

New Hampshire Underground Damage Prevention Program



THE ONE CALL CONCEPTS BIKE © PAUL JR. DESIGNS



Presented by William Ruoff



N. H. PUBLIC UTILITIES COMMISSION



**Underground
Damage Prevention**

**Natural Gas, LP & Electric
Safety & Security**

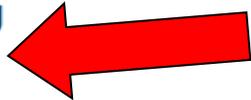


Home > Safety > Education and Training

Enter Search Request

Go

Education and Training



**www.puc.nh.gov/safety/
education and training**

- [Excavator Manual](#) (Rev. 1-09)
- [Small LP Gas Systems Manual- April 2001 Edition](#) (OPS)
- [OQ Guide for Small Distribution Systems](#)
- NH PUC Model Propane Operating & Maintenance and Emergency Plans
(The operator will need to enter the required information to complete the document)
 - Available in two formats: [MS Word](#) or [PDF](#)
- [Amilia's Law](#) - Effective January 1, 2007, all persons engaged in the installation, servicing and/or repair of gas fired appliances shall be licensed by the NH State Fire Marshal's Office ([RSA 153:27](#)).
 - [NH Plumbing and Mechanical Contractors](#) (Gas Licensing)
- Presentations from October 2005 LP Seminar (in PDF)
 - [192 & NFPA 58](#)
 - [LP RULES 2005](#)
 - [NH DIGSAFE Presentation](#)

803.01 811 and Internet Entries as Notification Methods



Dig Safe System, Inc.

1-888-DIG-SAFE MA - ME - NH - RI - VT

[Home](#) | [Quick-Ticket](#) | [Company Info](#) | [Membership Info](#) | [Laws & Enforcement](#) | [Services](#) | [Contact Us](#)

- [New User Registration](#)
- [Quick-Ticket Entry](#)
- [Quick-Ticket Help](#)
- [Map Coverage](#)

[Sign up for our Newsletter.](#)

[Sign up for a Contractor ID number.](#)

[Contractor Newsletter](#)

[Contractor ID Number](#)



**Know what's below.
Call before you dig.**

Exception to 72 hr wait:

Emergency Situation

Puc 802.04 “Emergency situation” means 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.



Dig Safe® does not notify non-member facility owners

including:

- **Municipal** water, sewer, electric and drainage.
 - You must contact them directly.
- ALSO: Privately-owned facilities should be marked by their owner.



Mandatory Reporting Requirements for all Damages

- How does this get accomplished?
Writing, Phone, Fax, Email or Non Utility Report

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION REPORT OF PROBABLE VIOLATION OF UNDERGROUND UTILITY REGULATIONS AND/OR DAMAGE TO UNDERGROUND FACILIITES Non-Utility Report	
DATE:	<input type="text"/>
PERSON REPORTING:	<input type="text"/>
MAILING ADDRESS:	<input type="text"/>
CITY/TOWN & STATE:	<input type="text"/> ZIP: <input type="text"/>
TELEPHONE #:	<input type="text"/>
LOCATION OF INCIDENT:	<input type="text"/>
DATE OF INCIDENT:	<input type="text"/>
TIME OF INCIDENT:	a.m. <input type="text"/> p.m. <input type="text"/>
UTILITY COMPANY IMPACTED:	<input type="text"/>
EXCAVATION LOCATION:	IN A PUBLIC WAY <input type="checkbox"/> ON PRIVATE PROPERTY <input type="checkbox"/>
DAMAGE / INJURY:	YES <input type="checkbox"/> NO <input type="checkbox"/>
DESCRIBE THE REASON FOR THIS COMPLAINT:	
PLEASE CHECK ONE OR MORE OF THE FOLLOWING:	
1. DIG-SAFE NUMBER (if know n)	<input type="text"/>
2. Notification completed, location w as not marked	<input type="checkbox"/>
3. Pre-marked? YES	NO <input type="checkbox"/>
4. Operator's markings were incorrect	<input type="checkbox"/>
5. Facility operator failed to mark in a timely manner	<input type="checkbox"/>
6. Was the utility notified of the problems?	YES, please provide name of person spoken to: <input type="text"/>
	NO <input type="checkbox"/>
If additional remarks are necessary, or if you have pictures or other evidence to fully describe the incident referenced above please attach a separate sheet.	

New Hampshire PUC Enforcement



- Administrative Body: Formal and Informal
- Agency charged with resolving disputes among parties
- Most disputes arise from damage to the underground facility
- Majority result in Informal Conferences (both parties attend, no sworn testimony)

What do the Rules say?

- **Purpose and Application** 801
- **Definitions** 802
- **System Requirements aka Duties of the One Call Center (Dig Safe Systems Inc.)** 803
- **Duties of Operator** 804
- **Duties of an Excavator** 805
- **Marking Standards and Tolerance Zone** 806
- **Enforcement Procedures** 807

What is the purpose of the “Dig Safe” program?

- To protect against damage to and from buried facilities
- To delineate responsibilities of excavator and facility operator



How does “Dig Safe” work?

- Excavator plans & **pre-marks** site
- Excavator contacts Dig Safe Systems, Inc.
- Dig Safe advises facility operators
- Facility operators mark facilities **within 72 hrs.**
- Excavator digs knowing where facilities are located



Key Elements for a **SAFE EXCAVATION**

Plan Ahead

Premark

Obtain Dig Safe ticket

Wait 72 hours

Maintain the Marks

Excavate Carefully

Renew Ticket after 27 days

Notify of Damage



Are you excavating?

What is excavation?

“Excavation”- *Any operation ... in which earth, rock or other material in the ground is moved, removed, or otherwise displaced by means of any tools, equipment or explosive, including but not limited to drilling, grading, boring, milling, trenching, tunneling, scraping, tree and root removal, cable or pipe plowing, fence or sign post installation, pile driving, wrecking, razing, rending or moving any structure or mass material... ”*

(Statute RSA374:48, Section III)

Hand Digging is Not Exempt



Will you be on territory covered by the law?

