OHIO811 Before You Dig

LEAVE YOUR MARK
Ohio's Universal Marking Standards

EXCAVATOR MANUAL -AND- UNIVERSAL MARKING STANDARDS

JUNE 2026





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PREFACE

This booklet provides basic information on safe excavation practices in Ohio. It is intended as an *educational* resource only. Please be advised of the following:

- This manual is not a legal reference. Consult legal for for interpreting the law.
- Visit OHIO811.org for the complete text of ORC 153.64, 3781.25-3781.32 and Chapter 4913.01.
- This manual does not solely satisfy training requirements per ORC 3781.261.
- The information in this manual is subject to change without notice.

Failure to comply with the enforceable provisions of Ohio's damage prevention laws could result in fines or penalties, even if a damage has not occurred.

For more information, or to register a complaint, visit puco.ohio.gov/help-center/utc-complaint-form.



Locating and marking facilities is the responsibility of the utility owner/operators. OHIO811 does not locate or mark underground facilities.

There may be other company practices or policies to follow, so you should also check with your supervisor.

MATERIAL TYPE ABBREVIATIONS

AC ..... Asbestos Cement
BRK .... Brick Sewer
CI ..... Cast Iron
CPR .... Copper
C/ST ... Coated Steel
DI ..... Ductile Iron
FG ..... Fiberglass
FO ..... Fiber Optic
FM ..... Forced Main
GI ..... Green Infrastructure
PI ..... Plastic Line Inserted into Steel
PL ..... Plastic
PVC .... Polyvinyl Chloride
RCP .... Reinforced Concrete Pipe
SCC .... Steel Cylinder Concrete
STL ..... Steel
TR ..... Transite
VCP .... Vitrified Clay Pipe
UNKN . Casing Size/Material Type is Uknown

DEFINITIONS

Conduit – A single enclosure containing one or more facilities.

Duct bank – A structure containing two or more conduits.

Owner – Any person or entity who owns the means to convey services or materials.

Operator – Any person who furnishes or transports materials or services by means of a utility line.

Pipelines – Underground utility lines used for the transportation of hazardous liquid, steam, water, sewer, storm, and gaseous materials.

Utility Appurtenances – The physical components and legal rights attached to a property that are necessary for providing utility services such as water, electricity, gas, communications, and sewage.

WHAT IS AN EXCAVATION?



ORC 3781.25(I) | "'Excavation' means the use of hand tools, powered equipment, or explosives to move earth, rock, or other materials in order to penetrate or bore or drill into the earth, or to demolish any structure whether or not it is intended that the demolition will disturb the earth. 'Excavation' includes such agricultural operations as the installation of drain tile, but excludes agricultural operations such as tilling that do not penetrate the earth to a depth of more than twelve inches. 'Excavation' excludes mining and reclamation operations regulated under Chapters 1513. and 1514. of the Revised Code and rules adopted under it. 'Excavation' excludes all of the following activities when performed in the public or utility right-of-way:

(1) Milling and grinding of road surfaces up to the following depths without penetrating the earth or sub-base:

(a) For interstate routes, twelve inches;

(b) For multi-lane routes outside of municipal corporations, whether divided or undivided, six inches;

(c) For multi-lane divided routes inside municipal corporations, six inches;

(d) For all other roadways, six inches.

(2) Utility wood pole inspection utilizing hand tools to excavate to a depth that does not penetrate the earth more than twelve inches and working on the clear side of poles, greater than ninety degrees from any risers;

(3) Tilling for sowing of grass and wildflower coverings to a depth that does not penetrate the earth more than four inches for erosion control or beautification purposes;

(4) Placement of temporary signage, without penetrating the earth more than four inches;

(5) Localized pavement repairs on all areas outside municipal corporations, without penetrating the earth or sub-base, to a depth not greater than twelve inches;

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WHAT IS AN EXCAVATION? *(Continued)*

(6) Any activity conducted solely in response to a valid notification, provided that such activity is performed exclusively by means of hand tools. This exemption shall apply irrespective of whether the activity occurs within or outside the boundaries of a road right-of-way. If a transmission facility is within the scope of the notification, coordination between the responding party and the transmission facility owner must take place for this exemption to exist.

(7) Activities conducted entirely within twelve inches in any horizontal direction and twelve inches in any vertical direction from an existing, exposed, or visible utility appurtenances, as defined in division (Z) of this section, provided such activities are performed exclusively with hand tools and do not otherwise disturb the surrounding subsurface area. This exemption shall apply irrespective of whether the activity occurs within or outside the boundaries of the road right-of-way."

Other types of excavation include, but are not limited to:

- Grading
- Digging
- Dredging
- Augering
- Scraping
- Wrecking
- Blasting
- Setting poles/pipes
- Installing sign poles
- Trenching
- Ditching
- Drilling
- Tunneling
- Potholing
- Tree stump removal
- Razing
- Cable or pipe plowing or driving
- Driving survey pins
- Boring holes for percolation tests

UTILITY EMERGENCY REPAIRS

An emergency situation is a sudden or unexpected occurrence involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to life; health; property or essential public services.

ORC 3781.28(F)(1) | *"In the case of a utility that is making an emergency repair to its own underground utility system or a governmental entity making an underground emergency repair to traffic control devices, as defined in section 4511.01 of the Revised Code, used on any street or highway under the entity's jurisdiction, the utility or governmental entity shall notify a protection service and each limited basis participant of the excavation site. This notice need not occur before commencing excavation."*

Only actual emergencies should be designated as such when an excavation notification is provided to OHIO811. An example of an emergency is a broken water main.

