#### **New Jersey Common Ground Alliance**

# A GGA

#### **Damage Prevention Training 2025**

#### Excavator Safety By: New Jersey Utilities







#### **Mission Statement**

The New Jersey Common Ground Alliance (NJCGA) is a member-driven damage prevention council that is comprised of all stakeholders who want to be part of damage prevention. Through shared responsibility among all stakeholders, NJCGA works to reduce damages to New Jersey Infrastructure – ensuring public safety, education, environmental protection, and the integrity of services by promoting effective damage prevention practices.

#### Damage Prevention is a Shared Responsibility



It's the Law!





#### It's The Law & It's Free!

- ➤In New Jersey it's illegal to dig anywhere in the state without first calling for a markout.
- ➤ Calling 811 or 1-800-272-1000 gets your utility lines marked and helps protect you from potential injury and unnecessary expense.
- ➤ Call 1-800-272-1000 when you are outside the state of New Jersey but want to call in for a markout ticket within New Jersey



It's the Law!





## Contact the NJ One Call Center 7 days a week, 24 hours a day, any day of the year.



One Call: 811 or 1-800-272-1000 ITIC & Fax www.nj1-call.org





#### Who Should Call the NJ One Call Center?

"Excavate" or "excavation" or "demolition" means 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

#### Up to and Including:

- ➤ Planting a Tree
- **≻**Mailbox
- > Fencing & Dog Fence
- ➤ Sidewalks, Curbs
- ➤ Moving Dirt
- **≻**Pest Control
- **≻**Sprinkler
- ➤ Stump Removal
- ➤ Roadway/Real Estate Signs

- > Excavation
- ➤ Demolition
- ➤ Road Milling/Paving
- > Paving
- ➤ Driveways
- ➤ Drainage
- > Sewer or Water
- **>** Utility





#### Ways to Call in or Process Markout Requests

#### Call 811 or 1-800-272-1000

>Speak directly with a customer service representative

#### **Remote Entry (ITIC)**

➤ Your company can enter their request using the web service known as ITIC (for "Internet Ticketing"). User will have a secure login using their email address, pass code and training. Please e-mail them at NewJerseyITIC@occinc.com for your pass code.

#### Fax

➤ Using the New Jersey One Call form. See fax locate agreement form and fax form that must be used to submit your request on web site at www.nj1-call.org





#### What Type of Ticket Does the NJ One Call Center Process?

#### **Routine:**

➤ Must wait 3 business days for a markout. Begin digging within 10 business days. Tickets expires in 45 business days.

#### **Update:**

➤ Update your routine ticket and report tickets with no response or mismarked and unmarked facilities.

#### **Emergency:**

Any condition constituting a clear and present danger to life, health or property caused by the escape of any material or substance transported by means of an underground facility or interruption of a vital communication or public service that requires immediate action.





#### TIMEFRAME MATRIX

MON.	TUES.	WED.	THUR.	FRI.	SAT.	SUN.	MON.	TUES.	WED.	THUR.	FRI.
CALL-	MARKOUT	MARKOUT	MARKOUT	DIG							
	CALL-	MARKOUT	MARKOUT	MARKOUT	DIG						
		CALL-	MARKOUT	MARKOUT	*	*	MARKOUT	DIG			
			CALL-	MARKOUT	*	*	MARKOUT	MARKOUT	DIG		
				CALL-	*	*	MARKOUT	MARKOUT	MARKOUT	DIG	
					CALL-	CALL-	CALL-	MARKOUT	MARKOUT	MARKOUT	DIG
					*	CALL-	CALL-	MARKOUT	MARKOUT	MARKOUT	DIG
CALL-	MARKOUT	HOLIDAY ★	MARKOUT	MARKOUT	DIG						
	CALL-	MARKOUT	HOLIDAY*	MARKOUT	*	*	MARKOUT	DIG			

CALL- Start of the 10 Day time frame

DIG 7 Business days to start job

Saturday, Sunday and Holidays

- \* Contractors option to dig on Saturday, Sunday or Holiday once ticket is valid
- ★ Saturday, Sunday and Holidays do not count in three business days allowed for markout
- Any request received at One-Call Center on a Saturday, Sunday or Holiday is considered requested the next business day

#### **New Jersey State Holidays**

- New Year's Day
- Martin Luther King Jr.
- President's Day
- Good Friday
- Memorial Day
- Juneteenth
- Independence Day
- Labor Day
- Columbus Day
- Election Day
- Veteran's Day
- Thanksgiving Day
- Christmas Day





#### Before Contacting the NJ One Call Center:

- 1. County
- 2. Municipality
- 3. Address
- 4. Nearest Intersection
- 5. Other Intersection
- 6. Type of Work
- 7. Extent of Work
- 8. White Painted Area
- 9. Who are you working for
- 10. Excavator or Homeowner's Information