Do you plan to excavate on:

- **Private Property**
- **Public Way**
- **Right-of-Way**
- **Easement**
- **Public Street or**
- **Any Other Public Place**



Reason For Violations

- **No Dig Safe Ticket**
- **Incorrect Dig Safe Ticket**
- **Failure to Wait 72 Hours**
- **Failure to Maintain Marks**
- **Failure to Excavate Carefully**
- **Failure to Renew Dig Safe Ticket**
- **Assuming depth of facility**
- **Subcontractors not on ticket**



ASSUME



Underground Surprises

2008 Changes to NH Underground Damage Prevention Rules

- **Training for Locators** 804.03, 802.10
- **Newly Installed Facilities to be communicated to Excavators** 806.05
- **Positive Response** 804.02, 806.02
- **Expiration Dates to Tickets** 803.01
- **Notifications to 911 for certain Damages** 805.05
- **Reports of Damage from Excavators** 805.05
- **811 and Internet Entries as Notification Methods** 803.01
- **Trenchless Technology Reasonable Care Language** 805.02

Added Training for Locators

- ***Puc 802.10 “Locator” means a person acting on behalf of an operator to identify and mark the locations of underground facilities in accordance with Puc 806.***

Added Training for Locators

- ***Puc 804.03 Training of Locators.***
- ***(a) Locators shall be trained in accordance with National Utility Locating Contractors Association (NULCA) standards as adopted on December 21, 2001, including the competencies as described in (b) below.***
- ***(b) To meet the requirements of (a), training programs for locators shall include, at a minimum, the following competencies:***
 - (1) Electromagnetic locating;***
 - (2) Instruction in the use of transmitters and receivers;***
 - (3) Procedures for marking underground facilities;***
 - (4) Training in the identification of facilities;***
 - (5) Safety procedures;***
 - (6) Operator map and record reading; and***
 - (7) Familiarity with the rules in this chapter.***

Added Newly Installed Facilities to be communicated to Excavators

- **Puc 806.05 *Marking Certain Newly Installed Underground Facilities.***
- ***(a) Upon completing the installation of new underground facilities within an area that has been subject to excavator notification and premarking pursuant to Puc 805.01, an operator shall make reasonable efforts to communicate the existence of such facilities if they are covered with soil or other material that impairs their visibility.***

Added Newly Installed Facilities to be communicated to Excavators

- **Puc 806.05 Marking Certain Newly Installed Underground Facilities.**
- ***(b) For purposes of (a) above, reasonable efforts shall include:***
- ***(1) Marking the tolerance zone in accordance with 806.01, 806.02, 806.03, and 806.04;***
- ***(2) Contacting the excavator with information regarding the presence of the newly constructed facilities, or***
- ***(3) Leaving a tag or marker clearly indicating the presence of the newly constructed facilities with contact information.***

Added Positive Response

- ***Puc 804.02 Notification Requirements***
- ***(e) When no underground facility is within the area of a proposed excavation, an owner or operator receiving notification of the proposed excavation shall so advise the excavator by:***
 - ***(1) Marking the non existence of facilities within the premarked area of intended excavation in accordance with Puc 806;***
 - ***(2) Participating in a meeting where details of the job site are discussed and documented; or***
 - ***(3) Communicating with the operator via e-mail, fax, telephone or other electronic communication, provided that the excavator confirms receipt of such communication.***

Added Positive Response

- ***Puc 806.02 Markers.***
- ***(a) Within 72 hours after receipt of notice from a proposed excavator or from the notification center of a proposed excavation, but not including Saturdays, Sundays and holidays, an operator or member of the notification center who owns or operates an underground facility, shall***
 - (2) If no underground facility is within the area of the proposed excavation, so notify the excavator pursuant to Puc 804.02(e).***

Added 30 Day Expiration Dates to Be Printed on Tickets

- **Puc 803.01 Procedures and Operation of Notification Center.**
- ***b 6 (i). The date and time the notification will expire in accordance with Puc 805.01(b)***

[805.01(b) The excavator's notification, required by (a) above, shall be valid for 30 calendar days from the date and time the notification center confirms the notification.]

Added Notifications to 911 for certain Damages

- ***Puc 805.05 Damage to an Underground Facility.***
- ***(a) When an excavator causes any damage to an underground facility not owned or operated by the excavator, the excavator shall:***
- ***(1) Call 911 when:***
 - ***(a) A gas underground facility is damaged and there is a release of gas,***
 - ***(b) An electric underground facility is damaged and an excavator determines that a person may have received an electric shock, or***
 - ***(c) Any other facility is damaged and public safety is affected;***
- ***(2) Evacuate nearby structures if necessary;***
- ***(3) Contact the facility owner or operator;***
- ***(4) Attempt no repairs, unless directed to by the facility owner or operator;***
- ***(5) Call 811 or 888-DIG SAFE (Notification Center); and***
- ***(6) Report the damage to the commission.***

Reporting Damages

Report:

- All Damaged Lines Immediately
- Coating Damage
- Broken Tracer Wire or Warning Tape
- Unmarked Gas Facilities



If you hit an Underground Facility...

- Call 911 if appropriate
- Call the utility
- Call 811 or 888 DIG-SAFE
- Evacuate nearby structures if necessary
- Do not attempt repairs
- Stand down until utility says you may backfill



If you hit an Underground Facility...

(con't)

- Take photos or video of the scene (best before starting dig)
 - Dig Safe marks
 - Hit
 - Other conditions
- Get witnesses' names
- Take notes
- File Report with PUC
 - (603) 271-6022



Added 811 and Internet Entries as Notification Methods

- Puc 803.01 Procedures and Operation of Notification Center.
- *(c) The current toll-free telephone numbers of the notification center for reporting proposed excavations and otherwise communicating with the notification center shall be, 888-“DIG-SAFE”, which is, 888-344-7233 or 811.*
- *(d) The notification center shall also maintain an internet-based system for proposed excavations at www.digsafe.com.*

Added Trenchless Technology Reasonable Care Language

- ***Puc 805.02 Excavation That Affects the Tolerance Zone.***
 - ***(e) For trenchless excavations, such as horizontal drilling, boring, pneumatic jacking, tunneling and pavement reclamation, reasonable care for purposes of Puc 805.02(a) shall include determining the exact depth of the underground facility and clearances required by the operator and incorporating location details into the trenchless excavation procedure so as to avoid any potential damage of the underground facility.***

