

New Hampshire Underground Damage Prevention Program



Presented by Bryan Connelly

Overview of the Underground Damage Prevention Course

The purpose of this course is to mitigate damage to underground facilities while protecting the public, operators, and excavators from harm.

- Department of Energy, Enforcement Division

- The Importance of a Dig Safe Ticket

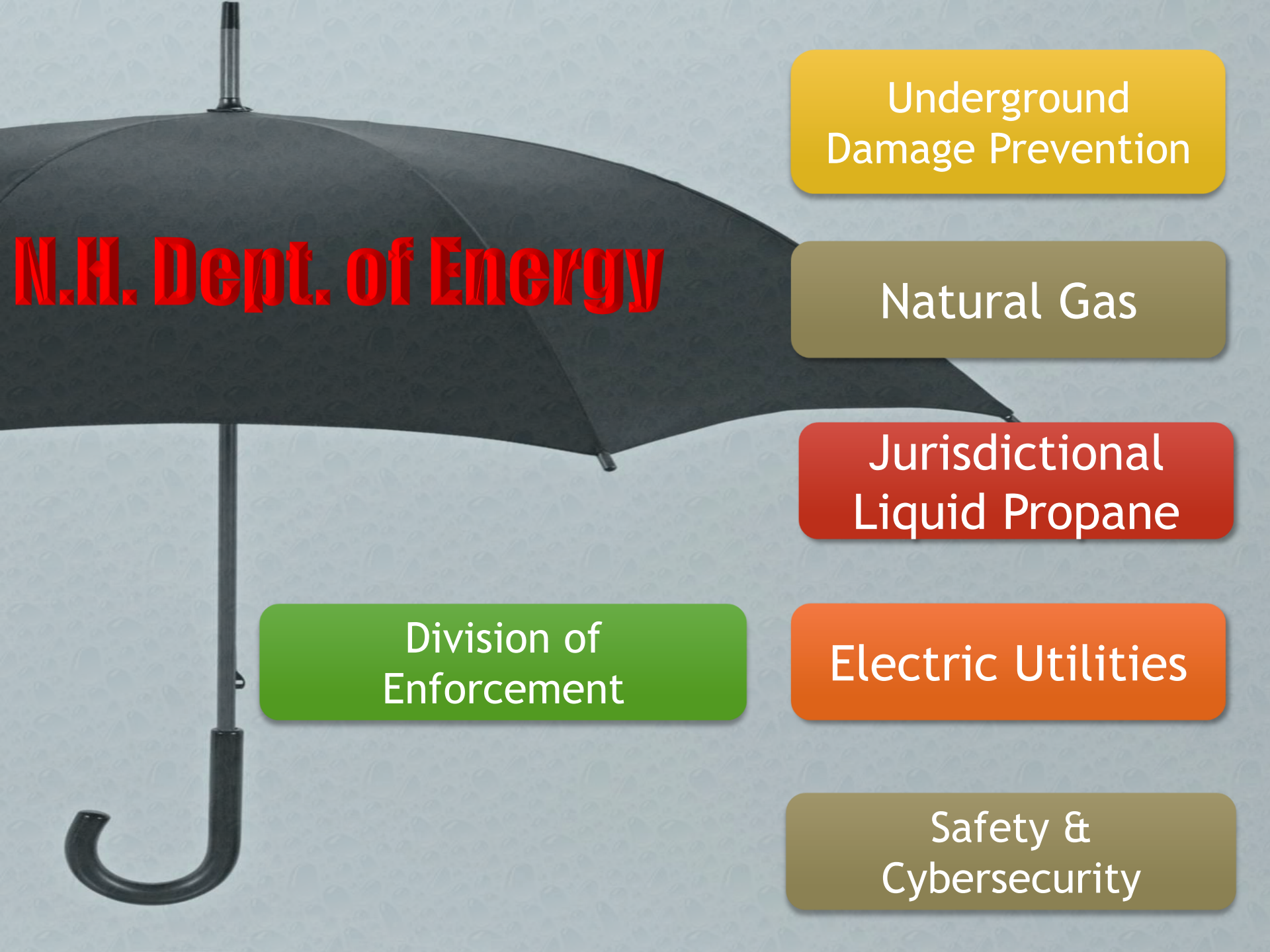
- Laws and Rules Say

- Premarking and Marking Standards

- Tolerance Zone

- What to do if you damage an underground facility

- Keys to a Safe Dig



N.H. Dept. of Energy

Underground
Damage Prevention

Natural Gas

Jurisdictional
Liquid Propane

Division of
Enforcement

Electric Utilities

Safety &
Cybersecurity

Ways to Communicate

<https://www.energy.nh.gov/>



New Hampshire
Department of Energy



Home Consumers Utilities & Providers Renewable Energy Energy Information

Enforcement

Rules and Regulatory

- > Underground Damage Prevention
- > Pipeline Safety
- > Electrical Safety and Reliability
- > Emergency Preparedness and Emergency Response
- > Physical and Cyber Security
- > Engineering, GIS and Other Support

How Can We Help You Today?

I am looking to

select an option



Welcome

The Department of Energy was established effective July 1, 2021. It was created by the NH legislature to promote and coordinate energy policies and programs in the state. The Public Utilities Commission, Site Evaluation Committee, Office of Consumer Advocate and the Energy Efficiency & Sustainable Energy Board are administratively attached.

<https://www.nh.gov/energy-environment/underground-damage-prevention/violations-penalties>



Overview



Violations & Penalties



Education & Training

Form 8NU-0401
NEW HAMPSHIRE DEPARTMENT OF ENERGY
REPORT OF PROBABLE VIOLATION OF UNDERGROUND UTILITY REGULATIONS AND/OR DAMAGE TO UNDERGROUND FACILITIES
Non-Utility Report