MANDATORY 811 TRAINING

ORC 3781.261 | *"(A) An excavator, contractor, utility, designer, engineer, developer, or utility locator that utilizes a protection service who has responsibility to the 811 notification process shall obtain training in the protection of underground utility facilities.*

(B) | Employers shall provide training at the time of initial assignment. Retraining of each employee shall occur every five years thereafter, or whenever changes occur to Chapters 3781. or 4913. of the Revised Code.

(C) | Employee training provided and training successfully completed shall be documented and retained by the employer. Employee training requirements shall include the following topics:

(1) The one-call OHIO811 notification process;

(2) Responsibilities of utilities and excavators;

(3) Positive response system;

(4) The Ohio universal marking standards;

(5) The laws and regulations described in sections 153.64 and 3781.25 to 3781.34 of the Revised Code."



Training compliance is enforceable.

4 STEPS TO SAFE DIGGING

1. Contact OHIO811 before you dig
2. Wait the required time for marking
3. Respect the marks
4. Dig with care

WHO IS OHIO811?

Ohio Utilities Protection Service, dba OHIO811, is a 501(c)(6) not-for-profit public safety organization that serves as the established underground utility protection service for Ohio, as defined in ORC 3781.25 (A).

OHIO811 is the communication link between those who own or operate underground utility facilities and those who have a need to excavate.

The OHIO811 Mission:

The OHIO811 mission is to prevent damage to member facilities and promote public safety by providing an efficient and effective communication and education process.

THE SAFE DIGGING PROCESS

The first step to a safe excavation begins during the planning stages. By planning your work, understanding your work area, and deciding when you plan to start your excavation project, you are on your way to digging safely. A careful review of your plans and work area prior to the actual excavation can help save you and your company from unexpected downtime, loss of revenue, and injury.

Before you notify OHIO811:

- Assess your route or excavation site
- Gather all required information
- If required, premark the approximate location in white paint, flags, or both

Now the person digging can notify OHIO811

ORC 3781.28 (A) | *"Except as otherwise provided in divisions (C), (D), (E), and (F) of this section, at least two working days, not including the day of the notification, but not more than sixteen calendar days before commencing excavation, the excavator shall notify the protection service of the location of the excavation site and the date on which excavation is planned to commence."*

Three Ways to Notify OHIO811

- Call **800-362-2764 or 8-1-1**
- Visit **OHIO811.org** to enter your excavation notification through Remote Ticket Entry (RTE), known as i-dig and e-dig.
- Download the **OHIO811 app** to access i-dig and e-dig.

OHIO811 EXCAVATION CHECKLIST

CONTACT PHONE NUMBER

CALLER'S NAME

COMPANY NAME

FAX NUMBER E-MAIL

COUNTY CITY/TOWNSHIP

ADDRESS/LOCATION OF WORK

EXTENT OF WORK: FRONT/SIDES/REAR

FARTHEST DISTANCE/DIRECTION BACK OFF ROAD

LOT# SUBDIVISION

BUILDER NAME

CROSS/BETWEEN STREETS

DISTANCE AND DIRECTION FROM CROSS STREET

DATE OF EXCAVATION START TIME OF EXCAVATION

TYPE OF WORK

WORKING FOR COMPANY WORK DONE BY COMPANY

MEANS OF EXCAVATION BLASTING PRE

MARKINGS MEET RR RIGHT OF WAY

HIGHWAY MILE MARKER AT/FROM

COMMENTS

OHIO811 REFERENCE NUMBER

REVISED JUNE 2026

WHAT HAPPENS WHEN I CALL OHIO811?

When you call OHIO811 you will be asked questions regarding your project. You will need the required information about your excavation. See the previous page for a list of the information that will be requested.

After you have given the appropriate information to the Customer Service Representative (CSR)...

- The CSR will read all information back to you.
- You must verify its accuracy.
- You will be given a list of member utility owners that OHIO811 will notify.
- As outlined in ORC 3781.26(C), you will be given a reference/ticket number that is proof of your call.

  Record the number and keep it for the duration of your excavation, or longer, when applicable. This number allows access to Positive Response. We recommend each excavator check Positive Response prior to beginning excavation to determine the status of their excavation notification.

  To check Positive Response, use the link in your confirmation email, or select Positive Response on OHIO811.org or in the OHIO811 mobile app.

SO I'VE CONTACTED OHIO811 NOW WHAT DO I DO?

WAIT THE REQUIRED AMOUNT OF TIME

ORC 3781.28(A) | *"Except as otherwise provided in divisions (C), (D), (E), and (F) of this section, at least two working days, not including the day of the notification, but not more than sixteen calendar days before commencing excavation, the excavator shall notify the protection service of the location of the excavation site and the date on which excavation is planned to commence."*

UNDERGROUND FACILITIES WILL BE MARKED BY THE FACILITY OWNERS

Outlined in ORC 3781.29(A)(1) | Within at least two working days, not including the day of the notification, each utility shall review the status of its facilities within the excavation site, locate its underground utility facilities at the excavation site, and report to Positive Response.

