



Natural gas pipeline safety

Excavator Damage Prevention Guide

Inside:

Public Act 174 of 2013
Call 8-1-1

Consumers Energy

Count on Us®



An important message about digging safely

CONSUMERS ENERGY is providing this handbook to excavation contractors as part of our Pipeline Public Awareness program. We want to share with you safe-digging practices to help protect your employees, the public and the environment.

As one of Michigan's largest natural gas companies, we operate and maintain more than 28,000 miles of natural gas pipelines that help us bring this important product to more than 1.8 million customers in Michigan's Lower Peninsula.

Pipelines help fuel our economy and way of life. Buried pipelines carry natural gas into our state from Texas, Oklahoma, Louisiana, the Gulf of Mexico and Canada.

According to the U.S. Department of Transportation, pipelines

are the safest, most reliable and cost-effective means of transporting energy products such as natural gas over long distances.

We work with local, state and federal agencies in implementing programs to encourage safe-digging and pipeline-security practices and to ensure high-quality pipeline monitoring and maintenance.

Please take the time to review this information and share it with your co-workers. Many of the provisions in this handbook are covered by Michigan law Public Act 174 of 2013 included on pages **25 – 36** of this handbook.

For more information:
800-477-5050

**ConsumersEnergy.com/
pipelinesafety**

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Did You Know?

Damage to pipelines from excavation activities is a major cause of leaks. About 88 percent of damages to Consumers Energy's gas system are caused by excavating activities. Nearly 82 percent of all damages are caused by professional excavators.



Natural Gas Hazards

Natural gas pipelines are built with safety and reliability as the top priorities. All state and federal guidelines, regulations and specifications are followed during construction. However, you should know that a natural gas leak may present these hazards:

- Fire
- Explosion
- Asphyxiation (Natural gas displaces oxygen in confined spaces)

These hazards may be created by uncontrolled escaping gas, caused by:

- Rupturing, nicking or puncturing a pipeline
- Extreme loading of materials over buried facilities (spoil piles, transport of equipment, outriggers)
- Water main breaks that weaken roadways and pavement, damaging gas pipelines
- Heavy ice on outside meters or gas pipelines
- Collapsed buildings that break or damage gas pipelines
- Fire or explosion near or directly involving a pipeline facility
- Under- or overpressure in the gas system
- Equipment failure
- Human error
- Lightning
- Extreme natural events such as floods, tornadoes and earthquakes
- Civil disturbances such as riots

Important Facts About Natural Gas Safety

Natural gas is colorless, tasteless and odorless. To make it easier to recognize natural gas, a “rotten egg” odor is added. This usually is done at the point where the gas enters the distribution system. The natural gas in most of Consumers Energy’s large transmission pipelines does not contain an odorant.

Natural gas is not toxic. However, large concentrations of natural gas will displace the air in enclosed spaces, and asphyxiation may occur.

Natural gas cannot burn by itself. To burn, natural gas must be mixed with air. It also must have an ignition source such as static electricity, a pilot light, a lighted match, or an electric arc from a light switch, motor, doorbell or telephone.

Burning natural gas will not explode. If natural gas does ignite, let it burn. Do not attempt to put out the flame.

Natural gas follows the path of least resistance. Field conditions, such as a frost cap on the ground surface in the winter, may cause leaking gas to move beyond the immediate area and into sewers, phone ducts and other locations.

Natural gas is almost 40 percent lighter than air. Natural gas rises and quickly spreads out in open areas. In an enclosed room or building, natural gas displaces air first at the ceiling level and then moves down toward the floor.

Natural gas is not propane. Propane and other liquefied petroleum gases are different from natural gas because they are heavier than air and collect in low places.

Utility Preventive Actions

Pipeline Safety Programs

We have many programs in place to maintain the safety of our natural gas system, especially in densely populated areas or places where people congregate, such as schools, parks and campgrounds. The federal government sets standards for the development of integrity management programs specifically near these High Consequence Areas. Some of our many safety programs include:

- All pipe is factory-tested to ensure it meets our safety standards
- Our cathodic protection program uses a low-voltage electric current to help reduce or eliminate corrosion
- We use high-tech devices called “smart pigs” in transmission pipelines to locate any breaks in the pipe’s protective wrap, dents or small internal weaknesses
- We conduct ground and aerial surveys to check our 2,550 miles of transmission pipelines at least twice a year
- The distribution system also is surveyed for leaks. Survey intervals vary according to the type of pipe, pressure and other factors
- We respond to more than 300,000 MISS DIG 811 requests each year to mark pipeline locations so excavators can dig safely
- To allow us to respond quickly to any emergency, our employees continuously monitor a computer system that alerts us to any abnormal pressures or flows in the gas system
- Field employees receive extensive training to maintain pipelines and respond to possible problems
- We respond promptly to all gas emergency calls to make the situation safe as soon as possible and to mitigate the impact of an incident involving natural gas
- We also count on the awareness of those living and working near pipelines to inform us of unusual activities and have an extensive pipeline public awareness program
- Engineering plans for significant civic projects, such as roads and sewers, are reviewed by Consumers Energy prior to construction to evaluate the projects’ potential impacts on the gas system



Pipelines in Your Area

The National Pipeline Mapping System (NPMS) provides maps of interstate and intrastate transmission pipelines for natural gas, oil and other products, along with contact information of the pipeline operator.

To find out who operates transmission pipelines in your area, visit www.npms.phmsa.dot.gov.

Pipeline Markers

Consumers Energy uses various types of permanent pipeline markers (signs) to indicate the presence of natural gas pipelines. However, the markers do not indicate a pipeline’s exact location, its depth or the direction it follows. Markers may not be present in some areas.

Pipeline markers usually are located at road, railroad and waterway crossings, and at regular intervals across rural areas. They are yellow signs that identify the company, type of pipeline and provide an emergency phone number. Consumers Energy must be notified through MISS DIG 811 before any excavation or demolition activity in the area of a pipeline regardless of the presence of established line markers.



How to Recognize a Gas Leak

Signs of a natural gas leak may include:

- “Rotten egg” smell from distribution lines (natural gas in transmission lines usually does not have an odor added)
- Blowing or hissing sound
- Dead or discolored vegetation in an otherwise green area
- Dirt or dust blowing from a hole in the ground
- Bubbling in wet or flooded areas
- Flames, if a leak has ignited

Please consider any sign of a natural gas leak as an emergency that may put your safety and that of the public at risk. If you observe any signs of a gas leak, first go to a safe location, then call **9-1-1** and then notify Consumers Energy at **800-477-5050** any time, day or night.

If You Make Contact With a Pipeline

If your equipment makes contact with a Consumers Energy pipeline, stop your excavation and contact the company immediately at **800-477-5050**. This includes nicks, dents, gouges, cuts, scrapes or scratches to the pipeline or its coating. Failure to notify the utility of these occurrences could result in future corrosion and/or pipeline failure. Call even if there is no apparent damage.

DO NOT assume that damage occurs only at the contact point. A pipeline that is pulled or bumped could break some distance away from the contact point.

If an underground gas facility is damaged, the excavation machine operator must take immediate action to minimize the hazard:

- Keep everyone away from the damage and upwind until a gas crew arrives to shut off gas. Consider the possibility of gas migrating to surrounding structures
- If you can do so safely, without risking the ignition of any leaking gas, move your machine away from the damage. **DO NOT** start an engine or motor that may already be “off”
- If the machine’s motor stalls, **DO NOT** attempt to restart it. If you can do so safely, turn off the motor to prevent possible ignition of any gas and abandon the equipment
- **DO NOT** cover the damaged pipe with dirt to try to stop the leak
- **DO NOT** crimp plastic gas facilities. A spark from static electricity may ignite the gas
- **DO NOT** attempt to plug damaged pipes. Allow the gas to vent into the atmosphere



If you snag a 1-1/4 inch or smaller diameter gas service with power equipment at a building with an inside meter, use the power equipment to break the service so that gas is blowing to atmosphere at the excavation. This will eliminate the risk of gas blowing inside the building if the pipe has separated at an inside pipe joint.

Contact Consumers Energy immediately at **800-477-5050 and evacuate the building until we can assure that gas has not accumulated in the structure.**

- If natural gas ignites, let it burn. **DO NOT** put out the flame. Burning gas will **NOT** explode
- **Call 9-1-1** and then Consumers Energy at **800-477-5050**
- **DO NOT** use any matches, lighters or electrical devices that could ignite the gas
- **DO NOT** try to shut off any natural gas valves



Evacuation May Be Needed

When gas is escaping from a broken pipe, buildings in the area may need to be evacuated. This is the responsibility of the excavator, according to Public Act 174. (Please see details on pages 25 – 36). If you have damaged a gas line and suspect leaking gas may be entering or blowing into a building, take immediate action:

- Evacuate the occupants and leave the doors open
- **Call 9-1-1** and then notify Consumers Energy at **800-477-5050**
- Tell people they must not return to the building for any reason
- **DO NOT** operate light switches, doorbells or use telephones in the building
- **PROHIBIT** smoking in the area
- Keep people and traffic away from the leak area
- **PROHIBIT** the operation of machinery

Your prompt action may save lives or prevent serious injury or property damage.