Transmit: Date: 01/17/24 At: 12:39 \*\*\* R O U T I N E \*\*\* Request No.: 240171132 Underground Facility Operators Notified: AE2 = ATLANTIC CITY ELECTRIC CO BAN = VERIZON CC1 = COMCAST CABLEVISION OF GL GCU = GLOUCESTER COUNTY UTILITI MON = MONROE MUNICIPAL UTILITIE SJG = SOUTH JERSEY GAS COMPANY Start Date/Time: 01/23/24 At 00:15 Start By Date: 01/31/24 Expiration Date: 03/21/24 Location Information: County: GLOUCESTER Municipality: MONROE Subdivision/Community: Street: 705 SHERWOOD DR Nearest Intersection: MAIDSTONE DR Other Intersection: IRONWOOD DR Lat/Lon: Type of Work: REPAIR GAS SERVICE Block: Lot: Depth: 5FT Extent of Work: CURB TO CURB. CURB TO ENTIRE PROPERTY. CURB TO 20FT BEHIND OPPOSITE CURB. Remarks: Working For Contact: Working For: Address: City: Phone: **Excavator Information:** Caller: Phone:

## NJ One Call Markout Ticket





Excavator:
Address:
City:
Phone:

#### **Positive Response**

Once the facility operator or locating company performs the locate, you will receive a positive response to the email address given during the initial call. This notification will let you know what facilities are marked or cleared and will also show you who has not responded as of the email or fax date. On Emergencies you will see a new <u>Dispatched</u> feature. Remember you still will not be able to dig until your start dig date.

Ticket Number:230030728

Location: 100 US HWY 1, WOODBRIDGE, NJ

As of 01/02/23 9:00 AM EST, participating facility owners have responded to Ticket

Check as follows:

District Code Status

VERIZON Clear/No conflict

PENTA COMMUNICATIONS Marked

MCI = MCI Not yet responded AGT = ALGON/TEXAS EASTERN GAS Not yet responded

EG1 = ELIZABETHTOWN GAS Dispatched (Emergencies only)





## What Do the Colors Mean?







#### **Things to Know:**

- ➤ Call 3 business days ahead, but not more than 10 business days
- ➤ All excavators must have their own markout request
- ➤ Must provide physical location of dig site not postal address
- >Excavators must verify their location, dig date and have copy of request (ticket) on site
- Excavation must begin within 10 business days or request (ticket) is no longer valid
- Excavator must protect and preserve marks until no longer necessary

Can not use an update ticket to refresh marks, must call in for a new ticket.





#### Things to Know:

- ➤ Plan the excavation or demolition with reasonable care to avoid damages
- >Support and protect facilities from traffic and other hazards
- > Request (ticket) expires in 45 business days
- ➤If your project will extend past 45 business days, you must call for a new markout for the project to continue

Call for a new ticket on the 40<sup>th</sup> day





#### **Contractor Digging With Out Calling 811**







#### QUIZ!

How many days after calling 811 to request a utility markout can you start digging?

3 BUSINESS Days

If you see marks on the ground, do you still need to call 811? Yes, all excavators need their own VALID markout request.

What color are the water markouts?

Blue





#### Who Marks the Lines?

>The utility companies are responsible to mark out their facilities or lines

➤ Often, they will hire a third party to do their markouts

➤ Privately owned facilities (after the meter) are the responsibility of the property owner







#### **How Lines are Marked**



1. Paint

2.Flags





3. Whiskers

4.Stakes







#### Flag Standards N.J.A.C. 14.2-5.2







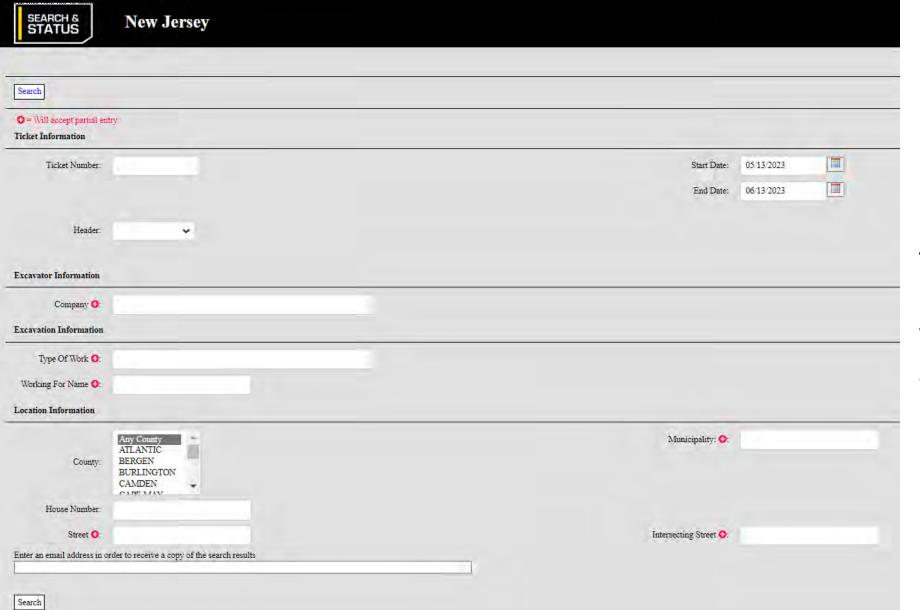




#### NJ ONECALL NEW QR CODE







Search for any One Call ticket called in. Not all lines need to be filled in, you can just search by street and town. Date range must be used.