CHECK POSITIVE RESPONSE

ORC 3781.26(D) | *"Each utility fully participating in a protection service pursuant to this section shall also participate in its affiliated positive response system."*

Working days do not include weekends and legal holidays.

ORC 3781.25 (F) | *"Working days" begin at midnight, end at eleven fifty-nine p.m. on the same date, and exclude weekends and legal holidays as defined in section 1.14 of the Revised Code and "hours" excludes hours on weekends and legal holidays.*

OHIO811 POSITIVE RESPONSE CODES

001 – NO CONFLICT

Underground facilities operated by this member are not in conflict based on information provided in the excavation notification.

002 – MARKED

Underground facilities operated by this member at the site of proposed excavation have been marked up to the privately owned facility.

003 – EXCAVATOR REQUEST CANCELED (CNCL)

Excavator has canceled this excavation request.

004 – LOCATOR COORDINATION

Locate request has not been completed. Locator has/will contact the excavator to coordinate markings.

005 – FACILITY OWNER OR OPERATOR COORDINATION

Locate request has not been completed. Facility Owner or Operator will contact the excavator to coordinate markings.

006 – HIGH PROFILE OR CRITICAL FACILITY

Facility Owner or Operator requests to be present for the excavation in accordance with ORC 3781.31 (A). Excavator must provide notification of at least one full working day prior to commencing excavation.

007 – COMPLEX PROJECT (LPRJ)

This response is designated for use with a Complex Project notification only.

008 – DESIGN REQUEST (DSGN)

Facility Owner or Operator has completed the design request in accordance with ORC 3781.27 (C) or 153.64 (B) (2).

009 – WORK COMPLETE

The Facility Owner or Operator or their representatives has deemed the excavation to have been completed.

999 – NO RESPONSE (LATE)

The Facility Owner or Operator or its representatives has not posted a Positive Response prior to the legal start date. A "LATE" notification has automatically been sent to the Facility Owner or Operator.

I SEE THE MARKS... NOW I CAN DIG WITH CARE

YOU have planned, YOU have made the necessary contacts, YOU are now ready to dig... **Now what do you do?**

ORC 3781.30 | Duties of excavator

"(A) When making excavations using traditional or trenchless technologies, the excavator shall do all of the following:

(1) | Maintain reasonable clearance between any underground facility and the cutting edge or point of powered equipment;

(2) | Protect and preserve the markings of tolerance zones of underground utility facilities until those markings are no longer required for proper and safe excavations;

(3) | When approaching and excavating within the tolerance zone of underground utility facilities with powered equipment, require an individual other than the equipment operator to visually monitor the excavation activity for any indication of the underground utility facility;

(4) | Conduct the excavation within the tolerance zone of underground utility facilities in a careful, prudent and nondestructive manner, when necessary, in order to prevent damage.

(5) | Excavate up to the total depth of the excavation to either determine the precise location of underground utility facilities or verify that the total depth of excavation is free of such facilities;..."

ORC 3781.30 (A) (6-8) can be found on page 17 under "What to Do if a Damage Occurs".

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I SEE THE MARKS... NOW I CAN DIG WITH CARE

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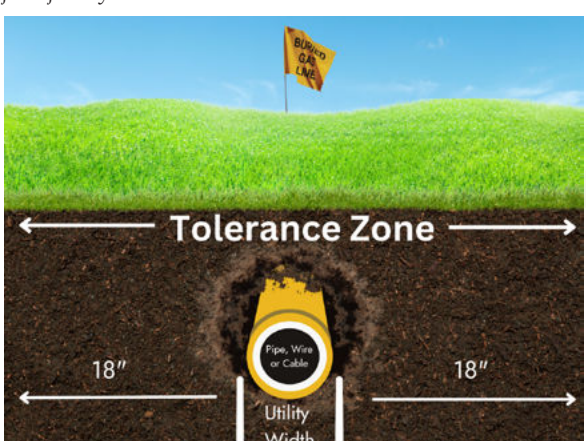
When Markings are Destroyed or Removed:

3781.31(B) | *"If the markings of underground utility facilities made under section 3781.29 of the Revised Code are destroyed or removed before excavation is completed, the excavator shall notify the utility through the protection service that the markings have been destroyed or removed, and the utility shall remark the facilities in accordance with section 3781.29 of the Revised Code."*

Wait two working days, not including the day of the notification, for the excavation site to be remarked.

Remember:

3781.25(E) | *"'Tolerance Zone' means the site of the underground utility facility including the width of the underground utility facility plus eighteen inches on each side of the facility."*



Methods of excavation within this area include, but are not limited to:

- Hand digging
- Pot holing
- Vacuum excavation

WHAT TO DO IF A DAMAGE OCCURS

When excavation damages a buried utility, the first move should always be the same: **get everyone to safety, stop work, and protect the area.** Do not try to repair or stop a leak yourself or use anything that might create a spark, such as a cell phone.

Next, report the damage to the appropriate parties, including a report to OHIO811 as outlined in 3781.30(A)(6)(7)(8).

Mandatory Damage Reporting:



ORC 3781.30 (A)(6) | "As soon as any damage is discovered, including gouges, dents, or breaks to coatings, cable sheathes, and cathodic protection anodes or wiring, report the type and location of the damage to the utility and the protection service and permit the utility a reasonable amount of time to make necessary repairs. If the owner or operator of the utility facility is unknown, notification to the protection service satisfies the excavator's reporting requirement to the utility under this section."