2008 Revisions to NH Underground Damage Prevention Rules

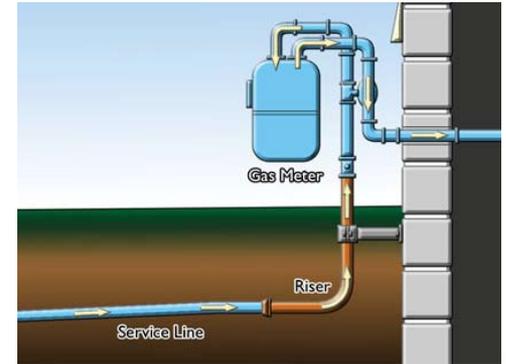
- **Clarified Widths to be Marked** 806.03
- **Blasting Special Notifications** 805.04
- **Identification Standards** 806.03
- **Clarified Holidays** 802.09
- **Premarking use of white** 806.02

Revised & Clarified Widths to be Marked

- ***Puc 806.03 Identification.***
- ***(a) When an operator marks its underground facility it shall indicate:***
 - (1) The width of the underground facility for all facilities **greater than 1 inch nominal diameter.*****

Revised & Clarified Widths to be Marked

- *1" Gas Service – Not Required*
- *Typical CATV -Not Required*
- *2" Conduit in Trench -Required*



Added Blasting Special Notifications

- Puc 805.04 Blasting.
- *(a) When an excavator determines that blasting will be required during an excavation, the excavator shall inform the notification center when providing notice of the excavation.*
- *(b) If an excavator determines during the effective term of the excavator's notification that blasting is required within the area premarked in accordance with Puc 805.01 (d), the excavator shall notify the notification center of the need to blast. Notification shall be made at least 24 hours prior to any blasting, not including Saturdays, Sundays, and holidays.*
- *(c) When unanticipated obstructions prevent further excavation without blasting, the excavator shall provide separate notice of such blasting not less than four hours in advance of such blasting, not including the hours of 4:00 p.m. to 6:00 a.m. weekdays, or all of Saturdays, Sundays, and holidays.*

Added Blasting Special Notifications

- **Previously could add name of the subcontractor once the ticket was called in and start 10 minutes later. This can no longer happen.**
- **Now if discover during the life of the 30 day ticket that blasting is required need to inform the One Call Center and wait 24 hours.**
- **If already identified that blasting was required but need to go to a different area within a digging area then must wait only 4 hours not 24 hours.**

Revised Identification Standards

- ***Puc 806.03 Identification.***
- ***(a) When an operator marks its underground facility it shall indicate:***
 - (2) The specific owner or operator of the underground facility; and***
 - (3) The function of the underground facility.***

Revised Identification Standards

RED	RED	ELECTRIC	E
YELLOW	YELLOW	GAS	G
YELLOW	YELLOW	OIL	PP
YELLOW	YELLOW	STEAM	ST
YELLOW	YELLOW	CHEMICAL	CH
ORANGE	ORANGE	TELEPHONE	T
ORANGE	ORANGE	CABLE TV CA	TV
ORANGE	ORANGE	TRAFFIC CONTROL	TC
ORANGE	ORANGE	FIRE ALARM	FA
BLUE	BLUE	WATER	W
PURPLE	PURPLE	RECLAIMED WATER	RW
GREEN	GREEN	SEWER	S
GREEN	GREEN	STORM SEWER	SS
GREEN	GREEN	STORM DRAIN	SD
WHITE	WHITE	IDENTIFICATION FOR PROPOSED EXCAVATION AREA	
PINK	PINK	TEMPORARY SURVEY MARKINGS	

Revised and Clarified Holidays

- *Puc 802.09 “Holiday” means any legal holiday pursuant to RSA 288:1 or, when such holiday falls on a Sunday, the following day pursuant to RSA 288:2.*

- NEW YEAR’S DAY
- PRESIDENT’S DAY
- INDEPENDENCE DAY
- COLUMBUS DAY
- VETERAN’S DAY
- **ELECTION DAY**

- M.L.K. DAY
- MEMORIAL DAY
- LABOR DAY
- CHRISTMAS DAY
- THANKSGIVING DAY

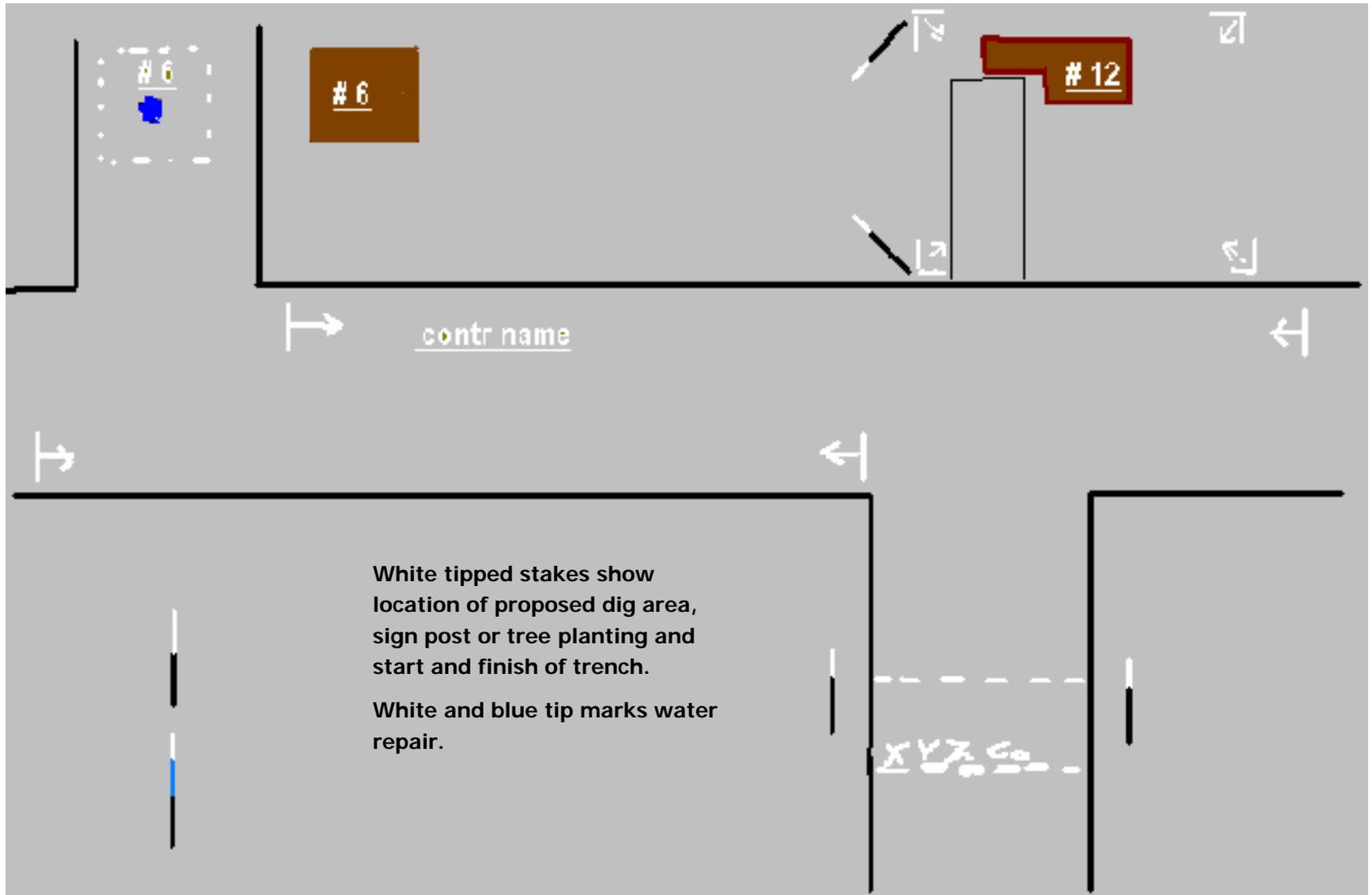
EVEN YEARS ONLY!!!