DO NOT leave a potentially hazardous situation to chance.

Repairing Pipeline Damages

Once notified that a pipeline or pipeline coating has been damaged, a utility or pipeline crew will be dispatched to make repairs. Only qualified personnel, using proper safety equipment and materials, are allowed to repair or replace damaged pipelines.

We encourage you to report nicks, as typically there is no charge. However, if the excavator has not complied with PA 174, then a bill can and usually will be generated.

Excess Flow Valves

Excavators should be aware of the possible presence of excess flow valves (EFVs). Since 1999, Consumers Energy has installed EFVs in certain new and replacement services. These valves typically are installed near the connection of the gas service to the gas main. An EFV will trip when gas flow exceeds the valve's design limits. This might occur as a result of a gas service line being severed by excavator damage or damage to gas meters due to high winds or a vehicular accident.

The most popular EFV style allows a slight amount of gas to leak across the valve seat after the valve trips. Therefore, if a gas line with an EFV installed is severed, a small amount of gas will continue to flow. This may result in a potentially hazardous condition if not reported promptly to Consumers Energy.

If your equipment contacts or severs a gas line, stop your excavation and contact the pipeline operator immediately. Once notified that a gas line has been damaged, a utility or pipeline crew will be dispatched to make repairs. Only qualified personnel, using proper safety equipment and materials, should repair or replace damaged pipelines.

MIOSHA Requirements

Contractors are subject to the Michigan Occupational Safety and Health Administration's (MIOSHA) requirements. MIOSHA cites in its "General Duty Clause" the possible regulatory enforcement action that could be taken against excavation contractors who place their employees at risk by not using proper damage prevention practices. The lack of adequate damage prevention could subject the excavator to MIOSHA regulatory enforcement. MIOSHA information may be found at www.michigan.gov/mioshastandards.

Call 8-1-1

E-Locate and Remote Ticket Entry

The option to call **8-1-1** to reach one-call centers such as the MISS DIG 811 System went into effect nationwide in 2007. One easy call to **8-1-1** gets free marking of underground utility lines and helps protect against injury and expense. To know what's below, always call **8-1-1** before you dig. You also may reach MISS DIG 811 at **800-482-7171**.

MISS DIG 811 staking requests for simple projects can also be initiated using the E-Locate feature at elocate.missdig811.org. Excavators with large projects can request access to the MISS DIG 811 remote ticket entry (RTE) tool to initiate staking requests on line for complex projects. For more information go to www.missdig811.org.

Consumers Energy and others promote damage prevention using the four key messages of the Common Ground Alliance's Dig Safely program. Those messages, tailored to Michigan, are to:

- Initiate a MISS DIG 811 staking request at least three full working days before excavation
- Wait until the approximate locations of underground facilities are marked with flags or paint
- Expose the underground utilities by hand-digging within the caution zone (see page 23)
- Respect the markings by not damaging or removing them

What is the MISS DIG 811 System?

The MISS DIG 811 System is Michigan's one-call notification system. It was formed in 1970 in Oakland County by four major Michigan utilities. The MISS DIG 811 System was created to provide excavators and the public a way to use one telephone call to inform multiple owners of underground facilities for nonemergency and emergency excavations.

The MISS DIG 811 System is a message-handling service that processes calls from those planning to dig and informs its affected members (utilities, municipalities, private companies, etc.) of the excavation plans.

MISS DIG 811 System is not a utility, owns no underground facilities and does not provide locating services. It is the MISS DIG 811 System members such as utilities like Consumers Energy who are responsible for maintaining their underground facilities, maintaining all records of their facility locations and, under Public Act 174, marking the approximate location of their underground lines.

When to Use the MISS DIG 811 System

Public Act 174 requires anyone who is planning or performing any type of excavation to provide notice to the MISS DIG 811 System at least 72 hours before starting any of those activities. See Public Act 174 on page 25 for definition of "excavation."



The MISS DIG 811 System is available to initiate locating requests 24 hours a day, seven days a week by calling **8-1-1** or **800-482-7171** for emergency and nonemergency requests.

For situations other than locating requests that involve Consumers Energy facilities, contact the utility directly at **800-477-5050**:

- To report damage to any type of Consumers Energy facility
- To resolve any type of damage billing problem with Consumers Energy
- To request any type of Consumers Energy facility removal or relocation, including meter removals before demolition of a building
- To request gas or electric service from Consumers Energy

Types of Requests that the MISS DIG 811 System Handles

Three working day (normal) notice:

This is the most common request processed by the MISS DIG 811 System. This request is made in compliance with the state law requirement of 72-hour notice before digging. It involves a request to identify utility and pipeline facility locations at a specific address or area for a specific dig-start date.

Emergency notice:

See Public Act 174 on page 25 for definition of "emergency." Examples of emergencies include gas leaks, water main breaks, utility line repairs and sewer repairs. Emergency locating requests are accepted and responded to 24 hours a day, seven days a week. Utilities are required to respond prior to the dig start date and time on the emergency ticket. This is typically three hours from the time the ticket is called in, but the excavator can allow for a later time if appropriate.

Additional assistance:

If an excavator has reason to believe that there is an unmarked facility on the job site, perhaps by the presence of meters, utility pedestals, hydrants, etc., the excavator may contact MISS DIG 811 and request additional assistance from the utility owners involved. Additional assistance may also be requested when a marked line cannot be found via hand exposing or soft excavation, or if a utility owner has failed to provide a response via Positive Response. Utility owners and operators must generally respond within three hours of receiving a request for additional assistance.

Re-marking requests:

An excavator shall provide notification to the notification system if facility markings are destroyed or covered by excavation or blasting activities. Upon receiving a notification during business hours from an excavator through the notification system of previous marks being covered or destroyed, a facility owner or facility operator shall re-mark the location of a facility within 24 hours, excluding all hours on nonbusiness days.

Preparing a Location Staking Request for MISS DIG 811

The following information is needed for each MISS DIG 811 locate request, whether it is placed over the phone with the call center or through the web via the E-Locate or Remote Ticket Entry programs. If an excavator has the proper information, creating locate requests is easy regardless of the chosen method. There is a definite reason for every question asked. This section will provide a brief explanation of the reason for each.

You will be asked several questions when you call the MISS DIG 811 System, including:

- The name of the caller who is placing the staking request
- The phone number where the excavator can be reached during the day
- The name of the contractor doing the work
- The party that the work is being done for
- The type of work being performed
- The county where the work will take place
- The township, city, or village where the work will take place
- The location. Know the instructions of where markings of underground facilities will be needed (Street address, lot number, subdivision) and exact location where digging will be done (The front, back, or sides, and the north, south, east, or west side of the location)
- The date and time when the excavation work will begin
- The overhead clearance. Know if you will be able to maintain a minimum of 10 feet clearance from overhead electric lines with equipment you will be using on the job
- The use of directional boring equipment
- The proximity to railroad easements

Once your excavation information has been entered, the MISS DIG 811 system will generate a staking request. You will be given the ticket number for your staking request. Please keep your ticket number so you can track the status of utility staking or if you have future concerns or questions regarding the utilities' staking for your excavation.

A typical ticket is good for 21 days from the dig-start date. However, you should start your excavation activity within 14 days of the ticket's dig-start date for the ticket to retain its effectiveness.

If your project will last longer than 21 days, you should have the ticket designated as a project ticket. This will extend the ticket life to 180 days.

If you cannot maintain a minimum 10-foot clearance from any overhead electric lines with the equipment you will be using on the job, please let the MISS DIG 811 operator know. MISS DIG 811 can request an overhead assistance appointment for you with the electric company. Appointments must be scheduled between 9 a.m. and 3 p.m.



Anyone who is planning or performing any excavation work must call MISS DIG 811 at least 72 hours before starting any digging activities.

Location Accuracy is Important

One of the most common mistakes excavators make is identifying an excavation location as within a village or city when actually it is in a township. This could happen since a mailing address would include the nearest village or city. Before you call, please check whether the excavation site is in a village, city or township.