ORC 3781.30 (A)(7) | "Immediately report to the utility, the protection service, and, if necessary, to the appropriate emergency response agencies by calling 9-1-1, any damage to an underground utility facility that results in escaping flammable, corrosive, explosive, or toxic liquids or gas, and take reasonable appropriate actions needed to protect persons and property and to minimize safety hazards until those agencies and departments and the utility arrive at the scene. If the owner or operator of the utility facility is unknown, notification to the protection service satisfies the excavator's reporting requirement to the utility under this section."



ORC 3781.30 (A)(8) | "In complying with divisions (A)(6) and (7) of this section, damage information reporting shall, at a minimum, include all of the following:

(a) The location or address where the damaged underground facility is located;

(b) The type of underground utility facility damaged, including the approximate size, material type and color, if available;

(c) The approximate depth at which the damaged underground utility facility was encountered."

TRENCHLESS EXCAVATION



3781.30(B) | "When utilizing trenchless excavation methods, the excavator must comply with the following requirements, in a manner consistent with division (A) of this section:

(1) | Expose and confirm all underground utility facilities at each crossing point by the proposed excavation in a nondestructive manner to the installation depth of the new facility;

(2) | Expose all parallel underground utility facilities in a nondestructive manner at the beginning and end of each trenchless excavation to the installation depth of the new facility. If the proposed alignment is within the tolerance zone of any parallel underground utility facility, the underground utility facility shall be exposed every one hundred feet.

(3) | Ensure that the final product installation maintains the proper clearances of existing underground utility facilities as determined pursuant to division (E)(4) of section 3781.27 of the Revised Code."

For additional guidance, see the North American Society for Trenchless Technology's (NASTT) HDD Good Practices Guidelines, which provides industry standards and best practices for trenchless technology.

Owners of hazardous facilities may have additional guidelines for excavating near their facilities.

RECOMMENDED GOOD PRACTICES

1. Perform a site assessment prior to excavation, including positive response and site visuals that indicate present utilities.
2. Request markings necessary for your work scope. Don't request markings outside of your excavation area.
3. Marking size and frequency should be appropriate for the situation or area. Locate what is necessary for the excavator to perform their job safely.
4. Provide detailed information about your premarking on your excavation notification when possible (i.e., number of premarkings).
5. Use appropriate markers for decorative surfaces (i.e., whiskers, chalk, etc.).
6. An 18-inch tolerance zone should be respected around all above-ground infrastructure.
7. Identifying markings such as facility owner, size, and type shall not be used as a measuring point when establishing the tolerance zone of a buried utility.

It is recommended that this symbol be used to identify a **tie in**.

Example:



It is recommended that this symbol be used to identify the **intersection of two separate facilities**.

Example:



A LIST OF "DO'S" DURING EXCAVATION

- **Do** check Positive Response prior to arriving at job site.
- **Do** keep a reasonable clearance between any underground facility and the cutting edge or point of powered equipment.
- **Do** protect and preserve the color-coded markings until those markings are no longer needed for proper and safe excavation.
- **Do** contact OHIO811 if the markings are destroyed or removed before excavation is complete and allow 2 working days, not including the day of the notification, for utilities to respond.
- **Do** make sure someone other than the equipment operator, i.e. the spotter, is there to look for any sign of the underground facility.
- **Do** conduct the excavation near the underground facility carefully. Excavate in a careful and prudent manner; by hand, if necessary; to be able to tell the exact location of the underground facility and to prevent damage.
- **Do** protect and support exposed facilities during excavation and take care while backfilling to maintain support to prevent damage. Be sure that backfill materials are free of any material that could damage the facility.



Be prepared. Always have an updated list of emergency contact numbers for the excavation area including law enforcement, fire department, and utility owners/operators.

Facility markers in the area should display emergency contact information.

If an excavation will cover a large area and will progress from one area to the next over a period of time, the excavator shall provide written notice of excavation with projected timelines for segments of the excavation as the excavation progresses in order to coordinate the marking of facility locations with actual excavation schedules.

A LIST OF "DON'TS" DURING EXCAVATION

- **Don't** assume that a pipeline or cable runs in a straight line between facility markers.
- **Don't** assume the depth of a utility. Never assume that an underground facility is the same depth throughout the entire route of the excavation.
- **Don't** report emergency status excavation notifications if they are not emergencies.
- **Don't** refresh the utility locators marks with your own paint. Contact OHIO811 to request a remark.
- **Don't** excavate on someone else's excavation notice.
- **Don't** assume *all* facility owners have responded to your notification. Check Positive Response.



Laws and regulations often change. As an excavator it is your responsibility to understand the current mandates.

OHIO UNIVERSAL MARKING STANDARDS

APWA COLORS

The American Public Works Association recommended color code shall be used to mark the location of underground facilities, temporary survey markings, and site of intended excavation. When utility company representatives mark a location, they use colored flags and/or paint to identify the type of underground service:

ORC 3781.29(C)(1) | *"Except as otherwise provided in division (C)(2) of this section, a utility shall mark its underground facilities using the following color codes:"*



WHITE - Proposed Excavation

PINK - Temporary Survey Markings

RED - Electric Power Lines, Cables, Conduit and Lighting Cables

YELLOW - Gas, Oil, Steam, Petroleum or Gaseous Materials

ORANGE - Communication, Alarm or Signal Lines, Cables or Conduit

BLUE - Potable Water

PURPLE - Reclaimed Water, Irrigation and Slurry Lines

GREEN - Sewers and Drain Lines

WHITE LINING/PREMARKING

It is necessary to be specific about your area of excavation when contacting the Ohio Utilities Protection Service. The description must meet one of the following criteria:

3781.29 (F) | "An excavator is not required to premark the approximate location of an excavation as provided in division (D) of this section in any of the following situations:

(1) The utility can determine the precise location, direction, size, and length of the proposed excavation site by referring to the notification provided by the protection service pursuant to sections 3781.27 and 3781.28 of the Revised Code.