#### **Search Results**

Request #	Type	Call Date & Time	Company	Addr	Street	Municipality/Town
231323154	ITIC2.0	05/12/23 20:05:28	BROTHERS CONTRERAS, LLC	2193	HARBOUR DR	PALMYRA
231330010	Phone	05/13/23 06:35:37	ROOT 24	46	MADISON AVE	MOUNT HOLLY
231330035	ITIC2.0	05/13/23 07:43:39	WHITTENDALE EXCAVATING		FORRESTAL DR	EDGEWATER PARK
231330054	Phone	05/13/23 08:16:23	JJ KELLY SERVICES	105	SWEDES RUN DR	DELRAN
231330077	Phone	05/13/23 09:29:44	PSE&G	11	BON AIR DR	EVESHAM
231330107	Phone	05/13/23 10:24:52	AUGUSTINE RIGINOS	3	MADISON CT	EVESHAM
231330150	Phone	05/13/23 11:33:37	ORKIN PEST CONTROL	45	WHITE PINE RD	CHESTERFIELD
231330169	Phone	05/13/23 12:11:02	LIGHTCAP ELECTRIC	6	S POPLAR AVE	MAPLE SHADE
231330170	Phone	05/13/23 12:11:06	ERICSON'S PLUMBING LLC	27	MIDVALE LN	WILLINGBORO
231330180	Phone	05/13/23 12:18:55	ROOT 24	215	TAYLOR ST	RIVERSIDE
231330190	Phone	05/13/23 12:31:39	SAMEER ZAKI	15	BLOOMER DR	BURLINGTON TWP
231330218	Phone	05/13/23 13:26:49	DOUG ODELL LANDSCAPING LLC	11.	JENNINGS RD	MEDFORD





#### **Unmarked Lines and What to Do**

## What should I do if there are visible signs that a utility is in my work area, and it was not marked?

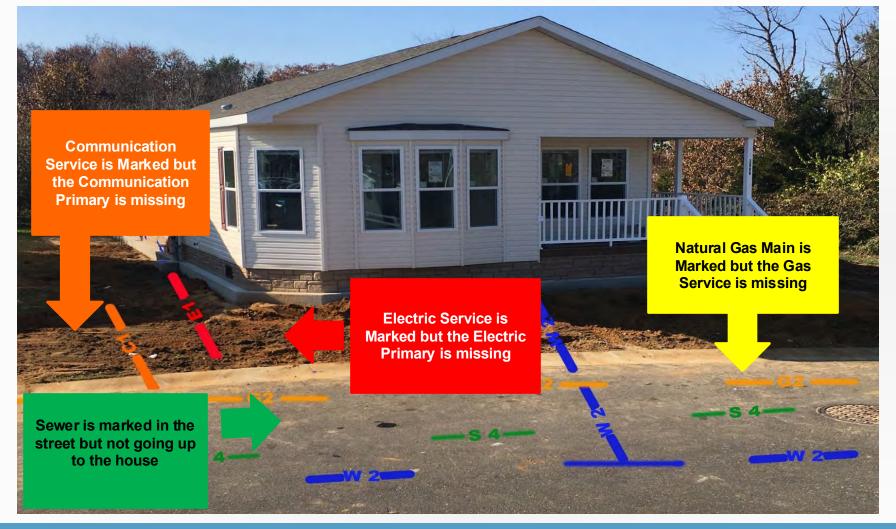
➤ Call the NJ One Call Center with your original ticket number and advise the customer service representative of the company that did not mark out.







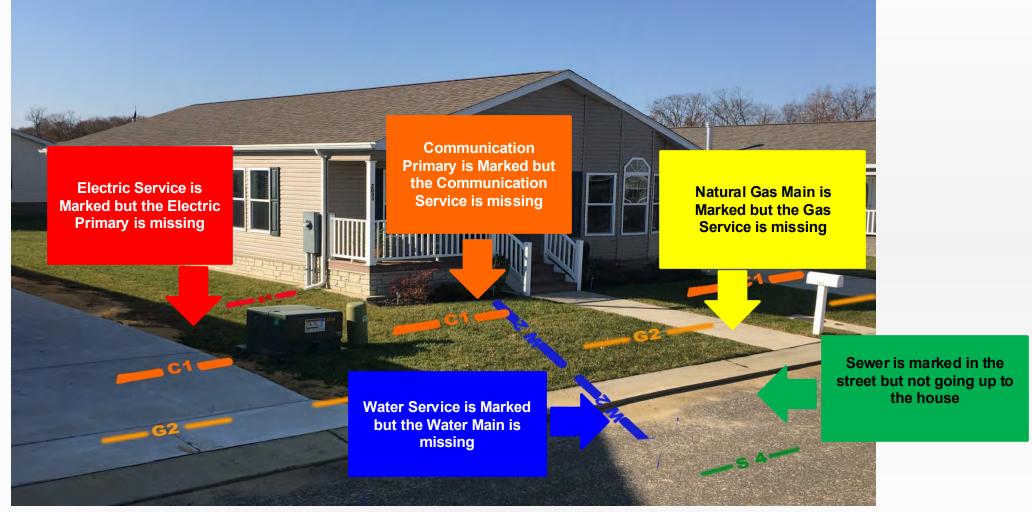
## What's Missing? Ticket for curb to curb and curb to entire property