Rural Location Requests

When you need staking at a rural excavation location, provide as much information as possible. For example, include which side of the road the digging will be on, the road name, the nearest crossroad to the address, and the name of the owner and/or renter at the location where you will be digging. Give the directions to this address from the nearest town including the name of the road(s) and distance(s). Additional information helps, such as rural fire department numbers, pedestal numbers, transformer numbers, mileage markers, longitude and latitude or any other landmarks that may help identify the location.

Scope of Work Guidelines

Scope of Work is a MISS DIG 811 procedure regarding the extent of work on a single ticket. This procedure exists to create reasonable requests that can be responded to within a 3 business-day time frame. The following applies:



Utility and Type	MISS DIG 811 Flag Color
Electric	Red
Gas, Oil, Steam or Petroleum	Yellow
Communications	Orange
Potable Water	Blue
Reclaimed Water Irrigation	Purple
Sewer and Drain Lines	Green
Temporary Surveying	Pink
Proposed Excavation	White

Addresses and Lots

- 10 individual addresses / lots on a single street per ticket, in the same city, township, or village. The total distance between addresses is not to exceed 1 mile
- Apartment/condo complexes: 5 buildings maximum per ticket

Road Work and Cross Country – ONLY ONE STREET PER TICKET

- Work along a road with named intersections may include up to one mile per ticket. This applies to cross country work as well.
 - If your work extends into more than one city, township or village a separate ticket is required for each city, township or village you are working in.
 - When working on different streets, each street requires an individual ticket, unless working 200ft or less from intersection.
 - You may request a radius of intersections along the stretch of road you are working on (up to a 200ft radius). However, the intersecting street names must be noted in the Locate Info field (e.g. Include entire intersections with A St, B St, & C St).
- Work along a continuous road with no named intersections in the same city, township or village, may include up to two miles per ticket. This applies to cross country work as well.

Roads are also considered continuous if they have limited access and include entrance and exit ramps (e.g. freeways, highways, interstates).

- When working along an expressway, or interstate, with limited access and on & off ramps, each ticket should include only one side of the expressway with traffic bound in a single direction (e.g. north bound, south bound sides on separate tickets). If entrance or exit ramps are part of the work site, list each street they enter or exit.
- In addition, along a highway, mile markers can only be used to identify a beginning and ending point if the very closest cross streets are also included. You must indicate the distance & direction from the cross street(s) listed or the cross streets the mile markers are between.

- Service drives run parallel to highways, interstates, etc. and are therefore separate streets. Each service drive, located on either side of the highway with its own traffic direction, must be placed on a separate ticket.
- When working in the median, type: Locate entire median from [point (A) to point (B)].

- Work at intersections: The largest radius of an intersection that can be requested on a single ticket is 200 feet.
- Work on unnamed streets in subdivisions – options: Subdivisions must be called in by individual streets. If street names are not posted, then the contractor should post street names (e.g. Street A) at the worksite and identify the street name in the Locate Info field and give the distance and direction from the nearest named streets.

Utility Poles

- When measuring off footage between pole locations with no given addresses (e.g. Loc 1: 50 ft N of inter), the scope of work is 3 pole locations per ticket (with a maximum of 4). The total distance for the 3 locations cannot exceed 1 mile.
- If pole location is within the boundaries of a single address or in the road r-o-w directly in front of or directly across the street from the single address, you can include up to 10 addresses per street on a ticket. This does not apply when multiple lots have a single address nor if the total distance between addresses exceeds 1 mile.
- If pole locations are along a continuous road with named intersections, from point A to point B on C Street, then the total distance covered must not exceed 1 mile. If locations are along a road with no named intersections from point A to point B on C Street, then the total distance covered must not exceed 2 miles.

What Happens After a Request is Made?

After the locating request is made, the MISS DIG 811 System analyzes the information to identify which utilities or pipeline operators should be notified. MISS DIG 811 System then transmits the request to the appropriate members such as Consumers Energy.

Once it is determined that markings are required, the request is assigned to a field locator who will locate and mark the excavation site with paint, stakes and/or flags. Facilities are marked according to specific guidelines and color codes. For example: Yellow is used for natural gas, oil, steam, petroleum or other gaseous materials. See Table on page 16 for other utility colors.

Consumers Energy is responsible only for marking the portions of facilities that it operates or maintains. The utility will not mark privately installed facilities such as gas lines from houses to garages, outbuildings, generators, grills or lights.

Emergency locates are given top priority. Utilities will mark facilities within the emergency excavation area within three hours.

If marks are no longer visible due to weather or construction activity, utilities will re-mark the facilities upon receiving a valid request through MISS DIG 811.

Notify Consumers Energy if there has been damage to the coating of its facilities, including nicks, dents, gouges, cuts, scrapes, or scratches so a proper repair can be made.



If the re-mark request refers to the original request, (and the ticket is still valid) utilities will re-mark facilities within 24 hours, excluding all hours on nonbusiness days.

When evidence of unmarked facilities exists, an excavator cannot locate a marked line via hand exposing, or a utility owner has not provided a response through the Positive Response program, an excavator can request additional assistance by contacting MISS DIG 811 with a valid ticket number. Utilities will respond to that request within three business hours.

When an appointment is set up, either through MISS DIG 811, or directly with members, locating representatives shall make every attempt to meet the excavator at the time and place agreed upon.

Consumers Energy has a Public Safety Outreach team who work with excavators when there are difficulties in locating underground facilities. For more information, go to ConsumersEnergy.com/pipelinesafety to contact our Public Safety Outreach team.

Positive Response on Digging Request

Positive Response is a system housed at the MISS DIG 811 System center that allows excavators to see if utilities have responded to their dig ticket requests. The Positive Response system is updated after a utility or locating contractor marks the site or clears the ticket. The updated status may be retrieved by the requestor of the ticket using the ticket number at status.missdig811.org on mobile devices, response.missdig811.org or calling 800-763-3888.

The positive response program has been enhanced in 2015 to include additional responses. The responses are color coded to help communicate status of the staking and details about facility owners' response to the staking request.

See the list on pages 19 and 20.

Excavator Responsibilities After Making a Request

Notifying MISS DIG 811 is only the first step for the excavator in fulfilling his or her responsibilities in the locating process. Locating underground facilities is not an exact science, therefore the actual location of the facility could vary from the position of the marks. To avoid damaging underground utility facilities and ensure public and employee safety, excavators must comply with all sections of Public Act 174 and MIOSHA. (See copies in back of guide.)

MISS DIG Positive Responses as adopted by TIME and MDPB committees Positive Responses for Standard Dig Notice Tickets effective 3/1/2015

- 000 Response Pending:** System generated default response attached to initial request
- 001 No Conflict:** Facility is outside of stated area/scope of excavation
- 002 Marked:** Facilities have been marked
- 003 Not Complete:** None or some of the facilities have been marked, more time needed, coordination or assistance required to complete locating of facility
- 004 Marked-Utility Required On Site During Excavation:** Facility owner operator required to be on site when excavating within noted scope of work for this specific facility
- 005 On Going Coordination:** On-going mutual cooperation between facility owner operator and excavator
- 006 Not Marked-No Access to Work Area:** Facility owner operator could not get access to work area, and requires coordination with excavator
- 007 Stated Scope of Work Complete:** Facility owner operator confirmed stated scope of work found completed prior to dig start date
- 008 Facility Response Not Required:** For RXMT locate requests only (retransmitted at the excavators request) and intended for specific facility or facilities that have NOT been requested to locate. Example: the RXMT locate request states "Locate Gas and Electric only". In this case, all other facility owners (water, sewer, telephone, cable TV, etc.) would respond with "Facility Response Not Required". Facilities that were requested (Gas and Electric) would choose from one of the other possible valid positive responses
- 009 Additional Locating Required:** Facility owner discovered field conditions require additional locating and will communicate with excavator on resolution of additional locating issues
- 010 Exempt From Marking:** As defined in Public Act 174 Section 460.727 Sec. 7 (9). This is a system generated response
- 011 Not Marked-Excavator Contacted for Additional Information:** Facility owner operator reached out to the excavator as noted on the locate request and requires additional information to properly complete locate request. Excavator required to contact facility owner/operator.
- 012 Possible Abandoned Facility:** There may be an abandoned facility in the proposed excavation area
- 013 Canceled:** System generated response indicating the dig notice was canceled
- 014 Reported Excavating With No Visible Marks:** This ticket was placed by a concerned citizen to alert facility owner/operators of possible excavation near the ticket location.
- 015 Delayed Marking Due to Work Stoppage and Special Conditions:** Locator requires additional time to mark and provide a positive response.
- 999 Has Not Responded:** System generated response indicating the facility owner operator has not responded to the request
 - GREEN:** Dig with caution following PA174 requirements
 - YELLOW:** Contact facility owner operator, Dig with caution following PA174 requirements
 - RED:** Do not Dig

Positive Responses for Design Ticket Requests are not color coded as they are not Dig Notices

- 201 Design-No Facilities:** No Facilities in area as described in the scope of excavation
- 202 Design-Task Completed:** Facility owner operator sent record drawings to designer
- 203 Design-Marking Required:** As defined in Public Act 174 Section 6a paragraph (3)

(3) The response to a design ticket is to provide general information regarding the location of underground facilities, not to mark any facilities. However, if a facility owner or operator does not have drawings or records that show the location of a facility, the facility owner or operator shall mark that facility under the procedures described in section 7. A design ticket or information provided in response to a design ticket does not satisfy the requirement under this act for excavation or blasting notice to the notification system or marking the approximate location of facilities for blasting or excavation.

