structural independence (R302.2.1, R302.2.4)</p> | <p>_____ Fireblocking (R302.11)</p> <p>_____ Draftstopping (R302.12)</p> <p>_____ Fire protection of floors (R302.13)</p> <p>_____ Combustible insulation clearance (R302.14)</p> |
|--|---|

ROOM PLANNING REQUIREMENTS (R303 through R305)

Use	Area (ft ²)	Width	Ceiling height [†]	Natural light*	Natural ventilation*
Living	70	7'-0"	7'-0"	8% floor area	4% floor area
Dining	70	7'-0"	7'-0"	8% floor area	4% floor area
Kitchen	N.A.	N.A.	7'-0"	8% floor area	4% floor area
Bedroom	70	7'-0"	7'-0"	8% floor area	4% floor area
Bathroom	N.A.	N.A.	6'-8"	3 square feet	1½ square feet

* See Sections R303.1 & R303.3 for mechanical ventilation and artificial light and R303.4 for required whole-house mechanical ventilation.

† 6'-8" min. at plumbing fixtures and for non-habitable basements.

_____ Required heating (R303.9)

SANITATION (R306 and R307)

- _____ Water closet
- _____ Lavatory
- _____ Tub or shower
- _____ Kitchen area with sink
- _____ Sanitary sewer (Chapter 30)
- _____ Private disposal (Appendix I)

GLAZING (R308)

- _____ Identification (R308.1)
- _____ Louvered windows or jalousies (R308.2)
- _____ Human impact loads/hazardous locations (R308.3, R308.4)
- _____ Skylights and sloped glazing (R308.6)

BUILDING PLANNING (cont'd.)

GARAGES AND CARPORTS (R309)

- _____ Floor surface noncombustible; sloped floor
(R309.1)
- _____ Carport: open two sides; noncombustible
floors; sloped floor (R309.2)
- _____ Automatic garage door opener (R309.4)
- _____ Fire sprinklers (R309.5)

EMERGENCY ESCAPE AND RESCUE OPENINGS (R310)

- _____ Where required (R310.1)
- _____ Areas, height, width, operations (R310)
- _____ Window wells (R310.2.3)
- _____ Under decks and porches (R310.2.4)
- _____ Bars, grilles, covers and screens (R310.4)

MEANS OF EGRESS (R311)

- _____ General (R311.1)
- _____ Egress door (R311.2)
- _____ Landings at exterior doors
(R311.3 - R311.3.3)
- _____ Vertical egress (R311.4)
- _____ Construction and attachment (R311.5)
- _____ Hallways (R311.6)
- _____ Stairway width, headroom, vertical rise, walk-
line (R311.7.1 - R311.7.4)
- _____ Stairway treads, risers profiles
(R311.7.5 - R311.7.5.4)
- _____ Stairway landings and walking surfaces
(R311.7.6, R311.7.7)
- _____ Handrails required (R311.7.8)
- _____ Handrail height, continuity, grip-size
(R311.7.8.1 - R311.7.8.4)
- _____ Stairway illumination (R303.7, R311.7.9)
- _____ Special stairways (R311.7.10)
- _____ Ramp slope, landings, handrails (R311.8)

GUARDS AND WINDOW PROTECTION (R312)

- _____ Required for open-sided surfaces, stairs,
ramps and landings > 30" above floor/
grade (R312.1.1)
- _____ Height - 36" (R312.1.2)
- _____ Opening limitations (R312.1.3)
- _____ Window fall protection (R312.2)

AUTOMATIC FIRE SPRINKLER SYSTEMS (R313)

- _____ Townhouses (R313.1)
- _____ One- and two-family dwellings (R313.2)

SMOKE ALARMS (R314)

- _____ Referenced standards (R314.1)
- _____ Location and interconnection
(R314.3, R314.4)
- _____ Power source (R314.6)

CARBON MONOXIDE ALARMS (R315)

- _____ New construction (R315.1, R315.2)
- _____ Existing construction (R315.2.2)
- _____ Referenced standard (R315.6)

FOAM PLASTIC (R302.8, R316)

- _____ Labeling (R316.2)
- _____ Surface burning, thermal barrier, specific
approval (R316.3 - R316.8)

DECAY AND TERMITE PROTECTION (R317 and R318)

- _____ Protection required
(Table R301.2(1), R317.1, R318.1)
- _____ Quality mark (R317.2 and R318.1.1)

SITE ADDRESS (R319)

- _____ Address numbers (R319.1)

ACCESSIBILITY (R320)

- _____ Type B dwelling units applicable (R320.1)

ELEVATORS/PLATFORM LIFTS (R321)

- _____ Referenced standards (R321.1 - R321.3)

FLOOD-RESISTANT CONSTRUCTION (R322)

- _____ General (R322.1)
- _____ Hazard area and requirements
(R301.2.4, R309.3, R322.2, R322.3)
- _____ Design professional (R322.3.6)

STORM SHELTERS (R323)

- _____ General/referenced standard (R323.1)

SOLAR ENERGY SYSTEMS (R324)

- _____ System, installation, access
(R324.2 - R324.7)

MEZZANINES (R325)

- _____ Area, egress, openness (R325.2 - R325.5)

SWIMMING POOLS, SPAS AND HOT TUBS (R326)

- _____ ISPSC (R326.1)

FOUNDATIONS (Chapter 4)

MATERIALS (R402)

- _____ Wood foundations (R402.1)
- _____ Concrete, compressive strength (R402.2, R402.3)

FOOTINGS (R403)

- _____ Soil bearing value (R401.4, R403.1)
- _____ Footing width [Tables R403.1(1) - R403.1(3)]
- _____ Footing edge thickness; footing projection = 2" minimum, but ≤ footing thickness (R403.1.1)
- _____ Footings in SDC C and D (R403.1.2 and R403.1.6.1)
- _____ Depth below (outside) grade = 12" minimum; but below frost line (R403.1.4, R403.1.4.1)
- _____ Sill plate bolting in concrete/masonry = 1/2" diameter bolts, within 12" but not less than 7 bolt diameters from ends, 7" embedment (R403.1.6)
- _____ Footings adjacent to slopes (R403.1.7)
- _____ Frost-protected shallow foundations (R403.3)
- _____ Footings for precast concrete foundations (R403.4)

FOUNDATION/RETAINING WALLS (R404 - R406)

- _____ Masonry foundation walls (R404.1.2)
- _____ Wall height, unbalanced backfill, nominal thickness [Tables R404.1.1(1) - R404.1.1(4), R404.1.5.1]
- _____ Reinforcement size and spacing [Tables R404.1.1(2) - R404.1.1(4)]
- _____ Concrete foundation walls (R404.1.3)
- _____ Wall height, unbalanced backfill, nominal thickness [Tables R404.1.2(1) - R404.1.2(8), R404.1.5.2]

- _____ Horizontal and vertical reinforcement size and spacing [Tables R404.1.2(1) - R404.1.2(8), R404.1.3.2, R404.1.3.3.7]
- _____ Stay-in-place forms (R404.1.3.3.6.1)
- _____ SDC D provisions (R404.1.4)
- _____ Height above finished grade (R404.1.6)
- _____ Sill plate size (R404.3)
- _____ Precast concrete foundation walls (R404.5)
- _____ Drains required if habitable or usable spaces are below grade* (R405)
- _____ Soil class (Table R405.1)
- _____ Dampproofing if basements are below grade* (R406.1)
- _____ Waterproofing if high water table* (R406.2)

* If uninhabitable, see Under-Floor Space (R408)

COLUMNS (R407)

- _____ Protection from decay or corrosion (R407.1 and R407.2)
- _____ Structural requirements (R407.3)
- _____ Anchorage (R407.3)
- _____ Wood columns (minimum 4" square) (R407.3)
- _____ Steel columns (minimum 3" diameter, Schedule 40 pipe) (R407.3)

UNDER-FLOOR SPACE (R408)

- _____ Ventilation (R408.1 and R408.2)
- _____ Unvented crawl space (R408.3)
- _____ Access (R408.4)
- _____ Removal of debris (R408.5)
- _____ Finished grade (R408.6)
- _____ Flood resistance (R408.7)

FLOORS (Chapter 5)

WOOD JOISTS AND GIRDERS (R502)

- _____ Species and grade (R502.1)
- _____ Joists—Sleeping areas, LL = 30 psf
[Table R502.3.1(1)]
- _____ Joists—Nonsleeping areas, LL = 40 psf
[Table R502.3.1(2)]
- _____ Cantilevered joists
[Tables R502.3.3(1) and R502.3.3(2)]
- _____ Girder and header spans
[Tables R602.7(1) - R602.7(3)]
- _____ Joists under bearing partitions (R502.4)
- _____ Bearing (1.5" minimum on wood or metal; 3"
on masonry or concrete) and lapped joists
(3") (R502.6, R502.6.1)
- _____ Lateral restraint and bridging
(R502.7, R502.7.1)
- _____ Drilling and notching (R502.8)
- _____ Fastening (R502.9)
- _____ Framing of openings (R502.10)
- _____ Wood trusses (R502.11)
- _____ Draftstopping (R502.12)

LUMBER FLOOR SHEATHING (R503.1)

- _____ Allowable span (Table R503.1)
- _____ End joints (R503.1.1)

WOOD STRUCTURAL PANEL SHEATHING (R503.2)

- _____ Grade (R503.2.1)
- _____ Thickness (R503.2.1)
- _____ Allowable spans
[Tables R503.2.1.1(1) and R503.2.1.1(2)]
- _____ Installation [Table 602.3(1)]

PARTICLEBOARD UNDERLAYMENT (R503.3)

- _____ Grade (R503.3.1)
- _____ Thickness (R503.3.2)
- _____ Installation [Table R602.3(1)]

TREATED-WOOD FLOORS (ON GROUND) (R504)

- _____ Base course: 4" thick with maximum $\frac{3}{4}$ "
gravel or $\frac{1}{2}$ " crushed stone (R504.2.1)
- _____ Moisture barrier: placed over base course
(R504.2.2)
- _____ Materials (R504.3)

STEEL FLOOR FRAMING (R505)

- _____ Cold-formed steel; applicability limits;
in-line framing (R505.1)
- _____ Structural framing (R505.2)
- _____ Material (R505.2.1)
- _____ Corrosion protection (R505.2.2)
- _____ Identification (R505.2.4)
- _____ Fastening (R505.2.5)
- _____ Floor construction (R505.3)

CONCRETE FLOORS (ON GROUND) (R506)

- _____ Thickness: $3\frac{1}{2}$ " minimum; Concrete strength
(R506.1)
- _____ Support: prepared subgrade; maximum earth
fill = 8"; maximum sand or gravel fill = 24"
(R506.2.1)
- _____ Base course: 4" graded with 2" maximum
aggregate (R506.2.2)
- _____ Vapor retarder (R506.2.3)
- _____ Reinforcement support (R506.2.4)

EXTERIOR DECKS (R507)

- _____ Support, attachment (R507.1 - R507.2.4)
- _____ Plastic composite materials (R507.3)
- _____ Decking/deck joists (R507.4, R507.5)
- _____ Deck beams (R507.6)
- _____ Deck posts, connections, footings
(R507.7.1, R507.8)

WALL CONSTRUCTION (Chapter 6)

WOOD CONSTRUCTION (R602)

- _____ Construction
 [Figures R602.3(1) and R602.3(2)]
 - _____ Stud grade (R602.2)
 - _____ Design/construction (R602.3)
 - _____ Stud spacing *[R602.3.1, Table R602.3(5)]*
 - _____ Interior load-bearing walls (R602.4)
 - _____ Interior nonbearing walls: 2" x 3" at 24" o.c.
 or 2" x 4" flat at 16" o.c. (R602.5)
 - _____ Drilling and notching—studs (R602.6)
 - _____ Drilling and notching—top plate (R602.6.1)
 - _____ Headers *[Tables R602.7(1) - R602.7(3) and
 Figure R602.7.2]*
 - _____ Fireblocking (R602.8, R302.11)
 - _____ Cripple walls (R602.9)
 - _____ Wall bracing, lines, panels
 (R602.10.1, R602.10.2)
 - _____ Required length of bracing, method
 *[R602.10.3, R602.10.4, Tables
 R602.10.3(1) and R602.10.3(3)]*
 - _____ Minimum length, connections, support, joints,
 cripple walls (R602.10.5 - R602.10.11)
 - _____ Wall anchorage (SDC C and D) (R602.11)
 - _____ Simplified wall bracing (R602.12)
- ### STEEL WALL FRAMING (R603)
- _____ General (R603.1)
 - _____ Structural framing (R603.2)

- _____ Material (R603.2.1)
- _____ Corrosion protection (R603.2.2)
- _____ Identification (R603.2.4)
- _____ Fastening (R603.2.5)
- _____ Wall construction (R603.3 - R603.5)
- _____ Headers (R603.6)
- _____ Studs, tracks and structural sheathing
 (R603.7 - R603.9)

SHEATHING (R604 and R605)

- _____ Wood structural panels (R604)
- _____ Particleboard (R605)

MASONRY CONSTRUCTION (R606 - R610)

- _____ General design (R606)
- _____ Seismic requirements (R606.12)
- _____ Glass unit masonry (R607)
- _____ Exterior concrete wall construction (R608)
- _____ Exterior windows/doors (R609)
- _____ Glass unit masonry (R610)

STRUCTURAL INSULATED PANEL WALL CONSTRUCTION (R610)

- _____ Applicability (R610.2)
- _____ Materials (R610.3)
- _____ Wall panels, construction details
 (R610.4 - R610.10)

WALL COVERING (Chapter 7)

INTERIOR WALL COVERING (R702)

- _____ Plaster material (R702.2)
- _____ Plaster support (R702.2.3)
- _____ Gypsum board materials (R702.3.1)
- _____ Gypsum board support, application and fastening (R702.3.2 - R702.3.7)
- _____ Ceramic tile (R702.4)
- _____ Other finishes (R702.5 and R702.6)
- _____ Vapor retarders (R702.7)

EXTERIOR WALL COVERING (R703)

- _____ Water-resistive barrier (R703.2)
- _____ Attachment and minimum thickness [Table R703.3(1)]
- _____ Wood siding (R703.5)

- _____ Wood shakes and shingles (R703.6)
- _____ Exterior plaster (R703.7)
- _____ Stone & masonry veneer (R703.8 & Figure R703.8); Steel angle lintels-4" minimum bearing each end (R703.8.3)
- _____ Veneer ties: #9 U.S. gage wire or #22 U.S. gage by $\frac{7}{8}$ " corrugated metal; horizontal and vertical spacing; 2.67 square feet maximum area supported (wind > 30 psf and SDC C or D, maximum area = 2 square feet) (R703.8.4.1)
- _____ Flashing (R703.4 and R703.8.5)
- _____ Exterior insulation and finish systems (R703.9)
- _____ Fiber cement siding (R703.10)
- _____ Vinyl siding (R703.11)
- _____ Other sidings (R703.12 - R703.17)

ROOF-CEILING CONSTRUCTION (Chapter 8)

WOOD ROOF FRAMING (R802)

- _____ Fire-retardant-treated wood (R802.1.5)
- _____ Framing details (R802.3)
- _____ Rafter ties (R802.3.1)
- _____ Collar ties (4' o.c., in upper third of attic) (R802.3.1)
- _____ Purlins (2" x 4" at 4' o.c. minimum) (Figure R802.5.1, R802.5.1)
- _____ Bearing (R802.6)
- _____ Cutting and notching (R802.7)
- _____ Engineered wood products (R802.7.2)
- _____ Lateral support and bridging (R802.8)
- _____ Framing of openings (R802.9)
- _____ Wood trusses (R802.10)
- _____ Roof tie-down (R802.11)

- _____ Species and grade
- _____ Span
- _____ Size

RAFTERS [Tables R802.5.1(1) - R802.5.1(8)]

- _____ Ground snow load/LL = 20 psf
- _____ Controlling design (LL or snow)
- _____ Ceiling not attached/ceiling attached
- _____ Spacing
- _____ Species and grade

- _____ Span
- _____ Size
- _____ H_C/H_R ; Adjustment factor

ROOF SHEATHING (R803.2)

- _____ Grade
- _____ Thickness
- _____ FRTW allowable stresses/grading
- _____ Allowable spans [Table R503.2.1.1(1)]
- _____ Installation (R803.2.3)

CEILING JOISTS [Tables R802.4(1), R802.4(2)]

- _____ Without attic storage, LL = 10psf
- _____ With attic storage LL = 20psf
- _____ Spacing

ROOF-CEILING CONSTRUCTION (cont'd.)

STEEL ROOF FRAMING (R804)

- _____ General (R804.1)
- _____ Structural framing (R804.2)
- _____ Material (R804.2.1)
- _____ Corrosion protection (R804.2.2)
- _____ Identification (R804.2.3)
- _____ Fastening (R804.2.5)

_____ Roof construction (R804.3)

_____ Roof tie-down (R804.3.8)

ROOF VENTILATION (R806)

_____ Ventilation requirements (R806.1 - R806.5)

ATTIC ACCESS (R807)

_____ Access requirements (807.1)

ROOF ASSEMBLIES (Chapter 9)

ROOF CLASSIFICATION (R902)

_____ Roof covering materials (R902.1)

_____ Metal roof panels (R905.10)

_____ Modified bitumen roofing (R905.11)

WEATHER PROTECTION (R903)

_____ Flashing (R903.2)

_____ Coping (R903.3)

_____ Roof drainage (R903.4)

_____ Thermoset single-ply roofing (R905.12)

_____ Thermoplastic single-ply roofing (R905.13)

_____ Sprayed polyurethane foam roofing (R905.14)

_____ Liquid-applied roofing (R905.15)

_____ Photovoltaic shingles (R905.16)

MATERIALS (R904)

_____ Compatibility; specifications; physical characteristics; identification (R904.2 - R904.4)

ROOF INSULATION (R906)

_____ General (R906.1)

REQUIREMENTS FOR ROOF COVERINGS (R905)

_____ Underlayment (R905.1.1, R905.1.2)

_____ Asphalt shingles (R905.2)

_____ Clay and concrete tile (R905.3)

_____ Metal roof shingles (R905.4)

_____ Mineral-surfaced roll roofing (R905.5)

_____ Slate shingles (R905.6)

_____ Wood shingles (R905.7)

_____ Wood shakes (R905.8)

_____ Built-up roofs (R905.9)

ROOFTOP - MOUNTED PHOTOVOLTAIC SYSTEMS (R907)

_____ Materials and installation (R907.1 - R907.5)

REROOFING (R908)

_____ Materials and methods (R908.1)

_____ Structural support (R908.2)

_____ Replacement/re-covering (R908.3, R908.4)

ROOFTOP - MOUNTED PHOTOVOLTAIC PANEL SYSTEMS (R909)

_____ Materials and installation (R909.1 - R909.3)

CHIMNEYS AND FIREPLACES (Chapter 10)

MASONRY FIREPLACES (R1001)

_____ Construction
(Figure R1001.1 and Table R1001.1)

_____ SDC D reinforcing/anchorage
(R1001.3 and R1001.4)

_____ Firebox walls and dimensions
(R1001.5 and R1001.6)

_____ Steel fireplace units (R1001.5.1)

_____ Lintel (noncombustible) (R1001.7)

_____ Hearth extension (R1001.9, R1001.10)

_____ Fireplace clearance (R1001.11)

_____ Fireblocking (R1001.12)

MASONRY CHIMNEYS (R1003)

_____ Construction (Table R1001.1, R1003.2, R1003.3, and Figure R1001.1)

_____ Corbeling (R1003.5)

CHIMNEYS AND FIREPLACES (cont'd.)

_____ Changes in dimension (<i>R1003.6</i>)	_____ Chimney clearance (<i>R1003.18</i>)
_____ Additional load (<i>R1003.8</i>)	_____ Fireblocking (<i>R1003.19</i>)
_____ Termination (<i>R1003.9</i>)	_____ Chimney crickets (<i>R1003.20</i>)
_____ Spark arrestors (<i>R1003.9.2</i>)	FACTORY-BUILT FIREPLACES (R1004)
_____ Wall thickness; $\geq 4"$ (<i>R1003.10</i>)	_____ Listed and labeled (<i>R1004.1</i>)
_____ Flue lining - material/installation (<i>R1003.11 and R1003.12</i>)	_____ Installation (<i>R1004.2 - R1004.5</i>)
_____ Multiple flues (<i>R1003.13</i>)	FACTORY-BUILT CHIMNEYS (R1005)
_____ Flue area (appliance) (<i>R1003.14</i>)	_____ Listed and labeled (<i>R1005.1</i>)
_____ Flue area (masonry fireplace) (<i>R1003.15</i>)	_____ Installation (<i>R1005.3 and R1005.4</i>)
_____ Inlet (<i>R1003.16</i>)	EXTERIOR AIR SUPPLY (R1006)
_____ Cleanout opening (<i>R1003.17</i>)	_____ Intake size (<i>R1006.2, R1006.4</i>)

ENERGY EFFICIENCY (Chapter 11)

_____ Compliance; information (<i>N1101.5, N1101.13</i>)	_____ Electrical (<i>N1104</i>)
_____ Climate zone (<i>Table N1101.7</i>)	_____ Simulated performance (<i>N1105</i>)
_____ Building thermal envelope (<i>N1102</i>)	_____ ERI compliance alternative (<i>N1106</i>)
_____ Systems (<i>N1103</i>)	_____ Existing buildings (<i>N1107 - N1111</i>)

MECHANICAL (Chapters 12-23)

_____ Appliance labeling (<i>M1302, M1303</i>)	_____ Chimney and vent location and terminations (<i>Chapters 10 and 18</i>)
_____ Appliance access (<i>M1305, M1401</i>)	_____ Special equipment (<i>Chapter 19</i>)
_____ Appliance installation (<i>M1307</i>)	_____ Boilers/water heaters (<i>Chapter 20</i>)
_____ Heating and cooling equipment; load calculations (<i>Chapter 14</i>)	_____ Hydronic piping (<i>Chapter 21</i>)
_____ Exhaust systems (<i>Chapter 15</i>)	_____ Special piping and storage systems (<i>Chapter 22</i>)
_____ Duct systems (<i>Chapter 16</i>)	_____ Solar thermal energy systems (<i>Chapter 23</i>)
_____ Combustion air (<i>Chapter 17</i>)	_____ Penetrations of fire-resistance rated assemblies (<i>R302.4, R302.5</i>)

FUEL GAS (Chapter 24)

_____ Application (<i>G2401.1</i>)	_____ Clearances (<i>G2409</i>)
_____ General regulations (<i>G2404</i>)	_____ Electrical and electrical bonding (<i>G2410, G2411</i>)
_____ Appliance location (<i>G2406</i>)	_____ Pipe sizing (<i>G2413</i>)
_____ Air requirements (<i>G2407</i>)	_____ Piping materials (<i>G2414</i>)
_____ Installation (<i>G2408</i>)	

FUEL GAS (cont'd)

_____ Piping installation (<i>G2415 and G2419</i>)	_____ Venting (<i>G2425 - G2429</i>)
_____ Piping support (<i>G2418 and G2424</i>)	_____ Misc appliances (<i>G2423, G2430 - G2454</i>)
_____ Valves, controls, connections (<i>G2420, G2421 and G2422</i>)	

PLUMBING (Chapters 25-33)

_____ Water service location and depth (<i>P2603, P2604</i>)	_____ Freezing protection (<i>P2904.2.3</i>)
_____ Sanitary and storm sewer location and depth (<i>P2603, P2604</i>)	_____ Sprinkler coverage (<i>P2904.2.4</i>)
_____ Piping support (<i>Table P2605.1</i>)	_____ Piping materials (<i>P2904.3</i>)
_____ Listed plastic materials (<i>P2609</i>)	_____ Flow rates (<i>P2904.4.1, P2904.4.2</i>)
_____ Plumbing fixtures (<i>Chapter 27</i>)	_____ Water supply capacity (<i>P2904.5.2</i>)
_____ Water heater size and location (<i>Chapter 28</i>)	_____ Pipe sizing (<i>P2904.6</i>)
_____ Water supply and distribution system-design and calculations (<i>Chapter 29</i>)	_____ Drain, waste and vent pipe sizing and riser diagram (<i>P3004, P3005, Chapter 31</i>)
_____ Dwelling unit fire sprinkler systems (<i>P2904</i>)	_____ Sumps and ejectors (<i>P3007</i>)
_____ NFPA 13D system (<i>P2904.1</i>)	_____ Backwater valves (<i>P3008</i>)
_____ Temperature rating (<i>P2904.2.1, P2904.2.2</i>)	_____ Fixture traps (<i>P3201</i>)
	_____ Storm drainage (<i>Chapter 33</i>)
	_____ Penetrations of fire-resistance rated assem- blies (<i>R302.4, R302.5</i>)

ELECTRICAL (Chapters 34-43)

_____ Penetrations of fire-resistance rated assem- blies (<i>E3402.2</i>)	_____ Wiring methods (<i>Chapter 38</i>)
_____ Listed and labeled materials (<i>E3403</i>)	_____ Required lighting and receptacle outlets (<i>E3901, E3903</i>)
_____ Service equipment and location (<i>E3405, E3601, E3606</i>)	_____ Ground-fault and arc-fault circuit-interrupter protection (<i>E3902</i>)
_____ Service size and load calculations (<i>E3602</i>)	_____ Devices and lighting fixtures (<i>Chapter 40</i>)
_____ Available fault current (<i>E3606</i>)	_____ Appliance installation (<i>Chapter 41</i>)
_____ System grounding (<i>E3607</i>)	_____ Swimming pools (<i>Chapter 42</i>)
_____ Required branch circuits (<i>E3703</i>)	_____ Class 2 remote-control, signaling and power- limited circuits (<i>Chapter 43</i>)
_____ Feeder requirements and load calculations (<i>E3704</i>)	

MANUFACTURED HOUSING USED AS DWELLINGS (Appendix E)

_____ Provisions adopted (<i>R102.5</i>)	_____ Compliance with Appendix E verified
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PASSIVE RADON GAS CONTROLS (Appendix F)

_____ Provisions adopted (*R102.5*)

_____ Compliance with Appendix F verified

PATIO COVERS (Appendix H)

_____ Provisions adopted (*R102.5*)

_____ Compliance with Appendix H verified

PRIVATE SEWAGE DISPOSAL (Appendix I)

_____ Provisions adopted (*R102.5*)

_____ Compliance with Appendix I verified

EXISTING BUILDINGS AND STRUCTURES (Appendix J)

_____ Provisions adopted (*R102.5*)

_____ Compliance with Appendix J verified

SOUND TRANSMISSION (Appendix K)

_____ Provisions adopted (*R102.5*)

_____ Compliance with Appendix K verified

HOME DAY CARE—R-3 OCCUPANCY (Appendix M)

_____ Provisions adopted (*R102.5*)

_____ Compliance with Appendix M verified

AUTOMATIC VEHICULAR GATES (Appendix O)

_____ Provisions adopted (*R102.5*)

_____ Compliance with Appendix O verified

SOLAR-READY PROVISIONS (Appendix U)

_____ Provisions adopted (*R102.5*)

_____ Compliance with Appendix U verified

NOTES

Name of Permit Holder: _____ Permit #: _____

Address/Lot #: _____

Inspector: _____ Date of Inspection: _____

Weather Condition: _____ Time of Inspection: _____

INSPECT IT! FRAMING INSPECTION CHECKLIST

1. GENERAL FRAMING

- 1.1 Approved plans and specifications on site
- 1.2 Rooms and corridors: type, arrangement, dimensions, egress and special requirements
- 1.3 Windows and doors: type, location, dimensions, framing of openings, egress and special requirements
- 1.4 Framing materials: type, size, dimensions, span, condition, grade, location, spacing and alignment
- 1.5 Sheathing materials: type, size, dimensions, span, condition, grade, location, spacing
- 1.6 Connection and fastening materials: type, size, dimensions, gauge, condition, placement and spacing
- 1.7 Splices, cuts, notching and bored holes
- 1.8 Wood decay and termite protection
- 1.9 Corrosion protection

2. SILL

- 2.1 Sill plate
- 2.2 Sill bolts
- 2.3 Sealer/grout
- 2.4 Band/rim joist
- 2.5 Laps, splices, blocking

3. FLOORS AND CEILING

- 3.1 Columns
- 3.2 Beams/girders
- 3.3 Bearing points
- 3.4 Joists and span
- 3.5 Joist hangers
- 3.6 Lateral support
- 3.7 Bracing and blocking
- 3.8 Framing of openings
- 3.9 Sheathing
- 3.10 Ventilation

4. EXTERIOR WALLS

- 4.1 Bottom and top plates
- 4.2 Studs
- 4.3 Outside corners
- 4.4 Lateral supports
- 4.5 Bracing and blocking
- 4.6 Framing of openings
- 4.7 Ties and straps
- 4.8 Sheathing
- 4.9 House wrap
- 4.10 Flashing

5. INTERIOR WALLS

- 5.1 Bearing
- 5.2 Non bearing
- 5.3 Bottom and top plates
- 5.4 Studs
- 5.5 Corners and partition posts
- 5.6 Lateral supports
- 5.7 Bracing and blocking
- 5.8 Framing of openings

6. ROOF

- 6.1 Slope/pitch
- 6.2 Bearing points
- 6.3 Rafters
- 6.4 Ridge
- 6.5 Hips and valleys
- 6.6 Lateral supports
- 6.7 Bracing and blocking
- 6.8 Ties and straps
- 6.9 Overhang/soffit and fascia
- 6.10 Framing of openings
- 6.11 Sheathing
- 6.12 Flashing
- 6.13 Ventilation
- 6.14 Attic access

7. ROOF AND FLOOR TRUSSES

- 7.1 Engineering calculations and drawings on site
- 7.2 Manufacturer's installation specifications on site
- 7.3 Number, sizes, location and span
- 7.4 Bearing points
- 7.5 Truss plates and connectors
- 7.6 Lateral support
- 7.7 Bracing and blocking
- 7.8 Ties and straps
- 7.9 No field modifications

8. STAIRWAYS

- 8.1 Rise and run
- 8.2 Width
- 8.3 Headroom
- 8.4 Treads and risers
- 8.5 Winders
- 8.6 Landings
- 8.7 Handrails

Note any comments on reverse side.

Name of Permit Holder: _____ Permit #: _____

Address/Lot #: _____

Inspector: _____ Date of Inspection: _____

Weather Condition: _____ Time of Inspection: _____

INSPECT IT! FINAL BUILDING INSPECTION CHECKLIST

1. GENERAL BUILDING

- 1.1 Permit posted on site
- 1.2 Approved plans and specifications on site
- 1.3 All aspects of the building exterior and interior for compliance with approved plans, specifications and code requirements
- 1.4 Materials: type, location, size, condition and installation
- 1.5 Connections and fasteners: type, size, dimensions, gauge, condition, placement and spacing
- 1.6 Treatment of penetrations and opening in walls, floors, ceilings and roof
- 1.7 Installation and operability of all plumbing, mechanical and electrical fixtures, equipment and controls
- 1.8 Caulking and sealing
- 1.9 Acceptable workmanship
- 1.10 House numbers
- 1.11 Exterior and interior cleanup
- 1.12 Energy and water conservation measures
- 1.13 Final approvals by plumbing, mechanical and electrical inspectors

2. DRAINAGE

- 2.1 Backfill and final grading: maximum height against foundation, minimum slope from foundation, type of soil, layered and tamped
- 2.2 Direction of drainage flow from foundation, adjoining properties and public areas
- 2.3 Gutters: type, location, anchorage, support, attachment, fasteners, down spouts, tails and drainage flow

3. EXTERIOR WALLS AND COVERING

- 3.1 Insulation: type, location, rating, condition and installation
- 3.2 Anchorage, support, attachment, fasteners, and ratings (insulation, flame spread, etc.)
- 3.3 Moisture control
- 3.4 Painting and staining
- 3.5 Trim materials and installation
- 3.6 Corrosion protection
- 3.7 Finished surface conditions

4. ROOF

- 4.1 Anchorage, support, attachment and fasteners
- 4.2 Flashing
- 4.3 Ventilation
- 4.4 Overhang/soffit and fascia
- 4.5 Finished surface conditions

5. INTERIOR WALL, FLOOR AND CEILING COVERINGS

- 5.1 Insulation: type, location, rating, condition and installation
- 5.2 Anchorage, support, attachment and fasteners
- 5.3 Flame spread and smoke rating
- 5.4 Finished surface condition
- 5.5 Painting and staining
- 5.6 Trim materials and installation

6. DOORS AND WINDOWS

- 6.1 Location and type
- 6.2 Dimensions
- 6.3 Door swings
- 6.4 Installation and operability
- 6.5 Glazing in hazardous locations requirements
- 6.6 Emergency egress requirements
- 6.7 Required glazing label and identification
- 6.8 Skylights and sloped glazing requirements
- 6.9 Hardware and security locks
- 6.10 Screens and storms
- 6.11 Flashing
- 6.12 Sealants/caulking
- 6.13 Weather-stripping

7. FLATWORK

- (Driveways, walks, terraces, patios, basement floors, garage floors, etc.)
- 7.1 Location: exterior, interior and placement per approved plans
 - 7.2 Concrete installation: site preparation, fill, minimum fill depth, approved base course, vapor barrier, minimum compressive strength and minimum thickness of slab
 - 7.3 Weather exposure: compressive strength, air-entrained and approved concrete mixture for exposure to de-icing chemicals

Note any comments on reverse side.

Plan review process for the City of Grand Blanc

Two complete sets of construction documents shall be submitted for review before building or trade permits will be issued.

A site plan drawn to scale shall be submitted with all documents for review.

After all applications have been properly completed and submitted, they will be reviewed and either approved, or returned with a revision list of information needed. All construction documents shall be reviewed within twelve (12) business days of an approved submittal for plan review.

All construction documents shall be submitted by a "Design Professional In Charge".

Complete plan review fees shall be paid at the time of submittal.

Plan reviews will not be required for the following:

Building

- When the work is determined by the building official to be of a minor nature.
- When accessory structures are 100 square feet or less.

Electrical

- When the electrical system does not exceed 400 amps and the building is not over 3,500 square feet in area.

Mechanical

- One-and-two-family dwellings when the total building heating/cooling system input rating is 375,000 Btu's or less.
- Alterations and repair work determined by the mechanical official to be minor.
- Business, mercantile, and storage buildings having HVAC equipment only, with one fire area and not more than 3,500 square feet.
- Work completed by a governmental subdivision or state agency costing \$1,500.00.

Plumbing

- One-and-two-family dwellings containing not more than 3,500 square feet of building area.

- Alterations or repair work determined by the plumbing official to be minor.
- Assembly, business, mercantile and storage buildings with a required plumbing fixture count less than 12.
- Work completed by a governmental subdivision or state agency costing less than \$1,500.00.

Any questions regarding plan review services shall be submitted to City of Grand Blanc Building Department at 810-694-1118



MECHANICAL PERMIT APPLICATION - CITY OF GRAND BLANC
CITY OF GRAND BLANC, Building Department, 203 E. Grand Blanc Road, Grand Blanc, MI 48439
 Phone: (810) 694-1118 Fax: (810) 694-9517

APPLICANT IS: CONTRACTOR _____ HOMEOWNER _____

I. JOB LOCATION			
JOB LOCATION (STREET NO. AND NAME)	CITY: FLINT / GRAND BLANC / HOLLY	SUBDIVISION	LOT NO.
OWNER'S NAME	TOWNSHIP GR BLANC	COUNTY GENESEE	HAS A BUILDING PERMIT BEEN OBTAINED FOR THIS PROJECT?

II. CONTRACTOR/HOMEOWNER INFORMATION:			
NAME		AUTHORITY: P.A.230 OF 1972, AS AMENDED	
ADDRESS (STREET NO. AND NAME)		COMPLETION: MANDATORY TO OBTAIN PERMIT	
		PENALTY: PERMIT CANNOT BE ISSUED	
CITY	STATE	ZIP CODE	State License No. Expiration Date
SOCIAL SECURITY NUMBER or FEDERAL ID NO. (OR REASON FOR EXEMPTION)	TELEPHONE NUMBER		State Registration No. Local License Jurisdiction
WORKERS COMPENSATION INSURANCE CARRIER (OR REASON FOR EXEMPTION)	MESC EMPLOYR NO. (OR REASON FOR EXEMPTION)		Local License Number Expiration Date

III. TYPE OF JOB			
<input type="checkbox"/> Single Family	<input type="checkbox"/> New	<input type="checkbox"/> Special Insp	<input type="checkbox"/> Premanufact Home Set (State Approved)
<input type="checkbox"/> Other	<input type="checkbox"/> Alteration	<input type="checkbox"/> L P Tank	<input type="checkbox"/> Manufactured Home Set (HUD Mobile Home)
<input type="checkbox"/> State Owned	<input type="checkbox"/> School		
What is the input rating of the heating system in the building? _____	What is the building size in square feet? _____	Air Conditioning? Yes _____ No _____	Have plans been submitted? Yes _____ No _____ Not Required _____

IV. PLAN REVIEW REQUIRED

See below for plan review requirements before completing this section. Plans and specifications must be submitted for one- and two-family dwellings when the input rating of the building heating/cooling system exceeds 375,000 Btu's.

Plans are required for all building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to Act No. 299 of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's signature and seal, except:

1. One- and two-family dwellings when the total building heating/cooling system input rating is 375,000 Btu's or less.
2. Alterations and repair work determined by the mechanical official to be of a minor nature.
3. Business, mercantile, and storage buildings having HVAC equipment only, with one fire area and not more than 3,500 sf
4. Work completed by a governmental subdivision or state agency costing less than \$15,000.

Plans must be submitted, reviewed and approved before a permit can be issued.

V. APPLICANT SIGNATURE	
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 subjected to civil fines.	
X	DATE
SIGNATURE OF LICENSEE OR HOMEOWNER (HOMEOWNER SIGNATURE INDICATES COMPLIANCE WITH SECTION VI. HOMEOWNER AFFIDAVIT)	

VI. HOMEOWNER AFFIDAVIT

I hereby certify the mechanical work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the Mechanical Code and shall not be enclosed, covered up or put into operation until it has been inspected and approved by the Mechanical Inspector. I will cooperate with the Mechanical Inspector and assume the responsibility to arrange for necessary inspections.

MECHANICAL PERMIT APPLICATION - GRAND BLANC

VII. FEE CLARIFICATIONS

For New Houses #1, #2, #41 and #42 are required. If you need more then a rough and final inspection then it will be \$75.00/inspection

Item #3 Furnace Replacement is a flat rate of \$125.00-No application fee needed

Item #5 Water Heater is a flat rate of \$125.00-No application fee is needed

The application fee is NON-REFUNDABLE and DOES NOT include any inspections

NEW PERMIT	TO ADD TO EXISTING PERMIT (ADD'L INSP FEE MAY BE REQUIRED)
COMPLETE DESCRIPTION OF WORK TO BE COMPLETED UNDER THIS PERMIT	EXISTING PERMIT #
	COMPLETE DESCRIPTION OF ADDITIONAL WORK

VIII. Fee Chart - Enter the number of item being installed, multiply by the unit price for total fee.

	FEE	# ITEMS	TOTAL		FEE	# ITEMS	TOTAL
1. Application Fee	\$ 75.00	1	\$ 75.00	20. Conversion Burners (oil)	\$ 32.00		
2. New Res Htg Sys (incl duct/pipe) to 1,500 sf	\$ 85.00			21. Commercial Hoods	\$ 16.00		
New Res Htg Sys (" " " ")-1,501-3,500 sf	\$ 135.00			22. Heat Recovery Units	\$ 11.00		
New Res Htg Sys (" " " ") 3,501-7,000 sf	\$ 185.00			23. V.A.V.. Boxes	\$ 11.00		
New Res Htg Sys (" " " ") 7,001 sf & Over	\$185.00 + \$25.00/1,000 SF			24 Unit Ventilators	\$ 11.00		
3. Furnace Replacement	\$ 125.00			25. Unit Heaters (Terminal Units)	\$ 27.00		
Gas/Oil Burning Eq-New/Conv<400,000 In	\$32.00			26. Air Handlers/Heat Wheels	\$ 27.00		
Gas/Oil Burning Eq-New/Conv>400,000 In	\$42.00			27. Fire Suppression/Protection - minimum \$45.00	0.75 per head		
4. Residential Boiler	\$ 32.00			28. Evaporator Coils	\$ 32.00		
5. Water Heater	\$ 6.00			29 Refrigeration (Split Systems) - Self Contained	\$ 17.00		
Water Heater (Replacement Only)	\$ 125.00			Refrigeration (Split Systems) - 5 H.P.	\$ 32.00		
6. Flue/Vent Damper	\$ 6.00			Refrigeration (Split Systems) - Over 5 H.P.	\$ 42.00		
7. Solid Fuel Equipment (includes chimney)	\$ 32.00			30. Chiller	\$ 32.00		
Gas Burning Fireplace	\$ 32.00			31. Cooling Towers	\$ 32.00		
8. Chimney, Factory build - installed separately	\$ 27.00			32. Compressor	\$ 32.00		
9. Solar; set of 3 panels (includes piping)	\$ 21.00			33. Manufactured Chimney	\$ 22.00		
10. Gas Piping; each opening - new installation	\$ 6.00			34. Exhaust Fans	\$ 22.00		
11. A/C (includes split systems) 1 1/2 - 15 H.P.	\$ 32.00			35. Multi Zone Self Contained Units	\$ 27.00		
A/C (includes split systems) Over 15 H.P.	\$ 52.00			36. Through the Wall Units	\$ 27.00		
12. Heat Pumps: Complete Residential	\$ 32.00			37. Ranges (gas)	\$ 22.00		
13. Bath & Kitchen Exhaust	\$ 6.00			38. Limited Area Suppression (per head)	\$ 3.00		
14. Tanks - Aboveground	\$ 22.00			39 Fire Suppression Hood (per head)	\$ 5.00		
15. Tanks - Underground	\$ 22.00			40. Special/Safety Insp. (includes Cert Fee)	\$ 75.00		
16. Humidifiers	\$ 6.00			41. Additional Inspection	\$ 75.00		
17. Piping - minimum \$30.00	.05/ft.			42. Final Inspection	\$ 75.00	1	\$ 75.00
18. Duct - minimum \$30.00	.10/ft.			43. Certification Fee	\$ 25.00		
19. Heat Pumps: Commercial (pipe not included)	\$ 22.00			44. Plan Review (see fee sch for calc method)			

REQUIRED INSPECTIONS: Underground Pressure Rough Above Ceiling Final Other:	TOTAL FEES		
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IX. COMPLETING APPLICATION

<p>GENERAL: Any regulated activity started prior to the applicant securing the permit, will be charged an additional administrative charge at the same rate as the required permit fee not to exceed \$100.00. This shall be paid prior to the issuance of the required permit.</p>	<p>PERMIT EXPIRATION: A permit remains valid provided work is progressing & inspections are requested & conducted. A permit shall become invalid if the authorized work is not commenced within 6 months after issuance or if work is suspended or abandoned for a period of six months after the time of commencement. A pmt will be cancelled when no inspections are requested/conducted within six months of the date of issuance or the date of a previous inspection. Cancelled pmts cannot be refunded or reinstated.</p>	<p>The Department will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, handicap or political beliefs.</p>
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Department Approval: _____ Date: _____



ELECTRICAL PERMIT APPLICATION - CITY OF GRAND BLANC
CITY OF GRAND BLANC, Building Department, 203 E. Grand Blanc Road, Grand Blanc, MI 48439
 Phone: (810) 694-1118 Fax: (810) 694-9517

APPLICANT IS: _____ **CONTRACTOR** _____ **HOMEOWNER** _____

I. JOB LOCATION			
JOB LOCATION (STREET NO. AND NAME)	CITY: FLINT / GRAND BLANC / HOLLY	SUBDIVISION	LOT NO.
OWNER'S NAME	TOWNSHIP GR BLANC	COUNTY GENESEE	HAS A BUILDING PERMIT BEEN OBTAINED FOR THIS PROJECT?

II. CONTRACTOR/HOMEOWNER INFORMATION:			
NAME		AUTHORITY: P.A.230 OF 1972, AS AMENDED	
ADDRESS (STREET NO. AND NAME)		COMPLETION: MANDATORY TO OBTAIN PERMIT	
CITY		STATE	ZIP CODE
SOCIAL SECURITY NUMBER or FEDERAL ID NO. (OR REASON FOR EXEMPTION)		TELEPHONE NUMBER	State License No. Expiration Date
WORKERS COMPENSATION INSURANCE CARRIER (OR REASON FOR EXEMPTION)		MESC EMPLOYER NO. (OR REASON FOR EXEMPTION)	State Registration No. Local License Jurisdiction
			Local License Number Expiration Date

III. TYPE OF JOB					
<input type="checkbox"/> Single Family	<input type="checkbox"/> New	<input type="checkbox"/> Special Inspection	<input type="checkbox"/> Manufactured Home Set (HUD Mobile Home)	<input type="checkbox"/> State Owned	
<input type="checkbox"/> Other	<input type="checkbox"/> Alteration	<input type="checkbox"/> Service Only	<input type="checkbox"/> Premanufact Home Set (State Approved)	<input type="checkbox"/> School	
What is the rating of the service or feeder in ampere?	What is the building size in square feet?	Air Conditioning? Yes _____ No _____		Have plans been submitted? Yes _____ No _____ Not Required _____	

IV. PLAN REVIEW REQUIRED
 See below for plan review requirements before completing this section. Plans and specifications must be submitted when the wiring or alteration to an electrical system is over 400 amps and is in excess of 3,500 square feet in all buildings.
 Plans are required for all building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to Act No. 299 of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's signature and seal, except:
 1. When the electrical system rating does not exceed 400 amps and the building is not over 3,500 square feet in area.
 2. Work completed by a governmental subdivision or state agency costing less than \$15,000.
Required Plans must be submitted, reviewed and approved before a permit can be issued.

V. APPLICANT SIGNATURE	
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 subjected to civil fines.	
X	DATE
SIGNATURE OF LICENSEE OR HOMEOWNER (HOMEOWNER SIGNATURE INDICATES COMPLIANCE WITH SECTION VI. HOMEOWNER AFFIDAVIT)	

VI. HOMEOWNER AFFIDAVIT
 I hereby certify the electrical work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the Electrical Code and shall not be enclosed, covered up or put into operation until it has been inspected and approved by the Electrical Inspector. I will cooperate with the Electrical Inspector and assume the responsibility to arrange for necessary inspections.

VII. FEE CLARIFICATIONS

For New Houses items #1,#2,#28 and #29 are required. All inspections are separate fees. Include required detail in "Complete Description of Work" Section

The application fee is **NON-REFUNDABLE** and **DOES NOT** include any inspections

ITEM #16, MOBILE HOME UNIT SITE:

When installing a site service in a park, the permit application must include the application fee, service, plus the number of park sites.

When setting a HUD mobile home in a park, a permit must include the application fee and a feeder. This shall be done by a licensed electrical contractor.

When setting a HUD mobile home or a premanufactured home on private property, a permit must include the application fee, service and feeder, and final inspection.

NEW PERMIT	TO ADD TO EXISTING PERMIT (ADDT'L INSP FEE MAY BE REQUIRED)
COMPLETE DESCRIPTION OF WORK TO BE COMPLETED UNDER THIS PERMIT	EXISTING PERMIT #
	COMPLETE DESCRIPTION OF ADDITIONAL WORK

VIII. Fee Chart - Enter the number of item being installed, multiply by the unit price for total fee.

	FEE	# ITEMS	TOTAL		FEE	# ITEMS	TOTAL
1. Application Fee	\$ 75.00	1	\$ 75.00	15. Feeders - Bus Ducts, etc. - per 50'	\$ 7.00		
2. New Res Electrical System up to 1,500 sf	\$ 85.00			16. Mobile Home Park Site (see above)	\$ 6.00		
New Res Electrical System - 1,501 - 3,500 sf	\$ 135.00			17. Recreational Vehicle Park Site	\$ 6.00		
New Res Electrical System - 3,501 - 7,000 sf	\$ 185.00			18. Units up to 20 K.V.A. & H.P..	\$ 5.00		
New Res Electrical System - 7,001 sf & Over	\$185.00 + \$25.00/1000			19. Units 21 to 50 K.V.A. or H.P.	\$ 7.00		
3. Service thru 200 Amps	\$ 15.00			20. Units 51 K.V.A or H.P. or over	\$ 11.00		
4. Over 200 Amps thru 600 Amps	\$ 20.00			21. Fire Alarms - up to 10 devices	\$ 55.00		
5. Over 600 Amps thru 800 Amps	\$ 25.00			22. Fire Alarms - 11 to 20 devices	\$ 105.00		
6. Over 800 amps thru 1200 Amps.	\$ 55.00			23. Fire Alarms - over 20 devices	\$105.00 + \$5.00/20		
7. Over 1200 Amps GFI Only	\$ 80.00			24. Energy Retrofit - Temp. Control	\$ 50.00		
8. Circuits	\$ 6.00			25. Conduit only; or grounding only	\$ 50.00		
9. Lighting Fixtures - per 25	\$ 6.00			26. Low Voltage - per opening	\$ 6.00		
10. Dishwasher	\$ 6.00			27. Special/Safety Insp. (includes Cert Fee)	\$ 75.00		
11. Furnace - Unit Heater	\$ 6.00			28. Additional Inspection	\$ 75.00		
12. Electrical Heating Units (baseboard)	\$ 32.00			29. Final Inspection	\$ 75.00		
13. Power Outlets (A/C, ranges, dryers, etc)	\$ 8.00			30. Certification Fee	\$ 25.00		
14. Signs: Unit	\$ 7.00			31. Plan Review (see fee sch for calc method)			
Letter	\$ 11.00						
Neon - each 25 feet	\$ 22.00			TOTAL FEES			

REQUIRED INSPECTIONS: Service Underground Rough Above Ceiling Final Temporary Service Other:

IX. COMPLETING APPLICATION

GENERAL: Any regulated activity started prior to the applicant securing the permit, will be charged an additional administrative charge at the same rate as the required permit fee not to exceed \$100.00. This shall be paid prior to the issuance of the required permit.

PERMIT EXPIRATION: A permit remains valid provided work is progressing & inspections are requested & conducted. A permit shall become invalid if the authorized work is not commenced within 6 months after issuance or if work is suspended or abandoned for a period of six months after the time of commencement. A pmt will be cancelled when no inspections are requested/conducted within six months of the date of issuance or the date of a previous inspection. Cancelled pmts cannot be refunded or reinstated.

The Department will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, handicap or political beliefs.

DEPARTMENT APPROVAL:

DATE:



PLUMBING PERMIT APPLICATION - CITY OF GRAND BLANC
CITY OF GRAND BLANC, Building Department, 203 E. Grand Blanc Road, Grand Blanc, MI 48439
 Phone: (810) 694-1118 Fax: (810) 694-9517

APPLICANT IS: CONTRACTOR _____ HOMEOWNER _____

I. JOB LOCATION			
JOB LOCATION (STREET NO. AND NAME)	CITY: FLINT / GRAND BLANC / HOLLY	SUBDIVISION	LOT NO.
OWNER'S NAME	TOWNSHIP GR BLANC	COUNTY GENESEE	HAS A BUILDING PERMIT BEEN OBTAINED FOR THIS PROJECT?

II. APPLICANT INFORMATION			
NAME		AUTHORITY: P.A.230 OF 1972, AS AMENDED	
ADDRESS (STREET NO. AND NAME)		COMPLETION: MANDATORY TO OBTAIN PERMIT	
CITY		STATE	ZIP CODE
SOCIAL SECURITY NUMBER or FEDERAL ID NO. (OR REASON FOR EXEMPTION)		TELEPHONE NUMBER	State License No. Expiration Date
WORKERS COMPENSATION INSURANCE CARRIER (OR REASON FOR EXEMPTION)		MESC EMPLOYR NO. (OR REASON FOR EXEMPTION)	State Registration No. Local License Jurisdiction
			Local License Number Expiration Date

III. TYPE OF JOB				
<input type="checkbox"/> Single Family	<input type="checkbox"/> New	<input type="checkbox"/> Sewer	<input type="checkbox"/> Premanufact Home Set (State Approved)	<input type="checkbox"/> State Owned
<input type="checkbox"/> Other	<input type="checkbox"/> Alteration	<input type="checkbox"/> Water	<input type="checkbox"/> Manufactured Home Set (HUD Mobile Home)	<input type="checkbox"/> School
What is Size of Building (sq ft)?	Air Conditioning Included?	Occupant Load (Commercial/Industrial Uses)		

IV. PLAN REVIEW REQUIRED	
HAVE PLANS BEEN SUBMITTED? (see below for plan review requirements before completing this section)	Yes _____ No _____ Not Required _____
Plans are not required for the following:	
1. One- & two-family dwelling containing not more than 3,500 sq ft of building area.	2. Alterations, repair work determined to be of a minor nature by plmb official.
3. Assembly, Business, Mercantile, & Storage Bldgs with a req'd plumbing fixt count < 12.	4. Work completed by a gov subdivision or state agency costing < \$15,000.
If work being performed is described above, answer Section IV. "Not Required."	
Plans are required for all other building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to Act No. 299 of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's signature and seal.	
REQUIRED PLANS MUST BE SUBMITTED BEFORE A PERMIT CAN BE ISSUED	

V. APPLICANT SIGNATURE	
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 subjected to civil fines.	
X	DATE
SIGNATURE OF LICENSEE OR HOMEOWNER (HOMEOWNER SIGNATURE INDICATES COMPLIANCE WITH SECTION VI. HOMEOWNER AFFIDAVIT)	

VI. HOMEOWNER AFFIDAVIT
I hereby certify the plumbing work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the Plumbing Code and shall not be enclosed, covered up or put into operation until it has been inspected and approved by the Plumbing Inspector. I will cooperate with the Plumbing Inspector and assume the responsibility to arrange for necessary inspections.

PLUMBING PERMIT APPLICATION - GRAND BLANC

VII. FEE CLARIFICATIONS

For New Houses items #1, #2, #24 and #25 are required. All inspections are separate fees. Include required detail in "Complete Description of Work" Section

Item #3 Water Heater is a flat rate of \$125.00-No Application fee is needed

The application fee is NON-REFUNDABLE and DOES NOT include any inspections

ITEM #3, MOBILE HOME UNIT SITE:

When item is used for sewer excavations in a new park, the permit application should include the application fee plus the number of unit sites. When setting a mobile or modular home on a private property, a permit should include the application fee, a sewer or building drain and a water service or water distribution pipe.

REQUIRED: ITEM #4, FIXTURES, FLOOR DRAINS, SPECIAL DRAINS, & WATER CONNECTED APPLIANCES INCLUDE:

Wtr Closets	Sink (any description)	Slop Sink	Drinking Fountain	Floor Drain	Water outlet/Connection to any Make-up WTr Tank
Bathtub	Emergency Eye Wash	Bidet	Condensate Drain	Roof Drain	Water Outlet/Connection to Heating system
Lavatories	Emergency Shower	Cuspidor	Washing Machine	Grease Trap	Water Outlet/Connection to Filters
Shower Stall	Garbage Grinder	Dishwasher	Acid Waste Drain	Starch Trap	Connection to Sprinkler System (irrigation)
Laundry Try	Water Outlet Cooler	Refrigerator	Embalming Table	Plaster Trap	Water Connected Sterilizer
Urinal	Ice Making Machine	Water Htr	Bed Pan Washer	Wtr Softener	Water Connected Dental Chair
Autopsy	Water Connected Still				Water Connection to Carbonated Bev Dispensers

NEW PERMIT		TO ADD TO EXISTING PERMIT (ADDT'L INSP FEE MAY BE REQUIRED)	
COMPLETE DESCRIPTION OF WORK TO BE COMPLETED UNDER THIS PERMIT		EXISTING PERMIT #	
		COMPLETE DESCRIPTION OF ADDITIONAL WORK	

VIII. Fee Chart - Enter the number of item being installed, multiply by the unit price for total fee.

	FEE	# ITEMS	TOTAL		FEE	# ITEMS	TOTAL
1. Application Fee	\$ 75.00	1	\$ 75.00	13. Sewers 6" & Over perf 100 lf (sanitary/storm)	\$ 30.00		
2. New Res Plumbing System up to 1,500 sf	\$ 85.00			14. Manholes, Catch Basins (ea)	\$ 6.00		
New Res Plumbing system -1,501 - 3,500 sf	\$ 135.00			15. Water Dist Pipe (syst) 3/4" Wtr Dist Pipe	\$ 6.00		
New Res Plumbing System - 3,501 - 7,000 sf	\$ 185.00			16. Water Dist Pipe (syst) 1" Wtr Dist Pipe	\$ 11.00		
New Res Plumbing System - 7,001 sf & over	\$185.00 + \$25.00/1,000			17. Water Dist Pipe (syst) 1 1/4" Wtr Dist Pipe	\$ 16.00		
3. Water Heater	\$125.00			18. Water Dist Pipe (syst) 1 1/2" Wtr Dist Pipe	\$ 21.00		
4. Fixt, flr drains, spec drains, wtr conn appl (ea)	\$ 6.00			19. Water Dist Pipe (syst) 2" Wtr Dist Pipe	\$ 26.00		
5. Stacks (soil, waste, vent or conductor (ea)	\$ 3.00			20. Water Dist Pipe (syst) Over 2" Wtr Dist Pipe	\$ 31.00		
6. Sewage ejectors, sumps (ea)	\$ 6.00			21. Red press zone back-flow preventer (ea)	\$ 6.00		
7. Sub-soil drains (ea)	\$ 6.00			22. Medical gas (per connection / min = \$50.00)	\$55.00 + \$5.00 ea		
8. Water service - Less than 2"	\$ 6.00			23. Special/Safety Inspection (includes Cert Ltr)	\$ 75.00		
9. Water service - 2" - 6"	\$ 30.00			24. Additional Inspection	\$ 75.00		
10. Water Service - over 6"	\$ 55.00			25. Final Inspection	\$ 75.00		
11. Connection - building drain-building sewers	\$ 6.00			26. Certification Fee	\$ 25.00		
12. Sewers Less than 6" per 100 lf (sanitary/storm)	\$ 6.00			27. Mobile Home Park Site* (each)	\$ 6.00		

REQUIRED INSPECTIONS: Undergroud Rough Above Ceiling Final Other:	TOTAL FEES		
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IX. INSTRUCTIONS FOR COMPLETING APPLICATION

GENERAL: Any regulated activity started prior to the applicant securing the permit, will be charged an additional administrative charge at the same rate as the required permit fee not to exceed \$100.00. This shall be paid prior to the issuance of the required permit.	PERMIT EXPIRATION: A permit remains valid provided work is progressing & inspections are requested & conducted. A permit shall become invalid if the authorized work is not commenced within 6 months after issuance or if work is suspended or abandoned for a period of six months after the time of commencement. A pmt will be cancelled when no inspections are requested/conducted within six months of the date of issuance or the date of a previous inspection. Cancelled pmts cannot be refunded or reinstated.	The Department will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, handicap or political beliefs.
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DEPARTMENT APPROVAL: _____ DATE: _____



COMMERCIAL & INDUSTRIAL BUILDING PERMIT APPLICATION
CITY OF GRAND BLANC, Building Department, 203 E. Grand Blanc Road, Grand Blanc, MI 48439

Phone: (810) 694-1118 Fax: (810) 694-9517

THIS DEPARTMENT WILL NOT DISCRIMINATE AGAINST ANY INDIVIDUAL OR GROUP BECAUSE OF RACE, SEX, RELIGION, AGE, NATIONAL ORIGIN, COLOR, MARITAL STATUS, HANDICAP, OR POLITICAL BELIEFS.

AUTHORITY: PA 230OF 1972, AS AMENDED **COMPLETION:** MANDATORY TO OBTAIN PERMIT **PENALTY:** PERMIT NOT ISSUED

JOB ADDRESS: _____ **SUITE #** _____ **PID:** _____ **DATE:** _____

➤ **IT IS YOUR RESPONSIBILITY** :Obtain The Following County & State Permits (If Required) Prior To Application For Your Building Permit:

_____ *Soil Erosion Permit (County)* _____ *Right-Of-Way Permit (County)* _____ *CCIF (B) Permit (County)*

_____ *IPP Permit (County)* _____ *DEQ (State)* _____ *DNR (State)*

Construction Value (to be calculated per national standard): _____

Description of work to be completed under this permit: _____

CONTRACTOR INFORMATION:

Name/Company Name: _____ Builder's License Number: _____

Project Manager/Contact Person: _____ Federal Employer ID Number Or Reason Exempt: _____

Address: _____ Workman's Comp Carrier Or Reason Exempt: _____

City/State/Zip Code: _____ MESC Employer Number Or Reason Exempt: _____

Phone Number: _____ email: _____

Cell Phone: _____ Fax Number: _____

OWNER/LESSEE:

Name: _____ Contact: _____

Address: _____ City/State/Zip Code: _____

Phone Number: _____ Fax Number: _____

APPLICANT INFORMATION:

Name/Company Name: _____ Project Manager/Contact Person: _____

Address: _____ City/State/Zip Code: _____

Phone Number: _____ Cell Phone: _____

Fax Number: _____ email: _____

IMPORTANT INFORMATION

PLEASE NOTE: UNLESS YOU ARE OTHERWISE NOTIFIED, PERMIT OR DENIAL WILL BE ISSUED WITHIN 21 DAYS OF SUBMISSION OF COMPLETE APPLICATION. Construction shall not be started until the permit has been approved and issued. All construction shall be in compliance with the building code currently in effect. No work shall be concealed until it has been inspected. Inspections must be requested by calling the City of Grand Blanc at (810) 694-1118. Requests must include the job location, permit number, caller' name and company name, return telephone number, and lockbox information.

EXPIRATION: A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if the authorized work is not commenced within six months after the issuance of the permit or the authorized work is suspended or abandoned for a period of six months after the time of commencing work. Once processed for issuance, building permits must be issued, including payment of all required fees, within thirty (30) days. A permit will be cancelled when no inspections are requested or conducted within six months of the date of issuance or the date of a previous inspection. Cancelled permits cannot be reissued or refunded.

IF REQUIRED:

- ✓ *PLAN REVIEW MUST BE COMPLETED PRIOR TO THE PROCESSING AND ISSUANCE OF THE BUILDING PERMIT.*
- ✓ *TRADE PERMITS WILL NOT BE ISSUED PRIOR TO THE BUILDING PERMIT.*

I HEREBY CERTIFY THAT THE OWNER OF RECORD AUTHORIZES THE PROPOSED WORK AND THAT I HAVE BEEN AUTHORIZED BY THE OWNER TO MAKE THIS APPLICATION AS HIS/HER AUTHORIZED AGENT. 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

Applicant's Signature: _____

COMMERCIAL & INDUSTRIAL PERMITS: REQUIRED INSPECTIONS

- ✓ Project Address (Including Suite Number, Building Number Etc.)
- ✓ Name Of Person Calling And Telephone Contact Number
- ✓ Permit Number
- ✓ Relevant Information Such As Location For Inspection, Lockbox, Etc.

PLEASE NOTE: Calls Made Later In The Day Will Receive Inspection The Next Business Day (Monday Through Friday).

INSPECTION TYPES:

INSPECTION IS REQUIRED:

Footing Forms	When forms are set and before concrete is poured.
Foundation Forms	When forms are set, any reinforcing is installed and secured, and before the concrete is poured.
Backfill	When concrete is poured, waterproofed, drain tile is in and covered with gravel, before foundation is backfilled.
HVAC Rough	When piping and ductwork are installed.
Electrical Rough-In	When rough-in work is complete; before drywall or insulation is in place.
Plumbing Underground	When piping is located between floors or underground, but before covering is in place. Flushing of underground must be witnessed.
Plumbing Rough-In	When rough work is completed.
Rough (Structural)	Before any drywall, plaster or interior finish is applied. Rough in of electrical, plumbing, and ductwork must be installed and approved. Inspection per floor is required for all uses.
Underslab	When base is prepared and reinforcing in place and before concrete is poured. All utilities and service equipment in concrete must be in place prior to inspection.
Insulation	When framing inspection has been approved and the insulation has been installed.
HVAC Final	When system is installed and operational.
Plumbing Final	When final work is complete and before system is operational.
Electrical Final	When final work is complete.
Fire Protection Systems; Fire Prevention Systems including sprinkler system, fire alarm systems, hood systems, etc.	All fire protection, detection, suppression and alarm systems shall be inspected and witnessed before the systems are operational. **Systems may require a rough inspection. All trade inspections must be approved prior to the framing inspection or the final inspection for occupancy.
Periodic	For large commercial and industrial buildings, between regularly scheduled inspections (progress status reporting).

Final / Occupancy | When all work is completed and all other required inspections have been completed and approved.

APPROVAL FOR PERMIT PROCESSING AND ISSUANCE:

Zoning _____

Fire Department _____

Variance Granted (Date): _____

ZBA #: _____

Pollution Control _____

Noise Control _____

Tap-In Fees _____

Other _____

USE GROUP	CONSTRUCTION TYPE	SQUARE FEET	OCCUPANT LOAD	SEAT COUNT

Total Bldg Pmt Fee: \$ _____

Building Department Inspector Approval for Permit Issuance

Date

COMMERCIAL OR INDUSTRIAL PROJECTS PLAN REVIEW APPLICATION



CITY OF GRAND BLANC
Building Department
203 E. Grand Blanc Road
Grand Blanc, MI 48439

Phone: (810) 694-1118
Fax: (810) 694-9517

APPLICATION INFORMATION AND REQUIREMENTS (application MUST be complete):

- _____ PLAN REVIEW FEES MUST BE PAID IN FULL AT TIME OF PROJECT SUBMITTAL
- _____ PLANS MUST BE SIGNED/SEALED BY ARCHITECT OR ENGINEER
- _____ THREE SETS OF SIGNED/SEALED PLANS ARE REQUIRED
- _____ DIGITAL COPY REQUIRED
- _____ THE FOLLOWING SIGNATURES MUST BE ON THE APPLICATION:
_____ Applicant _____ Architect/Engineer _____ Design Professional In Charge
- _____ SITE PLAN REVIEW IN PROCESS? _____ COMPLETED AND APPROVED?
- _____ ZBA REQUIRED? _____ IF YES, APPROVAL OBTAINED?
- _____ SPECIAL LAND USE REQUIRED? _____ IF YES, APPROVAL OBTAINED?

IT IS YOUR RESPONSIBILITY To Obtain The Following County & State Permits **(If Required)** Prior To Application For Your Building Permit:

- _____ Soil Erosion Permit (County) _____ Right-Of-Way Permit (County)
- _____ CCIF (B) Permit (County) _____ IPP Permit (County)
- _____ DEQ (State) _____ DNR (State)

Fire Suppression / Fire Prevention Information Required (last page of application)

TED SCZEPANSKI, BUILDING OFFICIAL
BUILDING PLAN REVIEW/COMMERCIAL BUILDING INSPECTIONS

MIKE KYLE
ELECTRICAL PLAN REVIEW/INSPECTOR

GLENN THOMAS
MECHANICAL PLAN REVIEW/INSPECTOR
FIRE SUPPRESSION PLAN REVIEW/INSPECTOR
PLUMBING PLAN REVIEW/INSPECTOR

Notice: The City of Grand Blanc Authority: Act 230, P.A. 1972, as amended Completion: Mandatory Penalty: Permit Cannot Be Issued
will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, handicap or political beliefs.

PLEASE NOTE: ONLY those items checked and that have fees paid will be reviewed. **Additional submittals for plan review require a new application:

Building _____ Electrical _____ Mechanical _____ Plumbing _____ Energy _____

Foundation _____ Barrier Free _____ Fire Prevention* _____ Fire Suppression _____ Fire Alarm _____

- * Each of the following require fire prevention plan review and permits in addition to mechanical and/or electrical:
 - Any project requiring fire suppression plan review and permit.
 - Any project requiring fire alarm systems
 - Any project requiring Automatic Range Hood systems

➤ **APPLICANT INFORMATION:**

Company: _____ Contact Name: _____

Address: _____ City: _____ State: _____ Zip Code: _____

Phone: _____ Cell Phone (if desired): _____ Fax: _____

➤ **Applicant Signature:** _____ **Title:** _____

➤ **ARCHITECT/ENGINEER INFORMATION:**

Company: _____ Contact Name: _____

Address: _____ City: _____ State: _____ Zip Code: _____

License #: _____ Phone: _____ Fax: _____

➤ **DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE:**

Company: _____ Contact Name: _____

Address: _____ City: _____ State: _____ Zip Code: _____

Phone Number: _____ Fax: _____

Architect: _____ Engineer: _____ License Number: _____

Email _____

➤ **RESPONSIBILITY AREAS:**

Building _____ Electrical _____ Mechanical _____ Plumbing _____ Energy _____

Foundation _____ Barrier Free _____ Fire Suppression _____ Other _____

➤ _____
Signature of Design Professional in Charge **Date**

THIS APPLICATION IS FOR:

Project Address: _____

Project Name: _____

Building Data: New _____ Addition _____ Alteration _____ Repair _____ Other _____

Proposed Construction Cost: _____

AREA 1General Description: _____

Gross Floor Area: _____ Alteration Area: _____ Occupant Load: _____

Use Group: _____ Construction Type: _____ Date: _____

Fire Suppression: Yes / No **Type of System:** NFPA13 NFPA13R NFPA13D LTD AREA HOOD SYS OTHER

Fire Alarms: Yes / No **Type of System:** MANUAL AUTOMATIC

AREA 2General Description: _____

Gross Floor Area: _____ Alteration Area: _____ Occupant Load: _____

Use Group: _____ Construction Type: _____ Date: _____

Fire Suppression: Yes / No **Type of System:** NFPA13 NFPA13R NFPA13D LTD AREA HOOD SYS OTHER

Fire Alarms: Yes / No **Type of System:** MANUAL AUTOMATIC

AREA 3General Description: _____

Gross Floor Area: _____ Alteration Area: _____ Occupant Load: _____

Use Group: _____ Construction Type: _____ Date: _____

Fire Suppression: Yes / No **Type of System:** NFPA13 NFPA13R NFPA13D LTD AREA HOOD SYS OTHER

Fire Alarms: Yes / No **Type of System:** MANUAL AUTOMATIC

NOTES: N.R. — Not required
 N.A. — Not applicable

ADMINISTRATION (Chapter 1)

_____ Complete construction documents
 (107.1, 107.2)

_____ Signed/sealed construction documents
 (107.1, State laws vary)

BUILDING PLANNING (Chapters 3, 4, 5, 6)

OCCUPANCY CLASSIFICATION (302 - 312, 508, 509)

_____ Single Occupancy (302.1)

_____ Incidental uses (509, Table 509)

_____ Mixed Occupancy (508.1)

_____ Accessory occupancies (508.2)

GENERAL BUILDING LIMITATIONS (Chapters 5 & 6)

Apply Case 1 to determine the allowable height and area and permitted types of construction for a building containing a single occupancy or nonseparated mixed occupancies. Apply Case 2 to determine the allowable height and area and permitted types of construction for a building containing separated mixed occupancies.

FRONTAGE INCREASE

Frontage (506.3)	North	East	South	West
Total Frontage (F) _____ ft.	Perimeter (P) _____ ft.			
Width of open space (W) = _____				
Area Increase Factor due to frontage, I_f = _____ (506.3.3)				
$I_f = \left[\frac{F}{P} - 0.25 \right] \frac{W}{30}$				

CASE 1 — SINGLE OCCUPANCY OR NONSEPARATED MIXED OCCUPANCIES (508.3)

Using Tables 504.3, 504.4 and 506.2, identify the allowable height and area of the single occupancy or the most restrictive of the nonseparated mixed occupancies. Construction types that provide an allowable building area and height equal to or greater than the actual building area and height are permitted.

DETERMINE CONSTRUCTION TYPE

Actual building area _____ ft²

Tabular allowance area (A_1) _____ ft²

Tabular allowance area for nonsprinklered
buildings (NS) _____ ft²

Allowable building area _____ ft²

$$A_a = A_1 + (NS \times I_f)$$

Actual building height _____ feet _____ stories

Allowable building height _____ feet _____ stories

Permitted types of construction _____

Type of construction assumed
for review (602.1) _____

CHECK MAXIMUM ALLOWABLE AREA (506.2.3)

Total floor area (all stories) _____ ft²

Maximum allowable floor area (all stories)

_____ × _____ = _____ ft²
Allowable building area (A_a) number of stories above grade plane (maximum 3) (S_a)

Compliance verified _____

CASE 2—SEPARATED MIXED OCCUPANCIES (508.4)

Using Tables 504.3, 504.4 and 506.2, identify the allowable height and area of each of the separated occupancies within the building. Construction types that provide, for each story of the building, areas from Table 506.2 (as modified by Section 506.3.3) which result in a sum of the ratios of 1.00 or less and allowable heights (per Tables 504.3 and 504.4) equal to or greater than the actual heights of the occupancies are permitted.

Story	Group	Actual floor area	Tabular allowance area (A _i)	Tabular allowance area for nonsprinklered buildings (NS)	Allowable floor area*	Actual height	Allowable height
_____	_____	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories

-4-

Area ratio (single floor) = $\frac{\sum \text{Actual floor area}}{\text{Allow. floor area}^*}$ = _____ + _____ + _____ + _____ = _____ ≤ 1.00

*Allowable floor area = A_i + (NS × I_i)

CHECK MAXIMUM ALLOWABLE AREA (506.2.4)

Three stories or less buildings	_____	Permitted types of construction	_____
Four or more story buildings (Total area ratio ≤ 3)	_____	Type of construction assumed for review (602.1)	_____
		Compliance verified	_____

MEZZANINES (505)

_____ Area limitation (505.2.1)

_____ Openness (505.2.3)

_____ Egress (505.2.2)

_____ Equipment platforms (505.3)

UNLIMITED AREA BUILDINGS (507)

_____ Open space (507.2)

_____ Group H-5 occupancy (507.9)

_____ Nonsprinklered, one story (507.3)

_____ Aircraft paint hangar (507.10)

_____ Sprinklered, one story (507.4)

_____ Group E buildings (507.11)

_____ Two story (507.5)

_____ Motion picture theaters (507.12)

_____ Group A-3 buildings (507.6, 507.7)

_____ Covered and open mall buildings/anchor stores (507.13)

_____ Group H-2, H-3 and H-4 occupancies (507.8)

SPECIAL PROVISIONS (510)

_____ Special condition applicable (510.1)

_____ Compliance verified

SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY (Chapter 4)

COVERED MALL AND OPEN MALL BUILDINGS (402)

_____ Open space (402.1.1, 402.1.2)

_____ Plastic signs (402.6.4)

_____ Lease plan (402.3)

_____ Standpipe system (402.7.1)

_____ Area/type of construction (402.4.1)

_____ Smoke control (402.7.2)

_____ Fire separations (402.4.2 - 402.4.2.3)

_____ Emergency power and emergency voice/ alarm (402.7.3, 402.7.4)

_____ Open mall construction (402.4.3)

_____ Fire department access (402.7.5)

_____ Automatic sprinkler system (402.5)

_____ Mall width (402.8.1)

_____ Interior finish (402.6.1)

_____ Occupant load (402.8.2 - 402.8.2.4)

_____ Kiosk requirements (402.6.2)

_____ Egress (402.8.3 - 402.8.7)

_____ Children's play structures (402.6.3)

_____ Security grilles and doors (402.8.8)

HIGH-RISE BUILDINGS (403)

- _____ Construction (403.2)
- _____ Automatic sprinkler system (403.3)
- _____ Smoke detection (403.4.1)
- _____ Fire alarm system (403.4.2)
- _____ Standpipes (403.4.3)
- _____ Emergency voice/alarm systems (403.4.4)
- _____ Emergency responder radio coverage (403.4.5)
- _____ Fire command center (403.4.6)
- _____ Smoke removal (403.4.7)
- _____ Standby/emergency power (403.4.8)
- _____ Stair remoteness (403.5.1)
- _____ Additional stairway (403.5.2)
- _____ Stairway doors (403.5.3)
- _____ Smokeproof exit (403.5.4)
- _____ Luminous egress path (403.5.5)
- _____ Elevators (403.6)

ATRIUMS (404)

- _____ Use (404.2)
- _____ Automatic sprinkler system (404.3)
- _____ Fire alarm system (404.4)
- _____ Smoke control (404.5)
- _____ Enclosure (404.6)
- _____ Standby power (404.7)
- _____ Interior finish (404.8)
- _____ Travel distance (404.9)
- _____ Interior exit stairways (404.10)

OTHER SPECIAL USE AND OCCUPANCY

- _____ Underground structures (405)
- _____ Motor-vehicle-related occupancies (406, 510)
- _____ Group I-2 (407)
- _____ Group I-3 (408)
- _____ Motion picture projection rooms (409)
- _____ Stages, platforms and technical production areas (410)
- _____ Special amusement buildings (411)
- _____ Aircraft-related occupancies (412)
- _____ Combustible storage (413)
- _____ Hazardous materials (307.1, 414)
- _____ Groups H-1, H-2, H-3, H-4 and H-5 (415)
- _____ Application of flammable finishes (416)
- _____ Drying rooms (417)
- _____ Organic coatings (418)
- _____ Live/work units (419)
- _____ Groups I-1, R-1, R-2, R-3 and R-4 (420)
- _____ Hydrogen fuel gas rooms (421)
- _____ Ambulatory care facilities (422)
- _____ Storm shelters (423)
- _____ Children's play structures (424)
- _____ Hyperbaric facilities (425)
- _____ Combustible dusts (426)

FIRE PROTECTION (Chapters 6, 7, 8, 9)

FIRE-RESISTANCE-RATED CONSTRUCTION (Tables 601 & 602 and Chapter 7)

Note: Entry in indicates required rating in hours. NC indicates noncombustible construction required.