## What's Missing? Ticket for curb to curb and curb to entire property



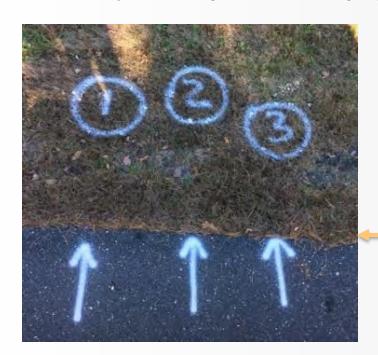


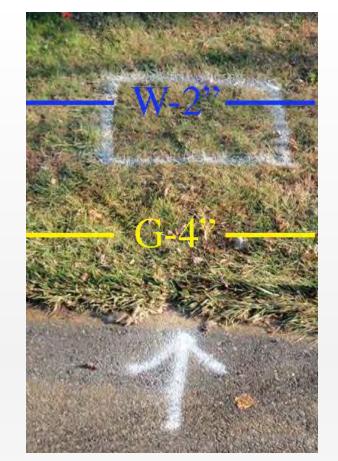


#### **White Paint Area**

#### N.J.S.A. 14:2-3.2 Notice of intent to excavate – contents, perimeter marking

(c) Where appropriate to clearly identify the site of a planned excavation or demolition, an excavator or responsible contractor may choose to mark the perimeter of the site in white, prior to notifying the One Call Center. White perimeter marking is encouraged in order to minimize unnecessary marking and locating by the underground facility operators.





**For example** – use marking to indicate small sites, nonlinear excavations, and spot excavations such as a soil borings, mailboxes, signposts, or tree planting.





Contractor called in for an area marked in white with his One Call ticket. The perimeter of the area marked in white was marked but Contractor worked outside that scope. Since this was a School and the size of the project, Excavator should have called in the entire property.