NOTES:

Amended 11/16/15 for addition of code 011; 7/20/15 to clarify use of codes 007 & 008; 4/27/15 for addition of code 010

Excavators must exercise reasonable care while working around exposed utility lines or in close proximity to unexposed facilities.



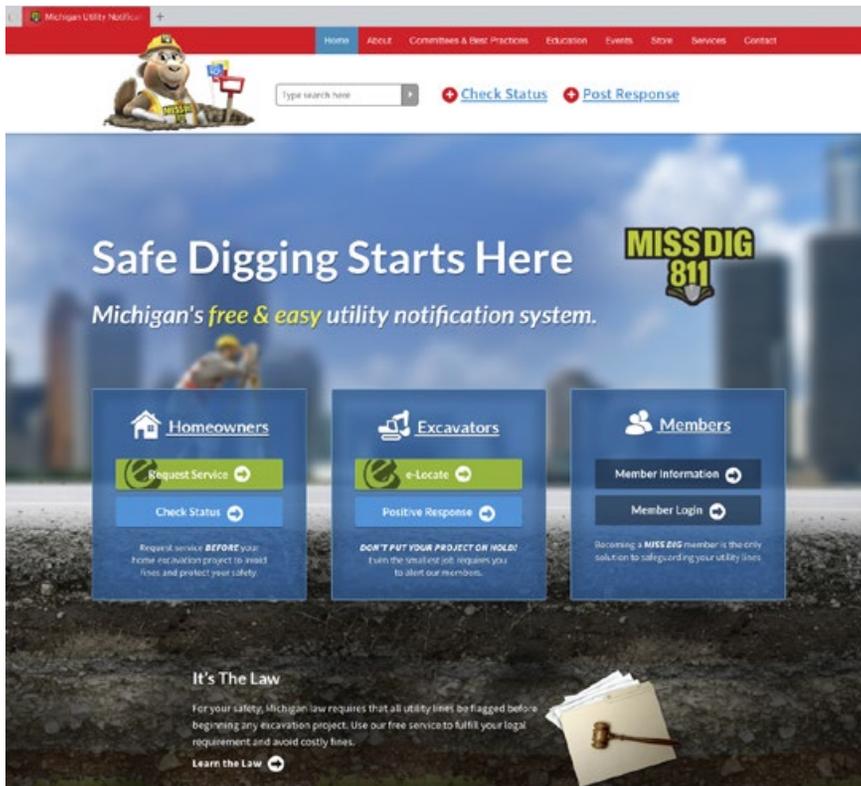
Excavator Responses for Standard Dig Notice Tickets effective 5/1/2017

- 301 Excavator Checked Positive Response:** Excavator has checked positive response per requirements of PA 174 and is beginning excavation.
- 302 Excavator Checked Positive Response and Cannot Locate Facility Within Approximate Location:** Excavator has checked positive response and contacted MISS DIG 811 to request additional assistance (retransmit) from Facility Owner(s)/ Operator(s) because the location of the marked facility within the approximate location cannot be determined.
- 303 Excavator Checked Positive Response and Noted Unmarked Facilities:** Excavator has checked positive response and contacted MISS DIG 811 for additional assistance (retransmit) for unmarked facilities due to one of the following: 1. There is visible evidence of a facility with no marks visible 2. There is a lack of a positive response on the ticket 3. There is a positive response from a facility owner or facility operator indicating the presence of a facility with no marks.
- 304 Excavator Delay:** Excavator has checked Positive Response and made request(s) for additional assistance (retransmit), and Facility Owner has not supplied an appropriate response. Excavator is delayed.
- 305 Excavator Digging:** Nonresponsive Facility Owner(s)/ Operator(s) on ticket. Excavator has checked Positive Response; the Facility Owner(s) positive response remains (999). The Excavator has made appropriate contact with MISS DIG 811 for additional assistance (retransmit) and the Facility Owner(s)/ Operator(s) has not supplied a response. Excavator is putting nonresponsive Facility Owner(s)/ Operator(s) on notice that Excavation is proceeding.
- 306 Work Stoppage Special Condition:** Excavating on this project has ceased due to a special condition.
- (307) Return To Work Special Condition:** Special conditions that impacted work stoppage has ceased. Excavator will return to work after all locating has been completed.
- GREEN:** Excavator is digging with caution following PA174 requirements
- YELLOW:** Excavator contacted facility owner(s)/ operator(s) through MISS DIG 811. Waiting to dig following PA174 requirements
- RED:** Excavator cannot dig until further action is taken by facility owner(s)/ operator(s)

**Excavator Responses for Standard Dig Notice Tickets are an optional tool for remote ticket entry users to provide general information regarding the status of an excavator on their ticket to the facility owner/ operator(s). These responses are not a requirement of Public Act 174 of 2013.

Steps for a Safe Construction Site

1. Contact MISS DIG 811 at least three full working days, except holidays recognized by MISS DIG 811, but not more than 14 calendar days, prior to planned excavating, digging, landscaping, augering, boring, cultivating, grading, discharging of explosives, tunneling, or demolishing a building
 2. Owners of underground utility lines will mark the approximate location of their facilities with flags, paint, or both. For the purposes of Public Act 174, the approximate location is defined as a strip of land at least 3 feet wide, but not wider than the width of the facility plus 18 inches on either side of the facility
 3. If power equipment will be used within 48 inches of the facility marks, excavators must verify the precise location (including depth) of the utility line through hand exposing or other soft excavation means
 4. If you are unable to determine the precise location of the marked facility within the approximate location, you must contact the facility owner through MISS DIG 811 again and the utility will provide additional assistance as needed
 5. Occasionally, multiple underground utility facilities will be located at a job site. MISS DIG 811 does not know how many facilities each utility company may have in the area of the proposed excavation. If there are indications of unmarked facilities within the scope of ticket you must call MISS DIG 811 regardless of whether or not you have received an "All Clear" from the facility owners
 6. If marks at the construction site are knocked down or obliterated, or become faded due to time, weather, or any other cause, the excavator must call MISS DIG 811 so the requests can be retransmitted due to destroyed markings
 7. Excavators must exercise reasonable care while working around exposed utility lines or in close proximity to unexposed facilities
 8. Excavators must avoid driving over valve boxes and regulator vaults
 9. Excavators shall support exposed facilities and excavation walls to prevent damage in the area of excavation from cave-ins, pipe movement, settlements and washouts. See Consumers Energy support standards on pages 38 and 39
 10. Excavators boring or augering under, over, or in close proximity to underground facilities must hand expose the facility to ensure that the bore shot will not come in contact with the facility. This includes hand exposing facilities under roads. In such situations, it will be necessary to make a window in the road to ensure there will be no contact
 11. Prior to backfilling, notify Consumers Energy if there has been damage to the coating of their facilities, including nicks, dents, gouges, cuts, scrapes, or scratches so a proper repair can be made. Failure to notify Consumers Energy of these occurrences could result in future corrosion and/or pipe failure. In addition, failure to notify facility owners of damage to a line may result in the excavator being found guilty of a misdemeanor under Public Act 174
- Also before backfilling, excavators must inform Consumers Energy if any of the following were discovered during the excavations:
- Threaded joints and mechanical fittings
 - Damaged or gouged pipe
 - Damaged cathodic lead wire and/or valve boxes
 - Broken locating wire in plastic facilities
 - Damaged coating or wrapping on pipelines
- Normally, there is no charge for making repairs in the above situations. Qualified personnel need to inspect the pipeline and perform the needed work.
- When backfilling, it is important that valve boxes and lead wires boxes are not buried or made inaccessible.



Online Tools

MISS DIG 811 has developed a number of tools to assist those in the excavation and design fields to communicate with the call-center, and its member facility owners.

Remote Ticket Entry: A free service that allows frequent MISS DIG 811 users to create their tickets from their home or office computer rather than through the call-center.

rte.missdig811.org

E-Locate: A free and easy program available to create single address tickets. This program is ideal for do-it-yourselfers, landscapers, and other small volume ticket creators.

elocate.missdig811.org

Design Ticket: An online process which allows designers and engineers to initiate contact with utility personnel for the purpose of project planning.