- _____ Construction classification (602)
- COMBUSTIBILITY (602.2, 602.3, 602.4, 602.5, 603)
- _____ Exterior walls
 - _____ Interior elements
 - _____ Roof

FIRE-RESISTANCE RATINGS AND FIRE TESTS (703)

- _____ Ratings / Combustibility (703.2, 703.4, 703.5)
- _____ Alternative methods (703.3, 719, 721, 722)
- _____ Rated glazing (703.6)
- _____ Marking and identification (703.7)

BUILDING ELEMENTS (Table 601)

_____ Structural frame (704)

_____ Interior bearing walls

_____ Interior nonbearing walls

_____ Floor construction (711)

_____ Roof construction (711)

_____ Atriums (707.3.6)

_____ Incidental uses (707.3.7)

_____ Control areas (707.3.8)

_____ Mixed occupancy and fire area separations (707.3.9, 707.3.10, 901.7)

_____ Construction (707.2, 707.5 - 707.10)

EXTERIOR WALLS (507, Table 602, 705, 707.4)

North East South West

Fire separation distance

Bearing _____ _____ _____ _____

Nonbearing _____ _____ _____ _____

_____ Projections (705.2)

_____ Materials/stability (705.4, 705.6)

_____ Opening protection (705.8.1 - 705.8.4)

_____ Vertical fire spread protection (705.8.5, 705.8.6)

_____ Parapets (705.11)

FIRE BARRIERS (707)

_____ Shaft enclosures (707.3.1)

_____ Interior exit stairway/ramp (707.3.2)

_____ Exit access stairway/ramp (707.3.3)

_____ Exit passageway (707.3.4)

_____ Horizontal exits (707.3.5)

VERTICAL OPENINGS (712)

_____ Compliance (712.1.1 - 712.1.16)

SHAFTS (713)

_____ Construction (713.2 - 713.12, 713.14)

_____ Refuse and laundry chutes (713.13)

OTHER FIRE-RESISTANT CONSTRUCTION

_____ Fire walls (706)

_____ Fire partitions (708)

_____ Smoke barriers (709)

_____ Smoke partitions (710)

_____ Penetrations (714)

_____ Fire-resistant joint systems (715)

_____ Opening protectives (716)

_____ Dampers (717)

_____ Concealed spaces (718)

_____ Thermal- and sound-insulating materials (720, 807)

INTERIOR FINISHES (Chapter 8)

- _____ Smoke development
(803.1.1, 803.1.2, 803.11,
Table 803.11)
- _____ Flame spread
(803.1.1, 803.1.2, 803.11,
Table 803.11)
- _____ Textile/expanded vinyl coverings
(803.1.3, 803.1.4, 803.5 - 803.8)
- _____ Floor finish (804)
- _____ Combustible materials (805)
- _____ Decorations and trim (806)
- _____ Acoustical ceiling systems (808)

FIRE PROTECTION (Chapter 9)

AUTOMATIC SPRINKLER SYSTEMS (903) (Where required)

- _____ Assembly (A-1, A-2, A-3, A-4, A-5)
(903.2.1)
- _____ Ambulatory health care facilities (B)
(903.2.2)
- _____ Educational (E) (903.2.3)
- _____ Factory/Industrial (F-1) (903.2.4)
- _____ High-hazard (H-1, H-2, H-3, H-4, H-5)
(903.2.5)
- _____ Institutional (I-1, I-2, I-3, I-4) (903.2.6)
- _____ Mercantile (M) (903.2.7)
- _____ Residential (R) (903.2.8)
- _____ Storage/Repair garage (S-1) (903.2.9)
- _____ Parking garages (903.2.10)
- _____ Windowless story (903.2.11.1)
- _____ Rubbish and linen chutes (903.2.11.2)
- _____ Buildings over 55 ft. high (903.2.11.3)
- _____ Incidental uses (Table 509)
- _____ Additional required systems
(Table 903.2.11.6)
- _____ International Fire Code (IFC 903.2.11.6)

AUTOMATIC SPRINKLER SYSTEMS* (903) (Design)

- _____ Shop drawings (107.2.2)
- _____ NFPA 13 system (903.3.1.1)

- _____ NFPA 13R system (903.3.1.2)
- _____ NFPA 13D system (903.3.1.3)
- _____ Quick-response and residential heads
(903.3.2)
- _____ Actuation (903.3.4)
- _____ Water supplies (903.3.5)
- _____ Hose threads (903.3.6)
- _____ Fire department connections (903.3.7)
- _____ Limited area sprinkler system (903.3.8)
- _____ Sprinkler monitoring and alarms (903.4)

* Also see Fire Code Sprinkler Plan Review Record

ALTERNATIVE AUTOMATIC FIRE-EXTINGUISHING SYSTEMS (904)

- _____ Installation (904.3)
- _____ Wet-chemical systems (904.5)
- _____ Dry-chemical systems (904.6)
- _____ Foam systems (904.7)
- _____ Carbon dioxide systems (904.8)
- _____ Halon systems (904.9)
- _____ Clean-agent systems (904.10)
- _____ Automatic water mist system (904.11)
- _____ Commercial cooking systems
(903.2.11.5, 904.2.2, 904.12)
- _____ Domestic cooking in Group I-2 (904.13)

FIRE PROTECTION (continued)

STANDPIPE SYSTEMS (905)

- _____ Installation standard (905.2)
- _____ Building height (905.3.1)
- _____ Group A (905.3.2)
- _____ Covered and open malls (905.3.3)
- _____ Stages (905.3.4)
- _____ Underground buildings (905.3.5)
- _____ Helistops/heliports (905.3.6)
- _____ Marinas/boatyards (905.3.7)
- _____ Rooftop gardens/landscaped roofs (905.3.8)
- _____ Hose connections and locations (905.1, 905.4, 905.5, 905.6)
- _____ Cabinets (905.7)
- _____ Dry standpipes (905.8)
- _____ Valve supervision (905.9)

PORTABLE FIRE EXTINGUISHERS (906)

- _____ Required locations (906.1, 906.5, 906.6)
- _____ Installation standard (906.2)
- _____ Size and distribution (906.3)
- _____ Cabinets (906.8)
- _____ Installation (906.9)

FIRE ALARM AND DETECTION SYSTEMS (907) (Where required)

- _____ Construction documents/shop drawings (907.1.1, 907.1.2)
- _____ Assembly (A-1, A-2, A-3, A-4, A-5) (907.2.1)
- _____ Business (B) (907.2.2)
- _____ Educational (E) (907.2.3)
- _____ Factory (F-1, F-2) (907.2.4)
- _____ High-hazard (H-5/organic coatings/highly toxic gases/organic peroxides/oxidizers) (907.2.5)
- _____ Institutional (I-1, I-2, I-3, I-4) (907.2.6)
- _____ Mercantile (M) (907.2.7)
- _____ Residential (R-1, R-2, R-4) (907.2.8, 907.2.9, 907.2.10)
- _____ Single/multiple station smoke alarms (907.2.11)
- _____ High-rise buildings (907.2.13)
- _____ Atriums (907.2.14)
- _____ Other buildings/areas (907.2.12, 907.2.15 - 907.2.23)

FIRE ALARM AND DETECTION SYSTEMS (907) (Design)

- _____ Residential smoke alarm interconnection (907.2.11.5)
- _____ Residential smoke alarm power source (907.2.11.6)
- _____ Smoke detection system (907.2.11.7)
- _____ Fire safety functions (907.3)
- _____ Initiating devices (907.4)
- _____ Occupant notification (907.5)
- _____ Installation (907.6, 907.7)

EMERGENCY ALARM SYSTEMS (908)

- _____ Detection system applicable (908.1 - 908.7)

SMOKE CONTROL SYSTEMS (909)

- _____ Where required (402.7.2, 404.5, 405.5, 408.9, 410.3.7.2, 1023.11, 1029.6.2.1)
- _____ Design requirements (909.1 - 909.4)
- _____ Smoke barriers (909.5)
- _____ Pressurization method (909.6)
- _____ Airflow design method (909.7)
- _____ Exhaust method (909.8)
- _____ Design fire (909.9)
- _____ Equipment/Power (909.10, 909.11)
- _____ Detection and control (909.12 - 909.18)
- _____ Smokeproof enclosures (909.20)
- _____ Elevator hoistway pressurization (909.21)

SMOKE AND HEAT REMOVAL (910)

- _____ Where required (910.2)
- _____ Smoke and heat vents (910.3)
- _____ Mechanical alternative (910.4)

FIRE COMMAND CENTER (911)

- _____ Requirements (911.1.1 - 911.1.6)

FIRE DEPARTMENT CONNECTIONS (912)

- _____ Installation (912.1 - 912.6)

FIRE PUMPS (913)

- _____ Requirements (913.1 - 913.5)

EMERGENCY RESPONDER SAFETY FEATURES/ RADIO COVERAGE (914, 916)

- _____ Requirements (914.1, 914.2, 916.1)

CARBON MONOXIDE DETECTORS (915)

- _____ Requirements (915.1 - 915.6)

MEANS OF EGRESS (continued)

GENERAL MEANS OF EGRESS

- | | |
|---|--|
| _____ Design requirements (1003.2 - 1003.7) | _____ Door landings/Thresholds/Arrangement (1010.1.5 - 1010.1.8) |
| _____ Encroachment (1005.7) | _____ Door hardware (1010.1.9, 1010.1.10) |
| _____ Means of egress illumination (1008) | _____ Stairways (1011) |
| _____ Exit signs (1013) | _____ Roof access (1011.12) |
| _____ Accessible means of egress (1009) | _____ Ramps (1012) |
| _____ Door size/swing/opening force (1010.1 - 1010.1.3) | _____ Handrails (1014) |
| _____ Special doors/Gates/Turnstiles (1010.1.4, 1010.2, 1010.3) | _____ Guards (1015) |
| | _____ Luminous egress path markings (1025) |

EXIT ACCESS

- | | |
|---|--|
| _____ Exit access configuration (1007.1.1 - 1007.1.3) | _____ Aisles (1018) |
| _____ Common path of egress travel (Table 1006.2.1) | _____ Exit access stairways/ramps (1019) |
| _____ Intervening spaces (1016.2, 1016.2.1) | _____ Corridors (1020) |
| _____ Exit access travel distance (1017) | _____ Air movement in corridors (1020.5) |
| | _____ Egress balconies (1021) |

EXITS / EXIT DISCHARGE

- | | |
|---|--|
| _____ Exits/Exit doors (1006, 1022) | _____ Horizontal exits (1026) |
| _____ Exit configuration (1007.1.1, 1007.1.2) | _____ Exterior exit ramps/stairways (1027) |
| _____ Interior exit stairways/ramps (1023) | _____ Exit discharge (1028) |
| _____ Exit passageways (1024) | |

OTHER MEANS OF EGRESS

- | | |
|---|---|
| _____ Miscellaneous egress requirements (1006.2.2.1 - 1006.2.2.5) | _____ Assembly aisles & features (1029.6 - 1029.16) |
| _____ Bleachers (1029.1.1) | _____ Emergency escape and rescue (1030) |
| _____ Assembly exits & egress (1029.2 - 1029.5) | |

ACCESSIBILITY* (Chapter 11)

- | | |
|--|--|
| _____ Scoping requirements (1103) | _____ Dwelling units and sleeping units (1107) |
| _____ Accessible route (1104) | _____ Special occupancies (1108) |
| _____ Accessible entrances (1105) | _____ Features and facilities (1109) |
| _____ Parking and passenger loading (1106) | _____ Recreational facilities (1110) |
| | _____ Signage (1111) |

*Also see Accessibility Plan Review Record

INTERIOR ENVIRONMENT (Chapter 12)

- | | |
|---|---|
| <p>_____ Ventilation (1203, 1503.5)*</p> <p>_____ Temperature control (1204)</p> <p>_____ Lighting (1205)</p> <p>_____ Yards or courts (1206)</p> | <p>_____ Sound transmission (1207)</p> <p>_____ Interior space dimensions (1208)</p> <p>_____ Access to unoccupied spaces (1209)</p> <p>_____ Toilet and bathroom requirements (1210, 2509)</p> |
|---|---|

*Also see Mechanical Code Plan Review Record

BUILDING ENVELOPE (Chapters 13*, 14, 15)

*See Energy Conservation Code Plan Review Record

EXTERIOR WALLS (Chapter 14)

- | | |
|--|--|
| <p>_____ Performance requirements (1403)</p> <p>_____ Materials (1404)</p> <p>_____ Exterior wall coverings/MCM's (1405, 1407)</p> | <p>_____ Combustible material restrictions (1406)</p> <p>_____ EIFS (1408)</p> <p>_____ HPL (1409)</p> <p>_____ Plastic composite decking (1410)</p> |
|--|--|

ROOF ASSEMBLIES AND ROOFTOP STRUCTURES (Chapter 15)

- | | |
|--|--|
| <p>_____ Weather protection (1503)</p> <p>_____ Flashing (1503.2, 1507.2.9, 1507.3.9, 1507.5.7, 1507.7.7, 1507.8.8, 1507.9.9)</p> <p>_____ Performance requirements (1504)</p> <p>_____ Fire classification (1505)</p> <p>_____ Materials (1506)</p> | <p>_____ Roof coverings (1507)</p> <p>_____ Roof insulation (1508)</p> <p>_____ Radiant barriers (1509)</p> <p>_____ Rooftop structures (1510)</p> <p>_____ Reroofing (1511)</p> <p>_____ Solar photovoltaic panels/modules (1512)</p> |
|--|--|

STRUCTURAL SYSTEMS (Chapters 16, 17, 18)

STRUCTURAL DESIGN (Chapter 16)

STRUCTURAL DESIGN CALCULATIONS

- _____ Submitted for all structural members (106, 107.1, 107.2.1, 1604, 1605)

DESIGN LOADS ON CONSTRUCTION DOCUMENTS (1603)

Uniformly distributed floor live loads (1603.1.1, Table 1607.1)

Floor Area Use	Loads Shown
_____	_____
_____	_____
_____	_____
_____	_____

- _____ Live load reduction (1603.1.1, 1607.10, 1607.11)

- _____ Roof live loads (1603.1.2, 1607.12)

Roof snow loads (1603.1.3, 1608; Chapter 7 of ASCE 7)

- _____ Ground snow load, p_g (1608.2; 7.2 of ASCE 7)

- _____ If $p_g > 10$ psf, flat-roof snow load, p_f (7.3 of ASCE 7)

- _____ If $p_g > 10$ psf, snow exposure factor, C_e (Table 7-2, 7.3.1 of ASCE 7)

- _____ If $p_g > 10$ psf, snow load importance factor, I_s (7.3.3, Table 1.5-2 of ASCE 7)

- _____ If $p_g > 10$ psf, roof thermal factor, C_t (Table 7-3, 7.3.2 of ASCE 7)

- _____ Sloped roof snow load, p_s (7.4 of ASCE 7)

- _____ Drift loads (7.7, 7.8 of ASCE 7)

- _____ Width of snow drift (7.7, 7.8 of ASCE 7)

- _____ Ponding instability (1608.3; 7.11 of ASCE 7)

DESIGN LOADS (continued)

Wind loads (1603.1.4, 1609; Chapters 26 - 31 of ASCE 7)

- _____ Design procedure (1609.1.1, 1609.6, Chapters 26 - 31 of ASCE 7)
- _____ Alternate all-heights method (1609.6)
- _____ Wind speed (1609.3; Fig. 26.5.1 of ASCE 7)
- _____ Risk category (Table 1604.5; Table 1.5-1 of ASCE 7)
- _____ Surface roughness/Exposure categories (1609.4; 26.7 of ASCE 7)
- _____ Internal pressure coefficient (26.11, Table 26.11-1 of ASCE 7)
- _____ Component and cladding pressures (Chapter 30 of ASCE 7)
- _____ Main wind-force resisting system (1609.5; 27.4, 27.6, 28.4, 28.6 of ASCE 7)

Earthquake design data (1603.1.5, 1613; Chapters 11 - 13 and 15 - 23 of ASCE 7)

- _____ Risk category (Table 1604.5; Table 1.5-1 of ASCE 7)
- _____ Seismic importance factor, I_e (11.5.1, Table 1.5-2 of ASCE 7)
- _____ Mapped spectral response acceleration parameters, S_s and S_1 (1613.3.1; 11.4.1 of ASCE 7)
- _____ Design spectral response parameters, S_{DS} and S_{D1} (1613.3.4; 11.4.4 of ASCE 7)

_____ Site class (1613.3.2; 11.4.2, Chapter 20 of ASCE 7)

_____ Seismic design category (1613.3.5; 11.6 of ASCE 7)

_____ Basic seismic-force-resisting system (Table 12.2-1 of ASCE 7)

_____ Response modification coefficient, R (Table 12.2-1 of ASCE 7)

_____ Seismic response coefficient, C_s (12.8.1.1 of ASCE 7)

_____ Analysis procedure (12.6 of ASCE 7)

_____ Design base shear (12.8 of ASCE 7)

Flood loads (1603.1.7, 1612)

_____ Flood hazard area (1612.3)

_____ Documentation (1612.5)

Ice loads (1614; Chapter 10 of ASCE 7)

_____ Compliance

Other loads

_____ Concentrated live loads (1607.4)

_____ Partition loads (1607.5)

_____ Impact loads (1607.9)

_____ Misc. loads (1607.6, 1607.7, 1607.8, 1607.13, 1607.14, 1610, 1611, 2404)

Structural integrity (1615)

_____ Design requirements (1615.1 - 1615.4)

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_____ Approvals/Research report(s) (1703, 1703.4.2) Report No. _____

_____ Statement of special inspections (1704.3)

_____ Report requirement/submittal to building official (1704.2.4, 1704.5)

_____ Prefabricated items (1704.2.5, 1705.10)

_____ Steel construction (1705.2)

_____ Concrete construction (1705.3, 1901.6)

_____ Masonry construction (1705.4, 2101.3)

_____ Wood construction (1705.5)

_____ Prepared fill and foundations (1705.6 - 1705.9)

_____ Sprayed fire-resistant materials and coatings (1705.14, 1705.15)

_____ EIFS (1705.16)

_____ Fire-resistant penetrations and joints (1705.17)

_____ Smoke control (1705.18)

_____ Wind requirements (1704.3.3, 1705.11)

_____ Seismic resistance (1704.3.2, 1705.12, 1705.13)

_____ Contractor responsibility (1704.4)

_____ Structural observations (1704.6)

_____ Testing (other) (1706 - 1709)

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_____ Soils investigations/Reports (1803.1, 1803.2, 1803.3, 1803.6)	_____ Foundation walls, retaining walls and embedded posts and poles (1807)
_____ Soil classification (1803.5)	_____ Foundations (1808)
_____ Excavation, grading and fill (1804)	_____ Shallow foundations (1809)
_____ Dampproofing and waterproofing (1805)	_____ Deep foundations (1810)
_____ Load-bearing values (1603.1.6, 1806)	

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_____ Plain, reinforced and structural plain concrete design/construction standard specified (1901.2, 1905, 1906)	_____ Construction documents (1901.5)
	_____ Slab provisions (1907)
	_____ Shotcrete (1908)

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_____ Design method, construction standard specified (2101.2, 2104)	_____ Seismic design (2106)
_____ Masonry units (2103.1)	_____ Glass unit masonry (2110)
_____ Mortar type/grout (2103.2, 2103.3)	_____ Fireplaces/Heaters/Chimneys (2101.3.1, 2111, 2112, 2113)
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_____ Structural steel design/construction standard specified (2205)	_____ Steel cable structures (2208)
_____ Composite structural steel and concrete (1901.4, 2206)	_____ Steel storage racks (2209)
_____ Open-web steel joist design/construction standard specified (2207)	_____ Cold-formed steel design/construction standard specified (2210)
	_____ Cold-formed steel light-framed design/ construction standard specified (2211)

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_____ Design method option used (2301.2)	_____ Structural composite lumber (2303.1.10)
MATERIAL STANDARDS / CONSTRUCTION REQUIRE- MENTS (2303 - 2306)	_____ Structural log members (2303.1.11)
_____ Lumber (2303.1.1)	_____ Round timber poles and piles (2303.1.12)
_____ Wood I-joists (2303.1.2)	_____ Engineered wood rim board (2303.1.13)
_____ Glue-laminated timbers (2303.1.3, 2303.1.4)	_____ Fire-retardant-treated wood (2303.2)
_____ Wood structural panels (2303.1.5, 2304.6, 2304.7, 2304.8)	_____ Hardwood and plywood (2303.3)
_____ Fiber-, hard-, & particle-, boards (2303.1.6 - 2303.1.8)	_____ Trusses (2303.4)
_____ Decay and termite protection (2303.1.9, 2304.12)	_____ Joist hangers (2303.5)
	_____ Fasteners and fastening (2303.6, 2304.10, Table 2304.10.1)
	_____ Heavy timber construction (2304.11)
	_____ Shear walls and diaphragms (2305, 2306)

WOOD (continued)

CONVENTIONAL LIGHT-FRAME CONSTRUCTION (2308)

_____	Limitations satisfied (2308.2)	_____	Wall construction (2308.5)
_____	Foundations and footings (2308.3)	_____	Wall bracing (2308.6)
_____	Floor framing (2308.4)	_____	Roof and ceiling framing (2308.7)
		_____	Design of elements (2308.8)

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GLASS AND GLAZING (Chapter 24)

_____	Sloped glazing and skylights (2405)	_____	Safety glazing (2406, 2407, 2408, 2409)
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GYPSUM BOARD AND PLASTER (Chapter 25)

_____	Gypsum board materials (2506, Table 2506.2, Table 2508.1)	_____	Plaster (2507, 2508, 2510 - 2513)
		_____	Reinforced gypsum concrete (2514)

PLASTIC (Chapter 26)

FOAM PLASTIC INSULATION (2603)

_____	Labeling (2603.2, 2603.5.6)
_____	Surface-burning characteristics (2603.3, 2603.5.4)
_____	Thermal barrier (2603.4)
_____	Exterior walls/Roofs (2603.5, 2603.6)
_____	Interior finish/trim in plenums (2603.7)
_____	Protection against termites (2603.8)
_____	Special approval (2603.9)

_____	Wind resistance (2603.10)
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_____	Cladding attachment (2603.11, 2603.12)
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MISCELLANEOUS PLASTICS

_____	Interior finish and trim (2604)
_____	Plastic veneer (2605)
_____	Light-transmitting plastics (2606 - 2611)
_____	Plastic composites (2612)
_____	Fiber-reinforced polymer (2613)
_____	Reflective plastic core insulation (2614)

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ELEVATORS AND CONVEYING SYSTEMS (Chapter 30)

_____	Construction standard specified (3001.2)	_____	Machine rooms (3005)
_____	Hoistway enclosures (3002)	_____	Elevator lobbies/hoistway opening protection (3006)
_____	Opening protectives (3002.1.1)	_____	Fire service access elevator (3007)
_____	Emergency operations (3003)	_____	Occupant evacuation elevator (3008)
_____	Conveying systems (3004)		

* Also see Electrical (Ch.27), Mechanical (Ch.28) and Plumbing (Ch.29) Plan Review Records

SPECIAL DEVICES AND CONDITIONS (Chapters 31, 32)

SPECIAL CONSTRUCTION (Chapter 31)

_____ Membrane structures (3102)
_____ Temporary structures (3103)
_____ Awnings and canopies/Marquees
 (3105, 3106)
_____ Signs (3107)
_____ Telecommunication and broadcast towers
 (3108)
_____ Swimming pool enclosures (3109)

_____ Automatic vehicular gates (3110)
_____ Photovoltaic panels/modules (3111)
PEDESTRIAN WALKWAYS AND TUNNELS (3104)
_____ Construction and use (3104.3, 3104.4)
_____ Separation (3104.5, 3104.10)
_____ Public way (3104.6)
_____ Egress (3104.7 - 3104.9)

ENCROACHMENTS INTO THE PUBLIC RIGHT-OF-WAY (Chapter 32)

_____ Below grade (3202.1)
_____ Above grade (3202.2, 3202.3)

_____ Temporary (3202.4)

APPENDICES A - M

_____ Appendices adopted (101.2.1)

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NOTES

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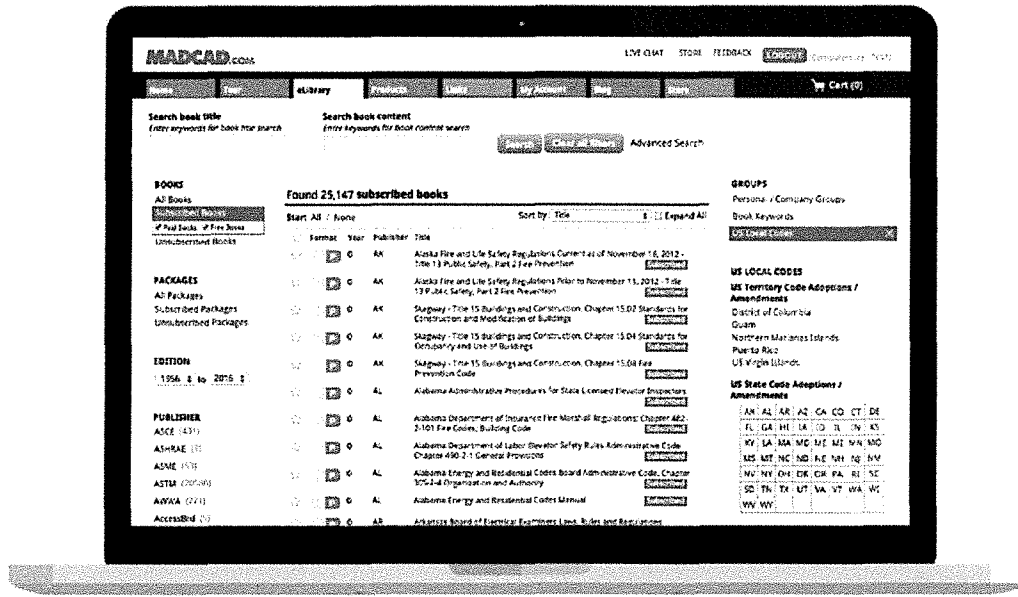
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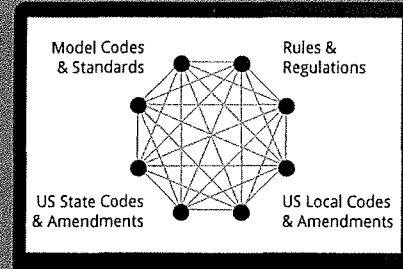
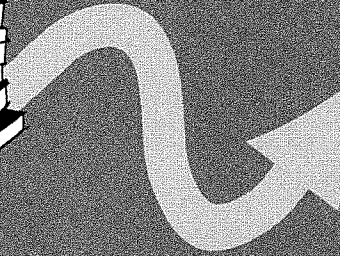
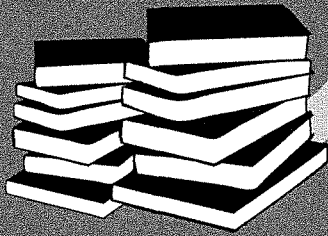


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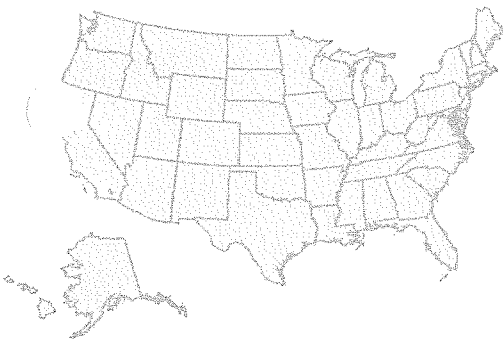
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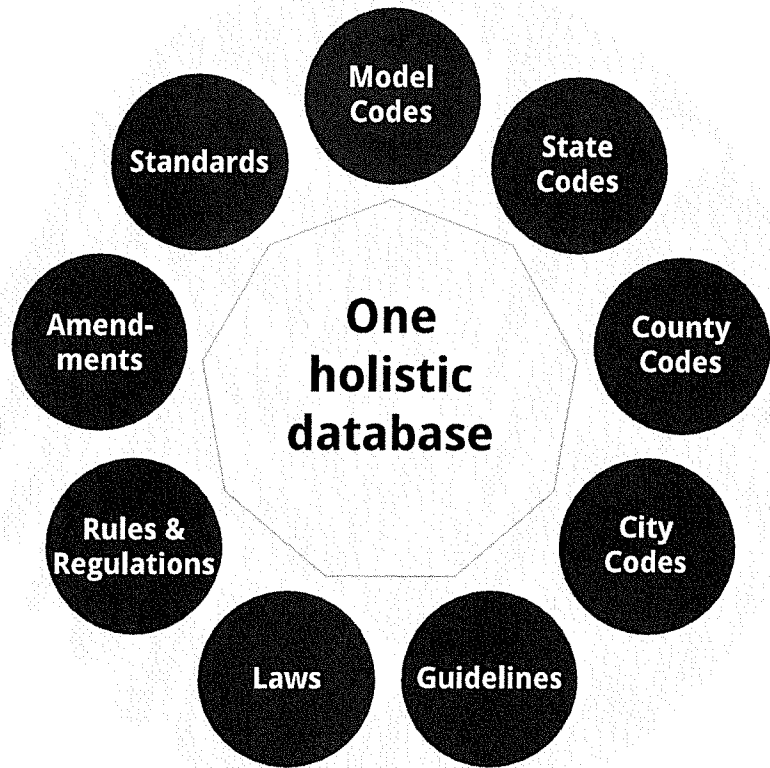
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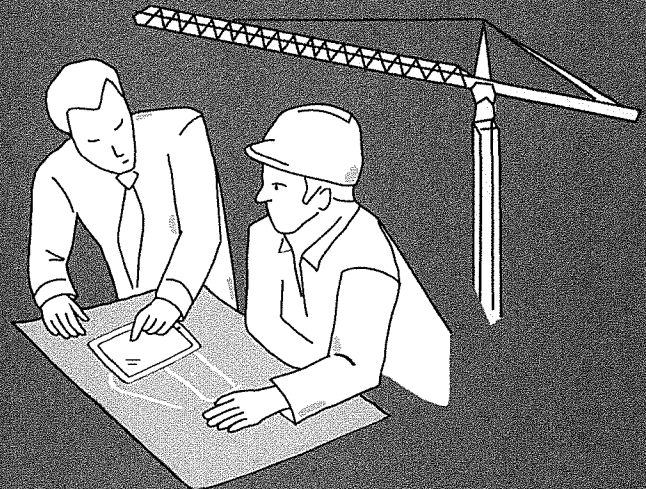
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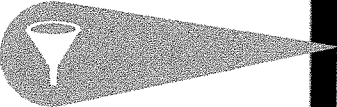
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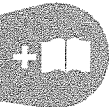
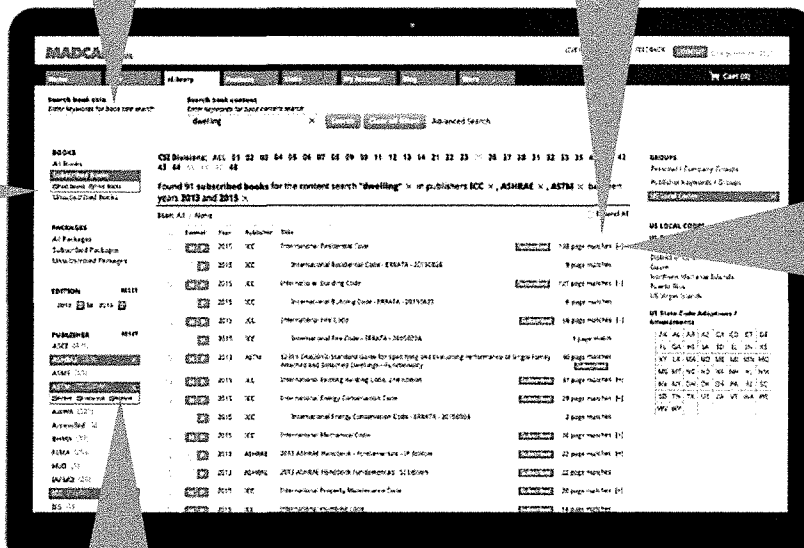
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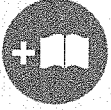
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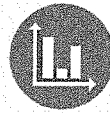
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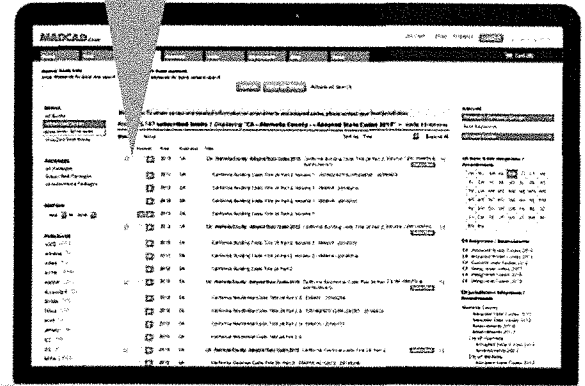
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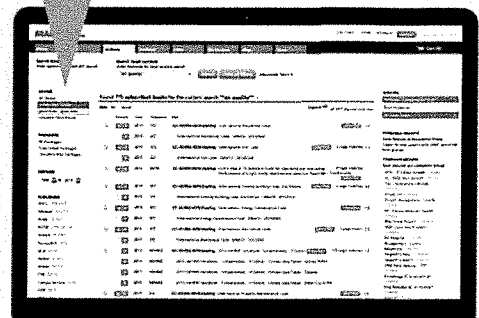
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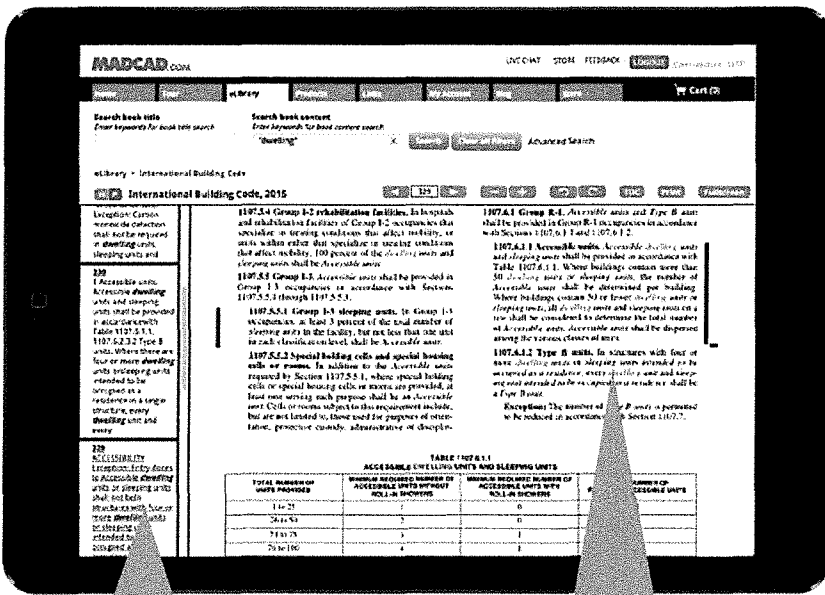
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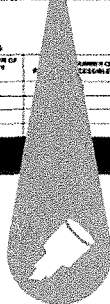
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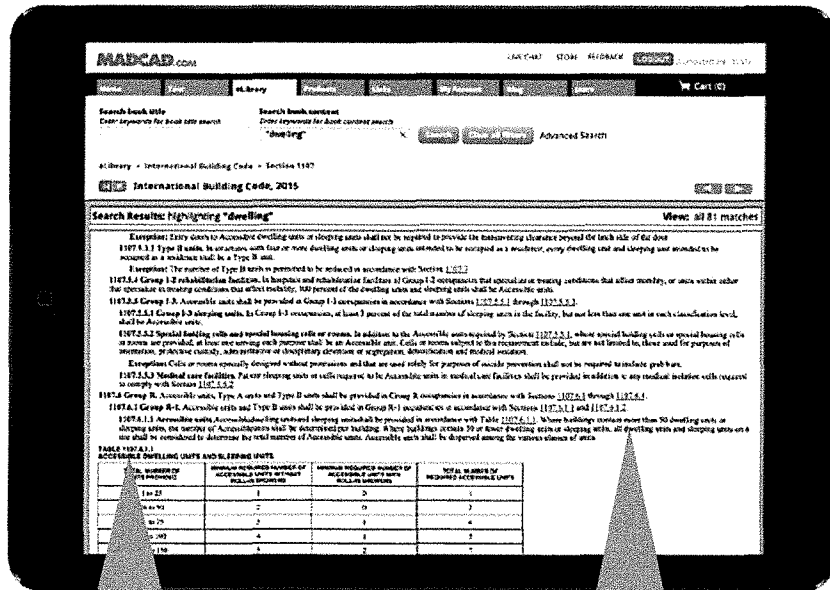
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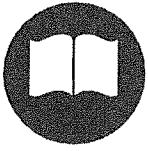


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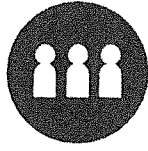
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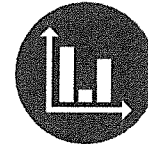
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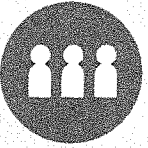


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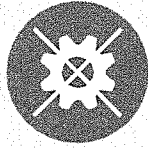
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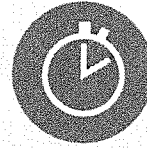
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As the Building Official,
Ted Szczepanski will
present the City's
understanding of the
Administration and
enforcement of 1972
PA 230 (the Act) and
the state construction
code, pursuant to
Section 8(b) of the Act.



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

SHELLY EDGERTON
DIRECTOR

January 18, 2017

Wendy L. Jean-Buhrer, Manager
City of Grand Blanc
203 E. Grand Blanc Rd.
Grand Blanc, MI 48439

Dear Ms. Jean-Buhrer:

The City of Grand Blanc Application to Administer and Enforce was received by the Bureau of Construction Codes on Tuesday, January 17, 2017.

Pursuant to statutory requirements the application will be presented to the Construction Code Commission at their April 12, 2017, meeting for their review and decision on the matter. You or your representative are welcome to be in attendance at this meeting to support your application. You will be notified within 90 days of the April 12, 2017, Commission meeting of their decision.

The State of Michigan, Bureau of Construction Codes will continue to administer and enforce the Act and the Electrical, Mechanical, and Plumbing codes within the City until the Commission renders its decision. If you have questions regarding this issue please feel free to contact me at (517) 241-6479.

Sincerely,

A handwritten signature in cursive script that reads "Dianne Barmes".

Dianne Barmes, Administrative Manager
Licensing and Complaints Division
Bureau of Construction Codes

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City of Grand Blanc

203 E. Grand Blanc Rd.
Grand Blanc, MI 48439

www.cityofgrandblanc.com

810-694-1118
Fax 810-694-9517

MAYOR
Susan J. Soderstrom

CITY COUNCIL
Paula L. Nas - Mayor Pro-Tem
Lisa A. Blondell
John W. Creasey
Chris Douglas
Julie M. Nielsen

CITY MANAGER
Wendy L. Jean-Buhrer

**CITY CLERK-
ASST. CITY MANAGER**
Bethany J. Smith

**FINANCE DIRECTOR-
TREASURER**
Dianne M. Waterworth

CITY ASSESSOR
Tonya Lall

CITY ATTORNEY
Walter P. Griffin

January 13, 2017

Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes/Office of Administrative Services
P.O. Box 30254
Lansing, MI

Re: Application to Administer and Enforce

Dear Commission Members:

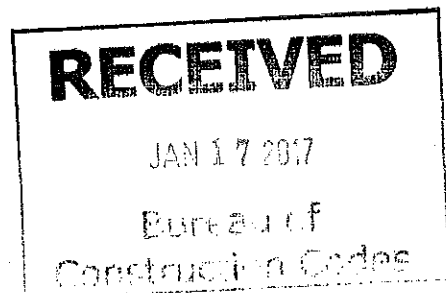
The City of Grand Blanc is requesting approval to administer and enforce the electrical, plumbing and mechanical code at the April 12, 2017 Commission meeting. I have enclosed the ordinance, resolution and the agreement for the independent contractor for these services which will serve under the part time building official.

I look forward to meeting each of at the April meeting.

If you have any questions, please contact me at any time.

Sincerely,

Wendy L. Jean-Buhrer
City Manager



Application to Administer and Enforce
 Michigan Department of Licensing and Regulatory Affairs
 Bureau of Construction Codes / Office of Administrative Services
 P.O. Box 30254, Lansing, MI 48909
 517-335-2972
 E-Mail: bccoas@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

NAME OF GOVERNMENTAL SUBDIVISION CITY OF GRAND BLANC		CONTACT PERSON (Elected Official) SUSAN SODERSTROM	
ADDRESS (Street Number and Name) 203 E. GRAND BLANC ROAD			
CITY GRAND BLANC	COUNTY GENESEE	STATE MI	ZIP CODE 48439
TELEPHONE NUMBER (Include Area Code) (810) 694-1118	FAX NUMBER (Include Area Code) (810) 694-9517	E-MAIL ADDRESS MAYOR@CITYOFGRANDBLANC.COM	

Code Adoption

Pursuant to Section 8b(6) of 1972 PA 230 (the Act), to assume responsibility for the administration and enforcement of the act and the state construction code, as defined in Section 2(a)(1)(l) of the Act and as provided for in Section 4(2) of the Act, a **copy of the certified adopted ordinance assuming responsibility for administration and enforcement of the act and the code is attached.**

Please list the code or parts thereof to be enforced.
Section 8b(6) of 1972 PA 230 (the Act); Section 4(2) - Electrical, Plumbing and Mechanical Codes

By checking the boxes below you are certifying the following:

The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce this act and the code and all related acts and rules.

Agency personnel are provided as necessary.

Administrative services are provided.

Plan review services are provided.

Timely field inspection services will be provided.

A Board of Appeals is in place per MCL 125.1514.

Have immediate access to the codes & standards for which you have applied to administer & enforce.

RECEIVED

JAN 17 2017

Bureau of
Construction Codes

BUILDING OFFICIAL INFORMATION	Name: THEODORE SCZEPANSKI	Registration Number: 002112
--------------------------------------	----------------------------------	------------------------------------

Certification

I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge.

Name of Elected Official (Type or Print) Susan J. Soderstrom Title Mayor

Signature of Elected Official *Susan Soderstrom* Date 1/12/17

Copies of all ordinances submitted with this application must include clear and visible identification of the governmental subdivision's department of building safety.

The conduct of the administration and enforcement of the Michigan codes shall be performed in accordance with the approved Application to Administer and Enforce and ordinance. Any changes in the approved ordinance must be submitted to the Bureau of Construction Codes for review and final approval prior to implementation by local departments of building safety.

RESOLUTION

At the regular meeting of the City Council of the City of Grand Blanc, Genesee County, Michigan held at the City of Grand Blanc Municipal Building, in said City on the Twenty Sixth day of September, 2012 at 7:00 P.M.

Present: Telliga, Adkins, Wolfgram, Bender, Freel

Absent: Bappert

The following resolution was offered by Councilman Telliga and supported by Councilman Wolfgram.

WHEREAS, the City currently administers and enforces the State Construction Code for building; and

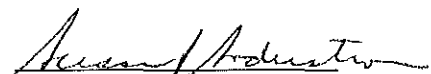
WHEREAS, it is the City's desire to assume responsibility for the administration and enforcement of the State Construction Code for electrical, mechanical and plumbing pursuant to MCL 125.1508b; and

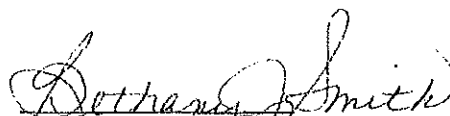
WHEREAS, the proposed amendment will improve the service provided to builders, contractors and home owners as the plan review, permitting and inspections will be conducted by one governmental unit instead of two; and

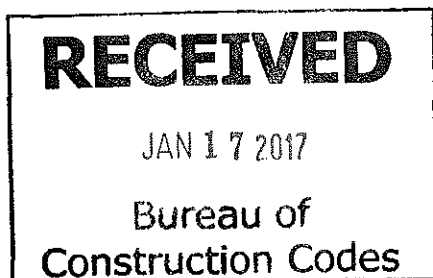
WHEREAS it is deemed in the best interest of the public health, safety and welfare of the citizenry of the City of Grand Blanc to administer and enforce the State Construction Code.

NOW THEREFORE BE IT RESOLVED THE CITY COUNCIL OF THE CITY OF GRAND BLANC hereby INTRODUCES FOR PUBLICATION AND SUBSEQUENT ADOPTION Ordinance Number 10-12-01.

Adopted: Yeas 3 Nays 2


Susan J. Soderstrom
Mayor


Bethany J. Smith
City Clerk



RECEIVED

JAN 17 2017

Bureau of
Construction Codes

CITY OF GRAND BLANC
COUNTY OF GENESEE, STATE OF MICHIGAN
CITY ORDINANCE NO 10-12-01

CITY OF GRAND BLANC ADMINISTRATION AND ENFORCEMENT OF THE
MICHIGAN MECHANICAL, ELECTRICAL AND PLUMBING CODES.

AN ORDINANCE TO DESIGNATE AN ENFORCING AGENCY TO DISCHARGE THE
RESPONSIBILITY OF THE CITY OF GRAND BLANC IN GENESEE COUNTY, UNDER
THE PROVISIONS OF THE STATE CONSTRUCTION CODE ACT, 1972 P.A. 230 AS
AMENDED

IT IS HEREBY ORDAINED BY THE CITY OF GRAND BLANC, GENESEE COUNTY,
MICHIGAN:

Section 1. – AGENCY DESIGNATED

Pursuant to the provisions of the Michigan Mechanical, Electrical, and Plumbing Codes, in accordance with Sections 8b and 23 of 1972 P.A. 230, as amended, the mechanical, electrical, and plumbing code officials of the City of Grand Blanc are hereby designated as the enforcing agencies to discharge the responsibility of the City of Grand Blanc under 1972 P.A. 230, State of Michigan, as amended. The City of Grand Blanc assumes responsibility for the administration and enforcement of said Act throughout its corporate limits.

Section 2. – ENFORCEMENT AND PENALTIES

1. Failure to comply with the Michigan Mechanical, Electrical or Plumbing Codes shall constitute a violation of this ordinance. Each day that there is such a failure to comply will constitute a separate offense.
2. Violation of the state Mechanical, Electrical or Plumbing Codes shall be deemed to be a nuisance per se. Any person or anyone acting on behalf of any such person who shall violate any provisions of said codes, or who shall fail to comply with any requirements thereof, shall be in violation of a municipal civil infraction as provided in City of Grand Blanc Codified Ordinances Section number 202.99. A violator shall also be subject to such additional sanctions, remedies, and judicial orders as are authorized under Michigan law, including costs and attorneys' fees.

Section 3 – SEVERABILITY

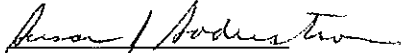
This ordinance and the various parts, sentences, and clauses thereof are hereby declared to be severable and if any in part, sentence, paragraph, section or clause is adjudged unconstitutional or invalid, the same shall not affect the validity of this ordinance as a whole or any part thereof, other than the part declared to be unconstitutional and invalid.

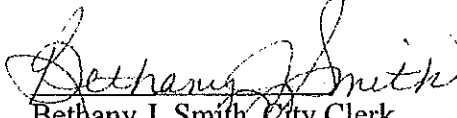
Section 4 – REPEAL CLAUSE

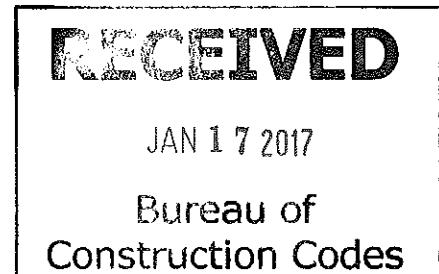
All ordinances or parts of ordinances in conflict herewith are repealed to the extent necessary to give this ordinance full force and effect.

Section 5 – EFFECTIVE DATE

This ordinance shall take effect and be in force twenty 20 days after its publication.
Adopted: Yeas 6 Nays 0


Susan J. Soderstrom, Mayor


Bethany J. Smith, City Clerk



ORDINANCE NO: 2013-02

An Ordinance to be included in Ordinance Chapter 14 – Building & Housing Code

THE CITY OF GRAND BLANC ORDAINS:

ORDINANCE NO. _____, SECTION _____.

AN ORDINANCE TO DESIGNATE ENFORCING AGENCY TO DISCHARGE THE RESPONSIBILITY OF CITY OF GRAND BLANC UNDER THE PROVISIONS OF THE STILLE-DEROSSETT-HALE SINGLE STATE CONSTRUCTION CODE ACT, 1972 PA 230.

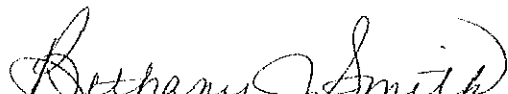
SECTION 1. ENFORCING AGENCY DESIGNATED. Pursuant to Section 8b(6) of The Stille-DeRossett Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1508b(6), The City of Grand Blanc hereby elects to administer and enforce the 1972 PA 230 and the **Michigan Building Code**. The City of Grand Blanc shall also administer and enforce the respective provisions of the Michigan Residential, Rehabilitation, and Uniform Energy Codes and all applicable laws and ordinances. A government official registered in accordance with 1986 PA 54 shall be appointed to receive all fees, issue permits, plan reviews, notices, orders, and certificates of use and occupancy. All personnel performing plan reviews and inspections shall be registered in accordance with 1986 PA 54.

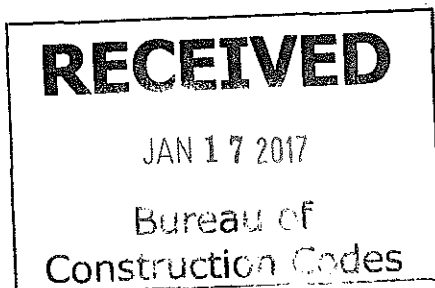
SECTION 2. REPEALS. All ordinances inconsistent with the provisions of this ordinance are hereby repealed.

SECTION 3. PUBLICATION. This ordinance shall be effective after legal publication and in accordance with provisions of the Act governing same.

This Ordinance duly adopted at the regular meeting of the City Council on the 8th day of May, A.D., 2013 to be effective after twenty (20) days after adoption hereof.


SUSAN SODERSTROM, Mayor


BETHANY SMITH, City Clerk



Barmes, Dianne (LARA)

From: Barmes, Dianne (LARA)
Sent: Wednesday, March 08, 2017 11:16 AM
To: Dan, Nutt
Cc: Allaire, LeeAnn (LARA)
Subject: Mechanical Code
Attachments: moorland twp M denial order.doc; moorland twp M review letter.doc; moorland twp M review.doc; Application to Administer and Enforce.pdf

Mr. Nutt:

Following research I was able to locate some additional information regarding the Mechanical code. The Bureau of Construction Codes records indicate the State has had mechanical code authority in the Township since March 25, 1981 with no interruption.

The Township was granted jurisdiction over Electrical - January 12, 2000, Building & Plumbing – July 31, 2001, Plan Review & Building Official – October 1, 2007.

A 2011/2012 application from Moorland Twp. to administer and enforce the Mechanical code was presented to the Construction Code Commission. The attached letters addressing that application were sent to the Township office. The denial order document explains why the application was not approved. .

Based upon the January 9, 2012, Decision of the Michigan Construction Code Commission your recent application will need to be addressed by the Construction Code Commission. I will present the application you submitted and received in this office on February 8, 2017. However, please review the new application (attached) and the letter I sent to you dated February 13, 2017, outlining the issues the Commission wishes to address with all applicants.

Upon submittal of your application to the Commission, you will be notified as to the date of the Commission meeting where your application will be reviewed.

Thank you

Dianne Barmes, Administrative Manager
Licensing and Complaints Division
Bureau of Construction Codes
1st Floor, Ottawa Building
611 W. Ottawa, Lansing, MI 48933
517/241-6479 - tele
517/373-8547 - Fax

**MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
CONSTRUCTION CODE COMMISSION
2501 Woodlake Circle
Okemos, MI 48864**

Mailing Date: January 9, 2012

**Moorland Township (Muskegon Co)
12416 Apple Avenue
Ravenna, MI 49451**

**Application to Administer and Enforce
Mechanical
CCC Document No. 12-13**

DECISION OF THE MICHIGAN CONSTRUCTION CODE COMMISSION

On January 4, 2012, the Construction Code Commission reviewed Moorland Township's Application to Administer and Enforce as prescribed in the Stille-DeRossett-Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1501. The application and all supplemental materials received before the meeting date were provided to all parties. The decision is issued pursuant to Section 8b (6) of 1972 PA 230, MCL 125.1508b (6).

FINDINGS

1. The Township did not provide a certified copy of an adopted ordinance assuming the responsibility for the administration and enforcement of the Michigan Mechanical Code.
2. The Township's proposed application for a mechanical permit form does not identify the Township as the enforcing agency and is not a form prescribed for use by the Commission in accordance with Section 10 (1) of the Act.
3. The Township did not provide a copy of its proposed mechanical permit form for review.
4. The Township has indicated that it is utilizing Sullivan Township's Construction Board of Appeals, but the Township did not provide a written set of procedures for the governance of its board of appeals.
5. There is no cost analysis provided to establish the fee charged for a plan review.
6. There is no cost analysis provided to establish the fee charged for an inspection.
7. There was no information regarding the method and analysis utilized to establish the fees charged for mechanical code enforcement services provided to the public.

8. The Township charges a fee for work started without a permit, but the Township does not indicate the amount of the additional fee.
9. The Township does not provide the fee for a pre-manufactured unit.
10. There were no copies of inspector employment agreements or contracts provided for review.
11. There was no information providing the means and method of inspector compensation.
12. There was no information providing the days and hours of enforcing agency operation
13. There was no proposed building department budget and staffing information provided for review.
14. The Township did not provide assurance that a complete library of codes and standards is available for use by the inspectors and plan reviewers as identified in Chapter 15 of the 2009 Michigan Mechanical Code.
15. The Township's application indicates that its mechanical inspector is associated with a private inspection agency and names the Township Supervisor as the governmental official responsible for decision making as it relates to code administration and enforcement. However, a review of the Bureau's inspector registration records indicates that the supervisor is not registered as a code official in accordance with 1986 PA 54. The Township must identify a registered code official to serve as the governmental official.

CONCLUSION

Moorland Township has not demonstrated that it is "qualified by experience and training to administer and enforce this act and the code and all related acts and rules" as required by MCL 125.1508b (6) for the reasons enumerated above.

THEREFORE, it is the decision of the Construction Code Commission to not approve Moorland Township's Application to Administer and Enforce. In accordance with Section 8b (6) of 1972 PA 230, MCL 125.1508b (6), a governmental subdivision that receives a disapproval may resubmit its application for approval.

January 9, 2012

Irvin J. Poke, AIA
Director, Bureau of Construction Codes



STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
IRVIN J. POKE
DIRECTOR

RICK SNYDER
GOVERNOR

STEVEN H. HILFINGER
DIRECTOR

November 15, 2011

Mr. Chuck Kreps, Supervisor
Moorland Township
12416 Apple Avenue
Ravenna, MI 49451

RE: Application to Administer and Enforce
Michigan Mechanical Code

Dear Mr. Kreps:

The Township's Application to Administer and Enforce and related information, received in this office on October 14, 2011, has been reviewed.

It is requested that Moorland Township review and provide all the information and documentation requested upon the Application to Administer and Enforce and checklist forms, and forward the material to this office for review. The comments and checklist shall not be presumed to be exclusive of any additional information deemed to be appropriate and necessary to effectuate the general purposes of the Act. Additional information may be requested by the bureau to complete the review. **Our office must receive and complete a successful review of the Township's information by no later than November 30, 2011, in order to be included upon the agenda for the next meeting of the State Construction Code Commission scheduled for January 4, 2012.**

I have enclosed a copy of the current Application to Administer and Enforce form and a sample ordinance to assist the Township in assuming the responsibility to enforce the Michigan Mechanical Code. If you have questions, you may contact our office at (517) 335-2972.

Sincerely,

Michael Somers, Analyst
Office of Administrative Services

MDS/ms
Enclosures

Cc: Kimberly Borgman, Clerk, Moorland Township, w/o encl.

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**MOORLAND TOWNSHIP
MUSKEGON COUNTY, MICHIGAN**

(Ordinance No. 38.01)

AN ORDINANCE TO AMEND MOORLAND TOWNSHIP ORDINANCES, RULES, AND REGULATIONS TO AUTHORIZE THE TOWNSHIP OF MOORLAND TO ADMINISTER AND ENFORCE THE MICHIGAN BUILDING CODE, ELECTRICAL CODE, MECHANICAL CODE, AND PLUMBING CODE AND TO DESIGNATE THE ENFORCING AGENCY THEREOF.

The following Ordinance was offered for adoption by Township Board Member S. Holisan / Seconded By, Township Board Member K. Bergman.

THE TOWNSHIP OF MOORLAND (the "Township") ORDAINS

Section 1. Purpose. This Ordinance designates the Township as having responsibility for the administration and enforcement of the Michigan Building Code, Electrical Code, Mechanical Code, and Plumbing Code under the provisions of the State Construction Code Act, being Public Act No. 230 of the Public Acts of 1972, as amended.

Section 2. Agency Designated. Pursuant to the provisions of the State Construction code Act, in accordance with Act 230 of the Public Acts of 1972, as amended, the Township will enforce and administer the Michigan Building Code, Electrical Code, Mechanical Code, and Plumbing Code and the Township's Building Inspector is hereby designated as the enforcing agency to discharge the responsibility of the Township under Act 230 of the Public Acts of 1972, as amended, State of Michigan. The Township assumes responsibility for the administration and enforcement of said statute throughout the Township.

Section 3. Violation. Any violation of the Michigan Building Code, Electrical Code, Mechanical Code, and plumbing Code, as administered and enforced by the Township, shall constitute a municipal civil infraction violation.

Section 4. Fees. The fees to be charged by the Township for administration and enforcement of the Michigan Building Code, Electrical Code, Mechanical Code and Plumbing Code shall be as set from time to time by the Township Board by resolution.

Section 5. Repeals. All ordinances inconsistent with the provisions of this Ordinance are hereby deemed repealed to the extent of such inconsistency.

Section 6. Publication. This Ordinance (or a summary thereof) shall be published in the newspaper in accordance with the provisions of Michigan Law governing the same.

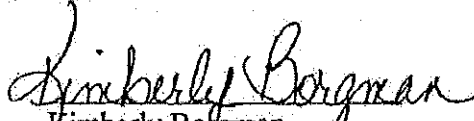
Section 7. Effective Date. This Ordinance shall become effective on July 31, 2001.

YEAS: 5

NAYS: 0

ABSTAIN/ABSENT: 0

ORDINANCE DECLARED ADOPTED.

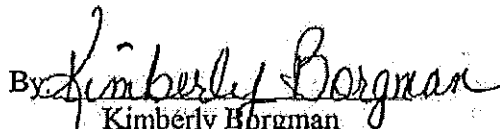

Kimberly Borgman
Moorland Township clerk

CERTIFICATION

I hereby declare that the above is a true copy of an ordinance adopted by the Moorland Township Board at a regular meeting held on July 9, 2001, at the Moorland Township Hall, pursuant to the required statutory procedures.

DATED: July 9, 2001

Respectfully Submitted,

By 
Kimberly Borgman
Moorland Township Clerk

10591 (001) 140012.01



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

SHELLY EDGERTON
DIRECTOR

February 13, 2017

Daniel Nutt, Supervisor
Moorland Township
12416 E. Apple Avenue
P.O. Box 346
Ravenna, MI 49451

Dear Mr. Nutt:

The Moorland Township Application to Administer and Enforce was received in the Bureau of Construction Codes office on February 8, 2017. As submitted we are unable to present your application to the Construction Code Commission.

In your letter you indicate that, approximately 25 years ago, Moorland Township did not file a document properly. Pursuant to the Stille-DeRossett-Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1508b(5) the Township was to have submitted a notice of intent to continue to administer and enforce the act and code. Failure to submit this document reverted the enforcement of the act and the code to the Bureau of Construction Codes.

Therefore, Moorland Township must follow the process outlined in MCL 125.1508b(6) and submit an application with ALL required documents. The application **must** include a copy of the certified adopted ordinance assuming responsibility for administration and enforcement of the act and the code. The application, with the proper documentation, will be submitted by BCC to the Construction Code Commission (CCC) to render a decision on the application.

Once the CCC receives a complete application you will be notified of the date the application will be placed on the CCC meeting agenda. You or your representative, along with enforcing agency personnel should plan to be in attendance at this meeting to respond to Commission inquiries regarding your application.

Issues to be addressed by the Commission may include, but not be limited to, the following:

- Reason for application
- Your proposed program budget
- Proposed public facing documents i.e.:
 - o Permits, correction/violation notices, certificates of occupancy, stop work orders, etc.
- Drafts of proposed fees for permits, plan reviews, inspections, etc.
- Communication process with enforcing agencies
- Registration of governmental subdivision and enforcing agency personnel
- Board of Appeal members per MCL 125.1514
- Administrative personnel and services provided i.e.:
 - o FOIA, retention schedule, location of official records/documents, etc.

Providing for Michigan's Safety in the Built Environment

LARA is an equal opportunity employer
Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
P.O. BOX 30254 • LANSING, MICHIGAN 48909
www.michigan.gov/bcc • Telephone (517) 241-9302 • Fax (517) 241-9570

Daniel Nutt
Moorland Township
Application to Administer and Enforce
February 13, 2017
Page 2

- Processes for establishing fees and variance of code process
- Agency personnel are provided as necessary.
- Plan review services are provided and timely field inspection services will be provided.
- Access to the codes & standards for which you have applied to administer & enforce.
- Your understanding of the Administration and enforcement of 1972 PA 230 (the Act) and the state construction code, pursuant to Section 8b(6) of the Act.

If you have questions regarding this issue please feel free to contact me at (517) 241-6479.

Sincerely,



Dianne Barmes, Administrative Manager
Licensing and Complaints Division

Application to Administer and Enforce
Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes / Office of Administrative Services
P.O. Box 30254, Lansing, MI 48909
517-335-2972
E-Mail: bccoas@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

NAME OF GOVERNMENTAL SUBDIVISION Moorland Township		CONTACT PERSON (Elected Official) Daniel Nutt	
ADDRESS (Street Number and Name) 12416 E. Apple Avenue			
CITY Ravenna	COUNTY Muskegon	STATE MI	ZIP CODE 49451
TELEPHONE NUMBER (Include Area Code) (231) 853-2015	FAX NUMBER (Include Area Code) (231) 853-5013	E-MAIL ADDRESS supervisor@moorlandtwp.com	

Code Adoption

To assume responsibility for the administration and enforcement of the act and the state code in accordance with Section 8b(6) of 1972 PA 230. **Attach a copy of the certified adopted ordinance assuming responsibility for administration and enforcement of the act and the code.**

State Code(s) to be Enforced

Building
 Electrical
 Mechanical
 Plumbing

By checking the boxes below you are certifying the following:

The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce this act and the code and all related acts and rules.
 Agency personnel are provided as necessary.
 Administrative services are provided.
 Plan review services are provided.
 Timely field inspection services will be provided.
 A Board of Appeals is in place per MCL 125.1514.
 Have immediate access to the codes & standards for which you have applied to administer & enforce.

BUILDING OFFICIAL INFORMATION	Name: <i>Michigan Township Services Muskegon</i>	Registration Number: <i>004480</i>
--------------------------------------	--	------------------------------------

Certification

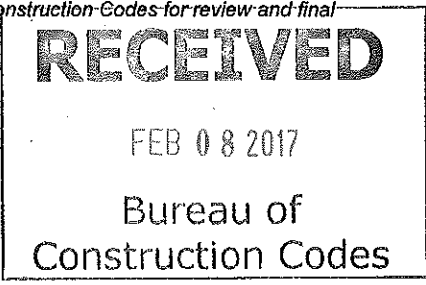
I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge.

Name of Elected Official (Type or Print) DANIEL NUTT Title SUPERVISOR

Signature of Elected Official *Daniel Nutt* Date 02/06/2017

Copies of all ordinances submitted with this application must include clear and visible identification of the governmental subdivision's department of building safety.

The conduct of the administration and enforcement of the Michigan codes shall be performed in accordance with the approved Application to Administer and Enforce and ordinance. Any changes in the approved ordinance must be submitted to the Bureau of Construction Codes for review and final approval prior to implementation by local departments of building safety.



Use for Spring Lake Twp, Sullivan Twp and Moorland Twp

ELECTRICAL PERMIT

michigantownshipservicesmuskegon.com
mtsm@frontier.com

Michigan Township Services

Make checks payable to MTSM or Michigan Township Services Muskegon or for Spring Lake Twp - make payable to Spring Lake Township

5855 Airline Fruitport, MI 49415

Ph. 231-865-6977 or 231-865-3310

Fax 231-865-6191

Jurisdiction _____

PERMIT NO. _____

Project address _____

Owner's name and address _____

City _____ State _____ Zip _____

Phone Number _____

e-mail _____

Date _____

Type of Service

_____ Temporary _____ Upgrade _____ Permanent

_____ amps _____ overhead _____ underground

Type of project

Commercial: _____ New _____ Remodel

Residential: _____ New _____ Remodel

Description of work _____

The permit holder is responsible for arranging access for inspections. If an inspection is requested, but cannot be completed due to locked or otherwise inaccessible job site, a re-inspection fee may be charged.

ELECTRICAL PERMIT FEE SCHEDULE	PER UNIT	NUMBER	FEE
Permit base fee, plus permit unit charge (includes one inspection)	\$35.00	1	\$35.00
Final inspection	\$35.00		
Services through 200 amp	\$10.00		
over 200 amp through 600 amp	\$15.00		
over 600 amp through 800 amp	\$20.00		
over 800 amp	\$25.00		
Circuits	\$4.00		
Lighting fixtures per 25 and fraction thereof	\$6.00		
Furnace, unit heaters, Dishwasher, garbage disposal and range hood	\$5.00		
Electrical heating units (baseboards), each	\$4.00		
Power outlets (including ranges, dryers, etc.), each (30 amp or more)	\$7.00		
Rewire/Repairs	\$20.00		
Feeders, bus ducts, etc. per 50 feet and fraction thereof	\$6.00		
Mobile home park site	\$6.00		
Recreational vehicle park site	\$4.00		
K.V.A. & H.P., each (well pumps, A.C., etc.)	\$6.00		
Fire Alarms - Commercial - up to 10 stations	\$50.00		
over 10 stations and horns	\$100.00		
certification (upon request)	\$20.00		
Additional inspection fee (service, underground, etc.)	\$35.00		
Signs, each	\$35.00		
Commercial Plan Review Fee based on \$50 per hour - \$50 min	\$50.00		
TOTAL FEE			

Building Permit Number _____

Name of Power Co _____

Energy request number _____

This permit will be expired/canceled when no inspections are requested and conducted within six months of the date the permit is issued or the last inspection. Expired/canceled permits cannot be refunded. A new permit is required if work to be completed after expiration of permit

Contractor Information

NAME			FAX NO.
ADDRESS			TELEPHONE NO.
CITY	STATE	ZIP CODE	e-mail
			LICENSE NUMBER
FEDERAL EMPLOYER ID NUMBER OR REASON FOR EXEMPTION			EXPIRATION DATE
WORKERS COMP. INSURANCE CARRIER OR REASON FOR EXEMPTION			
MESC EMPLOYER NUMBER OR REASON FOR EXEMPTION			

Contractor Affidavit: All work shall be installed in accordance with the current Electrical Code and I will assume the responsibility to arrange for the required inspections.

Home Owner Affidavit

I hereby certify the electrical work described on this permit application shall be installed by myself in my own single family dwelling in which I am living or about to occupy. All work shall be installed in accordance with the local Electrical Code and shall not be enclosed, covered or put into operation until inspected and approved by the Electrical Inspector. I will cooperate with the Electrical Inspector and assume the responsibility to arrange for the necessary inspections.

Signed _____

Mechanical Permit

Use for Spring Lake Twp and Sullivan Twp

Make checks payable to MTSM or Michigan Township Services or for Spring Lake Twp - make payable to Spring Lake Twp

Michigan Township Services Muskegon

5855 Airline Fruitport, MI 49415
Ph. 231-865-6977 or 865-3310
Fax 231-865-6191

www.michigantownshipservicesmuskegon.com
mtsm@frontier.com

Jurisdiction of: _____

PERMIT NUMBER _____

Address of project _____

Owner _____

Owners address if different than above _____

City _____ State _____ Zip _____

Phone # _____

E-mail _____

Date: _____

Type of project
Commercial - New Remodel Other
Residential - New Remodel Other

Description of work to be done _____

Building Permit Number _____

The permit holder is responsible for arranging access for inspections. If an inspection is requested but cannot be completed due to a locked or otherwise inaccessible job site - a re-inspection fee may be charged.

Single Family - fee schedule

	Per Unit	Number	Fee
Permit base fee (includes one inspection).....	\$35.00		\$35.00
Final inspection.....	\$35.00		
Furnaces (heat pumps, boilers, wtr htr, and decorative appliances).....	\$20.00		
Fireplaces - Gas, solid fuel (wood or pellet stoves etc) Includes one inspection - base fee not required.....	\$70.00		
Chimney factory built.....	\$20.00		
Central Air.....	\$20.00		
Duct system or hydronic piping.....	\$15.00		
Solar equipment system, piping fee included.....	\$20.00		
Gas piping new installation.....	\$10.00		
Exhaust fans each.....	\$4.00		
LP and fuel oil tanks - piping fee included - each.....	\$15.00		
additional inspection.....	\$35.00		
Total			

Commercial/Industrial

Permit base fee - includes one inspection.....	\$35.00		
Gas oil burning equipment, new and/or conversion unit.....	\$25.00		
Gas piping - each outlet new installation.....	\$5.00		
Solar equipment - each panel and tank - piping included.....	\$20.00		
A/C and refrigeration heat pumps self contained under 15 HP A/C - each.....	\$20.00		
evaporator coils each.....	\$30.00		
Under 5 HP split system - each.....	\$30.00		
5 HP and over split system - each.....	\$40.00		
Chiller - each.....	\$90.00		

	Per Unit	Number	Fee
Cooling towers - each.....	\$40.00		
Compressor 15HP to 50HP each.....	\$35.00		
over 50 HP each.....	\$60.00		
Air Handlers - self contained units Ventilation and exhaust fans under 1,500 CFM - each.....	\$7.00		
1,500 CFM to 10,000 CFM - each.....	\$30.00		
Over 10,000 CFM - each.....	\$60.00		
Heat recovery and wall fan cold - each.....	\$12.00		
Unit Heaters - each.....	\$20.00		
Ducts, insulation, piping, fire suppression/protection systems based on bid price.....	\$25.00		
under \$3000.....			
\$3000 to \$7999.....	\$35.00		
\$8000 to \$10,999.....	\$45.00		
\$10 for each \$3000 over \$11,000 in addition to the above rate.....			
Incrinerators - each.....	\$20.00		
Humidifiers - each.....	\$12.00		
Electronic air cleaner with washer - each.....	\$35.00		
Tanks - for underground tanks add \$5 to each of the following.....			
Under 276 gallons - each.....	\$15.00		
276 gallon to 550 - each.....	\$20.00		
over 550 gallons - each.....	\$30.00		
additional inspection.....	\$35.00		
final inspection.....	\$35.00		
Plan Review Fee - \$50 per hour (\$50 minimum).....	\$50.00		
Total			

Permit will be expired/canceled if no inspections are requested or conducted within six months of the date of issuance or date of last inspection. Expired/canceled permit cannot be refunded and a new permit shall be issued if work is to be completed after expiration of permit.

Contractor Information

Name		Phone #		Fax #	
Address			City		State
License #			Expiration date		Zip Code
Federal Employer ID number or reason for exemption			E-mail		
Workers Comp insurance Carrier or reason for exemption					
MESC Employer number or reason for exemption					

- CONTRACTOR AFFIDAVIT: All work shall be installed in accordance with the current Mechanical Code and I will assume the responsibility to arrange for the required inspections
- HOME OWNER AFFIDAVIT: I hereby certify mechanical work described on this permit shall be installed by myself in my own single family dwelling in which I am living or about to occupy. All work shall be installed in accordance with the local Mechanical Code and shall not be enclosed, covered up or put into operation until it has been inspected and approved by the Mechanical Inspector. I will cooperated with the Mechanical inspector and assume the responsibility to arrange for necessary inspections.

Signed _____

Use for Spring Lake Twp, Moorland Twp and Sullivan Twp

Make check payable to MTSM or Michigan Township Services Muskegon for Spring Lake Twp - make payable to Spring Lake Township

PLUMBING PERMIT

5855 Airline - Fruitport, MI 49415
231-865-3310 or 231-865-6977
Fax 231-865-6191

mtsm@frontier.com

Jurisdiction of _____

PERMIT NO. _____

DATE: _____

Job Location _____

TYPE OF JOB:

COMMERCIAL: NEW REMODEL

RESIDENTIAL: NEW REMODEL

OTHER - DESCRIPTION BELOW

Owner _____

Owner's Address _____

DESCRIPTION OF WORK: _____

City _____ State _____ Zip _____

Phone No. _____ e-mail address _____

The permit holder is responsible for arranging access for inspection. If an inspection is requested but cannot be completed due to a locked or otherwise inaccessible job site, a re-inspection fee may be charged

BLDG. PERMIT NO. _____

	PER UNIT	NO.	FEE
Permit base fee (includes one inspection)	35.00	1	\$35.00
Final inspection	35.00		
Underground inspection	35.00		
Fixtures - each	4.00		
Stacks, vents and roof conductors	3.00		
Subsoil drains, each	6.00		
Utility holes, catch basins, each	6.00		
Sewage sumps, sewage ejectors, each	6.00		
Water distributing pipe (system) Up to one inch	6.00		
Over one inch	22.00		
Laboratory, hospital, clinic fixtures, equipment & devices	3.00		
Reduced pressure zone backflow preventer each	6.00		
Water connected appliance, equipment & devices each	4.00		
Floor drains, special drains & traps	3.00		
Additional Inspections, trench or cross connection	35.00		
Commercial Plan Review Fee based on \$50 per hour - \$50 minimum	50.00		
If work is started before permit is applied for, an additional fee will be charged.	TOTAL		

Note: permit will be expired/canceled when no inspections are requested and conducted within six months of the date of issuance or the last inspection done. An expired/canceled permit can not be refunded and a new permit shall be required if the work is to be completed after permit has been expired/canceled.

Contractor Information

NAME			FAX NO.
ADDRESS			TELEPHONE NO.
CITY	STATE	ZIP CODE	
LICENSE NUMBER	EXPIRATION DATE	e-mail address	
FEDERAL EMPLOYER ID NUMBER OR REASON FOR EXEMPTION			
WORKERS COMP INSURANCE CARRIER OR REASON FOR EXEMPTION			
MESC EMPLOYER NUMBER OR REASON FOR EXEMPTION			

CONTRACTOR AFFIDAVIT: All work shall be installed in accordance with the Plumbing Codes and I will assume the responsibility to arrange for the required inspections.

HOMEOWNERS AFFIDAVIT: I hereby certify the plumbing work described on this permit application shall be installed by myself in my own single family dwelling in which I am living or about to occupy. All work shall be installed in accordance with the Local Plumbing Code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the Plumbing Inspector. I will cooperate with the Plumbing Inspector and assume the responsibility to arrange for necessary inspections.

Signed _____

Building Permit Fees

(These fees do not apply to commercial
or industrial buildings)

Residential - One and Two Family and Accessory Buildings:

Calculate a valuation from the residential cost schedule

Use that valuation with the Rate Table to determine the fee

Building Permit Rate Table *

<u>Valuation</u>	
\$0 - \$1,000	\$40.00
\$1,001 - \$10,000	\$40.00 + \$2.00/100 over \$1,000
\$10,000 - \$1,000,000	\$210.00 + \$4.00/1,000 over \$10,000
Over \$1,000,000	\$4170.00 + \$3.00/1,000 over \$1,000,000

* Investigation Fee will be charged for work started without a permit.