(2) The excavator and the affected utility have had an on-site, preconstruction meeting for the purpose of premarking the excavation site.

(3) The excavation involves replacing a pole that is within five feet of the location of an existing pole.

(4) Premarking by the excavator would clearly interfere with pedestrian or vehicular traffic control."

If none of these four requirements are met, excavators are required to premark with white paint in order to show the facility owners/locators the specific area where excavation will take place. This could help to make the locate process more efficient and timely.

For a single point excavation; such as installing poles, pedestals or planting a tree, premark the approximate location of the excavation as shown with dashes.



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WHITE LINING/PREMARKING *(Continued)*



For continuous excavation; such as trenching, boring, etc.; mark the center line of the excavation with dashes in white paint. Excavation width (in feet) shall be indicated on either side of the center line in legible figures.

White flags or stakes may be used in place of white paint and, in some situations, may be more practical.

MARKINGS APPROPRIATE FOR AREA

Underground facilities shall be marked using paint, flags, whiskers, chalk, or other method as appropriate or a combination to identify the facility(s). Marks shall be placed at the beginning and end of the locate and at a minimum interval of two feet (2') but not more than twenty-five feet (25') throughout the locate as needed to clearly identify the route of the underground utility.

For Cables: Marks shall be placed at the beginning and end of the locate and at a minimum interval of two feet (2') but not more than fifty feet (50') throughout the locate.

It is recommended that when flags are used at the excavation site by the facility owner/locator, the facility owner/operator's name is on the flag as well as a contact name and phone number. This contact will be able to assist the excavator if additional information is needed about the location of underground facilities.

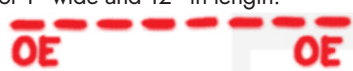
IDENTIFICATION ABBREVIATIONS

When marks are placed at the excavation site, the owner/operator of a utility line shall be indicated by a letter or letters utilizing the APWA color code. These letters shall be legible and placed at the beginning and end of the locate and at intervals throughout the locate as needed to clearly identify the owner/operator. This may also be achieved by the use of flags that indicate the owner/operator of the facility.

CABLES

Underground utility lines of the same type in the same trench owned by the same company shall be marked individually.

A. If a single underground facility is present, it shall be marked by placing a single mark over the approximate center of the facility. It is recommended that this mark be a minimum of 1" wide and 12" in length.



B. If multiple underground facilities are present, they shall be marked by placing a single mark over the approximate center of each underground facility. It is recommended that this mark be a minimum of 1" wide and 12" in length.



Marks shall be placed at the beginning and the end of the locate as needed to clearly identify the route of the underground utility.

PIPELINES

A. Pipelines two inches and smaller (nominal size): The physical location of a pipeline shall be represented by a single mark.



B. Pipelines larger than two inches (nominal size): The physical location of a pipeline shall be represented by a single mark. The nominal size shall be noted.

For all pipelines:

1. The owner/operator shall be identified. Flags, as well as paint, shall be deemed acceptable as identifying the owner/operator.

2. When known, the material type of the pipeline shall be indicated using the "material type" abbreviation index.

3. When the facility is installed in casing, the facility shall be marked as follows: "diameter and material type/ casing diameter and material type". If the casing size or material is unknown it shall be indicated by "UNKN" and, the excavator, designer, or engineer should contact the facility owner.



4. Marks shall be placed at the beginning and the end of the locate (maximum interval length does not apply to design tickets) throughout the locate as needed to clearly identify the owner/operator, pipeline location, material, and width.

5. All numbers identifying width shall be in inches.

CONDUIT/DUCT BANK

The term "conduit" shall be used for a single enclosure containing one or more facilities; the term "duct bank" shall be used for a structure containing two or more conduits.

A. For duct banks constructed with conduits sized 2 inches or less, the following information will be provided:

1. A single mark is used.
2. A diamond is placed within the mark.
3. The number of small-diameter conduits shall be indicated within the diamond symbol.



B. For duct banks containing conduits larger than 2 inches, the following information will be provided:

1. The duct bank boundary (the "width") is identified with marks after locating the outermost conduits within the bank.
2. The number of conduits shall be placed within the diamond. This diamond shall be placed within the duct bank boundary marks.



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CONDUIT/DUCT BANK *(Continued)*

In situations where multiple conduits, which are owned and/or operated by different companies, are placed together in a bundle fashion, a conduit structure or duct bank marking symbol shall be used by the first operator marking the facility. Other operators owning facilities within the bundle shall verify the marks and add their owner/operator letter designation.



C. For all conduits and duct banks:

1. The owner(s)/operator(s) shall be indicated using the facility owner identification code.
2. Marks shall be placed at the beginning and the end of the locate or anytime the facility changes direction, (maximum interval length does not apply to design tickets) throughout the locate as needed to clearly identify the owner/operator, the conduit/duct bank location, and the number of conduits. If known, indicate number of conduits in a duct bank.