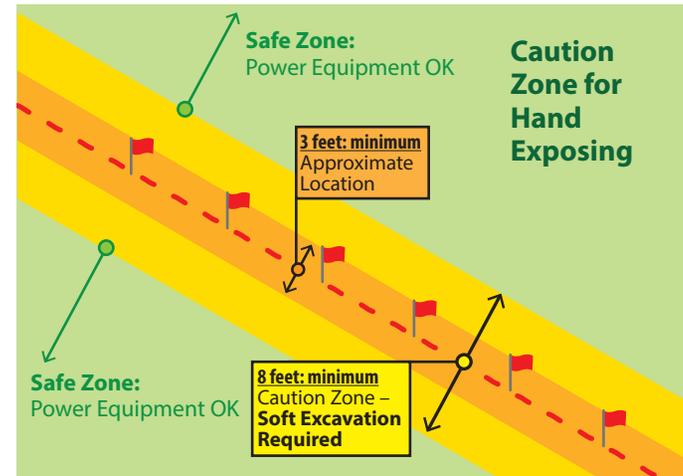
www.missdig811.org/programs/design-ticket.html

Positive Response: A program where MISS DIG 811 member facility owners post status responses to the tickets they receive. Responses such as “clear” or “marked” are available for each facility owner on MISS DIG 811 tickets.

Responses can be checked at: status.missdig811.org on mobile devices, response.missdig811.org or calling 800-763-3888.

Additional information about these programs can be found at www.missdig811.org

Why “Approximate” Location and Caution Zone



It is the excavator’s responsibility to verify the precise location (and depth) of facilities through use of hand tools or other soft excavation techniques.

The stakes and/or flags provide only the approximate location of underground utility facilities. This is because locating underground facilities is not an exact science. Electronic locating equipment has limited capabilities. The actual facility location could vary from the position of the flags or marks.

It is the excavator’s responsibility to verify the precise location (and depth) of facilities through use of hand tools or other soft excavation techniques when using power equipment within 48 inches of utility marks.

Facility Depth

Consumers Energy does not provide information on the depth of underground facilities. Locating equipment depth readouts are not accurate enough to determine facility depth.

The utility follows certain depth requirements or guidelines when installing lines, but it cannot control depth variations resulting from human intervention or natural events. Grade changes, landscaping, erosion, frost and other factors may affect the depth of underground facilities over time.

Do not assume the depth of a gas facility. It is the excavator’s responsibility to expose the facility by hand to determine its depth.

Typical Distribution Gas Services and Mains

Sizes	Material
1/2"	Copper, Plastic, Steel Tubing
3/4"	Steel
1"	Copper, Steel, Plastic, Steel Tubing
1 1/4"	Steel, Plastic
2"	Steel, Plastic
3"	Steel, Plastic, Cast Iron
4"	Steel, Plastic, Cast Iron
6"	Steel, Plastic, Cast Iron
8"	Steel, Plastic, Cast Iron
10"	Steel, Cast Iron
12"	Steel, Cast Iron
Typical Gas Transmission Lines	
12" to 36"	Steel

Cast Iron Mains

Generally, cast iron mains will be replaced if they will be undermined by excavating activity or are located within the zone of influence. In areas where cast iron mains are not replaced, Consumers Energy will instruct contractors on the appropriate means of support and backfill compaction.

Typical Operating Pressures

Pressures in gas pipes range from 1/4 psig to 2000 psig. It is not possible to know the type of gas system from visual inspection of a pipe in the ground, but typical pressures on the various levels of gas systems are provided in the following table.

Gas Transmission	300 – 2000 psig
High Pressure Distribution	60 – 400 psig
Medium pressure distribution	1 to 60 psig
Standard (low) pressure distribution	Less than 1 psig
Typical residential fuel line pressure	1/4 psig *

* some residential and commercial fuels lines carry higher than 1/4 psig

Public Act 174 of 2013

MISS DIG Underground Facility Damage Prevention and Safety Act

Effective April 1, 2014

AN ACT to enhance public safety, protect the environment, and prevent the disruption of vital public services by reducing the incidences of damage to underground facilities caused by excavation or blasting activity by providing notices to facility owners and facility operators before excavation or blasting; to provide for certain notices to affected parties when underground facilities are damaged; to provide for the powers and duties of certain state governmental officers and entities; to allow the promulgation of rules; to prescribe penalties; to allow the imposition of a fee; to provide for immunity for certain individuals; to allow claims for damages against certain governmental entities in certain circumstances; and to repeal acts and parts of acts.

The People of the State of Michigan enact:

Sec. 1.

This act shall be known and may be cited as the "MISS DIG underground facility damage prevention and safety act."

Sec. 3.

As used in this act:

- (a) "Additional assistance" means a response by a facility owner or facility operator to a request made by an excavator during business hours, for help in locating a facility.
- (b) "Approximate location" means a strip of land at least 36 inches wide, but not wider than the width of the marked facility plus 18 inches on either side of the facility marks.
- (c) "Blasting" means changing the level or grade of land or rendering, tearing, demolishing, moving, or removing earth, rock, buildings, structures, or other masses or materials by seismic blasting or the detonation of dynamite or any other explosive agent.
- (d) "Business day" means Monday through Friday, excluding holidays observed by the notification system and posted on the notification system website.
- (e) "Business hours" means from 7 a.m. to 5 p.m., eastern standard time, on business days.
- (f) "Caution zone" means the area within 48 inches of either side of the facility marks provided by a facility owner or facility operator.
- (g) "Commission" means the Michigan public service commission created in section 1 of 1939 PA 3, MCL 460.1.

(h) “Damage” means any impact upon or exposure of an underground facility requiring its repair or replacement due to weakening, partial destruction, or complete destruction of the facility, including, but not limited to, the protective coating, lateral support, cathodic protection, or housing of the facility.

(i) “Design ticket” means a communication to the notification system in which a request for information regarding underground facilities for predesign, design, or advance planning purposes, but not marking for excavation or blasting, is made under the procedures described in section 6a.

(j) “Dig notice” means a communication to the notification system by an excavator providing notice of intended excavation or blasting activity as required by this act.

(k) “Emergency” means a sudden or unforeseen occurrence, including a government-declared emergency, involving a clear and imminent danger to life, health, or property, or imminent danger to the environment, that requires immediate correction in order to restore or to prevent the interruption of essential governmental services, utility services, or the blockage of public transportation and that requires immediate excavation or blasting.

(l) “Emergency notice” means a communication to the notification system to alert the facility owners or facility operators of the urgent need for marking the location of a facility due to an emergency.

(m) “Excavation” means moving, removing, or otherwise displacing earth, rock, or other material below existing surface grade with power tools or power equipment, including, but not limited to, grading, trenching, tiling, digging, drilling, boring, augering, tunneling, scraping, cable or pipe plowing, and pile driving; and wrecking, razing, rending, moving, or removing a structure or mass of materials. Excavation does not include any of the following:

(i) Any of the following activities performed in the course of farming operations:

(A) Any farming operation performed in the public right-of-way to a depth of not more than 12 inches below the existing surface grade if the farming operation is not performed within 6 feet of any aboveground structure that is part of a facility.

(B) Any farming operation performed outside a public right-of-way and within 25 yards of an existing petroleum or natural gas pipeline to a depth of not more than 18 inches below the existing surface grade if the farming operation is not performed within 6 feet of any aboveground structure that is part of a facility.

(C) Any farming operation performed outside a public right-of-way and not within 25 yards of an existing petroleum or natural gas pipeline if the farming operation is not performed within 6 feet of any aboveground structure that is part of a facility.

(ii) Replacing a fence post, sign post, or guardrail in its existing location.

(iii) Any excavation performed at a grave site in a cemetery.

(iv) Any excavation performed within a landfill unit as defined in R 299.4103 of the Michigan administrative code during its active life as defined in R 299.4101 of the Michigan administrative code or during its postclosure period as set forth in R 299.4101 to R 299.4922 of the Michigan administrative code.

(v) Any of the following activities if those activities are conducted by railroad employees or railroad contractors and are carried out with reasonable care to protect any installed facilities placed in the railroad right-of-way by agreement with the railroad:

(A) Any routine railroad maintenance activities performed in the public right-of-way as follows:

(I) Within the track area, either to the bottom of the ballast or to a depth of not more than 12 inches below the bottom of the railroad tie, whichever is deeper, if the routine railroad maintenance activity is not performed within 6 feet of any aboveground structure that is part of a facility that is not owned or operated by that railroad.