Re-inspection charge - \$40.00 per inspection or \$40.00 per hour (whichever is greater)

Plan review fee -

\$50.00 per hour - Residential Construction

\$25.00 per hour - Decks, Detached Garages, Pools, Hot Tubs, Gazeboes and similar structures

Value for Determining Building Permit Fees

Base Mobile Home - Doublewide	\$53.65 per sq. ft.
Base Modular Construction	\$65.00 - \$82.00 per sq. ft.
Base Custom Construction	\$87.50 per sq. ft.
Add to base cost the following:	
Crawl Space	\$9.35 per sq. ft.
Basement - unfinished	\$11.25 per sq. ft.
Basement - finished	\$23.35 per sq. ft.
Additional Bath	\$3382.00
Additional half bath	\$2040.00
Fireplace & Chimney (prefab)	\$3090.00
Masonry Fireplace	\$6065.00
2nd Masonry Fireplace(same chimney)	\$1500.00
Porches and Breezeways	\$21.00 per sq. ft.
Wood Decks	\$10.00 per sq. ft.
Wood Decks over 30"	\$12.25 per sq. ft.
Carports - Simple without sides	\$10.00 per sq. ft.
Pools	Contract price of pool
Garages - wood frame - unattached	\$21.00 per sq. ft.
Attached or unattached slab	\$18.65 per sq. ft.
Pole Buildings	\$11.70 per sq. ft.
Shed	\$11.25 per sq. ft.
Reside - contract price or \$245.00 per square	
Reroof - contract price or \$152.75 per square	
Miscellaneous Improvements - at cost (labor and materials or estimated contract price)	

For Industrial, Commercial and other use groups use the current State fee schedule to establish minimum value of project. Once value is established run it thru the above Building Permit Rate Table. Plan Review fee - .15% of the project value over \$100,000 - minimum fee of \$150.00



Moorland Township

12416 East Apple Avenue
P.O. Box 368
Ravenna, MI 49451
(231) 853-2015

February 6, 2017

Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes/Office of Administrative Services
P.O. Box 30254
Lansing, MI 48909

To whom it may concern,

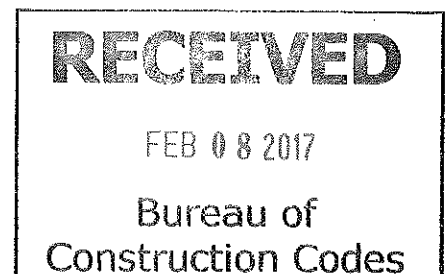
My name is Dan Nutt, newly elected supervisor of Moorland Township, located in Muskegon County, Michigan. I am writing in regard to mechanical inspections.

From what I understand, approximately 25 years ago, Moorland Township did not file a document properly, and as a result our mechanical inspections were never given back to the township. At this point I am requesting that, in lieu of filling out the requested paperwork and providing the documents necessary, that we receive our mechanical inspection abilities back to the township.

Thank you for your consideration in this matter. Please feel free to call our office with any questions or concerns.

Regards,

Dan Nutt
Township Supervisor



CONSTRUCTION CODE INSPECTIONS SERVICES AGREEMENT

THIS AGREEMENT, made and entered into this 13th day of February, 2006, by and between Moorland Township with its principal offices at 12416 E. Apple Avenue, Ravenna, MI 49451 (hereinafter referred to as the "Township"), and Michigan Township Services Muskegon, Inc., a Michigan Corporation with business offices located at 384 N. Third, suite E, Fruitport, MI 49415 (hereinafter referred to as the "Contractor").

WITNESSETH:

WHEREAS, THE Township has by ordinance, and pursuant to the Michigan State construction code Act (1972 PA 230, as amended; hereinafter, "SCCA"), undertaken the responsibility for administration and enforcement of certain of the codes and code sections referred to in that Act (hereinafter, referred to as "the Codes"); and

WHEREAS, THE Township and the enforcing agencies designated by it to administer and enforce codes (hereinafter, "Enforcing Agency") require expert assistance in conducting inspections mandated by the SCCA and applicable codes and regulations.

NOW, THEREFORE, for and in consideration of the mutual covenants hereinafter contained, IT IS HEREBY AGREED as follows:

1.0 SCOPE AND MANNER OF SERVICES

- 1.1 The Municipality hereby employs Michigan Township Services Muskegon, its officers, agents and employees, for the purpose of code enforcement administration as their Building Official, Building Inspector, Plan Reviewer, Electrical Inspector, Mechanical Inspector and Plumbing Inspector under State law and local ordinances for the Codes.
- 1.2 The contractor shall review all plans submitted and issue all building, Electrical, mechanical and plumbing permits.
- 1.3 The Contractor shall perform Building, Electrical, Plumbing and Mechanical Code Inspection duties as mandated by the applicable current Michigan Building and Residential Codes.
- 1.4 The Contractor shall respond to a request for an inspection within 24 hours (excluding weekends and holiday on which the offices are closed and occasional training days) from the time the Contractor receives a request to make an inspection.
- 1.5 The Contractor shall perform the services hereunder under the direction of the Enforcing Agencies.
- 1.6 The Contractor shall perform all services hereunder in accordance with the highest professional standards and in a manner consistent with the highest level of skill and care in the construction code industry. The Contractor represents and warrants that it has the capability, experience and materials required to perform the services contemplated by this Agreement and consistent with such standards.

RECEIVED

FEB 08 2017

Bureau of
Construction Codes

- 1.7 On a daily and monthly basis, the Contractor shall submit a report to the applicable enforcing Agency disclosing the results of inspections performed.
- 1.8 The contractor shall perform all inspections in accordance with the SCCA codes, applicable regulations and other applicable laws.
- 1.9 The Contractor shall not be held liable for inspections done prior to the effective date of this agreement.

2.0 COMPENSATION

- 2.1 For the duties specified in Section 1.0 Scope and Manner of Services the Contractor agrees to remit to the Municipality 10% of Building, Electrical, Mechanical and Permits collected on a monthly basis.
- 2.2 Contractor will bill the Township at a rate of \$40.00 for inspections done on Any permits issued prior to the date of this contract.

3.0 QUALIFICATIONS OF CONTRACTOR'S PERSONNEL.

- 3.1 The Contractor shall ensure that all its officers and employees possess at all Times the licenses, certifications and registrations required by applicable Federal and State laws, rules and regulations which are required to perform the services to be performed under this Agreement, including but not limited to the registration requirements in the Building Officials and Inspectors Registration Act (1986 PA54).
- 3.2 Any officer or employee of the Contractor whose license, certification or Registrations which are required to perform the services to be performed under this Agreement expires and is not renewed or is revoked, shall immediately upon the expiration or revocation thereof cease performing work under this agreement.
- 3.3 The Contractor shall provide the Township with Copies of the State of Michigan Registration Certification for Building, Electrical, Plumbing and Mechanical Inspectors.

4.0 TERMS OF AGREEMENT

- 4.1 Either party may terminate this Agreement by giving written notice at least Sixty (60) days in advance of the desired termination date. This notice requirement need not be complied with if the termination is due to default.
- 4.2 In case of a party's breach of this Agreement, the other party may terminate This agreement, effective on the date that written notice of default is delivered to the defaulting party.
- 4.3 Within thirty (30) days after termination of this Agreement, all fees and Charges due and owing by one party to the other shall be paid.

- 5.0 MODIFICATION OF AGREEMENT. Modifications, amendments or waivers of any provisions of this Agreement may be made only by the written mutual consent of the parties hereto.

6.0 CERTIFICATION OF AUTHORITY TO SIGN AGREEMENT. The persons Signing this Agreement on behalf of the parties hereto certify by their signatures that they are duly authorized to sign this Agreement on behalf of said parties and that this Agreement has been authorized by said parties.

MOORLAND TOWNSHIP

BY: Charles E. Krupp

ITS: Supervisor

ATTESTED BY: Kimberly Borgman

ITS: Clerk

MICHIGAN TOWNSHIP SERVICES MUSKEGON, INC.

BY: Gregory T. Mason

ITS: President

ATTESTED BY: Jackie A. Essenberg

ITS: Secretary/Treasurer

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Bureau of
Construction Codes

RICK SNYDER
GOVERNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY BUILDING OFFICIAL
BUILDING INSPECTOR
PLUMBING INSPECTOR
PLAN REVIEWER

GREGORY T MASON

[REDACTED]
FRUITPORT MI 49415

REGISTRATION NO.	EXPIRATION DATE
BCC-149 (Rev. 9/06) 004480	09/16/18

THIS DOCUMENT IS DULY
ISSUED UNDER THE LAWS OF
THE STATE OF MICHIGAN

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FEB 08 2017

Bureau of
Construction Codes

RICK SNYDER
GOVERNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY MECHANICAL INSPECTOR
PLUMBING INSPECTOR
PLAN REVIEWER

ROBERT F MODRESKE

[REDACTED]

HOPKINS MI 49328

REGISTRATION NO.

EXPIRATION DATE

THIS DOCUMENT IS DULY
ISSUED UNDER THE LAWS OF
THE STATE OF MICHIGAN

005098

09 16 18

RICK SNYDER
GOVERNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY MECHANICAL INSPECTOR
PLUMBING INSPECTOR
PLAN REVIEWER

HAROLD J CALLENDER, JR

[REDACTED]

WHITEHALL TWP MI 49461-

REGISTRATION NO.

EXPIRATION DATE

THIS DOCUMENT IS DULY
ISSUED UNDER THE LAWS OF
THE STATE OF MICHIGAN

CC-149 (Rev. 9/06)

002634

09/16/18

MUST BE DISPLAYED IN CONSPICUOUS PLACE

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FEB 08 2017

Bureau of
Construction Codes



Moorland Township

12416 East Apple Avenue
P.O. Box 368
Ravenna, MI 49451

MOORLAND TOWNSHIP ZONING BOARD OF APPEALS MEMBERS (Three year terms)

Tim Hedges

Term expires: 12/31/2017

[REDACTED]
Ravenna, MI 49451
231-[REDACTED]

Rich Miller

12/31/2018

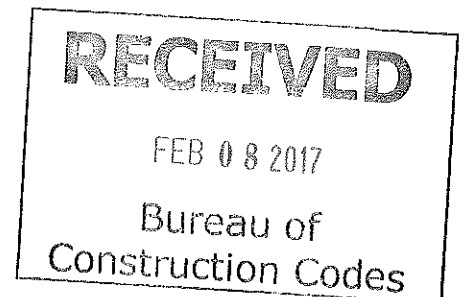
[REDACTED]
Ravenna, MI 49451
231-[REDACTED]

Rose Spoelman, Board Rep.

12/31/2019

[REDACTED]
Ravenna, MI 49451
231-[REDACTED]

Zoning Administrator: Michigan Township Services
384 N. Third Street, Suite E
Fruitport, MI 49415
231 865-3310



Moorland Township

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Fire Department

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 FEB 08 2017
 Bureau of
 Construction Codes



Please consider the following information as supplemental data to the following applications that have been submitted to your agency for your review.

Village of Centreville, St. Joseph, County
Village of Colon, St. Joseph, County
Fawn River Township, St. Joseph, County
Village of White Pigeon, St. Joseph County
Village of Marcellus, Cass County
Volinia Township, Cass County



Reason for Application

The following municipalities are desiring to assume the administration and enforcement of all disciplines in an effort to provide customer serviced based inspections using trade officials that live in the communities and are familiar with those communities.

Communications and processes between local jurisdictions and the bureau of construction codes office appear to be very ineffective.

A couple of years ago which was cause for Mottville Township to obtain such a great desire to administer and enforce its codes was due to the fact that a large project was placed at a standstill due to an inspector being off due to an injury. The bureau was not able to provide an inspector, but was quick to deny the local jurisdiction the opportunity to obtain a local Inspector to finish the inspections citing that Mottville did not have its own reference standards.

None of the local jurisdictions were ever notified of this issue so that the local municipalities could be prepared to answer questions of it's residents. We have had situations where the bureau has lost inspectors due to retirements, no notifications by the bureau of such event occurred, and the response from the bureau was for the local jurisdiction to check the website. As we currently address this issue, we have a very highly respected inspector off on medical leave, and again the bureau never notified anyone of this situation. I was not until one of the residents notified the municipality that we became aware of the issue. It becomes very difficult to answer to the residents, when we as local municipalities don't have the answers.

Just in the past several months we have observed very inconsistent policies and procedures regarding the administration and enforcement of the codes. When we first embarked to transfer the administration and enforcement of the officials in Mottville Township, we were basically informed that this would be a steep hill to climb due to requirement to have all of the code books, which was then later reduced to the essential standards. As Mottville went through the paces, and constructed an inter-governmental code Library which has been enjoined by several other municipalities, passed a resolution and completed all of the documents Mottville submitted its application to the bureau.

Before we were notified by the bureau that Mottville Township had been approved, residents were being told by the bureau that they no longer were responsible for that area. When Mottville contacted the bureau, they were advised that due to the fact that Mottville passed the resolution, that they should have been doing the inspections the day the resolution was effective, but yet no authorization had been granted. Now in February 2017 the bureau has changed the application, and is now requiring local officials to attend meetings in Lansing to answer questions during this interim period of change.

Interim Period? Such comment would lend one to believe that yet more changes are yet to come, but when questioned, the bureau does not seem to have or willing to share any ideas as to what might be being considered.

In this packet, documentation has been provided from six jurisdictions requesting to administer and enforce their codes. Four of the applications were submitted at a later date, and it is now being indicated that these may not be considered in the April 2017 meeting, and may not be on an agenda until July 2017. This seems to be unacceptable timeframe to respond to such a request, and then may fall under yet more policy and procedural changes.

In closing probably one of the most disturbing issues amongst all is recently the bureau issued a building permit for a commercial building in the Village of White Pigeon. This permit was issued without any local zoning approval. In an effort to backfill and create a file as we understand that recordkeeping is a critical portion of the operation, and understanding from past requests that the only method to obtain such records through the bureau even though it is for the jurisdiction is through a Freedom of Information Act Request. It was quite disturbing to find that the bureau admits to not having local zoning authority, and then denies a portion of the request for copies of the plan review stating that it was exempt from such request.

I think it would safe to presume that if the shoe was on the other foot, such practices would not be acceptable.

Therefore, with that we ask that each of the municipalities that are referenced in this document be released from the bureau's jurisdiction at its April 2017 meeting in an effort for the local municipalities may provide prompt professional services to its residents that they deserve.



Douglas Kuhlman <municipalzoning@gmail.com>

FOIA No.: 2017-02016 Response

2 messages

LARAFOIAInfo <LARAFOIAInfo@michigan.gov>
To: Douglas Kuhlman <municipalzoning@gmail.com>

Fri, Feb 3, 2017 at 11:20 AM

Dear Mr. Kuhlman:

The Michigan Department of Licensing and Regulatory Affairs (LARA) has received your request for public records and has processed it under the provisions of the Michigan Freedom of Information Act (FOIA), 1976 PA 442, MCL 15.231 *et seq.* Because of the nature of your request it was sent to the Bureau of Construction Codes (BCC) to search for any non-exempt records that may be responsive to your request.

Your request has been **granted in part and denied in part**. Portions of your request are exempt from disclosure based on provisions set forth in the Act. Please see comments below.

Comments:

As to the partial grant, non-exempt documents responsive to your request are attached. Additionally, please note that BCC Licenses, Permits, Plan Review, Complaints, and Fire Services information can also be found online at: <https://aca3.accela.com/lara/>.

As to the partial denial, some records are specifically described exempt from disclosure by another agency statute (MCL 15.243(1)(d)). **Statute(s)**: Copyright Act of 1976. The file contained copies of copyrighted code material, including architectural works.

Also, BCC has no authority for zoning in the requested location.

If you have questions concerning this matter, please feel free to contact the LARA FOIA Office at LARAFOIAInfo@michigan.gov. To review a copy of LARA's written public summary, procedures, and guidelines, go to www.michigan.gov/lara.

As to the denial of your request, under section 10 of the FOIA, MCL 15.240, LARA is obligated to inform you that you may do the following:

1) *Appeal this decision in writing to Director Shelly Edgerton, Department of Licensing and Regulatory Affairs, P.O. Box 30004, Lansing, MI 48909. The writing must specifically state the word "appeal" and must identify the reason or reasons you believe the denial [partial denial] should be reversed. The head of the Department or her designee must respond to your appeal within 10 business days of its receipt. Under unusual circumstances, the time for response to your appeal may be extended by 10 business days.*

2) Commence an action in the Court of Claims within 180 days after the date of the final determination to deny the request. If you prevail in such an action, the court is to award reasonable attorney fees, costs, and disbursements, and possible damages.

Sincerely,

LARA FOIA Office

cf

From: Douglas Kuhlman [mailto:municipalzoning@gmail.com]
Sent: Tuesday, January 31, 2017 3:45 PM
To: LARAFOIAInfo <LARAFOIAInfo@michigan.gov>
Subject: Fwd: FIOA Request

----- Forwarded message -----
From: Douglas Kuhlman <municipalzoning@gmail.com>
Date: Wed, Jan 25, 2017 at 12:37 PM
Subject: FIOA Request
To: larafoainfo@michigan.gov

Please accept the following attached document as a FIOA request. If you have any questions, feel free to contact my office.

—
Douglas M. Kuhlman

Zoning Administrator &
Code Compliance Officer

NEW CONTACT INFORMATION

65656 Burg Rd
Sturgis, Mi. 49091

Tel: (269)-651-3130
Fax: (269)-651-3131
Email: municipalzoning@gmail.com

Confidentiality Notice: This email and any attachment to it are intended only for the use of the intended recipient(s). If you have received this transmission in error, please immediately notify the sender by "reply" and permanently delete this message from your computer system. **Reliance:** Any legal opinion expressed in this email, including any attachment may only be relied upon by those persons or entities that are clients of Douglas Kuhlman any or the municipality being represented. This email and/or attachments are considered privileged information to the intended recipient(s). **Non-binding Electronic Transmission:** This mail, including statement, symbols or any attachment, is not meant to constitute an electronic signature or an offer, acceptance or intent to contract electronically. **IRS Required Notice:** To ensure compliance with IRS regulations, we inform you that any tax advice contained in this communication, including any attachment, is not intended or written to be used, ad cannot be used, for the purpose of (I) avoiding tax penalties or (II) promoting, marketing or recommending to another party any transaction or matter addressed herein.

—
Douglas M. Kuhlman


Zoning Administrator &
Code Compliance Officer

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 **Tracy Exports FOIA 2017-02016.pdf**
213K

Douglas Kuhlman <municipalzoning@gmail.com>
To: LARAFOIAInfo <LARAFOIAInfo@michigan.gov>

Fri, Feb 3, 2017 at 11:47 AM

I guess that I am somewhat confused that the Village of White Pigeon designates the State of Michigan as their building official for the Village, but when there is need for documentation of a project that took place in the Village, we would be told that some information pertaining to the project would not be released merely because you are a different agency. I will provide this information to the Village Council and see how that would like to handle this issue.

Thank you for your time

[Quoted text hidden]

- Workflow
- Owner
- Address

- Reports**
- ▶ My Reports
 - ▶ Ad Hoc Reports
 - ▶ Batch Permits
 - ▶ Boiler
 - ▶ Building
 - ▶ CEPAS Report
 - ▶ Custom Reports
 - ▶ Financial
 - ▶ General
 - ▶ Permits
 - ▶ Plan Review
 - ▶ Standard Reports

- Quicklinks**
- ▶ Clear Cache

Record ID: PR2016BCC-000482

Menu ▾ Help

Go To ▾ Summary Record Activities (0) Activity Summary (0) Address (1) Addtl Info GENERAL INFORMATION

File Date: 07/07/2016
 Application Status: Closed
 Description of Work: 16ft x48ft. post frame addition
 Application Detail: Detail
 Application Type: BCC Plan Review
 Address: 604 S Miller DR, White Pigeon, MI 49099
 Owner Name:
 Owner Address:
 Application Name: Tracy Export
 Parcel No:

Contact info: Name	Organization Name	Contact Type	Contact Primary Address	Status
		Applicant		Active
		Applicant		Active

Licensed Professionals Info: Primary	License Number	License Type	Name	Business Name
		Architect		

Job Value: \$0.00
 Total Fee Assessed: \$625.00
 Total Fee Invoiced: \$625.00
 Balance: \$250.00

Custom Fields: Plan Review Information

Facility Type
 General

New Building
 0

Addition
 768

Alteration
 -

Repair
 -

Building Use
 U. Utility (Miscellaneous)

Construction Type
 2B - Non Combustible (Non-Rated Structural Elements)

Number of Occupants
 6

Area/Floor
 2208

Sprinkler System
 None

Sprinkler System Limited Area Description
 -

Government Project Cost Less than \$15,000
 No

Addendum Number
 -

Original BCC Project Number
 -

Architect Project Number
 -

Manual Fee Assessment
 0

GENERAL INFORMATION

Project Type
 Addition

Preliminary Review

Estimated Capital Ex
 23250

PLAN REVIEW REQUEST INFO

Building

Electrical

Mechanical

Plumbing

Barrier Free

Footing/Foundati

Fire Sprinkler

Energy

Site

Other

Other Description

PREMANUFACTURED SPECIFIC INFO

Primary Manufacturer Name	C.A. Number	2nd Manufacturer
2nd Manufacturer C.A. Number	3rd Manufacturer Name	3rd Manufacturer
Building Data	Model Number Name and Size	Previous BSAR N
Type of Unit	Roof Live / Snow Load	Roof Dead Load
Floor Live Load	Floor Dead Load	Ground Snow Load
Wind Speed	Heating Degree Days	Access Panel Location
Building Code	Electrical Code	Mechanical Code
Plumbing Code	Limitations of Approval (if any)	

Other than 1&2 Family Dwelling
 New Model (One Foundation System) Additional Manufacturer(s) Submittal (not primary/commercial)

1 & 2 Family Dwellings
 New Model (one foundation system) Foundation Options/Modification Reverse Plan

Various Options Additional Manufacturer(s) Submittal (not primary) Foundation Code

PAYMENT METHOD

Payment Method
Paper Check

PAYMENT AMOUNT

Building Code Review Fee Amount	Total Fee	Billable Hours
0	\$125.00	2

PLANS AND SPECS

Type	No. of Sets	Location	Sets Requested	Date Received	Sets Returned	Return Location	Date Returned
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RECORD CENTER

Document Type	Lot No.	Box Record Center No. (Number)	Itemized	Date Sent
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Workflow Status:	Task	Assigned To	Status	Status Date	Action By
	<u>Application Submittal</u>		Complete	08/03/2016	Jonathan Marhugh
	<u>Plan Route</u>		Routed for E...	08/05/2016	Jonathan Marhugh
	<u>Electrical Review</u>				
	<u>Plumbing Review</u>				
	<u>Mechanical Review</u>				
	<u>Pub School Site Review</u>				
	<u>Footing/Foundation Review</u>				
	<u>Building Review</u>	James Greene	Approved	08/05/2016	James Greene
	<u>Review Completion</u>		Approved	08/05/2016	Jonathan Marhugh
	<u>Issuance</u>		Close	08/05/2016	Jonathan Marhugh
	<u>Closure</u>				

Condition Status:	Name	Short Comments	Status	Apply Date	Severity	Action
Application Comments:	View ID	Comment		Date		

Initiated by Product: ACA

Scheduled/Pending Inspections:	Inspection Type	Scheduled Date	Inspector	Status	Cost
--------------------------------	-----------------	----------------	-----------	--------	------



Registration of Governmental Sub-division

The following information should apply to the following municipalities that have made application to administer and enforce all of the various codes.

Village of Centreville, St. Joseph, County


Village of Colon, St. Joseph, County

Fawn River Township, St. Joseph, County

Village of White Pigeon, St. Joseph County

Village of Marcellus, Cass County

Volinia Township, Cass County



Communication
process
with
enforcing
agencies

Each of the trade officials are very transparent in the communities that they serve. Contact numbers are provided on each municipalities website, the Zoning– Building Permit Application, and can usually be found on a bulletin board at each of the municipalities, or by contacting one of the municipalities officials..

Board of Appeals



An intergovernmental Construction Board of Appeals has been created and is shared by all of the municipalities.

Township of Volinia

Cass County

Procedures for the Construction Board of Appeals

1. Appeals must be in writing to the Board Chair. If an appeal is addressed to the Village President, it shall promptly be referred to the Chair of the Appeals Board. A separate file is to be maintained for each appeal.
2. A hearing is scheduled as soon as possible, but not more than 25 days following receipt of an appeal. Notice is given to all interested parties by first class mail with 10 days notice before the hearing.
3. Appeals are heard by a quorum of the Construction Board of Appeals.
4. The final decision of the Board is reduced to writing and sent to the applicant within 5 days after Board decision is reached.
5. Records of the appeal and its disposition are maintained on file in the Building Inspection Department of the Township of Volinia.

APPOINTMENTS TO CONSTRUCTION BOARD OF APPEALS

SPECIFIC ACTION REQUESTED: Authorize Supervisor to make appointments to the Construction Board of Appeals

DESCRIPTION OF ISSUE:

The Township is the administering and enforcing agency for the State Construction Code. MCL 125.1514 requires an administering and enforcing agency to appoint a "Construction Board of Appeals" for the purposes of hearing and deciding appeals on questions of the State Construction Code, such as the refusal to grant a permit or the denial of a permit.

The Construction Board of Appeals must consist of a minimum of 3 persons, qualified by experience or training to perform the duties of a member of the Board of Appeals. In this respect, it is incumbent upon the Township to appoint individuals that have training in one or more of the Building Trades; or that have municipal building code experience, or both. Employees of the Township cannot serve on the Township Construction Board of Appeals.

MCL 125.1514 provides that the Supervisor shall appoint the members of the Construction Board of Appeals. The members serve for 2-year terms.

We recommend that the Township Supervisor appoint the following individuals to the Township Construction Board of Appeals with two year terms commencing on (date) _____, all of whom have agreed to be named and are willing to serve:

Butch Bender – Electrical Contractor

██████████ Cassopolis, MI 49301

Rich Wheat – Electrical Contractor

██████████ Three Rivers, MI 49093

Greg Persing – Mechanical and Plumbing Contractor

██████████ Road Burr Oak, MI LICENSE#8110541

David Nelson – Mechanical and Plumbing Contractor

██████████ Sturgis, MI 49091 LICENSE#8002752

Fred Mazzoni – Building Contractor

██████████ Sturgis, MI 49091 LICENSE#2101132671 (exp 5/31/17)

Doug Hopkins – Building Contractor

62969 Fair Road Sturgis, MI 49091 phone 269-508-4260

Proposed Motion:

“I move that the Township appoint Butch Bender, Rich Wheat, Greg Persing, David Nelson, Fred Mazzone and Doug Hopkins to the Construction Board of Appeals effective (date) _____, that the Construction Board of Appeals meet only as needed upon application, a fee of \$500 will be charged to the applicant and that each Construction Board of Appeals member be compensated \$100 plus mileage at the current IRS rates for those meetings each appointee attends”.

Support by:

All in favor:

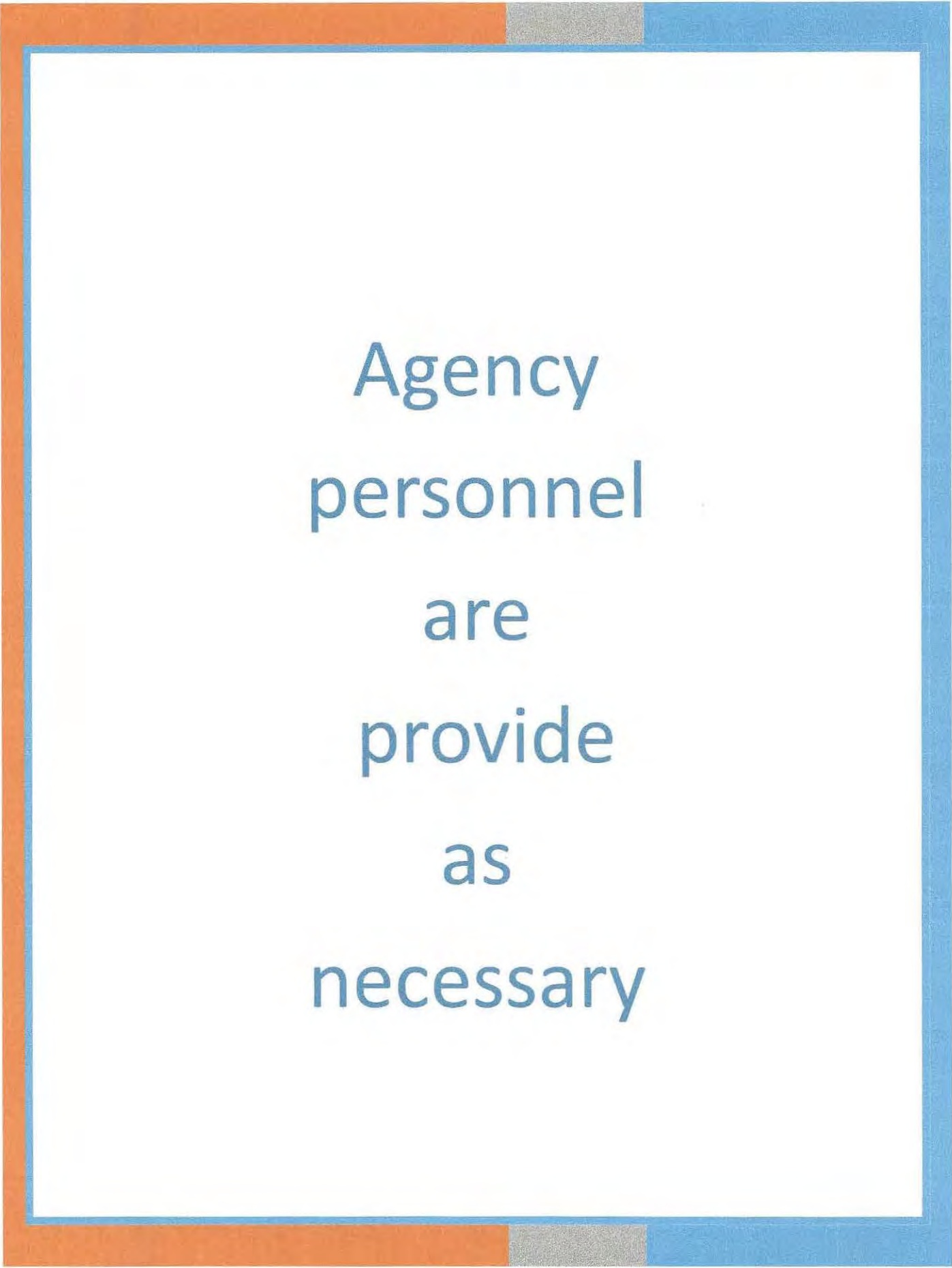
Administrative
personnel and service
provided
F.O.I.A.

All Freedom of Information Act requests are handled by the Freedom of Information Act Coordinator for each of the municipalities.

All forms, retention schedule and location of official records are in adherence with the Freedom of Information Act , Act 442 of 1976, and are maintained at each of the municipalities.

Processes
for
establishing
fees
and
variance
code
process.

All fees and variance s of code process are modeled from the State of Michigan, and consideration regarding local cost of operations is also considered.



Agency
personnel
are
provide
as
necessary

Each municipality provides administrative support to all of the trade officials, and each of the trade official have assigned officials as back up support in the case of their absence.



Plan
reviews
and
field
inspections

All plan reviews are conducted on a timely basis.

All inspections are usually conducted within 24-48 hours from the time of the request under normal circumstances.



Proposed Program Budget

Each of the trade officials work on a fee based inspection service therefore not having the requirement for any type of budget.

In addition, each of the trade officials contribute 10% of their inspection fees to the municipalities for administrative costs.



Drafts of Proposed Fees

RESIDENTIAL BUILDING PERMIT FEE SCHEDULE

BASE FEE FOR NEW HOMES AND ADDITIONS (LIVING SPACE)

1 FIRST 1000 SQ. FT.	\$190.00	_____
2 OVER 1000 SQ. FT.	\$0.19 SQ FT	_____
3 BASEMENT, CRAWL SPACE, ATTACHED GARAGE, DECKS AND 3 SEASON ROOMS	\$0.08 SQ FT	_____

REMODEL PERMIT BASE FEE (2 INSPECTIONS)

1 BASE FEE	\$120.00	_____
2 PER SQ. FT. OF REMODEL	\$0.16 SQ FT	_____

DECK PERMIT BASE FEE

1 DECKS WITHIN 30" FROM GRADE	\$80.00	_____
2 DECKS OVER 30" OR COVERED DECKS WITH PANNING OR SOFFIT	\$120.00	_____
3 ENCLOSED DECKS OR 3 SEASON ROOMS	\$190.00	_____
4 OVER 1000 SQ. FT.	\$0.08 SQ FT	_____

MODULAR AND MOBILE HOME BASE FEE

1 HOMES WITH PILLARS OR SLABS-FIRST 1000 SQ.FT.	\$120.00	_____
2 HOMES WITH BASEMENT AND CRAWL SPACE-FIRST 1000 SQ.FT.	\$190.00	_____
3 OVER 1000 SQ.FT.	\$0.16 SQ FT	_____
4 BASEMENT, CRAWL SPACE, ATTACHED GARAGE, DECKS AND 3 SEASON ROOMS	\$0.08 SQ FT	_____

ACCESSORY BUILDING

1 FIRST 1000 SQ. FT.	\$190.00	_____
2 OVER 1000 SQ. FT.	\$0.16 SQ FT	_____

MISCELLANEOUS

1 SHEDS 200 TO 400 SQ. FT.	\$60.00	_____
2 POOLS IN GROUND, ABOVE GROUND OR 2' DEEP	\$90.00	_____
3 RESIDENTIAL DEMOLITION PERMIT	\$75.00	_____
4 TOWER PERMITS	\$250.00	_____
5 RE-ROOF OVERLAY	\$40.00	_____
6 RE-ROOF TEAR OFF	\$80.00	_____
7 SIDING OR WINDOW AND DOOR REPLACEMENT	\$40.00	_____
8 PLAN REVIEW FEE TO 2500 SQ. FT.	\$50.00	_____
9 OVER 2500 SQ. FT. \$50.00/HOUR	\$100.00 MIN	_____
10 ADDITIONAL INSPECTIONS	\$50.00	_____
11 RED TAG FEE	\$50.00	_____
12 ZONING	\$50.00	_____

TOTAL _____

VII. FEE CLARIFICATIONS

ITEM #17, MOBILE HOME SITE:

When installing a site service in a park, the permit application must include the application & inspection fee, service, plus the number of park sites.
 When installing a HUD mobile home in a park, a permit must include the application & inspection fee and a feeder. This shall be done by a licensed electrical contractor.
 When installing a HUD mobile home or a pre-manufactured home on private property, a permit must include the application & inspection fee, service and feeder.

VIII. FEE CHART- Enter the number of items being installed; multiply by the unit price for total fee.

	ITEM DESCRIPTION	FEE	# OF ITEMS	TOTAL		ITEM DESCRIPTION	FEE	# OF ITEMS	TOTAL
1.	Application Fee	75.00	1	\$75.00	17.	Mobile Home Park Site	6.00		
2.	Service: Through 200 Amp	10.00			18.	Recreational Vehicle Park Site	4.00		
3.	Over 200 Amp thru 600 Amp	15.00			19.	Energy Retrofit - Temp. Control	45.00		
4.	Over 600 Amp thru 800 Amp	20.00			20.	K.V.A & H.P.	6.00		
5.	Over 800 Amp thru 1200 Amp	25.00				Units up to 20 K.V.A. or H.P.			
6.	Over 1200 Amp (GFI only)	50.00			21.	Units 21 to 50 K.V.A. or H.P.	10.00		
7.	Circuits	5.00			22.	Units 51 K.V.A. or H.P and over	12.00		
8.	Lighting Fixtures – per 25	6.00			23.	Fire Alarms – up to 10 devices(not residential smoke detectors)	50.00		
9.	Dishwasher, range hood, disposal (each)	5.00			24.	11 to 20 devices	100.00		
10	Furnace	5.00			25.	over 20 devices (each)	5.00		
11	Electrical Heating Units (baseboard)	4.00			26.	Data/Telecom/TV Outlets 1 to 19 devices	5.00 ea.		
12	Power Outlets (ranges, dryers, etc)	7.00			27.	20 to 300 devices	100.00		
13	Signs: Unit	10.00			28.	Over 300 devices	300.00		
14	Letter	15.00			29.	Conduit only, or Grounding only	45.00		
15	Neon – each 25 feet	20.00			30.	Inspection Fee	75.00	1	\$75.00
16	Feeders-Bus Ducts, etc. per 50'	\$6.00			31.	Additional Inspection Fee	50.00		
					32.	Certification Fee	10.00		
Total Fees:									
<p>Send Application to: Ron Bellaire 66751 Conrad Rd. Edwardsburg, MI 49112 Phone: 269-663-3429</p>					<p>Make check payable to: Fabius Township</p>				

IX. INSTRUCTIONS FOR COMPLETING APPLICATION

GENERAL: Electrical work shall not be started until the application for permit has been filed. All installations shall be in conformance with the MI Electrical Code. No work shall be concealed until it has been inspected. When ready for an inspection, call the Electrical Inspector, providing as much advance notice, as possible. The Inspector will need the job location, type of inspection and permit number.

EXPIRATION OF PERMIT: A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if the authorized work is not commenced within six months after issuance of the permit or if the authorized work is suspended or abandoned for a period of six months after the time of commencing the work. **A PERMIT WILL BE CANCELED WHEN NO INSPECTIONS ARE REQUESTED AND CONDUCTED WITHIN SIX MONTHS OF THE DATE OF ISSUANCE OR THE DATE OF A PREVIOUS INSPECTION. CANCELED PERMITS CANNOT BE REFUNDED OR REINSTATED.**

The Department will not discriminate against any individual or group because of race, sex, religion, age, national origin, marital status, handicap or political beliefs. Please note that inspection fee may be waived on certain type of work, namely temporary's, sewage pumps and services that may only require 1 inspection. Please call me before you complete form.

X. UTILITY SERVICE ORDER NUMBER

If this application includes work involving service equipment, include the serving utility work order number here.

VIII. Fee Chart – Enter the number of items being installed, multiply by the unit price for total fee.

	FEE	# ITEMS	TOTAL
1. Application Fee (non-refundable)	\$75.00	1	\$ 75.00
2. Residential Heating System (include duct & pipe) <i>New Building Only</i>	\$50.00		
3. Gas/Oil Burning Equipment (furnace) New and/or Conversion Units	\$30.00		
4. Residential Boiler	\$30.00		
5. Water Heater	\$5.00		
6. Flue/Vent Damper	\$5.00		
7. Solid Fuel Equip. (includes chimney)	\$30.00		
37. Gas Burning Fireplace	\$30.00		
8. Chimney, Factory built (installed separately)	\$25.00		
9. Solar; set of 3 panels (includes piping)	\$20.00		
10. Gas Piping; each opening – new installation (residential)	\$5.00		
11. Air Conditioning (includes split systems)	\$30.00		
12. Heat Pumps (complete residential)	\$30.00		
13. Bath & Kitchen exhaust	\$5.00		
Tanks			
14. Aboveground	\$20.00		
38. Aboveground Connection	\$20.00		
15. Underground	\$25.00		
39. Underground Connection	\$25.00		
16. Humidifiers	\$10.00		
Piping Systems – minimum \$25.00			
17. Piping	\$.05 / ft.		
40. Process piping	\$.05 / ft.		

	FEE	# ITEMS	TOTAL
18. Duct – minimum \$25.00	\$.10 / ft.		
19. Heat Pumps; Commercial (pipe not included)	\$20.00		
Air Handlers/Heat Wheels			
20. Under 10,000 CFM	\$20.00		
21. Over 10,000 CFM	\$60.00		
22. Commercial Hoods	\$15.00		
23. Heat Recovery Units	\$10.00		
24. V.A.V. Boxes	\$10.00		
25. Unit Ventilators	\$10.00		
26. Unit Heaters (terminal units)	\$15.00		
27. Fire Suppression/Protection – minimum \$20.00	\$.75 per head		
28. Evaporator Coils	\$30.00		
29. Refrigeration (split system)	\$30.00		
30. Chiller	\$30.00		
31. Cooling Towers	\$30.00		
32. Compressor	\$30.00		
Inspections			
33. Special/Safety Insp. (includes cert. fee)	\$75.00		
34. Additional Inspection	\$75.00		
35. Final Inspection	\$75.00		\$ 75.00
36. Certification Fee	\$30.00		

Total Fee (Must include the \$75.00 non-refundable application fee)

--

See VII. Fee Clarification, Item #2 on front
 See VII. Fee Clarification, Item #4 on front
 See VII. Fee Clarification, Items #14 and 15 on front

IX. Instructions for Completing Application

General: Mechanical work shall not be started until the application for permit has been filed with the Bureau of Construction Codes & Fire Safety. All installations shall be in conformance with the Michigan Mechanical Code. **No work shall be concealed until it has been inspected.** The telephone number for the inspector will be provided on the permit form. When ready for an inspection, call the inspector providing as much advance notice as possible. The inspector will need the **job location and permit number.**

Expiration of Permit: A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if the authorized work is not commenced within six months after issuance of the permit or if the authorized work is suspended or abandoned for a period of six months after the time of commencing the work. **A PERMIT WILL BE CLOSED WHEN NO INSPECTIONS ARE REQUESTED AND CONDUCTED WITHIN SIX MONTHS OF THE DATE OF ISSUANCE OR THE DATE OF A PREVIOUS INSPECTION. CLOSED PERMITS CANNOT BE REFUNDED OR REINSTATED.**

Where to Submit Application: The Bureau of Construction Codes & Fire Safety is responsible for code enforcement in units of government throughout the state which have no local program and for all state owned buildings. Permit applications for state issued permits should be sent to the address listed on the front of this application. If you are not sure whether a state permit or a local permit is appropriate, contact our office or your local building inspector. Questions regarding state issued permits may be directed to the Office of Management Services, Permit Section at 517-241-9313. Code questions may be directed to the Mechanical Division at 517-241-9325.

**Make Checks Payable to:
 FABIUS TOWNSHIP**

**Mail to:
 John Dobberteen
 400 S Monroe
 Sturgis, MI 49091**

The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability or political beliefs. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.

VIIb. Fee Clarification (continued)

Item #3, Fixtures, Floor Drains, Special Drains, and Water Connected Appliances Include:					
Water Closets	Sink (any description)	Slop Sink	Drinking Fountain	Floor Drain	Water Outlet or Connection to any Make-up Water Tank
Bathtub	Emergency Eye Wash	Bidet	Condensate Drain	Roof Drain	Water Outlet or Connection to Heating System
Lavatories	Emergency Shower	Cuspidor	Washing Machine	Grease Trap	Water Outlet or Connection to Filters
Shower Stall	Garbage Grinder	Dishwasher	Acid Waste Drain	Starch Trap	Connection to Sprinkler System (Irrigation)
Laundry Tray	Water Outlet Cooler	Refrigerator	Embalming Table	Plaster Trap	Water Connected Sterilizer
Urinal	Ice Making Machine	Water Heater	Bed Pan Washer	Water Softener	Water Connected Dental Chair
Autopsy	Water Connected Still				Water Connection to Carbonated Beverage Dispensers

Plus Any Other Fixture, Drain, or Water Connected Appliance Not Specifically Listed

Item #25, Domestic Water Treatment And Filtering Equipment: A license is not required for the installation of domestic water treatment and filtering equipment that requires modification to an existing cold water distribution supply and associated water piping in buildings if a permit is secured, required inspections performed, and the installation complies with the applicable code. If the enforcing agency determines a violation exists, it shall be corrected by the responsible installer. The permit application shall include the application fee, the number of water treatment devices recorded in item #25 for #5.00 each, and the appropriate water distribution pipe (system) size fee.

VIII. Fee Chart – Enter the number of items being installed, multiply by the unit price for total fee.

	FEE	# ITEMS	TOTAL		FEE	# ITEMS	TOTAL
1. Application Fee (non-refundable)	\$75.00	1	\$ 75.00	Watering Distributing Pipe (system)			
2. Mobile Home Park Site	\$5.00 each			14. 3/4" Water Distribution Pipe	\$5.00		
3. Fixtures, floor drains, special drains, water connected appliances	\$5.00 each			15. 1" Water Distribution Pipe	\$10.00		
4. Stacks (soil, waste, vent and conductor)	\$3.00 each			16. 1-1/4" Water Distribution Pipe	\$15.00		
5. Sewage ejectors, sumps	\$5.00 each			17. 1-1/2" Water Distribution Pipe	\$20.00		
6. Sub-soil drains	\$5.00 each			18. 2" Water Distribution Pipe	\$25.00		
Water Service				19. Over 2" Water Distribution Pipe	\$30.00		
7. Less than 2"	\$5.00			20. Reduced pressure zone back-flow preventer	\$5.00 each		
8. 2" to 6"	\$25.00			25. Domestic water treatment and filtering equipment only	\$5.00		
9. Over 6"	\$50.00			26. Medical Gas System	\$45.00		
10. Connection (bldg. drain – bldg. sewers)	\$5.00			Inspections			
Sewers (sanitary, storm, or combined)				21. Special/Safety Insp. (includes cert. fee)	\$75.00		
11. Less than 6"	\$5.00			22. Additional Inspection	\$75.00		
12. 6" & Over	\$25.00			23. Final Inspection	\$75.00		\$ 75.00
13. Manholes, Catch Basins	\$5.00 each			24. Certification Fee	\$30.00		

See VIIa. Fee Clarification, Item #2 on front
See VIIb. Fee Clarification, Item #25 above

Total Fee (Must include the \$75.00 non-refundable application fee)

IX. Instructions for Completing Application

General: Plumbing work shall not be started until the application for permit has been filed with the Bureau of Construction Codes & Fire Safety. All installations shall be in conformance with the Michigan Plumbing Code. **No work shall be concealed until it has been inspected.** The telephone number for the inspector will be provided on the permit form. When ready for an inspection, call the inspector providing as much advance notice as possible. The inspector will need the **job location and permit number.**

Expiration of Permit: A permit remains valid as long as work is progressing and inspections are requested and conducted. A permit shall become invalid if the authorized work is not commenced within six months after issuance of the permit or if the authorized work is suspended or abandoned for a period of six months after the time of commencing the work. **A PERMIT WILL BE CLOSED WHEN NO INSPECTIONS ARE REQUESTED AND CONDUCTED WITHIN SIX MONTHS OF THE DATE OF ISSUANCE OR THE DATE OF A PREVIOUS INSPECTION. CLOSED PERMITS CANNOT BE REFUNDED OR REINSTATED.**

Where to Submit Application: The Bureau of Construction Codes & Fire Safety is responsible for code enforcement in units of government throughout the state which have no local program and for all state owned buildings. Permit applications for state issued permits should be sent to the address on the front of this application. If you are not sure whether a state permit or a local permit is appropriate, contact our office or your local building inspector. Questions regarding state issued permits may be directed to the Office of Management Services, Permit Section at 517-241-9313. Code questions may be directed to the Plumbing Division at 517-241-9330.

**Make Checks Payable to:
FABIUS TOWNSHIP**

**Mail to:
John Dobberteen
400 S Monroe
Sturgis, MI 49091**

The Department of Labor & Economic Growth will not discriminate against any individual or group because of race, sex, religion, age, national origin, color, marital status, disability, or political beliefs. If you need help with reading, writing, hearing, etc., under the Americans with Disabilities Act, you may make your needs known to this agency.



Proposed
Public
Facing
Documents

The following are the majority of the documents that are used on a daily basis for each of the officials.

It should be noted that the building official uses a joint application with the zoning administrator that meets all of the requirements of the building permit application, but reduces the number of applications required to the customer, and reduces conflicting information



Colon Village

Michigan

Zoning Administration Office

Zoning Application

Douglas M. Kuhlman
Zoning Administrator
65656 Burg Rd
Sturgis, Mi. 49091
Telephone: (269)-651-3130
Fax: (269)-651-3131
municipalzoning@gmail.com

INSTRUCTIONS FOR COMPLETING ZONING/BUILDING APPLICATION

The following information must accompany each copy of this application form. Each supporting document must include the name and address of the applicant.

** IMPORTANT INFORMATION **

Incomplete applications will not be processed. Incomplete applications would include but not limited to drawings, measurements on both the application and drawings, property owner's signature, cross sections of structure, energy code requirements, property owners signatures and application fees.

It is highly recommended that you plan for your project well in advance. Other applications, or additional review time regarding your application may delay your anticipated start date of your project. Commencement of your project may not start until you have received your permits.

You must know where your property lines are located. Assumptions and adjacent property owner agreements are not acceptable. If accurate property lines cannot be established, a survey must be completed. If there is a question as to any of the property lines, the Zoning Administrator and/or the building official may request a survey to verify property lines prior to processing an application.

There are many areas in the county that have what is known as plat or platted sub-divisions. Platted areas sometimes have deed restrictions associated with that area or lot. The municipality is not obligated to confirm the presence of any such regulations, and is not obligated nor has any authority to enforce such regulations.

- A. All appropriate fees must be included with the Zoning Application. The building official will advise you of the building permit fees at the time of issuance of such permit.
- B. Proof of Property Ownership/Interest/Other Party Information: Proof of ownership of the property such as a warranty deed, land contract or other evidence of interest in the property, and the names, addresses, phone numbers of all other persons or entities having legal or equitable interest in the property including written authorization by the landowner for a person to act on behalf of the landowner (if applicable). If property is under land contract, the deed holder will be required to sign such application.
- C. Legal Description: A legal description of the property.
- D. Potable Water/Sewage Disposal Approval: **Well and septic permits** obtained from the St. Joseph County Health Department, 269-273-2161. **NOTE: All building permit applications will require a change of use of existing sewage permit or septic system construction permit with the exception of free standing outbuildings on skids or decks, per the St. Joseph County Environmental Health Code. (Sewer Permit in sewer district obtained from plumbing inspector or appropriate sewer authority)**

- E. Driveway Permit: Permits/evidence demonstrating Road Commission approval for driveway location (if new proposed driveway along a public road). [St. Joseph County Road Commission \(269\)-467-6393](#).
- F. Deed Restrictions: Copy of any deed restrictions on the property. [St. Joseph County Register of Deeds Office \(269\)-467-5500](#).
- G. Project Plan: Drawings of proposed project. This plan must include dimensions of all structures and dimensions from structures to other structures and property lines, and square footage of the proposed project. The grid on page 4 may be used, or other sets of plans may be submitted.
- H. Flood Hazard Zone: If any portion of your parcel is located in a F.E.M.A. Flood Hazard Zone, proper clearance authorization must first be approved by the authorizing agency. [Michigan Department of Environmental Quality \(269\)-567-3564](#).
- I. Address assigned and posted on the parcel in accordance to the St. Joseph County Address Ordinance. A copy of the rural identification card from the St. Joseph County Land Resource Centre must be included with the application. [St. Joseph County Land Resource Centre \(269\)-467-5576](#).
- J. Soil Erosion Permit: A soil erosion permit for all projects located with 500 feet of a lake, river, stream, watercourse or wetland must be obtained and submitted as part of the application. [St. Joseph County Drain Commissioner \(269\)-467-5600](#).
- K. Building Plans: Two sets of building plans must be submitted. If submitting electronically, and original set must also be mailed. Such plans must include the following drawings:
- ✓ Foundation.
 - ✓ All elevations. (Side view)
 - ✓ Floor plan.
 - ✓ Cross Section of on wall from foot to peak.
 - ✓ Truss diagrams as required.
 - ✓ For new construction, a Michigan Uniform Energy code approved plan is required.
- L. Energy Code Calculations: State law requires a minimum level of energy efficiency.
- M. Plan review: For electrical, plumbing and mechanical, required in all commercial and in residential over 3500 Sq. Ft. In addition Fire code required for all but single family single unit residential.
- N. Multi- Family Use or Business: Use must be inspected by the fire chief.
- O. Electrical, Mechanical, Plumbing, Sewer, Soil Erosion and all other application must be submitted to the respective department for approval.
- P. Zoning and Building Permits: Zoning Permits are valid for 12 months after issuance. Building Permits are valid for 6 months. An extension may be granted by the building inspector with a written request and a justifiable cause. (To be determined by the building inspector)

- Q. Utilities, Easements and Deed Restrictions: The municipality and/or anyone acting on behalf of the municipality will not be responsible for the location of any power lines, gas lines, sewer lines, water lines or any other essential service provided. In addition the municipality and/or anyone acting on behalf of the municipality will not be responsible for the verification and/or location of any utility easements, property easements or deed restrictions. **Almost all utility providers along with other service providers have clearance areas from their lines or equipment.**
- R. Inspection Types: The following inspections are required:

<u>BUILDING</u>	<u>ELECTRICAL</u>	<u>MECHANICAL, PLUMBING AND SEWER</u>
Foundation	Expired	Expired
Back fill	Rejected	Rejected
Radon	Final	Final
Rough Frame		
Insulation		
Other		
Final		

- S. Inspections: All inspections require a minimum of a 24 hour notice.
- T. Copies: Please do not submit 2 sided copies.

IMPORTANT INFORMATION

Please be aware of the following State Law:

- Structures (such as houses, barns, and sheds) may not be burned for the purpose of demolition. Air quality regulations allow structures to be intentionally burned for the purpose of fire department training ONLY. However, there are specific guidelines developed by the National Fire Protection Association (NFPA) that fire departments must follow when conducting a training exercise. A guidance document for fire departments conducting fire suppression training can be found on the DEQ's Open Burning web site www.michigan.gov/deq (click on "Air" then "Open Burning Information").
- Construction and Demolition Waste Construction and demolition (C & D) waste is waste building material, packaging, and rubble that results from construction, remodeling, repair, and demolition operations on houses, commercial or industrial buildings, and other structures. C & D waste may be generated at many sources including households, commercial establishments, and industrial facilities. The open burning of any C & D waste is prohibited, even if the burning is to be conducted on the person's own property. A person may NOT take C & D waste to another location (such as a household) to be burned. C & D waste should be reused, recycled, or disposed of in a landfill that accepts C & D waste (see the "Open Burning Alternatives" section of this guide)
- It is also prohibited to bury such materials on a property. Materials must be disposed of in a licensed landfill qualified to handle such waste.

THE FOLLOWING INSTRUCTIONS ARE FOR NON-RESIDENTIAL PROJECTS ONLY

SUPPORTING DOCUMENTS: The following must accompany each copy of this application form.

Each supporting document must include the name and address of the applicant.

1. **Narrative Description:** A detailed narrative description of the proposed activity or construction including what is to be constructed and for what purpose, the nature of any repairs or alterations, number of employees, retail sales floor area, basis for number of parking spaces proposed, manner of sewage/refuse disposal, nature of services to be provided, nature of products for sale or manufacture, etc.
2. **Site Plan Drawing:** A detailed drawing indicating any existing structures, and any new proposed structures. The site plan shall contain the following information:
 - A. The date, north arrow and scale. The scale shall not be less than one (1) inch equals twenty (20) feet for property under three (3) acres and at least one (1) inch equals one hundred (100) feet for those three (3) acres or more
 - B. All lot and/or property lines are to be shown and dimensioned, including building setback lines on corner lots.
 - C. The location and height of all existing and proposed structures on and within one hundred (100) feet of the subject property.
 - D. The location and dimensions of all existing and proposed drives, sidewalks, curb openings, signs, exterior lighting, park areas (show dimensions of a typical parking space), unloading areas and recreation areas.
 - E. The location and the pavement and right-of-way width of all abutting roads, streets or alleys.
 - F. For those buildings, uses or facilities which will be used or which will be available for use by the public for the purposes of education, employment, housing (other than a privately owned one- or two-family dwelling), transportation or recreation and for the purchase, rental or acquisition of goods and services, the name and firm address of the professional individual responsible for the preparation of the site plan (including imprint of his professional seal).
 - G. The name and address of the property owner or petitioner.
 - H. The location of all rubbish receptacles and landscaping and the location, height and type of fences and walls.
 - I. A summary schedule should be affixed, if applicable, which gives the following data:
 1. The number of dwelling units proposed, to include the number, size and location (by code if necessary) of one- bedroom units two-bedroom units, mobile home sites, etc.
 2. The residential area of the site in acres and in square feet, including breakdowns for any sub-areas or staging areas (excluding all existing rights-of-way).
 - J. Size and location of all surface drainage facilities.
 - K. Existing and proposed contours shall be shown on all site plans (two (2) foot intervals minimum) as may be required by the Township, or Village.
 - L. For multiple-family development site plans, there shall be shown typical elevation views of the front and side of each type or building proposed, as well as typical dimensioned floor plans for each type of dwelling unit.
3. **Site Plan/Statement of Analysis:** Site plan and supporting information (including legal description) as required. In addition, if the proposed use is classified as a special land use according to the District in which it is to be located, a statement of analysis must also be included addressing the estimated population holding capacity of any proposed residential use, the anticipated impact upon community facilities (such as schools and infrastructure), the anticipated new traffic generation including available roadway capacities and impact upon neighboring land uses and streets.
4. **Proof of Property Ownership/Interest/Other Party Information:** Proof of ownership of the property such as a warranty deed, land contract or other evidence of interest in the property, and the names, addresses, phone numbers of all other persons or entities having legal or equitable interest in the property including written authorization by the landowner for a person to act on behalf of the landowner (if applicable).
5. **Deed Restrictions:** Copy of any existing and proposed deed restrictions on the property.
6. **Utilities/Access:** Permits/evidence demonstrating Health Department approval of water supply and sewage disposal system, and Road Commission approval for new public roads or proposed driveway/private road intersections with existing public roads (as applicable). Address card from the St. Joseph County Land Resource Centre

Village of Colon

Fee Schedule

THE FOLLOWING COST SCHEDULE WILL APPLY

Zoning Application (No building permit required)	\$25.00
Zoning Application (Building Permit Required)	\$50.00
Agricultural Exemption Letter of Understanding (To be filed on deed)	\$25.00
Re-Zoning Request	\$250.00
Ordinance Amendment Request	\$250.00
Amend Future Land Use Map	\$250.00
Special Exemption Permit	\$250.00
Special Meetings of Zoning Board for any purpose	\$250.00
Zoning Board request for Variance	\$250.00
Special Meetings of Planning Commission for any purpose	\$375.00
Home Occupation Original Application	\$50.00
Home Occupation Annual Renewal	\$20.00
Outdoor Festival Permit (Annually)	N/A
Publishing /Mailing/Administration Fees	\$160.00
Land Division (Parent + First Split)	\$100.00
Land Division Per Split (Same Application)	\$50.00
Copy of Master Plan (Paper Copy)	\$75.00
Copy of Master Plan (CD Copy)	\$20.00
Copy of Zoning Ordinance (Paper Copy)	\$75.00
Copy of Zoning Ordinance (CD Version)	\$20.00
FOIA Copies per page	\$0.10
FOIA Labor Charges per Hour	\$12.00

The Zoning Administrator may require the applicant to deposit an Escrow Fee with the township at any time as permitted by the Mendon Township Escrow Fee Resolution

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Colon Village

Zoning and Building Contact List

The following are the various contacts for your zoning and building needs.

ZONING ADMINISTRATOR

Douglas Kuhlman
65656 Burg Road
Sturgis, Mi. 49091
Telephone: 269-651-3130
Fax: 269-651-3131
Email: municipalzoning@gmail.com

BUILDING OFFICIAL

Randy Schmeling
10884 Harder Rd
Three Rivers, Mi. 49093
Telephone: 269-625-3260
Email: rschmeling1@hotmail.com

PLUMBING OFFICIAL

State of Michigan

ELECTRICIAL OFFICIAL

Ron Bellaire
66751 Conrad Rd
Edwardsburg, Mi. 49112
Telephone 269-663-3429
Email: ronb700@aol.com

MECHANICAL OFFICIAL

John Dobberteen
400 S. Monroe St.
Sturgis, Mi. 49091
Telephone: 269-651-4567
Cell: 269-625-7648
Fax: 269-503-7354
Email: dobberteeninc@gmail.com

ASSESSOR/LAND DIVISION OFFICER

Ann Richmond
Tel: 269-870-4587

HELATH DEPARTMENT

Branch, Hillsdale, St. Joseph County
1110 E. Hill St
Three Rivers, Mi. 49093
Telephone: 269-273-2161

SOIL EROSION

Jeffrey Wenzel
Telephone: 269-467-5600

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VILLAGE OF COLON

St. Joseph County, Mi.

ZONING/BUILDING PERMIT - PLOT- SITE PLAN APPLICATION
 (for single and two-family dwellings including related accessory uses/structures, and temporary dwellings and uses)

Important Notice to Applicants: A minimum of 1 copy of this completed application, along with the same number of copies of supporting documents described below, must be submitted to the Zoning Administrator. The application must be completed in full. If additional space is needed, number and attach additional sheets. Approval of this application is required before a Zoning Permit can be issued. The excavation for or erection of a building or structure prior to the issuance of a Zoning Permit is a violation of the Zoning Ordinance. References to "Section" and "Article" refer to the Zoning Ordinance. They are provided to assist the applicant. The references highlight parts of the Ordinance that may be applicable but do not necessarily identify all parts that apply. Authority: 1972 PA 230. Completion: Mandatory to obtain permit. Penalty: Permit cannot be issued.

CHECK TYPE OF REQUEST

RESIDENTIAL PLOT PLAN

SITE PLAN REVIEW

CHANGE OF USE

APPLICANT'S NAME(S)		ADDRESS	CITY	STATE	ZIP CODE
LAST NAME	FIRST				
TELEPHONE #	CELLULAR #	FAX #	EMAIL ADDRESS		

PROPERTY OWNERS NAME		ADDRESS	CITY	STATE	ZIP CODE
LAST NAME	FIRST				
TELEPHONE #	CELLULAR #	FAX #	EMAIL ADDRESS		

ARCHITECT/ENGINEERS NAME		ADDRESS	CITY	STATE	ZIP CODE
LAST NAME	FIRST				
TELEPHONE #	CELLULAR #	FAX #	EMAIL ADDRESS		
LICENSE #	EXPIRATION DATE				

CONTRACTORS NAME		ADDRESS	CITY	STATE	ZIP CODE
LAST NAME	FIRST				
TELEPHONE #	CELLULAR #	FAX #	EMAIL ADDRESS		
LICENSE #	EXPIRATION DATE				

FEDERAL EMPLOYER ID NUMBER OR REASON FOR EXEMPTION

WORKERS COMPENSATION CARRIER OR REASON FOR EXEMPTION

MESC EMPLOYER NUMBER OR REASON FOR EXEMPTION

APPLICANT'S INTEREST in PROPERTY (check one): Owner Lessee Buy Option
 Other/Specify: _____

PROPERTY INFORMATION WHERE CONSTRUCTION IS TO TAKE PLACE:

Street Address: _____ Tax Parcel #: _____

Zoning District: _____ Present Use: _____

Is Property in a (check if "yes"): platted or condominium subdivision? Subd. Name: _____

Are there any deed restrictions on the parcel? (Check one): Yes No If yes, include copy.

TYPE OF IMPROVEMENT AND PLAN REVIEW: (check all that apply)

	NEW	ADDITION/ALTERATION		
Single Family Dwelling	<input type="checkbox"/>	<input type="checkbox"/>		
Two Family Dwelling	<input type="checkbox"/>	<input type="checkbox"/>		
Mobile Home Set-Up	<input type="checkbox"/>	<input type="checkbox"/>		
Pre Manufacture	<input type="checkbox"/>	<input type="checkbox"/>		
Commercial/Industrial **	<input type="checkbox"/>	<input type="checkbox"/>		
Church/Religion **	<input type="checkbox"/>	<input type="checkbox"/>		
School/Library/Educational **	<input type="checkbox"/>	<input type="checkbox"/>		
Multiple Family Dwelling/Hotel/Motel **	<input type="checkbox"/>	<input type="checkbox"/>	Number of Units	
Swimming Pool	<input type="checkbox"/>	<input type="checkbox"/>		
Private Garage	<input type="checkbox"/>	<input type="checkbox"/>	Attached <input type="checkbox"/>	De-Attached <input type="checkbox"/>
Pole Barn	<input type="checkbox"/>	<input type="checkbox"/>	Agricultural Use <input type="checkbox"/>	
Shed	<input type="checkbox"/>	<input type="checkbox"/>		
Temporary Dwelling	<input type="checkbox"/>	<input type="checkbox"/>		
Other Temporary Use	<input type="checkbox"/>	<input type="checkbox"/>		
Home Occupation	<input type="checkbox"/>	<input type="checkbox"/>		
Privacy Fence	<input type="checkbox"/>	<input type="checkbox"/>		
Foundation Only	<input type="checkbox"/>	<input type="checkbox"/>		
Moving of building(s)	<input type="checkbox"/>	<input type="checkbox"/>		
Demolition	<input type="checkbox"/>	<input type="checkbox"/>		
Sign	<input type="checkbox"/>	<input type="checkbox"/>		
Other	<input type="checkbox"/>	<input type="checkbox"/>		

Upon submission for a building permit, floor plans which include elevations and a wall cross section **must** be included. If the application is for new home construction, energy compliance calculations **must** be submitted. If a structure is being constructed for Agricultural Use, a Letter of Understanding **must** be signed by the property owner prior to a zoning permit being issued allowing for a building permit exemption.

If one of the boxes in this section indicated by ** is checked plans and specifications are required for all other building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to 1980 PA 299 and shall bear the architect's or engineer's seal and signature. Plans are not required for alterations and repair work if determined by the building official to be minor in nature.

PROPOSED CONSTRUCTION AND USE OF LAND OR CHANGE OF USE

Describe in detail the proposed alterations, repairs, and/or additions or demolitions to any new and/or existing principal and/or accessory buildings and include the proposed use of such building(s) if applicable.

CHARACTERISTICS OF BUILDING										
Principal Type of Frame										
<input type="checkbox"/>	Masonry, Wall bearing	<input type="checkbox"/>	Wood Frame	<input type="checkbox"/>	Structural Steel	<input type="checkbox"/>	Reinforced Concrete	<input type="checkbox"/>	Other	
Principal Type of Heating Fuel										
<input type="checkbox"/>	Gas	<input type="checkbox"/>	Oil	<input type="checkbox"/>	Electricity	<input type="checkbox"/>	Wood/Coal	<input type="checkbox"/>	Other	
Type of Sewage Disposal										
<input type="checkbox"/>	Public or Private Company	<input type="checkbox"/>	Septic System							
Type of Water Supply										
<input type="checkbox"/>	Public or Private Company	<input type="checkbox"/>	Private Well or Cistern							
Type of Mechanical										
	Will there Be Air Conditioning?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No	Will there be fire suppression?	<input type="checkbox"/>	Yes	<input type="checkbox"/>	No

Have all of the setback requirements been met for the water supply/water well system? (Check one): Yes No

Have all of the setback requirements been met for the sewer system/septic system? (Check one): Yes No

Have all of the setback requirements been met for the electrical supply lines? (Check one): Yes No

Have all of the setback requirements been met for the gas lines/propane supply systems? (Check one): Yes No

Are there any utility easements or other easements on the parcel? (Check one): Yes No

If yes, describe _____

Have you surveyed your property to establish property lines for this project (Check one): Yes No

If no, describe how you are establishing your property lines.

EXISTING STRUCTURES AND BUILDINGS ON THE PARCEL OR LOT

List and describe all buildings and structures that are currently on the parcel or lot. Such buildings or structures would include a house, garage, pole barn, shed, outdoor wood boilers, generators privacy fences etc.

BUILDING CHARACTERISTICS:

The proposed building characteristics of new constructions are as follows:

Building #1 consisting of _____

Feet	Required	Description	Feet	Required	Description
		From front lot line			From right side lot line
		From rear lot line			From left side lot line
		Height of existing principal structure			Height of proposed building/structure
		Proposed structure length			Proposed structure width
		Number of stories			Agricultural Use Y = Yes No = No
		Square feet gross floor area			From nearest structure
		Square feet of foundation			Total square footage of parcel
P= Principal Use A=Accessory Use			From lake, stream, shore, pond, waterway		
Floor Area Sq. Footage		Existing		New	Alterations
Basement					
First Floor					
Second Floor					
Third Floor					

To be completed for nonresidential requests

Number of Off Street Parking Spaces							
Enclosed			Outdoors		Handicap Enclosed		Handicap Outdoors

Grey Area for Official Use Only

ESTIMATED TOTAL PROJECT COST (Required Information)	\$	Required Information
---	----	----------------------

Building #2 consisting of _____

Feet	Required	Description	Feet	Required	Description
		From front lot line			From right side lot line
		From rear lot line			From left side lot line
		Height of existing principal structure			Height of proposed building/structure
		Proposed structure length			Proposed structure width
		Number of stories			Agricultural Use Y = Yes N=No
		Square feet gross floor area			From nearest structure
		Square feet of foundation			Total square footage of parcel
P= Principal Use A=Accessory Use			From lake, stream, shore, pond, waterway		
Floor Area Sq. Footage		Existing		New	Alterations
Basement					
First Floor					
Second Floor					
Third Floor					

To be completed for nonresidential requests

Number of Off Street Parking Spaces							
Enclosed			Outdoors		Handicap Enclosed		Handicap Outdoors

Grey Area for Official Use Only

ESTIMATED TOTAL PROJECT COST (Required Information)	\$	Required Information
---	----	----------------------

AFFIDAVIT: I (we) the undersigned affirm that the foregoing answers, statements, and information, and any attachments, are in all respects true and correct to the best of my (our) knowledge and belief. I (we) the undersigned understand that the Zoning Permit applied for, if granted, is issued on the representations made herein and that any Zoning Permit or Building Permit subsequently issued may be revoked because of any breach of representations or conditions, or because of the lack of continued conformance with zoning ordinance requirements. I understand that incomplete applications which also includes application fees will not be processed. Incomplete applications will be closed after 45 days, applicant will have to re-submit including all applicable fees.

I (we) the undersigned fully understand that acceptance and/or approval of this application for zoning and/or building permit(s) does not confer approval by any other municipal entity. We fully understand that the use of a septic system or other on-site sewage disposal system and/or preparation for the use of such system, is the full responsibility of the applicant. Applicant is advised to contact their local District Health Department for a determination whether a "change in use" permit is required.

I (we) the undersigned authorize the zoning administrator, building official, inspector, Health Department and any other person authorized by the Zoning Administrator or Building Official to enter onto the property subject to this permit, and into any structure to be constructed or presently under construction hereon for the purpose of conducting inspections for compliance. Entry into presently occupied dwelling units that are the subject of this application/construction (i.e. expansion/modification of residential unit) shall be permitted as required under arrangement with the individual inspection and/or officials requiring entry. Failure by the undersigned to permit such inspections shall result in the Zoning Permit Application and/or building permit being denied, or immediate termination of the Zoning Permit and/or building permit that has been issued.

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 as his /her authorized agent, and we agree to conform to all applicable laws of the State of Michigan. 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 understand that the Zoning Administrator and/or Building Official may require that a survey be performed to verify information regarding the property and/or buildings and /or structures located on the parcel.

I understand that incomplete applications, or applications that have been denied, will only be held open for 45 days. After 45 days a new application will have to be submitted along with new application fees.

Applicant/Agent Signature(s) Date
Before signing, please read below

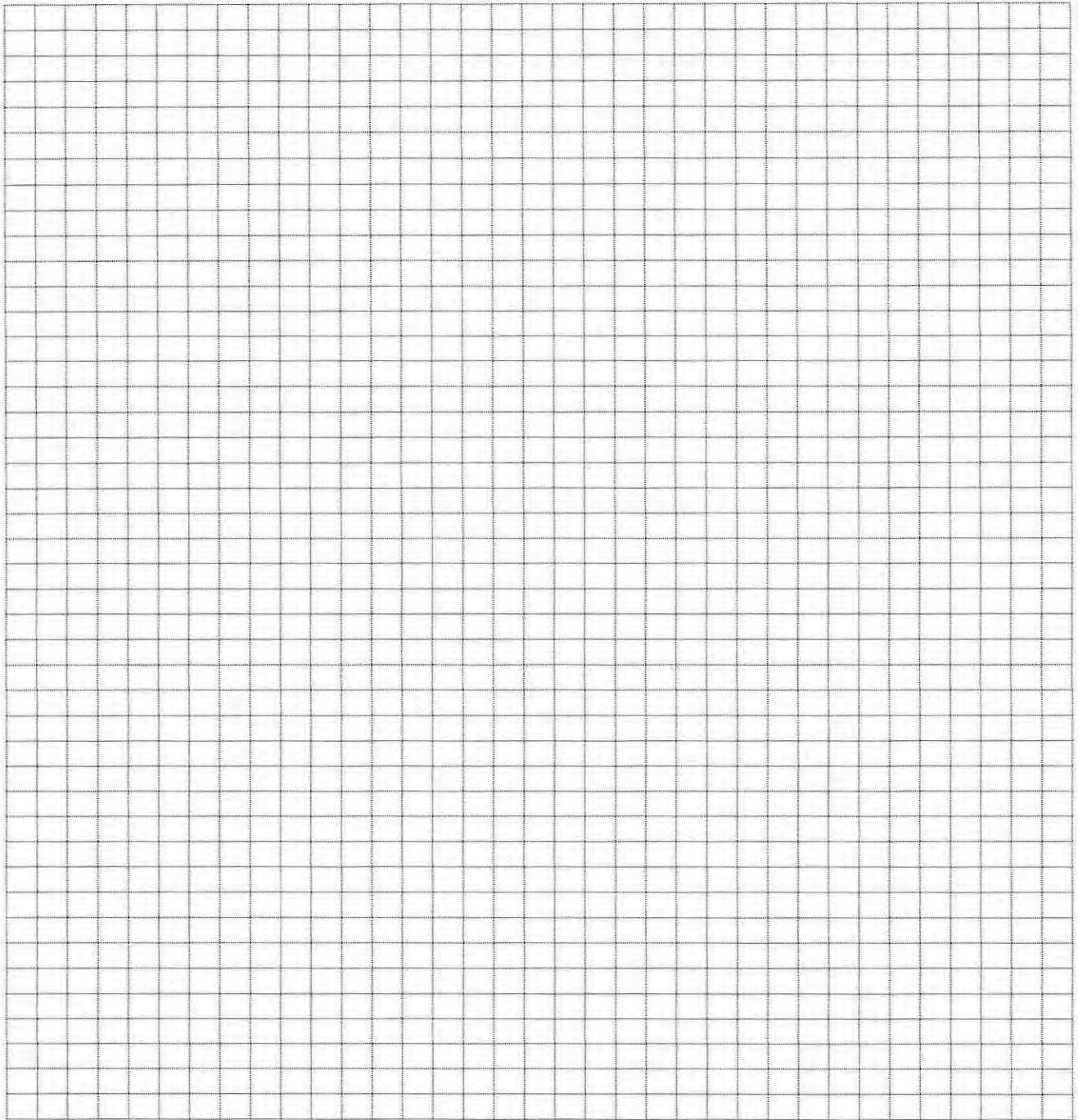
Property Owner's(s) Signature(s) Date
(if different than applicant)

READ BEFORE SIGNING

As agent of the above-referenced owner of the property, I assert that I have authority to sign this document on behalf of the owner and to bind such owner to the terms and conditions set forth herein as if the owner signed himself. I understand that signing this document on behalf of the owner without the legal authority to do so constitutes fraud and/or perjury and that I may be prosecuted for the same".

A person shall not be recognized as the agent, attorney, engineer, architect, or builder of another person unless the person seeking recognition files with the enforcing agency a written instrument, which shall be an architectural, engineering, or construction contract, power of attorney, or letter of authorization signed by that other person designating the person seeking recognition as the agent, attorney, architect, engineer, or builder and, in case of a residential builder or maintenance and alteration contractor, architect, or engineer, setting forth the license number of the person seeking recognition and the expiration date of the license.

Place the NORTH ARROW in the CORRECT DIRECTION Here: W ^



The plot plan must be completed in its entirety prior to any review. This grid paper may be used or a separate plan attached. Required information includes, but is not limited to:

1. The location, shape, area and dimension of the lot.
2. The location, dimensions, and height of any and all existing and/or proposed structures and buildings to be erected, altered, or moved on the lot. Measurements from all property lines and other structures shall be included.
3. All streets that adjoin the property.
4. All front, side and rear yard setback dimensions, and where such dimensions are measured from.
5. Location of any existing and/or proposed septic system, drain field and well easements or right of ways.
6. Configuration of existing and/or proposed driveways.
7. Location of any lakes, streams, ponds or wetlands, on or adjoining the property.
8. Location of well, septic and drain field must be on the drawing along with measurements from structures.