FACILITIES MARKED ACCORDING TO RECORD



Facilities not marked via electronic equipment should be indicated in this manner and in appropriate facility color code.

Marking Undetectable Areas of a Facility:





Areas where a facility becomes undetectable shall be marked in the same manner, using a line with an arrow to indicate the direction of the undetectable line.

CHANGE IN DIRECTION

When deviations in the direction of a facility are known to exist, the deviations shall be marked in a manner which clearly identifies the route of the facility.



OFFSET MARKS

In areas prone to the frequent destruction of marks, offset marks may be used in conjunction with the marks placed at the actual location of a facility. They are intended to be used as a supplemental means of marking.

1. A line is placed in conjunction with an arrow and a measurement (stated in feet), which specifies the distance from the reference line to the actual location of the facility.
2. The arrow indicates the direction from the reference line to the actual location of the facility.
3. The arrow shall be oriented at 90 degrees to the reference line.
4. The distance to the actual location of the facility, from the reference line, shall be placed on one side of the arrow.
5. The locator shall provide all of the necessary information which adequately identifies the specific facility in accordance with the marking standards. This information shall be placed on the side of the arrow not utilized for the distance information.



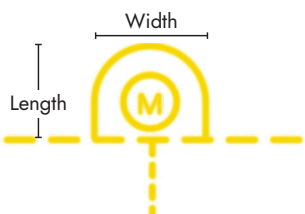
TERMINATION POINTS

Termination points, stub outs, and dead ends shall be marked as shown. Marking could also be accompanied by adding the letters "TP".



BACK TIED/LOOPED SERVICE

When known by records or documentation, the symbol shall be a ½ circle equaling 36 inches in width and 36 inches in length unless greater amount is identified.



FACILITIES GREATER THAN 36 INCHES

For facilities greater than 36 inches in diameter, a rectangle with lines extending from each end that represent the direction of the facility shall be drawn using the appropriate APWA color. Facility owner information and, when known, the size and type of the facility shall be placed inside the rectangle.



VALVE PITS / MANHOLES / VAULTS



When known, the perimeter of valve boxes, manholes, and other surface indicators shall be marked using the appropriate APWA color code. The structure should be named as such (vault, pit, manhole, etc.) along with the structure owner's indicator. If the structure size is unknown, it shall be indicated as "UNKN". If the size of the structure is not indicated, the excavator, designer, or engineer should contact the facility owner. All parties shall work jointly to establish accurate information.

FACILITIES UNDER BODIES OF WATER

Identifying Facilities Located Under Bodies of Commercially Navigable Waterways

It is recommended that facility owners/operators shall comply with applicable state and federal standards.

CORRECTING MARKING ERRORS

Marking errors shall be corrected by the locator/operator and communicated to the excavator as soon as possible after the discovery of such errors. Black paint shall be used to remove, cover up, or cancel erroneous markings. In the event of damage, marking errors shall be preserved until such marks are documented.

EXCESSIVE MARKS

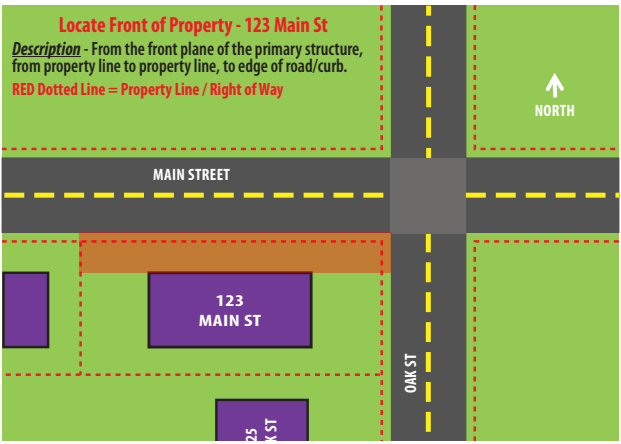
Markers used to identify underground facilities should not be excessive or oversized.

WORK AREA DESCRIPTIONS

Locate Front of Property - 123 Main St

Description - From the front plane of the primary structure, from property line to property line, to edge of road/curb.

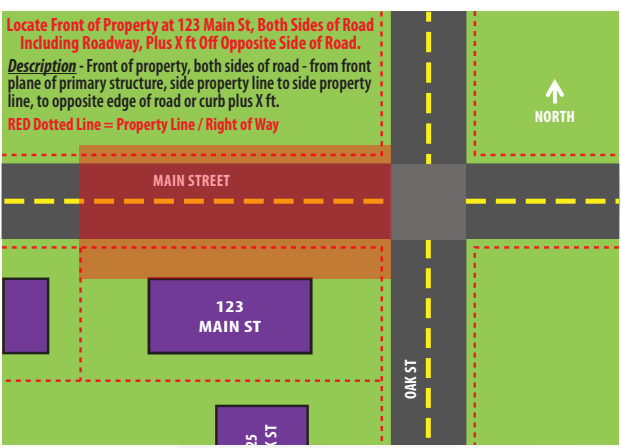
RED Dotted Line = Property Line / Right of Way