(II) Outside the track area, not more than 12 inches below the ground surface, if the routine railroad maintenance activity is not performed within 6 feet of any aboveground structure that is part of a facility that is not owned or operated by that railroad.

(B) Any routine railroad maintenance activities performed to a depth of not more than 18 inches below the flow line of a ditch or the ground surface in the railroad right-of-way, excluding the public right-of-way, if the routine railroad maintenance activity is not performed within 6 feet of any aboveground structure that is part of a facility that is not owned or operated by that railroad.

(vi) Routine maintenance or preventative maintenance as those terms are defined in section 10c of 1951 PA 51, MCL 247.660c, to a depth of not more than 12 inches below the roadway and any shoulder of a street, county road, or highway.

(n) “Excavator” means any person performing excavation or blasting.

(o) “Facility” or “underground facility” means an underground or submerged conductor, pipe, or structure, including, but not limited to, a conduit, duct, line, pipe, wire, or other device and its appurtenances used to produce, store, transmit, or distribute a utility service, including communications, data, cable television, electricity, heat, natural or manufactured gas, oil, petroleum products, steam, sewage, video, water, and other similar substances, including environmental contaminants or hazardous waste.

(p) “Facility operator” means a person that controls the operation of a facility.

(q) “Facility owner” means a person that owns a facility.

(r) “Farm” means that term as defined in section 2 of the Michigan right to farm act, 1981 PA 93, MCL 286.472.

(s) “Farming operations” means plowing, cultivating, planting, harvesting, and similar operations routine to most farms and that are performed on a farm. Farming operations do not include installation of drainage tile, underground irrigation lines, or the drilling of a well.

(t) “Governmental agency” means the state and its political subdivisions, including counties, townships, cities, villages, or any other governmental entity.

(u) “Mark”, “marks”, or “marking” means the temporary identification on the surface grade of the location of a facility in response to a ticket as described in section 7.

(v) “Notification system” means MISS DIG System, Inc., a Michigan nonprofit corporation formed and operated by each facility owner and facility operator to administer a 1-call system for the location of facilities, or any successor to this corporation.

(w) “Person” means an individual, firm, joint venture, partnership, corporation, association, governmental agency, department or agency, utility cooperative, or joint stock association, including any trustee, receiver, assignee, or personal representative thereof.

(x) “Positive response” means the procedure administered by the notification system to allow excavators to determine whether all facility owners or facility operators contacted under a ticket have responded in accordance with this act.

(y) “Public right-of-way” means the area on, below, or above a public roadway, highway, street, alley, easement, or waterway.

(z) “Railroad” means that term as defined in section 109 of the railroad code of 1993, 1993 PA 354, MCL 462.109.

(aa) “Safe zone” means an area 48 inches or more from either side of the facility marks provided by a facility owner or facility operator.

(bb) “Soft excavation” means a method and technique designed to prevent contact damage to underground facilities, including, but not limited to, hand-digging, cautious digging with nonmechanical tools, vacuum excavation methods, or use of pneumatic hand tools.

(cc) “Start date” means the date that a proposed excavation or blasting is expected to begin as indicated on a ticket.

(dd) “Ticket” means a communication from the notification system to a facility owner or facility operator requesting the marking of underground facilities, based on information provided by an excavator in a dig notice.

(ee) “White lining” means marking by an excavator of the area of a proposed excavation or blasting, with white paint or flags, or both, before giving notice to the notification system.

Sec. 4.

(1) Facility owners and facility operators shall continue to operate and be members of MISS DIG Systems, Inc., a Michigan nonprofit corporation, that shall have the duties and undertake the responsibilities of the notification

system under this act on and after the effective date of this act. The notification system responsibilities and duties do not include the physical marking of facilities, which is the responsibility of a facility owner or facility operator upon notification under this act.

(2) The notification system and its procedures shall be governed by its board of directors and in accordance with its current articles of incorporation and bylaws as of the effective date of this act, with any future changes made in accordance with the nonprofit corporation act, 1982 PA 162, MCL 450.2101 to 450.3192, and the notification system’s articles, bylaws, and board procedures. The notification system shall request input regarding its policies from all interested persons, including facility owners and facility operators, excavators, marking service providers, and governmental agencies.

(3) Funding for the notification system operations shall be established by the notification system, including through fees based on a reasonable assessment of operating costs among facility owners or facility operators. A facility owner or facility operator shall not charge a fee to excavators for marking facilities under this act.

(4) Facility owners and facility operators shall be members of and participate in the notification system and pay the fees levied by the notification system under this section. This obligation and the requirements of this act for facility owners and facility operators do not apply to persons owning or operating a facility located on real property the person owns or occupies if the facility is operated solely for the benefit of that person.

(5) Owners of real property on which there is a farm operation, as that term is defined in section 2 of the Michigan right to farm act, 1981 PA 93, MCL 286.472, may become a nonvoting member of the notification system, known as a farm member, upon providing the notification system with the information necessary to send the farm member a ticket for purposes of notification under section 6(1). A farm member is not subject to any fees levied under subsection (3).

(6) The notification system is exempt from taxes collected under the general property tax act, 1893 PA 206, MCL 211.1 to 211.155.

Sec. 5.

(1) An excavator shall provide a dig notice to the notification system at least 72 hours, but not more than 14 calendar days, before the start of any blasting or excavation. If the dig notice is given during business hours, the 72-hour period shall be measured from the time the dig notice is made to the notification system. If a dig notice is given before 7 a.m. on a business day, the 72-hour period begins at 7 a.m. on that day. If a dig notice is given on a nonbusiness day or after 5 p.m. on a business day, the 72-hour period begins at 7 a.m. on the next business day. All hours of nonbusiness days are excluded in counting the 72-hour period. If there are multiple excavators on the same site, each excavator shall provide its own dig notice.

(2) A dig notice shall contain at least all of the following:

(a) The name, address, and telephone number of the excavator.

- (b) A description of the proposed area of blasting or excavation, including the street address and a property description.
 - (c) The specific type of work to be performed.
 - (d) The start date and time of blasting or excavation.
 - (e) Whether the proposed blasting or excavation will be completed within 21 days after the start date.
- (3) A ticket is valid for 21 days from the start date of the excavation or blasting on the ticket as identified by the excavator, except that a ticket is valid for 180 days from the start date if the dig notice indicates that the proposed excavation or blasting will not be completed within 21 days from the start date.
- (4) An excavator shall comply with the notification system procedures and all requirements of this act.
- (5) Except as otherwise provided in this subsection, before blasting or excavating in a caution zone, an excavator shall expose all marked facilities in the caution zone by soft excavation. If conditions make complete exposure of the facility impractical, an excavator shall consult with the facility owner or facility operator to reach agreement on how to protect the facility. For excavations in a caution zone parallel to a facility, an excavator shall use soft excavation at intervals as often as reasonably necessary to establish the precise location of the facility. An excavator may use power tools and power equipment in a caution zone only after the facilities are exposed or the precise location of the facilities is established.
- (6) An excavator shall provide support or bracing of facilities or excavation walls in an excavation or blasting area that are reasonably necessary for protection of the facilities.
- (7) An excavator shall provide notification to the notification system if facility markings are destroyed or covered by excavation or blasting activities or if a ticket expires before the commencement of excavation. If a ticket expires before the commencement of excavation, an excavator shall provide a new dig notice to the notification system, and comply with subsection (1).
- (8) An excavator shall provide notification to the notification system requesting additional assistance if the location of a marked facility within the approximate location cannot be determined.
- (9) An excavator shall provide immediate additional notice to the notification system and stop excavation in the immediate vicinity if the excavator has reason to suspect the presence of an unmarked facility due to any 1 of the following:
- (a) Visible evidence of a facility with no marks visible.
 - (b) Lack of a positive response to a ticket.
 - (c) A positive response from a facility owner or facility operator indicating the presence of a facility with no marks visible.

- (10) If an excavator contacts or damages a facility, the excavator shall provide immediate notice to the facility owner or facility operator.
- (11) If an excavator damages a facility resulting in the escape of any flammable, toxic, or corrosive gas or liquid, or endangering life, health, or property, the excavator shall call 9-1-1 and provide immediate notice to the facility owner or facility operator. The excavator shall also take reasonable measures to protect the excavator, those in immediate danger, the general public, and the environment until the facility owner or facility operator, or emergency first responders, have arrived and taken control of the site.
- (12) An excavator shall provide prompt emergency notice to the notification system for any proposed excavation or blasting in an emergency. In an emergency, blasting or excavation required to address the conditions of the emergency may be performed as the emergency conditions reasonably require, subject to the provisions in this act for emergency notice and marking facilities in response to an emergency notice.
- (13) If the location of a proposed excavation or blasting cannot be described in a manner sufficient to enable the facility owner or facility operator to ascertain the precise tract or parcel involved, an excavator shall provide white lining in advance of submitting a ticket or additional assistance to the facility owner or facility operator on reasonable request to identify the area of the proposed excavation or blasting.
- (14) For purposes of this section, notice to the notification system constitutes notice to all facility owners or facility operators regarding facilities located in the area of the proposed excavation or blasting.
- (15) Except as otherwise provided in this act, an excavator may conduct excavation in a safe zone using power equipment without establishing the precise location of any facilities.