Revised Premarking Use of White

- ***Puc 806.02 Markers.***
- ***(f) Excavators shall use the color white for the pre-marking of the boundaries of a proposed excavation, **except as provided in (g) below.*****
- ***(g) Excavators shall use pink for pre-marking when snow conditions would render white premarking not clearly visible.***

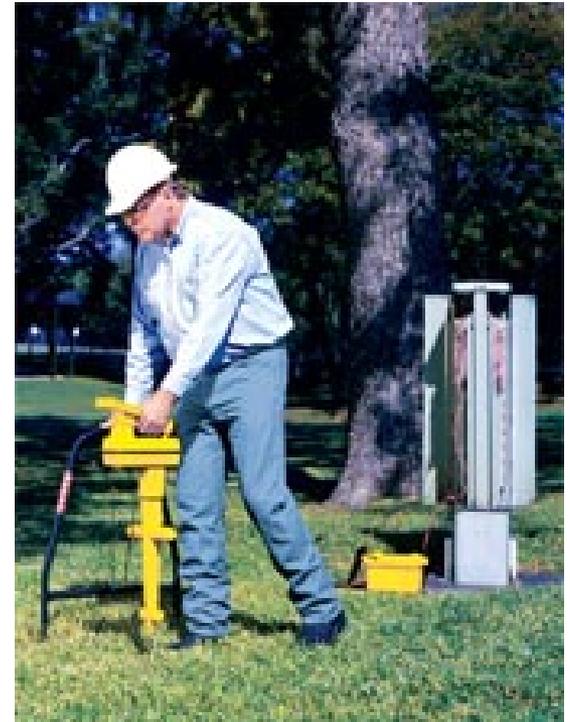


Premarkarking



Marking is not infallible

- Limitations
 - Locators can't find some facilities
 - Locators can't determine depth accurately
 - Records are not reliable
 - The deeper the facility, the less accurate the marks
 - Flags may be moved
 - Marks may have disappeared



The Depth Myth



Utility locators *do not* determine depth.

Don't count on *any* amount of cover.