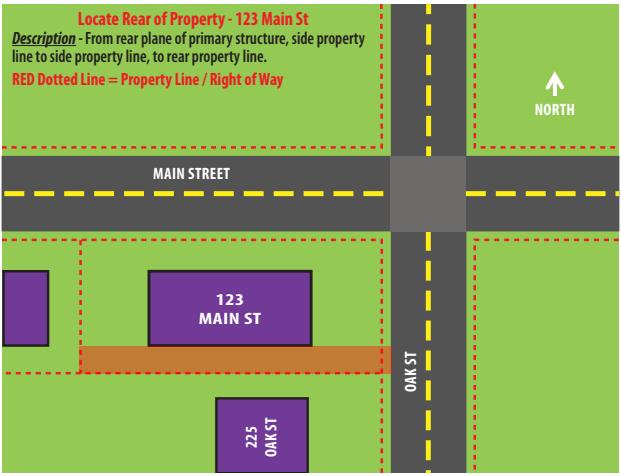


Locate Front of Property at 123 Main St, Both Sides of Road Including Roadway, Plus X ft Off Opposite Side of Road.

Description - Front of property, both sides of road - from front plane of primary structure, side property line to side property line, to opposite edge of road or curb plus X ft.

RED Dotted Line = Property Line / Right of Way

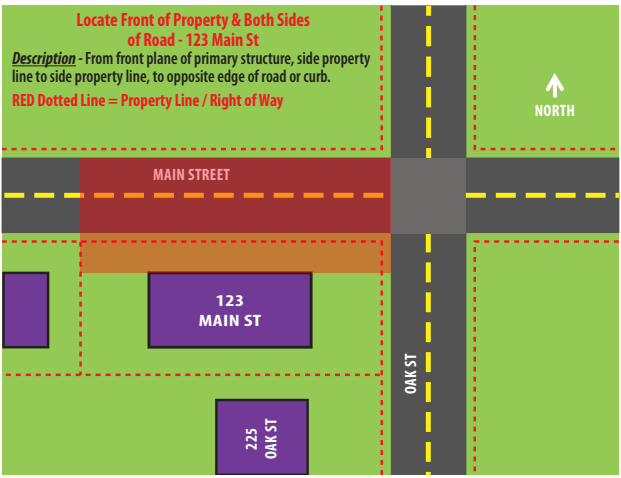



Locate Rear of Property - 123 Main St
Description - From rear plane of primary structure, side property line to side property line, to rear property line.
RED Dotted Line = Property Line / Right of Way
NORTH
MAIN STREET
123
MAIN ST
OAK ST
225
OAK ST


Locate Right Side of Property (Facing) - 123 Main St
Description - Facing front of property - from right side plane of primary structure, from edge of road or curb to rear property line.
RED Dotted Line = Property Line / Right of Way
NORTH
MAIN STREET
123
MAIN ST
OAK ST
225
OAK ST


Locate Left Side of Property (Facing) - 123 Main St
Description - Facing front of property - from left side plane of primary structure, from edge of road or curb to rear property line.
RED Dotted Line = Property Line / Right of Way
NORTH
MAIN STREET
123
MAIN ST
OAK ST
225
OAK ST


Locate Entire Property - 123 Main St
Description - From edge of road or curb to rear property line and from side property line to side property line.
RED Dotted Line = Property Line / Right of Way
NORTH
MAIN STREET
123
MAIN ST
OAK ST
225
OAK ST

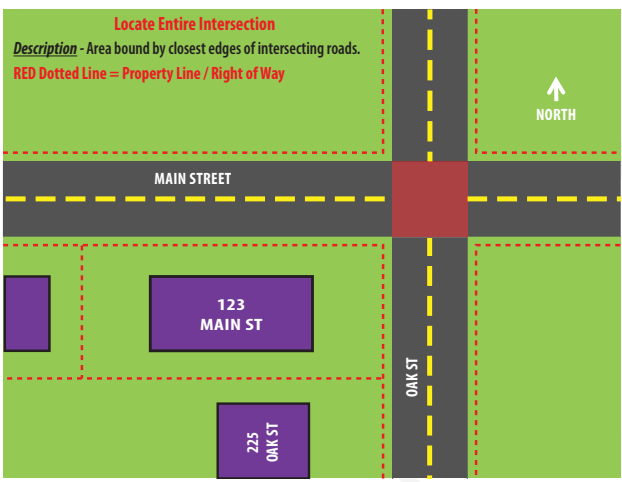

Locate Front of Property & Both Sides of Road - 123 Main St
Description - From front plane of primary structure, side property line to side property line, to opposite edge of road or curb.
RED Dotted Line = Property Line / Right of Way
NORTH
MAIN STREET
123 MAIN ST
OAK ST
225 OAK ST


Locate 123 Main St - Premarked Single Point Location(s)
Description - Locate 25' radius around premarked location(s).
RED Dotted Line = Property Line / Right of Way
NORTH
MAIN STREET
25' Radius around premark
123 MAIN ST
OAK ST
225 OAK ST


Locate 123 Main St. - Premarked Path
Description - Locate 10' on all sides of premarked path.
RED Dotted Line = Property Line / Right of Way
NORTH
MAIN STREET
123
MAIN ST
OAK ST
225
OAK ST


OAK ST
Locate from intersection of Oak St
to intersection of Maple St
Description -
Side to Side = Closest edges of intersecting roads.
Top to Bottom = Edge of road to edge of road.
RED Dotted Line = Property Line / Right of Way
MAPLE STREET
NORTH
MAIN STREET