Sec. 6.

- (1) The notification system shall receive dig notice notification of proposed excavation and blasting activities and promptly transmit a ticket to facility owners or facility operators of facilities in the area of the proposed excavation or blasting. The notification system shall provide alternative means of access and notification to the system.
- Except for 5 shutdowns caused by acts of nature, war, or terrorism, the notification system shall be available 24 hours per day, 7 days per week.
- (2) The notification system shall publicize the availability and use of the notification system and educate the public, governmental agencies, excavators, farm operators, facility owners, and facility operators regarding the practices and procedures of the notification system, the requirements of this act, and practices to protect underground facilities from damage.
- (3) The notification system shall administer a positive response system to allow excavators to determine whether all of the facility owners or facility

operators in the area have responded to a ticket and whether a particular facility owner or facility operator does not have facilities in the area of a proposed excavation or blasting.

(4) The notification system shall maintain adequate records of its notification activity for a period of 6 years after the date of the notice, including voice recordings of calls. The notification system shall provide copies of those records to any interested person upon written request and payment of a reasonable charge for reproduction and handling as determined by the notification system.

(5) The notification system shall expedite the processing of any emergency notice it receives under this act.

(6) The notification system shall receive design tickets under the procedures described in section 6a and transmit them to facility owners or facility operators.

Sec. 6a.

(1) The notification system shall establish reasonable procedures, including marking response times, for design ticket notification to facility owners or facility operators of requests for project design or planning services to determine the type, size, and general location of facilities during the planning and design stage of a construction or demolition project. Facility owners or operators may charge the person requesting project design or planning services separate fees for design or planning services.

(2) Procedures under this section do not affect or alter the obligation of excavators to provide notice of blasting or excavation under section 5.

(3) The response to a design ticket is to provide general information regarding the location of underground facilities, not to mark any facilities. However, if a facility owner or operator does not have drawings or records that show the location of a facility, the facility owner or operator shall mark that facility under the procedures described in section 7. A design ticket or information provided in response to a design ticket does not satisfy the requirement under this act for excavation or blasting notice to the notification system or marking the approximate location of facilities for blasting or excavation.

Sec. 7.

(1) A facility owner or facility operator shall respond to a ticket by the start date and time for the excavation or blasting under section 5(1) by marking its facilities in the area of the proposed excavation or blasting in a manner that permits the excavator to employ soft excavation to establish the precise location of the facilities.

(2) A facility owner or facility operator shall mark the location of each facility with paint, stakes, flags, or other customary methods using the uniform color code of the American national standards institute as follows:

- (a) White - used by excavators to mark a proposed excavation or blasting area.
- (b) Pink - temporary survey markings.
- (c) Red - electric power lines, cables, conduit, and lighting cables.
- (d) Yellow - gas, oil, steam, petroleum, or gaseous materials.
- (e) Orange - communication, cable television, alarm or signal lines, cables, or conduit.
- (f) Blue - potable water.
- (g) Purple - reclaimed water, irrigation, and slurry lines.
- (h) Green - sewers and drain lines.

(3) A facility owner or facility operator shall provide notification to the notification system using positive response.

(4) Upon receiving a notification during business hours from an excavator through the notification system of previous marks being covered or destroyed, a facility owner or facility operator shall mark the location of a facility within 24 hours, excluding all hours on nonbusiness days.

(5) If a facility owner or facility operator receives a request under section 5(8) or (9), that facility owner or facility operator shall provide additional assistance to an excavator within 3 hours of a request made by the excavator during business hours. An excavator and a facility owner or facility operator may agree to an extension of the time for additional assistance. If a request for additional assistance is made at a time when the additional assistance cannot be provided during normal business hours or assistance is required at a remote rural location, the response time shall be no later than 3 hours after the start of the next business day or a time based on mutual agreement.

(6) If a facility owner or facility operator receives notice that a facility has been damaged, that facility owner or facility operator shall promptly dispatch personnel to the area.

(7) A facility owner or facility operator shall respond within 3 hours to an emergency notice, or before the start day and time provided in an emergency notice if that start day and time is more than 3 hours from the time of notice.

(8) New facilities built after the effective date of this act shall be constructed in a manner that allows their detection when in use.

(9) This section does not apply to the state transportation department or to the marking of a county or intercounty drain by a county drain commissioner's office or drainage board.

Sec. 8.

wwThis act does not limit the right of an excavator, facility owner, or facility operator to seek legal relief and recovery of actual damages incurred and equitable relief in a civil action arising out of a violation of the requirements of this act, or to enforce the provisions of this act, nor shall this act determine the level of damages or injunctive relief in any such civil action. This section

does not affect or limit the availability of any contractual or legal remedy that may be available to an excavator, facility owner, or facility operator arising under any contract to which they may be a party.

Sec. 9.

(1) The notification system and its officers, agents, or employees are not liable for any damages, including damages for injuries or death to persons or damage to property, caused by its acts or omissions in carrying out the provisions of this act. The notification system is not responsible for assuring performance by a facility owner or facility operator of its obligation to participate in the notification system under section 4(4).

(2) An excavator or a farmer engaged in farming operations that complies with this act is not responsible for damages that occur to a facility that is improperly marked, not marked, or determined to be within the safe zone.

(3) An owner of a farm who complies with this act is not liable for any damages to a facility if the damage occurred in the course of farming operations, except in those lands within the public right-of-way, unless the owner intentionally damaged the underground facility or acted with wanton disregard or recklessness in damaging the facility. As used in this subsection, “owner” includes a family member, employee, or tenant of the owner.

Sec. 10.

This act does not authorize, affect, or impair local ordinances, charters, or other provisions of law requiring permits to be obtained before excavating or tunneling in a public street or highway or to construct or demolish buildings or other structures on private property. A permit issued by a governmental agency does not relieve a person from the responsibility of complying with this act. The failure of any person who has been granted a permit to comply with this act does not impose any liability upon the governmental agency issuing the permit.

Sec. 11.

(1) A person who engages in any of the following conduct is guilty of a misdemeanor punishable by imprisonment for not more than 1 year or a fine of not more than \$5,000.00, or both:

- (a) Knowingly damages an underground facility and fails to promptly notify the facility owner or facility operator.
- (b) Knowingly damages an underground facility and backfills the excavation or otherwise acts to conceal the damage.
- (c) Willfully removes or otherwise destroys stakes or other physical markings used to mark the approximate location of underground facilities unless that removal or destruction occurs after the excavation or blasting is completed or as an expected consequence of the excavation or blasting activity.

(2) Upon complaint filed with the commission or upon the commission’s own motion, following notice and hearing, a person, other than a governmental agency, who violates any of the provisions of this act may be ordered to pay a civil fine of not more than \$5,000.00 for each violation. In addition to or as an alternative to any fine, the commission may require the person to obtain reasonable training to assure future compliance with this act. Before filing a complaint under this subsection, a person shall attempt to settle the dispute with the adverse party or parties using any reasonable means of attempted resolution acceptable to the involved parties. In determining the amount of any fine, the commission shall consider all of the following:

- (a) The ability of the person charged to pay or continue in business.
- (b) The nature, circumstances, and gravity of the violation.
- (c) Good-faith efforts by the person charged to comply with this act.
- (d) The degree of culpability of the person charged and of the complainant.
- (e) The history of prior violations of the person charged.

(3) A commission determination under subsection (2) shall not be used against a party in any action or proceeding before any court. A complaint filed under subsection (2) does not limit a person’s right to bring a civil action to recover damages that person incurred arising out of a violation of the requirements of this act.

(4) The commission shall develop forms with instructions and may promulgate administrative rules for processing complaints under this act, pursuant to the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328.

(5) Not later than October 1, 2014, the commission shall establish requirements for reporting incidents involving damage to underground facilities.

(6) Beginning April 1, 2015, the commission shall maintain information on damaged facilities reported under subsection (5), including, but not limited to, any damage that occurs during excavation, digging, or blasting that is excluded from the definition of excavation under section 3(m). The commission shall make any information maintained under this subsection publicly available on its website.

Sec. 12.

(1) Except as provided in this section, this act does not affect the liability of a governmental agency for damages for tort or the application of 1964 PA 170, MCL 691.1401 to 691.1419.