Depth at Hampton Beach Jan 2005

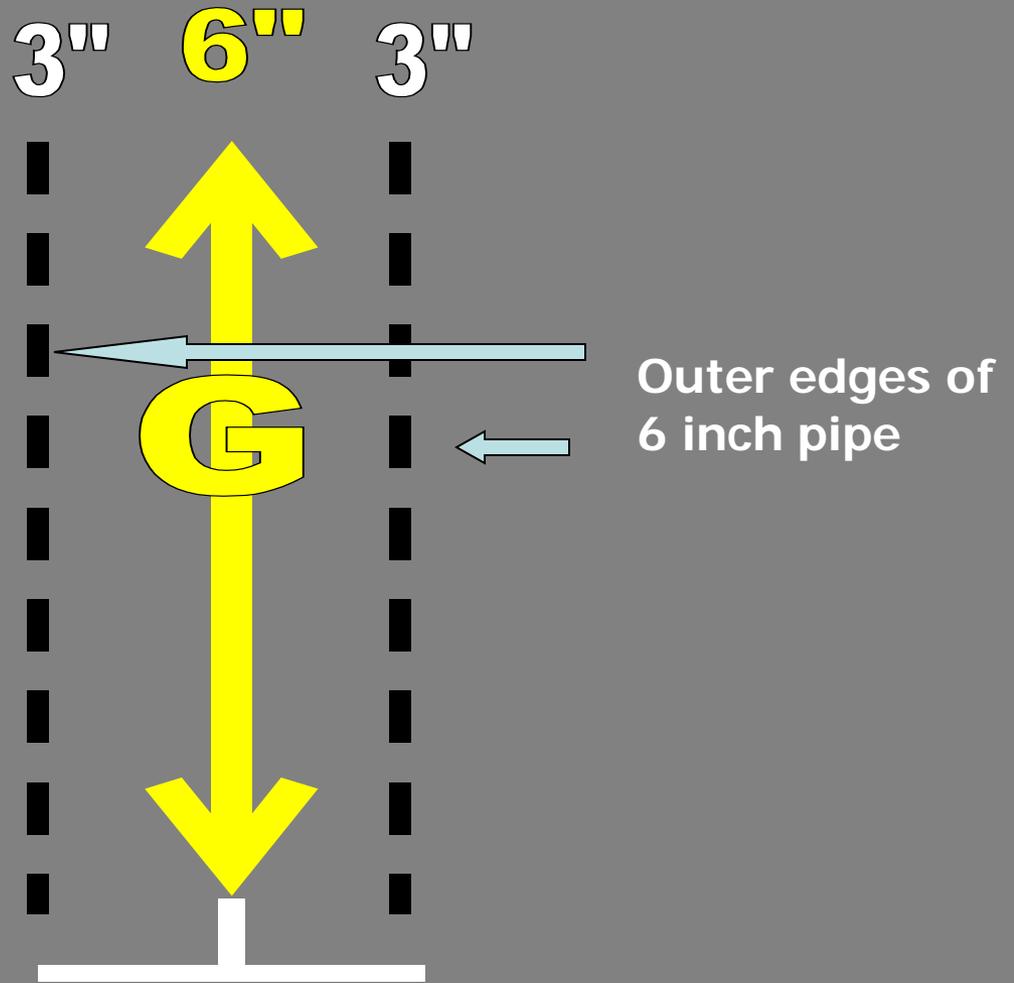


"Center line" Marks

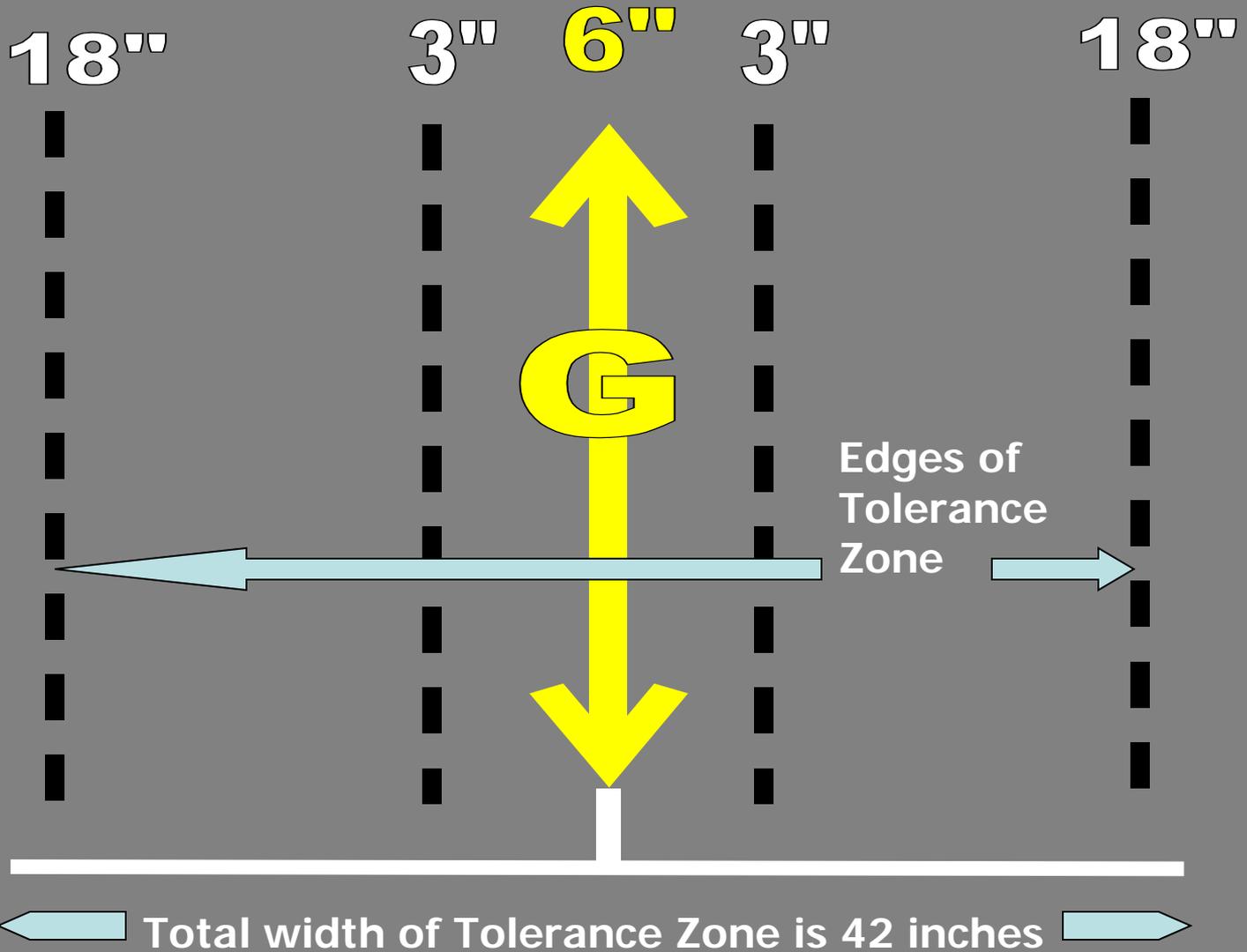
6"