Locate from intersection of Oak St to the intersection of Maple St plus X feet off the road
Description - Side to Side = Closest edges of intersecting roads. Top to Bottom = Entire road plus specific footage.
RED Dotted Line = Property Line / Right of Way
OAK ST
MAPLE STREET
NORTH
MAIN STREET

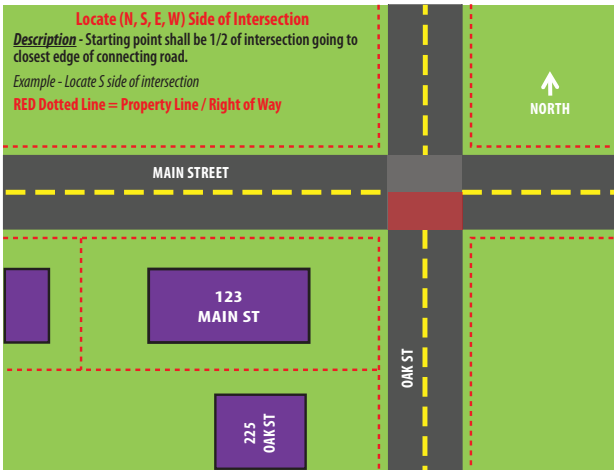

Locate Entire Intersection
Description - Area bound by closest edges of intersecting roads.
RED Dotted Line = Property Line / Right of Way
NORTH
MAIN STREET
123 MAIN ST
OAK ST
225 OAK ST

Locate (N, S, E, W) Side of Intersection

Description **- Starting point shall be 1/2 of intersection going to closest edge of connecting road.**

Example - Locate S side of intersection

RED Dotted Line = Property Line / Right of Way

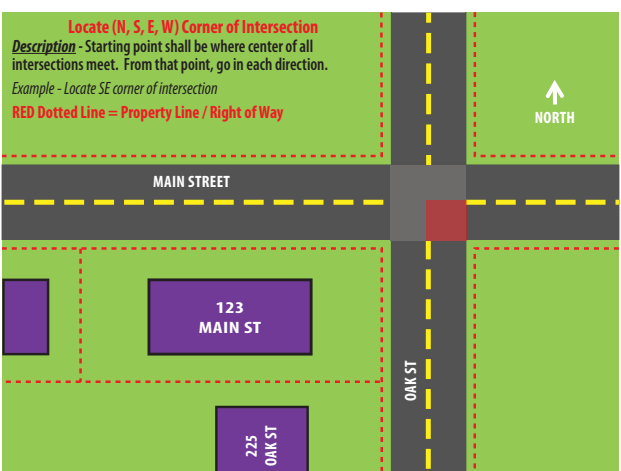


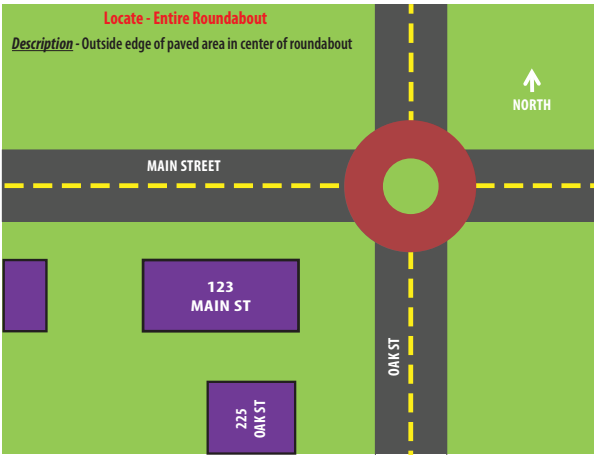
Locate (N, S, E, W) Corner of Intersection

Description **- Starting point shall be where center of all intersections meet. From that point, go in each direction.**

Example - Locate SE corner of intersection

RED Dotted Line = Property Line / Right of Way





FOR ADDITIONAL INFORMATION ON LOCATING PRACTICES...

This manual outlines the recommended facility marking standards for Ohio.

For additional information on locating practices, including the use of facility records, locator training recommendations, and safety guidelines; refer to Common Ground Alliance Best Practices at **commongroundalliance.com**.

NOTIFY OHIO811

Excavation notifications are received from 6:00 AM to 6:00 PM Monday through Friday.

i-dig and e-dig are accessible 24/7 for routine excavation notifications.

Emergency excavation notifications must be made by phone and are received 24/7/365.

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OHIO811.org
12467 Mahoning Avenue
North Jackson, Ohio 44451

OHIO811 Before You Dig

COLOR CODE FOR UTILITY MARKINGS

WHITE - Proposed Excavation

PINK - Temporary Survey Markings

RED - Electric Power Lines, Cables, Conduit and Lighting Cables

YELLOW - Gas, Oil, Steam, Petroleum or Gaseous Materials

ORANGE - Communication, Alarm or Signal Lines, Cables or Conduit

BLUE - Potable Water

PURPLE - Reclaimed Water, Irrigation and Slurry Lines

GREEN - Sewers and Drain Lines

TOLERANCE ZONE: Width of underground utility facility plus 18" on each side

SCAN TO VIEW THE EXCAVATOR MANUAL IN ENGLISH

ECHE UN VISTAZO AL MANUAL DEL EXCAVADOR EN ESPAÑOL

8-1-1 or 1-800-362-2764
www.OHIO811.org