Colon Village
St. Joseph County, Michigan

ZONING PERMIT

Date:

-
-
-

SF - Single Family Residence

Dear

This Zoning Permit is issued to certify that official approval has been granted by the Colon Village Zoning Administrator on your Zoning Permit Application, Application #COZA1700000 for Tax Parcel 75-041-000-000-00 at address 125 Main St.. The permit is for a 1900 Sq Ft principal Dwelling construction project. This permit certifies that the approved application is in compliance with the Colon Village Zoning Ordinance, and that authority is hereby granted to the owner of said property to make changes to the property as detailed in the application in compliance with all conditions that may have been placed on such approval. Your application was:

- | | |
|--|--|
| <input type="checkbox"/> Approved as submitted | <input type="checkbox"/> Approved with conditions |
| Building Permit Required | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Agricultural Use | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Verify FEMA Flood Hazard Zone | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Soil Erosion Permit Required | <input type="checkbox"/> Yes <input type="checkbox"/> No |

Special Conditions:

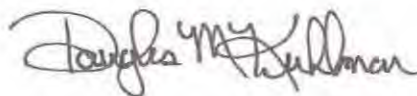
This Zoning Permit authorizes all construction activities, land uses, building setbacks, parking locations, and all other site development features in compliance with the approved Plot Plan/Site Plan, dated and/or revised through February 2017 and all conditions made part of such approval.

The erection of a building or structure, or excavation for any building or structure, prior to the issuance of a Building Permit is a violation of the Colon Village Zoning Ordinance. A Building Permit will not be issued until a Zoning Permit has been issued and all requirements of all applicable building codes have been met. This Zoning Permit does not signify compliance with local, county or other building codes, or with the requirements of the St. Joseph County Health Department.

This instrument does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of conforming to all applicable federal, state, and local statutes and acquiring all other necessary permits from such authorities. This permit expires 12 months from the date of issuance.

Please call if you have any questions.

Sincerely,



Douglas Kuhlman, Zoning Administrator
65656 Burg Road, Sturgis, Mi. 49091
Telephone: 269-651-3130 Fax: 269-651-3131

C.I. MIS. JUV. State of Michigan Uniform Law Citation Ticket No. CO Victim Involved

Incident No. CO Dept. No. Local Use/Arrest No. Offense Code

The People of: the State of Michigan Township City Village County BAC OF: Colon of

THE UNDERSIGNED SAYS THAT ON: Month Day Year At approximately A.M. P.M. Date of Birth Month Day Year

State Oper./Chauff. CDL Driver License Number SSN (last 4 digits)

Race Sex Height Weight Hair Eyes Occupation/Employer Name (First, Middle, Last) Street City State Zip Code

Vehicle Plate No. Year State Vehicle Description (Year, Make, Color) Veh. Type THE PERSON NAMED ABOVE, in violation of § Local Ordinance State Law Administrative Rule UPON

AT OR NEAR WITHIN CITY VILLAGE TOWNSHIP OF Colon COUNTY OF Cass

DID THE FOLLOWING Nuisance Ordinance Building Code Speeding MPH in a MPH Zone (formerly MPH Zone) Licenses Ordinance Plumbing Code Electrical Code Disobey Traffic Signal Zoning Ordinance Mechanical Code Disobey Stop Sign Sign, Lighting & Display Ordinance Animal & Fowl Ordinance Defective Equipment No Operator's License in Possession Other

Describe/Remarks:

Compliance Order Requested Fine \$

CHECK IF APPROPRIATE: Vehicle Impounded Traffic Crash Damage to Property Injury Death Person in Active Military Service Yes No Local Court Bond \$ License Posted in Lieu of Bond Appearance Certificate None

SEE DATE BELOW. SEE BACK OF CITATION FOR EXPLANATION AND INSTRUCTIONS Appearance Date on or before Hearing Date (if applicable) on Contact Court Juvenile Traffic Misd. (Court will Notify) Formal Hearing Required. (Court will Notify)

In the 4th District Court of Cass County Court Address & Phone Number 60296 M-62 Telephone: 269-445-4430 Cassopolis, Mi. 49031

I personally served a copy of the complaint upon the defendant. I served a copy of the complaint upon the owner/occupant by posting and by sending a copy to the owner by first class mail at the last known address. I declare under the penalties of perjury that the statements above are true to the best of my information, knowledge, and belief.

Complainant's Signature and receipt if applicable Month Day Year

Officer's Name (printed) Officer's ID No.

Agency ORI MI- Agency Name Colon Village

Violation for Which Court May Waive Fine/Costs: Correct the violation. Present the citation to any law enforcement officer to certify the correction. Mail or bring the citation to the court clerk at the address shown above before your appearance or hearing date.

OFFICER CERTIFICATION: I certify that the violation described above has been corrected. Officer's Signature Officer's ID No. Date

Agency ORI Agency Name

UC-01b (rev. 6/05)

COURT COPY

CIVIL INFRACTION - READ CAREFULLY

WARNING: If you fail to appear by the date specified on the front of this citation or at the date and time scheduled for hearing, a default judgment will be entered against you. A person who fails to answer a citation is guilty of a misdemeanor. Timely application to the court for a hearing or return of the citation with an admission of responsibility and with full payment of applicable civil fines and costs constitute a timely appearance.

If this is a traffic violation and you fail to answer this citation or a notice to appear, the Secretary of State will suspend your driver license.

If this is a state civil infraction and you fail to answer this citation or a notice to appear, the Secretary of State will not issue or renew your driver license.

If this is a municipal civil infraction and you fail to answer this citation or a notice to appear in court or to comply with a judgment, the municipal agency that alleged the violation and the prosecutor may try to collect the judgment through civil post judgment collection procedures.

You are alleged to be responsible for a civil infraction. You must either:

- Admit Responsibility (including full payment); or
- Admit Responsibility with Explanation; or
- Deny Responsibility

ADMIT RESPONSIBILITY by mail, in person, or by representation.

BY MAIL. Contact the court indicated on the front of this citation and obtain the amount of your fine and costs. Sign below. Mail this copy with your certified check or money order to the court clerk, on or before the date specified on the front of this citation.

IN PERSON OR BY REPRESENTATION. Sign below. You or your representative must bring this copy to the court clerk at the address indicated on the front of this citation on or before the date specified on the front of this citation.

I enter my appearance, waive my right to a hearing, and I admit responsibility for the civil infraction alleged on the front of this citation.

Signature _____ Date _____

ADMIT RESPONSIBILITY WITH EXPLANATION. You may admit responsibility with explanation of the circumstances of the violation which the court may consider in determining the amount of your fine and costs. You may admit responsibility with explanation by mail, in person, or by representation.

IN PERSON OR BY REPRESENTATION. Contact the court on or before the date specified on the front of this citation in person, by mail, by telephone, or by representation to obtain a time to appear in court to give your explanation.

BY MAIL. Sign below. Mail this copy and your explanation on a separate sheet of paper to the court clerk at the address indicated on or before the date specified on the front of this citation. The court will mail you its determination and, if applicable, order any fine and costs to be paid by you.

I enter my appearance by mail, waive my right to a hearing, and admit responsibility with explanation for the civil infraction alleged on the front of this citation.

Signature _____ Date _____

DENY RESPONSIBILITY. To deny responsibility you must either:

1. Appear in person in court for an informal hearing before a magistrate, referee, or judge; neither side may have an attorney, OR
2. Appear in court for a formal hearing before a judge. An attorney will be with the officer. You may be represented by an attorney.

If a hearing date is specified on the front of this citation, you must appear on that date for an informal hearing unless you contact the court at least 10 days before that date by mail, telephone, representation, or in person to request a formal hearing.

If an appearance date is specified on the front of this citation, you must contact the court on or before that date by mail, telephone, representation, or in person to obtain a hearing date. The court will schedule an informal hearing unless you request a formal hearing. A municipal agency may also request a formal hearing.

Notify the court and the Secretary of State immediately if you change your address.

PLEASE NOTE: If you do not understand these instructions, or if you have questions about what you must do, contact the court in person or by telephone on or before the appearance date or hearing date specified on the front of this citation.

CIVIL INFRACTION COPY

BUILDING PERMIT

DATE _____ PERMIT NO. _____

APPLICANT _____ ADDRESS _____ (NO.) (STREET) (CONTR'S LICENSE)

PERMIT TO _____ (TYPE OF IMPROVEMENT) (NO.) STORY _____ (PROPOSED USE) NUMBER OF DWELLING UNITS _____

AT (LOCATION) _____ ZONING DISTRICT _____
(NO.) STREET)
BETWEEN _____ AND _____
(CROSS STREET) (CROSS STREET)

SUBDIVISION _____ LOT _____ BLOCK _____ LOT SIZE _____

BUILDING IS TO BE _____ FT. WIDE BY _____ FT. LONG BY _____ FT. IN HEIGHT AND SHALL CONFORM IN CONSTRUCTION

TO TYPE _____ USE GROUP _____ BASEMENT WALLS OR FOUNDATION _____ (TYPE)

REMARKS: _____

AREA OR VOLUME _____ ESTIMATED COST \$ _____ PERMIT FEE \$ _____
(CUBIC / SQUARE FEET)

OWNER _____ BUILDING DEPT. BY _____
ADDRESS _____

FORM NO. DC-107-2003

I hereby certify that the proposed work is authorized by the owner of record and I have been authorized by the owner to make this application as his/her authorized agent.

SIGNATURE OF AGENT _____

ADDRESS _____
(NUMBER) (STREET) (CITY)

APPROVED BY _____ TITLE _____

DATE _____

YOUR SPECIAL ATTENTION is called to the following:

This permit is granted on the express condition that the said construction shall, in all respects, conform to the Ordinances of this jurisdiction including the Zoning Ordinance, regulating the construction and use of buildings, and may be revoked at any time upon violation of any provisions of said ordinances.

Weatherproof placard given at the time permit is issued must be displayed on premises. The department must be notified and inspection made of prior construction work as requested on weather card. All new buildings and additions and alterations to existing buildings require a minimum of three called inspections, namely, (1) Footings, drain tile systems, foundation and basement walls, when walls are at least two feet high, but before back filling the wall and before proceeding with the superstructures. (2) Framing prior to lath or finish covering but after firestopping, electrical, plumbing and mechanical systems are installed. (3) Final inspection when building or structure is completed.

On jobs involving reinforced concrete work, inspection must be made after steel is in place and before concrete is poured.

The Department reserves the right to reject any work which has been concealed or completed without first having been inspected and approved by the Department in accordance with the requirements of the various codes.

Any deviation from the approved plans must be authorized by the approval of revised plans, subject to the same procedure established for the examination of the original plans. An additional permit fee is also charged predicated on the extent of the variation from the original plans.

Permits are not valid if construction work is not started within six months from the date permit is issued.

Request for Final Inspection should be made by postcard or phone call to *this department* when the construction work is completed and heating apparatus has been installed. Painting or decorating is not required before the Final Building Inspection.

Final Inspection and certificate of occupancy must be obtained before occupying building.

DEPARTMENTAL APPROVAL FOR CERTIFICATE
of OCCUPANCY and COMPLIANCE

To be filled in by each division indicated hereon
upon completion of its final inspection.

BUILDINGS Permit No. _____

Approved by _____ Date _____

Remarks _____

PLUMBING Permit No. _____

Approved by _____ Date _____

Remarks _____

ELECTRICAL Permit No. _____

Approved by _____ Date _____

Remarks _____

OTHER Permit No. _____

Approved by _____ Date _____

Remarks _____

OTHER Permit No. _____

Approved by _____ Date _____

Remarks _____

BUILDING PERMIT

JOB WEATHER CARD

DATE _____ PERMIT NO. _____

APPLICANT _____ ADDRESS _____ (NO.) _____ (STREET) _____ (CONTR. LICENSE)

PERMIT TO _____ (TYPE OF IMPROVEMENT) _____ (NO.) _____ STORY _____ (PROPOSED USE) _____ NUMBER OF DWELLING UNITS _____

AT (LOCATION) _____ (NO.) _____ (STREET) _____	ZONING DISTRICT _____
BETWEEN _____ (CROSS STREET) _____ AND _____ (CROSS STREET) _____	

SUBDIVISION _____ LOT _____ BLOCK _____ LOT SIZE _____

BUILDING IS TO BE _____ FT WIDE BY _____ FT LONG BY _____ FT. IN HEIGHT AND SHALL CONFORM IN CONSTRUCTION

TO TYPE _____ USE GROUP _____ BASEMENT WALLS OR FOUNDATION _____ (TYPE)

REMARKS: _____

AREA OR VOLUME _____ (CUBIC / SQUARE FEET) ESTIMATED COST \$ _____ PERMIT FEE \$ _____

OWNER _____ ADDRESS _____ BUILDING DEPT. BY _____

THIS PERMIT CONVEYS NO RIGHT TO OCCUPY ANY STREET, ALLEY OR SIDEWALK OR ANY PART THEREOF, EITHER TEMPORARILY OR PERMANENTLY. ENCROACHMENTS ON PUBLIC PROPERTY, NOT SPECIFICALLY PERMITTED UNDER THE BUILDING CODE, MUST BE APPROVED BY THE JURISDICTION. STREET OR ALLEY GRADES AS WELL AS DEPTH AND LOCATION OF PUBLIC SEWERS MAY BE OBTAINED FROM THE DEPARTMENT OF PUBLIC WORKS. THE ISSUANCE OF THIS PERMIT DOES NOT RELEASE THE APPLICANT FROM THE CONDITIONS OF ANY APPLICABLE SUBDIVISION RESTRICTIONS.

<p>MINIMUM OF THREE CALLED INSPECTIONS REQUIRED FOR ALL CONSTRUCTION WORK:</p> <ol style="list-style-type: none"> 1. FOUNDATIONS OR FOOTINGS. 2. PRIOR TO COVERING STRUCTURAL MEMBERS (READY FOR LATH OR FINISH COVERING). 3. FINAL INSPECTION BEFORE OCCUPANCY 	<p>APPROVED PLANS MUST BE RETAINED ON JOB AND THIS CARD KEPT POSTED UNTIL FINAL INSPECTION HAS BEEN MADE. WHERE A CERTIFICATE OF OCCUPANCY IS REQUIRED, SUCH BUILDING SHALL NOT BE OCCUPIED UNTIL FINAL INSPECTION HAS BEEN MADE</p>	<p>WHERE APPLICABLE SEPARATE PERMITS ARE REQUIRED FOR ELECTRICAL, PLUMBING AND MECHANICAL INSTALLATIONS.</p>
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POST THIS CARD SO IT IS VISIBLE FROM STREET

BUILDING INSPECTION APPROVALS	PLUMBING INSPECTION APPROVALS	ELECTRICAL INSPECTION APPROVALS
1	1	1
2	2	2
3	HEATING INSPECTING APPROVALS	REFRIGERATION INSPECTION APPROVALS
OTHER	1	1
	2	2

WORK SHALL NOT PROCEED UNTIL THE INSPECTOR HAS APPROVED THE VARIOUS STAGES OF CONSTRUCTION.

PERMIT WILL BECOME NULL AND VOID IF CONSTRUCTION WORK IS NOT STARTED WITHIN SIX MONTHS OF DATE THE PERMIT IS ISSUED AS NOTED ABOVE.

INSPECTIONS INDICATED ON THIS CARD CAN BE ARRANGED FOR BY TELEPHONE OR WRITTEN NOTIFICATION.



269-663-3429

From the Desk of Ron Bellaire

Permit applicant,

I am sending this as an aid to filling out the electrical permit application. Please take the time to read, as incomplete applications will be sent back and the issuance of the permit will be delayed.

Section I: Homeowner name & Job Location. Fill out all parts. One of the building permit boxes must be checked.

Section II: Contractor/Homeowner Information: If your home address is the same as the job location, mark same as above or write in your current mailing address and check the homeowner box. Be sure to include the property ID number. Note that all the other boxes are for licensed electrical contractors and the homeowner only needs to fill in your telephone number and email.

Section III: Type of Job: Mark the box that applies to your installation. If there is no appropriate box, mark other, and write type of work it is.

Section IV: Plan Review Required: Plan review is usually for commercial and industrial jobs, Service or feeder must be over 400 amps and the size of the project exceeds 3500 square feet. Plans may be required for projects with unusual design characteristics. Complete electrical drawings stamped by an architect or engineer must be submitted, plan review fees are calculated at 60 % of the electrical permit fees, paid before a permit can be issued.

Sections V & VI: Applicant Signature & Homeowner Affidavit: If you are the applicant and homeowner, please read both parts, noting that only homeowners that reside at the address and licensed electrical contractors with a few exceptions can be issued permits and install electrical equipment in Michigan. Homeowners should read the affidavit carefully as they are liable for all of the electrical work, including personally installing it and scheduling inspections. It is a violation for a land owner to alter electrical equipment in rental or flip properties.

Section VII: This is informational only.

Section VIII: Fee Chart Any item you are installing has fees involved. The fees shown on the application are itemized; items #1 & #30 are to be included on all applications. If a service is needed then an item 2 thru 6 should be marked, unless you are installing a temporary service for new construction then 2 services would be required. Line 7 is the number of circuit breakers you will install in electrical panels. Each item in line 8 equals 25 fixtures. All mobile homes and most modular homes require item 16 (feeder). Lines 23 thru 25 are for commercial fire alarms (not residential smoke detectors). Please call me if you have any questions on your installation at 269-663-3429.

Section IX: Please read, Very important. Note area under section IX.

Section X: Utility work order number: If a new, temporary, repaired or replaced electrical service is to be installed then the power company must be notified, preferably before any work is done. They will issue a work order or energy request number. If it's not available at time of permit application, then it must be given to the inspector at time of inspection request.

Some jurisdictions have passed local ordinances (laws) that increase or double permit fees in the event a job is started before a permit is issued, an advance phone call to me can usually avoid this.

Respectfully, *Ron Bellaire*
Electrical Inspector



ELECTRICAL PERMIT APPLICATION

Permit Number (office use only)	—
------------------------------------	---

Fabius Township

AUTHORITY: P.A. 230 OF 1972, AS AMENDED
 COMPLETION: MANDATORY TO OBTAIN PERMIT
 PENALTY: PERMIT CAN NOT BE ISSUED

I. JOB LOCATION

Name of Owner/Agent	Has a building permit been obtained for this project? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not required		
Street Address & Job Location (Street No. and Name)	City/Village	Township	County
		Fabius	St. Joseph

II. CONTRACTOR / HOMEOWNER INFORMATION

<input type="checkbox"/> Contractor <input type="checkbox"/> Homeowner	Name	State License Number	Expiration Date
Address (Street No. and Name)		Property ID Number	
City	State	Zip Code	E-Mail
Telephone Number ()	Mobile Phone # ()	Federal Employer ID Number (or reason for exemption)	
Fax Number ()	Workers Compensation Insurance Carrier (or reason for exemption)	MESC Employer Number (or reason for exemption)	

III. TYPE OF JOB

<input type="checkbox"/> Single Family	<input type="checkbox"/> New <input type="checkbox"/> Garage	<input type="checkbox"/> Alteration	<input type="checkbox"/> Pre-manufactured Home Setup (State Approved)	<input type="checkbox"/> Industrial
<input type="checkbox"/> Pole Barn	<input type="checkbox"/> other (write in)	<input type="checkbox"/> Special Inspection	<input type="checkbox"/> Manufactured Home Setup (HUD Mobile Home)	<input type="checkbox"/> Commercial

IV. PLAN REVIEW REQUIRED

See below for plan review requirements before completing this section. Plans and specifications must be submitted when the wiring or alteration to an electrical system is over 400 amps and is in excess of 3,500 square feet in all buildings.

What is the rating of the service or feeder in amperes? _____
 What is the building size in square feet? _____

Have plans been submitted? YES NO NOT REQUIRED

Plans are required for all building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to Act No. 299 of the Public Acts of 1980, as amended, and shall bear that architect's or engineer's signature and seal, except:

1. When the electrical system rating does not exceed 400 amps and the building is not over 3,500 square feet in area.
2. Work completed by a governmental subdivision or state agency costing less than \$15,000.00

PLANS MUST BE SUBMITTED BEFORE A PERMIT CAN BE ISSUED.

V. APPLICANT SIGNATURE

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 structure. Violators of sections 23a are subjected to civil fines.

Signature of Licensee or Homeowner (Homeowner signature indicates compliance with Section VI. Homeowner Affidavit)	Date

VI. HOMEOWNER AFFIDAVIT

I hereby certify the electrical work described on this permit application shall be installed by myself in my own home in which I am living or about to occupy. All work shall be installed in accordance with the Electrical Code and shall not be enclosed, covered up, or put into operation until it has been inspected and approved by the Electrical Inspector. I will cooperate with the Electrical Inspector and assume the responsibility to arrange for necessary inspections.

COMPLETE APPLICATION ON BACK SIDE

MECHANICAL PERMIT APPLICATION

125

FABIUS TOWNSHIP
John Dobberteen, Mechanical Inspector
Phone (269) 651-4567

M-2013-M

Authority: 1972 PA 230
Completion: Mandatory to obtain permit
Penalty: Permit can not be issued

I. Job Location

NAME OF OWNER/AGENT	HAS A BUILDING PERMIT BEEN OBTAINED FOR THIS PROJECT? Yes No Not required
STREET ADDRESS & JOB LOCATION (Street No. and Name)	NAME OF CITY, VILLAGE OR TOWNSHIP IN WHICH JOB IS LOCATED City Village Township OF: COUNTY

II. Contractor/Homeowner Information

INDICATE WHO THE APPLICANT IS Contractor Homeowner	NAME	LICENSE NUMBER	EXPIRATION DATE
ADDRESS (Street No. and Name)	CITY	STATE	ZIP CODE
TELEPHONE NUMBER (Include Area Code)	FEDERAL EMPLOYER ID NUMBER (or reason for exemption)		
WORKERS COMPENSATION INSURANCE CARRIER (or reason for exemption)	MESC EMPLOYER NUMBER (or reason for exemption)		

III. Type of Job

Single Family	New	Special Inspection	Premanufactured Home Setup (State Approved)	State Owned
Other	Alteration	LP Tank	Manufactured Home Setup (HUD Mobile Home)	School

IV. Plan Review Required

Plans must be submitted with an Application for Plan Examination and the appropriate deposit before a permit can be issued, except as listed below.

Plans are not required for the following:

1. One-and two-family dwellings when the total building heating/cooling system input rating is 375,000 Btu's or less.
2. Alterations and repair work determined by the mechanical official to be of a minor nature.
3. Business, mercantile, and storage buildings having HVAC equipment only, with one fire area and not more than 3,500 square feet.
4. Work completed by a governmental subdivision or state agency costing less than \$15,000.00.

If work being performed is described above, check box below "Plans Not Required."

What is the building size in square footage? _____
 What is the input rating of the heating system in this building? _____

Plans are required for all other building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to 1980 PA 299 and shall bear that architect's or engineer's seal and signature.

Plan Review Submission No. _____ **Plans Not Required**

V. Applicant Signature

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 subjected to civil fines.

SIGNATURE OF LICENSEE OR HOMEOWNER (Homeowner's signature indicates compliance with Section VI Homeowner Affidavit)	DATE
---	------

VI. Homeowner Affidavit

I hereby certify the mechanical work described on this permit application shall be installed **by myself in my own home** in which I am living or about to occupy. All work shall be installed in accordance with the Michigan Mechanical Code and **shall not be enclosed, covered up,** or put into operation until it has been **inspected** and **approved** by the State Mechanical Inspector. I will cooperate with the State Mechanical Inspector and assume the responsibility to arrange for necessary inspections.

Complete Application on Back Side

VII. Fee Clarification

Item #2, Residential Heating System: This item is used for the installation of a heating system in a new residential structure . Items #10; Gas Piping and #18; Duct, SHOULD NOT BE charged. Replacement systems should be itemized.
Item #4, Residential Boiler: A residential boiler must be installed by a licensed boiler installer.
Items #14 and #15, Tanks: A homeowner must own tank to install. If homeowner does not own tank, a licensed mechanical contractor must install tank.

PLUMBING PERMIT APPLICATION

FABIUS TOWNSHIP
John Dobberteen, Plumbing Inspector
Phone (269) 651-4567

P-2013-P

Authority: 1972 PA 230
Completion: Mandatory to obtain permit
Penalty: Permit can not be issued

I. Job Location

NAME OF OWNER/AGENT	HAS A BUILDING PERMIT BEEN OBTAINED FOR THIS PROJECT? Yes No Not required
STREET ADDRESS & JOB LOCATION (Street No. and Name)	NAME OF CITY, VILLAGE OR TOWNSHIP IN WHICH JOB IS LOCATED City Village Township OF: _____
	COUNTY

II. Contractor/Homeowner Information

INDICATE WHO THE APPLICANT IS Contractor Homeowner Master Water Treatment Installer	NAME OF PLUMBING CONTRACTOR OR HOMEOWNER	CONTRACTOR LICENSE NUMBER	EXPIRATION DATE
ADDRESS (Street No. and Name)	CITY	STATE	ZIP CODE
TELEPHONE NUMBER (Include Area Code)	FEDERAL EMPLOYER ID NUMBER (or reason for exemption)		
WORKERS COMPENSATION INSURANCE CARRIER (or reason for exemption)	MESC EMPLOYER NUMBER (or reason for exemption)		
NAME OF MASTER PLUMBER	MASTER LICENSE NUMBER	EXPIRATION DATE	
BUSINESS/BRANCH ADDRESS	CITY	STATE	ZIP CODE

III. Type of Job

Single Family	New	Sewer Only	Water Service Only	Premanufactured Home Setup (State Approved)	State Owned
Other	Alteration	Special Inspection		Manufactured Home Setup (HUD Mobile Home)	School

IV. Plan Review Required

Plans must be submitted with an Application for Plan Examination and the appropriate deposit before a permit can be issued, except as listed below.

Plans are not required for the following:

1. One-and two-family dwelling containing not more than 3,500 square feet of building area.
2. Alterations and repair work determined by the plumbing official to be of a minor nature.
3. Buildings with a required plumbing fixture count less than 12.
4. Work completed by a governmental subdivision or state agency costing less than \$15,000.00. If work being performed is described above, check box below "Plans Not Required."

Plans are required for all other building types and shall be prepared by or under the direct supervision of an architect or engineer licensed pursuant to 1980 PA 299 and shall bear that architect's or engineer's seal and signature.

Plan Review Submission No. _____ Plans Not Required

V. Applicant Signature

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 subjected to civil fines.

SIGNATURE OF PLUMBING CONTRACTOR, MASTER PLUMBER, WATER TREATMENT INSTALLER, OR HOMEOWNER (Homeowner's signature indicates DATE compliance with Section VI. Homeowner Affidavit)	DATE
--	------

VI. Homeowner Affidavit

I hereby certify the plumbing work described on this permit application shall **be installed by myself in my own home** in which I am living or about to occupy. All work shall be installed in accordance with the Michigan Plumbing Code and **shall not be enclosed, covered up, or put into operation** until it has been **inspected and approved** by the State Plumbing Inspector. I will cooperate with the State Plumbing Inspector and assume the responsibility to arrange for necessary inspections.

Complete Application on Back Side

VIIa. Fee Clarification

Item #2, Mobile Home Unit Site: WHEN item is used for sewer excavations in a new park, the permit application should include the application fee plus the number of unit sites. WHEN setting a mobile home in a park, or a mobile or **modular** home on private property, a permit should include the application fee, a sewer or building drain, and a water service or water distribution pipe.

LEGAL NOTICE

**These premises, IT IS HEREBY ORDERED that
all persons cease, desist from and**

STOP WORK

**At once pertaining to construction,
alterations or repairs on this premises
known as**

ADDRESS

**All persons acting contrary to this order or removing or mutilating this notice are
liable to arrest unless such action is authorized by the department.**

VIOLATION

OFFICIAL

DATE OF NOTICE

CONTACT NUMBER

DANGER

**This Structure is Declared Unsafe For
Human Occupancy or Use.**

**It is Unlawful for Any Person To Use Or
Occupy This Building.**

**Any Unauthorized Persons Removing this Sign
WILL BE PROSECUTED.**

ADDRESS

VIOLATION

OFFICIAL

DATE OF NOTICE

CONTACT NUMBER

~ ~ ~ ~ **FAIL** ~ ~ ~ ~
DO NOT PROCEED

WORK DONE IN VIOLATION OF CODE

- BUILDING HEATING
 MECHANICAL PLUMBING

CALL INSPECTOR IMMEDIATELY

INSPECTOR

~ ~ ~ ~ **FAIL** ~ ~ ~ ~
DO NOT PROCEED

WORK DONE IN VIOLATION OF CODE

- BUILDING HEATING
 MECHANICAL PLUMBING

CALL INSPECTOR IMMEDIATELY

INSPECTOR

~ ~ ~ ~ **FAIL** ~ ~ ~ ~
DO NOT PROCEED

WORK DONE IN VIOLATION OF CODE

- BUILDING HEATING
 MECHANICAL PLUMBING

CALL INSPECTOR IMMEDIATELY

INSPECTOR

~ ~ ~ ~ **FAIL** ~ ~ ~ ~
DO NOT PROCEED

WORK DONE IN VIOLATION OF CODE

- BUILDING HEATING
 MECHANICAL PLUMBING

CALL INSPECTOR IMMEDIATELY

INSPECTOR

CONDEMNED

as

Dangerous and Unsafe

DANGER - - KEEP OUT

All persons are hereby notified to keep out as long as this notice remains posted. Any person willfully destroying, mutilating or removing this placard will be punished to the full extent of the law.

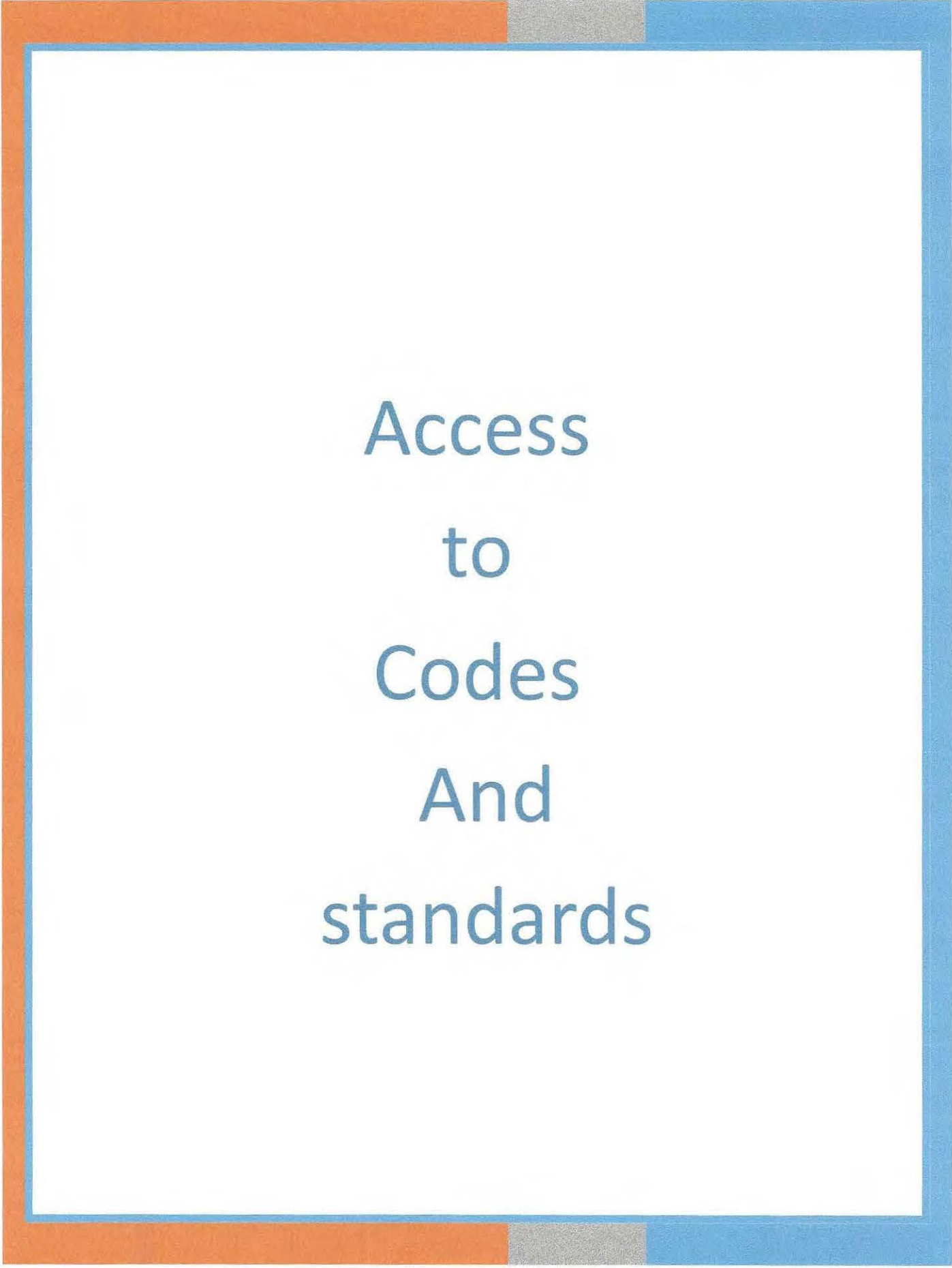
ADDRESS

VIOLATION

OFFICIAL

DATE OF NOTICE

CONTACT NUMBER



Access
to
Codes
And
standards

Each of the municipalities seeking to administer and enforce their jurisdictions is member of the Southwest Michigan Essential Standards Construction Code Library.

The municipality and each of the trade officials for each of the jurisdictions has 24 hour a day 7 days a week access to this library.

The Southwest Michigan Construction Code Essential Standards Library was created and is maintained after the Bureau of Construction Codes sent correspondence to the municipalities indicating that if they were going to enforce the construction codes that they would have to have their own reference standards. The first letter projected the cost to be near \$100,000.00. A short time later, new correspondence was released that stated that those municipalities would have to have only the essential standards with a projected cost of \$30,000.00. Due to the fact that Mottville Township in St. Joseph County had a large commercial project at a standstill due to inspectors not available, and being denied the right to have a local inspector finish the inspections due to the Township not having their reference standards, this was the driving force to create what is now known as the Southwest Michigan Construction Code Essential Standards Library. Mottville Township covered the majority of the cost for renovation to their building for this library.

**JOINT AGREEMENT
FOR CREATING AND MAINTAINING AN
"ESSENTIAL STANDARDS" CONSTRUCTION CODE LIBRARY**

THIS AGREEMENT is made this 10th day of February, 2015, by and between the Village of Colon, ST. JOSEPH COUNTY MICHIGAN, a Michigan municipal corporation ("MEMBER"), the principal business address of which is 110 N. Blackstone Ave. Colon, Mi. 49040 and all other municipal entities who are voluntary MEMBERS in the Southwest Michigan Construction Code Essential Standards Library ("SWMICCL") and signators to this agreement.

A. RECITALS

WHEREAS, MEMBER administers and enforces/desires to administer and enforce the Stille-DeRossett-Hale Single State Construction Code Act, 1972, PA 230, as amended; and

WHEREAS, the State of Michigan Department of Regulatory Affairs Bureau of Construction Codes ("BCC") requires a municipality that administers and enforces the State Construction Code to provide and maintain a library of current standardized codes, consisting of the Building, Energy, Plumbing, Electrical and Mechanical Codes and certain related sub-codes (hereinafter "Code Books"); which Code Books are maintained by the MEMBER; and

WHEREAS, the BCC also now requires a municipal entity that administers and enforces the State Construction Code to have access to the "essential standards" that are referenced in the backs of the Code Books; and

WHEREAS, BCC has issued a list of Essential Referenced Standards dated 4/22/14 and 5/7/14 which list is published on the BCC website (herein "Referenced Essential Standards"); and

WHEREAS, BCC estimates the costs to obtain such Referenced Essential Standards is \$30,000; and

WHEREAS, BCC requires the MEMBER to provide "access" to such Essential Referenced Standards, indicating that "access" may be obtained via the maintenance of its own library of Essential Referenced Standards; the obtaining of privileges to use a professional society or university library; or joining together with other municipalities to create a cooperative library; and

WHEREAS, MEMBER wishes to continue or to begin to administer and enforce the State Construction Code throughout its jurisdiction and has considered its options to provide such "Referenced Essential Standards"; which options were deemed unavailable or unsuitable for MEMBER's access needs; and

WHEREAS MEMBER wishes to continue or to begin to administer and enforce the State Construction Code throughout its jurisdiction; however the obtaining of such Referenced

Essential Standards by the MEMBER on its own is economically unfeasible; and

WHEREAS MEMBER wishes to continue or to begin to administer and enforce the State Construction Code throughout its jurisdiction; however, the provision of space in which to locate such essential referenced standards is impractical; and

WHEREAS MEMBER wishes to continue or to begin to administer and enforce the State Construction Code throughout its jurisdiction in order to provide local inspectors and plan reviewers which is deemed to provide more timely service than the utilization of state inspectors with broader territories; and

WHEREAS such Essential Referenced Standards are not available in a public library; and

WHEREAS such Essential Referenced Standards are not available via professionals or professional societies; and

WHEREAS, in order to be permitted to continue to administer and enforce the State Construction Code, the MEMBER must provide "access". Having exhausted other suggested means of access to "Essential Referenced Standards" MEMBER wishes to participate in and join the "Southwest Michigan Construction Code Essential Standards Library" which is a cooperative effort between MEMBERS to provide access to a library of Essential Referenced Standards under the terms and conditions set forth herein, which library is to be known and referred to as "SWMICCL"; and

WHEREAS, MCL 124.504 provides that any municipality in the state may exercise jointly any power, privilege or authority that it may otherwise exercise separately. MEMBER is a municipality in the State of Michigan.

WHEREAS, MEMBER believes it is in the best interest of the public health, safety and welfare to engage in intergovernmental cooperation in order to maximize resources, reduce costs, and maintain the level of services provided by local inspectors to citizens by allowing for the implementation of the SWMICCL; and by combining resources to provide its building officials and plan reviewers access to the Essential Standards at the SWMICCL.

NOW THEREFORE, in consideration of the respective representations and agreements contained herein, MEMBER agrees as follows:

SECTION 1. DEFINITIONS. The following terms, whenever used in this Agreement, shall have the following meanings, unless the context shall indicate another or different meaning.

"AGREEMENT" means this Joint Agreement for the Creation of an Essential Standards Construction Code Library.

"MEMBER" means the Village of Colon, St. Joseph County, Michigan.

"MEMBERSHIP FEE" means the initial cost to belong to the SWMICCL. The membership fee is a one-time fee to belong to the SWMICCL. The membership fee is \$3,000.00. Each MEMBER to this agreement shall provide the Membership Fee to be deposited into the SWMICCL ACCOUNT as enumerated herein. The Membership Fee shall be added to the other Membership Fees and accumulated in the SWMICCL ACCOUNT. It is anticipated that the MEMBERSHIP FEE, when accumulated in the SWMICCL ACCOUNT shall be sufficient to cover the initial \$30,000 anticipated outlay for essential standards, as well as the costs of creating the library space, the key-card access, the provision of equipment, this agreement and the operational expenses of the library for the foreseeable future. The same MEMBERSHIP FEE will be charged to each MEMBER regardless of when it joins. If the SWMICCL ACCOUNT is depleted to the extent that it cannot cover anticipated expenses for the following year, the ANNUAL REPORT shall provide a projection of estimated additional necessary funds. The STEERING AND OVERSIGHT COMMITTEE shall bill each MEMBER an equal amount of necessary funds in order to replenish the account.

"BUILDING OFFICIAL" means the appointed building, mechanical, electrical and plumbing inspector(s) and official(s), if any, for the MEMBER.

"MEMBERSHIP BENEFITS" means those benefits, including "access" as defined by the CCB which are enumerated in this agreement.

"STEERING AND OVERSIGHT COMMITTEE" is a committee created by this document consisting of two co-administrators of the library; and the Mottville Township Treasurer. Members of the Steering and Oversight Committee are not paid. If a co-administrator is unable or unwilling to serve, the remaining members of the steering and oversight committee shall appoint another co-administrator, who shall be a building official or zoning administrator from a MEMBER municipality that has the ability to physically access the SWMICCL for member municipal units and who has the ability and desire to perform the duties required of a co-administrator of the library. If the Mottville Township Treasurer is unwilling or unable to serve, the remaining steering committee members shall appoint a municipal treasurer from a nearby MEMBER municipality to the steering and oversight committee, which municipal treasurer shall serve the functions of the Mottville Township Treasurer as enumerated herein.

"CO-ADMINISTRATORS OF THE LIBRARY" shall mean Doug Kuhlman and Mike Alwine, or a successor of either of them as appointed in accordance with the above paragraph.

"SWMICCL ACCOUNT" means a separate account to be opened and maintained in a federally-insured bank by the Mottville Township Treasurer, which account shall be used to accumulate the membership fees and pay the costs for the obtaining and maintaining of the Essential Standards Library.

"SWMICCL FUNDS" means the membership fees that are accumulated in the SWMICCL Account. It is understood that the membership fee is intended to be accumulated with that of the other members and that the SWMICCL funds shall be utilized to pay for the Essential Standards Library, the renovation and equipment costs and the maintenance and operation fees for the SWMICCL Library.

"MEMBERSHIP LIST" shall mean a list of all members of the SWMICCL.

"ANNUAL REPORT" shall be a report provided by the Steering and Oversight Committee to each MEMBER on the membership list. It shall contain a list of members, an analysis of the SWMICCL ACCOUNT including income, expenses and fund balance. It shall provide an access analysis from the key-cards. The annual report shall be provided to MEMBER during the month of September each year. The annual report shall contain a projected operating expense cost for the following year. If additional funds are necessary to replace books or machinery or to provide maintenance or repair to the library, the annual report shall provide a projection as to the amount required and the STEERING COMMITTEE shall bill each member a fractional share of the projected additional funds needed. (IE if there are ten members and \$900 is needed, each member will be billed \$90.00).

B. LIBRARY AGREEMENT

SECTION 1. LOCATION. The SWMICCL shall be located in the Mottville Township, St. Joseph County Michigan Hall at 68596 Thomas Street, White Pigeon, Michigan. The Township Hall is located in a former school and it has the space to provide the library and access to MEMBERS.

SECTION 2. PHYSICAL CONFIGURATION OF LIBRARY AND SECURITY. The SWMICCL shall be physically located in a reconfigured area of the Mottville Township Hall. A separate exterior access shall be provided from the outside of the building into the SWMICCL. A key-card access to the SWMICCL shall be implemented. A key card shall be provided to each MEMBER building official by a co-administrator. The SWMICCL shall be accessible from the outside entrance 24 hours a day, seven days a week. The key-card access shall record each access to the library. A copy machine and fax machine will be located in the library, as well as a conference table. The documents contained in the library shall not leave the library. Any building official that removes a library document is responsible for the replacement thereof at no cost to the SWMICCL. The SWMICCL shall have a separate heating and air conditioning system. Mottville Township does not intend to charge heat and electrical costs to the library. However, in cases of extreme weather conditions, Mottville Township may request some reimbursement from the SWMICCL for such heating and cooling costs that are attributable to the library space.

The co-administrators shall be responsible for the maintenance of current essential standards in the library. If standards change or are updated, the co-administrators shall obtain the most current necessary standard and shall provide it in the library. Costs to obtain essential standards shall be paid from the SWMICCL account. MOTTVILLE TOWNSHIP has agreed not to charge rent to the SWMICCL for use of this space and agrees to allow the renovations required by this agreement in order to permit the library to be housed at the Township Hall and accessed via outside key-card system.

SECTION 3. DUTIES OF CO-ADMINISTRATORS. The co-administrators shall obtain the Essential Standards and provide for their location in the SWMICCL. The co-administrators shall provide key-cards to each member building official. The co-administrators shall arrange for the physical location and security of the library, including overseeing all configurations and/or renovations necessary to create the outside access. The co-administrators shall ensure that a conference table, copy machine and fax machine are provided in the library. The co-administrators shall provide each building official with a current cellular telephone number and an email address. A building official who needs access to a document in the SWMICCL shall first attempt to obtain such record by physically entering the library. If the physically obtaining of a document is not possible, the building official shall contact one of the co-administrators, shall identify the document that is needed and shall request that the co-administrator access the library and provide the document via fax, email or US mail. If large documents are required to be mailed, the Member shall be responsible for the mailing costs. The co-administrators shall ensure the physical security of the library and shall provide access reports to MEMBERS with the ANNUAL REPORT. The co-administrators shall receive no pay for these services.

SECTION 4. DUTIES OF MOTTVILLE TOWNSHIP TREASURER. The Mottville Township Treasurer shall open the SWMICCL account in a local FDIC-insured bank. The Mottville Township Treasurer shall accumulate the membership fees in the account. The Mottville Township Treasurer shall pay for essential standards from the account, upon presentation of a bill by a co-administrator and certification that such essential standard has been ordered or received. The Mottville Township Treasurer shall pay for the renovations and equipment to create the library from the SWMICCL Account. The Mottville Township Treasurer shall not co-mingle SWMICCL funds with Mottville Township funds. The Mottville Township Treasurer shall reconcile the SWMICCL account on at least a quarterly basis. The Mottville Township Treasurer shall provide an analysis of the account in the annual report. The Mottville Township Treasurer shall provide the balance of the account, shall project necessary funds for the following year and shall determine, with the assistance of the rest of the oversight committee whether additional funds will be needed to cover expenses.

SECTION 5. ACCESS. Each MEMBER's building official(s) shall have physical access to the library via key-card and outside entrance. Each MEMBER's building official(s) shall be permitted to utilize the books, standards and equipment in the library. The building official(s) shall not remove any essential standards from the library. A MEMBER building official serving a non-member municipality shall not have access to the library for non-members. A MEMBER building official shall return all materials and other items to their original location. Any damage to any materials or equipment shall be reported to one of the Co-Administrators. If a verbal damage report is initially made, a written report shall follow explaining the damage and an explanation as to how such materials or equipment was damaged. Other than failure by normal wear and tear, damages caused by misuse or other reason shall be the responsibility of the MEMBER for replacement costs to SWMICCL.

SECTION 6. CERTIFICATION OF ACCESS. The co-administrator shall provide certification of membership to any member on the membership list and/or to the State of Michigan CCB upon request. If the membership fee has not been paid, certification will not be provided.

C. ADDITIONAL TERMS

SECTION 1. SEVERABILITY. In the event any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, the invalid or unenforceable provision shall be severed from the remaining provisions of this Agreement which shall remain in full force and effect.

SECTION 2. PROHIBITION ON TRANSFER. Membership in the SWMICCL is non-transferrable. The MEMBERSHIP FEE is not refundable if a MEMBER wishes to forgo its membership status. Unspent portions of the MEMBERSHIP FEE shall be refunded on a pro-rata basis in the unlikely event that the library is deemed to be unnecessary before the essential code standards are fully accumulated.

SECTION 3. COUNTERPARTS. This Agreement is intended to be executed by each MEMBER. Upon execution of this AGREEMENT and payment of the MEMBERSHIP FEE, the individual agreements shall be considered combined as one joint agreement.

SECTION 4. AMENDMENT. Any amendment or modification of the terms and provisions herein must be made in a mutually signed writing, dated and approved by the MEMBER and the STEERING AND OVERSIGHT COMMITTEE.

SECTION 5. GOVERNING LAW. This Agreement shall be construed in accordance with Michigan law.

SECTION 6. ENTIRE AGREEMENT. This Agreement constitutes the entire agreement between the parties as it relates to the subject matters expressly set forth in this Agreement. Unless otherwise indicated in this Agreement, there are no other agreements, guarantees, promises or other understandings with respect to the subject matter of this Agreement.

SECTION 7. NO BENEFIT TO OTHERS. The terms, representations, covenants and agreements contained in this Agreement are for the sole benefit of the parties to this Agreement and shall not be construed as conferring any rights to any other persons or entities.

IN WITNESS WHEREOF, the MEMBER hereto, by action of its governing body, has caused this Agreement to be executed by their duly authorized officers.

Dated: 2/10 2015

Colon Village

By: Thomas A. Tenney
Thomas Tenney, President

Dated: 2/10, 2015

By: Kurt P. Kuhlmann
Kurt Kuhlmann, Clerk

STATE OF MICHIGAN)
)
COUNTY OF ST. JOSEPH)

Before me, a Notary Public, came Thomas Tenney and Kurt Kuhlmann, known to me to be and the same are the elected Supervisor and Clerk respectively, for Colon Village, St. Joseph County, Michigan, who swore on oath and indicated that they signed the within document at the direction of and under the authority of the Village Board of Colon Village on this 10th day of February, 2015 in their respective official capacities.

Sharon Beth Crown
Notary Public
St Joseph County, Michigan
My Commission Expires: 12/12/16

**Southwest Michigan
Construction Code
Essential Standards
Library**

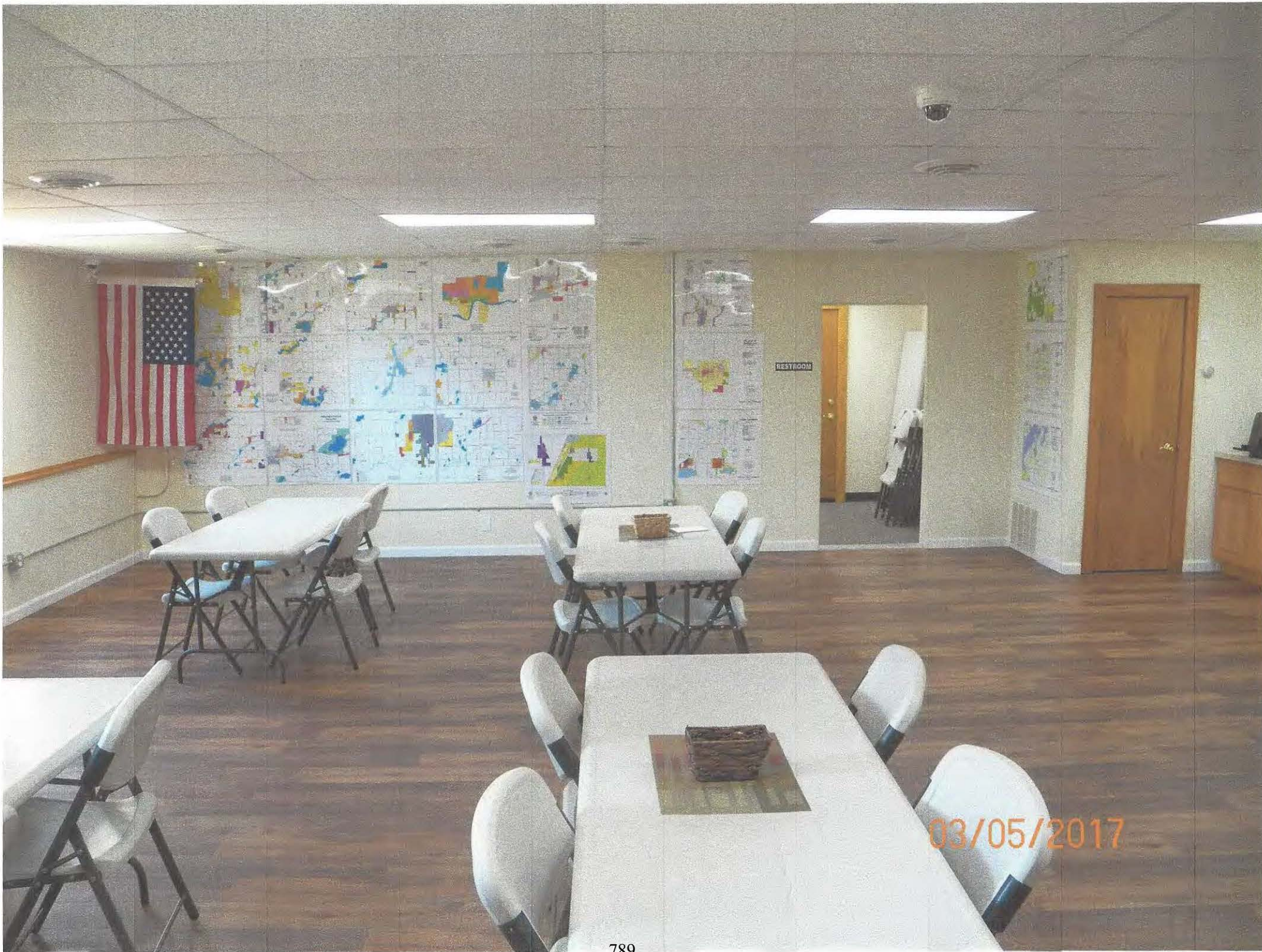
03/05/2017











03/05/2017

Application to Administer and Enforce
 Michigan Department of Licensing and Regulatory Affairs
 Bureau of Construction Codes / Office of Administrative Services
 P.O. Box 30254, Lansing, MI 48909
 517-335-2972
 E-Mail: bccoas@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

NAME OF GOVERNMENTAL SUBDIVISION Village of White Pigeon		CONTACT PERSON (Elected Official) Jesse Tyler Royce, Village President	
ADDRESS (Street Number and Name) 103 S Kalamazoo St., PO Box 621			
CITY White Pigeon	COUNTY St. Joseph	STATE MI	ZIP CODE 49099
TELEPHONE NUMBER (Include Area Code) (269) 483-7044	FAX NUMBER (Include Area Code) (269) 483-7323	E-MAIL ADDRESS whitepigeonvillageclerk@comcast.net	

Code Adoption

To assume responsibility for the administration and enforcement of the act and the state code in accordance with Section 8b(6) of 1972 PA 230. **Attach a copy of the certified adopted ordinance assuming responsibility for administration and enforcement of the act and the code.**

State Code(s) to be Enforced

Building Electrical Mechanical Plumbing

By checking the boxes below you are certifying the following:

The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce this act and the code and all related acts and rules.

Agency personnel are provided as necessary.

Administrative services are provided.

Plan review services are provided.

Timely field inspection services will be provided.

A Board of Appeals is in place per MCL 125.1514.

Have immediate access to the codes & standards for which you have applied to administer & enforce.

BUILDING OFFICIAL INFORMATION	Name: Randy Schmeling	Registration Number: 005637
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Certification

I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge.

Name of Elected Official (Type or Print) Jesse Tyler Royce Title 3-17-17

Signature of Elected Official Jesse Tyler Royce Date Village President

Copies of all ordinances submitted with this application must include clear and visible identification of the governmental subdivision's department of building safety.

The conduct of the administration and enforcement of the Michigan codes shall be performed in accordance with the approved Application to Administer and Enforce and ordinance. Any changes in the approved ordinance must be submitted to the Bureau of Construction Codes for review and final approval prior to implementation by local departments of building safety.

Application to Administer and Enforce
Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes / Office of Administrative Services
P.O. Box 30254, Lansing, MI 48909
517-335-2972
E-Mail: LARA-BCC-Licensing@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230 Penalty: Failure to provide the information may result in denial of your request.	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
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NAME OF GOVERNMENTAL SUBDIVISION Village of White Pigeon		CONTACT PERSON (Elected Official) Jesse Tyler Royce	
ADDRESS (Street Number and Name) 103 S Kalamazoo St. PO Box 621			
CITY White Pigeon	COUNTY St. Joseph	STATE MI	ZIP CODE 49099
TELEPHONE NUMBER (Include Area Code) 269-483-7044	FAX NUMBER (Include Area Code) 269-483-7323	E-MAIL ADDRESS whitepigeonvillageclerk@comcast.net	

Administration and enforcement of 1972 PA 230 (the Act) and the state construction code, is to be pursuant to Section 8b(6) of the Act. If only requesting authority to enforce a part of the state code as defined in Section 2(a)(1)(l) of the Act and as provided for in Section 4(2) of the Act, **please list the part or parts for which you are requesting authority.**

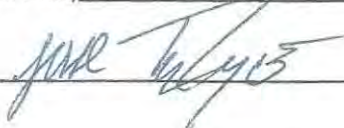
By checking the boxes below you are certifying **the required documents are attached.**

- copy of the certified adopted ordinance
- copy of the proposed program budget
- drafts of proposed public facing documents
permits, correction/violation notices, certificates of occupancy, stop work orders, etc.
- drafts of proposed fees
permits, plan reviews, inspections, etc.
- A representative of the governmental subdivision will be available to address the Construction Code Commission on issues such as:
Reason for application
Communication process with enforcing agencies
Registration of governmental subdivision and enforcing agency personnel
Board of Appeal members per MCL 125.1514
Administrative personnel and services provided
FOIA, Retention Schedule, Location of official records/documents, etc.
Processes for establishing fees and variance of code process
Agency personnel are provided as necessary.
Plan review services are provided and timely field inspection services will be provided.
The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce the act and the code and all related acts and rules.

Certification

I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge

Name of Elected Official (Type or Print) Jesse Tyler Royce Title President

Signature of Elected Official  Date 3-15-17

VILLAGE OF WHITE PIGEON

ORDINANCE NO. 17-03-15

ENFORCING AGENCY ORDINANCE

ADOPTED: March 15, 2017

EFFECTIVE: April 1, 2017

An ordinance to designate an enforcing agency to discharge the responsibility of the Village of White Pigeon, St. Joseph County, under the provisions of the State Construction Code Act (Act No. 230 of the Public Acts of 1972, as amended.)

THE VILLAGE OF WHITE PIGEON

ST. JOSEPH COUNTY, MICHIGAN

ORDAINS:

The Village of White Pigeon ordains:

Section 1. ENFORCING AGENCY DESIGNATED. Pursuant to Section 8b(6) of The Stille-DeRossett Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1508b(6), Village of White Pigeon hereby elects to administer and enforce the 1972 PA 230 and the Michigan Building Code, Michigan Electrical Code, Michigan Mechanical Code and The Michigan Plumbing Code. The Village of White Pigeon shall also administer and enforce the respective provisions of the Michigan Residential, Rehabilitation, and Uniform Energy Codes and all applicable laws and ordinances. A government official registered in accordance with 1986 PA 54 shall be appointed to receive all fees, issue permits, plan reviews, notices, orders, and certificates of use and occupancy. All personnel performing plan reviews and inspections shall be registered in accordance with 1986 PA 54.

Section 2. REPEALS. All ordinances inconsistent with the provisions of this ordinance are hereby repealed.

Section 3. PUBLICATION. This ordinance shall be effective after legal publication and in accordance with the provisions of the Act governing same.

The foregoing Ordinance was offered by Royce and supported by Wagaman, the voting being as follows:


Yea: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman

No: none

Abstain: none

Absent: none

Ordinance declared adopted



Maria C Spencer, Village Clerk

Date: March 15, 2017

Attested:



Tyler Royce, Village President

Date: March 15, 2017

CLERK'S CERTIFICATION

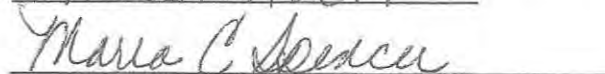
I HEREBY CERTIFY that the foregoing constitutes true and correct copy of an Ordinance which was adopted by the White Pigeon Village Council at a regular meeting held pursuant and in full compliance with the Open Meeting Act, being Act 267, Public Acts of Michigan, 1976 and that the minutes of said meeting was kept and will be or have been made available as required by said Act.



Maria C Spencer, Village Clerk

Date:

I further certify that Notice of the above Ordinance was published in the Three Rivers Commercial, Three Rivers, Michigan, on March 18, 2017



Maria C Spencer, Village Clerk

**March 15, 2017 Regular Meeting White Pigeon Village Council
(Unapproved)**

Present: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman
Also Clerk Spencer, Chief Burgoyne, Maintenance Bailey, Zoning Administrator Kuhlman

Call to order at 7:00 p.m. by President Royce

Motion by Strawser / Mercer to approve the agenda with the addition of Mrs. Taylor. Yea: All. Motion carried.

Motion by Armstrong / Strawser to approve the minutes of Regular Meeting. Yea: All. Motion carried.

Motion by Royce / Hostetler to approve financial report. Yea: All. Motion carried.

Motion by Hostetler / Mercer to pay bills presented. Roll call vote: Yea: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman. Nay: none. Motion carried.

Old Business:

- 1 Motion by Hostetler / Mercer at 7:14 pm to open public hearing regarding Ordinance No. 17-03-15, Enforcing Agency Ordinance. Yea: All. Motion carried.
- 2 Motion by Armstrong / Strawser at 7:16 pm to close public hearing. Yea: All. Motion carried.
- 3 Motion by Royce / Wagaman to approve Ordinance No. 17-03-15, Enforcing Agency Ordinance. Roll call vote: Yea: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman. Nay: none. Motion carried.
- 4 Motion by Strawser / Hostetler to have Randy Schmeling do the rental inspections for the Village. Roll call vote: Yea: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman. Nay: none. Motion carried.
- 5 Motion by Armstrong / Strawser to approve Resolution No. 3-15-17, a Resolution regarding marijuana facilities authorized by PA 281 of 2016. Roll call vote: Yea: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman. Nay: none. Motion carried.
- 6 Motion by Mercer / Wagaman to send both DPW workers to seminar on asset management program and rate study on May 24 – 25 and for them to stay overnight at a cost not to exceed \$2,000. Roll call vote: Yea: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman. Nay: none. Motion carried.

- 7 Motion by Strawser / Hostetler to purchase Rycom utility locator from Batco, Inc at a cost of \$2,610. Roll call vote: Yea: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman. Nay: none. Motion carried.

New Business:

- 1 Motion by Royce / Wagaman to purchase mosquito spray as needed. Yea: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman. Nay: none. Motion carried.
- 2 Motion by Strawser / Armstrong to approve White Pigeon Days as July 7 – 9, 2017. Yea: All. Motion carried.
- 3 Motion by Astling / Hostetler to close US 12 for the Memorial Day Parade and the White Pigeon Day Parade. Yea: All. Motion carried.
- 4 Motion by Royce / Strawser to close US 12 on July 8, 2017 from 7:00 am – 3:00 pm for car show during White Pigeon Days. Roll call vote requested. Roll call vote: Yea: Armstrong, Astling, Mercer, Royce, Strawser, Wagaman. Nay: Hostetler, Motion carried.
- 5 Motion by Armstrong / Strawser to continue using Sturgis Bank as the financial institute for the Village. Yea: All. Motion carried.
- 6 Motion by Royce / Hostetler to transfer \$20,000 of Act 51 funds from Major Streets to Local Streets. Yea: All. Motion carried.
- 7 Concerns regarding trash cans on edge of road. Tabled.
- 8 Motion by Hostetler / Strawser for the Village to contribute 6% of employees' salary to retirement fund for the 2017-2018 budget year. Roll call vote: Yea: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman. Nay: none. Motion carried.
- 9 Motion by Royce / Strawser to appoint Hostetler and Mercer to the White Pigeon Parks and Recs. Board, representing the Village. Yea: All. Motion carried.
- 10 Motion by Hostetler / Royce to amend the 2016-2017 budget as presented. Roll call vote: Yea: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman. Nay; none. Motion carried.
- 11 Motion by Strawser / Mercer at 8:21 pm to open public hearing regarding 2017-2018 budget. Yea: All. Motion carried.
- 12 Motion by Strawser / Hostetler at 8:25 pm to close public hearing. Yea: All. Motion carried.
- 13 Motion by Astling / Strawser to approve 2017-2018 budget as presented. Roll call vote:

Yea: Armstrong, Astling, Hostetler, Mercer, Royce, Strawser, Wagaman. Nay: none.
Motion carried.

Public Participation: none.

Committee Reports:

Chief Burgoyne reports 114 complaints and 31 citations for the month of February compared to 87 complaints and 28 citations for February 2016.

Motion by Armstrong / Mercer to adjourn meeting at 8:49 pm. Yea: all. Motion carried.

Posted by law on 3/16/17
Village Hall
White Pigeon Twp. Library
White Pigeon Post Office

Village Clerk
Maria C. Spencer

NOTICE OF ADOPTION OF ORDINANCE

VILLAGE OF WHITE PIGEON

ST. JOSEPH COUNTY, MICHIGAN

TO: THE RESIDENTS AND PROPERTY OWNERS OF THE VILLAGE OF WHITE PIGEON AND ANY OTHER INTERESTED PERSONS.

PLEASE TAKE NOTICE:

At the Regular March 15, 2017, White Pigeon Village Council Meeting, Council Members approved Ordinance No. 17-03-15, an ordinance to designate an enforcing agency to discharge the responsibility of the Village of White Pigeon, St. Joseph County, under the provisions of the State Construction Code Act (Act No. 230 of the Public Acts of 1972, as amended.)

ENFORCING AGENCY DESIGNATED. Pursuant to Section 8b(6) of The Stille-DeRossett Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1508b(6), Village of White Pigeon hereby elects to administer and enforce the 1972 PA 230 and the Michigan Building Code, Michigan Electrical Code, Michigan Mechanical Code and The Michigan Plumbing Code. The Village of White Pigeon shall also administer and enforce the respective provisions of the Michigan Residential, Rehabilitation, and Uniform Energy Codes and all applicable laws and ordinances. A government official registered in accordance with 1986 PA 54 shall be appointed to receive all fees, issue permits, plan reviews, notices, orders, and certificates of use and occupancy. All personnel performing plan reviews and inspections shall be registered in accordance with 1986 PA 54.

This ordinance will take effect April 1, 2017 or when approved by the State of Michigan, whichever is later. Copies are available at the Village Office.

Maria C. Spencer, Village Clerk

Application to Administer and Enforce
Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes / Office of Administrative Services
P.O. Box 30254, Lansing, MI 48909
517-335-2972
E-Mail: LARA-BCC-Licensing@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230 Penalty: Failure to provide the information may result in denial of your request.	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
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NAME OF GOVERNMENTAL SUBDIVISION Village of Marcellus		CONTACT PERSON (Elected Official) Ronald Welburn	
ADDRESS (Street Number and Name) 177 E. Main Street			
CITY Marcellus	COUNTY Cass	STATE MI	ZIP CODE 49067
TELEPHONE NUMBER (Include Area Code) 269-646-5485	FAX NUMBER (Include Area Code) 269-646-0065	E-MAIL ADDRESS clerk@villageomarcellus.org	

Administration and enforcement of 1972 PA 230 (the Act) and the state construction code, is to be pursuant to Section 8b(6) of the Act. If only requesting authority to enforce a part of the state code as defined in Section 2(a)(1)(l) of the Act and as provided for in Section 4(2) of the Act, **please list the part or parts for which you are requesting authority.**

By checking the boxes below you are certifying **the required documents are attached.**

- copy of the certified adopted ordinance
- copy of the proposed program budget
- drafts of proposed public facing documents
permits, correction/violation notices, certificates of occupancy, stop work orders, etc.
- drafts of proposed fees
permits, plan reviews, inspections, etc.
- A representative of the governmental subdivision will be available to address the Construction Code Commission on issues such as:
 Reason for application
 Communication process with enforcing agencies
 Registration of governmental subdivision and enforcing agency personnel
 Board of Appeal members per MCL 125.1514
 Administrative personnel and services provided
 FOIA, Retention Schedule, Location of official records/documents, etc.
 Processes for establishing fees and variance of code process
 Agency personnel are provided as necessary.
 Plan review services are provided and timely field inspection services will be provided.
 The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce the act and the code and all related acts and rules.

Certification	
I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge	
Name of Elected Official (Type or Print) <u>Ronald Welburn</u>	Title <u>Village President</u>
Signature of Elected Official <u><i>Ronald Welburn</i></u>	Date <u>MARCH 14, 2017</u>

VILLAGE OF MARCELLUS
COUNTY OF CASS, STATE OF MICHIGAN

ORDINANCE NO. 225

ENFORCING AGENCY ORDINANCE

ADOPTED: March 14, 2017

EFFECTIVE: March 23, 2017

An ordinance to designate an enforcing agency to discharge the responsibility of the Village of Marcellus, Cass County, under the provisions of the State Construction Code Act (1972 PA 230, as amended; and repealing all Ordinances and parts of Ordinances in conflict or inconsistent therewith)

THE VILLAGE OF MARCELLUS ORDAINS:

Section 1. PURPOSE. The purpose of this Ordinance is to designate an enforcing agency to discharge the responsibility of the Village of Marcellus, Cass County, under the provisions of the State Construction Code (1972 PA 230) as amended.

Section 2. ENFORCING AGENCY DESIGNATED. Pursuant to Section 8b(6) of The Stille-DeRossett Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1508b(6), Village of Marcellus hereby elects to administer and enforce the 1972 PA 230 and the Michigan Building Code, Michigan Electrical Code, Michigan Mechanical Code and The Michigan Plumbing Code. The Village of Marcellus shall also administer and enforce the respective provisions of the Michigan Residential, Rehabilitation, and Uniform Energy Codes and all applicable laws and ordinances. A government official registered in accordance with 1986 PA 54 shall be appointed to receive all fees, issue permits, plan reviews, notices, orders, and certificates of use and occupancy. All personnel performing plan reviews and inspections shall be registered/licensed in accordance with 1986 PA 54.

Section 2. REPEALS. All ordinances, parts of ordinances in conflict or inconsistent with the provisions of this ordinance are hereby repealed.

Section 3. EFFECTIVE DATE. This ordinance shall be effective after legal publication and in accordance with the provisions of the Act governing the same on March 23, 2017;

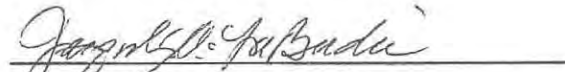
Section 4. SEVERABILITY Should any portion, sentence, paragraph, clause, phrase or word of this Ordinance be declared unconstitutional, illegal, or of no force or effect by a court of competent jurisdiction, such decision or judgment shall not affect the validity of the remaining portions thereof which shall continue to remain in full force and effect.

Section 5. PUBLICATION. This Ordinance shall be published once, in summary form or in full, in *The Marcellus News*, a newspaper of general circulation within the boundaries of said Village and qualified under State law to publish legal notices, within 15 days of its adoption. The same shall be recorded in the Ordinance Book of said Village and such recording authenticated by the signatures of the Marcellus Village President and the Marcellus Village Clerk.

Village of Marcellus




Ronald Welburn
Marcellus Village President



Jacqueline A. LaBudie
Marcellus Village Clerk

Certification: I hereby certify that the foregoing is a true and complete copy of Ordinance No. 225, being an "Enforcing Agency Ordinance", adopted by the Village Council of the Village of Marcellus, County of Cass, State of Michigan, at a regular meeting held on March 14, 2017; the original of which is on file in my office and available to the public. Public Notice of said meeting was given pursuant to and in compliance with the Open Meetings Act, including, in the case of a special or rescheduled meeting, notice by posting at least 18 hours prior to the time set for said meeting. That ordinance was published in summary form or in full in *The Marcellus News* on March 23, 2017.

Dated: March 14, 2017



Jacqueline A. LaBudie
Marcellus Village Clerk

Application to Administer and Enforce
Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes / Office of Administrative Services
P.O. Box 30254, Lansing, MI 48909
517-335-2972
E-Mail: LARA-BCC-Licensing@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

NAME OF GOVERNMENTAL SUBDIVISION <i>Village of Centreville</i>		CONTACT PERSON (Elected Official) <i>Keith Shears</i>	
ADDRESS (Street Number and Name) <i>221 W. Main Street</i>			
CITY <i>Centreville</i>	COUNTY <i>St. Joseph</i>	STATE MI	ZIP CODE <i>49032</i>
TELEPHONE NUMBER (Include Area Code) <i>269-467-4855</i>	FAX NUMBER (Include Area Code) <i>269-467-4017</i>	E-MAIL ADDRESS	


Administration and enforcement of 1972 PA 230 (the Act) and the state construction code, is to be pursuant to Section 8b(6) of the Act. If only requesting authority to enforce a part of the state code as defined in Section 2(a)(1)(l) of the Act and as provided for in Section 4(2) of the Act, **please list the part or parts for which you are requesting authority.**

By checking the boxes below you are certifying **the required documents are attached.**

- copy of the certified adopted ordinance
- copy of the proposed program budget
- drafts of proposed public facing documents
permits, correction/violation notices, certificates of occupancy, stop work orders, etc.
- drafts of proposed fees
permits, plan reviews, inspections, etc.
- A representative of the governmental subdivision will be available to address the Construction Code Commission on issues such as:
Reason for application
Communication process with enforcing agencies
Registration of governmental subdivision and enforcing agency personnel
Board of Appeal members per MCL 125.1514
Administrative personnel and services provided
FOIA, Retention Schedule, Location of official records/documents, etc.
Processes for establishing fees and variance of code process
Agency personnel are provided as necessary.
Plan review services are provided and timely field inspection services will be provided.
The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce the act and the code and all related acts and rules.

Certification

I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge

Name of Elected Official (Type or Print) *Keith Shears* Title *President*
Signature of Elected Official  Date *2-21-17*

VILLAGE OF CENTREVILLE

ORDINANCE NO. 201

ENFORCING AGENCY ORDINANCE

ADOPTED: February 21, 2017

EFFECTIVE: February 21, 2017

An ordinance to designate an enforcing agency to discharge the responsibility of the Village of Centreville, St. Joseph County, under the provisions of the State Construction Code Act (Act No. 230 of the Public Acts of 1972, as amended.)

THE VILLAGE OF CENTREVILLE

ST. JOSEPH COUNTY, MICHIGAN

ORDAINS:

The Village of Centreville ordains:

Section 1. ENFORCING AGENCY DESIGNATED. Pursuant to Section 8b(6) of The Stille-DeRossett Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1508b(6), Village of Centreville hereby elects to administer and enforce the 1972 PA 230 and the Michigan Building Code, Michigan Electrical Code, Michigan Mechanical Code and The Michigan Plumbing Code. The Village of Centreville shall also administer and enforce the respective provisions of the Michigan Residential, Rehabilitation, and Uniform Energy Codes and all applicable laws and ordinances. A government official registered in accordance with 1986 PA 54 shall be appointed to receive all fees, issue permits, plan reviews, notices, orders, and certificates of use and occupancy. All personnel performing plan reviews and inspections shall be registered in accordance with 1986 PA 54.

Section 2. REPEALS. All ordinances inconsistent with the provisions of this ordinance are hereby repealed.

Section 3. PUBLICATION. This ordinance shall be effective after legal publication and in accordance with the provisions of the Act governing same.

Adopted this 21ST day of February, 2017

Signed: Marty Chiddister
Marty Chiddister
Clerk of the Village of Centreville

Date: 2-21, 2017

Attested:

Signed: Keith Shears
Keith Shears
Village President of the Village of Centreville

Date: 2-21-, 2017

Centreville Village

St. Joseph County

Procedures for administration, and enforcement of the codes

1. Permit applications are reviewed and approved by the applicable designated Inspector. Permits shall not be issued until approved, and any zoning questions are resolved by the Centreville Village Zoning Administrator.
2. As plans are reviewed any violations are identified and resolved prior to issuance of the permit.
3. Permits are issued in writing by the Office of the Inspector. Files are maintained in the Building Inspection Department of the Centreville Village Office.
4. Inspections may be scheduled at the time the permit is issued. Findings are noted in the records of the Inspector.
5. Code violations are identified to the owner/contractor and must be corrected prior to the completion of the project.
6. Records are maintained for each permit. The files are maintained in the Building Inspection Department of Centreville Village .
7. Final Approvals are issued by the Inspectors, and the Building Official issues all certificates of occupancy. All files are maintained at the Building Inspection Department at Centreville Village .

Village of Centreville

St. Joseph County

Procedures for the Construction Board of Appeals

1. Appeals must be in writing to the Board Chair. If an appeal is addressed to the Village President, it shall promptly be referred to the Chair of the Appeals Board. A separate file is to be maintained for each appeal.
2. A hearing is scheduled as soon as possible, but not more than 25 days following receipt of an appeal. Notice is given to all interested parties by first class mail with 10 days notice before the hearing.
3. Appeals are heard by a quorum of the Construction Board of Appeals.
4. The final decision of the Board is reduced to writing and sent to the applicant within 5 days after Board decision is reached.
5. Records of the appeal and its disposition are maintained on file in the Building Inspection Department of the Village of Centreville.