(2) A facility owner or a facility operator may file a complaint with the commission seeking a civil fine and, if applicable, damages from a governmental agency under this section for any violation of this act.

(3) After notice and a hearing on a complaint under subsection (2), the commission may order the following, as applicable:

- (a) If the commission has not issued an order against the governmental agency under this section within the preceding 12 months, a civil fine of not more than \$5,000.00. In determining the amount of the fine, the commission shall consider the factors in section 11(2).
- (b) If the commission has issued an order under subdivision (a) against the governmental agency within the preceding 12 months, both of the following:
- (i) A civil fine of not more than \$10,000.00. In determining the amount of the fine, the commission shall consider the factors in section 11(2).
- (ii) That the governmental agency provide at its expense underground facility safety training to all its personnel involved in underground utility work or excavating.
- (c) If the commission has issued an order under subdivision (b) against the governmental agency within the preceding 12 months, both of the following:
- (i) A civil fine of not more than \$15,000.00. In determining the amount of the fine, the commission shall consider the factors in section 11(2).
- (ii) If the violation of this act by the governmental agency caused damage to the facilities of the facility owner or facility operator, that the governmental agency pay to the owner or operator the cost of repair of the facilities.
- (4) A party to a complaint filed under this section or section 11 may file an appeal of a commission order issued under this section or section 11 in the Ingham county circuit court.
- (5) This section does not apply if the violation of this act was a result of action taken in response to an emergency.
- (6) A finding by the commission under this section is not admissible in any other proceeding or action.
- (7) A civil fine ordered under this act shall be paid to the commission and used for underground facilities safety education and training.
- (8) Each day upon which a violation described in this act occurs is a separate offense.

Sec. 13.

An individual engaged in a farming operation on a farm shall comply with this act beginning May 1, 2014.

Enacting section 1. 1974 PA 53, MCL 460.701 to 460.718, is repealed.

Enacting section 2. This act takes effect April 1, 2014.

Enacting section 3. This act does not take effect unless Senate Bill No. 539 of the 97th Legislature is enacted into law.

This act is ordered to take immediate effect.

Michigan Occupational Safety and Health Administration Rules and Regulations

PART 9. EXCAVATION, TRENCHING AND SHORING R 408.40931 — LOCATING UTILITY LINES

Rule 931. (1) An employer shall not excavate in a street, highway, public place, a private easement of a public utility, or near the location of a public utility facility owned, maintained, or installed on a customer's premise, without having first ascertained the location of all underground facilities of a public utility in the proposed area of excavation.

(2) Upon receiving the information from the public utility, an employer shall exercise reasonable care when working in close proximity to the underground facilities of any public utility. If the facilities are to be exposed, or are likely to be exposed, only hand digging shall be employed in such circumstances and such support, as may be reasonably necessary for protection of the facilities, shall be provided in and near the construction area.

(3) When any contact with or damage to any pipe, cable or its protective coating, or any other underground facility of a public utility occurs, the public utility shall be notified immediately by the employer responsible for operations causing the damage. If an energized electrical cable is severed, an energized conductor is exposed, or dangerous fluids or gasses are escaping from a broken line, the employer shall evacuate the employees from the immediate area while awaiting the arrival of the public utility personnel.

For more information, visit www.michigan.gov/mioshastandards or www.osha.gov.

Consumers Energy Support Standards

Maximum Spacing Between Supports

Use the table below to determine the number of supports needed to support main during and after construction.

Distribution Mains

MAXIMUM SPACING BETWEEN SUPPORTS (FEET)				
Pipe Size In inches	STEEL		PLASTIC	
	Temporary	Permanent	Temporary	Permanent
1-1/4"	15'	6'	25'	5'
2"	25'	6'	30'	6'
3"	-	-	35'	7'
4"	35'	10'	40'	8'
6"	45'	13'	45'	9'
8"	55'	15'	50'	10'
10"	60'	18'	-	-
12"	65'	20'	-	-
16"	70'	25'	-	-

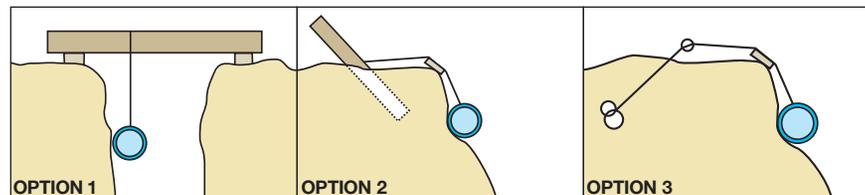
Transmission Pipelines

The length of pipeline to be exposed shall not exceed 25 feet. Backfilling shall be performed so as to avoid damage to the pipe and coating and to provide firm support.

Main Parallel to Excavation

INSTALLING TEMPORARY SUPPORTS

Caution: Protect the pipe at support points with old tires or equivalent.



Option 1 – Use a Class 4 or better utility pole.

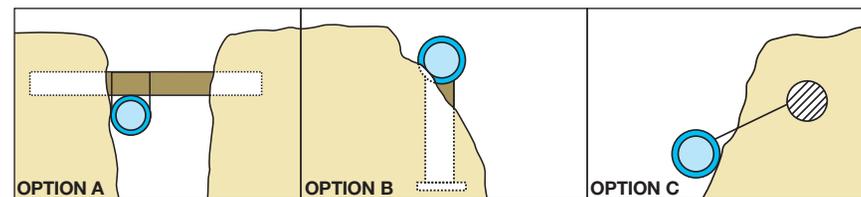
Option 2 – Use a 4 inch post driven 4 feet deep.

Option 3 – Use an 8 foot screw anchor and 1 inch steel bar.

Before removing any temporary supports, completely compact the backfill or install permanent supports if natural settlement is not complete.

Installing Permanent Supports

Caution: Protect the pipe at support points with old tires or equivalent.



Option A – Install 6 inch x 6 inch timber or utility pole below finish grade and leave in place.

Option B – Install 6 inch x 6 inch timber on 2 inch x 12 inch plate on stable soil.

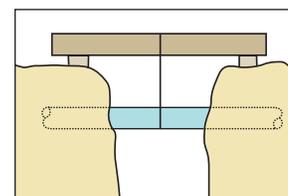
Option C – Install 6 foot log or timber deadman at least 4 feet into firm soil.

Use compacted sand under the pipe in the open trench in lieu of permanent physical supports.

Crossing the Excavation

INSTALLING TEMPORARY SUPPORTS

Caution: Protect the pipe at support points with old tires or equivalent.

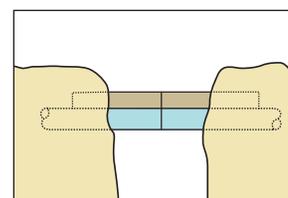


Use a Class 4 or better utility pole. Acceptable alternates include 6 inch x .219 inch wall pipe or 6 inch x 3 3/8 inch I-beam.

Before removing any temporary supports, completely compact the backfill or install permanent supports if natural settlement is not complete.

Installing Permanent Supports

Caution: Protect the pipe at support points with old tires or equivalent.



Use a Class 4 or better utility pole. Acceptable alternates include 6 inch by .219 inch wall pipe or 6 inch x 3 3/8 inch I-beam.

Use compacted sand under the pipe in the open trench in lieu of permanent physical supports.

Digging Safely Checklist

- Call **MISS DIG 811** three full working days before digging
- Comply with Public Act 174 requirements
- Hand dig and expose underground pipelines and facilities when necessary
- Report any contact with pipes including nicks, dents, gouges, cuts, scrapes or scratches so proper repairs may be made. Failure to notify the company of these damages could result in future corrosion and/or pipe failure. Call Consumers Energy at **800-477-5050**

For More Information

Call Consumers Energy at **800-477-5050** if you have questions about natural gas, natural gas pipelines, damage prevention or other natural gas safety issues.

Useful Websites

- **Call 8-1-1:** To know what's below, always call 8-1-1 before you dig. www.call811.com
- **MISS DIG 811:** Michigan's one-call utility notification organization. www.missdig811.org
- **Common Ground Alliance:** Damage prevention is a shared responsibility. www.commongroundalliance.com
- **Occupational Safety and Health Administration:** Promotes safe working conditions
www.osha.gov or www.michigan.gov/mioshastandards
- **Consumers Energy Pipeline Public Awareness:**
ConsumersEnergy.com/pipelinesafety
- **The National Pipeline Mapping System:** Who operates transmission pipelines in your area. www.npms.phmsa.dot.gov
- **Michigan Damage Prevention Board:** A forum for all damage prevention stakeholders to address concerns related to PA174.
www.missdig811.org/committees--best-practices.html