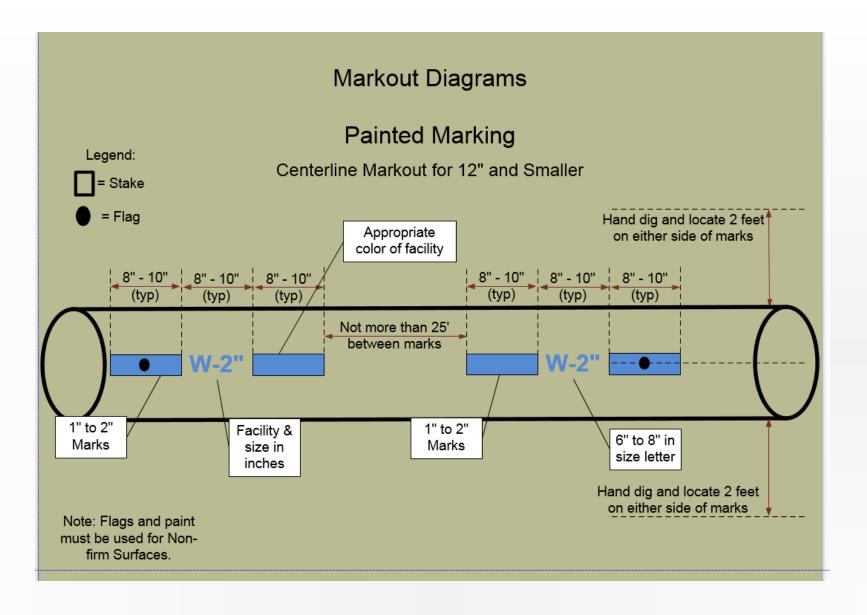






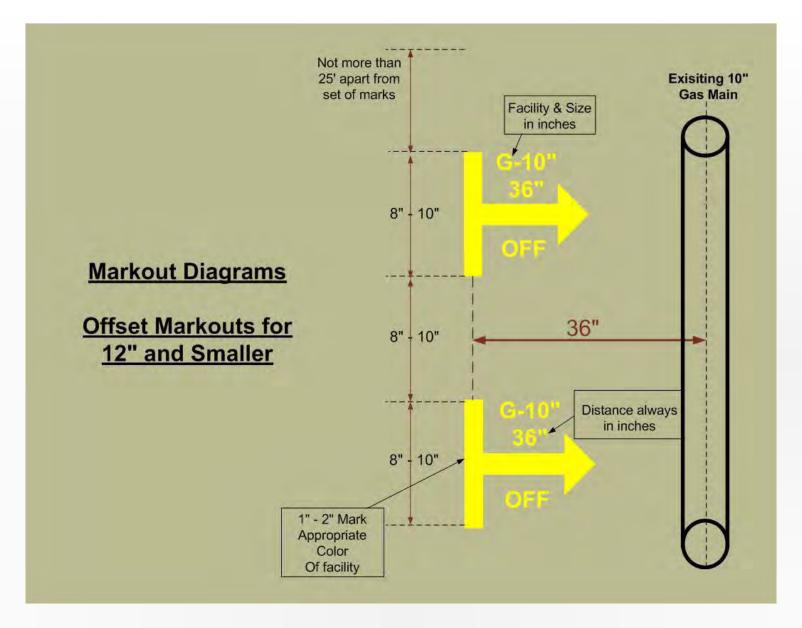
### **Marking Standards**





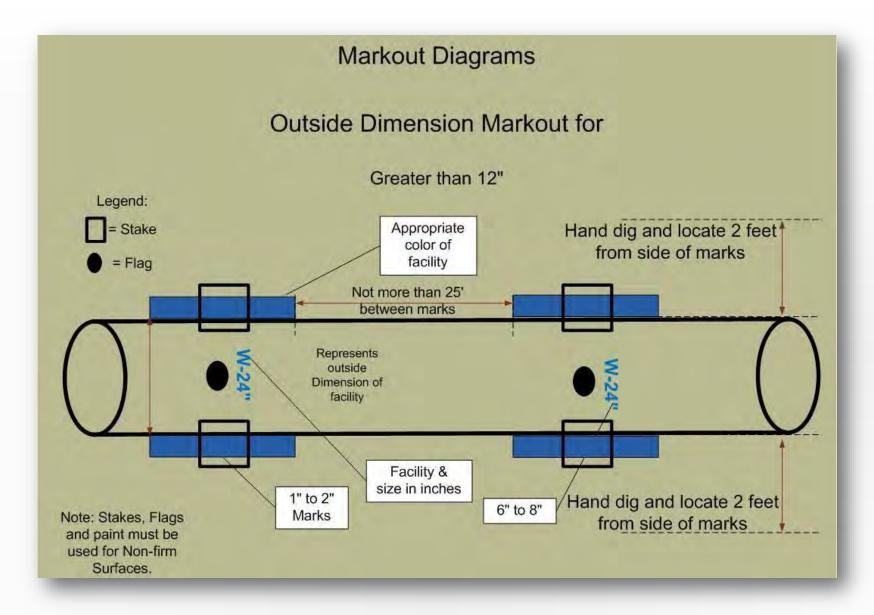






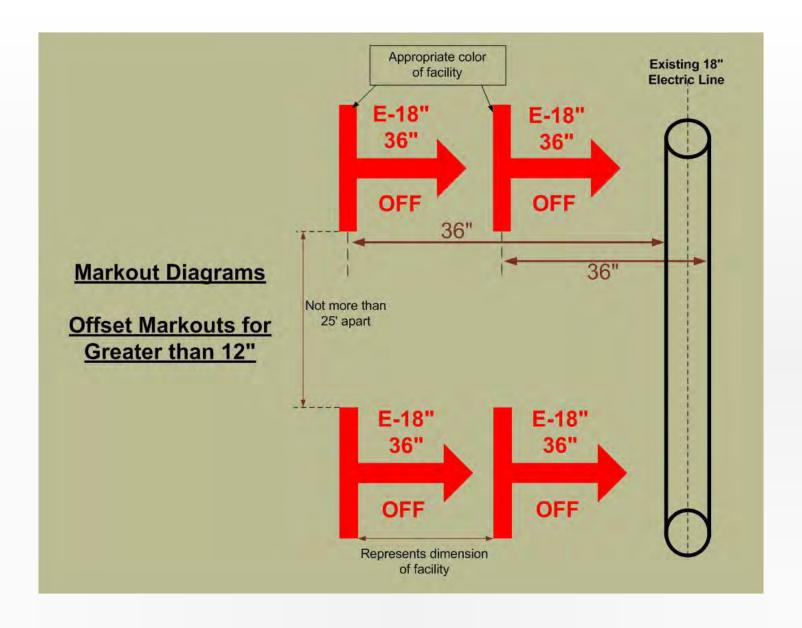
















#### **Infrastructure Material**

ABS	Acrylonitrile - Butadiene - Styrene
ACP	Asbestos Cement Pipe
CI	Cast Iron
CMC	Cement Mortar Coated

Markouts shall include the type of outer infrastructure material, where known or reasonably estimated, using the following letter designation codes. Composition codes are to appear once per linear markout or every time there is a change in diameter or composition.

CML.	Cement Mortar Lined	PLA	Plastic (conduit or pipe)	
CMP	Corrugated Metal Pipe	RCB	Reinforced Concrete Box	
CPP	Corrugated Plastic Pipe	RCP	Reinforced Concrete Pipe	
CU	Copper	RF	Reinforced Fiberglass	
CWD	Creosote Wood Duct	SCCP	Steel Cylinder Concrete Pipe	
HDPE	High Density Polyethylene	STL	Steel	
MTD	TD Multiple Tile Duct		Virtrified Clay Pipe	





#### **Material Type With Markout**

#### **Straight-line**



#### **Change in Direction**









#### **Change in Material Type**





### **Outside Dimension Markout**

**Straight-Line** 



**Change in Direction** 







### **High Profile Infrastructure Markers**











#### Damage to a High-Pressure Gas Main

On June 7, 2010, at 2:40 p.m., a **truck-mounted power auger** operated by C&H Power Line Construction (C&H) **struck and punctured a 36-inch-diameter natural gas transmission pipeline** operated by Enterprise Products Operating, LLC (Enterprise). C&H, a contractor working for Brazos Electric (Brazos), was using the auger truck to dig holes for the installation of new electric service utility poles. The natural gas ignited and **killed the auger operator and burned six workers**, who were transported to a nearby hospital for treatment. The pipeline had a maximum allowable operating pressure (MAOP) of 1,051 pounds per square inch, gauge (psig) and was operating at 950 psig at the time of the accident. **Total property damage and clean-up costs were estimated to be \$1,029,000**.