"Center line" Marks

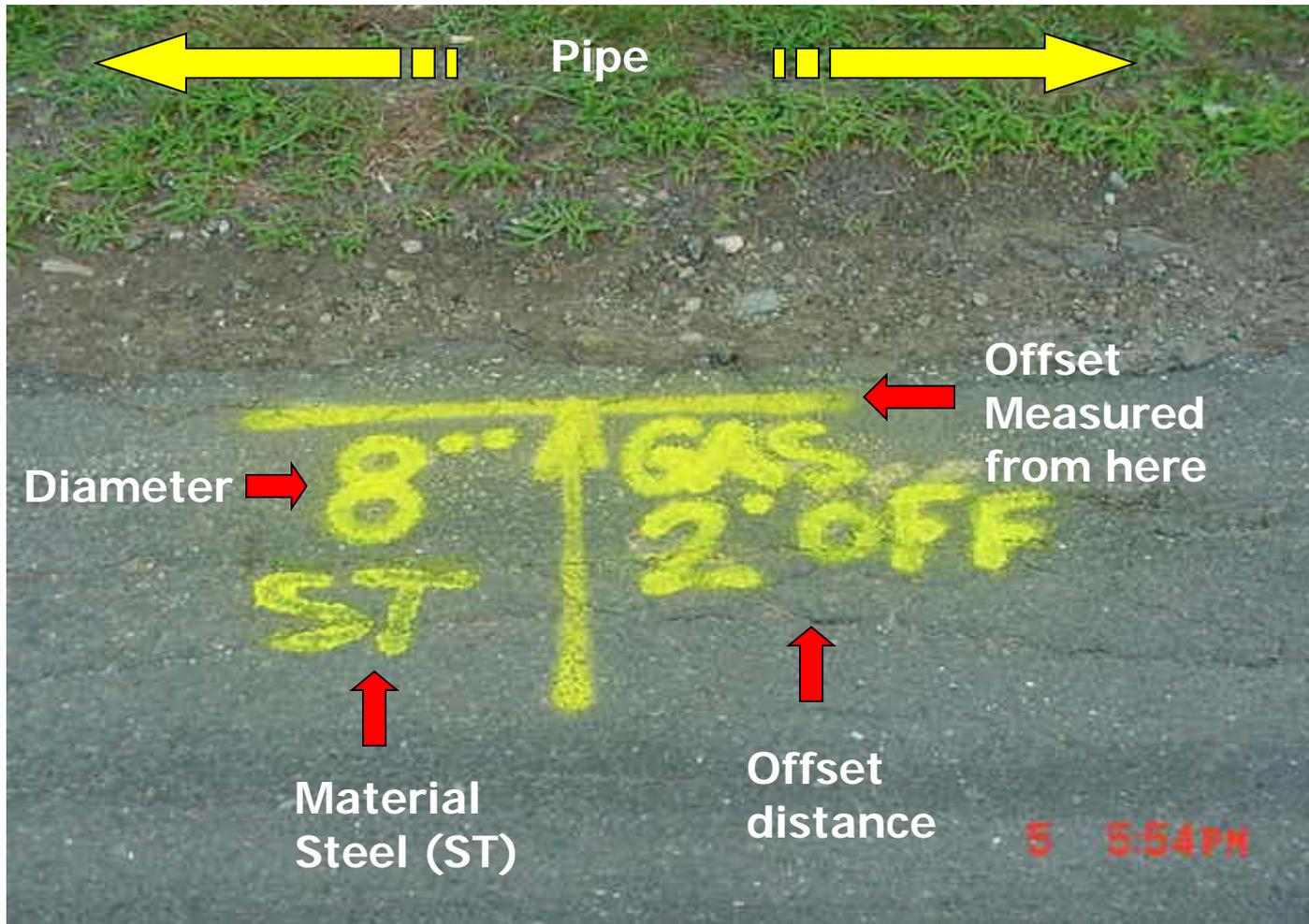


"Center line" Marks

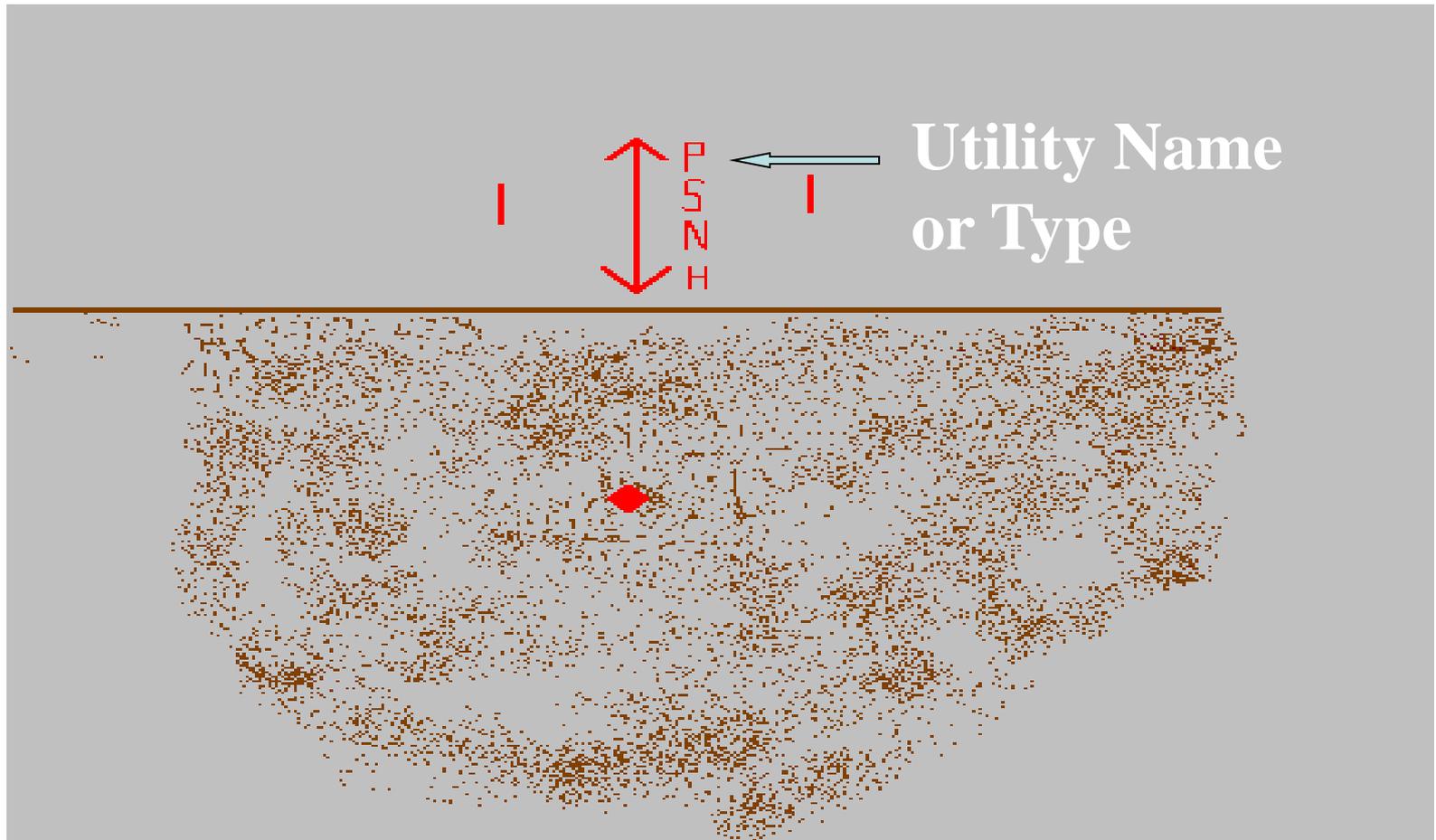