Application to Administer and Enforce
Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes / Office of Administrative Services
P.O. Box 30254, Lansing, MI 48909
517-335-2972
E-Mail: LARA-BCC-Licensing@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230 Penalty: Failure to provide the information may result in denial of your request.	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
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NAME OF GOVERNMENTAL SUBDIVISION <p style="text-align: center;">Volinia Township</p>		CONTACT PERSON (Elected Official) <p style="text-align: center;">Gwenn Johnson</p>	
ADDRESS (Street Number and Name) <p style="text-align: center;">50357 Decatur Rd</p>			
CITY <p style="text-align: center;">Decatur</p>	COUNTY <p style="text-align: center;">Cass</p>	STATE <p style="text-align: center;">MI</p>	ZIP CODE <p style="text-align: center;">49045</p>
TELEPHONE NUMBER (Include Area Code) <p>269-423-8985</p>	FAX NUMBER (Include Area Code)	E-MAIL ADDRESS <p style="text-align: right;">[REDACTED]@gmail.com</p>	

Administration and enforcement of 1972 PA 230 (the Act) and the state construction code, is to be pursuant to Section 8b(6) of the Act. If only requesting authority to enforce a part of the state code as defined in Section 2(a)(1)(l) of the Act and as provided for in Section 4(2) of the Act, **please list the part or parts for which you are requesting authority.**

By checking the boxes below you are certifying **the required documents are attached.**

- copy of the certified adopted ordinance
- copy of the proposed program budget
- drafts of proposed public facing documents
permits, correction/violation notices, certificates of occupancy, stop work orders, etc.
- drafts of proposed fees
permits, plan reviews, inspections, etc.
- A representative of the governmental subdivision will be available to address the Construction Code Commission on issues such as:
 - Reason for application
 - Communication process with enforcing agencies
 - Registration of governmental subdivision and enforcing agency personnel
 - Board of Appeal members per MCL 125.1514
 - Administrative personnel and services provided
FOIA, Retention Schedule, Location of official records/documents, etc.
 - Processes for establishing fees and variance of code process
 - Agency personnel are provided as necessary.
 - Plan review services are provided and timely field inspection services will be provided.
 - The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce the act and the code and all related acts and rules.

Certification	
I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge	
Name of Elected Official (Type or Print) <u>Gwenn Johnson</u>	Title <u>Township Supervisor</u>
Signature of Elected Official	Date <u>3-20-2012</u>

VOLINIA TOWNSHIP

ORDINANCE NO. 033017

ENFORCING AGENCY ORDINANCE

ADOPTED: MARCH 30, 2017

EFFECTIVE: APRIL 14, 2017

An ordinance to designate an enforcing agency to discharge the responsibility of the Township of Volinia, Cass County, under the provisions of the State Construction Code Act (Act No. 230 of the Public Acts of 1972, as amended.)

THE TOWNSHIP OF VOLINIA

CASS COUNTY, MICHIGAN

ORDAINS:

The Township of Volinia ordains:

Section 1. ENFORCING AGENCY DESIGNATED. Pursuant to Section 8b(6) of The Stille-DeRossett Hale Single State Construction Code Act, 1972 PA 230, MCL 125.1508b(6), Township of Volinia hereby elects to administer and enforce the 1972 PA 230 and the Michigan Building Code, Michigan Electrical Code, Michigan Mechanical Code and The Michigan Plumbing Code. The Township of Volinia shall also administer and enforce the respective provisions of the Michigan Residential, Rehabilitation, and Uniform Energy Codes and all applicable laws and ordinances. A government official registered in accordance with 1986 PA 54 shall be appointed to receive all fees, issue permits, plan reviews, notices, orders, and certificates of use and occupancy. All personnel performing plan reviews and inspections shall be registered in accordance with 1986 PA 54.

Section 2. REPEALS. All ordinances inconsistent with the provisions of this ordinance are hereby repealed.

Section 3. PUBLICATION. This ordinance shall be effective after legal publication and in accordance with the provisions of the Act governing same.

Adopted this 30th day of MARCH, 2017

Signed: Carol Walden
Carol Walden
Clerk of the Township of Volinia

Date: 3-30, 2017

Attested:

Signed: Gwenn Johnson
Gwenn Johnson
Supervisor of the Township of Volinia

Date: 3-30, 2017

TOWNSHIP OF VOLINIA

APPOINTMENTS TO CONSTRUCTION BOARD OF APPEALS

SPECIFIC ACTION REQUESTED: Authorize Supervisor to make appointments to the Construction Board of Appeals

DESCRIPTION OF ISSUE:

The Township is the administering and enforcing agency for the State Construction Code. MCL 125.1514 requires an administering and enforcing agency to appoint a "Construction Board of Appeals" for the purposes of hearing and deciding appeals on questions of the State Construction Code, such as the refusal to grant a permit or the denial of a permit.

The Construction Board of Appeals must consist of a minimum of 3 persons, qualified by experience or training to perform the duties of a member of the Board of Appeals. In this respect, it is incumbent upon the Township to appoint individuals that have training in one or more of the Building Trades; or that have municipal building code experience, or both. Employees of the Township cannot serve on the Township Construction Board of Appeals.

MCL 125.1514 provides that the Supervisor shall appoint the members of the Construction Board of Appeals. The members serve for 2-year terms.

We recommend that the Township Supervisor appoint the following individuals to the Township Construction Board of Appeals with two year terms commencing on April 1, 2017, all of whom have agreed to be named and are willing to serve:

Butch Bender – Electrical Contractor

[REDACTED] Cassopolis, MI 49301

Rich Wheat – Electrical Contractor

[REDACTED] Three Rivers, MI 49093

Greg Persing – Mechanical and Plumbing Contractor

[REDACTED] Burr Oak, MI LICENSE#8110541

David Nelson – Mechanical and Plumbing Contractor

[REDACTED] MI 49091 LICENSE#8002752

Fred Mazzoni – Building Contractor

[REDACTED] MI 49091 LICENSE#2101132671 (exp 5/31/17)

Doug Hopkins -- Building Contractor

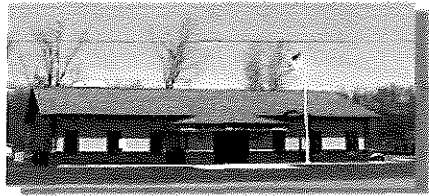
62969 Fair Road Sturgis, MI 49091 phone 269-508-4260

Proposed Motion: *Don Huff*

"I move that the Township appoint Butch Bender, Rich Wheat, Greg Persing, David Nelson, Fred Mazzoni and Doug Hopkins to the Construction Board of Appeals effective April 1, 2017, that the Construction Board of Appeals meet only as needed upon application, a fee of \$500 will be charged to the applicant and that each Construction Board of Appeals member be compensated \$100 plus mileage at the current IRS rates for those meetings each appointee attends".

Support by: *Bob Rasmussen*

All in favor: *Gwern Johnson
Loreen Williams
Carol Walden
Bob Rasmussen
Don Huff*



ROLLIN TOWNSHIP

730 Manitou Rd. P.O. Box 296
Manitou Beach, MI 49253
Phone: (517) 547-7786

June 5, 2017, 2017

Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes/Office of Administrative Services
P.O. Box 30254
Lansing, Michigan 48909

Re: Application to Administer and Enforce (BCC-246)

To Whom It May Concern:

Enclosed is a completed Application to Administer and Enforce (BCC-246) and the required certified copies of the ordinances enacted by the Township of Rollin assuming responsibility for administration and enforcement of the Stille-Derossett-Hale Single State Construction Code Act; Act 230 of 1972. It should be noted that the Township of Rollin had previously assumed responsibility for administration and enforcement of Act 230 for electrical and building years ago and is seeking to assume responsibility for plumbing and mechanical as well.

It is the intent of the Township of Rollin to offer professional and timely field inspection and administrative services within the municipality, as previously demonstrated through the Township's administration and enforcement regarding electrical and building components of Act 230, the Township is qualified by experience or training to administer and enforce plumbing and mechanical components of Act 230 as well as provide employee and/or agency personnel (via contract) as necessary, provide administrative services, provide plan review services, has a Board of Appeals in place and has access to the codes and standards.

As currently is the case with administration and enforcement of the electrical and building components of Act 230, the Township of Rollin intends to provide plumbing and mechanical administration and enforcement via contract and/or employee with qualified, experienced and licensed persons who are currently providing these services for a number of adjacent jurisdictions.

We will provide a package of information and documentation in support of Rollin Township's ability to enforce the added plumbing and mechanical disciplines and sent to you within 10 days. Please let us know if you would like this by mail or email for distributing.

Please contact Irma David or Bruce Nickel if you have any questions about this application or the accompanying documentation.

Sincerely,

Irma David
Township Supervisor
Email: rollinsupervisor@comcast.net
Office: (517) 547-7786

Bruce Nickel
Building Official
Email: building.inspector@twp.rollin.mi.us
Cell: (517) [REDACTED]

RECEIVED

JUN 07 2017

Bureau of
Construction Codes

Application to Administer and Enforce
Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes / Office of Administrative Services
P.O. Box 30254, Lansing, MI 48909
517-335-2972
E-Mail: bccoas@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

NAME OF GOVERNMENTAL SUBDIVISION Township of Rollin		CONTACT PERSON (Elected Official) Irma David - Supervisor	
ADDRESS (Street Number and Name) 730 Manitou Rd. P.O. Box 296			
CITY Manitou Beach	COUNTY Lenawee	STATE MI	ZIP CODE 49253
TELEPHONE NUMBER (Include Area Code) (517) 547-7786	FAX NUMBER (Include Area Code) (517) 547-4788	E-MAIL ADDRESS rollinsupervisor@comcast.net	

Code Adoption

Pursuant to Section 8b(6) of 1972 PA 230 (the Act), to assume responsibility for the administration and enforcement of the act and the state construction code, as defined in Section 2(a)(1)(I) of the Act and as provided for in Section 4(2) of the Act, **a copy of the certified adopted ordinance assuming responsibility for administration and enforcement of the act and the code is attached.**

Please list the code or parts thereof to be enforced.
Mechanical & Plumbing Codes - Building & Electrical Codes are already being administered & Enf.

By checking the boxes below you are certifying the following:

The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce this act and the code and all related acts and rules.

Agency personnel are provided as necessary.

Administrative services are provided.

Plan review services are provided.

Timely field inspection services will be provided.

A Board of Appeals is in place per MCL 125.1514.

Have immediate access to the codes & standards for which you have applied to administer & enforce.

BUILDING OFFICIAL INFORMATION	Name: Bruce Nickel	Registration Number: 01691
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Certification

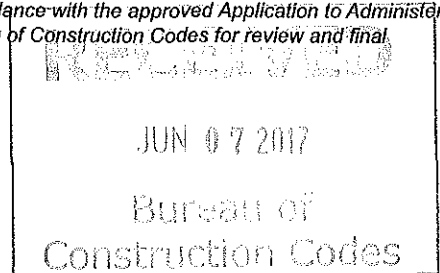
I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge.

Name of Elected Official (Type or Print) Irma David Title Supervisor

Signature of Elected Official *Irma David* Date 5/11/2017

Copies of all ordinances submitted with this application must include clear and visible identification of the governmental subdivision's department of building safety.

The conduct of the administration and enforcement of the Michigan codes shall be performed in accordance with the approved Application to Administer and Enforce and ordinance. Any changes in the approved ordinance must be submitted to the Bureau of Construction Codes for review and final approval prior to implementation by local departments of building safety.



State Construction Code Ordinance

An ordinance to assume responsibility pursuant to Act No. 230 of the Public Acts of Michigan of 1972, as amended, for administration and enforcement of said Act as to those portions of the State Construction Code promulgated thereunder consisting of the Michigan Building Code, the Michigan Residential Code, the Michigan Electrical Code, the Michigan Plumbing Code and the Michigan Mechanical Code; to provide for the designation of an enforcement officials hereunder; to provide for a Township Construction Board of Appeals; to permit the Township Board to set certain fees by Resolution of said Township Board; to provide for sanctions for violations of the aforementioned Act and Codes; and to repeal all conflicting ordinances.

THE TOWNSHIP OF ROLLIN ORDAINS:

SECTION 1. TITLE

This Ordinance shall be known and cited as the Rollin Township State Construction Code Ordinance.

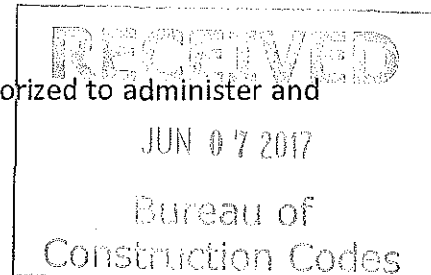
SECTION 2. ASSUMPTION OF ADMINISTRATION AND ENFORCEMENT

The Township of Rollin hereby assumes responsibility pursuant to Act No. 230 of the Public Acts of Michigan of 1972, as amended, for administration and enforcement of said Act as to those portions of the State Construction Code promulgated thereunder consisting of the Michigan Building Code, the Michigan Residential Code, the Michigan Plumbing Code, the Michigan Mechanical Code and the Michigan Electrical Code.

SECTION 3. ENFORCEMENT OFFICIALS

- a. The officials and inspectors listed in subsection (b) of this section, who shall be designated by Resolution of the Township Board, are hereby specifically authorized to investigate violations of the state construction code, serve notices of violation of the state construction code, issue and serve appearance tickets or uniform law citations as authorized by state statute, appear in court or other judicial proceedings to assist in the prosecution of any code violations, prepare cases for prosecution for violations of the state construction code, and perform such other state construction code enforcement duties as may be delegated by the enforcement agency/building official.
- b. The officials and inspectors whose authorities and duties are established in subsection (a) of this section are as follows:

1. The building official and deputy building official are authorized to administer and



enforce the Building Code, Residential Code, Electrical Code, Mechanical Code, and Plumbing Code.

2. The designated building inspector(s) is/are authorized to enforce the Building Code and Residential Code.
3. The designated electrical inspector(s) is/are authorized to enforce the Electrical Code.
4. The designated mechanical inspector(s) is/are authorized to enforce the Mechanical Code.
5. The designated plumbing inspector(s) is/are authorized to enforce the Plumbing Code.

SECTION 4. FEES

The Township Board of the Township of Rollin is authorized to establish by Resolution at any regular public meeting a schedule of fees, rates and charges for the administering of State Construction Code Act, the aforementioned Code sections and this Ordinance, provided that the same are reasonable and bear a reasonable relationship to the cost and expense of such administration and activity. The Township Board shall further have the right to amend the aforementioned Resolution from time to time within the foregoing limits of reasonableness.

SECTION 5. PLANS SPECIFICATION

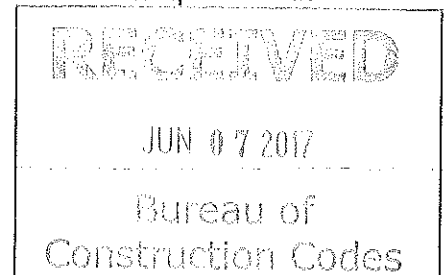
With each application for a building permit, and when required by a designated inspector for enforcement of any provisions of the State Construction Code, two sets of plans and specifications shall be submitted. All plans and specifications shall comply with the provisions of such applicable code and all other applicable state or local regulations.

SECTION 6. CONSTRUCTION BOARD OF APPEALS

- a. *General.* There is established a Construction Board of Appeals (also referred to as a "Building Board of Appeals") of three (3) members appointed by the Township Board as follows:

1. One person who is experienced as a general contractor.
2. One person who is licensed electrician.
3. One person who is a licensed plumber.

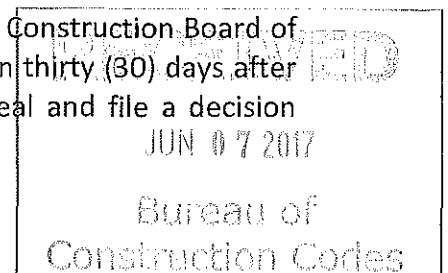
- b. *Tenure of Board.* The current members of the Construction Board of Appeals shall continue to serve until the expiration of their current terms. Thereafter, members shall be appointed for terms of three (3) years.



c. *Duties of the Construction Board of Appeals.* The Construction Board of Appeals shall act as an advisory board to the Township and shall have the following further powers and duties:

1. To provide for reasonable interpretation of the provisions of the Michigan Building Code, the Michigan Residential Code, the Michigan Plumbing Code, the Michigan Mechanical Code and the Michigan Electrical Code.
2. Hear and decide appeals from and review any order, requirement, decision and determination made by the Rollin Township Building Official, except the Board of Appeals shall have no authority relative to interpretation of the administrative provisions of the aforementioned Codes, nor shall the Board have the power to waive the requirements of the Codes except as provided below.
3. Do acts, make decisions, and make such determinations as authorized or directed by Township Ordinance.
4. To grant or approve alternatives from a substantive requirement of the aforementioned Codes if the literal application of the substantive requirement would result in an exceptional, practical difficulty to the applicant, and if both of the following requirements are satisfied:
 - i The performance of the particular item or part of the building or structure with respect to which an alternative is granted shall be adequate for its intended use and shall not substantially deviate from performance required by the Code for that particular item or part for the health, safety and welfare of the people of the Township.
 - ii The specific condition justifying the alternative shall be neither so general nor recurrent in nature as to make an amendment of the Code with respect to the condition reasonably practical or desirable.
5. The Construction Board of Appeals is also assigned with the responsibility for interpreting, hearing appeals, approving alternate methods, and making other designated determinations as described above with respect to all other portions of the Michigan Construction Code administered and enforced by the Township.

d. *Procedure for Appeals.* Appeals from the rulings of any official charged with the enforcement of the aforementioned Codes may be made to said Board within such time as shall be prescribed by the Township Board. The Appellant shall file with the Building Official and with the Township Clerk a notice of appeal specifying the ground therefore and stating the address of the Appellant. The Building Official shall set the matter for hearing and give due notice thereof to all interested parties. The Construction Board of Appeals shall hear said matter and decide the same not later than thirty (30) days after submission of the appeal. Failure by the Board to hear an appeal and file a decision



within the time limit is deemed a denial of the appeal for purposes of instituting a further appeal. The Construction Board of Appeals shall hear said matter and decide the same. Within the limits of its jurisdiction hereinabove described, the Construction Board of Appeals may reverse or affirm, in whole or in part, or may make such order, requirement, decision or determination as in its opinion ought to be made in the premises, and to that end shall have the powers of the official from whom said appeal is taken. The final disposition of such appeal shall be in writing and shall state the grounds therefore and shall be forthwith delivered to the Appellant at his or her last known address. Any person, including the Building Official, may file with the Construction Board of Appeals a request for an interpretation, approval of methods or materials, or any other matter provided for under the powers and duties of the Construction Board of Appeals in the same manner as provided for appeals herein. The Construction Board of Appeals may make such other further procedural rules as shall be necessary to perform its duties and exercise its powers hereunder.

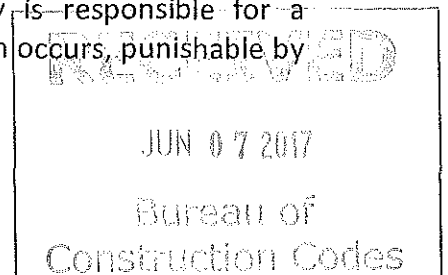
- e. *Decisions of the Construction Board of Appeals - Finality.* An interested person or his authorized agent may appeal a decision of the Construction Board of Appeals to the Michigan State Construction Code Commission in accordance with the provisions of Act No. 230 of the Public Acts of 1972, as amended. In the absence of such an appeal, decisions of the Construction Board of Appeals become effective on the 11th business day after filing of the decision with the Building Official.
- f. *Meeting, Rules of Procedure, Quorum.* The Construction Board of Appeals shall meet at such times as said Board may determine. It may adopt bylaws and rules of procedure covering any matters upon which it may act. The Building Official or such person as he or she shall designate shall serve as secretary of the Construction Board of Appeals and shall keep records of the meetings. The minutes of the meetings shall be in writing, but may state the substance of any matter considered. Any orders shall be set out in full and shall state the grounds of the order in a manner reasonably stated to apprise the Appellant/Petitioner of the basis thereof. The presence of all three (3) members shall be necessary to constitute a quorum. The majority of the members present shall be necessary to decide any question.

SECTION 7. VIOLATIONS AND PENALTIES

A person who violates any provision of the state construction code for which the township has assumed enforcement responsibility is responsible for a municipal civil infraction for each and every day that the violation occurs.

SECTION 8. SANCTIONS

- a. *Civil Infraction.* A person who violates any provision of the State Construction Code for which the Township has assumed enforcement responsibility is responsible for a municipal civil infraction for each and every day that the violation occurs, punishable by



a civil fine determined in accordance with the provisions of the Ordinance 34 the Rollin Township Municipal Civil Infractions Ordinance.

- b. *Other Remedies.* In addition to the foregoing, the Township shall have the right to proceed in any court of competent jurisdiction for the purpose of obtaining an injunction, restraining order, or other appropriate remedy to compel compliance with this Ordinance, 1972 PA 230, as amended and/or the aforementioned Codes. Each day that a violation exists shall constitute a separate offense.

SECTION 9. SEVERABILITY

Should any part of this Ordinance or the aforementioned Codes being administered and enforced hereunder be declared unconstitutional, illegal or of no force and effect by a court of competent jurisdiction, such portion thereof shall not be deemed to affect the validity of any other part or portion thereof.

SECTION 10. PUBLICATION AND EFFECTIVE DATE

Publication of this ordinance shall be made by causing a true copy thereof to be inserted once in a newspaper circulating with the Township of Rollin, which insertion shall be made within thirty (30) days after its passage. This ordinance shall take effect immediately upon its publication.

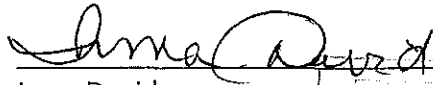
SECTION 11. REPEALER

All ordinances inconsistent with the provisions of this ordinance are hereby repealed.

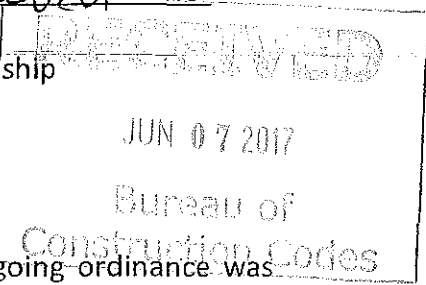
This ordinance was offered for adoption by the Township Board member Bruce Walker and was supported by Township Board member Marcia Willett, the vote being as follows:

AYES: James Sayre, Bruce Walker, Marcia Willett, Denice Combs, Irma David
NAYS: None ABSENT: None

Ordinance declared adopted on May 10, 2017.



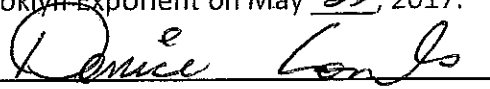
Irma David
Supervisor, Rollin Township



CERTIFICATION OF ADOPTION AND PUBLICATION

I, Denice Combs, the duly elected Township Clerk, certify that the foregoing ordinance was properly enacted by the township board of the Township of Rollin, Lenawee County, Michigan

on May 10, 2017 and that it was published in the Brooklyn Exponent on May 23, 2017.



Denice Combs
Clerk, Rollin Township

RECEIVED
JUN 07 2017
Bureau of
Construction Codes

Resolution No. 2017-16

State Construction Code Ordinance

WHEREAS: Act No. 230 of the Public Acts of Michigan of 1972 as amended provides for Townships to assume responsibility for administration and enforcement of those portions related to those portions of the State Construction Code promulgated thereunder consisting of the Michigan Building Code, the Michigan Residential Code, the Michigan Electrical Code, the Michigan Plumbing Code, and the Michigan Mechanical code, and

WHEREAS: Rollin Township wishes to provide for the designation of enforcement officials thereunder as well as to provide for a Township Construction Board of Appeals, and

WHEREAS: Rollin Township wishes to set fees for this activity, and

WHEREAS: Rollin Township wishes to provide for sanctions for violations of the aforementioned Act and Codes and to repeal all conflicting ordinances, and

WHEREAS: The Township is required to publish a summary of said ordinance in a paper of general circulation in the Township, the Brooklyn Exponent, and

WHEREAS: Publication of this ordinance will be made within 30 days after its passage and the ordinance shall take effect immediately upon its publication.

NOW, THEREFORE, BE IT RESOLVED that The State Construction Code Ordinance be adopted

BE IT FURTHER RESOLVED that existing Ordinance 10 related to the State Construction Code be repealed

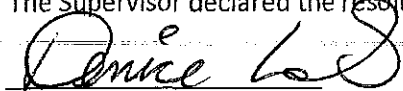
The foregoing resolution offered by Board Member Bruce Walker

Second offered by Board Member Marcia Willett

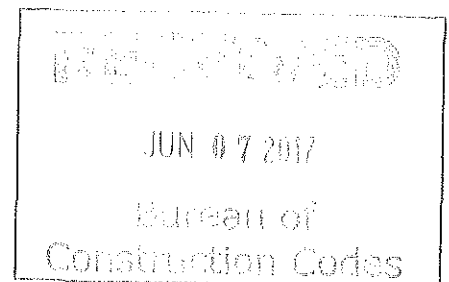
Upon roll call vote the following voted "aye": Jim Sayre, Bruce Walker, Marcia Willett, Denice Combs, Irma David

"Nay": None

The Supervisor declared the resolution adopted on 5/10/2017



Denice Combs, Clerk
Resolution # 2017-16





ROLLIN TOWNSHIP

730 Manitou Rd. P.O. Box 296

Manitou Beach, MI 49253

Phone: (517) 547-7786

Fax: (517) 547-4788

June 16, 2017

Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes / Office of Administrative Services
P.O. Box 30254
Lansing, MI 48909

Dianne Barmes &
Construction Code Commission:

Enclosed is a re-submission of the application and related ordinance to enforce the Mechanical and Plumbing Codes. Also included is information and documentation supporting our ability to provide an effective and professional administration of the codes.

This information is also being emailed as an attachment. Thank you for your assistance on this matter and please let me know if you have any questions.

Sincerely,

Bruce Nickel
Building Official
Office: (517) 547-7786
Cell: (517) [REDACTED]
Email: building.inspector@twp.rollin.mi.us

RECEIVED

JUN 19 2017

Bureau of
Construction Codes

Application Information for Construction Code Commission

Township of Rollin – Lenawee County
Application to Enforce Plumbing & Mechanical Codes
Projected Hearing Date - July 12, 2017

The Township of Rollin is a Lake Recreational and Farming Community located within the Irish Hills recreational activity area, Lenawee County. Rollin Township currently enforces the Michigan Building and Electrical Codes and is making application to also enforce the Michigan Plumbing and Mechanical Codes. Rollin, Rome, Cambridge and Franklin Townships and the Village of Onsted, Lenawee County, have an efficient and effective collaboration between municipalities and inspectors to administer and enforce the respective construction codes.

Reason for Application

The Township of Rollin is making application to enforce the Michigan Plumbing and Mechanical Codes pursuant to Section 8b(6) of 1972 PA230 (the Act), as defined in Section 2(a)(1)(l) of the Act and as provided in Section 4(2) of the Act. The Township would like to include an efficient and effective administration of the Mechanical and Plumbing Codes. Offering this service locally will benefit the property owners and contractors and improve quality, public health and safety.

Program Budget

The estimated annual budget for administration and enforcement of the Plumbing and Mechanical codes with the Township of Rollin is \$16,700 overall, or \$7200 & \$9,500 respectively.

Provided Documents

Permits, inspections, inspection results, correction & violation notices, certificates of occupancies, stop work orders are documented and issued through BS&A Building Department and Field Inspection software and computer equipment. The costs of the field inspection equipment and software are shared in collaboration between Townships.

Fee Schedule

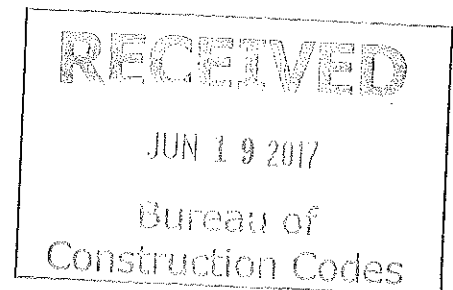
Proposed Plumbing and Mechanical fee schedules are included.

Communications Process

The local units of government, Lenawee County Health Department, Lenawee County Drain and Road Commissions work together and communicate effectively with the Building Departments to insure public health, safety and welfare along with effective and efficient processes.

Governmental and Enforcing Agency Personnel Registration

Included are copies of the enforcing personnel current licenses. Each inspector has at least one back-up in case of an unexpected absence and/or vacation.



Application Information for Construction Code Commission

Township of Rollin – Lenawee County
Application to Enforce Plumbing & Mechanical Codes
Projected Hearing Date - July 12, 2017

Construction Board of Appeals

Included is a form indicating the Construction Board of Appeals member, officers and contact information for the (5) five communities they serve.

Administrative Personnel and Services Provided

Rollin Township Officials, and administrative personnel, insure compliance and maintenance with FOIA, retention schedules, records and documents. The Township uses and maintains building records, documents and paper trails on BS&A Building Department and Field Inspection software systems. This data, related documents, inspection information and drawings are also electronically stored on a backed up server system.

Processes for Establishing Fees and Variance of Code Process

Regular meetings occur to review and assess processes and outstanding code concerns and questions. A mid-year and annual review of revenue and expenditures from each discipline will determine the associated fees.

Agency Personnel

Each inspector has a back-up to maintain an effective, efficient and timely inspection and/or administrative activity in their absence.

Plan Review and Field Inspection Services

All disciplines are covered by licensed inspector and plan reviewer. Our goal is to always provide a professional, thorough, timely and documented plan review and inspection service.

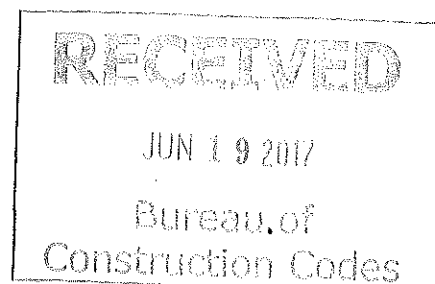
Access to Codes and Standards

We maintain all codes on site and have access to commentaries at one of the five municipalities that work in collaboration with each other. We also have a subscription and access to MADCAD.com for essential codes, commentaries and standards on-line.

The administration and enforcement of 1972 PA230 and the State Construction Code, pursuant to Section 8b(6) of the Act.

This Act provides for functions, commissions, authorizations, rules and codes from which to administer, conduct and enforce the respective codes. Section 8b(6) pertains to the process, requirements and rules for local governments electing to enforce the codes on or after December 28, 1999.

Bruce Nickel
Building Official
Cell: (517) [REDACTED]
Email: building.inspector@twp.rollin.mi.us

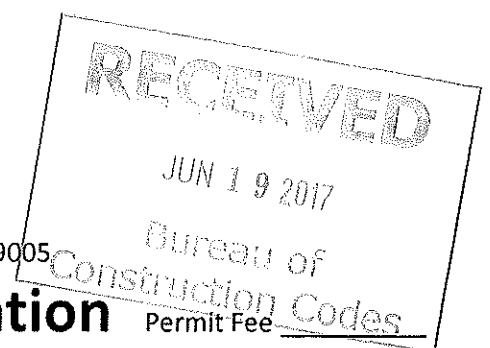


Rollin Township

730 Manitou Rd, P.O. Box 296, Manitou Beach, MI 49253
 Phone: (517) 547-7786 Fax: (517) 547-4788
 www.twp.rollin.mi.us

Thomas Trudeau, Plumbing Inspector (517) 206-9005

Plumbing Permit Application



Provide Detailed Work Description and Where on Site:			
Project Location:			
Address (street no. & name or Tax ID #)		City/Village	County
			Lenawee
State	Zip	Has a Building Permit been obtained for this project?	
MI		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Not Required	
Property Owner Name			
Applicant Information:			
<input type="checkbox"/> Contractor	Name:	Contractor License Number:	Exp. Date:
<input type="checkbox"/> Homeowner			
Address (street no. & name)		City	State Zip
Contact Phone Number		Email address	
Federal Emp. ID Number (or reason for exemption):	Workers Compensation Ins. Carrier (or reason for exemption):	UIA Number (or reason for exemption):	
Name of Master Plumber		Master License Number	Exp. Date
Address (if different from above)		City	State Zip
Type of Project and Inspections:			
<input type="checkbox"/> Single Family Res. <input type="checkbox"/> Commercial <input type="checkbox"/> Other _____		<input type="checkbox"/> New <input type="checkbox"/> Sewer Only <input type="checkbox"/> Water Service Only <input type="checkbox"/> Alteration <input type="checkbox"/> Special Insp. <input type="checkbox"/> Other _____	
Inspections (allow 48 hour inspection notice)			
<input type="checkbox"/> Underground <input type="checkbox"/> Rough <input type="checkbox"/> Shower Pan <input type="checkbox"/> Sewer <input type="checkbox"/> Final <input type="checkbox"/> Special		Total # Insp. _____	
Expiration of Permit:			
Plumbing work shall not commence prior to obtaining the required permit. No work shall be concealed prior to inspection. A permit remains valid as long as a reasonable amount of work progresses and inspections occur over each 6 month period. The permit expiration date is extended with each plumbing inspection. You may call to request an extension.			
Homeowner Affidavit:			
I hereby certify the plumbing work described on this permit application shall be installed by myself and in my own residence in which I occupy. All work shall be installed in accordance with the current State Plumbing Code and shall not be enclosed, covered up, or put into operation until inspected and approved by the Plumbing Inspector. I will cooperate with the Plumbing Inspector and assume responsibility to arrange the necessary inspections.			
Applicant Signature:			
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 residential structure. Violators of Section 23a or subject to civil fines.			
Signature			Date
_____			_____
Signature of Licensee or Homeowner (Homeowner's signature indicates compliance with Homeowner Affidavit above)			

Plumbing Permit Fee Schedule & Information

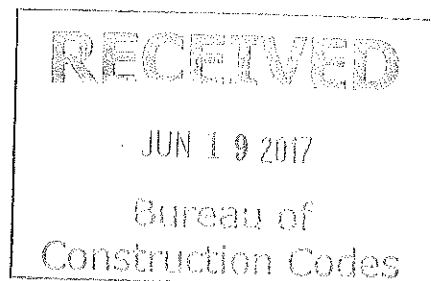
Rollin Township

Rollin Township issues building, electrical, plumbing and mechanical permits. If work for which a permit is issued is not started within six (6) months of being issued, or if the work is abandoned for a period of six (6) months, the permit may lapse and cease to be in effect. In the absence of any inspections over a six (6) month period Rollin Township shall cause the premises to be inspected to ascertain the work status. The respective permit applicant will be assessed a sixty (\$65) dollar inspection fee to reimburse the cost of such status inspection. In the event the permit lapses, any unexpended amounts of the permit fee shall be used to defray related costs. If a permit has lapsed, no further work shall take place until a new permit for the remaining work has been issued in accordance with the Township fee schedule. If the applicant communicates and explains the need for an extension prior to expiration one will be granted.

***PERMIT COSTS ARE BASED ON AN ESTIMATED NUMBER OF INSPECTIONS AND A SIXTY (\$65) DOLLAR PER INSPECTION FEE. ADDITIONAL INSPECTIONS WILL BE CHARGED OVER AND ABOVE THE INITIAL PERMIT FEE AND PAID PRIOR TO FINAL APPROVAL. SITE VISITS WHERE WORK HAS STARTED PRIOR TO THE PERMIT BEING OBTAINED WILL BE CHARGED AS AN INSPECTION. FINAL APPROVAL AND/OR A CERTIFICATE OF OCCUPANCY MUST BE ISSUED PRIOR TO USE OF PERMITTED EQUIPMENT AND/OR AREA. PLEASE ALLOW 2 BUSINESS DAYS FOR THE INSPECTION.**

The below fees are estimates for the initial cost of the Plumbing Permit. The final cost of the permit will be a result of the number of plumbing inspections throughout the project. If a required inspection is not included in the initial cost of the permit it will be added and need to be paid prior to final approval and Certificate of Occupancy being issued. Some inspections may be combined if ready during a single site visit, i.e. shower pan and rough inspections.

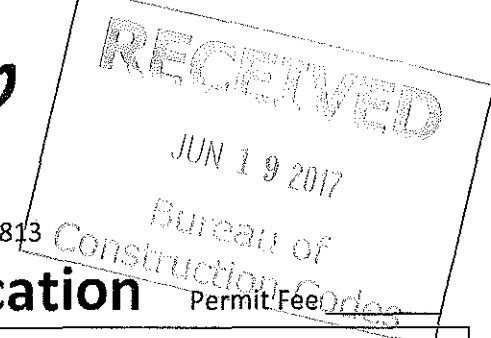
Type of Permit	# of Insp.	Est. Fee \$	Estimated Inspection Types
Administrative Fee (added to all permits)		30	This fee is added to all permits to help cover the admin costs.
New Home (stick)	2-4	130-260	Underground, shower pan, rough, final
New Home (Mod)	2-3	130-200	Underground, rough, final
New Home (HUD)	1-2	65-130	Underground, Final
New Home (HUD in MHP)	1	65	Final
Underground	1	65	Underground may be needed in other projects
Shower Pan	1	65	Leak Test (If applicable to project)
Addition (depends on facilities & fixtures)	2-4	130-260	Underground, shower pan, rough, final (if applicable)
Renovation/Remodel	2-4	130-260	Underground, shower pan, rough, final
Replacement Water Heater	1	65	Final
Special Insp. W/Report	3	195	Site, report, appearance
New or Replacement Sewer	1	65	Rough/Final
New or Replacement Water Service	1	65	Final
Water Softener Install	1	65	Final
Commercial & Industrial	Calc on P.Rev.	65/ Insp	Based on total floor area and number of inspections determined in the plan review.
Additional Inspections	1	65	Added when going over allowed/paid for # of insp.
Plan Reviews		130	Residential > 3500 SF & Commercial
When the permitted area of the new construction or renovation exceeds 4000 Sq.Ft., 25% of the inspection fee portion is added for each additional 1000 Sq.Ft.			



Rollin Township

730 Manitou Rd, P.O. Box 296, Manitou Beach, MI 49253
 Phone: (517) 547-7786 Fax: (517) 547-4788
 www.twp.rollin.mi.us

James Wiech, Mechanical Inspector (517) 937-2813



Mechanical Permit Application

Provide Detailed Work Description and location on Site:			
Project Location:			
Address (street no. & name or Tax ID #)		City/Village	County
			Lenawee
State	Zip	Has a Building Permit been obtained for this project?	
MI		<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Not Required	
Property Owner Name			
Applicant Information:			
<input type="checkbox"/> Contractor	Name:	Contractor License Number:	Exp. Date:
<input type="checkbox"/> Homeowner			
Address (street no. & name)		City	State
			Zip
Contact Phone Number		Email address	
Federal Emp. ID Number (or reason for exemption):		Workers Compensation Ins. Carrier (or reason for exemption):	UIA Number (or reason for exemption):
Type of Project and Inspections:			
<input type="checkbox"/> Single Family Res. <input type="checkbox"/> Commercial <input type="checkbox"/> Other		<input type="checkbox"/> New <input type="checkbox"/> Addition <input type="checkbox"/> LP Tank <input type="checkbox"/> Modular & HUD <input type="checkbox"/> Alteration <input type="checkbox"/> Special Insp. <input type="checkbox"/> Other	
Inspections (allow 48 hour inspection notice)			
<input type="checkbox"/> Underground <input type="checkbox"/> Rough <input type="checkbox"/> Final <input type="checkbox"/> AC/Refrigeration <input type="checkbox"/> Final <input type="checkbox"/> Special <input type="checkbox"/> Gas Line <input type="checkbox"/> Heating Appliance <input type="checkbox"/> Fire Suppression <input type="checkbox"/> Exhaust System <input type="checkbox"/> Fireplace <input type="checkbox"/> Pressure Test <input type="checkbox"/> Air Handler			
			Total # Insp: _____
<input type="checkbox"/> Residential heating systems greater than 375,000 BTU's		<input type="checkbox"/> Conditioned area greater than 3,500 SF	
If plans and plan review are required they shall be prepared by or under direct supervision of an architect or engineer licensed pursuant to 19080 PA 299 and shall bear the architect's or engineer's seal or signature.			
Expiration of Permit:			
Mechanical work shall not commence prior to obtaining the required permit. No work shall be concealed prior to inspection. A permit remains valid as long as a reasonable amount of work progresses and inspections occur over each 6 month period. The permit expiration date is extended 6 months with each mechanical inspection. You may call to request an extension.			
Homeowner Affidavit:			
I hereby certify the mechanical work described on this permit application shall be installed by myself and in my own residence in which I occupy. All work shall be installed in accordance with the current State Mechanical Code and shall not be enclosed, covered up, or put into operation until inspected and approved by the Mechanical Inspector. I will cooperate with the Mechanical Inspector and assume responsibility to arrange the necessary inspections.			
Applicant Signature:			
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 residential structure. Violators of Section 23a or subject to civil fines.			
Signature			Date
_____			_____
Signature of Licensee or Homeowner (Homeowner's signature indicates compliance with Homeowner Affidavit above)			

Mechanical Permit Fee Schedule & Information

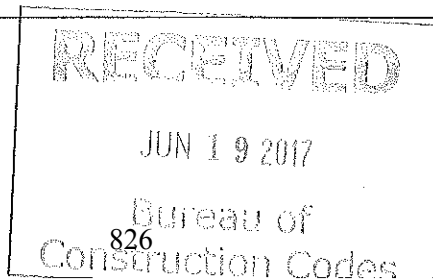
Rollin Township

Rollin Township issues building, electrical, plumbing and mechanical permits. If work for which a permit is issued is not started within six (6) months of being issued, or if the work is abandoned for a period of six (6) months, the permit may lapse and cease to be in effect. In the absence of any inspections over a six (6) month period Rollin Township shall cause the premises to be inspected to ascertain the work status. The respective permit applicant will be assessed a sixty (\$65) dollar inspection fee to reimburse the cost of such status inspection. In the event the permit lapses, any unexpended amounts of the permit fee shall be used to defray related costs. If a permit has lapsed, no further work shall take place until a new permit for the remaining work has been issued in accordance with the Township fee schedule. If the applicant communicates and explains the need for an extension prior to expiration one will be granted.

***PERMIT COSTS ARE BASED ON AN ESTIMATED NUMBER OF INSPECTIONS AND A SIXTY (\$65) DOLLAR PER INSPECTION FEE. ADDITIONAL INSPECTIONS WILL BE CHARGED OVER AND ABOVE THE INITIAL PERMIT FEE AND PAID PRIOR TO FINAL APPROVAL. SITE VISITS WHERE WORK HAS STARTED PRIOR TO THE PERMIT BEING OBTAINED WILL BE CHARGED AS AN INSPECTION. FINAL APPROVAL AND/OR A CERTIFICATE OF OCCUPANCY MUST BE ISSUED PRIOR TO USE OF PERMITTED EQUIPMENT AND/OR AREA. PLEASE ALLOW 2 BUSINESS DAYS FOR THE INSPECTION.**

The below fees are estimates for the initial cost of the Mechanical Permit. The final cost of the permit will be a result of the number of mechanical inspections throughout the project. If a required inspection is not included in the initial cost of the permit it will be added and need to be paid prior to final approval and Certificate of Occupancy being issued. Some inspections may be combined if ready during a single site visit, i.e. gas pressure check and rough.

Type of Permit	# of Insp.	Est. Fee \$	Estimated Inspection Types
Administrative Fee (added to all permits)		30	This fee is added to all permits to help cover the admin costs.
New Home (stick)	2	130	Rough, Final
New Home (Mod)	2	130	Rough, Final
New Home (HUD)	1	65	Final
W/Underground or Gas Pressure	1 ea	65	Underground or Pressure
Additions	2	130	Rough, Final
Renovation/Remodel	2	130	Rough, Final
Replacement Furnace	1	65	Final
New Heating Appliance / AC	1	65	Final (may need underground and/or gas pressure)
Fireplace Only	2	130	Rough, Final (may include gas pressure)
Gas Piping	1	65	Gas Pressure (may need underground)
Special Insp. W/Report	3	195	Site Insp and Report
Outdoor Hydronic Heating	2	130	Underground, Final
Duct System / Hydronic Piping	1	65	Rough or Pressure Check
Pool Boiler/ Heater	1	65	Final (may also need underground or gas pressure)
Hood/Exhaust System	1	65	Final
Fire Suppression System	2	130	Rough, Final
Commercial & Industrial	Calc on P.Rev.	65/ Insp	Based on total floor area and number of inspections determined in the plan review.
Additional Inspections	1	65	Added when going over allowed/paid for # of insp.
Plan Reviews		130	Commercial and Residential over 3500 SqFt
When the permitted area of the new construction or renovation exceeds 4000 Sq.Ft., 25% of the inspection fee portion is added for each additional 1000 Sq.Ft.			



7/2017

Construction Board of Appeals

The following are approved Construction Board of Appeals members for:

Cambridge Township, Lenawee County
9990 W. M-50, P.O. Box 417
Onsted, MI 49265
(517) 467-2104

Franklin Township, Lenawee County
3922 Monroe Rd., P.O. Box 101
Tipton, MI 49287
(517) 431-2320

Rome Township, Lenawee County
9344 Forrister Rd.
Adrian, MI 49221
(517) 263-3128 (Supervisor)

Village of Onsted
108 S. Main St.
Onsted, MI 49265
(517) 467-4618

Rollin Township, Lenawee County
730 Manitou Rd, P.O. Box 296
Manitou Beach, MI 49253
(517) 547-7786

Terms - 2 year terms renewed on February 15, 2017 (may want to consider approval of a longer term)

Officers - Elected on February 27, 2017

Chairman - Todd Dailey
Vice-Chair - Wade Pelham
Secretary - Jason Hess

Todd Dailey - Architect/Engineer

[REDACTED]
Onsted, MI 49265
(517) [REDACTED]
Email: [REDACTED]@me.com

Jason Hess - Commercial Contractor

[REDACTED]
Tipton, MI 49287
(517) [REDACTED]
Email: jason@klcompanies.com

Steve Hammill- Electrical Contractor

[REDACTED]
Addison, MI 49220
(517) [REDACTED]
Email: [REDACTED]@hotmail.com

Vernon Fry - Mechanical Systems Engineer

[REDACTED]
Tipton, MI 49287
(517) [REDACTED]
Email: [REDACTED]@tc3net.com

Wade Pelham - Residential Builder

[REDACTED]
Onsted, MI 49265
(517) [REDACTED]
Email: [REDACTED]@frontiernet.net

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JUN 19 2017

Bureau of
Construction Codes

RICK SNYDER
GOVERNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY BUILDING OFFICIAL
BUILDING INSPECTOR
PLAN REVIEWER

BRUCE W NICKEL

████████████████████
ONSTED MI 49265

REGISTRATION NO.

EXPIRATION DATE

THIS DOCUMENT IS DULY
ISSUED UNDER THE LAWS OF
THE STATE OF MICHIGAN

CC-149 (Rev. 9/06) 001691

09/16/18

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JUN 19 2017

Bureau of
Construction Codes

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORIES

PLUMBING INSPECTOR
PLAN REVIEWER

THOMAS R TRUDEAU

[REDACTED]
BROOKLYN MI 49230

REGISTRATION NO.

005886

EXPIRATION DATE

09/16/18

RECEIVED
JUN 19 2017
Bureau of
Construction Codes

RICK SNYDER
GOVERNOR

MICHIGAN DEPARTMENT OF LICENSING AND REGULATORY
BUREAU OF CONSTRUCTION CODES

REGISTERED CODE OFFICIAL AND INSPECTOR

CATEGORY MECHANICAL INSPECTOR
PLAN REVIEWER

JAMES M WIECH

[REDACTED]
JACKSON MI 49201

REGISTRATION NO.

005695

EXPIRATION DATE

09/16/18

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ISSUED UNDER THE LAWS OF
THE STATE OF MICHIGAN

BC-C-149 (Rev. 9/06)

I

CERTIFICATE OF OCCUPANCY

Township of Rollin

Lenawee County

STATE OF MICHIGAN

This is to certify that the occupant of the structure under the Certificate of Occupancy application,

OP17-003

3411 ROUND LAKE HWY

issued by the Inspection Division, and having complied with the requirements of the ordinance, permission is hereby granted to occupy the said premises as set forth in the corresponding application under which the permits were granted, so far as completed.

Building Code in Effect: **2015 MRC**

Construction Type: **5-B**

Building permit Number: **PB16-054**

Use Group: **R-3**

Occupancy Load: **0**

Sprinkler System Required? **N**

Installed? **N**

Prop. ID Number **RL0-790-0090-00**

Work Description: **Construct new single family dwelling. 1521 Total SF Finished Floor, 976 SF 1st floor on crawl, 545 SF 2nd floor, 130 SF covered rear patio, 75 SF cover front deck.**

Owner: **PROVOST, CHARLES L**

MANITOU BEACH

MI

49253

Stipulations:

Certificate of Occupancy Issue Date: **06/14/2017**

Signed in Rollin Township, Michigan

06/17/17

NON-TRANSFERABLE

RECEIVED

JUN 19 2017

Bureau of



Bruce Nickel - Building Official



STATE OF MICHIGAN

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
LANSING

RICK SNYDER
GOVERNOR

SHELLY EDGERTON
DIRECTOR

April 11, 2017

Michael E. Reilly, Building/Zoning Administrator
City of Fenton
301 South Leroy Street
Fenton, MI 8430-2196

Dear Mr. Reilly:

The City of Fenton Application to Administer and Enforce was received by the Bureau of Construction Codes on Friday, April 7, 2017. You will be notified as to the date, time, and place of the Construction Codes Commission where your application will be reviewed. You or your representative, and any enforcing agency personnel you choose should plan to be in attendance at that meeting to respond to Commission inquiries regarding your application.

Issues to be addressed by the Commission may include, but not be limited to, the following:

- Reason for application
- Your proposed program budget
- Proposed public facing documents i.e.:
 - o Permits, correction/violation notices, certificates of occupancy, stop work orders, etc.
- Drafts of proposed fees for permits, plan reviews, inspections, etc.
- Communication process with enforcing agencies
- Registration of governmental subdivision and enforcing agency personnel
- Board of Appeal members per MCL 125.1514
- Administrative personnel and services provided i.e.:
 - o FOIA, retention schedule, location of official records/documents, etc.
- Processes for establishing fees and variance of code process
- Agency personnel are provided as necessary.
- Plan review services are provided and timely field inspection services will be provided.
- Access to the codes & standards for which you have applied to administer & enforce.
- Your understanding of the Administration and enforcement of 1972 PA 230 (the Act) and the state construction code, pursuant to Section 8b(6) of the Act.

If you have questions regarding this issue please feel free to contact me at (517) 241-6479.

Sincerely,

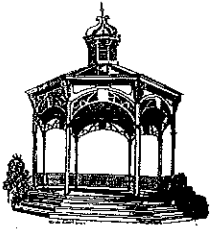
Dianne Barmes

Dianne Barmes, Administrative Manager
Licensing and Complaints Division

c: BCC Administrative Services Division

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www.michigan.gov/bcc • Telephone (517) 241-9302 • Fax (517) 241-9570



City of Fenton

301 South Leroy Street . Fenton, Michigan 48430-2196 . (810) 629-2261 . FAX (810) 629-2004

April 5, 2017

Ms. Diane Barmes
Bureau of Construction Codes/Licensing Division
PO Box 30254
Lansing, MI 48909

RE: Application to Administer and Enforce, City of Fenton, MI

Dear Ms. Barmes:

Enclosed please find our application and ordinance amendment to enforce the State of Michigan Electrical, Mechanical and Plumbing Codes. Presently, the City of Fenton is enforcing the State Building/Residential Codes. I assume the information provided is complete and if further documentation is required, please contact me.

When this application is placed on the Construction Codes agenda, please notify me of the meeting as I will be in attendance. If you have any questions or comments, please contact me, through my office, at 810-433-7907.

Sincerely,

Michael E. Reilly
Building/Zoning Administrator
City of Fenton

RECEIVED

APR 07 2017

OFFICE OF
ADMINISTRATIVE SERVICES

Enclosure: Application to Administer and Enforce
Fenton Ordinance 702

Application to Administer and Enforce
 Michigan Department of Licensing and Regulatory Affairs
 Bureau of Construction Codes / Office of Administrative Services
 P.O. Box 30254, Lansing, MI 48909
 517-335-2972
 E-Mail: bccoas@michigan.gov
www.michigan.gov/bcc

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

NAME OF GOVERNMENTAL SUBDIVISION City of Fenton		CONTACT PERSON (Elected Official) Mayor Sue Osborn	
ADDRESS (Street Number and Name) 301 S. Leroy Street			
CITY Fenton	COUNTY Genesee	STATE MI	ZIP CODE 48430
TELEPHONE NUMBER (Include Area Code) (810) 629-2261	FAX NUMBER (Include Area Code) (810) 629-2004	E-MAIL ADDRESS sosborn@cityoffenton.org	

Code Adoption

Pursuant to Section 8b(6) of 1972 PA 230 (the Act), to assume responsibility for the administration and enforcement of the act and the state construction code, as defined in Section 2(a)(1)(I) of the Act and as provided for in Section 4(2) of the Act, a copy of the certified adopted ordinance assuming responsibility for administration and enforcement of the act and the code is attached.

 Please list the code or parts thereof to be enforced.
 State of Michigan Electrical, Mechanical and Plumbing Codes, as adopted

By checking the boxes below you are certifying the following:

The governmental subdivision and the enforcing agency are qualified by experience or training to administer and enforce this act and the code and all related acts and rules.

Agency personnel are provided as necessary.

Administrative services are provided.

Plan review services are provided.

Timely field inspection services will be provided.

A Board of Appeals is in place per MCL 125.1514.

Have immediate access to the codes & standards for which you have applied to administer & enforce.

RECEIVED

APR 07 2017

OFFICE OF
ADMINISTRATIVE SERVICES

BUILDING OFFICIAL INFORMATION	Name: Michael E. Reilly	Registration Number: 001573
--------------------------------------	-------------------------	-----------------------------

Certification

I certify the information given in this application to administer and enforce is true and accurate to the best of my knowledge.

Name of Elected Official (Type or Print) Sue Osborn Title Mayor

Signature of Elected Official *Sue Osborn* Date 3-27-17

Copies of all ordinances submitted with this application must include clear and visible identification of the governmental subdivision's department of building safety.

The conduct of the administration and enforcement of the Michigan codes shall be performed in accordance with the approved Application to Administer and Enforce and ordinance. Any changes in the approved ordinance must be submitted to the Bureau of Construction Codes for review and final approval prior to implementation by local departments of building safety.

**CITY OF FENTON
ORDINANCE NO. 702
TO AMEND THE CITY OF FENTON CODE OF ORDINANCES**

THE CITY OF FENTON ORDAINS:

SECTION 1: An ordinance to amend the Fenton Code of Ordinances, by amending and repealing sections of such Code, being Ordinances No. 494, 538, 555, 628 of the City of Fenton.

SECTION 2: That Sec. 6-16 of the Fenton Code of Ordinances, is hereby amended to read as follows:

Sec. 6-16. Purpose.

The Purpose of this article is to provide for the enforcement of the Michigan Building, Electrical, Mechanical and Plumbing Codes pursuant to the provisions of the State Construction Code Act, 1972 PA 230, as amended, and to designate an enforcing agency to discharge the responsibility of the City of Fenton under that Act.

SECTION 3: That Sec. 6-17 of the Fenton Code of Ordinances, is hereby amended to read as follows:

Sec. 6-17. Agency Designated.

Pursuant to the provisions of the Michigan Building, Electrical, Mechanical and Plumbing Codes, in accordance with the State Construction Code Act, 1972 PA 230, the Building Official of the City of Fenton is hereby designated as the enforcing agency to discharge the responsibility of the City of Fenton under 1972 PA 230. The City of Fenton assumes responsibility for the administration and enforcement of said Act throughout its corporate limits.

SECTION 4: All ordinances or parts of ordinances in conflict or inconsistent with the provisions of this Ordinance, including the following sections of the Fenton Code of Ordinances, are hereby repealed:

Section 6-16 Purpose
Section 6-17 Agency Designated

SECTION 5: Prior charges. Any violation charged before the effective date of this Ordinance under an ordinance provision repealed by this Ordinance shall continue under the ordinance provision under which the violation was charged.

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APR 07 2017

OFFICE OF
ADMINISTRATIVE SERVICES

SECTION 6: The city manager is directed to cause a supplement to the Fenton Code of Ordinances be prepared in accordance with Sec. 1-7 of the Fenton Code of Ordinances.

SECTION 7: The City of Fenton Clerk shall publish this Ordinance in the manner provided by law and make complete copies available to the public at the office of the Clerk for inspection and distribution.

SECTION 8: Validity and severability. If a court of competent jurisdiction declares any provision of this Ordinance to be unenforceable, in whole or in part, such declaration shall only affect the provision held to be unenforceable and shall not effect any other part or provision; provided that if a court of competent jurisdiction declares a penalty provision to exceed the authority of the City, the penalty shall be construed as the maximum penalty that is determined by the court to be within the authority of the City to impose.

SECTION 9: This Ordinance shall take effect 30 days after publication as required by law, or as otherwise provided in the Charter.

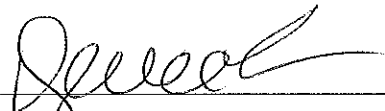
At a regular meeting of the City Council held on the 20th day of March, 2017, it was moved by Lockwood and supported by Grossmeyer that this Ordinance No. 702 be introduced. Motion carried.

At a regular meeting of the City Council held on the 27th day of March, 2017, it was moved by McDermott and supported by Grossmeyer that this Ordinance No. 702 be enacted. Motion carried.

ORDINANCE DECLARED ENACTED.

CERTIFICATION

I certify that this Ordinance was adopted by the City Council of the City of Fenton at a regular meeting of the City Council held on March 27, 2017 and published in the *Tri-County Times*, a newspaper of general circulation in the City of Fenton, on April 2, 2017.



Renee Wilson, City Clerk

PUBLISHED: April 2, 2017

EFFECTIVE: April 26, 2017

RECEIVED

APR 07 2017

OFFICE OF
ADMINISTRATIVE SERVICES

Application for Construction Code Appeal
 Michigan Department of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 P.O. Box 30255, Lansing, MI 48909
 517-241-9303
 www.michigan.gov/bcc

141/116/131/99

Agency Use Only

Application Fee: \$500.00

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

Note: The applicant is responsible for all fees applicable to this application.

CODE UNDER WHICH APPEAL IS SOUGHT			
<input checked="" type="checkbox"/> Building (141)	<input type="checkbox"/> Electrical (116)	<input type="checkbox"/> Mechanical (131)	<input type="checkbox"/> Plumbing (99)

APPLICANT (Note: All correspondence will be sent to this address)				
NAME OF COMPANY Integrated Design Solutions, LLC				
APPLICANT NAME Brandon Sundberg				TELEPHONE NUMBER (Include Area Code) (248) 823-2133
ADDRESS 1441 W. Long Lake Rd., Ste. 200	CITY Troy	STATE MI	ZIP CODE 48098	FAX NUMBER (Include Area Code) (248) 823-2200

Instructions for Application for Construction Code Appeal

Facility Information: Provide all information requested.

Building Data: Provide all information requested from the building permit or plan review.

Permit Holder: Provide the information requested for the entity named on the permit.

Building Owner: Provide the information requested for the entity that owns the building, which is the subject of the appeal.

Building Permit Authority: Provide all information requested for the enforcing agency.

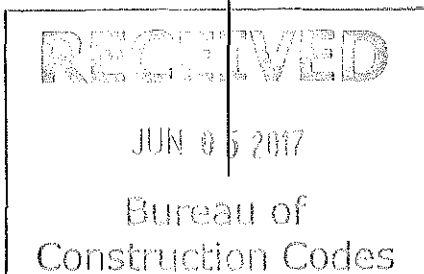
Summary of Appeal: Code; provide the code under which an appeal is sought. Code Section(s); provide the code section(s) that are the subject of the appeal. Desired Relief; describe the remedy being sought. Basis of Appeal; provide a brief statement why the requested remedy should be granted.

Note: If the decision being appealed is that of a local Board of Appeals, this application and the filing fee must be received in our office within 10 business days of the filing of the decision of the local board of appeals in accordance with Section 16 of 1972 PA 230.

U.S. Postal Service
 MI Dept. of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 (Address to appropriate division-
 Electrical Division, Mechanical Division
 or Plumbing Division
 Please address Building appeals to Plan
 Review Division)
 P.O. Box 30255
 Lansing, MI 48909

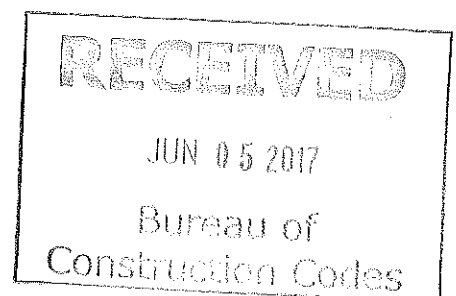
Courier Other Than U.S. Postal Service
 MI Dept. of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 (Address to appropriate division-Electrical
 Division, Mechanical Division or Plumbing
 Division
 Please address Building appeals to Plan
 Review Division)
 1st Floor Ottawa Bldg.
 611 W. Ottawa St.
 Lansing, MI 48933

Validation Area



TransInfo:141 22195866-1 05/31/17
 Chk#: 11623 Amt: \$500.00
 ID: INTEGRATED DESIGN SOLUTIONS LLC

FACILITY INFORMATION				
FACILITY NAME Greenhills School			ADDRESS 850 Greenhills Dr.	
NAME OF CITY, VILLAGE OR TOWNSHIP IN WHICH FACILITY IS LOCATED <input checked="" type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Township of: Ann Arbor			COUNTY Washtenaw	
BUILDING DATA				
GROSS FLOOR AREA <input type="checkbox"/> New Building <input type="checkbox"/> Addition <input checked="" type="checkbox"/> Alteration 6714 sf <input type="checkbox"/> Repair				
CLASSIFICATION PER BUILDING CODE Building Use <u>E</u> Construction Type <u>IV-B</u> No. of Occupants <u>existing</u> Area/Floor <u>existing</u> No. of Floors <u>2</u>				
PERMIT HOLDER				
NAME (Company or Individual) Greenhills School		CONTACT PERSON John Nickel		TELEPHONE NUMBER (Include Area Code) (734) 205-4059
ADDRESS 850 Greenhills Dr.	CITY Ann Arbor	STATE MI	ZIP CODE 48105	FAX NUMBER (Include Area Code) (734) 769-5029
BUILDING OWNER				
NAME (Company or Individual) Greenhills School		CONTACT PERSON John Nickel		TELEPHONE NUMBER (Include Area Code) (734) 205-4059
ADDRESS 850 Greenhills Dr.	CITY Ann Arbor	STATE MI	ZIP CODE 48105	FAX NUMBER (Include Area Code) (734) 769-5029
BUILDING PERMIT AUTHORITY				
ENFORCING AGENCY State of Michigan		BUILDING OFFICIAL NAME Bureau of Construction Codes		TELEPHONE NUMBER (Include Area Code) (517) 241-9328
ADDRESS PO Box 30255	CITY Lansing	STATE MI	ZIP CODE 48909	FAX NUMBER (Include Area Code)
SUMMARY OF APPEAL				
CODE SECTION(S) 2012 Michigan Building Code Sections 1009.15, 1009.7, 1108.2.2 <input checked="" type="checkbox"/>		Provide copies of the following as appropriate:		
DESIRED RELIEF (State Briefly) See attachments		<input type="checkbox"/> Statement of Facts and Reasoning		
BASIS OF APPEAL (State Briefly) See attachments		<input type="checkbox"/> Copy of Enforcing Agency Determination		
		<input type="checkbox"/> Supporting Material		
		<input type="checkbox"/> Copy of Decision of Local Board of Appeals		
		<input type="checkbox"/> Transcript of Local Board of Appeals Hearing		
APPLICANT SIGNATURE <i>Brandon Smith</i>			DATE 5/26/17	





STATE OF MICHIGAN

RICK SNYDER
GOVERNOR

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

SHELLY EDGERTON
DIRECTOR

June 13, 2017

John Nickel, Applicant
Greenhills School
850 Greenhills Drive
Ann Arbor, MI 48105

jnickel@greenhillsschool.org

PROJECT #: PR2017BCC-000262

**850 GREENHILLS DRIVE
ANN ARBOR, MI
WASHTENAW COUNTY**

Dear Mr. Nickel:

This project has been reviewed for compliance with the State of Michigan Construction Code.

2012 Michigan Building Code - James Greene (517) 241-9307

1. MBC, 1009.15 – Stairs shall have handrails on each side.
2. MBC, 1009.7 – Raised bench seating levels shall have rise and runs per the stair code. The use of platform seating levels is not covered in the code sections so the base of review is for the levels to be a monumental stair.
3. MBC, 1108.2.2 – Provide wheelchair spaces as required at raised bench seating area.

The plan review is denied based on the above plan review comments.

Items #1009.15 and 1009.7 are issues that can be appealed to the Construction Code Appeals Item #1108.2.2 is subject for a Barrier Free Design Rule Exception.

Please reference the above PROJECT NUMBER on future correspondence, addenda, blueprints, etc., concerning this project and notify any other architect/engineer, company, subcontractors, etc. involved.

Please check out our website at <https://aca3.accela.com/lara> for faster processing time using on-line submissions.

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John Nickel
Page 2
June 13, 2017

If you have questions, plan reviewers can be contacted directly or call our office at (517) 241-9328. Additionally, plan review statuses can be obtained and future reviews can be applied for on the Bureau's website at www.michigan.gov/bcc and clicking Online Licensing/Permitting.

Sincerely,
Signed and Filed on: June 13, 2017

James Greene, Plan Reviewer
Permits & Plan Review Division

JG/kc
cc: BCC - Building Division(s)

May 26, 2017

Application for Construction Code Appeal
 Michigan Department of Licensing & Regulatory Affairs
 Bureau of Construction Codes
 P.O. Box 30255
 Lansing, MI 48909

Project Name: Greenhills School
 Renovation Phase 1
BCC Project No. PR2017BCC-000262
 IDS Project No. 16167-1000

To whom it may concern:

In response to BCC Plan Review comments dated March 1, 2017, Greenhills School requests clarifications to the code as indicated in the following narrative.

The School's library (AKA Information Commons) can be entered from two levels; the main level and lower level. The difference in elevation between the two levels is 5'-3". Access to the Information Commons' lower level is from two sets of stairs inside the space or from an accessible ramp in the Corridor outside the Information Commons (refer to Drawings CI-1 and CI-2).

Egress from inside the Information Commons is through double doors at the main level and two single doors to the exterior at the lower level.

Modifications planned for the Information Commons include reconfiguring the Computer Lab at the main level, adding a Reception at the main level and reconfiguring an Office and Multi-Media Lab into a Learning Center on the lower level. Two new stairs with a tiered platform between the stairs permits communication between the two levels inside the Information Commons.

Item No. 1: Michigan Building Code, Section 1009.15 Handrails
 Plan Review Comment: "Stairs shall have handrails on each side"

Response: The planned stairs are monumental and are not required (refer to Drawing CI-2). If the stairs were not included in the design, code-compliant egress at each level would be maintained through existing exits. The function of the stairs is for communication between the main and lower levels inside the Information Commons only. Therefore, they are not *stairways* and not considered part of the *means of egress*. During an emergency, occupants on the lower level can egress directly outside at two Exits and the occupants on the upper level can egress from the space to an Exit-sign-defined *Egress Path*. Per Section 1012.9, a single handrail is only required along the most direct path of egress travel for monumental stairs. We request the stairs be defined as monumental; requiring a single handrail per Section 1012.9.

Item No. 2: Michigan Building Code, Section 1009.7 Stair Treads and Risers
 Plan Review Comment: "Raised bench seating levels shall be accessed by a stairway"

Response: Section 1009.7 defines requirements for stair treads and risers. Though applicable to the monumental stairs (each meet the requirements of that Section), it is unclear how this Section is applicable to the project's tiered platform (Refer to Drawing CI-2 Perspectives). There are no Code requirements for accessing a tiered platform via *stairways*. The design of the tiered platform does not include *fixed seating*. But, the monumental stairs do provide access at each end of the tiered platform. Additionally, the occupants can ingress/egress from the upper and lower levels of the tiered platform. We request the tiered platform not be defined as stair treads and risers as defined in Section 1009.7. We further request, without the inclusion of *fixed seating*, the tiered platform not be defined as "raised bench seating".

5211 cascade road se, ste. 300
 grand rapids, mi 49546

1441 w. long lake road, ste. 200
 troy, mi 48098

248-823-2100 www.ids-troy.com

INTEGRATED design SOLUTIONS
 architecture engineering interiors & technology

Item No. 3: Michigan Building Code, Section 1108.2.2 Wheelchair Spaces
Plan Review Comment: "Provide wheelchair spaces as required at raised bench seating area"

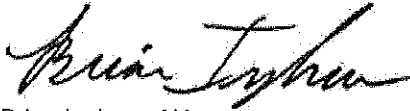
Response: The tiered platform area is not intended to view an event. The designed intent of the tiered platform is for socializing, studying, working and relaxing similar to areas on the lower level of the Information Commons. Therefore, it does not meet the definition of an *Assembly area* as referenced in Sections 1108.2 and 1028. The design of the tiered platform does provide *accessible* floor space at the upper and lower levels adjacent to the tiered platform. We request the tiered platform not be defined as an *assembly area* and wheelchair spaces not be required.

Conclusion

We trust we have clearly documented the design intent of the tiered platform and provided proper responses to justify its design. If the Board takes exception to any or all of the above responses, we will be happy to work with the Board to provide a safe and code-compliant design.

Sincerely,

Integrated Design Solutions, LLC



Brian Ingham, AIA
Architecture

cc: File

F:\2016\16167\1000\Corr\Construction\ltr003.docx



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

SHELLY EDGERTON
DIRECTOR

March 1, 2017

Mr. John Nickel, Applicant
Greenhills School
850 Greenhills Drive
Ann Arbor, MI 48105

jnickel@greenhillsschool.org

PROJECT #: PR2017BCC-000262

**850 GREENHILLS DR
ANN ARBOR, MI
WASHTENAW COUNTY**

Dear Mr. Nickel:

This project has been reviewed for compliance with the State of Michigan Construction Code.

2012 Michigan Building Code - James Greene (517) 241-9307

1. MBC, 1009.15 – Stairs shall have handrails on each side.
2. MBC, 1009.7 – Raised bench seating levels shall be accessed by a stairway.
3. MBC, 1108.2.2 – Provide wheelchair spaces as required at raised bench seating area.

Provide two (2) complete sets of construction documents incorporating any necessary changes in response to concerns stated by the plan reviewer. Once appropriate responses are received and reviewed, the approval process will proceed.

2014 Michigan Electrical Code - Jon Marihugh (517) 241-9369

1. NEC, Article 760 - The electrical plan review regarding the fire alarm system is limited to the wiring method.

This electrical review is approved contingent upon the enclosed comments and field inspection. Please do not respond to these comments unless changes occur to the approved design that require resubmittal or as requested by the field inspector.

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www.michigan.gov/bcc • Telephone (517) 241-9328 • Fax (517) 241-9308

John Nickel
Page 2
March 1, 2017

2012 Michigan Mechanical Code - Kevin Matteson (517) 373-6347

This mechanical review is approved contingent upon the field inspection.

2012 Michigan Plumbing Code - Peter Ingalls (517) 241-9350

This plumbing review is approved contingent upon the field inspection.

Please reference the above PROJECT NUMBER on future correspondence, addenda, blueprints, etc., concerning this project and notify any other architect/engineer, company, subcontractors, etc. involved.

Please check out our website at <https://aca3.accela.com/lara> for faster processing time using on-line submissions.

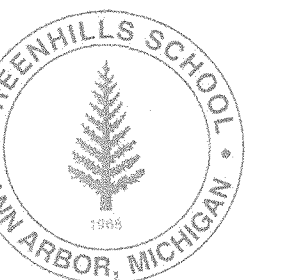
If you have questions, plan reviewers can be contacted directly or call our office at (517) 241-9328. Additionally, plan review statuses can be obtained and future reviews can be applied for on the Bureau's website at www.michigan.gov/bcc and clicking Online Licensing/Permitting.

Sincerely,
Signed and Filed on: March 1, 2017

James Greene, Plan Reviewer
Permits & Plan Review Division

JG/kc

cc: BCC - Building, Electrical, Mechanical, and Plumbing Division(s)

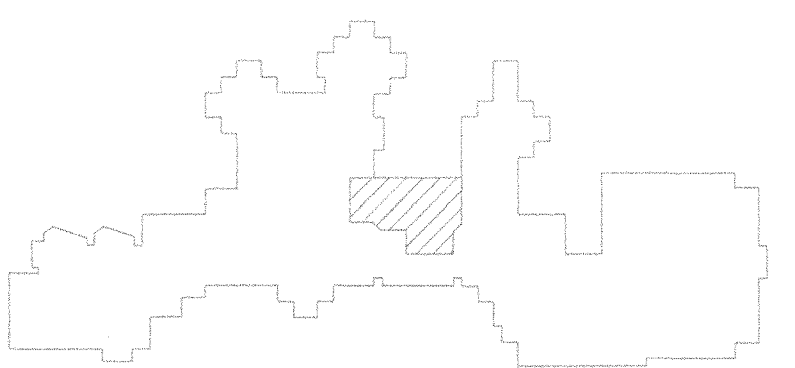


Greenhills School Renovation | Phase 1

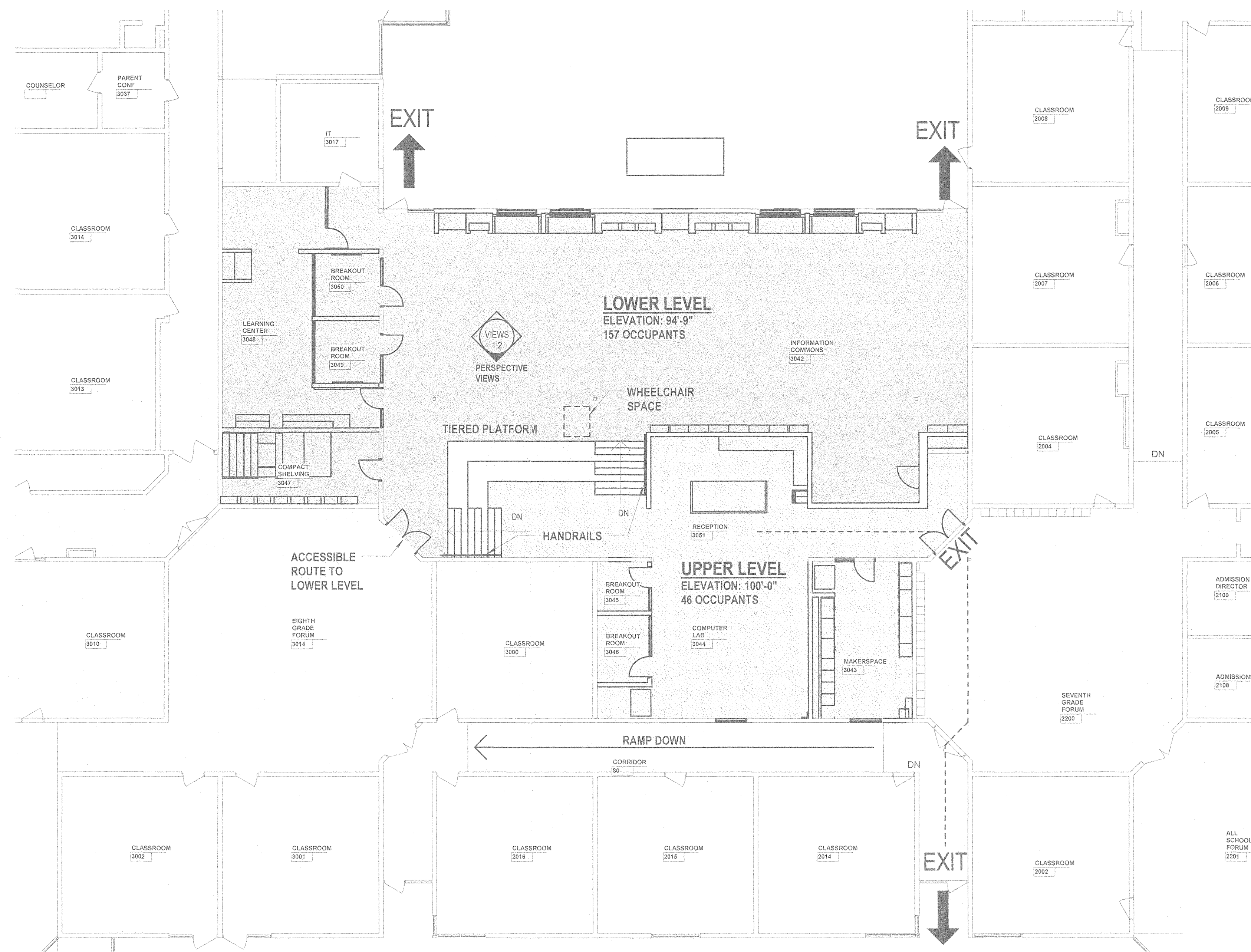
Greenhills School

850 Greenhills Dr,
Ann Arbor, MI 48105

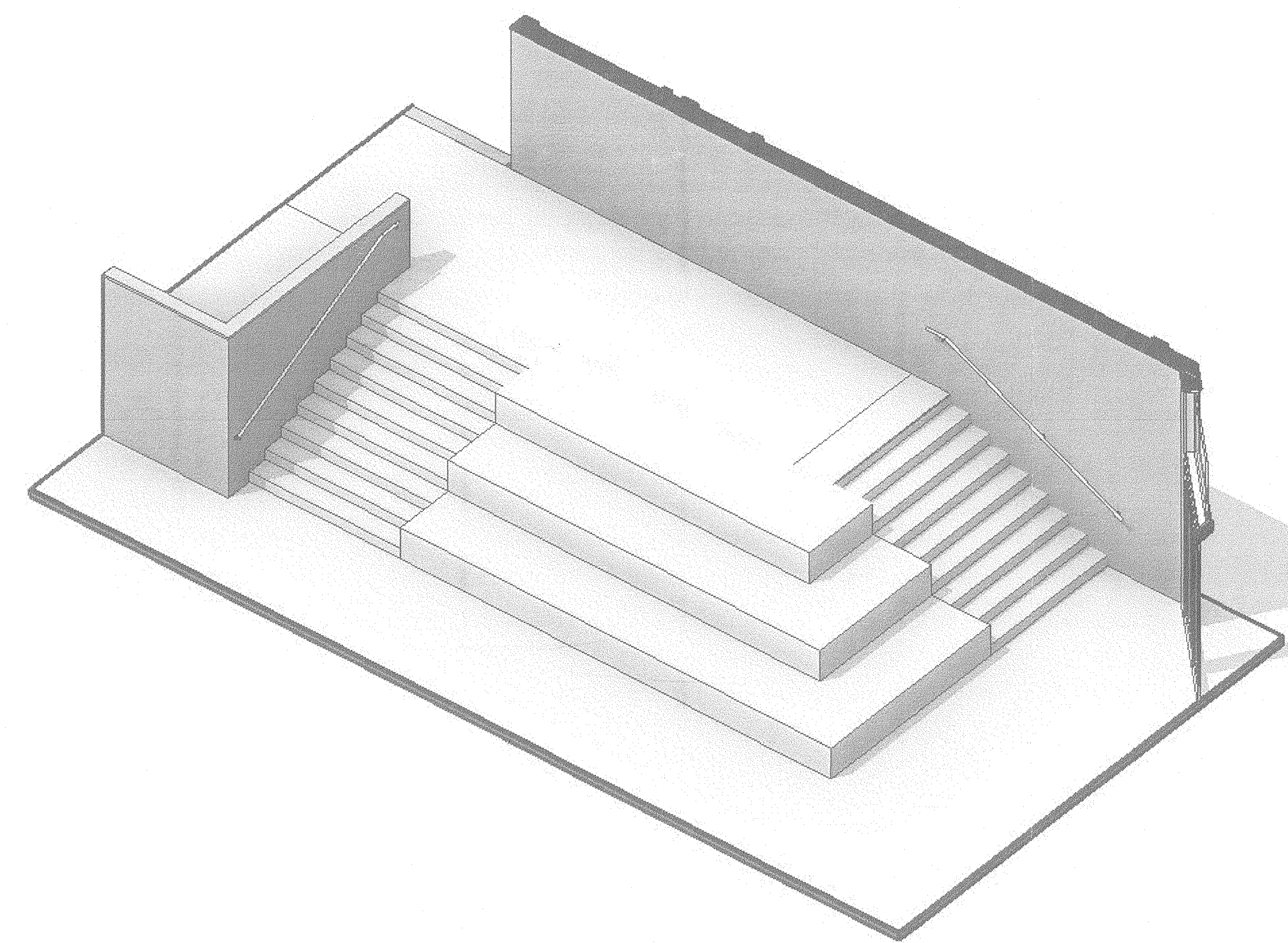
Key Plan



PERSPECTIVE VIEW 2



FIRST FLOOR COMPOSITE PLAN
 3/32" = 1'-0"



PERSPECTIVE VIEW 1

Project Administrator
S. Moschelli
 Project Designer
Designer
 Project Architect / Engineer
B. Sundberg
 Drawn By
Author
 Q.M. Review
B. Sundberg
 Approved
B. Sundberg
 Drawing Scale
As Noted

Issued for Issue Date
 Construction Code Appeal 05-26-17

© 2016 INTEGRATED DESIGN SOLUTIONS, LLC
 IDS Drawing Title

Enlarged Code Information
 Plan / Perspective Views

Reference Finish Floor Elevation: XXX'-X"

IDS Project Number Drawing Number

16167-1000

CI-2

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JUN 09 2017

Application for Construction Code Appeal

141/116/131/99

Michigan Department of Licensing and Regulatory Affairs
Bureau of Construction Codes
P.O. Box 30255, Lansing, MI 48909
517-241-9303
www.michigan.gov/bcc

Agency Use Only

BUREAU OF CONSTRUCTION CODES

Application Fee: \$500.00 PLAN REVIEW DIVISION

Authority: 1972 PA 230
Penalty: Failure to provide the information may result in denial of your request.
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Note: The applicant is responsible for all fees applicable to this application.