(In compliance with Pub 806.06)

INCIDENT DATE: (mo/day/yr) [] [] [] TIME: [] a.m. [] p.m.
REPORT DATE: (mo/day/yr) [] [] []

PERSON REPORTING: (FACILITY OPERATOR, EXCAVATOR OR ANY OTHER PARTY) AREA CODE 7 DIGIT NUMBER EXT.

Name: [] Home No. [] [] []
Company: (if applicable) [] Work No. [] [] []
Address: [] Fax No. [] [] []
City: [] Cell No. [] [] []
State: [] Zip Code: [] [] []

UTILITY COMPANY IMPACTED: []

Was the utility notified of the problems?
[] Yes, please provide name of person spoken to: [] []
[] No

LOCATION OF VIOLATION / DAMAGE: GPS COORDINATES:
Address: [] Long: [] Lat: []
City: []
State: [] Zip Code: [] PUBLIC WAY [] RIGHT OF WAY []
EASEMENT [] PRIVATE PROPERTY []

DESCRIBE THE REASON FOR THIS COMPLAINT: (If additional remarks are necessary, or if you have pictures or other evidence to fully describe the incident referenced below, please attach a separate sheet).

DAMAGE / INJURY: Yes [] No []

PLEASE CHECK ONE OR MORE OF THE FOLLOWING:

| | | | |
|-----|--|----------------|---|
| [] | 1. Notification completed, DIG-SAFE NUMBER (if known): [] | [] | 13.a. LOCATOR ERROR |
| [] | 2. Notification completed, marked, markings not maintained | [] | 13.b. INCORRECT RECORD |
| [] | 3. Notification completed, location was not marked | [] | 13.c. NO RECORD |
| [] | 4. Notification completed, marked, damage occurred | [] | 14. Facility operator failed to mark in a timely manner |
| [] | 5. Excavating outside the pre-marked area | [] | 15. OTHER |
| [] | 6. Excavation classified as EMERGENCY SITUATION | | |
| [] | 7. Excavator failed to observe 18-in. tolerance zone | | |
| [] | 8. Excavator failed to notify nonmember facility operator | | |
| [] | 9. Excavating on an expired ticket | | |
| [] | 10. Procedures for notification not followed DIG-SAFE NOT NOTIFIED | | |
| [] | 11. Failure to notify of damage | | |
| [] | 12. Pre-marked | Yes [] No [] | |

Signature: [] Title: []