OFFSET GAS MARKING

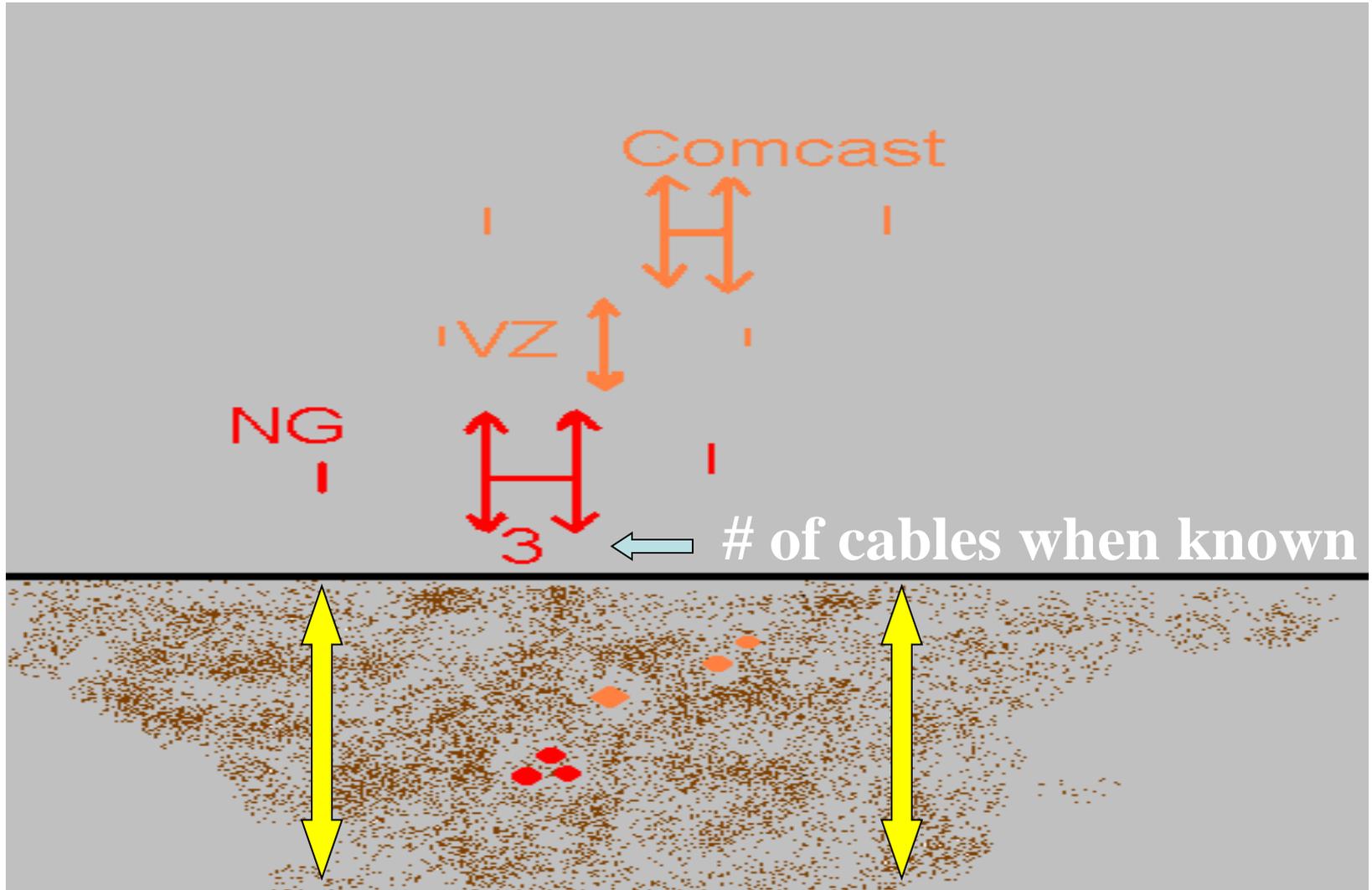
shows 8 inch steel (ST) gas line is located approximately 2 feet from end of arrow.