CODE UNDER WHICH APPEAL IS SOUGHT
[] Building (141) [] Electrical (116) [] Mechanical (131) [] Plumbing (99)

APPLICANT (Note: All correspondence will be sent to this address)
NAME OF COMPANY: PARTNERS in Architecture
APPLICANT NAME: David W. Gassen
TELEPHONE NUMBER: (586) 469-3600
ADDRESS: 65 Market Street, CITY: Mt Clemens, STATE: MI, ZIP CODE: 48043, FAX NUMBER: (586) 469-3607

Instructions for Application for Construction Code Appeal

Facility Information: Provide all information requested.

Building Data: Provide all information requested from the building permit or plan review.

Permit Holder: Provide the information requested for the entity named on the permit.

Building Owner: Provide the information requested for the entity that owns the building, which is the subject of the appeal.

Building Permit Authority: Provide all information requested for the enforcing agency.

Summary of Appeal: Code; provide the code under which an appeal is sought. Code Section(s); provide the code section(s) that are the subject of the appeal. Desired Relief; describe the remedy being sought. Basis of Appeal; provide a brief statement why the requested remedy should be granted.

Note: If the decision being appealed is that of a local Board of Appeals, this application and the filing fee must be received in our office within 10 business days of the filing of the decision of the local board of appeals in accordance with Section 16 of 1972 PA 230.


Validation Area

U.S. Postal Service

MI Dept. of Licensing and Regulatory Affairs
Bureau of Construction Codes
(Address to appropriate division-
Electrical Division, Mechanical Division
or Plumbing Division)
Please address Building appeals to Plan
Review Division)
P.O. Box 30255
Lansing, MI 48909

Courier Other Than U.S. Postal Service

MI Dept. of Licensing and Regulatory Affairs
Bureau of Construction Codes
(Address to appropriate division-Electrical
Division, Mechanical Division or Plumbing
Division)
Please address Building appeals to Plan
Review Division)
1st Floor Ottawa Bldg.
611 W. Ottawa St.
Lansing, MI 48933

FACILITY INFORMATION				
FACILITY NAME Covenant Academy			ADDRESS 400 W Crosstown Parkway	
NAME OF CITY, VILLAGE OR TOWNSHIP IN WHICH FACILITY IS LOCATED <input checked="" type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Township Of: <u>Kalamazoo</u>				COUNTY Kalamazoo
BUILDING DATA				
GROSS FLOOR AREA <input type="checkbox"/> New Building <input type="checkbox"/> Addition <input checked="" type="checkbox"/> Alteration <input type="checkbox"/> Repair				
CLASSIFICATION PER BUILDING CODE Building Use <u>E</u> Construction Type <u>VB</u> No. of Occupants <u>200</u> Area/Floor <u>Varies</u> No. of Floors <u>2</u>				
PERMIT HOLDER				
NAME (Company or Individual) E Gilbert and Sons		CONTACT PERSON Lester Gilbert		TELEPHONE NUMBER (Include Area Code) (586) 731-7450
ADDRESS 45887 Mound Rd.	CITY Utica	STATE MI	ZIP CODE 48317	FAX NUMBER (Include Area Code)
BUILDING OWNER				
NAME (Company or Individual) Kalamazoo Covenant Academy		CONTACT PERSON Gretchen LaHaie		TELEPHONE NUMBER (Include Area Code) (616) 528-2383
ADDRESS 400 W. Crosstown Parkway	CITY Kalamazoo	STATE MI	ZIP CODE 49007	FAX NUMBER (Include Area Code)
BUILDING PERMIT AUTHORITY				
ENFORCING AGENCY State of MI Bureau of Construction Codes		BUILDING OFFICIAL NAME		TELEPHONE NUMBER (Include Area Code) (517) 241-9328
ADDRESS PO Box 30255	CITY Lansing	STATE MI	ZIP CODE 48909	FAX NUMBER (Include Area Code)
SUMMARY OF APPEAL				
CODE SECTION(S) 1104.3, 1018, 1029, 1109.2, 1106.1, ICC-ANSI 117.1-2009-404.2			Provide copies of the following as appropriate: <input checked="" type="checkbox"/> Statement of Facts and Reasoning <input checked="" type="checkbox"/> Copy of Enforcing Agency Determination <input checked="" type="checkbox"/> Supporting Material <input type="checkbox"/> Copy of Decision of Local Board of Appeals <input type="checkbox"/> Transcript of Local Board of Appeals Hearing	
DESIRED RELIEF (State Briefly) The owner is requesting relief from several 2012 MBC sections which would allow their organization and its students to occupy the 2nd floor.				
BASIS OF APPEAL (State Briefly) Reuse of existing building as educational use and structural and logistical difficulties in making 2nd Floor fully compliant.				
APPLICANT SIGNATURE 				DATE 6-5-17



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

SHELLY EDGERTON
DIRECTOR

June 26, 2017

David Gassen
Partners in Architecture, Applicant
65 Market Street
Suite 200
Mt. Clemens, MI 48043

epacella@partnersinarch.com

PROJECT #: PR2017BCC-001528

**400 CROSSTOWN PKWY
KALAMAZOO, MI
KALAMAZOO COUNTY**

Dear Mr. Gassen:

This project has been reviewed for compliance with the State of Michigan Construction Code.

2012 Michigan Building Code - James Greene (517) 241-9307

1. MBC, B1104.1 Accessible routes within the site shall be provided from public transportation stops, accessible parking and accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance served. Provide site plan indicating compliance with ALL accessibility provisions including parking, accessible route (sidewalks), curb cuts, parking spaces, signage, etc.
2. MBC, B107.2.1 Construction documents shall be dimensioned and drawn to scale and shall indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code. Provide complete mechanical, electrical and plumbing design drawings for any alterations.
3. MBC, 3408.4 - Provide seismic compliance verification for the change in occupancy / risk category.
4. MBC, 107.2.1 - Provide the use of the basement area.
5. MBC, 1021.2(2) - Travel distance to exit is limited to 75' - provide dimension.
6. MBC, 1007.4 - The elevator is a required accessible means of egress and shall comply with the requirements of this code section.

Providing for Michigan's Safety in the Built Environment

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www.michigan.gov/bcc • Telephone (517) 241-9328 • Fax (517) 241-9308

7. MBC, 1018.2 - Minimum corridor shall be 6'-0" throughout. Special attention at existing column locations and ramped corridor access area which reduce the required width.
8. MBC, B107.2.1 Construction documents shall be dimensioned and drawn to scale and shall indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code. The construction documents are not complete. You shall provide adequate dimensions, details, sections for the means of egress (stair widths, handrails, guardrails), egress windows, etc, Provide fire alarm, means of egress lighting and exit lighting design and locations. Refer to MBC, 3408.1. This review is on-going and incomplete until such time we receive adequate construction documents to review and approve.
9. MBC, B1109.2 Toilet rooms and bathing facilities shall be accessible. MBC, 1010.9 - Handrails in compliance with 1012 shall be provided, detailed and dimensioned.
10. MBC, 1010.9 – Handrails in compliance with 1020 shall be provided, detailed and dimensioned.
11. MBC, 1008.1.6 - Provide dimensioned door landing in compliance with the code.
12. Provide dimensioned egress window sections and details for ALL egress windows throughout the building.
13. Provide dimensioned sections and details for handrail and guardrail, stair width, etc.
14. MBC, 1018.2 - Minimum corridor width is 6'-0".
15. MBC, 1018.2 - Vestibule width shall be 6'-0".
16. MBC, B1109.3 Where sinks are provided, not less than 5 percent but not less than one percent, provided in accessible spaces shall comply with ICC/ANSI A117.1.
17. MBC, 1018.2 - Corridor width to temporary classroom shall be 6'-0".
18. MBC, 1009.15 - Provide, dimension and detail required stair handrails.
19. ICC/ANSI A117.1 - 2009 Table 404.2.3.2 - Provide maneuvering clearances required by the code at ALL door locations.
20. MBC, 1018.1 - Existing corridor partitions and openings shall be fire rated per code - verify.
21. MBC, 1104.3 -Provide the required accessible access to temporary classroom 123 and Staff lounge.
22. MBC, 1009.4 - Stairway shall be 44" minimum width
23. MBC, 1110.1 - Provide accessible signage locations and details.

The building review is disapproved. Please download new documents incorporating changes in response to concerns stated above by the plan reviewer. Once appropriate responses are download to this electronic submittal, the approval process will proceed.

2012 Michigan Plumbing Code – Pete Ingalls (517) 241-9350

1. MPC, Section 106.3.1 Required construction documents submitted for approval shall consist of site plan, floor plans, DWV riser diagrams and water distribution system, and roof plan. Show direction of flow, pipe sizes, grade of horizontal piping, elevations, drainage fixture unit loading of both stacks and drains in the DWV system, supply fixture unit load for the water system, branch supplies serving more than one plumbing fixture, and appliance or hose outlet.

The plumbing review is disapproved. Please download new documents incorporating changes in response to concerns stated above by the plan reviewer. Once appropriate responses are download to this electronic submittal, the approval process will proceed.

The electrical and mechanical reviews have not been completed at this time.

Please reference the above PROJECT NUMBER on future correspondence, addenda, blueprints, etc., concerning this project and notify any other architect/engineer, company, subcontractors, etc. involved.

Please check out our website at <https://aca3.accela.com/lara> for faster processing time using on-line submissions.

If you have questions, plan reviewers can be contacted directly or call our office at (517) 241-9328. Additionally, plan review statuses can be obtained and future reviews can be applied for on the Bureau's website at www.michigan.gov/bcc and clicking Online Licensing/Permitting.

Sincerely,
Signed and Filed on: June 26, 2017

James Greene, Plan Reviewer
Permits & Plan Review Division

JG/kc

cc: BCC - Building, Electrical, Mechanical, and Plumbing Division(s)

Skopek, Stanley (LARA)

From: Skopek, Stanley (LARA)
Sent: Tuesday, June 13, 2017 8:44 AM
To: 'David Gassen'
Subject: Construction code appeal for Covent Academy

David Gassen,

Construction code appeal for Covent Academy

We have your application for construction code appeal for Covent Academy and your appeal will be placed on hold pending a plan review submission. As per my e-mail of March 27, 2017 you will have to resubmit to this office a plan review for the remainder of the building. The PR2017BCC-000549 was to allow the school to occupy a portion of the building the remainder was to be a separate submission. The e-mail was not a denial of a future plan review but areas of concern that should be addressed. To appeal before the construction code appeal board you must first submit a plan review for the remaining work and have a formal denial. The appeal will be processed after a formal denial is written.

Please contact me after you do submit for the plan review so we can put a priority on this project.

Stanley S. Skopek , Architect

Chief of Permits and Plan Review Division
Bureau of Construction Codes
Licensing and Regulatory Affairs
State of Michigan
(517) 241-9328 Phone
(517) 373-8547 Fax
skopek@michigan.gov

Darren McKenna

From: Skopek, Stanley (LARA) <SkopekS@michigan.gov>
Sent: Monday, March 27, 2017 1:36 PM
To: Darren McKenna
Cc: Lambert, Keith (LARA); glahaie@mcoventacademy.org; Les; David Gassen; Kunkel, Barbara (LARA); Curtis, Charles (LARA); Gensler, Alesha (LARA)
Subject: RE: RE: Plan review submittal - Covenant Academy - Kalamazoo

Darren,

This is the review of the project and the items needing to get address as a separate plan review submission for the next phase.

1. MBC 1104.3 – Connected spaces- Provide the required accessible access to 123 Temp Classroom and 124 Staff lounge.
2. MBC 1018.1 – Construction – Provide the required rated corridor for 122 Stairs, Closet 220 and 219 Elevator Lobby.
3. MBC 1018.2 –width – Provide the required corridor width for 110 Vestibule
4. MBC 1018. – Dead ends – Provide corridor without a dead end the area of concern is 208 Classroom.
5. MBC 1029 – Emergency Escape and Rescue- provide the required emergency escape and rescue access. For 123 Temp Classroom.
6. MBC 1109.2 – Toilet and Bathing Facilities – Provide the required accessible toilet rooms 120 Women, 121 Men, 218 Women and 217 Men.
7. MBC 1106.1 Accessible Parking Spaces submit for Site plan review and accessible parking.
8. ICC A117.1-2009 Table 404.2.3.2 – Maneuvering Clearances- Provide the required door clearances for doors at 122 Stairs and 101 Lobby stairs

Thank-you

Stanley S. Skopek , Architect
Chief of Permits and Plan Review Division
Bureau of Construction Codes
Licensing and Regulatory Affairs
State of Michigan
(517) 241-9328 Phone
(517) 373-8547 Fax
skopekS@michigan.gov

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BUREAU OF CONSTRUCTION CODES
PLAN REVIEW DIVISION

From: Skopek, Stanley (LARA)
Sent: Friday, March 24, 2017 1:53 PM
To: 'Darren McKenna' <DMcKenna@partnersinarch.com>
Cc: Lambert, Keith (LARA) <lambertk@michigan.gov>; glahaie@mcoventacademy.org; Les <lesg@egilbertandsons.com>; David Gassen <DGassen@partnersinarch.com>; Kunkel, Barbara (LARA) <KunkelB1@michigan.gov>
Subject: RE: Plan review submittal - Covenant Academy - Kalamazoo

Darren,

Attached is the comment letter, when you make the corrections please e-mail me the drawings.

We are doing a full review of the project and will have a list of concern sent to you on Monday. The items will need to be addressed but they will not affect the occupancy of this phase.

Stanley S. Skopek , Architect

Chief of Permits and Plan Review Division
Bureau of Construction Codes
Licensing and Regulatory Affairs
State of Michigan
(517) 241-9328 Phone
(517) 373-8547 Fax
skopekS@michigan.gov

From: Darren McKenna [<mailto:DMcKenna@partnersinarch.com>]

Sent: Thursday, March 23, 2017 4:57 PM

To: Skopek, Stanley (LARA) <SkopekS@michigan.gov>

Cc: Lambert, Keith (LARA) <lambertk@michigan.gov>; glahaie@mcoventacademy.org; Lesg@egilbertandsons.com; David Gassen <DGassen@partnersinarch.com>

Subject: Re: Plan review submittal - Covenant Academy - Kalamazoo

Stan,

The temporary project number assigned to the project is 17TMP-014756. See attached screen shot for reference.



Thank you,

Darren

On Mar 23, 2017, at 3:13 PM, Skopek, Stanley (LARA) <SkopekS@michigan.gov> wrote:

Darren,

Do you know the project number that our system assigned to it?

We do know you're having problems submitting project to us right now and our IT is working on it, you do have multiple different projects submitted in the last week. I could not find any of your project submitted with the address of 400 Crosstown Parkway.

Stanley S. Skopek , Architect

Chief of Permits and Plan Review Division
Bureau of Construction Codes
Licensing and Regulatory Affairs
State of Michigan
(517) 241-9328 Phone
(517) 373-8547 Fax
skopekS@michigan.gov

From: Darren McKenna [mailto:DMcKenna@partnersinarch.com]
Sent: Thursday, March 23, 2017 2:53 PM
To: Lambert, Keith (LARA) <lambertk@michigan.gov>
Cc: Skopek, Stanley (LARA) <SkopekS@michigan.gov>; glahaie@mcoventacademy.org; Les <lesg@egilbertandsons.com>; David Gassen <DGassen@partnersinarch.com>
Subject: Plan review submittal - Covenant Academy - Kalamazoo

Mr. Lambert,

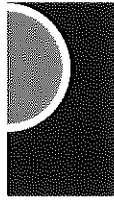
I believe we were successful in uploading documents to the BCC Plan Review Portal. We did receive an error at the Receipt/Record Issuance portion of the process. My understanding is that has been occurring recently, but that the submission is still successful. Can you confirm that the documents were transmitted through the portal. If not, I have attached them here.

Please let me know either way.

Thank you,

Darren R. McKenna, RA

PARTNERS in Architecture, PLC
65 Market Street
Mount Clemens, MI 48043
p 586.469.3600
f 586.469.3607
c 586 [REDACTED]



June 2, 2017

Re: Kalamazoo Covenant Academy
400 W. Crosstown Pkwy, Kalamazoo, MI
Construction Code Commission – Code Appeal
LARA Project Number PR2017BCC-000549

Construction Code Commission
Bureau of Construction Codes
Licensing and Regulatory Affairs
State of Michigan
PO Box 30255, Lansing, MI 48909

To whom it may concern,

The project in which we are requesting a code appeal was previously submitted to the Bureau of Construction Codes in the fall of 2016 under the 2012 Michigan Building Code. Covenant Academy is currently occupying the first floor of the renovated building under a temporary occupancy permit.

The Kalamazoo Covenant Academy is requesting relief from several 2012 MI Building Codes sections which would allow their organization and its students to occupy the second floor as an Educational Use.

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PLAN REVIEW DIVISION

The Academy serves a unique group of students of High School grades ranging in age from 16-22 and has a similar facility in Muskegon. The organization is like a one room school house, in that students are grouped in a classroom combining a mix of ages and do not need to move from one classroom to another throughout the building. Thus students with accessibility needs can be placed in a space that is in accordance with their needs if necessary.

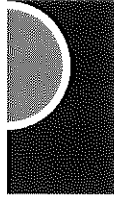
Existing Building Information:

Stories	2
Basement	Partial (occupied by mechanical equipment)
Area (1 st Floor)	6,791 SF
Area (2 nd Floor)	7,855 SF
Area (Basement)	995 SF

Code Relief Items. Items numbered below align with Plan Review Items forwarded by BCC Plan Review to PARTNERS in Architecture on March 27, 2017. Relief is not being requested from all items.

Item 1 MBC Section 1104.3 – Connected Spaces - *Provide the required accessible access to 123 Temp Classroom and 124 Staff Lounge.*

The building selected works well for the educational use, but is larger than necessary for the school occupant. Rooms 123 and 124 are intended to be utilized by staff only and are employee work areas which are duplicated elsewhere in the building. The overall size of both rooms are more than needed for the staff and less than 300 SF of area may be utilized. The Rooms in question are elevated and are currently only accessible by stair. Room 123 is approx. 3'-0" above the main level and Room 124 is approximately 7'-7" above the main level. To accommodate an accessible route a new lift would be required as a ramp to access the rooms is not feasible due to the length (91') required.



While the initial floor plan listed Rooms 123 and 124 as being occupied by students and staff, the rooms are not necessary to be occupied by students and staff as there are other classroom and staff areas that will be provided that are accessible which duplicate the uses. The spaces will be utilized by staff only. The Life Safety Plans have been revised to reflect this. The building owner requests relief from section 1104.3.

- Item 2 MBC Section 1018.1 – Construction – *Provide the required rated corridor for 122 Stairs, Closet 220 and 219 Elevator Lobby.*

Closet 220:

Construction will be upgraded to 45 minute Fire Barrier Construction with a 45 minute door opening.

Elevator Lobby 219:

Elevator Lobby and Elevator Machine Room Walls have been upgraded to 45 minute Fire Barrier Construction with 45 minute doors.

Stairs 122 (Request for relief from code passage):

Are indicated to be fire rated, but as indicated in Item No. 1 above, Rooms 123 and 124 are not to be utilized by students. Room 124 has direct access to the Fire Rated Stair down to Lobby 101. Access from the area can access the fire rated Stair off Lobby 101.

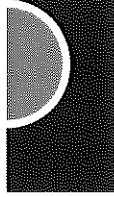
- Item 3 MBC Section 1018.2 –Corridor Width – *Provide the required corridor width for 110 Vestibule.*

Vestibule 110, which is a corridor, was defined by two existing building spaces. On the west side of the new Vestibule is an existing egress stair form the second floor. The stair is to remain and is planned to be utilized by the second floor occupants. On the east side of the new Vestibule is an existing bank equipment room that is to remain. The width between the stair on the west and the bank equipment vault on the east is 5 feet 8 inches. The corridor created was defined by the existing two rooms. The location of the corridor allows access to the exterior of the building.

The life safety and building codes list the minimum width of a corridor as 6'-0". The occupant load served by the corridor is 55. The corridor is an exit only condition and 5'-8" width is adequate to accommodate the occupants when exiting.

- Item 5 MBC Section 1029 – Emergency Escape and Rescue – *Provide the required emergency escape and rescue access. For 123 Temp Classroom.*

As indicated in Item No. 1 above, Rooms 123 and 124 are not to be utilized by students. Room 124 has direct access to the adjacent fire rated stair and then to the fire rated Lobby 101. Room 123 has the ability to travel in two separate directions – either to the east down the rated Vestibule 100 or to the fire rated stair and then to the fire rated Lobby 101. The owner requests relief from emergency escape and rescue requirement.



Item 6 MBC Section 1109.2 – Toilet and Bathing Facilities – *Provide the required accessible toilet rooms 120 Women, 121 Men, 218 Women and 217 Men.*

Total occupant load of building as calculated based on use is 275 occupants. Three water closets and three lavatories are required per gender for a total of 6 water closets and 6 lavatories. The original building, prior to the current renovations contained the following:

Water Closets (Female)	5
Water Closets/Urinals (Male)	5
Lavatories (Female)	3
Lavatories (Male)	2

The existing restrooms are not configured to meet existing accessibility requirements. During renovations two accessible single user restrooms were added to the first floor. The additional water closets and lavatories bring the total number of plumbing fixtures in line with the current codes.

On the first floor the total occupant load is 95. At 95 occupants, a single water closet and lavatory is required per gender. Mens 102 and Womens 103 provide the required number of fixtures for the floor.

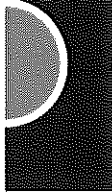
Due to the existing configuration of the restrooms on the first floor, reconfiguration of the restrooms is structurally not feasible as mechanical shafts occur on the east and west sides and stairs/hallways occur on the south and north sides respectively.

Due to the existing configuration of the restrooms on the second floor, reconfiguration is also infeasible as an exterior wall is located to the north, a stairway is located to the south, an elevator lobby and mechanical room is to the east and a corridor is to the west. The owner requests relief from being required to bring all restrooms up to current accessibility codes.

Item 8 ICC A117.1-2009 – Table 404.2.3.2 – Maneuvering Clearances at Doors – *Provide the required door clearances for doors at 122 Stairs and 101 Lobby stairs.*

As indicated in Item No. 1 above, Rooms 123 and 124 are not to be utilized by students and the areas are duplicated elsewhere in the facility on the first floor. The door clearances in question will not affect the usage of the student occupants. The owner requests relief from being required to bring all the staff area door clearance up to current codes due to the difficulties in complying due to the existing conditions.

PARTNERS



We look forward to presenting the Statement of Facts and Reasoning to you at the July Commission meeting. Feel free to contact me at 586-██████████. I can also be reached by email at dgassen@partnersinarch.com

Sincerely,
PARTNERS in Architecture, PLC

A handwritten signature in black ink, appearing to read "David W. Gassen".

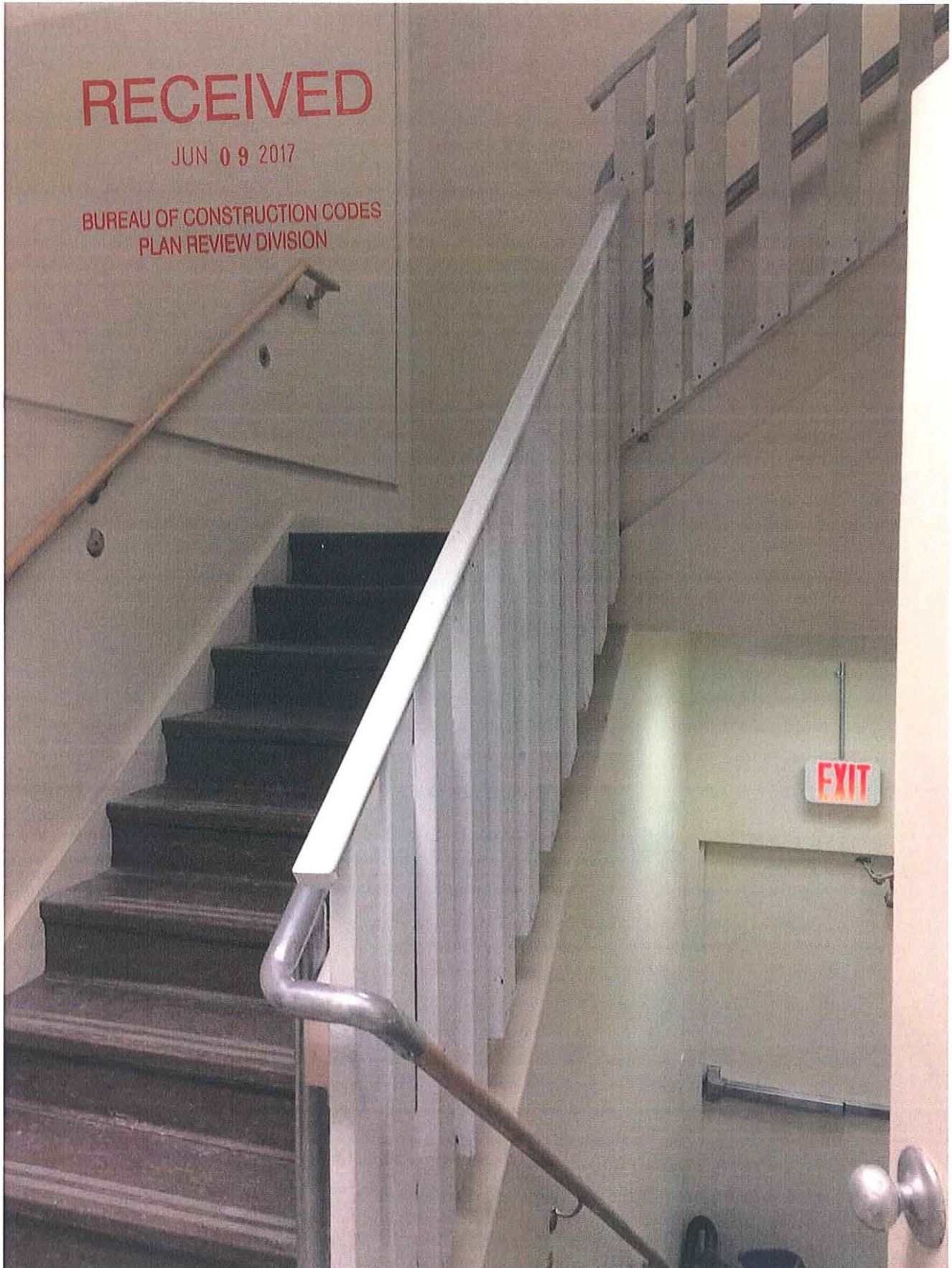
David W. Gassen, AIA
Principal

Cc: Gretchen LaHaie, Covenant Academy (via email)
Lester Gilbert, E. Gilbert and Sons
Darren McKenna, RA, PARTNERS in Architecture

File Ref: 16-151;

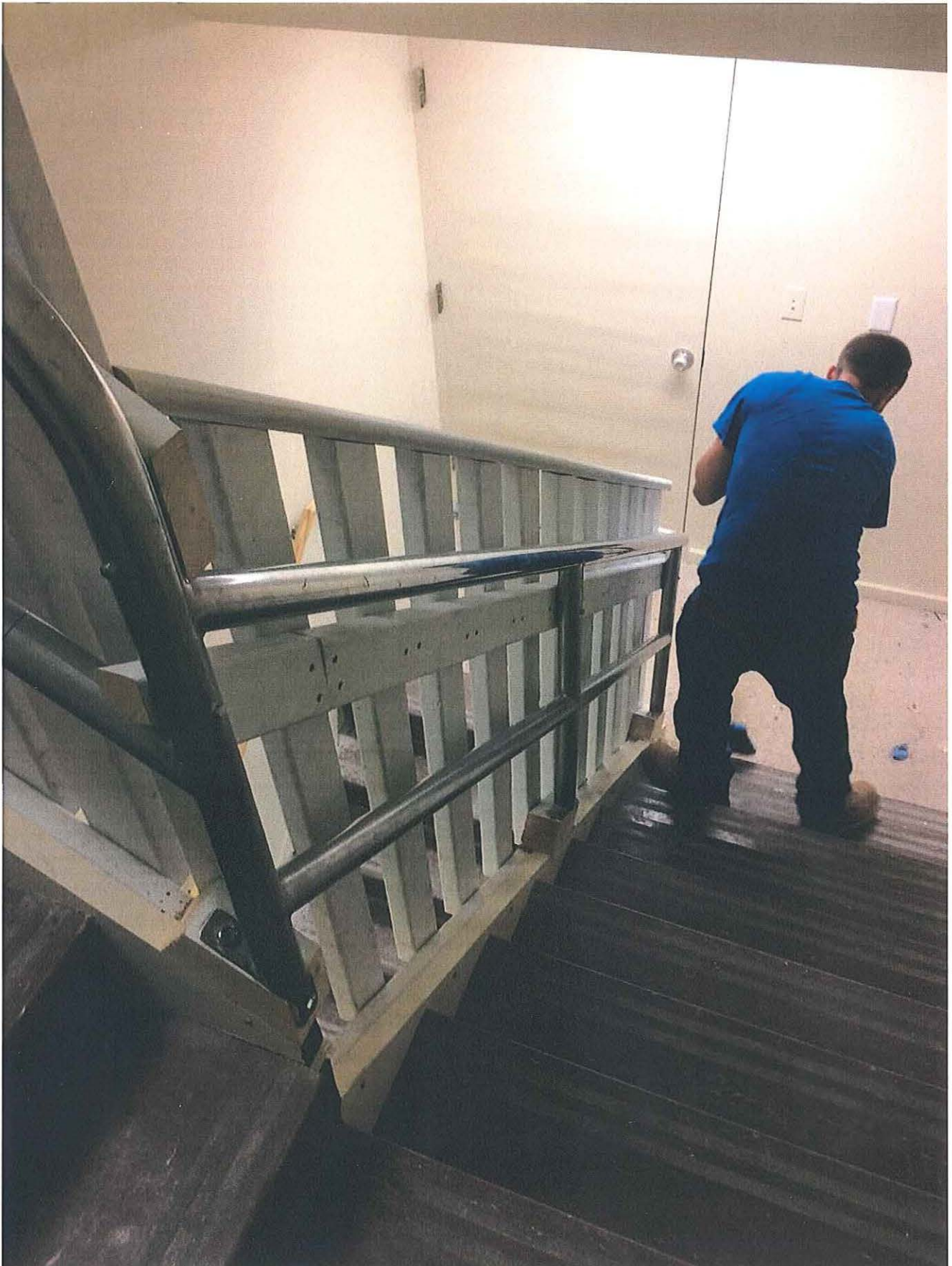
Enclosures: Life Safety and Building Drawings

Kalamazoo Covenant Academy Photographs



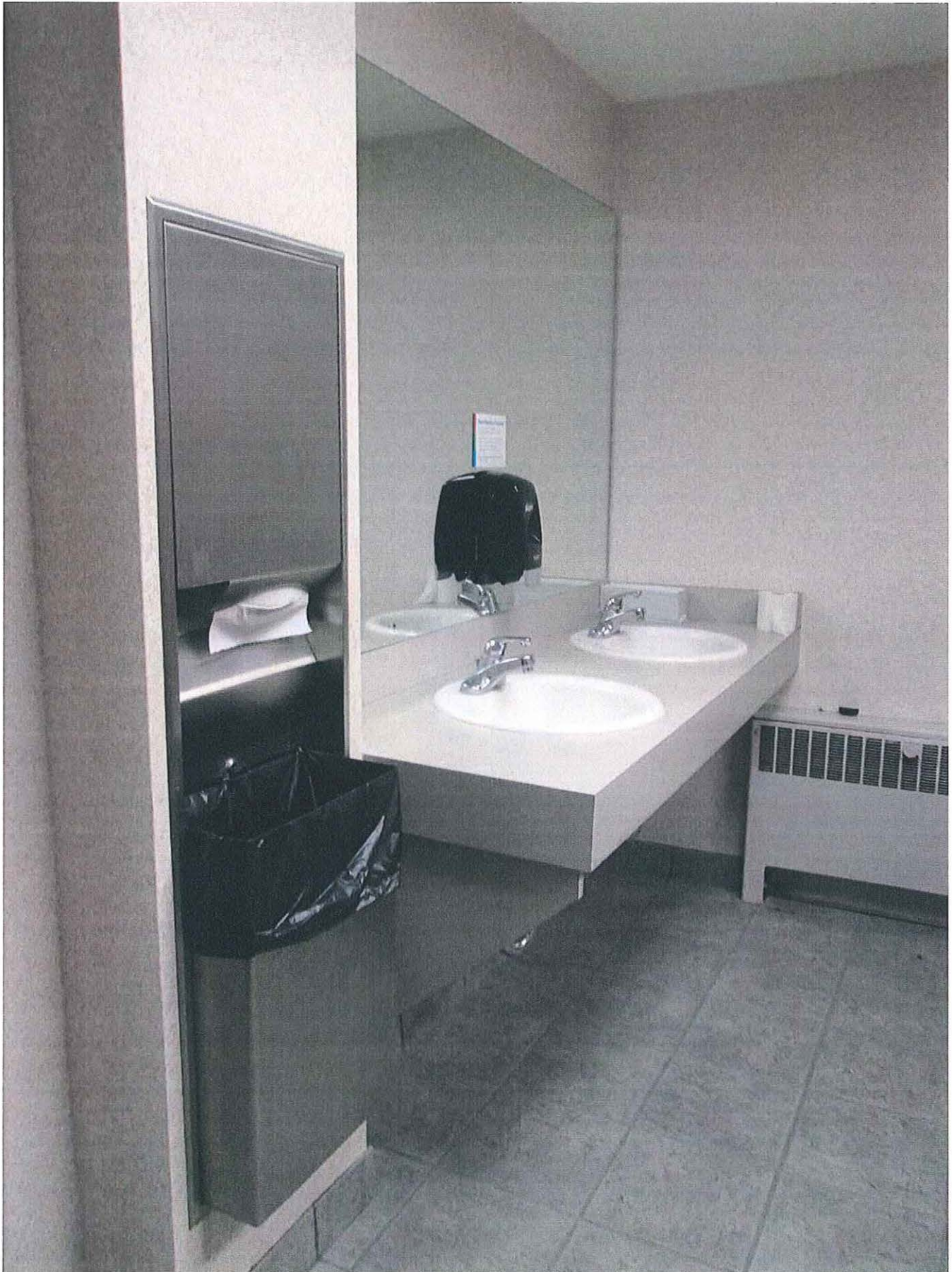
Guard and Handrail Modified
Center Stair

Kalamazoo Covenant Academy Photographs



**Guard and Handrail Modified
Center Stair**

Kalamazoo Covenant Academy Photographs



Women's Restroom - 2nd Floor

Kalamazoo Covenant Academy Photographs



Women's Restroom - 2nd Floor

Kalamazoo Covenant Academy Photographs



Men's Restroom - 2nd Floor

Kalamazoo Covenant Academy Photographs

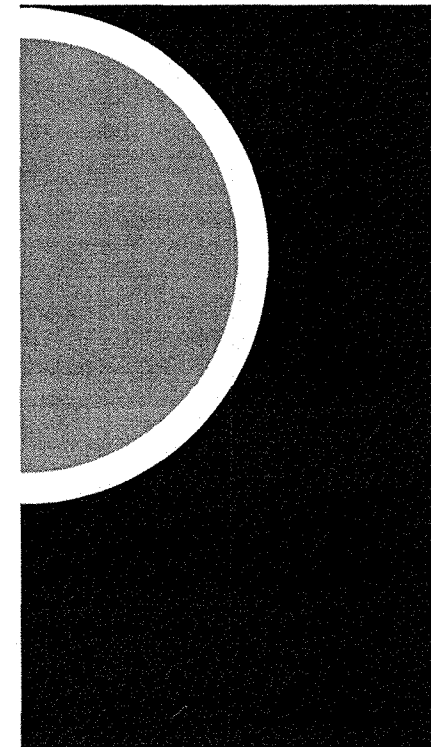


Men's Restroom - 2nd Floor

Kalamazoo Covenant Academy

Interior Renovations

PARTNERS



PARTNERS in Architecture, PLC

65 Market Street
Mount Clemens, MI 48043
586-469-3600

Construction Manager:
E. Gilbert & Sons

45887 Mound Road
Utica, MI 48317
(Phone) 586-731-7450

Owner

Kalamazoo Covenant Academy

400 W. Crosstown Parkway
Kalamazoo, MI 49007
Phone # (616) 528-2383

List of Drawings

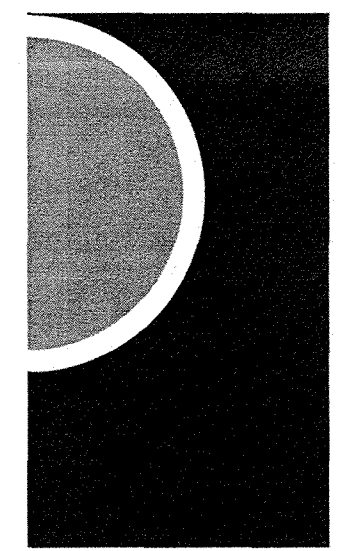
Sheet Number	Sheet Title
	Cover Sheet
A0-01	General Project Information
A0-03	Schedules
A1-01	Life Safety Plans and Information
A2-01	Demolition Plans
A3-00	Basement Plan
A3-01	Floor Plans
A4-01	Reflected Ceiling Plans
A6-01	Wall Sections and Details

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BUREAU OF CONSTRUCTION CODES
PLAN REVIEW DIVISION

PARTNERS



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65 MARKET STREET
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LOCATION MAP

OWNER

Covenant Academy
400 W. Crosstown Pkwy
Kalamazoo, MI 49007

PROJECT NAME

Kalamazoo Covenant
Academy
Interior Renovations

400 W. Crosstown Parkway
Kalamazoo, MI 49007

PROJECT NO.

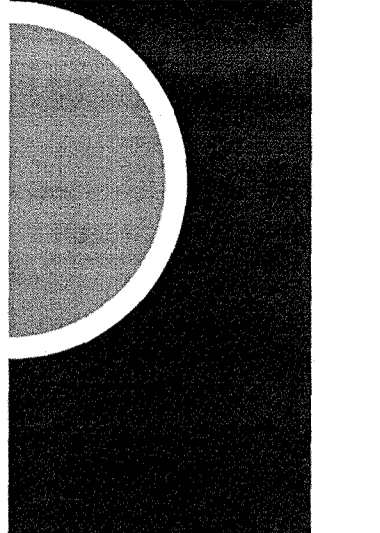
16-151

ISSUE DATE

Bids/Construction 09/21/16
BCC Bulletin 03/23/17
BCC Review 03/31/17
Construction Code Appeal 06/05/17

PROFESSIONAL SEAL





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CONSULTANT

KEY PLAN

OWNER

Kalamazoo Covenant Academy

PROJECT NAME

Kalamazoo Covenant Academy

400 W. Crosstown Parkway
Kalamazoo, MI, 49007

PROJECT NO.

16-151

ISSUES / REVISIONS

Bids/Construction	9/21/16
BFS Review Response	11/7/16
BCC Review	1/13/17
BCC Bulletin	03/23/17

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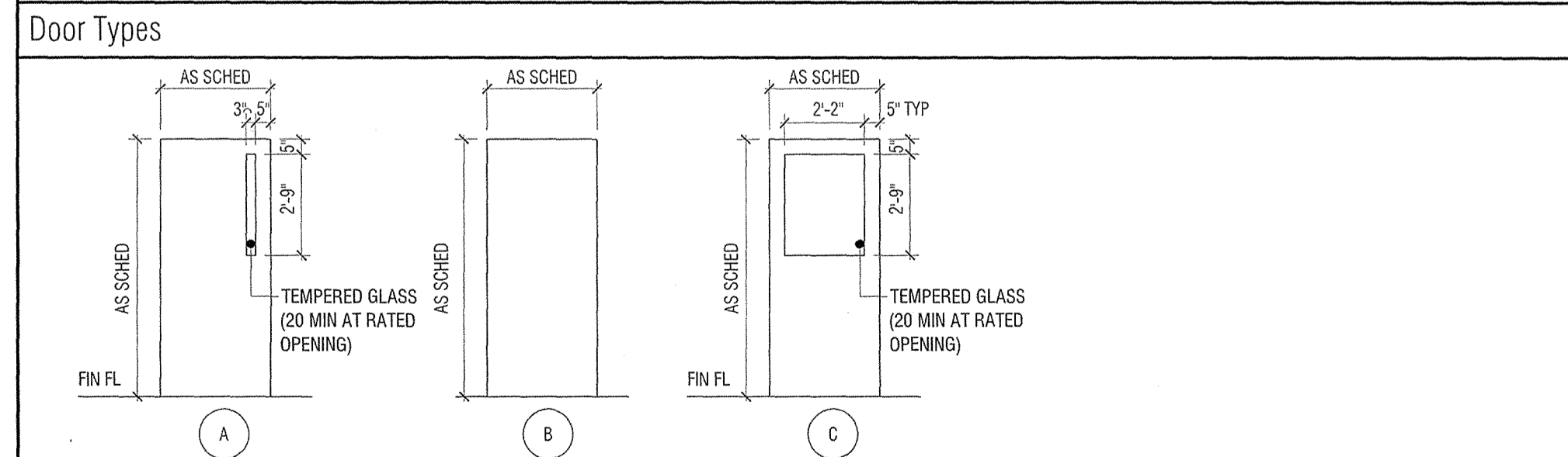
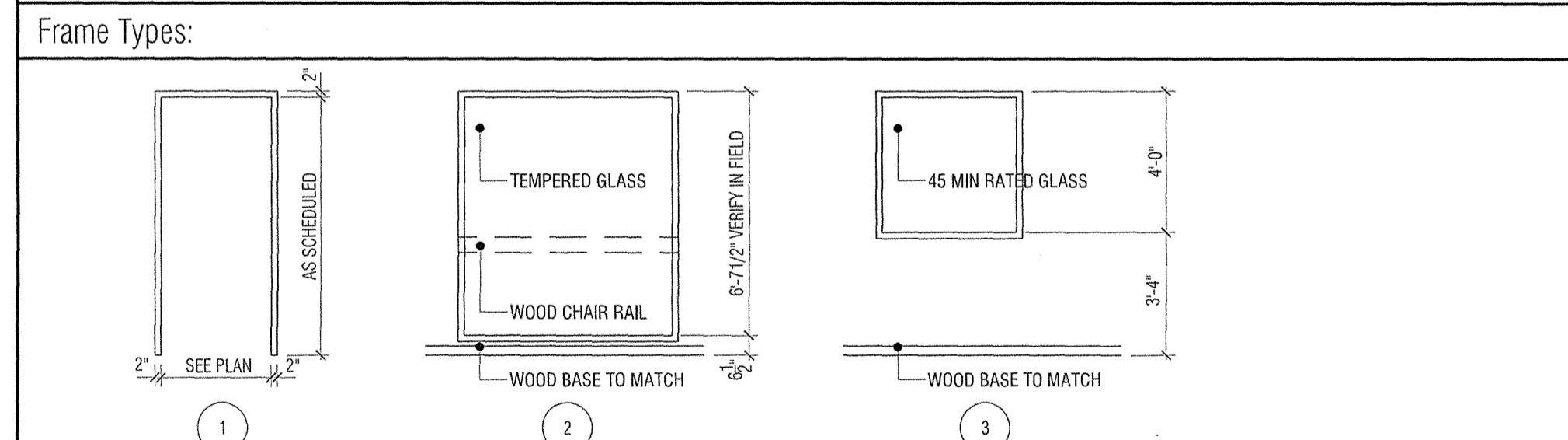
APPROVED BY
DWG

SHEET NAME

SCHEDULES

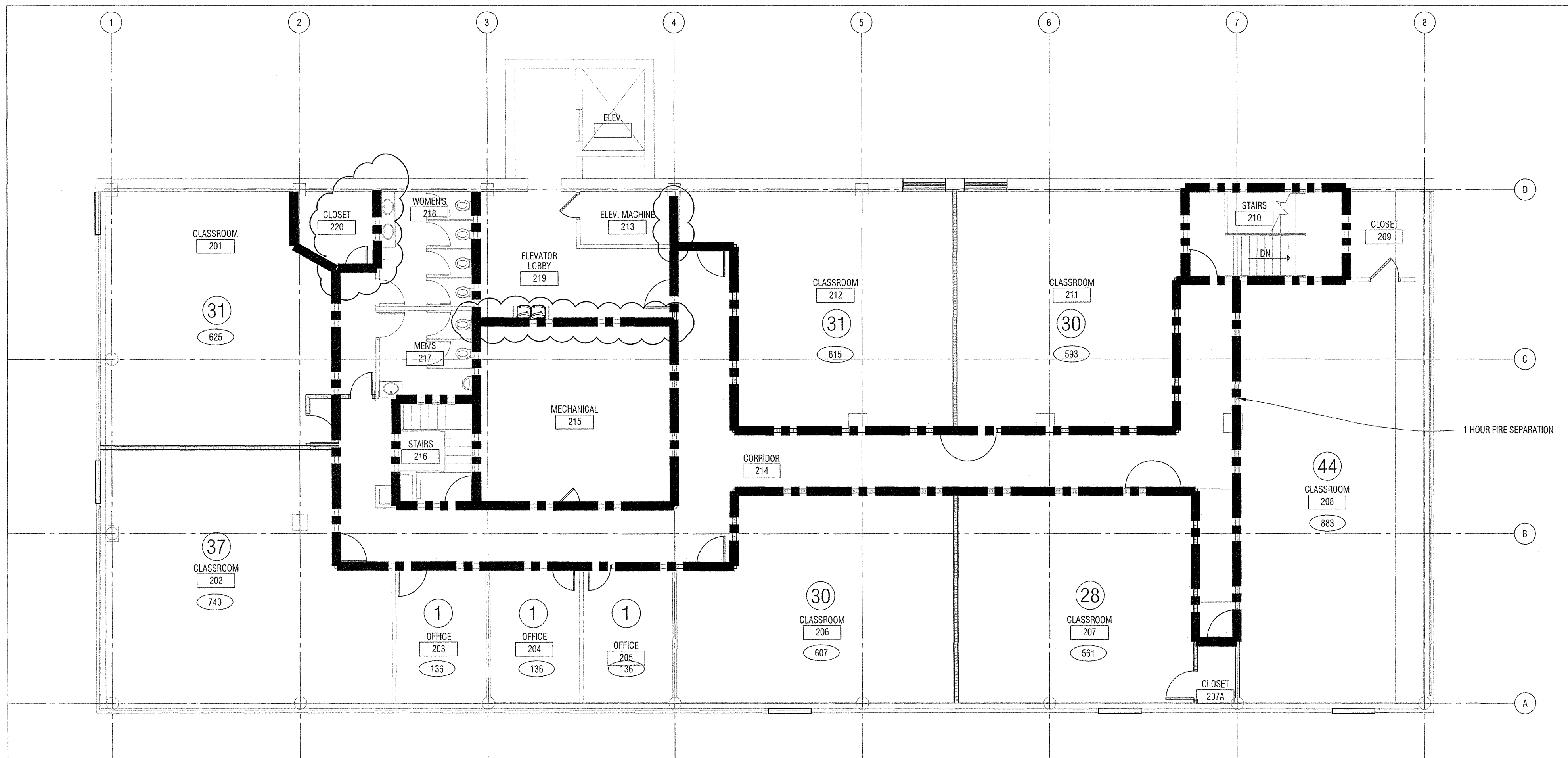
SHEET NO.
A0-03

Door / Opening Schedule													
DOOR NO.	DOOR/OPENING SIZE (N X H) (CONTRACTOR TO VERIFY DOOR SIZE IF OPENING IS EXISTING)	DOOR			FRAME			DETAILS			HARDWARE SET #	LABEL (MIN.)	ROOM FINISH KEY NOTES
		TYPE	MAT.	FINISH	TYPE	MATERIAL	FINISH	HEAD	JAMB	THRES/SILL			
100A	3'-0" X 7'-0"	C	ALUM.	ANOD.	1	ALUM.	ANOD.	D2-SIM.	D3-SIM.	FULL	001	--	
100B	3'-0" X 7'-0"	B	HM.	PNT	1	HM.	PNT	D2	D1		019	60	
101A	3'-6" X 7'-0"	B	HM.	PNT	1	HM.	PNT	EX	EX		006	60	
101B	3'-6" X 7'-0"	B	HM.	PNT	1	HM.	PNT	EX	EX		006.1	60	
102	3'-0" X 7'-0"	B	WD	PREFNL.	1	HM.	PNT	D2	D1		T4	017	--
103	3'-0" X 7'-0"	B	WD	PREFNL.	1	HM.	PNT	D2	D1		--	017	--
104	(2) 3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	009	20
104A	3'-0" X 7'-0"	C	WD	PREFNL.	1	HM.	PNT	D2	D1		T4	011	20
104B	3'-0" X 7'-0"	C	WD	PREFNL.	1	HM.	PNT	D2	D1		T4	011	20
104C	3'-10" X 3'-10"	--	--	--	3	HM.	PNT	D2	D1		--	45	--
104D	3'-10" X 3'-10"	--	--	--	3	HM.	PNT	D2	D1		--	45	--
105A	3'-0" X 7'-0"	B	WD	PREFNL.	1	HM.	PNT	D2	D1		T1	012	--
105B	3'-0" X 7'-0"	B	WD	PREFNL.	1	HM.	PNT	D2	D1		--	012	--
105C	6'-0" X 6'-0"	--	--	2	WD	STN.	--	--	--		--	6	--
105A	3'-0" X 7'-0"	B	HM.	PNT	1	HM.	PNT	--	--		010	60	2
106A	2'-6" X 7'-0"	B	HM.	PNT	EX	HM.	PNT	--	--		005	1, 3	
107A	3'-0" X 7'-0"	B	WD	PREFNL.	EX	WD	EX	--	--		003	1	
107B	3'-0" X 7'-0"	B	WD	PREFNL.	EX	WD	EX	--	--		003	1	
108A	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	013	
108B	3'-0" X 7'-0"	B	WD	PREFNL.	EX	WD	EX	--	--		003	1	
109	3'-0" X 7'-0"	B	WD	PREFNL.	EX	WD	EX	--	--		003	1	
110A	2'-10" X 7'-0"	A	WD	PREFNL.	EX	WD	EX	--	--		004	1	
110B	3'-0" X 7'-0"	B	HM.	PNT	1	HM.	PNT	D4	D3		--	007	2, 3
111	3'-0" X 7'-0"	B	WD	PREFNL.	1	HM.	PNT	D2	D1		--	014	
112	2'-0" X 7'-0"	B	WD	PREFNL.	EX	WD	EX	--	--		003.1		
113	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	011	20
114	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	011	20
115	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		T2	011	20
116A	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		T2	012.1	
118	2'-10" X 7'-0"	EX	WD	EX	EX	WD	EX	--	--		--	001.1	
119	2'-10" X 7'-0"	EX	WD	EX	EX	WD	EX	--	--		--	001.1	
120A	EX	EX	EX	EX	EX	EX	EX	EX	EX		--	002	5, 4
120B	EX	EX	EX	EX	EX	EX	EX	EX	EX		--	002.1	5, 4
121	EX	EX	EX	EX	EX	EX	EX	EX	EX		--	002	5, 4
122A	EX	EX	EX	EX	EX	EX	EX	EX	EX		--	001.1	5 (FRAME)
122B	EX	EX	EX	EX	EX	EX	EX	EX	EX		--	002.1	5, 4
122C	EX	EX	EX	EX	EX	EX	EX	EX	EX		--	002.1	5, 4
123	EX	EX	EX	EX	EX	EX	EX	EX	EX		--	002.1	5, 4
201A	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	011.1	20
201B	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	015	
202	2'-6" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	011.2	20
203	2'-6" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	013.1	1
204	2'-4" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	013.2	1
205	2'-4" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	013.2	1
206	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	011	20
207	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	011	20
207A	3'-0" X 7'-0"	B	WD	PREFNL.	1	HM.	PNT	D2	D1		--	014	
208	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	011	20
209	EX	EX	EX	EX	EX	EX	EX	EX	EX		--	001.1	5
210	2'-10" X 7'-0"	B	HM.	PNT	1	HM.	PNT	D2	D1		T1	008	60
211	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	011	20
212	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	011	20
213	2'-6" X 7'-0"	EX	EX	EX	EX	EX	EX	EX	EX		--	001.1	
215	2'-6" X 7'-0"	EX	EX	EX	EX	EX	EX	EX	EX		--	002.1	4, 5
216	3'-0" X 7'-0"	B	HM.	PNT	1	HM.	PNT	D2	D1		--	008.1	60
217	3'-0" X 7'-0"	EX	EX	EX	EX	EX	EX	EX	EX		--	001.1	
218	3'-0" X 7'-0"	EX	EX	EX	EX	EX	EX	EX	EX		--	001.1	
219	3'-0" X 7'-0"	A	WD	PREFNL.	1	HM.	PNT	D2	D1		--	015	
220	3'-0" X 7'-0"	B	WD	PREFNL.	1	HM.	PNT	D2	D1		--	014	

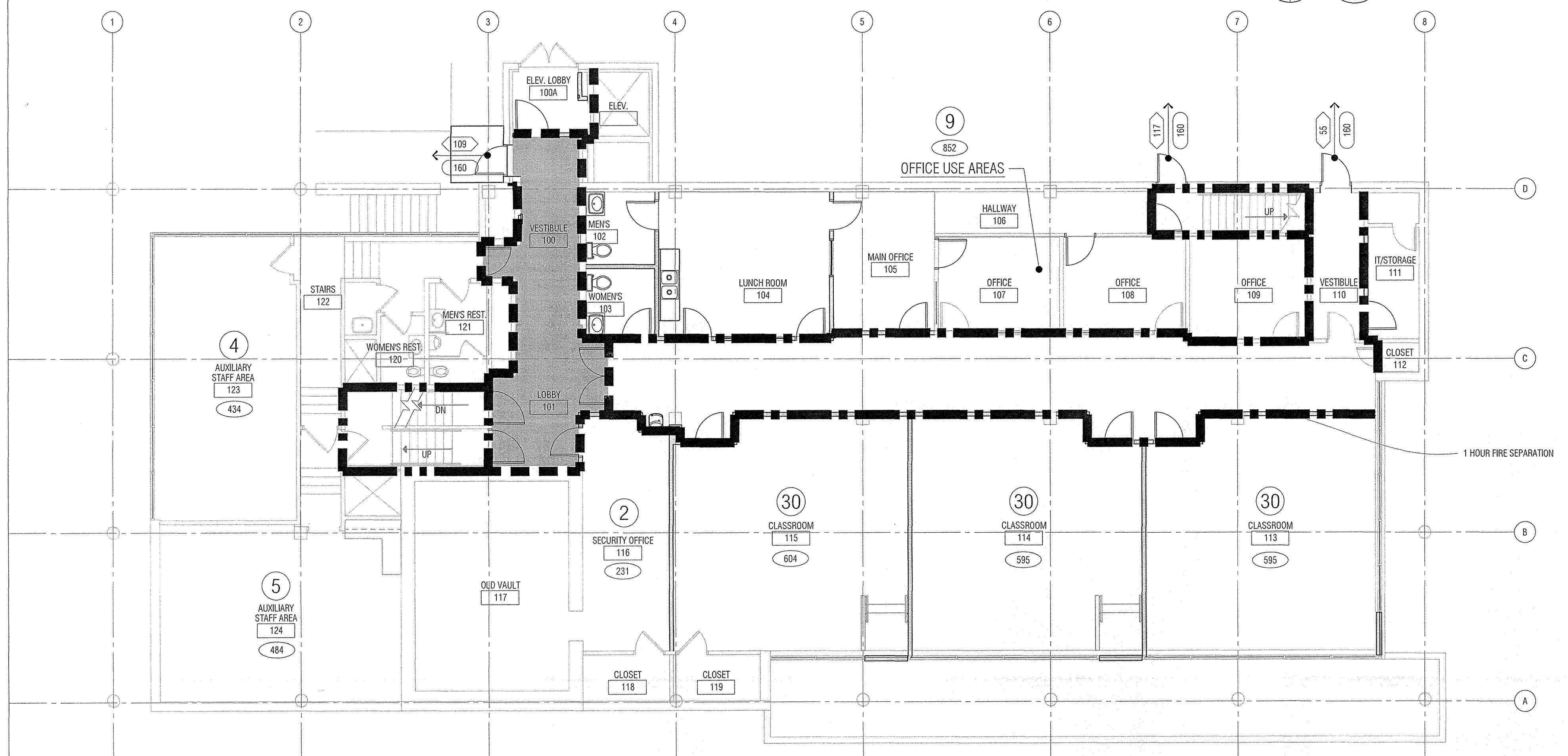


- Door / Opening Key Notes:
- EXISTING OPENING - DOOR AND FRAME TO BE CLEANED, PREPPED AND PAINTED. FIELD VERIFY OPENING SIZE. REPAIR DAMAGED SUBSTRATES CAUSED BY FRAME REMOVAL.
 - NEW MASONRY OPENING, SECURE MASONRY ANCHORS WITH TOOTHED IN CMU.
 - INSULATED EXTERIOR DOOR.
 - NEW LEVER HANDLE LOCKSET.
 - PAIN EXISTING FRAME & DOOR.
 - WOOD FRAME AND TRIM TO MATCH EXISTING, INCLUDING WOOD CHAIR RAIL.

Room Finish Schedule											
ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILING FINISH	ROOM FINISH KEY NOTES		
				NORTH	EAST	SOUTH	WEST				
100	VESTIBULE	EX. PT	EX.	GLAZING	PNT	GLAZ	PNT	EX.	REMOVE WALL COVERINGS, PNT WALLS		
101	LOBBY	EX. PT	EX.	PNT	PNT	EX.	PNT	EX.			
102	MENS RESTROOM	PT	PT	PNT	PNT	PNT	PNT	GYF BD-PNT			
103	WOMENS RESTROOM	PT	PT	PNT	PNT	PNT	PNT	GYF BD-PNT			
104	LUNCH ROOM	VCT	RES	PNT	PNT/GLAZING	--	PNT	ACT			
105	MAIN OFFICE	CPT	RES	PNT	PNT/GLAZING	PNT	PNT/GLAZING	ACT			
106	HALLWAY	CPT	RES	PNT	PNT	PNT	--	ACT			
107	OFFICE	CPT	EX.	EX. PNT	EX. PNT	EX. PNT	EX. PNT	EX.	1.		
108	OFFICE	CPT	EX.	EX. PNT	EX. PNT	EX. PNT	EX. PNT	EX.	1.		
109	OFFICE	CPT	EX.	EX. PNT	EX. PNT	EX. PNT	EX. PNT	EX.	1.		
110	CORRIDOR	VCT	RES	PNT	PNT	PNT	PNT	ACT			
111	STORAGE	VCT	RES	PNT	PNT	PNT	PNT	EX.			
112	CLOSET	EX.	EX.	PNT	PNT	PNT	PNT	EX.			
113	CLASSROOM	CPT	RES	PNT	BRK/GLAZ	BRK/GLAZ	PNT	ACT			
114	CLASSROOM	CPT	RES	PNT	PNT	BRK/GLAZ	PNT	ACT			
115	CLASSROOM	CPT	RES	PNT	PNT	BRK/GLAZ	PNT	ACT			
116	SECURITY OFFICE	CPT	RES	PNT	PNT	--	EX.	ACT			
117	OLD VAULT	EX.	EX.	EX.	EX.	EX.	EX.	EX.			
118	CLOSET	EX.	EX.	EX.	EX.	EX.	EX.	EX.			
119	CLOSET	EX.	EX.	EX.	EX.	EX.	EX.	EX.			
120	WOMENS RESTROOM	EX.	EX.	EX.	EX.	EX.	EX.	EX.			
121	MENS RESTROOM	EX.	EX.	EX.	EX.	EX.	EX.	EX.			
122	STAIRS	RES	RES	PNT	PNT	PNT	PNT	PNT			
123	OFFICE	EX.	EX.	EX.	EX.	EX.	EX.	EX.			
124	WORKROOM/LOUNGE	EX.	EX.	EX.	EX.	EX.	EX.	EX.			
201	CLASSROOM	CPT	RES	PNT	PNT	PNT	PNT	ACT			
202	CLASSROOM	CPT	RES	PNT	PNT	PNT	PNT	ACT			
203	OFFICE	CPT	RES	PNT	PNT	PNT	PNT	ACT			
204	OFFICE	CPT	RES	PNT	PNT	PNT	PNT	ACT			
205	OFFICE	CPT	RES	PNT	PNT	PNT	PNT	ACT			
206	CLASSROOM	CPT	RES	PNT	PNT	PNT	PNT	ACT			
207	CLASSROOM	CPT	RES	PNT	PNT	PNT	PNT	ACT			
207A	CLOSET	CPT	RES	PNT	PNT	PNT	PNT	ACT			
208	CLASSROOM	CPT	RES	PNT	PNT	PNT	PNT	ACT			
209	CLOSET	EX.	EX.	PNT	PNT	PNT	PNT	PNT			
210	STAIRS	RES	RES	PNT	PNT	PNT	PNT	PNT			
211	CLASSROOM	CPT	RES	PNT	PNT	PNT	PNT	ACT			
212	CLASSROOM	CPT	RES	PNT	PNT	PNT	PNT	ACT			
213	ELEVATOR MACHINE RM.	EX.	EX.	EX.	EX.	EX.	EX.	EX.			
214	CORRIDOR	CPT	RES	PNT	PNT	PNT	PNT	ACT			
215	MECHANICAL	EX.	EX.	EX.	EX.	EX.	EX.	EX.			
216	STAIRS	RES	RES	PNT	PNT	PNT	PNT	ACT			
217	MENS RESTROOM	EX.	EX.	EX.	EX.	EX.	EX.	PNT	2.		
218	WOMENS RESTROOM	EX.	EX.	EX.	EX.	EX.	EX.	PNT	2.</		



2 Second Floor Life Safety Plan
1/8" = 1'-0"



1 First Floor Life Safety Plan
1/8" = 1'-0"

CODE INFORMATION - BUREAU OF FIRE SERVICES

GOVERNING CODE:
1999 SCHOOL SAFETY RULES
NFPA 101 LIFE SAFETY CODE, 1997 EDITION W/ AMENDMENTS (LSC)

CHAPTER 3 USE and OCCUPANCY CLASSIFICATION:
NFPA 101 SECTION 4-1.3: EDUCATIONAL OCCUPANCY

LSC BUILDING DATA SUMMARY:
1997 LIFE SAFETY CODE:
CONSTRUCTION TYPE: II (000)
USE GROUP: E - EDUCATIONAL

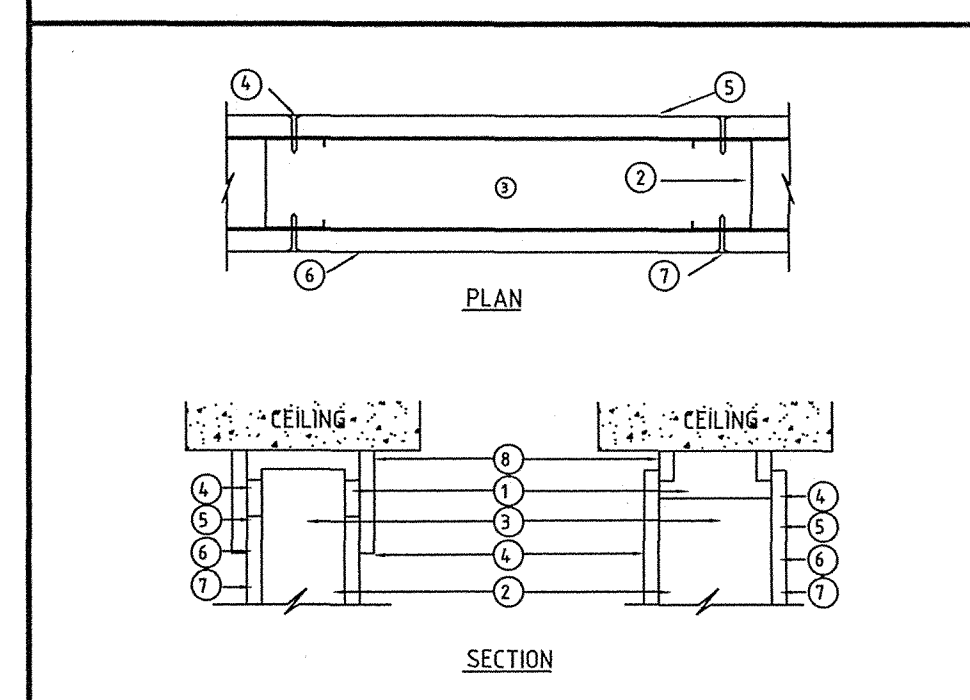
CHAPTER 6 FEATURES OF FIRE PROTECTION:
ALLOWABLE: PER MICHIGAN SCHOOL RULES, 10-1-16

CODE ANALYSIS AREA DATA - GROSS AREA - 'E' USE:
(EXISTG. AREA) = 15,455 SQ FT
(1ST FLOOR TO BE RENOVATED) = 4,686 SQ FT
(2ND FLOOR TO BE RENOVATED) = 8,285 SQ FT
TOTAL AREA TO BE RENOVATED = 12,971 SQ FT

PER LSC SECTION 9-1.7 & 10-1.7 AND MICHIGAN SCHOOL RULES 10-1-7.1
ALLOWANCES PER OCCUPANT:
- 26-1.7-BUSINESS: 1 PERSON/100 SQ FT

BUILDING CODE PLAN LEGEND

- ■ ■ ■ NEW, OR EXISTING TO BE UPGRADED, 1-HOUR "FIRE PARTITION" CONSTRUCTION PER 2012 MBC SECTION 708. THIS WALL CONSTRUCTION HAS 20 MINUTE DOOR AND FRAME PROTECTIVES FOR ALL CORRIDORS, PROVIDE FIRE / SMOKE DAMPERS AS REQUIRED PER 2012 MBC SECTION 714.
- ■ ■ ■ NEW 1-HOUR "FIRE BARRIER" FOR "EXIT PASSAGEWAY" CONSTRUCTION PER 2012 MBC SECTION 707. THIS WALL CONSTRUCTION HAS 60 MINUTE DOOR AND FRAME PROTECTIVES FOR ALL OTHER CONDITIONS. PROVIDE FIRE / SMOKE DAMPERS AS REQUIRED PER 2012 MBC.
- ■ ■ ■ ASSUMED EX. 1HR RATED CONSTR. - STAIR ENCL. W/ NEW 60 MIN. DOORS
- 1HR RATED FLOOR ASSEMBLY, CONCRETE ON METAL DECK WITH PLASTER AND LATH FIXED CEILING ASSEMBLY BELOW.
- # AREA OF ROOM OR SPACE (SQUARE FEET)
- # OCCUPANT LOAD EXITING THROUGH EGRESS COMPONENT
- # OCCUPANT CAPACITY OF EGRESS COMPONENT
- # OCCUPANT LOAD OF ROOM OR AREA



- UL DESIGN DETAIL #U495**
BASED ON UNDERWRITERS LABORATORIES INC. CURRENT FIRE RESISTANCE DIRECTORY DESIGN NO. U495 Non-Bearing Wall Rating 1 or 2 HR. (See Items 5 & 6)
1. FLOOR AND CEILING RUNNERS - CHANNEL SHAPED RUNNERS, 3-5/8 IN. WIDE (MIN.), 1-1/4 IN. LEGS FORMED FROM NO. 25 MSG (MIN.) GALV. STEEL, ATTACHED TO FLOOR AND CEILING WITH FASTENERS SPACED 24 IN. O.C. MAX.
 2. STEEL STUDS - CHANNEL SHAPED 3-5/8" WIDE (MIN.), 1-1/4" LEGS, 3/8" FOLDED BACK RETURNS FORMED FROM NO. 25 MSG (MIN.) GALV. STEEL, ATTACHED TO FLOOR AND CEILING WITH FASTENERS SPACED 24" O.C. MAXIMUM.
 3. BOTTLE AND BLANKETS - MINERAL WOOL OR GLASS FIBER BATTS COMPLETELY FILLING STUD CAVITY. SEE BATTS AND BLANKETS (BZJ2) CATEGORY IN UL MANUAL FOR NAMES OF CLASSIFIED COMPANIES.
 4. SCREWS-TYPE S SELF-TAPPING SCREWS, 2" LONG (1 HR) AND 2-1/2" LONG (2 HR).
 5. BUILDING UNITS - FOR 1 HR. RATING - NOMINAL 5/8 OR 3/4" THICK, 4 FT WIDE, FACED GYPSUM WALL BOARD PANELS WITH THE FACED SIDE ON THE INTERIOR WALL CAVITY. PANELS ATTACHED TO STUDS AND FLOOR AND CEILING RUNNERS WITH SCREWS SPACED 8" O.C. ALONG THE EDGES OF THE PANEL AND 12" O.C. IN THE FIELD OF THE PANEL. JOINTS ORIENTED VERTICALLY AND STAGGERED ON OPPOSITE SIDES OF THE ASSEMBLY. GENERAL ELECTRIC COMPANY - TYPE REGULAR "BEARING THE UL CLASSIFICATION MARKING
 6. JOINT TAPE AND COMPOUND-(NOT SHOWN)-VINYL DRY OR PREMIXED JOINT COMPOUND APPLIED IN TWO COATS TO JOINTS AND SCREW HEADS; PAPER TAPE, 2" WIDE EMBEDDED IN FIRST LAYER OF COMPOUND OVER ALL JOINTS.
 7. WALLBOARD GYPSUM-(NOT SHOWN)-FOR 2 HR. RATING-ANY CLASSIFIED 5/8" THICK (MIN.) 4" WIDE WALLBOARD APPLIED OVER EXTERIOR FACE OF BUILDING UNIT (ITEM 5). WALLBOARD TO BE APPLIED VERTICALLY JOINTS STAGGERED 24" FROM BUILDING UNIT (ITEM 5) AND ATTACHED TO STUDS AND FLOOR AND CEILING RUNNERS WITH SCREWS SPACED 8" O.C. SEE WALLBOARD GYPSUM (CXN) CATEGORY IN UL MANUAL FOR NAMES OF MANUFACTURERS "BEARING THE UL CLASSIFICATION MARKING
 8. UL APPROVED FIRESPRAY/COMPOUND BOTH SIDES OF WALL

CODE INFORMATION - BUREAU OF CONSTR. CODES

GOVERNING CODES:
2012 MICHIGAN BUILDING CODE w/ AMENDMENTS (MBC)
2011 NATIONAL ELECTRICAL CODE w/ AMENDMENTS (NEC)
2012 MICHIGAN MECHANICAL CODE w/ AMENDMENTS (MIMC)
2012 MICHIGAN PLUMBING CODE w/ AMENDMENTS (MPC)
2009 ICC / ANSI A 117.1

CLASSIFICATION OF OCCUPANCY (PER MBC SECTION 305)
- USE GROUP
E - EDUCATIONAL

CONSTRUCTION TYPE (PER MBC CHAPTER 6)
- EXISTING BUILDING: TYPE IIB, NOT FIRE SUPPRESSED
- ADDITION AREAS: TYPE IIB
- 'E' USE GROUP

ALLOWABLE HEIGHT AND BUILDING AREA (PER MBC TABLE 503)

CODE ANALYSIS AREA DATA - GROSS AREA - 'E' USE:
(EXISTG. AREA) = 15,455 SQ FT
(1ST FLOOR TO BE RENOVATED) = 4,686 SQ FT
(2ND FLOOR TO BE RENOVATED) = 8,285 SQ FT
TOTAL AREA TO BE RENOVATED = 12,971 SQ FT

OCCUPANT LOADS WERE CALCULATED BASED ON THE FOLLOWING ALLOWANCES. THE MOST RESTRICTIVE APPLIES.