Dover

Portsmouth

Keene

Derry

Salem

What The Rules Say

PUC 800: Underground Damage Prevention Program

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

802 DEFINITIONS:

"Operator" means a public utility

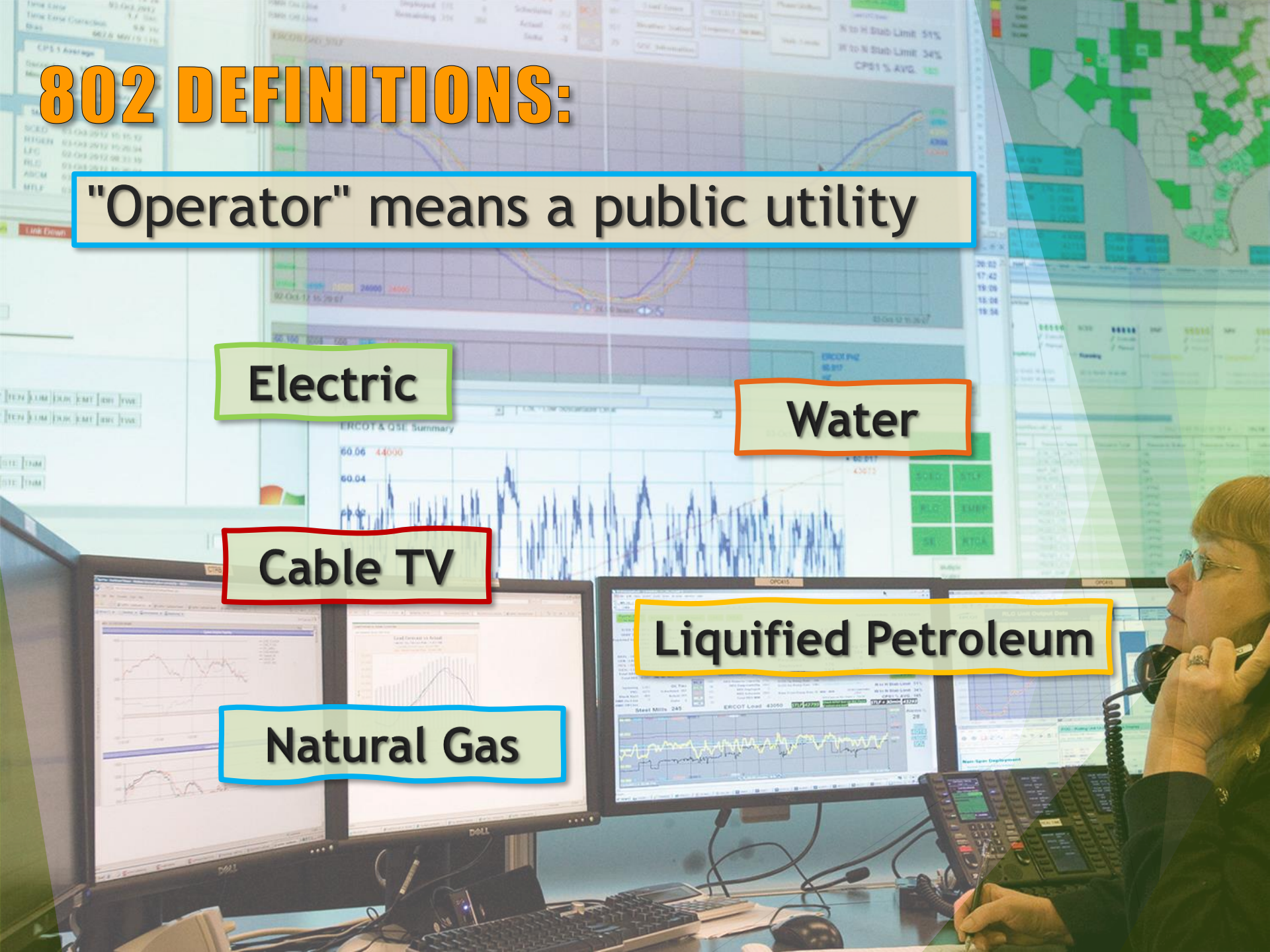
Electric

Water

Cable TV

Liquified Petroleum

Natural Gas



802 DEFINITIONS:

The background image shows a trench with several pipes. A red corrugated pipe is on the left, a blue pipe is in the middle with a large hole, and a grey pipe is on the right. The trench walls are made of concrete and earth.