#### **Excavator Responsibilities to Ensure Public Safety**

#### Take the following actions:

- ➤ Hand dig within two feet of the marks to locate facilities
- ➤ With open trench and during backfilling operations, facilities must be supported and protected from damage
- Immediately report damages to natural gas, liquid petroleum or any hazardous liquid facilities to 911
- ➤In addition, all damages to facilities must be reported to facility operator and/or NJ1Call 811





## **CALL 911!**

If a Homeowner or Excavator causes or discovers any damage to pipes carrying natural gas, liquid petroleum or any hazardous liquid: Follow below steps

- 1. Call 911
- 2. Report damage to underground facility operator
- 3. Call 811 or 1-800-272-1000 the NJ One Call Center.

## It's The Law!

N.J.A.C. 14:2-3.6





### <u>Underground Facilities:</u> <u>One Call Damage Prevention System</u>

Underground facility operator, responsibilities; underground facility markings

N.J.A.C. 14:2-4.4 G

Each operator of an underground facility that handles natural gas or hazardous liquids shall submit a "hits report" listing any damage, emergency or One Call incident involving the operator's natural gas or hazardous liquids facilities. The report shall be submitted to the Board by the close of business on Tuesday of the week following any two-week period in which any such damage, emergency or One Call incident has occurred.





#### **Supporting Facilities**

- Facilities that are exposed or in the dig area must be supported and protected
- Shoring or shielding to keep soil from caving in or collapsing should be used to protect the facilities
- ➤ Good backfill practices and proper compaction are required to ensure underground facilities are not damaged as soil settles.
- If underground facilities are undermined during excavation, soil above the facilities should be removed to reduce the weight on the facility.
- At all times throughout the course of an excavation or demolition, an excavator shall also provide adequate physical support of all underground facilities on the site.



➤N.J.A.C 14:2-3.3(b)





#### **Hand Digging**

Excavators must hand dig and locate facilities within 24 inches of marks before operation of any mechanized equipment





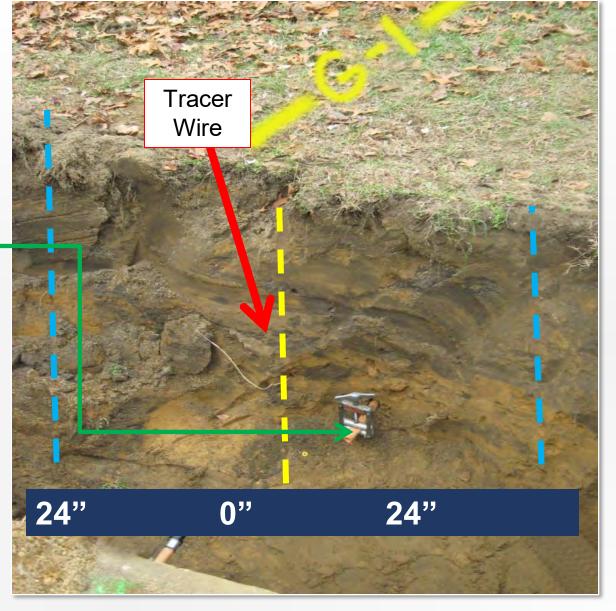




# Reason for Hand Digging

#### **Gas line**

- Markout paint = 0"
- Hand dig with care area
   =24" each side of the outer wall of the facility



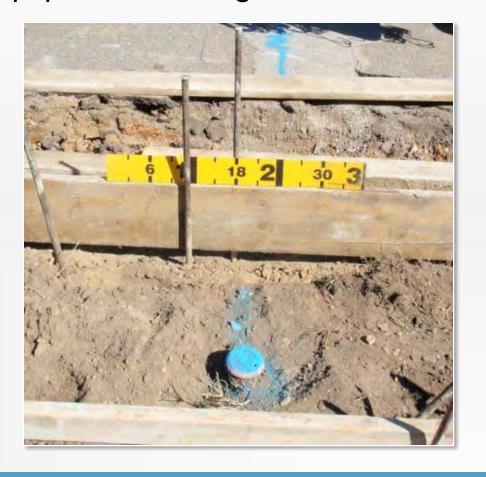




#### **Hand Dig and Locate Within 2 Feet**

2' Tolerance zone is not just for large mechanized equipment. It is also for all hand tools and smaller mechanized equipment like augers









#### QUIZ!

➤ True or False: Facilities only need to be supported in the beginning of an excavation?

False! Facilities must be supported and protected from damage throughout the course of the excavation

True or False: Once a gas facility has been damaged, the excavator must notify the facility operator first.

False! The excavator's first call must be to 911.

➤ True or False: It is a suggestion to hand dig and locate facilities within 24 inches of marks before operation of any mechanized equipment

False! It is the law.