PER MBC TABLE 1004.1.1

ASSEMBLY UNCONCENTRATED (TABLES AND CHAIRS):	1/15 SF (NET)
STORAGE/MECH:	1/300 SF (GROSS)
OFFICE:	1/100 SF (GROSS)
CLASSROOM:	1/20 SF (GROSS)

OCCUPANCY DATA - GROSS AREA - 'E' USE:

1ST FLOOR TO BE RENOVATED =	4,686 SQ FT	110 OCCUPANTS
2ND FLOOR TO BE RENOVATED =	8,285 SQ FT	234 OCCUPANTS
TOTAL AREA TO BE RENOVATED =	12,971 SQ FT	335 OCCUPANTS

GENERAL LIFE SAFETY NOTES

1. ALL FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS SHALL BE IDENTIFIED WITH SIGNS OF STENCILING (WHERE WALL AREAS ARE CONCEALED FROM VIEW). LETTERS MUST BE A MIN. 3" IN HEIGHT WITH A MIN. 3/8" STROKE IN CONTRASTING COLOR, AND READ "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS". LOCATE WITHIN 15'-0" OF THE END OF EACH WALL AND AT INTERVALS NOT EXCEEDING 30'-0".
2. THESE CODE ANALYSIS DRAWINGS (SHEET A0-02), NOTES, PLANS AND WALL IDENTIFICATION TYPES AND LOCATIONS ARE FOR FIRE RATINGS AND / OR SMOKE BARRIERS AS REQUIRED FOR LIFE SAFETY AND BUILDING CODE COMPLIANCE. ALL OTHER CONSTRUCTION REQUIREMENTS ARE INDICATED ON THE CONSTRUCTION DOCUMENTS.
3. ALL FIRE RATED WALLS OF ANY TYPE SHALL BE SEALED TIGHT TO ROOF DECK SYSTEM ABOVE WITH UL APPROVED MATERIAL BY EITHER JOHN'S MANVILLE FIRETEMP, HILTI FIRESTOP COMPOUND, OR 3M. ALL PRODUCTS / MATERIALS MUST BE UL APPROVED AND CLASSIFIED AND SUBMITTED FOR REVIEW AND APPROVAL BY ARCHITECT BEFORE APPLICATION/INSTALLATION.

PROJECT SCOPE NARRATIVE:

THE PROPOSED SCOPE OF WORK INCLUDES INTERIOR RENOVATIONS TO CONSTRUCT CLASSROOM SPACES WITHIN THE CURRENTLY VACANT BANK FACILITY.

THE EXISTING BUILDING HAS BEEN PURCHASED BY THE MUSKOGEE COVENANT ACADEMY AND TO BE OPERATED AS AN EDUCATIONAL FACILITY. THE ACADEMY WILL PROVIDE EDUCATION FOR 6-12 GRADES. CLASS SIZE VARIES BETWEEN 16-20 STUDENTS PER CLASSROOM.

THE EXISTING BUILDING WILL BE MAINTAINED FOR THE ENTIRE FACILITY FOR EDUCATIONAL INSTRUCTION BY NEW OWNER.

THE MECHANICAL ROOMS, SERVICE AREAS, BOILER ROOM WALL REMAIN FUNCTIONAL DURING THE CONSTRUCTION ACTIVITIES AND UPGRADED TO PROVIDE VENTILATION AND LIGHTING REQUIREMENTS PER CURRENT CODES.

TEMPORARY CLOSURE/SEPARATION WALL AND DOORS BETWEEN THE FIRST AND FLOOR WILL BE PROVIDED TO CONSTRUCT (3) CLASSROOMS ON THE LOWER LEVEL AS SOON AS POSSIBLE. RENOVATIONS WILL CONTINUE ON THE SECOND FLOOR TO ADD CLASSROOMS AS ENROLLMENT IS INCREASED FOR THE FOLLOWING SCHOOL YEAR.

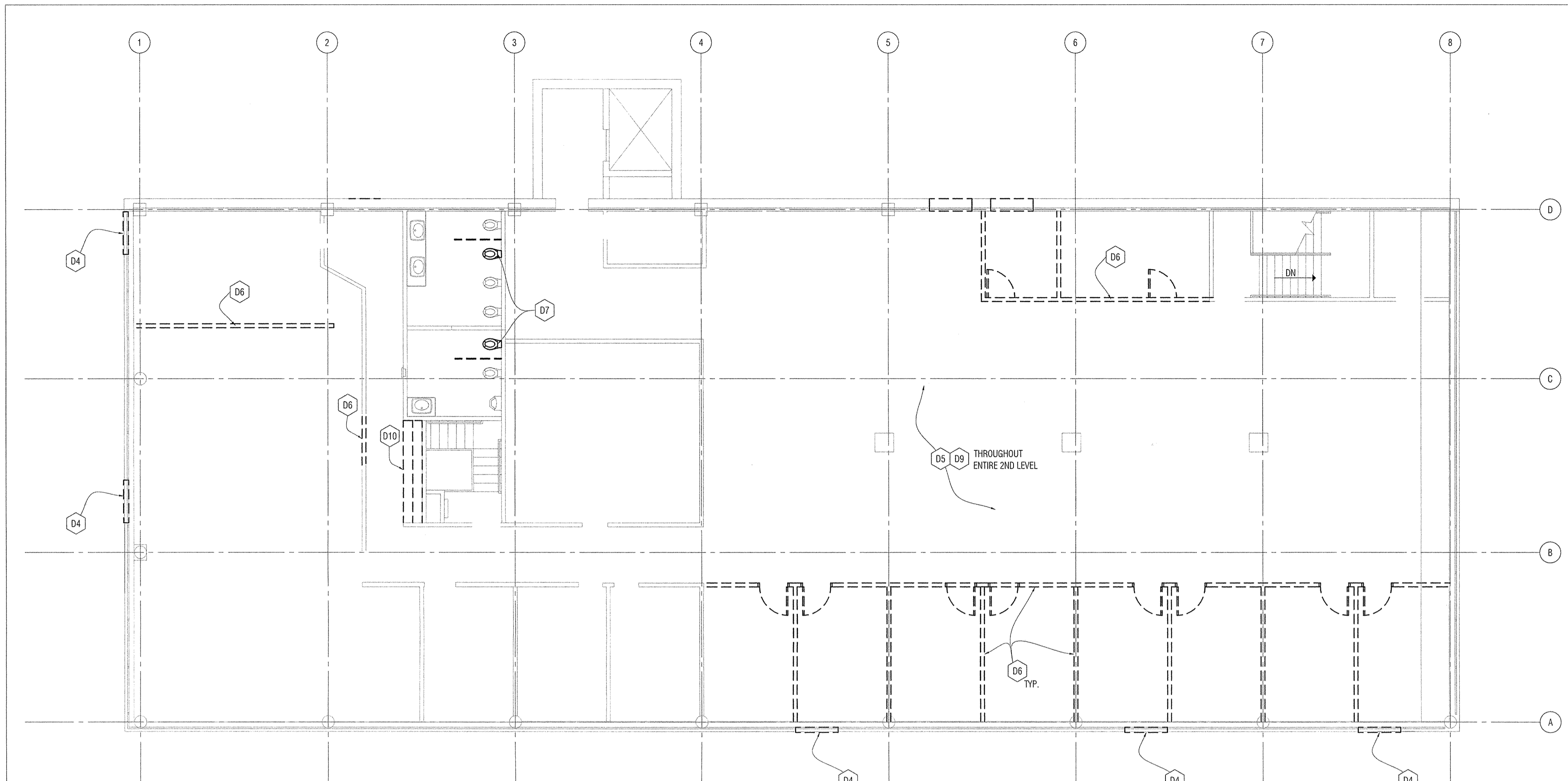
MECHANICAL, ELECTRICAL SYSTEMS MODIFICATIONS AND REPAIRS ARE SUBMITTED AS COMPANION PROJECTS BY THE REGISTERED ENGINEERING DESIGNERS. THE SYSTEM MODIFICATIONS INCLUDE:

- NEW EMERGENCY LIGHTING FIXTURES AND SYSTEM
- GENERAL ROOM LIGHTING FIXTURES
- MECHANICAL HEATING/VENTILATION SYSTEM REPAIRS
- FIRE ALARM SYSTEM MODIFICATIONS TO SUPPORT CURRENT WORK SCOPE
- MECHANICAL SPLIT SYSTEM UNITS IN OFFICES AND CLASSROOMS AS BUDGET ALLOWS.

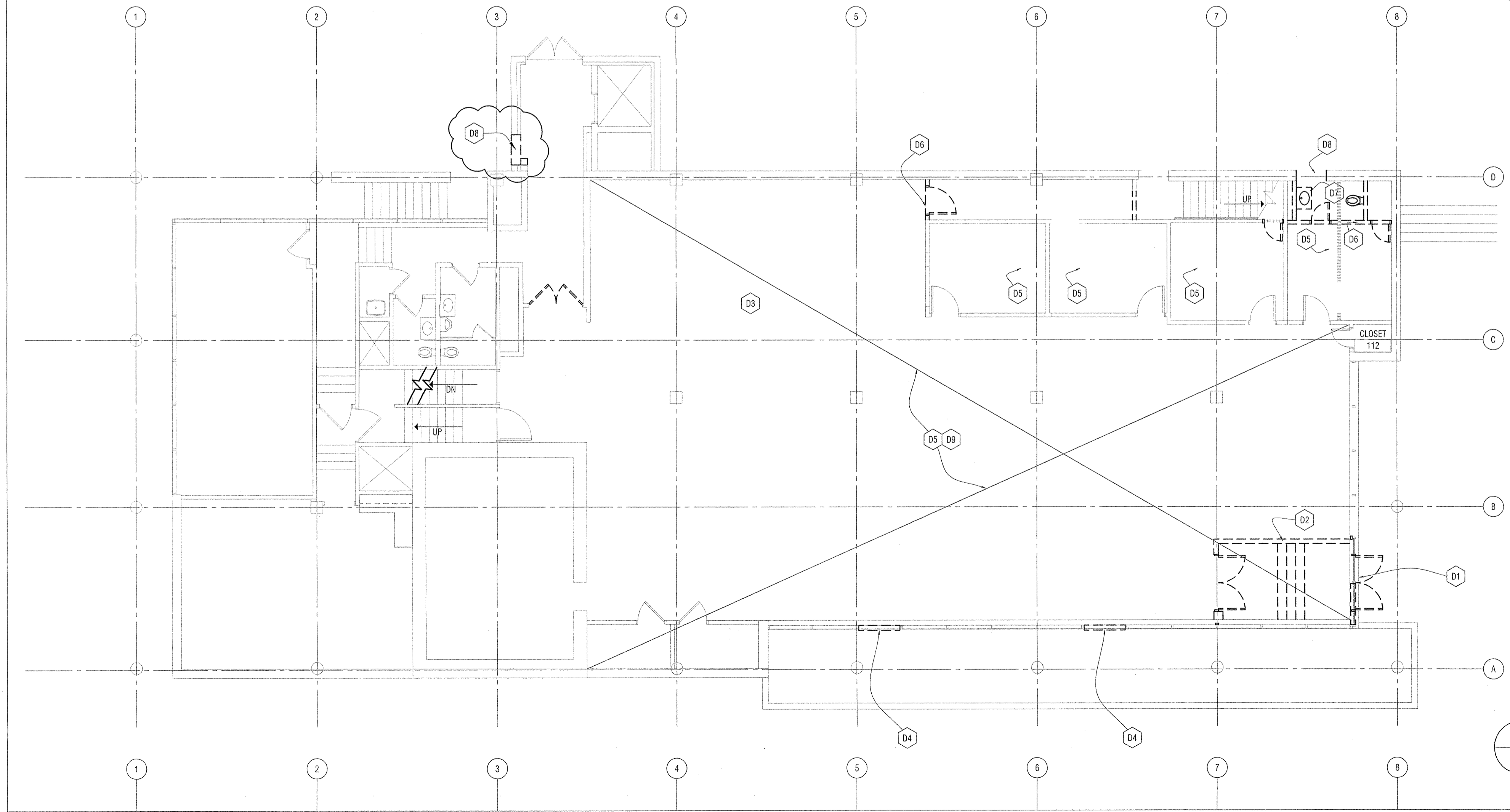
TEMPORARY OCCUPANCY NOTES

1. CROSS HATCHED AREA REPRESENTS COMPLETED FIRST FLOOR THAT WILL BE OCCUPIED DURING THE FINAL (2) MONTHS OF CONSTRUCTION ON THE SECOND FLOOR. ONLY ONE CLASSROOM WILL BE UTILIZED INITIALLY.
2. 1-HR RATED TEMPORARY FIRE SEPARATION WALLS ARE CONSTRUCTED TO SEPARATE THE OCCUPIED AREA FROM CONSTRUCTION AREA. SECOND FLOOR CONSTRUCTION SHOULD BE COMPLETED IN 60 DAYS.
3. ALL LIFE SAFETY SYSTEMS ARE CURRENTLY IN PLACE FOR BOTH FLOORS.

PART



2 Second Floor Demolition Plan
1/8" = 1'-0"



1 First Floor Demolition Plan
1/8" = 1'-0"

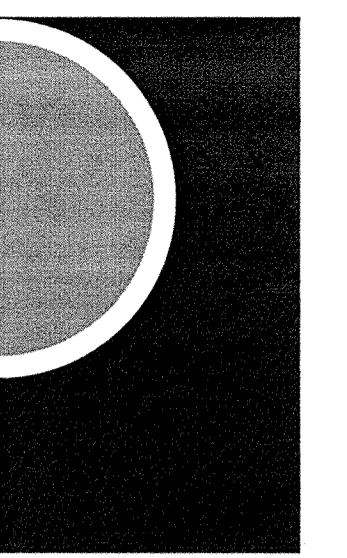
DEMO FLOOR PLAN - GENERAL NOTES:

- A. ALL DEMOLITION DRAWINGS AND DEMOLITION DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH NEW WORK. THE DEMOLITION DRAWINGS AND DETAILS MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH APPLY IN OTHER AREAS (AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRUCK THRU LINES). COORDINATE ALL DEMOLITION WORK WITH ALL ARCHITECTURAL, MECH. AND ELEC. DRAWINGS. CONTRACTOR RESPONSIBLE TO REFERENCE ALL DRAWINGS/SPECIFICATIONS TO CONFIRM EXTENT OF DEMOLITION WORK.
- B. ALL REMOVED ITEMS, WALLS, FLOORS, CEILING, OPENINGS, ETC ARE TO BE PATCHED/REPAIRED AND PREPPED TO RECEIVE NEW WORK AND/OR FINISHES.
- C. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- D. WALL REMOVAL THAT TERMINATES INTO A WALL OR CEILING TO REMAIN SHALL BE COMPLETELY REMOVED FREE OF PROJECTIONS, READY TO RECEIVE NEW WORK.
- E. REMOVE ALL ITEMS PROJECTING FROM EXISTING WALLS OR FLOORS TO REMAIN (BLOCKING, SCREWS, FASTENERS, PIPES, CONDUITS, MOUNTING PLATES, FIXED EQUIPMENT, ETC). PATCH AND REPAIR FOR NEW FINISH.
- F. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS PRIOR TO BIDDING.
- G. CONTRACTOR SHALL PROTECT EXISTING BUILDING ELEMENTS AND SITE FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES. CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS (IDENTIFIED BY OWNER, ARCHITECT, OR CONSTRUCTION MANAGER) AT NO ADDITIONAL COST.
- H. MAINTAIN EXISTING FIRE RATINGS WHERE OCCURS AND WHERE POSSIBLE DURING DEMOLITION. REFER TO CODE AND LIFE SAFETY SHEETS FOR MORE INFORMATION AS WELL AS CONSTRUCTION MANAGERS INSTRUCTIONS.
- I. ASBESTOS AND OTHER HAZARDOUS MATERIALS WILL BE REMOVED BY OWNER'S ABATEMENT CONTRACTOR PRIOR TO START OF CONSTRUCTION. IF ANY SUSPECTED HAZARDOUS MATERIAL IS ENCOUNTERED, STOP WORK IN THAT AREA AND IMMEDIATELY INFORM THE ARCHITECT, CONSTRUCTION MANAGER, AND OWNER.
- J. DISPOSE OF ALL DEMOLITION MATERIALS LEGALLY OFF-SITE, U.O.I.
- K. REMOVE ALL PICTURES, FRAMES & PLAQUES THAT MAY BE DAMAGED DURING CONSTRUCTION AND RETURN TO OWNER.
- L. CONTRACTOR IS TO DEMO AND PREPARE EXISTING WALL CONSTRUCTION AS REQUIRED FOR INSTALLATION OF NEW MECHANICAL AND ELECTRICAL WORK WITHIN EXISTING WALL.
- M. PREP. ALL MASONRY OPENINGS TO RECEIVE NEW TOOTHED-IN MASONRY FOR LIKE NEW APPEARANCE WHERE DEMOLITION OCCURS AND WALL IS VISIBLE.
- N. CONTRACTOR TO COORDINATE EXIST. CONC. SLAB REMOVAL THAT IS REQUIRED FOR INSTALLATION OF NEW UNDERGROUND PLUMBING WITH DEMOLITION CONTRACTOR.
- O. REMOVE ALL EXISTING EXPOSED CONDUIT NOT IN USE PRIOR TO OR AFTER NEW WORK.
- P. ALL DEVICES SUCH AS SECURITY CAMERAS, CLOCKS, DVD, VCR, WIFI WIRELESS ROUTERS, ETC. AND THEIR ASSOC. COMPONENTS ARE TO BE CAREFULLY REMOVED AND TURNED OVER TO OWNER.
- Q. THERE MAY BE EXISTING GLUE-UP CEILING PADS ABOVE SUSPENDED CEILING SYSTEMS. SOME PADS HAVE DETACHED FROM CEILING AND ARE LAYING ABOVE SUSPENDED CEILING SYSTEM. DISPOSE OF PADS PROPERLY.

DEMO FLOOR PLAN KEY NOTES:

- D1 REMOVE CONCRETE STAIRS AND MASONRY WALL. SALVAGE BRICK TO PATCH EXTERIOR WALLS.
- D2 REMOVE STOREFRONT FRAMING AT VESTIBULE
- D3 REMOVE CASEWORK TELLER STATIONS IN THEIR ENTIRETY. PATCH REMAINING SUBSTRATE AS REQUIRED FOR NEW CONSTRUCTION.
- D4 REMOVE INSULATED GLASS FOR INSTALLATION OF OPERABLE WINDOW.
- D5 REMOVE ALL FLOOR FINISHES (CARPET AND TILE) AND PREPARE FOR NEW FLOOR FINISH.
- D6 REMOVE WALLS IN ENTIRETY AND PATCH REMAINING SUBSTRATE FOR NEW FINISHES.
- D7 REMOVE PLUMBING FIXTURE AND TOILET PARTITION. PREPARE FLOOR FOR FINISH.
- D8 REMOVE MASONRY AS REQUIRED FOR DOOR INSTALLATION.
- D9 REMOVE SUSPENDED ACOUSTICAL LAY-IN CEILING IN ITS ENTIRETY
- D10 REMOVE EXISTING CASEWORK AND SINK IN ITS ENTIRETY, INCLUDING BUILT-IN APPLIANCES.

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BCC Bulletin	03/23/17

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JE/TJO

CHECKED BY

TJO

APPROVED BY

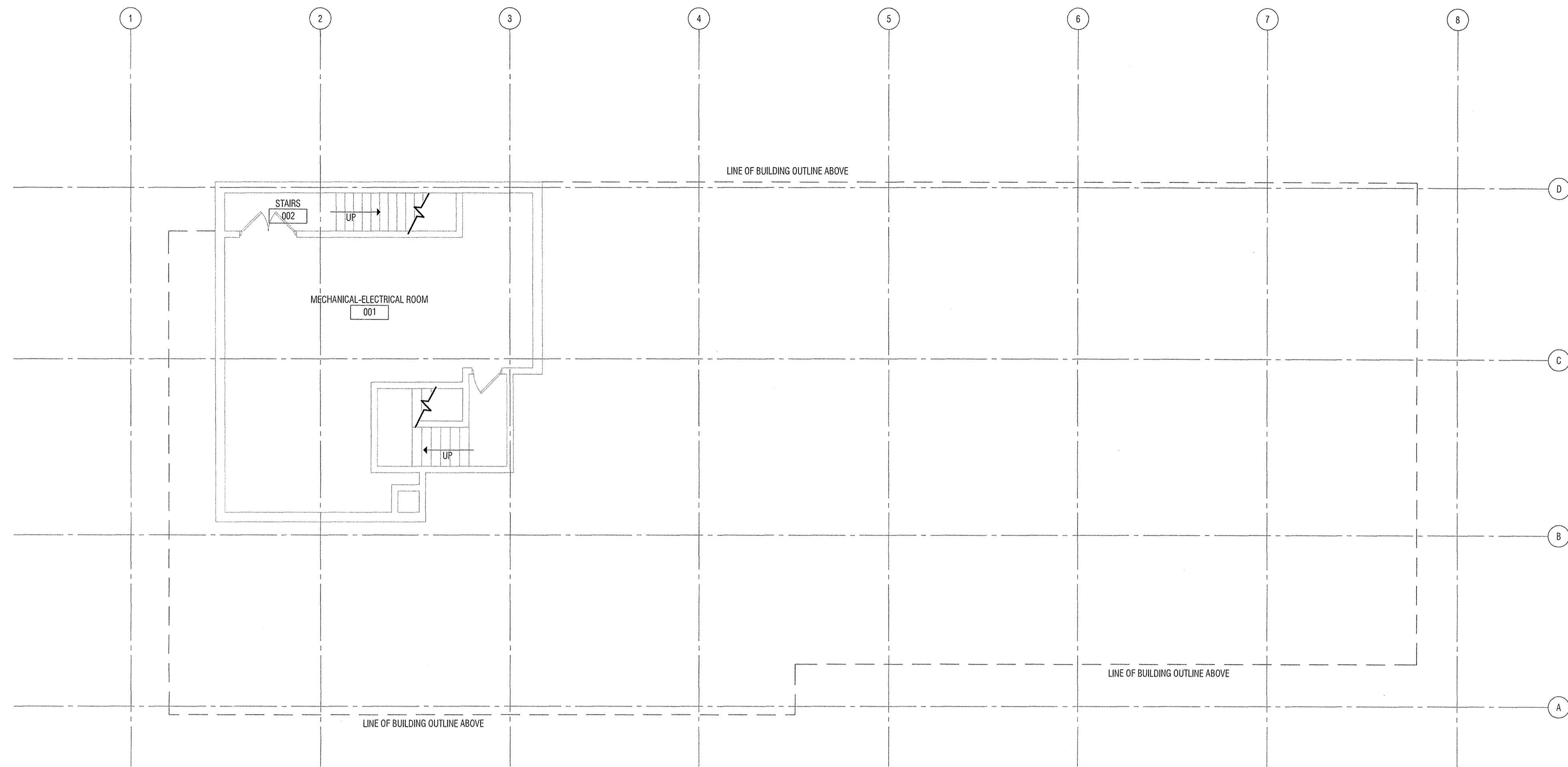
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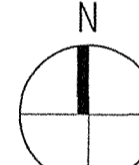
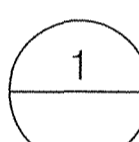
SHEET NAME

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SHEET NO.

A2-01

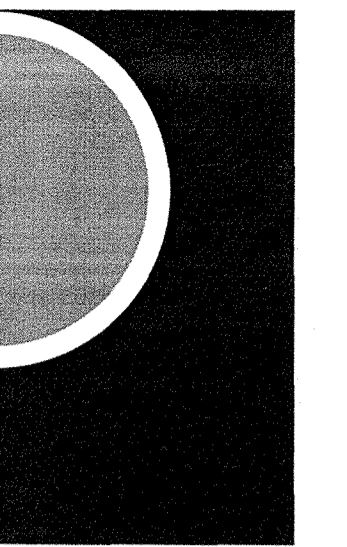




Basement Floor Plan
 1/8" = 1'-0"

FLOOR PLAN - GENERAL NOTES:

- A. ALL PLAN DIMENSIONS ARE NOMINAL TO FACE OF WALL. WALL THICKNESS ARE SHOWN NOMINAL - SEE WALL TYPES ON SHEET A0-03 FOR ACTUAL THICKNESS.
- B. COORDINATE SIZE AND LOCATION OF ALL DUCT, SHAFT AND LOUVER OPENINGS IN WALLS AND FLOORS WITH MECHANICAL AND ELECTRICAL. PROVIDE ALL REQUIRED LINTELS FOR OPENINGS.
- C. ALL EXPOSED CORNERS OF MASONRY BLOCK ARE TO BE BULLNOSED.
- D. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. IF A CONFLICT IS ENCOUNTERED OR A REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.
- E. EXISTING MASONRY WALL INTERSECTIONS WHICH ARE LEFT EXPOSED AFTER DEMOLITION OF ADJACENT MASONRY CONSTRUCTION MUST BE PATCHED AND REPAIRED WITH NEW MASONRY OR EXISTING BRICK VENER, TOOTH-IN TO MATCH EXISTING COURSING AND BOND PATTERN, TYPICAL AT ALL LOCATIONS.
- F. AT ALL REMOVED CONCRETE BLOCK WALLS, REMOVE ANY DEFECTS THAT PROTRUDE ABOVE ANY FLOOR FINISH AND LEVEL SURFACE WITH HYDRAULIC CEMENT UNDERLAYMENT. AS REQUIRED FOR LEVEL INSTALLATION OF NEW FLOOR FINISH.
- G. ALL NEW WALLS TO EXTEND TO UNDERSIDE OF DECK- REFER TO WALL TYPES ON DRAWING A0-03 FOR CONSTRUCTION METHOD.
- H. PATCH ALL EXISTING SURFACES AFFECTED BY DEMOLITION ACTIVITIES TO PROVIDE SMOOTH, CLEAN SURFACES TO RECEIVE NEW FINISHES.
- I. FIRE RATED PARTITIONS ARE INDICATED ON LIFE SAFETY PLANS ON SHEET A1-01. TOP OUT ALL EXISTING WALLS TO REMAIN THAT ARE NOTED AS FIRE PARTITIONS ON LIFE SAFETY PLANS BY EXTENDING FRAMING AND GYPSUM BOARD AS REQUIRED AND SEAL TO DECK WITH SPRAY SEALANT.
- J. REFER TO SCHEDULES SHEET A0-03 FOR ALL FLOOR TRANSITIONS.
- K. REFER TO DRAWING A0-01 FOR ABBREVIATIONS AND OTHER SYMBOL DEFINITIONS.
- L. FIELD VERIFY ALL EXISTING OPENINGS TO RECEIVE NEW WORK PRIOR TO FABRICATION OF ANY FRAME TYPES - NOTIFY ARCHITECT OF ANY DISCREPANCIES.
- M. REFER TO PLAN FOR LOCATIONS OF FIRE EXTINGUISHERS / CABINETS(FEC) TO BE INSTALLED SEMI-FLUSH. REFER TO WALL CONSTRUCTION.

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KEY PLAN

OWNER

Kalamazoo Covenant Academy

PROJECT NAME

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PROJECT NO.

16-151

ISSUES / REVISIONS

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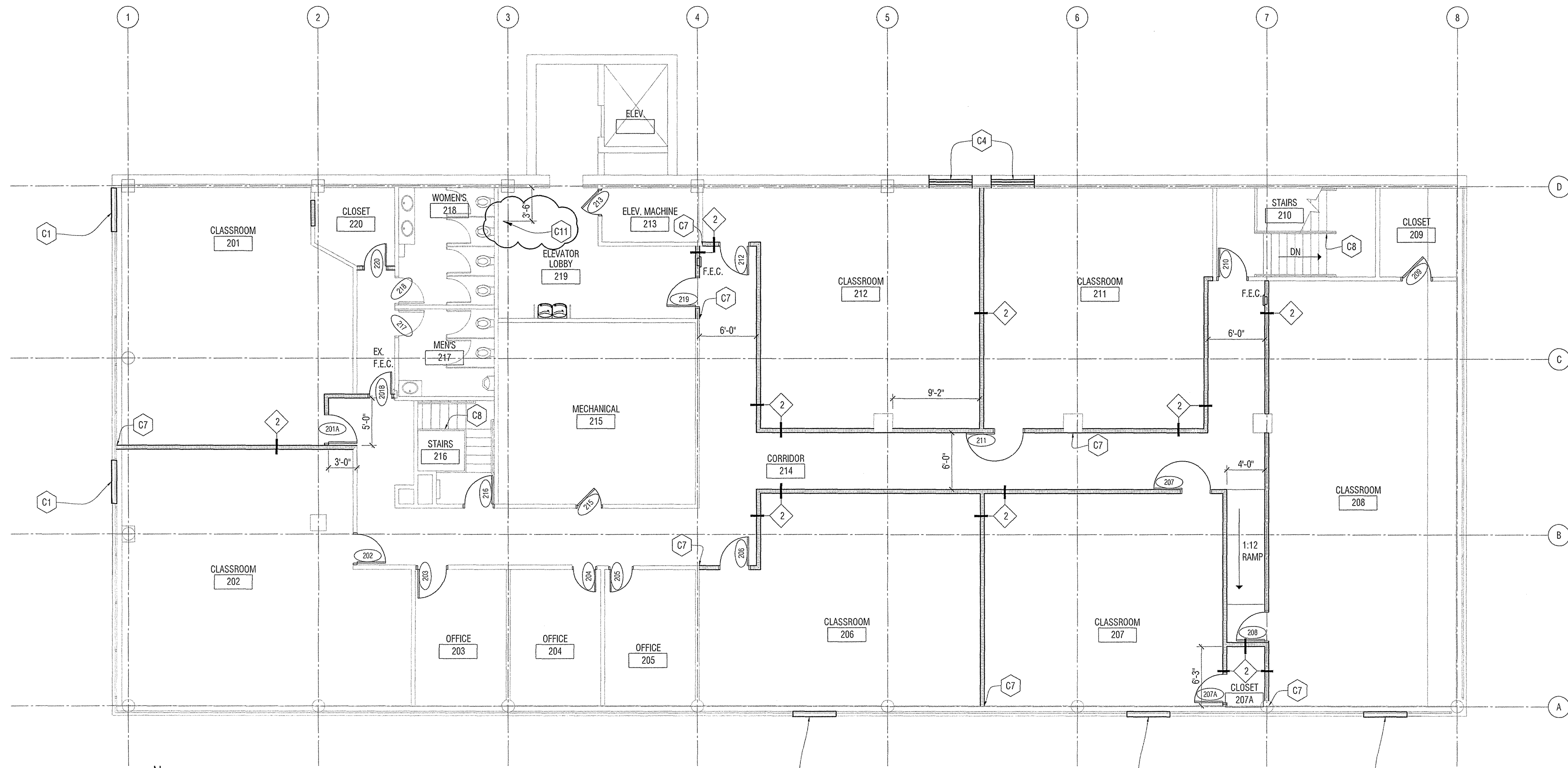
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 TJO

APPROVED BY
 DWG

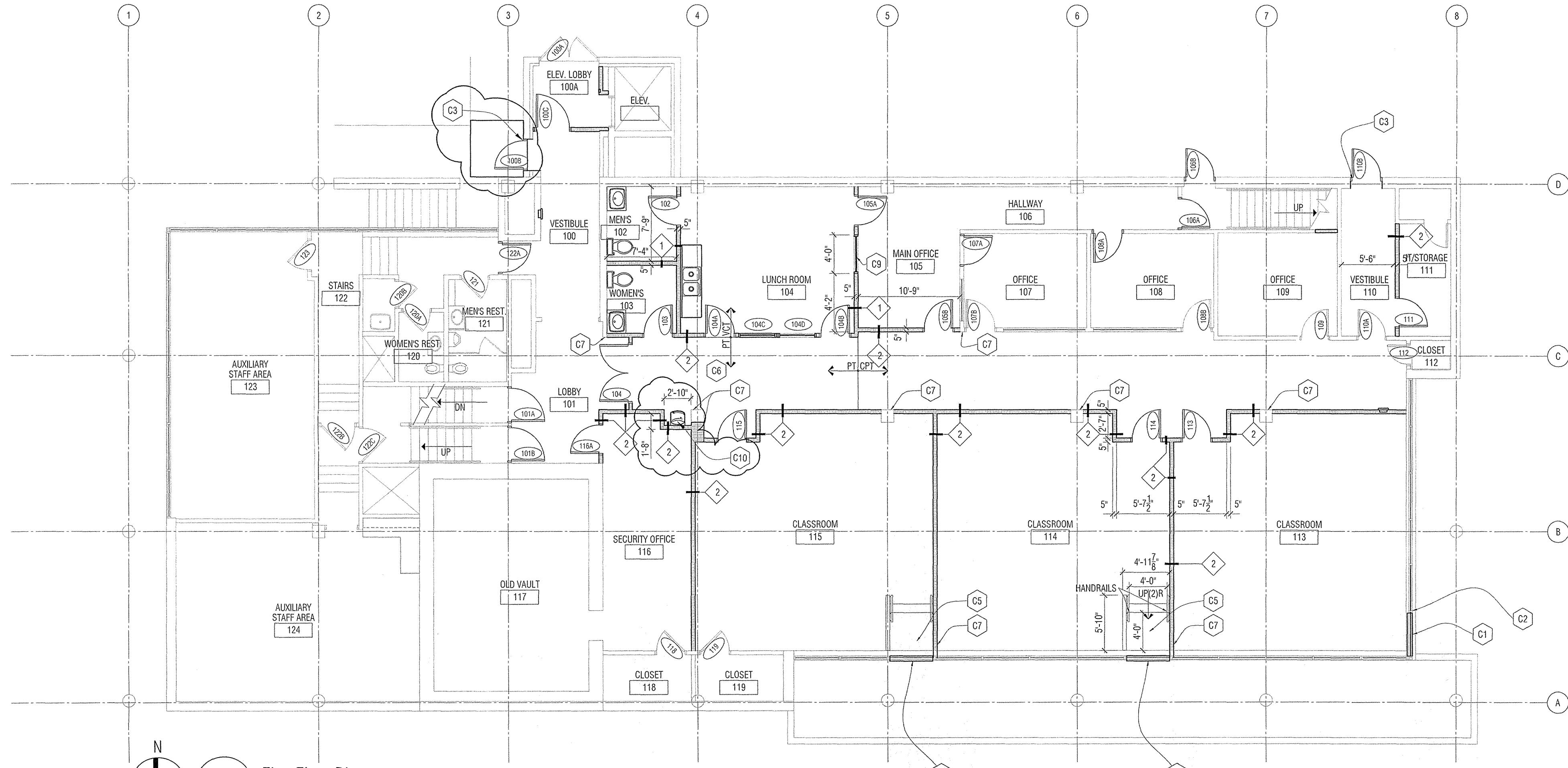
SHEET NAME

BASEMENT PLAN

SHEET NO.
A3-00



2 Second Floor Plan
1/8" = 1'-0"



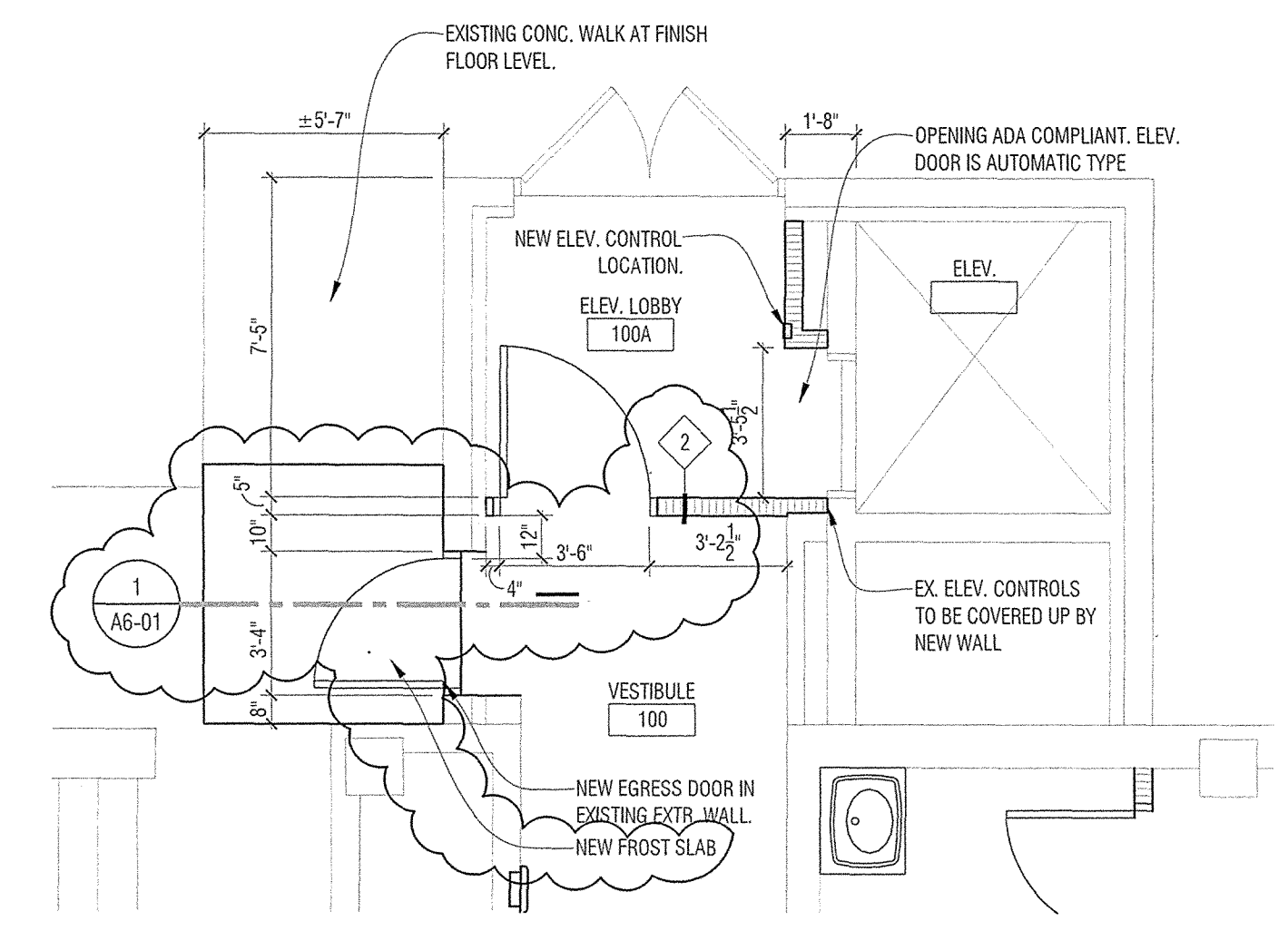
1 First Floor Plan
1/8" = 1'-0"

NEW CONS. FLOOR PLAN KEY NOTES:

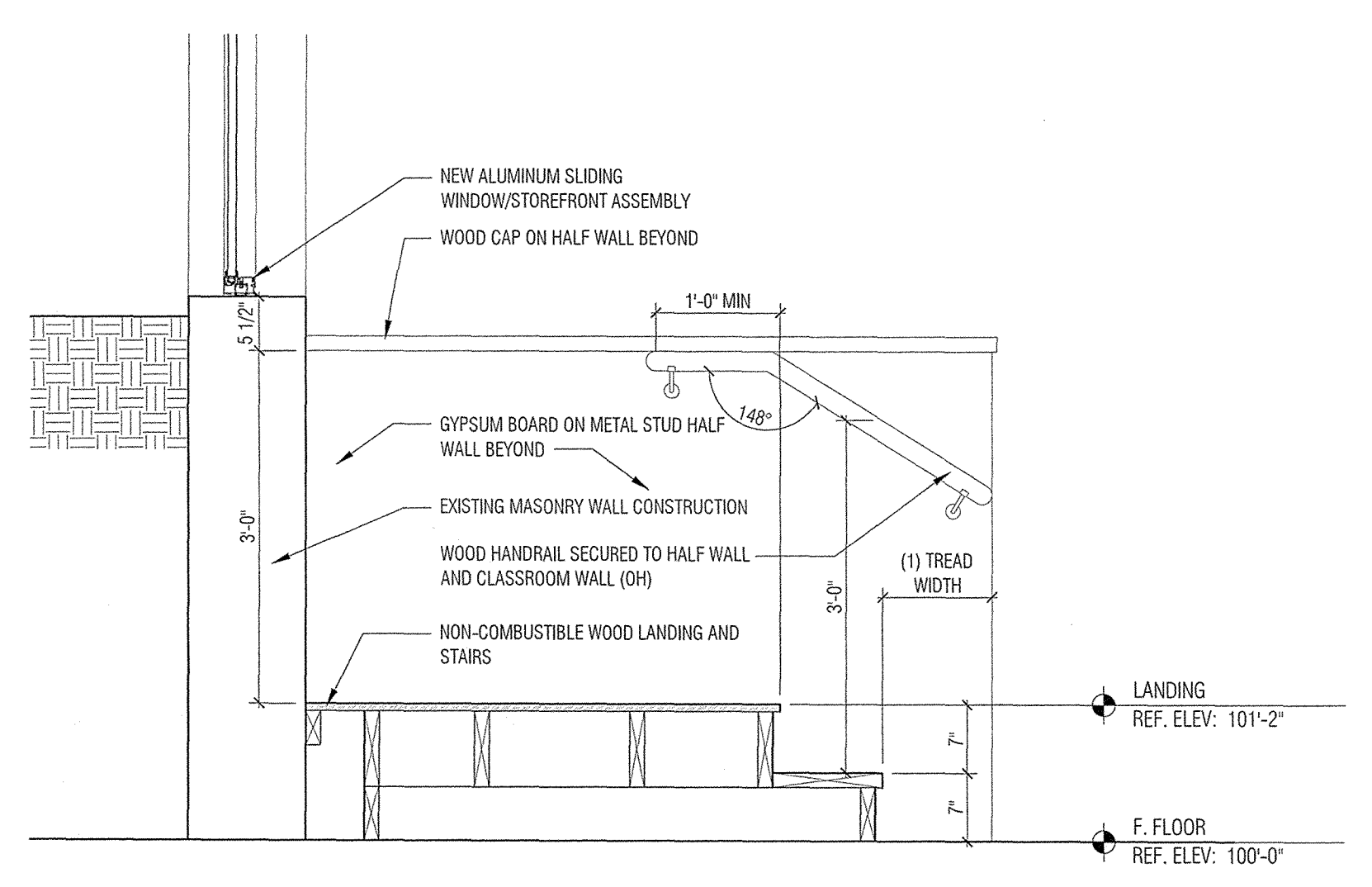
- C1 PROVIDE PROJECT OUT CASEMENT EGRESS WINDOW TO MEET MINIMUM CODE CLEARANCES. PROVIDE FIXED INSULATED GLASS ABOVE.
- C2 INSTALL NEW FRAME AND GLASS WITH ASSOCIATED BREAK METAL CLOSURE AT REMAINING EXTERIOR STOREFRONT.
- C3 TOOTH IN SALVAGED BRICK AND NEW CMU INCLUDING MASONRY HEADER FOR NEW DOOR OPENING.
- C4 NEW MASONRY OPENINGS FOR NEW EGRESS WINDOWS. CUT BRICK & BLOCK CLEAN AT NEAREST MASONRY JOINTS. COORDINATE EXACT OPENING SIZE WITH WINDOW MANUFACTURER PRIOR TO CUTTING. PROVIDE METAL TRIM AS NEEDED TO COVER MASONRY CAVITY AND SILL. INSTALL PRECAST HEADERS TO SUPPORT MASONRY ABOVE. FABRICATE PROJECT OUT WINDOWS TO PROVIDE CLEAR OPENING NOT LESS THAN 20" W, 24" H AND 5.7 SF IN AREA MINIMUM.
- C5 PROVIDE STEPS AND LANDING TO THE EGRESS WINDOW. SEE DETAIL A/A3-01.
- C6 EXISTING PORCELAIN TILE TO REMAIN
- C7 ALIGN NEW WALL WITH EXISTING COLUMN, WINDOW MULLION OR WALL.
- C8 MODIFY EXISTING HANDRAILS TO ADD GUARDRAIL AT 42" AFF AND MESH OR BALLUSTERS TO LIMIT OPENINGS IN BALINGS TO CODE REQUIREMENTS.
- C9 CONSTRUCT BORROWED LITE TO MATCH EXISTING BORROWED LITES IN ADJACENT OFFICE WITH WOOD FRAMES AND TRIM.
- C10 ACCESSIBLE DRINKING FOUNTAIN. SPOUT MOUNTED AT 36" A.F.F. MAX.
- C11 HI-LOW DRINKING FOUNTAIN. LOW UNIT SPOUT MOUNTED AT 36" A.F.F. MAX. HI UNIT SPOUT MOUNTED AT 38-43".

FLOOR PLAN - GENERAL NOTES:

- A. ALL PLAN DIMENSIONS ARE NOMINAL TO FACE OF WALL. WALL THICKNESS ARE SHOWN NOMINAL - SEE WALL TYPES ON SHEET A0-03 FOR ACTUAL THICKNESS.
- B. COORDINATE SIZE AND LOCATION OF ALL DUCT, SHAFT AND LOUVER OPENINGS IN WALLS AND FLOORS WITH MECHANICAL AND ELECTRICAL. PROVIDE ALL REQUIRED LINTELS FOR OPENINGS.
- C. ALL EXPOSED CORNERS OF MASONRY BLOCK ARE TO BE BULLNOSSED.
- D. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. IF A CONFLICT IS ENCOUNTERED OR A REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.
- E. EXISTING MASONRY WALL INTERSECTIONS WHICH ARE LEFT EXPOSED AFTER DEMOLITION OF ADJACENT MASONRY CONSTRUCTION MUST BE PATCHED AND REPAIRED WITH NEW MASONRY OR EXISTING BRICK VENEER. TOOTH-IN TO MATCH EXISTING COURSING AND BOND PATTERN, TYPICAL AT ALL LOCATIONS.
- F. AT ALL REMOVED CONCRETE BLOCK WALLS. REMOVE ANY DEFECTS THAT PROTRUDE ABOVE ANY FLOOR FINISH AND LEVEL SURFACE WITH HYDRAULIC CEMENT UNDERLAYMENT. AS REQUIRED FOR LEVEL INSTALLATION OF NEW FLOOR FINISH.
- G. ALL NEW WALLS TO EXTEND TO UNDERSIDE OF DECK- REFER TO WALL TYPES ON DRAWING A0-03 FOR CONSTRUCTION METHOD.
- H. PATCH ALL EXISTING SURFACES AFFECTED BY DEMOLITION ACTIVITIES TO PROVIDE SMOOTH, CLEAN SURFACES TO RECEIVE NEW FINISHES.
- I. FIRE RATED PARTITIONS ARE INDICATED ON LIFE SAFETY PLANS ON SHEET A1-01. TOP OUT ALL EXISTING WALLS TO REMAIN THAT ARE NOTED AS FIRE PARTITIONS ON LIFE SAFETY PLANS BY EXTENDING FRAMING AND GYPSUM BOARD AS REQUIRED AND SEAL TO DECK WITH SPRAY SEALANT.
- J. REFER TO SCHEDULES SHEET A0-03 FOR ALL FLOOR TRANSITIONS.
- K. REFER TO DRAWING A0-01 FOR ABBREVIATIONS AND OTHER SYMBOL DEFINITIONS.
- L. FIELD VERIFY ALL EXISTING OPENINGS TO RECEIVE NEW WORK PRIOR TO FABRICATION OF ANY FRAME TYPES - NOTIFY ARCHITECT OF ANY DISCREPANCIES.
- M. REFER TO PLAN FOR LOCATIONS OF FIRE EXTINGUISHERS / CABINETS (PEC) TO BE INSTALLED SEMI-FLUSH. REFER TO WALL CONSTRUCTION.

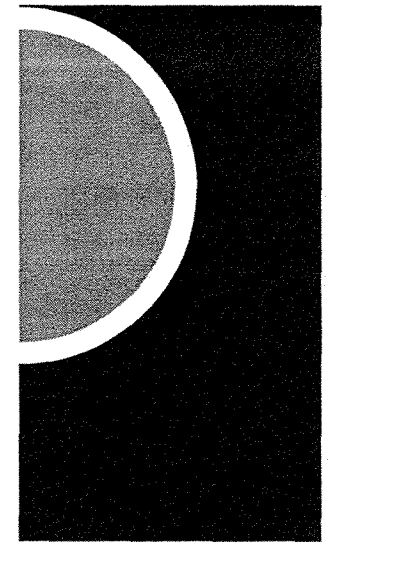


2 Enlarged 1st Floor Vestibule Plan
1/4" = 1'-0"



A Egress Window Stair Section
3/4" = 1'-0"

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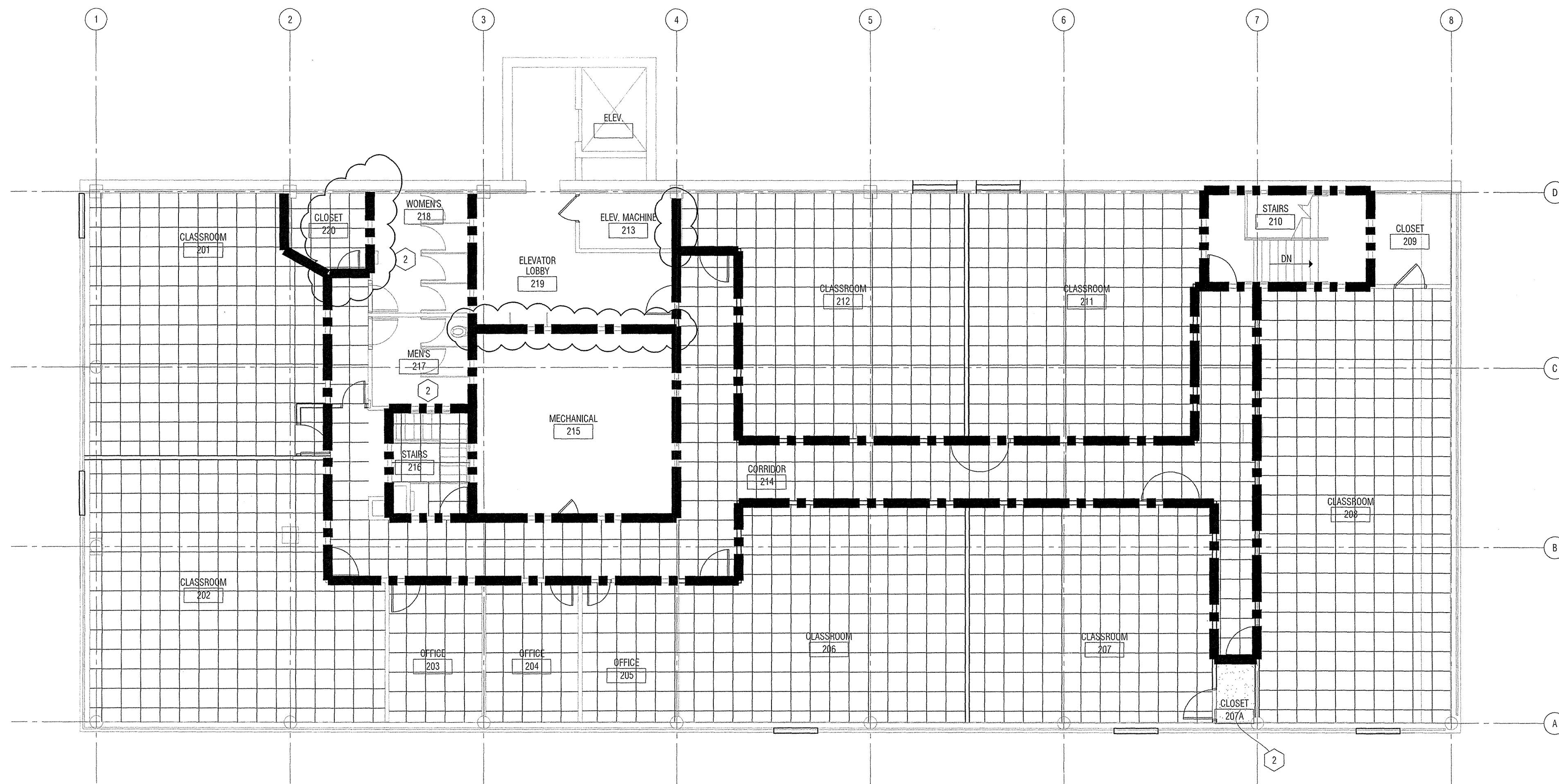
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SHEET NAME

FLOOR PLANS

SHEET NO.
A3-01



REFLECTED CEILING PLAN - GENERAL NOTES

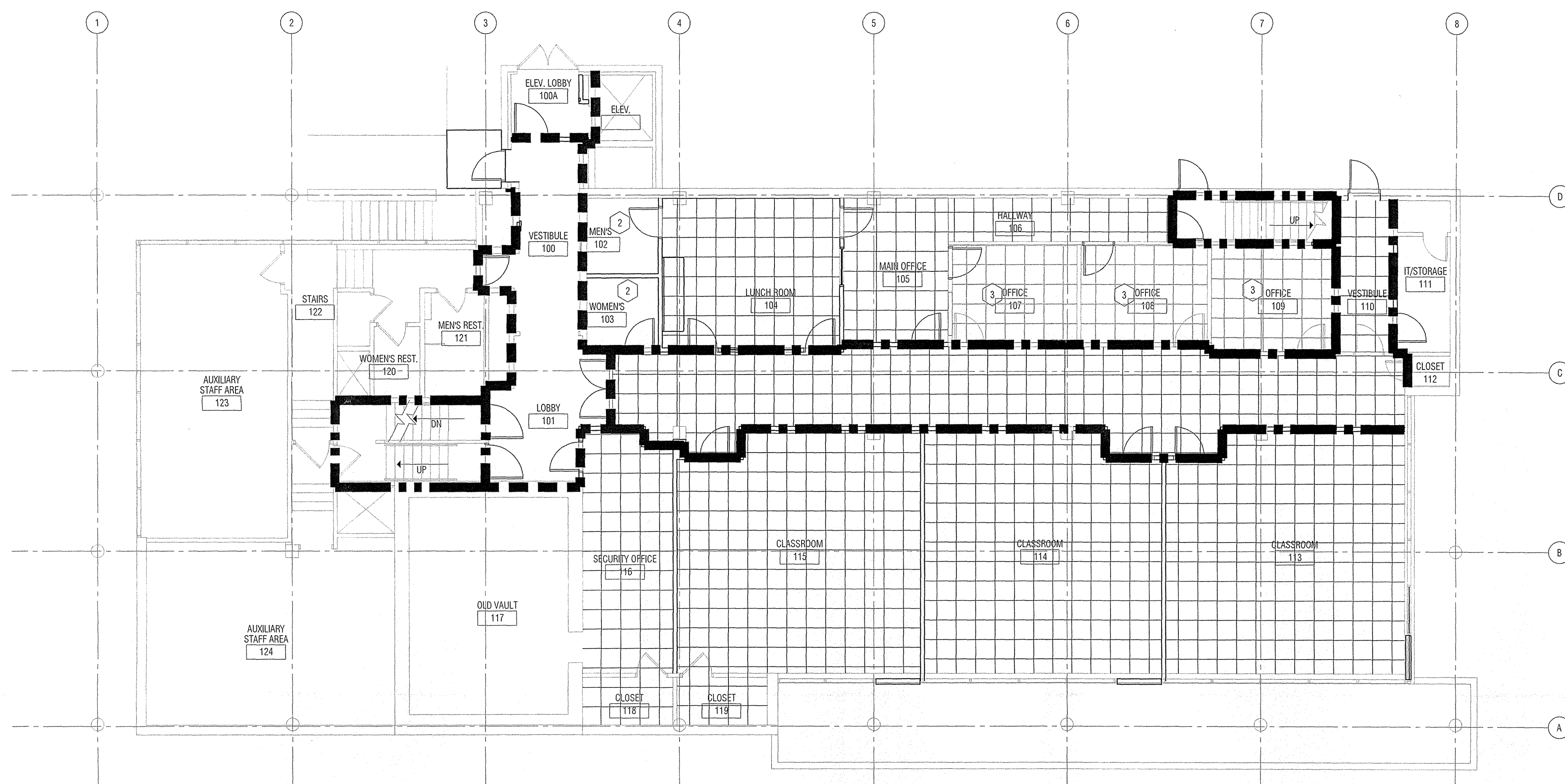
- A. REFER TO FLOOR PLANS FOR ROOM NAMES, NUMBERS AND ROOM DIMENSIONS
- B. REFER TO ELECTRICAL FOR LIGHT FIXTURE TYPES AND SPECIFICATIONS
- C. REFER TO MECHANICAL FOR DIFFUSERS, REGISTERS, AND RETURNS
- D. ALL LIGHT FIXTURES ARE TO BE CENTERED WITHIN CEILING TILE AND GYP SOFFIT U.O.N.
- E. CEILING GRID IS TO BE CENTERED IN ROOM U.O.N.
- F. AT LOCATIONS WHERE SOFFIT TERMINATES TO A MASONRY CORNER - GYP. BD. TO BE SET BACK 1" FROM FACE OF WALL
- G. PAINT ALL EXPOSED STRUCT., MECH., AND ELEC.

REFLECTED CEILING PLAN - KEY NOTES

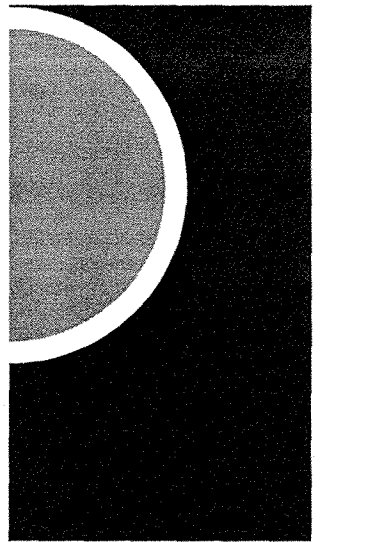
- 1 ACOUSTICAL CEILING TILE AND GRID (ACT-1)-TYPICAL U.O.N.
- 2 GYPSUM BOARD SOFFIT / CEILING
- 3 EXISTING TILE & GRID

NEW, OR EXISTING TO BE UPGRADED, 1-HOUR "FIRE PARTITION" CONSTRUCTION PER 2012 MBC SECTION 708. PROVIDE FIRE / SMOKE DAMPERS AS REQUIRED PER 2012 MBC SECTION 714. TOP OUT ALL EXISTING WALLS TO REMAIN BY EXTENDING FRAMING AND GYPSUM BOARD AS REQUIRED AND SEAL TO DECK WITH SPRAY SEALANT.

N
2 Second Floor Reflected Ceiling Plan
1/8" = 1'-0"



N
1 First Floor Reflected Ceiling Plan
1/8" = 1'-0"



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Construction Code Appeal	06/05/17

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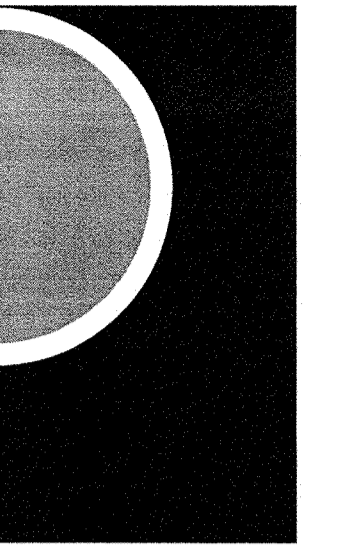
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SHEET NAME

REFLECTED
CEILING PLANS

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A4-01



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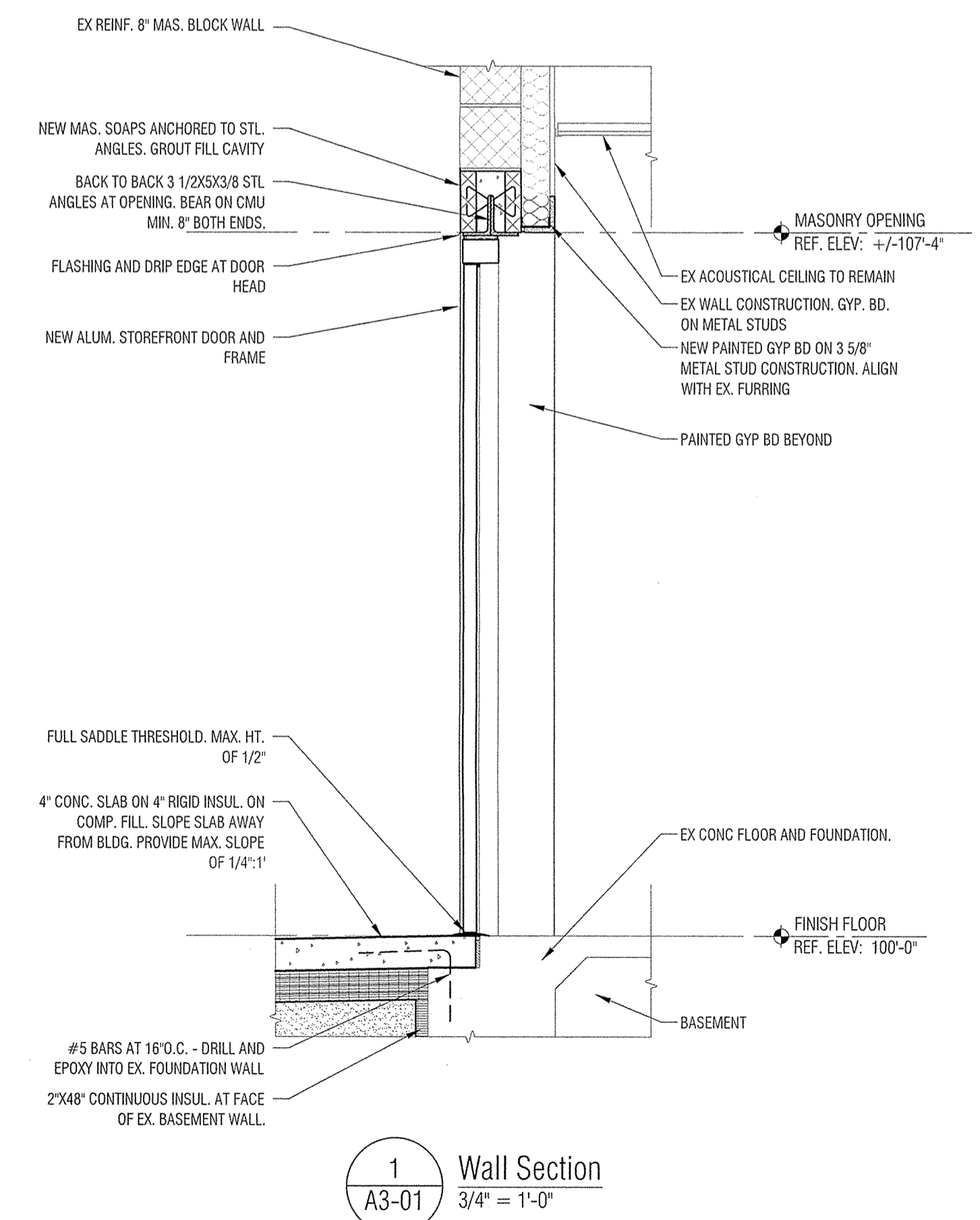
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SHEET NAME

WALL SECTIONS AND DETAILS

SHEET NO.

A6-01



Petition Application for Certificate of Acceptability
 Michigan Department of Licensing and Regulatory Affairs
 Bureau of Construction Codes
 P.O. Box 30255, Lansing, MI 48909
 www.michigan.gov/bcc

140/115/130/98

Agency Use Only

Application Fee: \$1,000.00 (Each Approval Requested Requires a Separate Application and Fee)

Authority: 1972 PA 230	LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.
Penalty: Failure to provide the information may result in denial of your request.	

CODE UNDER WHICH APPROVAL IS SOUGHT (Limited to One Code Per Petition)

Building (140)
 Electrical (115)
 Mechanical (130)
 Plumbing (98)

APPLICANT INFORMATION (Note: All correspondence will be sent to this address)

NAME OF COMPANY
 Penner Manufacturing Inc.

APPLICANT NAME
 Patrick Wall

ADDRESS 101 Grant St,		TELEPHONE NUMBER (Include Area Code) (402) 694-5003	
CITY Aurora	STATE Nebraska	ZIP CODE 68818	FAX NUMBER (Include Area Code)

Instructions for Petition Application for Acceptability

Nature of Petition: Check only one box. A component is a preassembled unit of different materials or products that will be incorporated into a building.

Code Under Which Approval is Sought: Check only one box. If there are requirements in 2 or more codes for the approval sought, an additional petition and fee must be submitted.

Name: Provide the name of the material, product, or method/manner of construction or installation.

Other Identification: Provide the model numbers.

Description: Provide a description of the material, product, method or component.

Intended Use: Give a brief description of how the product is incorporated into a building or structure and its purpose.

Laboratory Test and/or Evaluation By: List all tests performed and provide copies as listed above.

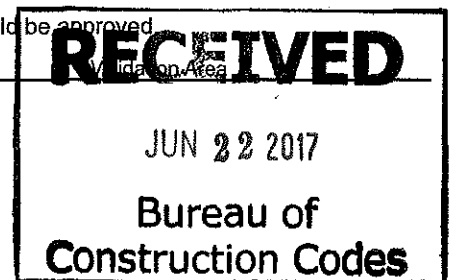
Pilot Service Experience and Conditions: Provide report of finding as listed above.

Restrictions for Use: Identify any restrictions or conditions of use.

Other: Any documentation or description necessary to demonstrate why this application should be approved.

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 Bureau of Construction Codes
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 Lansing, MI 48933



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 Chk#: 44148 Amt: \$1,000.00
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APPROVAL REQUESTED

NATURE OF PETITION (Limited to One Item Per Petition)

Material Product Method/Manner of Construction or Installation

NAME OF MATERIAL, PRODUCT, OR METHOD/MANNER OF CONSTRUCTION OR INSTALLATION

Cascade Comfort Bathing System

OTHER IDENTIFICATION (Model Number)

560010-1, 560010-1L, 560010-2, 560010-2L, 560010-X, 560010-XL

DESCRIPTION (Use Additional Sheets If Necessary)

This Bathing System is similar to Cascade Contour minus the reservoir. This system is simpler as it does not have on board controls for shampoo and bath oil as our other models do.

INTENDED USE (Use Additional Sheets If Necessary)

For bathing residents

DATA SUBMITTED

- | | | | |
|---|--------------------------------|--|---|
| <input type="checkbox"/> Letter | Reports | <input type="checkbox"/> Product Sample or Model | |
| <input checked="" type="checkbox"/> Manual | | <input type="checkbox"/> ICC - ES | <input type="checkbox"/> Prior Approvals by Other Agencies |
| <input type="checkbox"/> Standards | | <input type="checkbox"/> BOCA - NES | <input type="checkbox"/> Recommendations by Model Code Bodies |
| <input checked="" type="checkbox"/> Installation Instructions | | <input type="checkbox"/> ICBO | <input type="checkbox"/> Laboratory Test/Evaluation |
| <input type="checkbox"/> Display Catalog | | <input type="checkbox"/> SBCC | |
| | | <input type="checkbox"/> NRB | |
| | <input type="checkbox"/> Other | | |

LABORATORY TEST AND/OR EVALUATION BY

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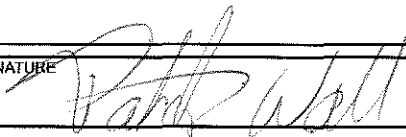
PILOT SERVICE EXPERIENCE AND CONDITIONS (Use Additional Sheets If Necessary)

We have been successfully manufacturing and selling bathing systems since April 2001. Our current systems are approved by the Bureau of Construction Codes in Michigan 1593-PA and 1647-PA.

RESTRICTIONS FOR USE (Use Additional Sheets If Necessary)

None to our Knowledge.

SIGNATURE



DATE

6-12-17

**THE BIG REVEAL
IS HERE**
ANNOUNCING

CASCADE COMFORT

THE LATEST BATHING SYSTEM

from

**Penner
SPAS**



- ONE STEP
- disinfecting!
- NO
- exposed wires
- or hoses
- Easy resident
- transfer into
- spa
- Fast-fill
- mixing valve

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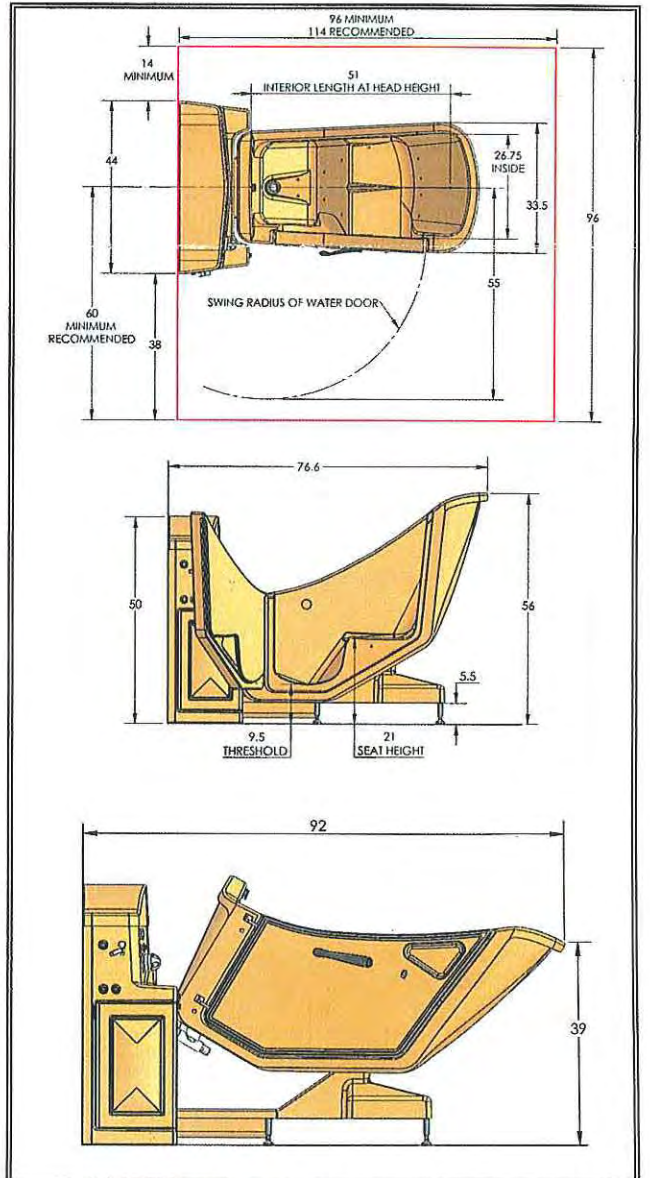
Cascade Comfort Spa



• • • • •
Comfort Spa FEATURES
 may leave you **STARSTRUCK!**

- 9 1/2" LEG-TRANSFER INTO SPA
- ENCLOSED CABINET TO ELIMINATE EXPOSED HOSES AND WIRES
- SPORICIDE INJECTION SYSTEM
- FAST-FILL MIXING VALVE

• • • • •
CASCADE COMFORT SPA
 Room & Spa Dimensions



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 (800) 732-0717



COMFORT AQUA-AIRE

INSTALLATION / ASSEMBLY INSTRUCTIONS



PENNER PATIENT CARE INC.
Box 523 / 101 Grant St.
Aurora, NE 68818
560745 Revision A – 03/17/16

1-866-PENNERS

1-866-736-6377

1-800-732-0717

SPAS MODEL NUMBERS- 560010-1, 560010-1L, 560010-2,

E-mail Address: pennersales@hamilton.net
Web Site: www.pennerpatientcare.com

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Cascade Comfort Spa Controls



Figure 1

- 1 RINSE JETS
- 2 DISINFECT JETS
- 3 HAND SPRAYER ON/AUTO - OFF
- 4 FILL/SHOWER TEMPERATURE DISPLAY
- 5 FILL/SHOWER TEMPERATURE CONTROL (MIXING VALVE)
- 6 SPA TEMPERATURE DISPLAY
- 7 AQUA-AIRE ON/OFF
- 8 TUB FILL ON/OFF
- 9 HAND SHOWER
- 10 SPORICIDE PUMP
- 11 SPA TILT BACK
- 12 SPA TILT FORWARD

Introduction:

These instructions are for the installation of a Cascade Comfort Spa.

Terminology and Symbols Meanings:

When the terms “left” or “right” are used with reference to the tub, this means left or right as you look at the control panel from the seat end of the spa.



Meaning: Safety warning. Failure to understand and obey this warning may result in injury to you or to others.

CAUTION Meaning: Failure to follow these instructions may cause damage to parts or systems.

Note: Refer to the “Spa Controls” section of this manual for the location of any of the controls referenced.

Unpacking the Spa:

- Inspect the equipment upon receipt to ensure no damage occurred during shipping.
- Remove the spa from the shipping container.
- Locate installation parts for safe keeping.

Basic Room Dimensions:

Figure 2 shows basic dimensions for a Cascade Comfort spa.

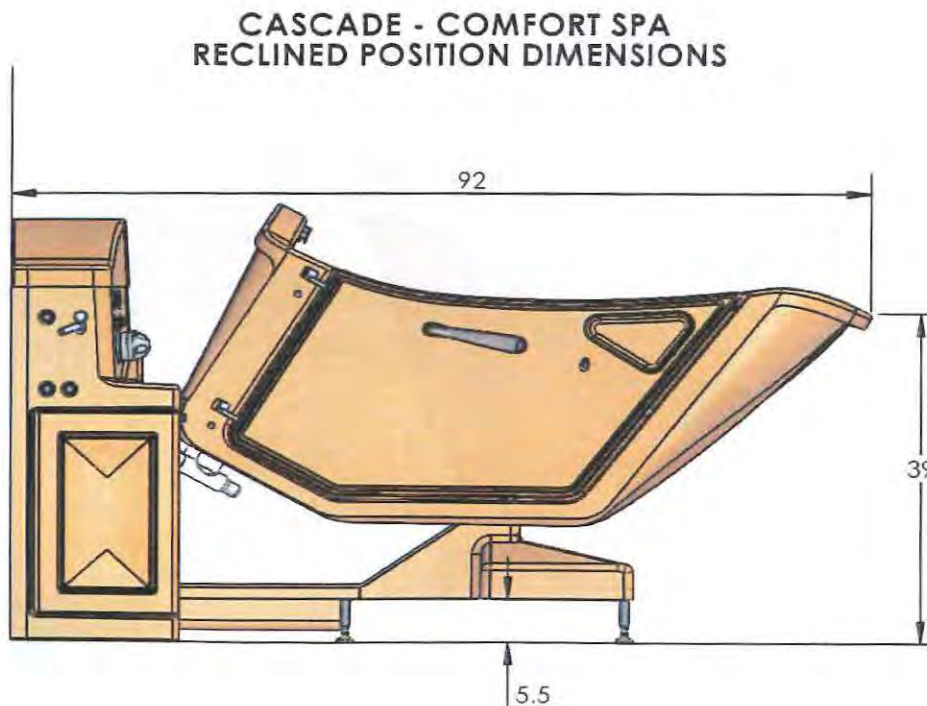
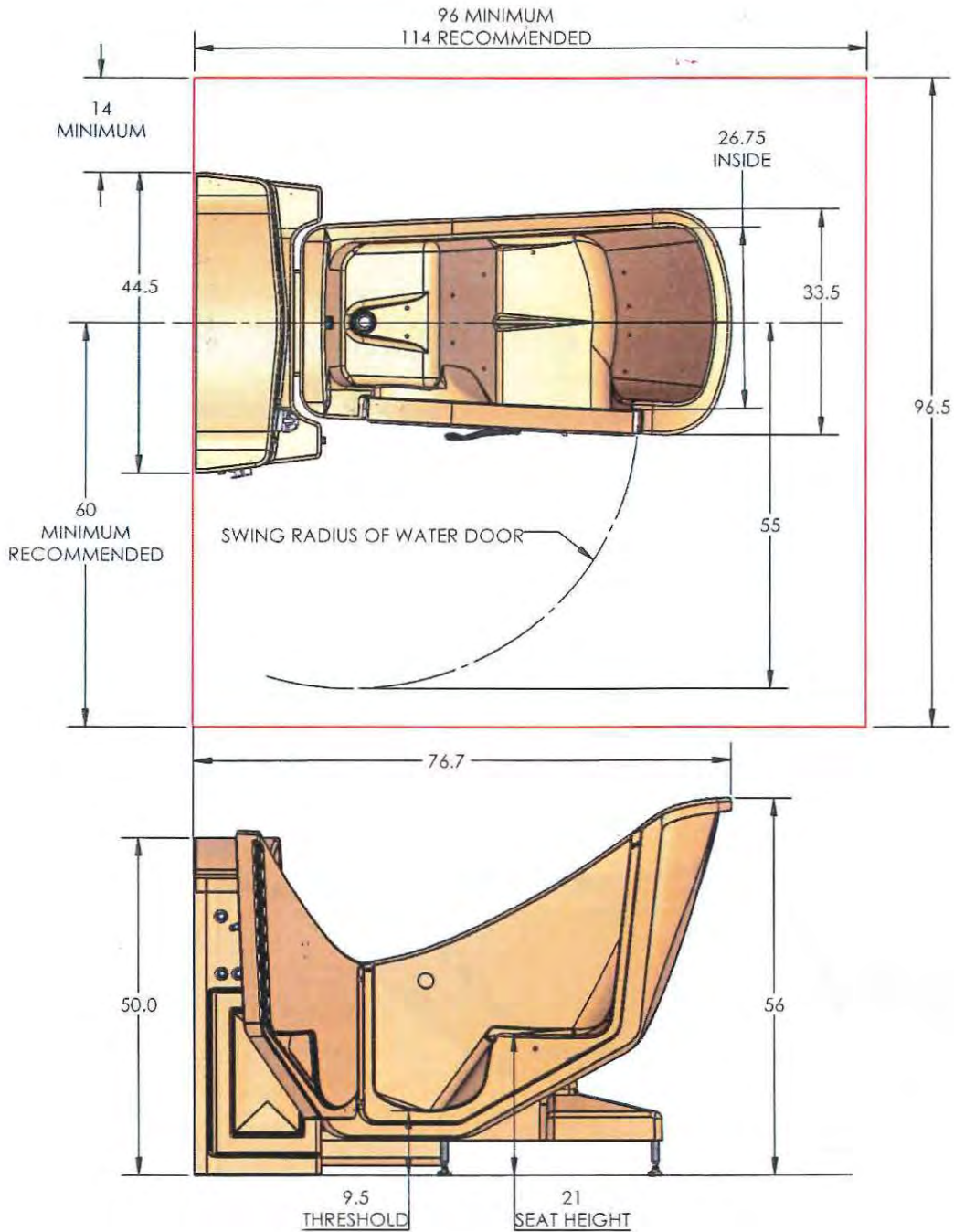


Figure 2

Figure 3
 Room layout for Cascade Comfort Spa

**CASCADE - COMFORT SPA
 ROOM AND SPA DIMENSIONS**



Drain requirements:

The spa is equipped with a 1 1/2" actual O.D. PVC drain pipe. As shown in Figure 4, the spa's drain pipe is approximately 12" from the wall and 3 1/2" above the floor. Figure 4 shows two different options for roughing in the drain pipe – from the floor or from the wall.