Single Cable or Wire



Multiple Cables

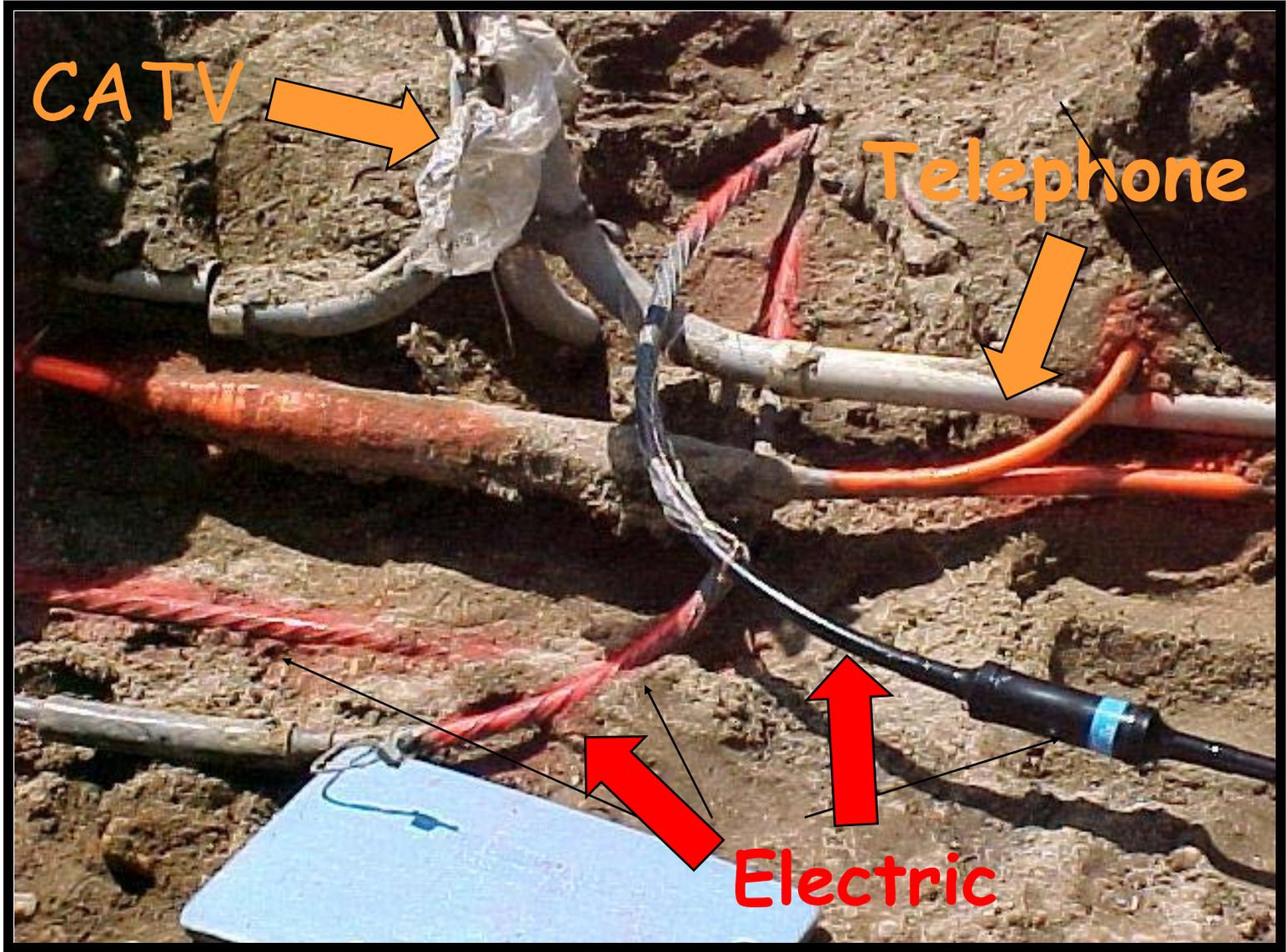


Tolerance Zone Rule

To locate and identify underground facilities, an excavator must hand dig, pot hole, soft dig or vacuum excavate in the *Tolerance Zone* except to remove pavement or with the approval of the underground utility owner or operator.







CATV

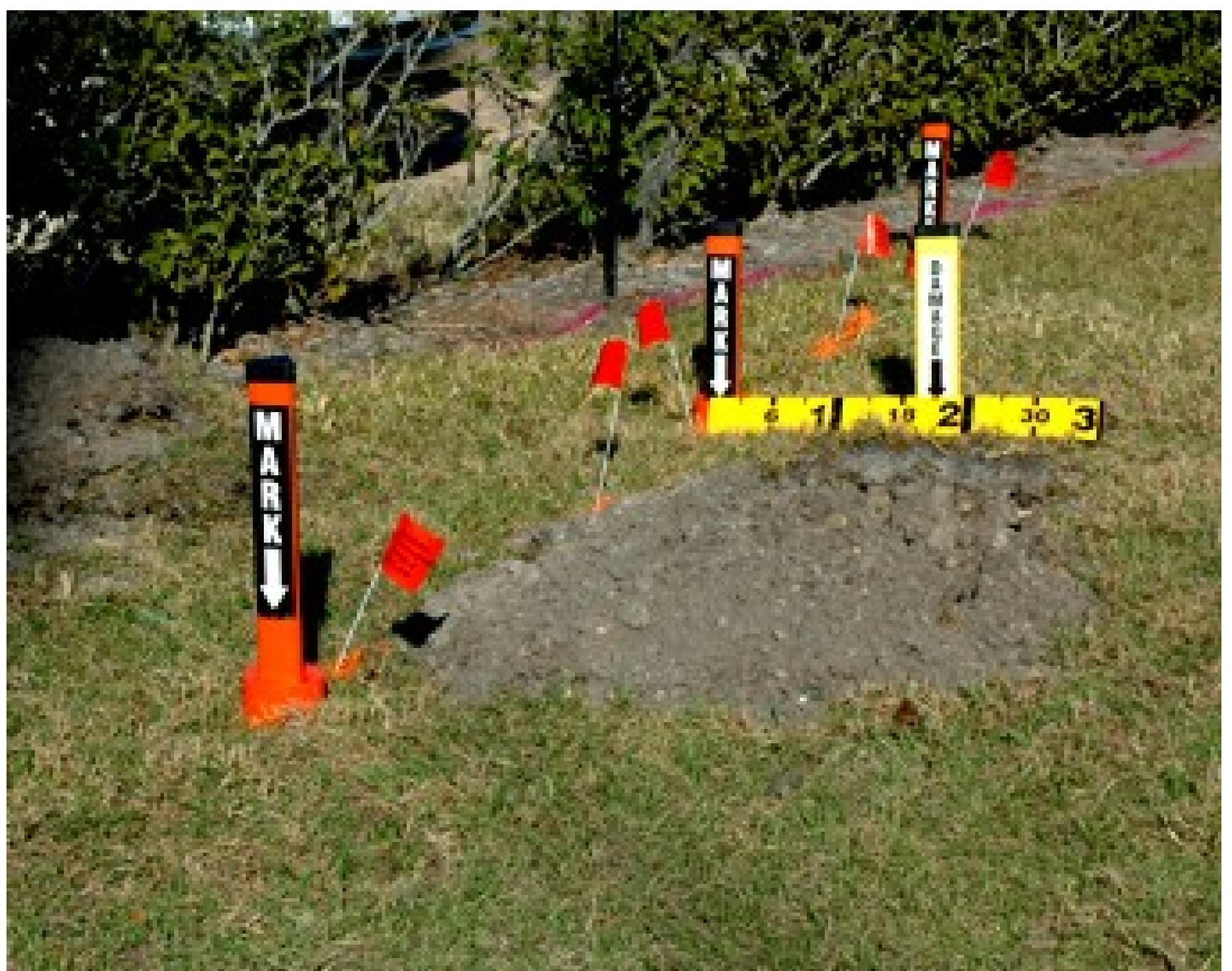


Telephone



Electric







Poor Planning Dig-Ups

ASSUME



ASSUME



Excavator digging a foundation addition.

ASSUME



Owner digging trench in his front yard.



Hampton Beach Hit & Fire





ASSUME



Assume



Don't take unnecessary chances

Thank you and Dig Safely



**Know what's below.
Call before you dig.**