#### **Trenchless Technology**

- ➤ Dig Test Holes and verify facility locations when using trenchless technology (drills, pneumatic moles, etc.)
- ➤ Utilities which are being crossed must be exposed during drilling and pullback operations
- ➤ When drilling parallel to a facility, test holes should be made every 25 feet or so to verify location

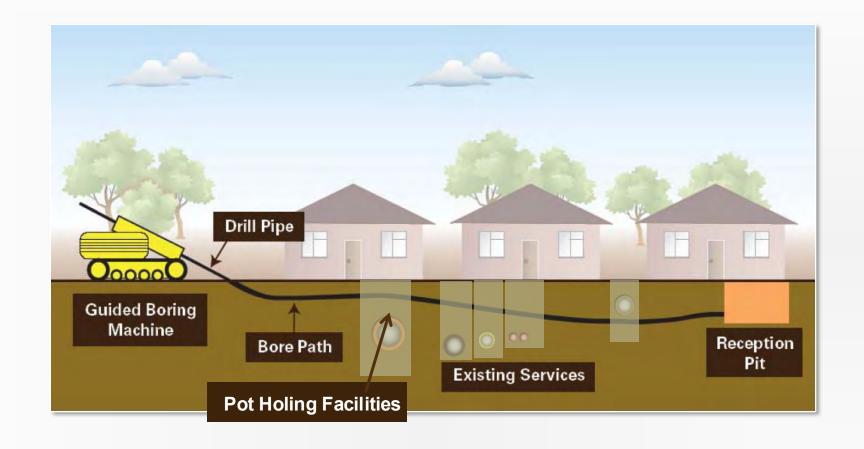








## **Trenchless Technology**







#### What is a Cross Bore?

The unintended installation of a utility line by trenchless construction methods which damages an existing utility.

These unintended pipe intersections might go undetected for YEARS without causing a problem.



Drill









Mole





#### Gas Pipe Bored Through a Sewer

- ➤ Can go undetected for decades
- > Resulting blockages can be easily mistaken for roots
- ➤Gas cross bore breach can quickly fill a house with gas (minutes)
- ➤ Call Local Utility Company



Blockage



Common Fix



Possible Result





#### Gas Pipe Bored Through a Sewer

September 2015, Waxahachie, Texas







#### What if You Suspect a Gas Leak

## Remember the three important signs to identify a potential gas leak – Look, Listen & Smell:

- ➤ LOOK for dirt blowing into the air, persistent bubbling in standing water or discolored or dead vegetation around the pipeline area.
- ➤ LISTEN for any unusual hissing or roaring sound.
- ➤SMELL an odor that smells like rotten eggs. It's important to note that we should not rely on our sense of smell alone to detect a leak. Odorant fade, or loss of odorant, can occur in natural gas piping.





#### What to Do if You Smell Gas

- ➤ Immediately Call 911 and the local gas company
- >Stop work and evacuate the area
- ➤ Safely shut down equipment within the immediate area
- ➤ Do not create a spark or ignition source
- ➤If the gas leak is at or near a building foundation, consider evacuating the building
- >Do not attempt to extinguish a natural gas fire
- >Do not try and fix the damaged facility
- ▶ Do not shut off valves for any reason





### **Altered and Damaged Pipe**













#### **Properties of Electricity**

#### **Current Flow Effect**

- ➤ A 7.5-Watt lamp operating at 120 volts draws 62.5 milliamp (mA) of current flow (Christmas Tree Bulb)
- ➤ Milliamp (mA) = 1/1000 Ampere

1 – 5 mA	Tingle
5 – 10 mA	Shock
10 – 50 mA	Painful Shock
OVER 50 mA	Loss of Muscle Control, Loss of Breathing, and Heart Functions, and Possible Fatal Shock





# What to Do When Electric Facilities are Exposed or Damaged

- Immediately call the facility operator and NJ1Call, and stop work
- >Warn all persons that the ground and any object near the dig area may be energized
- > Excavation operator should remain on the mechanized equipment









## What to Do When Electric Facilities are Exposed or Damaged

- ➤Do not touch the excavating equipment, structures or materials near the point of contact
- ➤Do not resume work or evacuate excavating equipment until the facility operator has deemed the area safe

➤If immediate evacuation from the excavating equipment is required – jump, do not step, clear of the

equipment and land on both feet

➤ Move a safe distance away (+25 feet) using short hops or shuffling steps- do not take normal walking steps

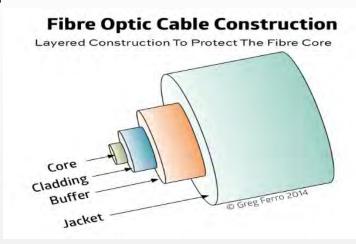


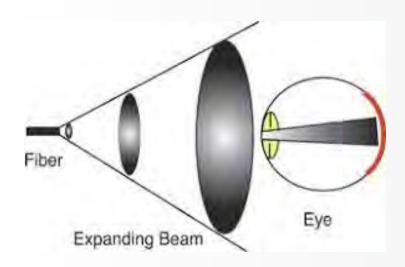




#### What to Do When Fiber Optic Facilities are Exposed or Damaged

- ➤ A beam of infrared laser light travels through a glass fiber at the core of the cable.
- > Telecommunications lasers are not strong enough to damage skin or material.