Plumbing Requirements:

It is required that a licensed plumber make all plumbing connections. He can select the best method of connection and if Reduced Pressure Zone Backflow Preventers are required.

Hot and cold water supply requirements:

3/4" supply lines with on/off valves with 3/4" NPT female threads. We recommend 3/4" ball valve with 3/4" NPT female ports. (Valves supplied by others.) See figure 4 for recommended locations.

For optimum performance, dynamic pressures should be nominally equal between hot and cold supplies.

Maximum static supply pressure: 145 PSI.

Maximum dynamic/maintained supply pressure: 81 PSI.

Maximum supply Hot water temperature: Consult local requirements for maximum allowed supply temperatures. (Not recommended over 120°F)

PENNER CASCADE - COMFORT (LH) ROUGH-IN SPECIFICATIONS

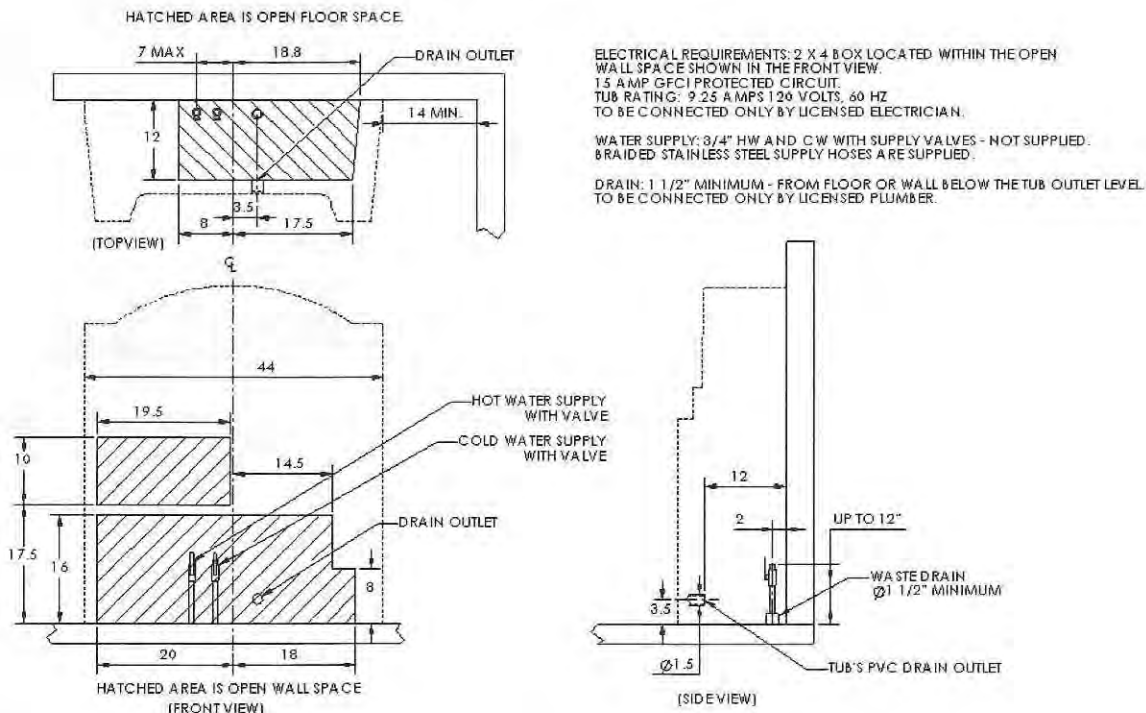


Figure 4
Suggested Rough-ins

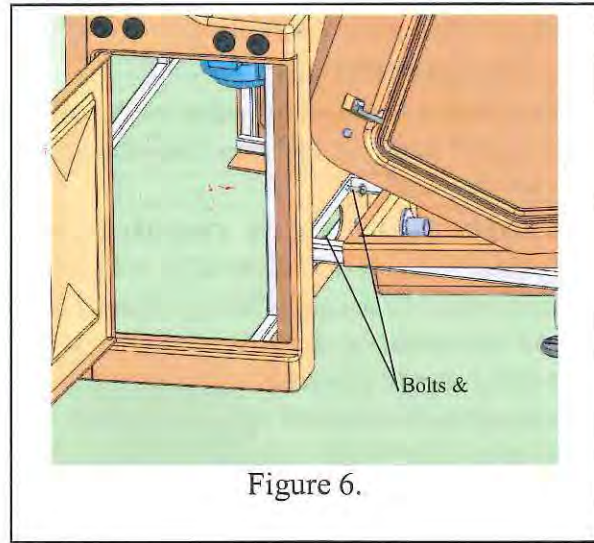
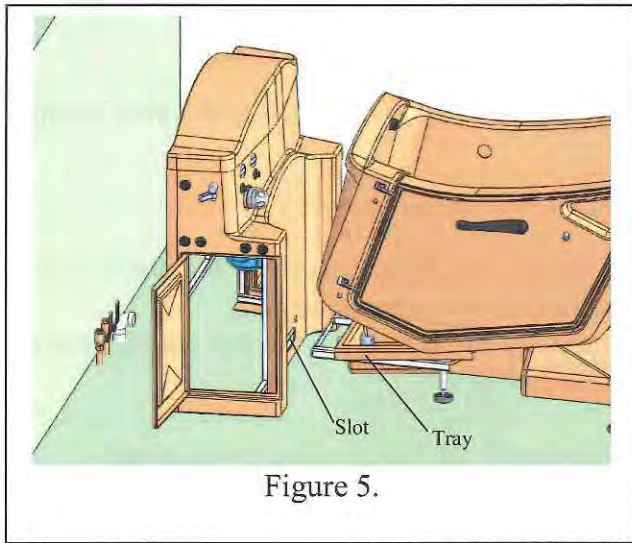
Electrical requirements:

The Cascade Comfort Spa (Aqua-Air) is rated 9.25 amps at 120 Volts AC.

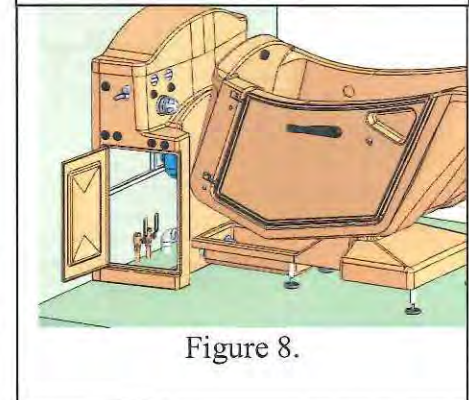
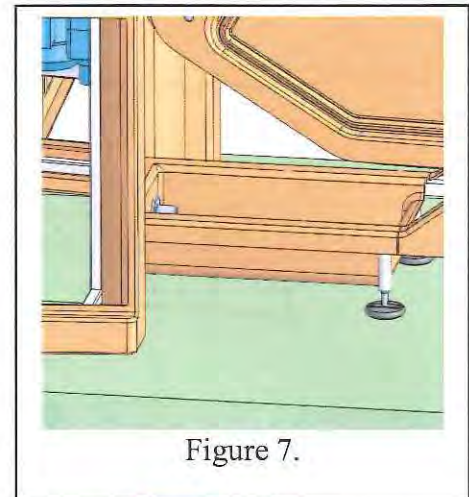
A 15 amp GFCI circuit is required.

Hooking up the Spa

1. Position the cabinet around 18" to 24" from the wall in front of the final installation location, as shown in figure 1.
2. Position the tub around 6" to 10" from the recessed front of the cabinet, centered as shown in figure 1.



3. Place manifold assembly through the slot of the cabinet.
4. Raise the rear of the base cover tray and slide it back about 3", as shown in figure 1.
5. Re-position the tub against the cabinet.
6. Install the provided (2 ea) 3/8-16 x 1 hx hd bolts, 3/8 washers and 3/8 lock washers through the tub frame slots and into the cabinet frame. See figure 2. Note: If the tub needs to be centered better, loosen these bolts, adjust, and re-tighten.
7. Move the base cover tray forward and down onto the tub base frame, as shown in figure 3.
8. Connect the manifold assembly to the cabinet air system with the union nut.
9. Locate and run the actuator power cable from inside the cabinet through the opening in the base frame tray, and connect to the actuator cable. Lock the connection with the connector nut.
10. Run the tub fill hose (braided stainless steel hose) from the tub, through the opening in the base frame tray and into the cabinet and connect it to the like hose from the tub fill solenoid valve.
11. Locate the temperature readout probe in the cabinet, and run it through the base frame tray opening and route it up to the temperature probe fitting, which is just above the drain fittings at the front of the tub. Place the probe through the hex nut part of the fitting until the end of the probe extends into the tub by 3/8". Tighten the hex nut enough to secure the probe in place.
12. Slide tub and cabinet back to the wall as shown in figure 4.

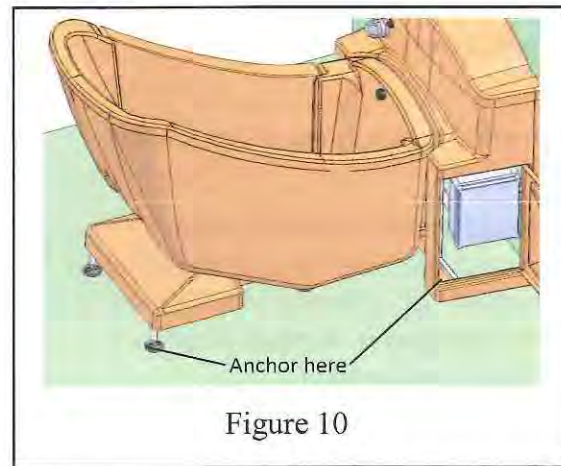
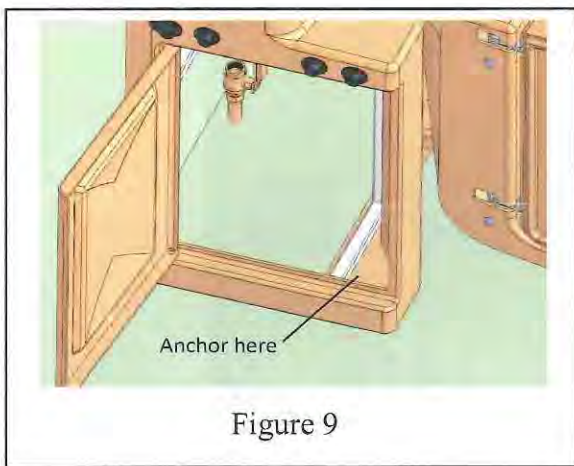


Anchoring the Spa:

Note:

These instructions for anchoring the spa are written with the assumption that the installation is being done on a concrete floor. If this is not the case, the spa can be anchored with simple lag screws (not provided). We recommend anchoring at minimum the locations shown below.

1. Place the spa in the final installation position.
2. Drill a 5/16" diameter x 1 1/2 inches deep hole in the floor at the anchor locations. A masonry drill will be required. In the cabinet drill through the fiberglass bottom flange at the locations shown.
3. Clean the drilled holes and clean the drilling dust with a shop vacuum.
4. Insert the provided anchors through the flange and into the anchor holes just drilled.
5. Tighten the nuts until the anchor locks the spa in position.



Water Supply and Drain Connections:

It is required that a licensed plumber make all plumbing connections. He can select the best method of connection and if Reduced Pressure Zone Backflow Preventers are required.

1. Connect the ends of the connecting hoses (hot and cold water supply) to the respective ports on the tub. Ensure that there are sealing gaskets within the swivel fittings on the hoses.
2. Connect the drain (waste) of the tub to the facility's drain system.
3. The system needs to be checked for any leaks in the entire system. However, the electrical connections must be made prior to doing this. Once the electrical connections have been made, continue with step 4.
4. Open the facility's supply valves to the spa and check for leaks. If no leaks are found, check the entire plumbing system for any leaks. Look for leaks while each of the following systems are running: "Tub fill", "Shower", and "Disinfecting".

Electrical Connections:

Warning:

This unit is to be connected only by a licensed electrician. A minimum of 15 amp 120 volt service is required with ground fault circuit interrupter.

1. Remove the cover from the electrical box of the spa.
2. Run flexible conduit and the proper size wires, from the facility's junction box to the connecting point of the spa's electrical enclosure. (Located inside the large access door opening on the "right" side of the tub.)
3. Connect the ground to the "protective earth" (ground) bar.
4. Connect the neutral wire to neutral bar marked "N".
5. Use the provided female disconnect wire terminal to connect the "line" wire to the circuit breaker tab marked "L". The provided female disconnect wire terminal is shipped already connected to the circuit breaker.
6. Replace the electrical enclosure cover. With the spas circuit breaker switch in the "OFF" position, turn "ON" the circuit to the spa.
7. Switch the spa's circuit breaker to the "ON" position. The temperature gauges should now display a temperature reading.

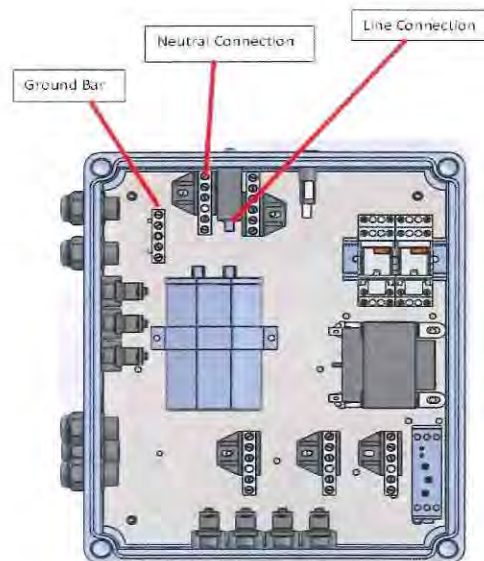


Figure 11.

CAUTION

When the spa circuit breaker is turned on, if there is a sound like a running motor, **immediately** switch "OFF" the circuit breaker. Find the "Aqua-Aire" button on the control panel of the spa and press it once. Switch on the spa circuit breaker. The motor should not be running now.

Finishing up:

1. Once the spa has been connected to the drain, checked for leaks (and fixed if needed), and is connected to power.
2. Once all the systems are operational, use zip (wire) ties to secure the hoses, electrical cords and temperature probe wire that are routed through the base frame tray to ensure they are not pinched or rubbing excessively as the tub is titled backward and forward.

Warning

Do not attempt to operate this equipment before selected personnel are trained in its operation per the operation manual. The use of this equipment before inspection, adjustment, and training per the operation manual could result in injury to the operator and/or resident along with damage to the equipment.

Notes

For your nearest distributor, contact:

***PENNER PATIENT CARE, INC.
Box 523 / 101 Grant St.
Aurora, NE 68818***

1-866-PENNERS

1-866-736-6377

1-800-732-0717

***E-mail Address: pennersales@hamilton.net
Web Site: www.pennerpatientcare.com***



Cascade Comfort
Bathing Systems with Aqua-Aire™
*Safe Operation & Daily Maintenance
Instructions*



PENNER PATIENT CARE, INC
Box 523 / 101 Grant St.
Aurora, NE 68818
560750 Revision A – 12/11/15

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Introduction

The Cascade Comfort System is designed to significantly improve the efficiency and environmental safety of your nursing care operation and yet have the quality appearance and appeal of a home system. However, the benefits designed into the Cascade Comfort System will be realized only if the system is operated and cared for properly. The purpose of this manual is to provide you with a recommended procedure to help you obtain the maximum efficiency and safety from your Cascade Comfort System.

Symbols and Terms

WARNING

The warning symbol identifies important safety messages. Failure to obey a safety warning may result in injury to you or to others.

CAUTION

The caution heading identifies important maintenance and operation information. Failure to obey a caution warning may result in damage to the equipment and may void the warranty.

Left or Right

When the terms “left” or “right” are used with reference to the spa, this means left or right as you look at the control panel from the seat end of the spa.

Technical Description

The Cascade Comfort Spa is an “Aqua-Aire” bathing system intended for use in nursing homes, hospitals, and assisted living facilities to bath residents under the direct supervision of trained staff. The system is mainly constructed of gel-coated fiberglass laminate on a powder coated steel frame. The spa has an Aqua-Aire system for mixing the water with air. It has a disinfecting system to aid in cleaning the spa. The spa has a locking door on one side for access to the spa by the resident. A thermostatic mixing valve controls incoming water temperature. Digital temperature read-outs indicate all incoming and spa water temperatures. A hand shower sprayer is also provided.

Cascade Comfort System

Manufacturer: Penner Manufacturing Inc
101 Grant St / PO Box 503
Aurora, NE 68818
(402) 694-5003

Models: Cascade – Comfort

560010-X Cascade Comfort bathing system Right hand entry
560010-XL Cascade Comfort bathing system Left hand entry
560010-XSB Cascade Comfort bathing system Right hand entry Still Bath
560010-XLSB Cascade Comfort bathing system Left hand entry Still Bath
(X in the model number represents a number which denotes a Color of the Spa)

Spa Electrical Ratings: 120 Volts AC
60 Hz 1 Phase
Aqua-Aire: 9.25 amp
60 Hz 1 Phase

UL Classification: Class I; Type B; Ordinary EQUIPMENT

Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.

**MEDICAL EQUIPMENT
WITH RESPECT TO ELECTRIC SHOCK
FIRE AND MECHANICAL HAZARDS ONLY
IN ACCORDANCE WITH UL2601-1, AND
CAN/CSA C22.2 NO. 601.1 IEC 60601**



Patient weight rating: 400 lbs Maximum
Upright position to reclined position angle: approximately 30°
Reclining actuator rating: 1 minute ON - 9 minutes OFF

All temperature read-out values are accurate to +/- 2°F (per NSF C-2). The read-out range is -40/199°F. The resolution is 1°.

An electrical circuit diagram can be found on the inside of the lid of the electrical box located inside the service access door on the right side of the spa cabinet.

Service parts and technical information are available by contacting your distributor or by calling one of the telephone numbers located on the front or back cover of this manual.

Environmental conditions for transport and storage for up to 15 weeks (as packaged from the manufacturer) are as follows:

Temperature range	-40° F (-40° C) to 120° F (49° C)
Relative Humidity	10% to 90%
Atmospheric Pressure	7.5 PSI to 15.5 PSI

Basic Components

The Cascade Comfort System is composed of the following components:
Cascade Spa with Cascade Door and Control Panel Cabinet.

The remainder of this section describes the components and their relationship to each other.

Cascade Comfort Spa Controls



- 1 RINSE JETS
- 2 DISINFECT JETS
- 3 HAND SPRAYER ON/AUTO - OFF
- 4 FILL/SHOWER TEMPERATURE DISPLAY
- 5 FILL/SHOWER TEMPERATURE CONTROL (MIXING VALVE)
- 6 SPA TEMPERATURE DISPLAY
- 7 AQUA-AIRE ON/OFF
- 8 TUB FILL ON/OFF
- 9 HAND SHOWER
- 10 SPORICIDE PUMP
- 11 SPA TILT BACK
- 12 SPA TILT FORWARD

The Cascade Comfort Aqua-Aire Spa is a specialized spa with built-in air jets. It has been designed for ease of use and resident comfort. The spa has a built-in control panel, which provides controls for all the functions of the spa, as shown above.

⚠ WARNING: DO NOT PLACE LIQUIDS OR CONTAINERS OF LIQUIDS ON TOP OF THE LID OF THIS SYSTEM. FAILURE TO HEED THIS WARNING MAY RESULT IN INJURY TO A RESIDENT AND OR OPERATOR.

Cascade Door

The Cascade Comfort Door is a specially designed reinforced door with locking door handle to open and close the door.



Figure 2

Locking Cascade Door

Figure 2

1. With door handle in the upright position, close the door tight against the spa.
2. When the door is against the spa push the door handle to the left or down so the door handle is in the LOCK position. (Label at base of lever indicates “UNLOCK” or “LOCK” positions)
3. The door is now locked in place.
4. (Note) To extend the life of the Water Door Seal, leave the door open when not in use.

Unlocking Cascade Door

WARNING:

NEVER ATTEMPT TO UNLOCK THE DOOR WHILE THERE IS ANY WATER IN THE SPA. FAILURE TO HEED THIS WARNING MAY RESULT IN INJURY TO A RESIDENT AND OR OPERATOR.

1. To unlock, first pull up on the door handle release and hold it.
2. Then move the door handle to the “unlock” position.
3. The door is now unlocked and able to be opened.


System Preparation (Before Bath)

WARNING

Only personnel who have been thoroughly trained in the operation of the Cascade Comfort System should operate this equipment. Operation of this equipment by untrained personnel could result in injury to the operator or patient. Your Penner Spa distributor is available at your request to provide complete in-service training on the equipment's proper operation.

Prior to the bath, perform the following preparation steps.

1. Make sure you have your bathing aids ready such as a washcloth, towels and liquids such as shampoo and body wash. You are now ready to bring the Resident or Patient to the Bathing Area with your Patient Transfer System or Wheel Chair.
2. At the bathing area, position your patient transfer equipment near the access of the Cascade Comfort for a normal wheel chair-to-chair transfer. Ensure the water door is open wide to allow easy access.
3. Lock the brakes of your patient transfer equipment before transferring the Resident or Patient.

 **WARNING:** Failure to lock the caster brakes of your equipment before the resident is transferred onto the Cascade Comfort could result in injury to the operator or patient.

4. Close the water door and lock it by pressing the door handle downward.

⚠ WARNING

In addition to monitoring the temperature readout, always check the water temperature by allowing it to run over your wrist. Failure to do this could result in a hot-water burn to the resident.

Using Cascade Comfort Bathing System

Reference page 5 for locations of the controls listed in this section.

⚠ WARNING

Failure to manually check the water temperature before putting a resident in the spa may result in burn injuries to the resident and/or operator.

1. Push the Tub Fill button located on the Cascade Comfort Control Panel and adjust the water temperature by turning the Temperature Control knob to normal bathing temperature, 95 to 105 degrees Fahrenheit (35 to 41 degrees Celsius).
2. When water reaches the overflow push Tub Fill button again to shut water off.
3. Press and hold the up button and recline the resident until you have reached a position suitable for resident bathing.

Bathing Procedure

You are now ready to begin washing the resident. The suggested bathing time is 5 to 10 minutes. Bathing a patient more than 10 minutes is not required.

To bathe the resident, use the following procedures:

(Reference Figure 1 for the location of the controls listed in this section)

After resident is comfortable in spa you can recline the spa using the up and down buttons pictured on page 5 of this manual.

1. Start the air blower by pressing the Aqua-Aire ON/OFF button.

⚠ WARNING

In the following bathing instructions it is recommended that the resident be rinsed with the shower sprayer. Before doing so each time, make sure the temperature is between 95 and 105 degrees Fahrenheit (35 to 41 degrees Celsius) by viewing the temperature readout. As a further precaution, always test the water on the inside of your wrist before turning the shower sprayer toward the resident. Failure to follow the precautions in this warning could result in a burn injury to the operator or the resident.

2. Bathe the resident's upper body as follows:
 - a) Begin gently washing the resident's upper body. Pay special attention to folds or creases in the skin and under the arms.
 3. Rinse the upper body with the shower sprayer as follows.
 - a) Pull out the Hand Sprayer.
 - b) Press the "HAND SPRAYER ON/AUTO OFF" button. This starts the water flow to the hand sprayer for a set period of time. Then the water flow is automatically stopped. It can be restarted at any time by pressing the "HAND SPRAYER ON/AUTO OFF" button.

Note. This time period is adjustable, up to 10 minutes, by the maintenance department.
 - c) Direct the sprayer into the spa, **not at the resident**. Press the trigger on the hand sprayer and adjust the mixing valve, if needed, to the normal bathing range of 95 to 105 degrees Fahrenheit (35 to 41 degrees Celsius). Monitor the temperature via the Fill/Shower Temperature readout. As a further precaution, always test the water on the inside of your wrist before turning the sprayer toward the resident.
 - d) The Aqua-Aire action in the Cascade Comfort will help clean the resident's.

Transferring Out Of Cascade Comfort

After the bath has been given, you are now ready to transfer the resident out of the spa.

1. **Drain the spa** by pulling the drain plug from the drain. To avoid water overflow start draining the spa before bringing the spa to the full upright position.

⚠ WARNING

Failure to have the spa completely drained before unlocking the door could cause injury to the operator and resident.

2. Press and hold the down button until the spa is in the full upright position.
3. Unlock door by pulling up on the door handle release and pulling up on the lever at the same time.
4. Open door to widest position.
5. Dry off resident.
6. Carefully maneuver resident's legs around and use proper nursing techniques to transfer to a wheelchair.
7. If using a sit-to-stand lift or total lift, follow the manufacturer's instructions on the use of that particular lift.
8. You are now ready to disinfect the Cascade Comfort Spa.

System Cleaning (After Every Bath)

Clean and disinfect the spa after every bath with Penner Cleaner/Disinfectant as follows:

Note. Penner Cleaner/Disinfectant is a special non-abrasive cleaning and disinfecting solution that will not harm the spa's fiberglass surface. Penner Cleaner/Disinfectant is the only cleaning solution designed and recommended for use with your Penner Spa.

CAUTION

Some cleaners, disinfectants, and floor strippers contain ingredients that are corrosive or abrasive. These solutions or compounds may contain chlorine, acid, basic ingredients or abrasives. DO NOT allow such solutions or compounds to come in contact with your Penner equipment. Failure to heed this caution could result in damage to the equipment and void the warranty.

1. Close and lock the door.
2. Press the Tub Fill Button and turn the Temperature Control Knob all the way to the left to its warmest level to heat the disinfectant solution and maximize its effectiveness.
3. Remove any visible tissue, residue, or fluids from the spa by pressing the Shower Button and rinsing the inside spa surfaces with the shower sprayer.
4. Press the Tub Fill Button again to turn off the water. Allow the spa to drain, and place the drain plug over the drain.
5. Press and hold the Disinfect Button located on the control panel. As the button is held down, the properly mixed cleaning solution is running through the air injection system and out all of the air jets. Release the button after you see solution coming out of all the air jets and you have 1 to 1 1/2 gallons of disinfectant solution in the foot well of the spa.

WARNING

Housekeeping personnel should wear protective glasses and gloves to prevent disinfectant from damaging their eyes or skin. If disinfectant gets on the skin or in the eyes, rinse thoroughly with plenty of water. Seek medical advice if irritation occurs.

6. Using the long-handled brush, available from your Penner distributor; thoroughly scrub all interior surfaces of the spa. Let disinfectant stay on surface for 10 minutes. (Or, as recommended by the instructions on the disinfectant concentrate container.)
7. Remove the plug from the drain.
8. Rinse the spa's interior surfaces thoroughly with the shower sprayer. (Continue with step 16)
9. Press and hold the Rinse button located on the control panel until clear water runs from all the air jets. Then release the Rinse button.
10. Finish rinsing the interior surfaces of the spa with the shower sprayer.
11. Start the air blower by pushing the Aqua-Aire Button. Allow it to run for 30 seconds. This pushes the rinse water out of the air injection system. If this was the last bath of the day, allow the blower to run for 2 minutes to dry out the system.

12. Stop the Aqua-Aire blower by again pushing the Aqua-Aire button.
13. Visibly check that the spa was effectively cleaned during the disinfecting procedure. If not, repeat the procedure.
14. If there is a delay of one or more hours before the next bath, we recommend using a towel to wipe off all excess water. This will keep your Cascade spa looking great for years to come.

Daily Maintenance

To properly maintain the Cascade Comfort Spa, perform the following daily maintenance procedures.

1. Check that there is an adequate supply of disinfectant concentrate in the supply bottle located behind the access door on the left side of the spa cabinet. Replace the bottle before it is empty to avoid re-priming the system. Be sure each bottle label matches the label found on the hose to which the bottle is attached.

WARNING

While replacing system liquids, housekeeping personnel should wear protective glasses and gloves to prevent disinfectant concentrate from damaging their eyes or skin. If disinfectant gets on the skin or in the eyes, rinse thoroughly with plenty of water. Seek medical advice if irritation occurs.

2. Perform the Daily Safety Checklist described in the following section before using the system.

WARNING

Failure to perform the daily safety checks and take corrective action, when required, prior to the operation of the equipment each day could result in injury to the resident or operator.

WARNING

If any part of the system is not functioning properly, cease all bathing activities until the problem is corrected by maintenance. The system must be maintained on a scheduled basis to ensure it is functioning properly. Failure to heed these precautions could result in injury to the operator or resident.

Daily Safety Checklist

CHECK THE FOLLOWING ITEMS EACH DAY BEFORE USING YOUR CASCADE COMFORT SPA.

Cascade Comfort Spa

Perform the following safety checks for the Cascade Spa:

1. High temperature limit – Press the Fill Button and turn the Temperature Control Knob all the way to the left to the highest setting. Test the fill and shower water temperature to ensure that it reaches no more than 115 degrees Fahrenheit (lower if required by local regulations).
2. Temperature Read-Out Accuracy – Temperature should be verified with a calibrated thermometer.
3. Seal Wear - Open the door and check to see that the seal is not cracked or peeling away from the door.

WARNING

If during the safety checks you find parts are missing, are excessively worn, do not function properly, or do not meet the recommended safe operating levels, do not operate the equipment until the maintenance department has taken the appropriate corrective action.

Your Penner Distributor and his personnel are trained to provide in-service instruction and maintenance on your Cascade Sit-Bath System. If you have any questions about the operation or maintenance of your Cascade Sit-Bath System, please contact your Penner Distributor. For your nearest Penner distributor, contact Penner Patient Care, Inc at 1-866-736-6377 OR 1-800-732-0717.

For your nearest distributor, contact:

PENNER PATIENT CARE, INC.
Box 523 / 101 Grant St.
Aurora, NE 68818

1-866-PENNERS

1-866-736-6377

1-800-732-0717

E-mail Address: pennersales@hamilton.net
Web Site: www.pennerpatientcare.com

NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE UL MARK



12/10/15

Penner Manufacturing Inc.
Don Rudy
101 Grant Street
Aurora, NE 68818

Our Reference: File E213698, Vol. 1 Project Number 4787104857
Project Scope: PIDF/7:E213698 V1/S2:ADDITION OF CASCADE COMFORT MODEL 560010-X, 560010-XL, 560010-XSB, 560010-XLSB, WHERE "X" CAN BE ANY NUMBER WHICH DENOTES THE COLOR OF THE UNIT, AND SB DENOTES A "STILL BATH" CONFIGURATION

Dear Mr. Rudy:

Congratulations! UL's investigation of your product(s) has been completed under the above Reference Number and the product was determined to comply with the applicable requirements. This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Mark at authorized factories under UL's Follow-Up Service Program. To provide your manufacturer(s) with the intended authorization to use the UL Mark, you must send a copy of this notice to each manufacturing location currently authorized under File E213698, Vol. 1.

Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent in the near future. Until then, this letter authorizes application of the UL Mark for 90 days from the date indicated above.

Additional requirements related to your responsibilities as the Applicant can be found in the document "Applicant responsibilities related to Early Authorizations" that can be found at the following web-site:
<http://www.ul.com/EAResponsibilities>

Any information and documentation provided to you involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

We are excited you are now able to apply the UL Mark to your products and appreciate your business. Feel free to contact me or any of our Customer Service representatives if you have any questions.

Very truly yours,

Ronald Tiongco
Staff Engineer

Reviewed by:

Bruce Mahrenholz
CPO Director
Certification Program Office
UL LLC

UNDERWRITERS LABORATORIES

INSPECTION REPORT

E213698X11512171535

Date	12/17/2015	File Number	E213698
Responsible Office	Northbrook	Volume	X1
Inspection Center	720	CCN	PIDF
Product Type	Medical Device/Equipment	UL Rep Name	Richard L. Griffin
Deliverable Type	Listed	UL Representative ID	07006
Party Site Number	580777	Subscriber Number	599459-001
Manufacturer Name and Address	PENNER MFG INC 102 GRANT ST PO BOX 503 AURORA, NE 68818-0503	Factory Representative	Mr. Patrick Wall
		Factory Rep Phone	402-694-5003
		Factory Rep Email	pennerqa@hamilton.net

Nature of Visit	Regular Inspection	Sample Status	Samples not required
Listing/Classification/Recognized (Unlisted) Component Marks Used Since Last Visit	Yes	Listing/Classification/Recognized (Unlisted) Component Marks Removed	No
Variation Notice Issued	No		

VN Corrective Action Follow-up Performed? No

PRODUCT DOCUMENTS / PRODUCTION READY VISIT

No Products Examined - Production Ready Visit

Model	Product	Class	Section/ RNN	Multiple Listed
383000-1	Lift		X1	No

SAMPLE DOCUMENTS

If samples are required to be sent to ULI Laboratory, indicate below. If required samples are not sent, explain in the Comments area.

Type/Style/ Cat/Model	Name	Sample Tag Number	Shipped to Office
No Samples			

Additional Comments:

In addition to the requirements specified in the applicable UL Services agreement and Follow-Up Service Procedure, UL further defines responsibilities, duties and requirements for both manufacturers and UL representatives in the document titled "UL Mark Surveillance Requirements" that can be located at www.ul.com/fus, and in accordance with the applicable terms and conditions of the document at www.ul.com/responsibilities. Manufacturers without Internet access may obtain the current versions of these documents from their local UL customer service representative or UL field representative.



Rada 320 Installation and Maintenance

Water Temperature Controls Groups of Fixtures Thermostatic

This Rada 320 Valve has been supplied for this application based upon information provided to Armstrong at the time the order was placed.

This Rada 320 Valve is configured for use in a "dead-leg" piping configuration as indicated in the drawing on Page 5.

This Rada 320 Valve has not been configured for use in a central pumped re-circulation system.

This Rada 320 Valve has not been designed to deliver tepid water to Emergency Fixtures.

For further information, please call our technical department Toll Free at 1-888-HOT-HOSE.

Model No. Rada 320 Rada 320D Rada 320DC

Serial No. _____

Ship Date _____



Water Temperature Control - Groups of Fixtures

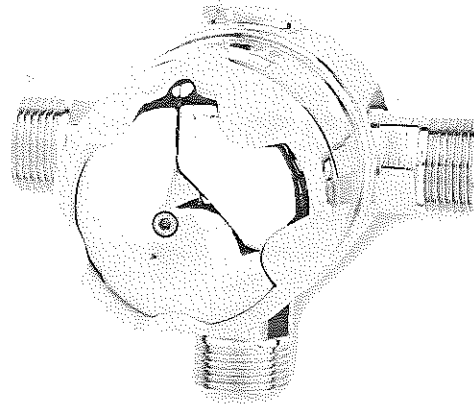
Thermostatic

Rada 320

Rada Thermostatic Mixing Valve of "sealed for life" disposable cartridge construction. Compact design with top and/or bottom blended water outlet makes Rada 320 ideal for recessed enclosure, plumbing chase and utility/mechanical room installation.

Complete operating mechanism of valve is enclosed in a durable polymer cartridge for ease of field maintenance. Powerful internal mechanism and non metallic wetted parts resist mineral deposition.

Capable of close temperature control at diverse flow rates between 1 gpm (3.8 lpm) 24 gpm (91 lpm). Able to blend within 5°F (2°C) of either inlet supply due to "low seepage" across internal proportioning mechanism.

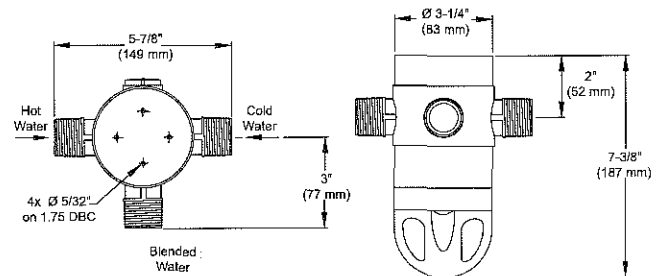


Operational Specifications

- Dual thermostatic elements provide redundancy in the event of individual thermostat failure
- Typical outlet temperature control +/-2°F
- Adjustable maximum temperature limit stop
- Adjustable single temperature lockout
- Thermal shutdown mode upon inlet supply failure

Technical Specifications

- 1" NPT inlets and 1" NPT outlet
- Chrome-plated DZR brass/polymer construction
- Operating pressures
 - Maximum: 150 psi (10 bar)
 - Minimum: 10 psi (.7 bar)
- Integral inlet check valves and strainers
- ASSE 1017 and CSA B125 certified
- Shipping weight 10 lbs (4.5 kg)



For a submittal drawing, refer to CDLW #1061.

Rada Thermostatic Mixing Valves (gpm)												
Model	Pressure Drop (psi)										Min. Flow	C _v
	5	10	15	20	25	30	35	40	45	50		
320	8	11	13	15	17	19	20	22	23	24	1	3.4
425	15	22	27	31	35	38	41	44	46	49	2	6.9
40	36	51	62	72	-	-	-	-	-	-	2	16.0
50	49	70	85	98	-	-	-	-	-	-	2	22.0

Water Temperature Control - Groups of Fixtures

Thermostatic

Rada 320D

A derivative assembly of the standard Rada 320 Thermostatic Mixing Valve of "sealed for life" disposable cartridge construction. Compact design with top and/or bottom blended water outlet makes Rada 320D ideal for recessed enclosure, plumbing chase and utility/mechanical room installation.

Complete operating mechanism of valve is enclosed in durable polymer cartridge for ease of field maintenance. Powerful internal mechanism and non metallic wetted parts resist mineral deposition.

Capable of close temperature control at diverse flow rates between 1 gpm (3.8 lpm) and 24 gpm (91 lpm). Able to blend within 5°F (2°C) of either inlet supply due to "low seepage" across internal proportioning mechanism.

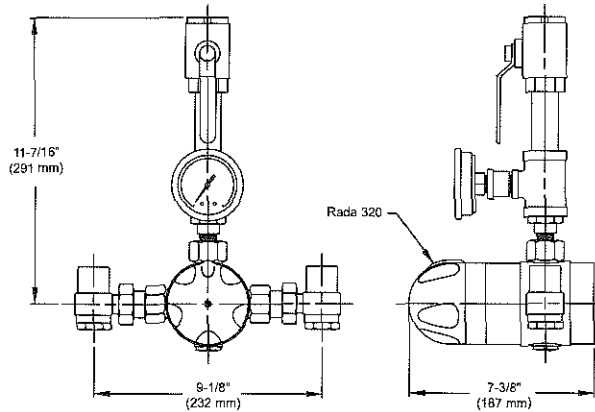
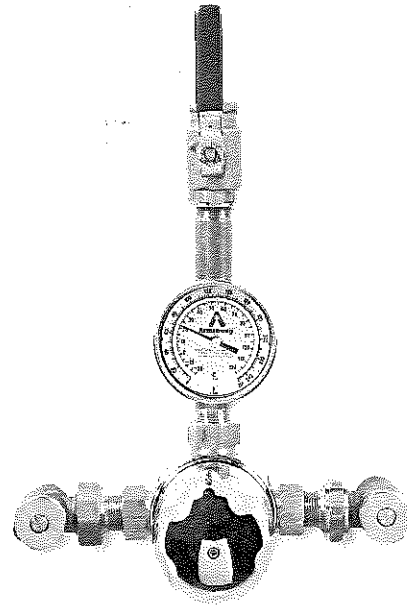
Operational Specifications

- Dual thermostatic elements provide redundancy in the event of individual thermostat failure
- Typical outlet temperature control +/-2°F
- Adjustable maximum temperature limit stop
- Adjustable single temperature lockout
- Thermal shutdown mode upon inlet supply failure

Technical Specifications

- 3/4" NPT inlets and 3/4" NPT outlet
- Chrome-plated DZR brass/polymer construction with self-finish brass and bronze components (320D) or with nickel-plated components (320DC)
- Operating pressures
 - Maximum: 150 psi (10 bar)
 - Minimum: 10 psi (.7 bar)
- Integral combination inlet check stop/union/strainers
- Outlet thermometer and outlet flow control valve
- ASSE 1017 and CSA B125 certified
- Shipping weight 10 lbs (4.5 kg)

For a submittal drawing, refer to CDLW #1102.



Rada Thermostatic Mixing Valves (gpm)												
Model	Pressure Drop (psi)										Min. Flow	C _v
	5	10	15	20	25	30	35	40	45	50		
320	8	11	13	15	17	19	20	22	23	24	1	3.4
425	15	22	27	31	35	38	41	44	46	49	2	6.9
40	36	51	62	72	-	-	-	-	-	-	2	16.0
50	49	70	85	98	-	-	-	-	-	-	2	22.0

Safety Warnings

The function of a Thermostatic Mixing Valve is to deliver water consistently at a pre-designated temperature.

Rada Thermostatic Mixing Valves are precision engineered to give continued superior and safe performance provided:

1. They are installed, commissioned, operated and maintained in accordance with the recommendations provided and accepted plumbing practices.
2. Periodic attention is given, as necessary, to maintain the product, the accessory fittings and the plumbing system in good functional order.

In keeping with every other mechanical product, Rada Mixing Valves should not be considered as functionally infallible and, as such will never totally replace the vigilance and attention of facility nursing/bathing or other institutional supervisory or industrial safety staff.

Provided that they are installed, commissioned, operated and maintained, the risk of product failure and its associated consequences, if not eliminated, are reduced to the minimum achievable.

Rada 320 Operating Specifications

Maximum Hot Water Supply Temperature	185°F (85°C) *
Minimum Cold Water Supply Temperature	33°F (1°C)
Optimum Inlet to Outlet Temperature Differential	21°F (12°C) **
Optimum Thermostatic Control Range	86°F (30°C) - 122°F (50°C)
Maximum Flow Rate at 45 psi	23 gpm (87 lpm)
Maximum Flow Rate at 9' per second	16 gpm (61 lpm)
Minimum Flow Rate	1 gpm (3.8 lpm)
Maximum Inlet Supply Pressure	150 psi (10 bar)
Minimum Inlet Supply Pressure	10 psi (0.7 bar)

*Rada 320 can accept temporary excursions above 185°F (85°C) and maintain control without sustaining internal damage. (ASSE 1017 certification requires exposure to 200°F (93°C) for a period of 30 minutes). Prolonged operation of the Mixing Valve at such elevated temperatures is not recommended.

** Under laboratory test conditions Rada 320 has displayed a repeatable capability to blend to within 5°F (2°C) of each inlet supply temperature. 21°F (12°C) is the optimum published differential required to achieve full thermal performance.

Rada 320 Installation

The Rada 320 Thermostatic Mixing Valve must be installed as per the piping schematic provided on Page 5. Failure to follow this directive will compromise valve/system performance, void all warranties and may create a user comfort issue and safety concern.

Armstrong has Rada technical support personnel available from 8:00 a.m. to 5:00 p.m. EST. Call Toll Free 1-888-HOT HOSE.

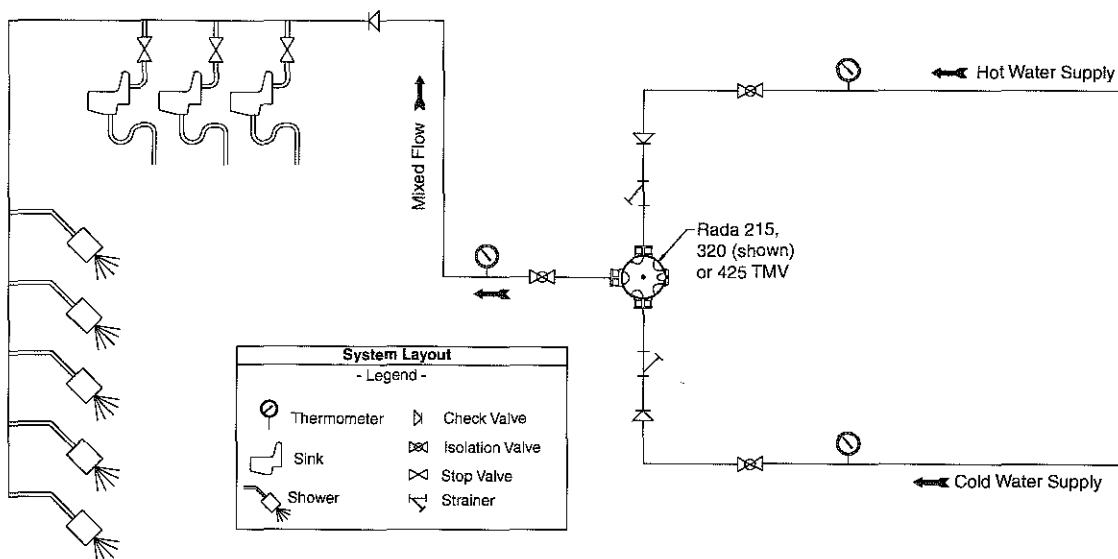
Notes:

1. Rada 320 may be installed in a vertical or horizontal position.
2. Rada 320 must be installed in a standard **HOT-LEFT/COLD-RIGHT** inlet supply configuration. There are red(hot) and blue(cold) markings on each valve. Rada 320 is provided as standard with a piped top outlet and a plugged bottom outlet. This configuration can be reversed by simply switching the outlet plug and fittings. The inlet supplies must always match the corresponding inlet ports on the valve. Rada 320D/DC is provided as standard with a top outlet which can also be reversed.
3. Install flat faced union connections* at each inlet and the outlet as close to the mixing valve as feasible to facilitate check valve and inlet strainer screen service and replacement.
4. Be sure to thoroughly flush the pipework before fitting the Rada 320.
5. Be sure to "make up" all "sweat" or "soldered" fittings ahead of time. Do not expose Rada 320 or any of its fittings to extreme temperatures (such as an acetylene or propane torch).
6. Rada 320 is serviced from the front of the valve as you face it. A minimum 18" clearance in front of the Temperature Control Handle is suggested for internal parts access.
7. Rada 320 is pre-set at the factory to a fixed outlet temperature of 110°F (43°C). It is highly unlikely that the installation site conditions will match the test conditions. As such:

RADA 320 MUST BE RE-SET ON SITE BY QUALIFIED PERSONNEL.

Rada 320 set up (commissioning the Rada 320 and the system) protocol is included on Page 6.

Rada 320 Piping Schematic



* Factory supplied on Rada 320D/DC and when Rada 320 is installed in a cabinet assembly (320 FMC/SMC).

Commissioning the Rada 320

Commissioning must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

Ensure that the hot and cold supplies are at their designated pressures and temperatures. Open mixed water outlet(s) and wait until the hot and cold inlet temperatures are stable. Note the mixed water temperature.

If the mixed water temperature requires adjustment, turn the temperature control handle clockwise to reduce the temperature or counterclockwise to increase it. Allow a few seconds for the temperature to stabilize.

If the blend temperature required is not obtainable (not hot enough) it is likely that the mixing valve has reached the factory calibrated maximum temperature set point. To recalibrate set point see **Maximum Temperature** below.

Maximum Temperature.

The maximum blend temperature obtainable through the mixing valve should be limited to prevent selection of a system temperature that is too hot.

Rada 320 is fully performance tested and the maximum temperature is pre-set to approximately 110°F (43°C) under ideal installation conditions at the factory.

Site conditions and design preference may dictate that the maximum temperature has to be re-set following installation.

Maximum Temperature Setting

Check that an adequate supply of **hot** water is available at the hot inlet of the mixing valve.

For optimum performance the minimum temperature of the hot water must be at least 21°F (12°C) above the desired blend, however during resetting this should be close to the typical storage maximum to reduce the possibility of any blend shift due to fluctuating supply temperatures.

Temperatures should always be recorded using a thermometer with proven accuracy.

For Adjustable Temperature

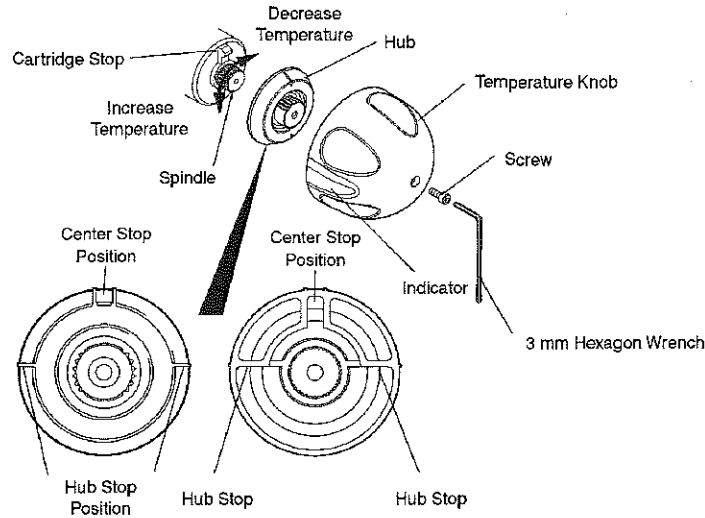
1. Remove the temperature knob screw using a 3 mm hexagonal wrench (supplied). Remove the temperature knob.
2. Pull off the black polymer hub assembly which may inadvertently remain attached to the inside of the temperature control handle. This is a "push fit" and can be "levered" out using a thin blade screwdriver or pliers.
3. Rotate the spindle until required maximum blend temperature is obtained at outlet point (**clockwise = decrease temperature, counterclockwise = increase temperature**). **When resistance is felt do not use force to turn any further, as this can damage the internal parts.**
4. Once the desired maximum blend temperature is achieved, re-fit the hub without disturbing the spindle: Position the hub so that the hub stop comes up against the cartridge stop (refer to Figure 7-1) preventing any further rotation in a counterclockwise direction. Check that blend temperature has not altered.
5. Refit the temperature knob. Make sure that the indicator points to 9 o'clock.

Commissioning the Rada 320

For Locked Temperature

1. Remove the temperature knob using a 3 mm hexagonal wrench (supplied).
2. Pull off the black polymer hub assembly which may inadvertently remain attached to the inside of the temperature control handle. This is a "push fit" and can be "levered" out using a thin blade screwdriver or pliers.

Figure 7-1



3. Rotate the spindle until required maximum blend temperature is obtained at outlet point (**clockwise = decrease temperature, counterclockwise = increase temperature**).
When resistance is felt do not use force to turn any further, as this can damage the internal parts.
4. Once the desired maximum blend temperature is achieved, re-fit the hub without disturbing the spindle, positioning it so that the center stop slot in the hub fits over the top of the cartridge stop (refer to Figure 7-1), preventing any further rotation in either direction. Check that the blend temperature has not altered.
5. Refit the temperature knob. Make sure that the indicator points to 6 o'clock.

Rada 320 Servicing and Maintenance (Refer to Figures 8-1 and 8-2)

Rada 320 Thermostatic Mixing Valves should be inspected annually, or more frequently where acknowledged site conditions such as high mineral content water dictate.

It is highly recommended that as a function of the annual inspection that the two "racetrack" shaped o-seals within the valve are replaced (D33387) seal pack.

Rada 320 Thermostatic Mixing Valve is of non-serviceable single "cartridge construction". The cartridge can be removed from the valve for inspection or replacement by first removing the chromed brass temperature control handle using a 3 mm hex wrench. The black polymer hub assembly may inadvertently remain attached to the inside of the temperature control handle. This is a "push fit" and can be "levered" out using a thin blade screwdriver or pliers.

The chromed polymer Temperature Indicator Ring, which fits beneath the temperature control handle can be "levered" off using a thin edged tool such as a razor blade knife.

Before proceeding further be sure to isolate the valve by turning off each inlet supply.

The complete cartridge assembly is accessed by first removing the 6 Phillips head-retaining screws and then smoothly drawing the cartridge out. Do not twist or apply "side load" leverage when extracting the cartridge.

When installing a new or reinstalling an existing cartridge note the raised "H" on the hot inlet of the cartridge and align to hot supply accordingly. Conversely, align raised "C" with cold supply.

Figure 8-1
Cartridge Assembly Removal

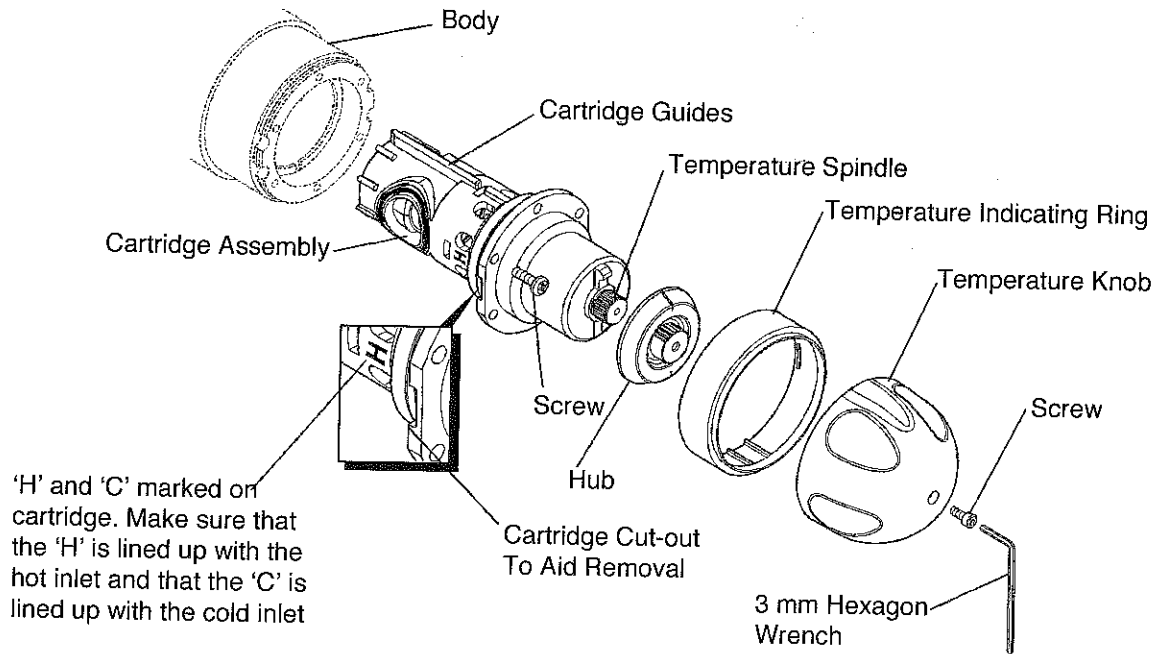
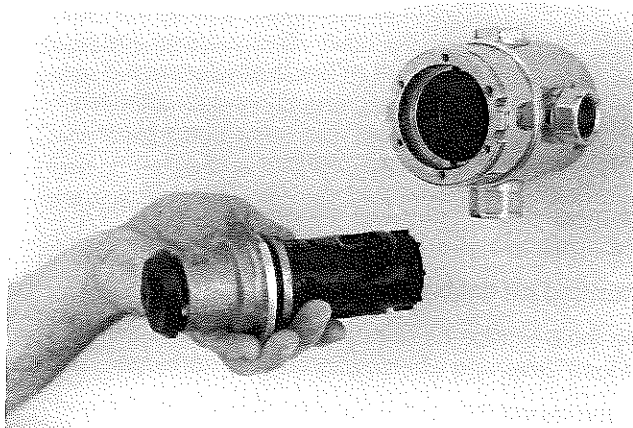
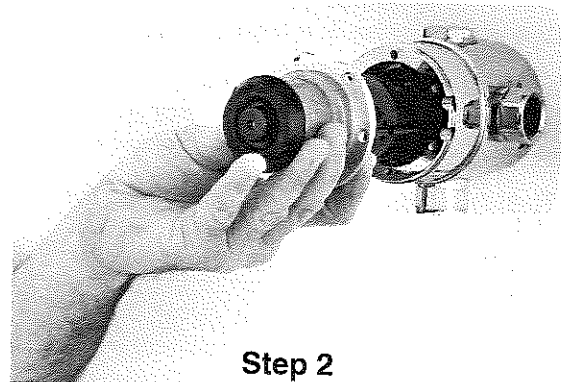
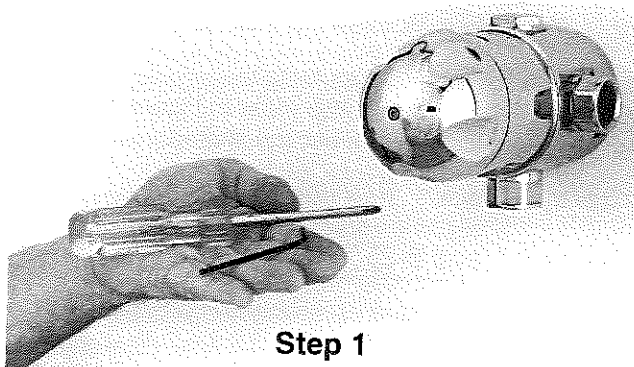


Figure 8-2

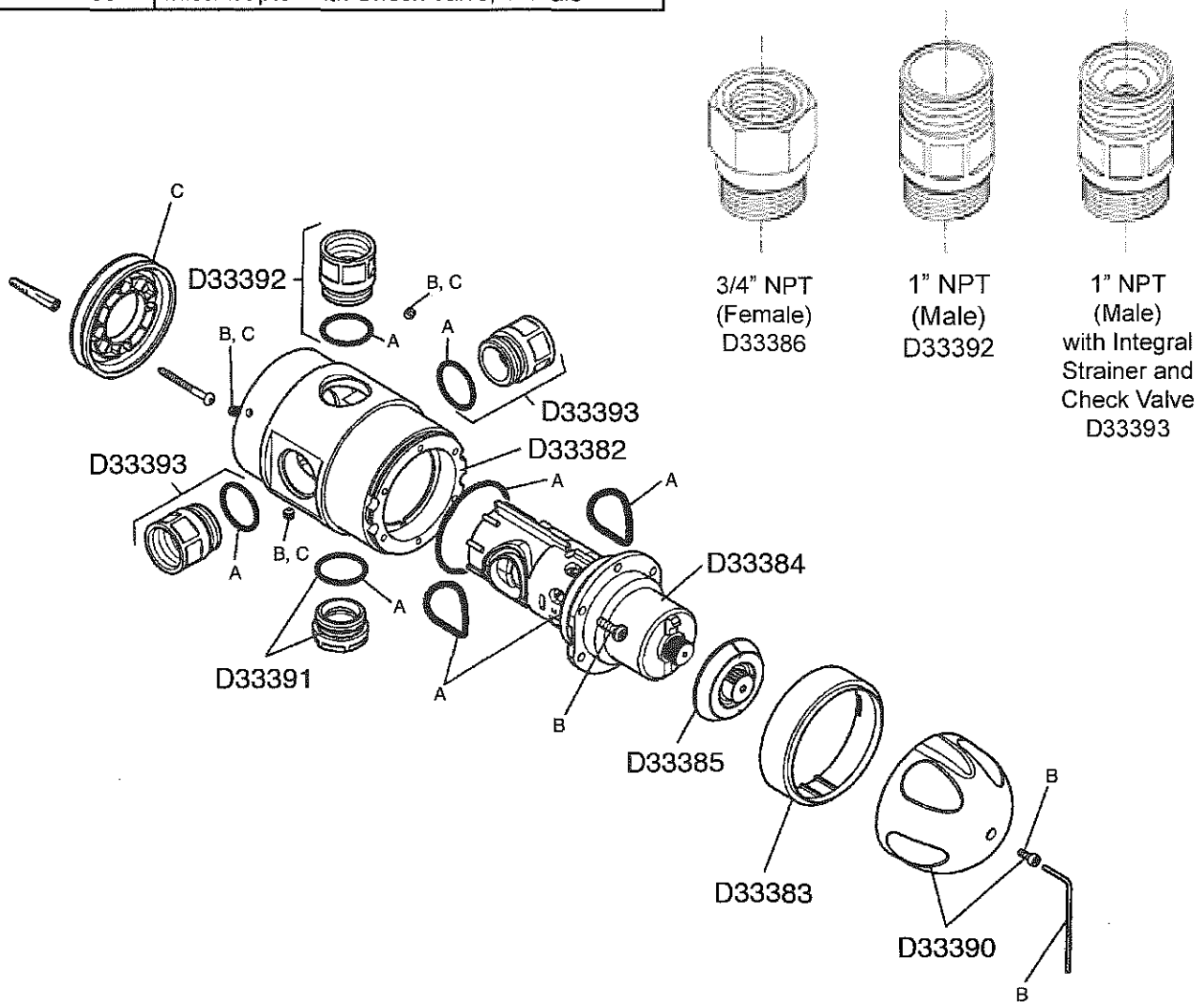


The Rada 320 Mixing Unit features a single "sealed for life" disposable internal cartridge. With an allen key (3 mm) to remove the handle retaining screw and a phillips head screwdriver to remove the 6 cartridge retaining screws, the entire mixing unit can be serviced and/or replaced in approximately 10 minutes.

Note: All seals are pre-lubricated. If further lubrication is required, use only silicone based lubricants on this product. Do not use petroleum based lubricants.

**Rada 320/320R/320D
Common Spare Parts**

Part No.	Description
D33382	Body, Model 320 (less connector)
D33383	Temperature Indicating Ring
D33384	Cartridge Assembly
D33385	Hub Pack
D33386	Inlet/Outlet Adapter, 3/4" Female
D33387	Seal Pack - Includes "A" Components
D33388	Screw Pack - Includes "B" Components
D33389	Backplate Kit - Includes "C" Components
D33390	Knob Pack with Screw
D33391	Blanking Cap
D33392	Outlet Adapter, 1" Male
D33393	Inlet Adapter with Check Valve, 1" Male



Fault Diagnosis

Symptom	Cause	Action
1. Only hot or cold water from outlet.	a. Inlet supplies reversed (i.e.: hot to cold or vice-versa)	Check-Rectify. Tip: check rear of valve under polymer mounting plate for raised "H" (hot) on appropriate inlet. If sight evaluation is not possible consult factory Technical Support for additional diagnostic tips.
	b. No hot water available from hot water source.	Check-rectify
	c. Screen/filters occluded or inlet supply fittings plugged.	Check-Rectify
	d. Refer to Symptom 4 below.	Refer to Symptom 4 below.
	e. Proportioning mechanism (shuttle) trapped against hot/cold seat.	Refer to Servicing/Maintenance on Pages 7-8. and Fig. 8-1. Inspect-Rectify-Replace.
2. No flow from Mixing Valve outlet.	a. Hot or Cold inlet supply failure; Thermostat holding correct shutdown function.	Check-Rectify.
	b. Screens/filters blocked or inlet supply fittings plugged.	Check-Rectify.
3. Mixed water temperature at TMV outlet fluctuates and does not respond to adjustment.	a. Thermostat not operating correctly.	Replace cartridge D33384.
	b. Mixing Valve operating below minimum required flow rate.	Check that at least 1 GPM is flowing through valve.
	c. Static inlet supply pressures beyond valves capability to correct.	Check-Rectify
	d. Inlet supply pressures fluctuating beyond valves capability to correct.	Check-Rectify
	e. Hot water supply temperature fluctuating beyond valves capability to correct.	Check by carefully sensing inlet hot supply pipe work- rectify.
	f. Partially occluded screens/filters or partially blocked inlet fittings.	Check-Rectify.
4. Hot water in cold supply and vice-versa.	a. Indicates non-functioning check valve (s).	Diagnose by turning off mixed water outlet flow and check to see if inlet hot pipe work becomes cold and vice-versa.
5. Mixed water temperature too high.	a. Mixing Valve has not been commissioned correctly and set too high.	Refer to Commissioning on Page 6 - Rectify.
	b. Mixing Valve has not been commissioned correctly and was set when the hot supply temperature was too low.	Refer to Commissioning on Page 6 - Rectify.
	c. Hot water is migrating into cold supply.	See Item 4 above.
	d. Thermostat not operating correctly.	Replace cartridge D33384.
6. Mixed water temperature too low.	a. Mixing Valve has not been commissioned correctly and is set too low.	Refer to Commissioning on Page 6 - Rectify.
	b. Hot water heat is not keeping up with demand.	Check-Rectify.
7. Mixed water flow rate is reduced.	a. Partially occluded inlet screens/filters or partially blocked inlet fittings.	Check-Rectify.
	b. Inlet supply pressure has fallen.	Check-Rectify.
	c. Accumulated pressure losses within the system are too high.	Refer to a trained and appropriate authority for system sizing assistance.
8. Water leaking from valve body.	a. Seals worn or damaged.	Obtain Seal Pack D33387.

Notes

Limited Warranty and Remedy

Armstrong Hot Water Group, Inc. ("Armstrong") warrants to the original user of those products supplied by it and used in the service and in the manner for which they are intended, that such products shall be free from defects in material and workmanship for a period of one (1) year from the date of installation, but not longer than 15 months from the date of shipment from the factory [unless a Special Warranty Period applies, as listed below]. This warranty does not extend to any product that has been subject to misuse, neglect, or alteration after shipment from the Armstrong factory. Except as may be expressly provided in a written agreement between Armstrong and the user, which is signed by both parties, Armstrong **DOES NOT MAKE ANY OTHER REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.** The sole and exclusive remedy with respect to the above limited warranty or with respect to any other claim relating to the products or to defects or any condition or use of the products supplied by Armstrong, however caused, and whether such claim is based upon warranty, contract, negligence, strict liability, or any other basis or theory, is limited to Armstrong's repair or replacement of the part or product, excluding any labor or any other cost to remove or install said part or product, or, at Armstrong's option, to repayment of the purchase price. As a condition of enforcing any rights or remedies relating to Armstrong products, notice of any warranty or other claim relating to the products must be given in writing to Armstrong: (i) within 30 days of last day of the applicable warranty period, or (ii) within 30 days of the date of the manifestation of the condition or occurrence giving rise to the claim, whichever is earlier. **IN NO EVENT SHALL ARMSTRONG BE LIABLE FOR SPECIAL, DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOSS OF USE OR PROFITS OR INTERRUPTION OF BUSINESS.** The Limited Warranty and Remedy terms herein apply notwithstanding any contrary terms in any purchase order or form submitted or issued by any user, purchaser, or third party and all such contrary terms shall be deemed rejected by Armstrong.

Special Warranty Periods are as follows:

Flo-Direct Gas Fired Water Heater

The stainless steel structure and stainless steel internals (flame, tube, pall rings, supports, etc.) shall have a ten (10) year non-prorated guarantee against burn out or any structural failure caused by materials and workmanship. Provided only clean potable water is heated. The other components on the Flo-Direct, such as valves, combustion equipment, electrical controls, and the burner shall have a two (2) year non-prorated guarantee against failure caused by materials and workmanship.

Flo-Rite-Temp Instantaneous Water Heater

The tube bundle shall have a 10-year guarantee against failure caused by materials or workmanship provided by Armstrong but not against gasket failure or damage caused by corrosion, water hammer or lack of proper cleaning.

Flo-Rite-Temp Packaged Instantaneous Water Heater

Two (2) years from the date of installation, but not longer than 27 months from the date of shipment. See above for tube bundle guarantee.

Flo-Eco High Efficiency Gas Water Heater

The heat exchanger and supplied integral components such as the burner, the electrical controls and valving shall have a two (2) year warranty from the date of installation but no longer than 27 months from the date of shipment. The tank and replaceable tank liner shall have a 5 year warranty from the date of shipment.

The Brain – Model DRV80 and derivative assemblies shall have a 5-year all component parts warranty.

*Designs, materials, weights and performance ratings are approximate and subject to change without notice.
Visit armstronginternational.com for up-to-date information.*



Armstrong International
221 Armstrong Blvd., Three Rivers, Michigan 49093 - USA
Ph: (269) 279-3602 Toll Free: (888) HOT-HOSE (468-4673) Fax: (269) 279-3130

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JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF LABOR & ECONOMIC GROWTH
LANSING

STANLEY "SKIP" PRUSS
DIRECTOR

November 6, 2008

Mr. Dale M. Wall
Penner Manufacturing Inc.
102 Grant Street
Aurora, NE 68818

Dear Mr. Wall:

At the Construction Code Commission meeting on November 5, 2008, the Plumbing Division presented your request for approval of the Penner Patient Care, Cascade Bath Systems, Premier Model 360020-1P.

The Construction Code Commission, upon recommendation of the State Plumbing Board, approved the use of the Penner Patient Care, Cascade Bath Systems, Premier Model 360020-1P with the following conditions:

1. All requirements of the Michigan Plumbing and Electrical codes shall be applicable.
2. Installations shall be in accordance with the manufacturer's specifications.
3. Requests from hospital or care institutions must be approved by the Health Department having jurisdiction.
4. Both hot and cold water supplies shall be protected by and approved for reduced pressure principle backflow preventer.
5. The unit shall discharge into an approved waste receptor.

Should any change be made in the design or designation of these products, the modified products must be submitted to this office and a new acceptance obtained.

Providing for Michigan's Safety in the Built Environment

BUREAU OF CONSTRUCTION CODES
P.O. BOX 30254 • LANSING, MICHIGAN 48909
Telephone (517) 241-9330 • Fax (517) 373-8547
www.michigan.gov/dleg

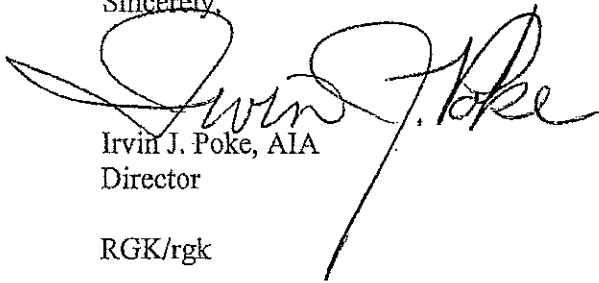
DLEG is an equal opportunity employer/program.
Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.

Mr. Dale M. Wall
Page 2
November 6, 2008

In accordance with Section 21 of 1972 PA 230, neither this letter nor the Certificate of Acceptability may be used for advertising or promotional purposes.

A Certificate of Acceptability is enclosed.

Sincerely,

A handwritten signature in black ink, appearing to read "Irvin J. Poke". The signature is written in a cursive style with a large, looping initial "I".

Irvin J. Poke, AIA
Director

RGK/rgk

Enclosure

cc: Duane Branch, Chairperson, State Plumbing Board

CERTIFICATE OF ACCEPTABILITY

NO. 1593 PA

Issued by the Michigan State Construction Code Commission in accordance with authority granted under Section 21 of 1972 PA 230, being Section 125.1521 of the Michigan Compiled Laws on the recommendation of the State Plumbing Board.

MANUFACTURER: Penner Manufacturing Inc.
102 Grant Street
Aurora, NE 68818

PRODUCT: Penner Patient Care, Cascade Bath Systems, Premier, Model 360020-1P

CONDITIONS OF USE AND INSTALLATION:

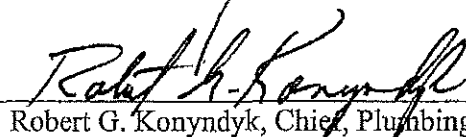
1. All requirements of the Michigan Plumbing and Electrical codes shall be applicable.
2. Installations shall be in accordance with the manufacturer's specifications.
3. Requests from hospital or care institutions must be approved by the Health Department having jurisdiction.
4. Both hot and cold water supplies shall be protected by and approved for reduced pressure principle backflow preventer.
5. The unit shall discharge into an approved waste receptor.

THIS CERTIFICATE SHALL NOT BE USED FOR ADVERTISING PURPOSES.

By Direction of the Construction Code Commission



Irvin J. Poke, AIA, Director, Bureau of Construction Codes



Robert G. Konyndyk, Chief, Plumbing Division

Effective Date: November 5, 2008

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS
BUREAU OF CONSTRUCTION CODES
P.O. BOX 30254
LANSING, MI 48909

CERTIFICATE OF ACCEPTABILITY
PRODUCT APPROVAL

1647-PA

Issued by the Michigan State Construction Code Commission in accordance with authority granted under Section 21, 1972 P.A. 230, MCL 125.1521 on the recommendation of the Bureau of Construction Codes, Plumbing Division. This product was reviewed to the 2009 Michigan Plumbing Code.

MANUFACTURER:

Penner Manufacturing, Inc.

PRODUCT:

Cascade Contour Bathing System, model 360030-1C

MANUFACTURER DESIGNATION:

Penner Manufacturing, Inc.
102 Grant Street
Aurora, NE 68818

CONDITIONS OF USE AND INSTALLATION:

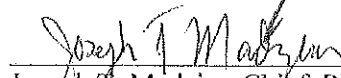
1. All requirements of the Michigan Plumbing Code shall be applicable.
2. Installations shall be in accordance with the manufacturer's specifications.
3. Requests from hospitals or care institutions must be approved by the Health Department having jurisdiction.
4. Both hot and cold water supplies shall be protected by an approved reduced pressure principle backflow preventer.
5. The unit shall discharge into an approved waste receptor.
6. This approval shall become void if and when the product no longer meets the requirements of the Michigan Plumbing Code or a change in design/designation occurs.

THIS CERTIFICATE SHALL NOT BE USED FOR ADVERTISING PURPOSES.



By Direction of the Construction Code Commission


Irvin J. Poke, AIA, Director


Joseph T. Madziar, Chief, Plumbing Division

Effective Date: January 8, 2014

BCC-978 (Rev. 11/12)



Home Innovation
LAB CERTIFIED™

THIS CERTIFICATE SIGNIFIES

PENNER MANUFACTURING INC.
101 GRANT STREET
AURORA, NE 68818
(CR# 6091)

IS IN CONFORMANCE WITH THE PROGRAM REQUIREMENTS AND IS
LICENSED TO AFFIX THE HOME INNOVATION LAB CERTIFIED LABEL TO
THE FOLLOWING PLUMBING FIXTURES:

WHIRLPOOL BATHTUBS, BATHTUBS WITH PRESSURED SEALED DOORS

MANUFACTURED IN ANY OF THE FOLLOWING APPROVED MATERIALS:

GELCOATED FIBERGLASS REINFORCED PLASTIC

THE LISTED PRODUCTS HAVE BEEN TESTED IN ACCORDANCE WITH THE APPROPRIATE
ASME A112.19.7/CSA B45.10; ASME A112.19.15; CSA B45.5/IAPMO Z124 STANDARDS

Thomas Kenney, PE
VP Engineering & Research

Shanzhong (Sam) Yuan, Ph.D., P.E.
Director of Laboratory & Certification Services

January 1, 2017

Issuance Date

December 31, 2017

Expiration Date

This certificate becomes invalid upon suspension, cancellation, revocation, or expiration of certification

Home Innovation Research Labs | 400 Prince George's Boulevard | Upper Marlboro, MD 20774 | HomeInnovation.com

COMFORT TUB WITH AQUA-AIR
POTABLE WATER SYSTEM

PENNER MFG INC.
102 GRANT ST
AURORA NE 68818