- Lasers can cause damage to the eyes if handled carelessly.
- Infrared lasers aren't visible to the naked eye and do not trigger the natural reflex to blink or to look away.
- > NEVER LOOK DIRECTLY INTO THE FIBER
- ➤ If a fiber is damaged, stop work immediately, secure the site, call 811 and/or the utility owner designated to the ticket.
- Fiber optics damages are expensive to repair





# What to Do if You Damage Water or Sewer Facilities

- ➤ Immediately call the facility operator and NJ One Call
- >Stop work and evacuate the area; leaking water can quickly fill and collapse a trench
- ➤ Move carefully around trenches with wet walls
- ➤ Do not operate or close valves to stop flooding
- ➤ Be careful of leaking high pressure water lines
- > Sewer gas is flammable; do not create an ignition source
- ➤ Avoid contact with sewer wastewater
- ➤ Do not try and fix the damaged facility







#### What to Do if You Damage Communication Facilities

- ➤ Immediately call the facility operator and NJ One Call 811
- ➤ Stop work immediately and secure the area
- ➤ Do not view or stare into broken or severed fiber optic cables
- ➤ Do not attempt to handle cables as they may be in contact with a power cable







#### **Utility Damages**

#### **Societal Impacts**

- ➤ Potential loss of life and property damage (public, excavators and first responders)
- ➤ Loss of service, potentially to critical facilities
- ➤ Evacuation of structures
- ➤ Disruption to travel (motor vehicles, buses, trains)
- ➤ First Responder (costs and time)
- ➤ Construction delays

#### If You Do Not Call:

- ➤ You do not know what is underground, which places life, health and property at risk
- ➤ You are in violation of state and federal law subject to civil and criminal penalties
- ➤ You will be held 100% liable for damages and lost revenue to damaged facilities





## **QUIZ!**

➤ What is the unintended installation of a utility line by trenchless construction methods which damages an existing utility?

Answer: A Cross Bore

➤ What are the three ways you can detect a gas leak?

Answer: See, Smell, Hear

➤ True or False: Sources of ignition are safe in the presence of Sewer Gas?

Answer: False! Sewer gas is flammable





## Settlement Update

Starting January 1<sup>st</sup>, 2025





#### January 2025

- ➤ The updated Settlement Guide offers will go into effect January 1, 2025. The lookback will only be from that date going forward.
- ➤ Education will be conducted through the contracted One Call Operator. Staff is working to increase sessions and allow for remote attendance on demand.
- Staff is available to answer questions regarding this roll out and welcomes feedback that will reduce violations as well as efforts that make the industry safer.

A **Combined Effort** is needed to reduce damages and increase compliance with the UFPA. Although zero violations may be difficult to achieve this is our goal. Increasing awareness, increasing education and penalties that are settled on matching the violation will help achieve the goal.





#### Non-Gas Damage Settlement Offer

Offenses	First Offense	Second Offense	More Than 8
811 called never in the system	Warning	\$2,500 + Education	\$2,500*
811 called not first offense	\$1,000	\$2,500 + Education	\$2,500*
811 not called	\$2,500	\$2,500 + Education	\$2,500*
Operator Mismark	\$2,500	\$2,500	

<sup>\*</sup> An analysis of tickets called in to damages will take place for potential further action based upon high hit ratios.





#### **Gas Violation Settlement Offer**

Gas Damage	First Offense	Second Offense	More Than 8
811 Called	\$4,000	\$5,000	\$10,000*
811 Not Called	\$5,000 + Education	\$7,500 + Re-Education	\$20,000*
Hand Digging	\$4,000	\$5,000 + Education	\$10,000*
Mechanized Digging	\$5,000	\$7,500 + Education	\$20,000*
Operator Mismark	\$4,000	\$5,000	
Did Not Call 911	\$20,000 + Education	\$50,000 + Education	

<sup>\*</sup> An analysis of the ratio of tickets called in to damages will occur. The fine will not increase for those with a high number of tickets called in in relationship to the damages that occur.





#### **Contact New Jersey One Call Center**

New Jersey One Call Center 1 Corporate Place South, Suite 150 Piscataway, NJ 08854

www.nj1-call.org

Admin Office: 732.394.3000

Admin Fax: 732.394.3007

Markout Toll Free: 811 or 800.272.1000

Email: newjersey@occinc.com





#### **Links For More Information**

Atlantic City Electric	www.atlanticcityelectric.com	
Elizabethtown Gas	www.elizabethtowngas.com	
Jersey Central Power and Light Corporation	www.firstenergycorp.com	
New Jersey Natural Gas	www.njng.com	
Public Service Electric and Gas	www.pseg.com	
South Jersey Gas	www.southjerseygas.com	
United Water New Jersey	www.unitedwater.com	
New Jersey One Call Center	www.nj1-call.org	
New Jersey Board of Public Utilities	www.bpu.state.nj.us	
Common Ground Alliance	www.commongroundalliance.com	
New Jersey Common Ground Alliance	www.njcga.com	
PHMSA Pipeline Safety Program	www.phmsa.dot.gov	
OSHA	www.osha.gov	





#### **Questions, Comments or Concerns?**





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