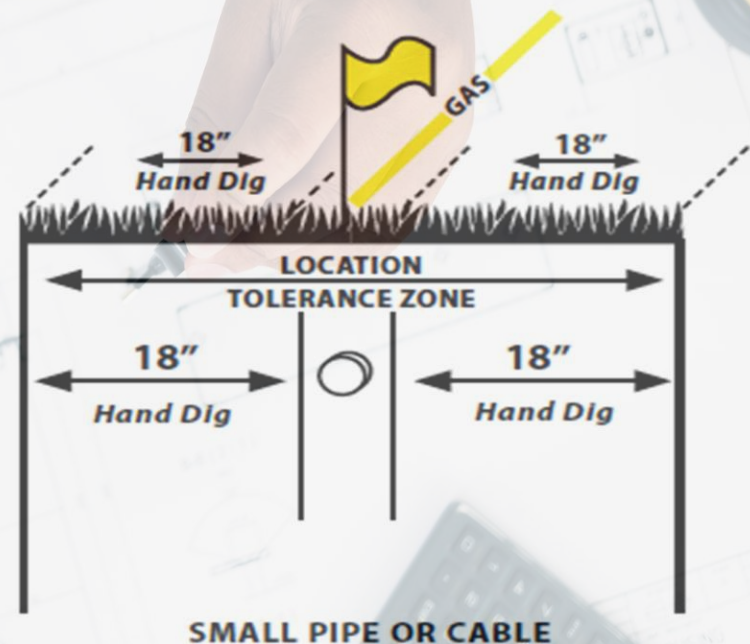
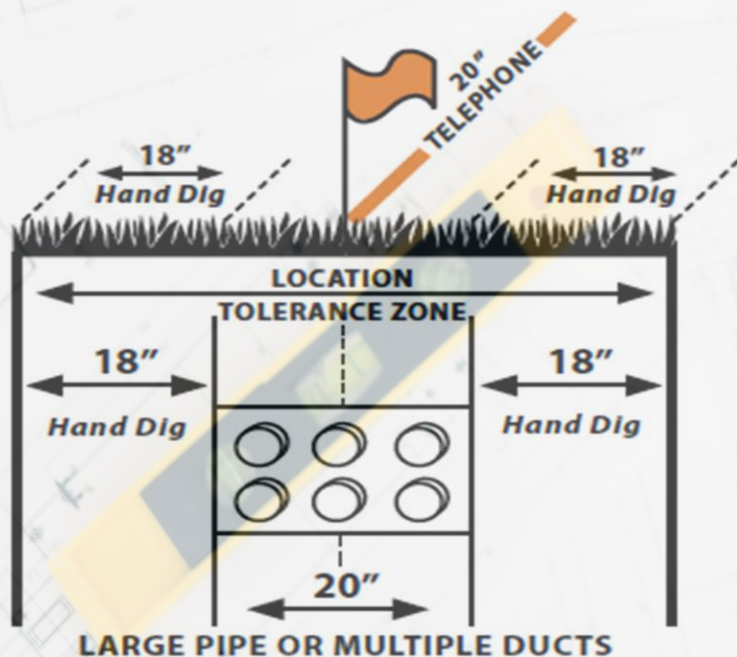
"Damage" means any impact or exposure that results in the need to repair an underground facility

- weakening or the partial or complete destruction of the underground facility
- the protective coating, conduit, lateral supports, corrosion, or the housing for the line of an underground facility.

802 DEFINITIONS:

“Tolerance Zone” is the area surrounding an underground facility, which is equal to the width of the underground facility plus 18 inches measured horizontally on either side of the underground facility.

TOLERANCE ZONE



Emergency Situations:

The Only Exception to the 72-hour rule

PUC Rule 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.”

805 DUTIES OF THE EXCAVATOR

An aerial photograph of a residential neighborhood, showing several houses with swimming pools, green lawns, and winding roads. The image is used as a background for the text overlays.

No excavation within 100 feet of an underground facility

Not less than 72 hours, no more than 30 days

Premark the area of proposed excavation

Make sure that you are on the Dig Safe ticket

805 DUTIES OF THE EXCAVATOR

Use of Reasonable Care to protect the underground facility from damage.

- To locate the underground facilities an excavator must hand dig, soft dig or vacuum excavate in the Tolerance Zone except to remove pavement or concrete.

If in an emergency situation, an excavator may begin excavation without notifying Dig Safe first.

- Must notify Dig Safe at the earliest practical moment

Rules surrounding blasting while excavating

Key Elements For a SAFE EXCAVATION

Plan Ahead

Premark Before Calling

Obtain Dig Safe ticket

Wait 72 hours

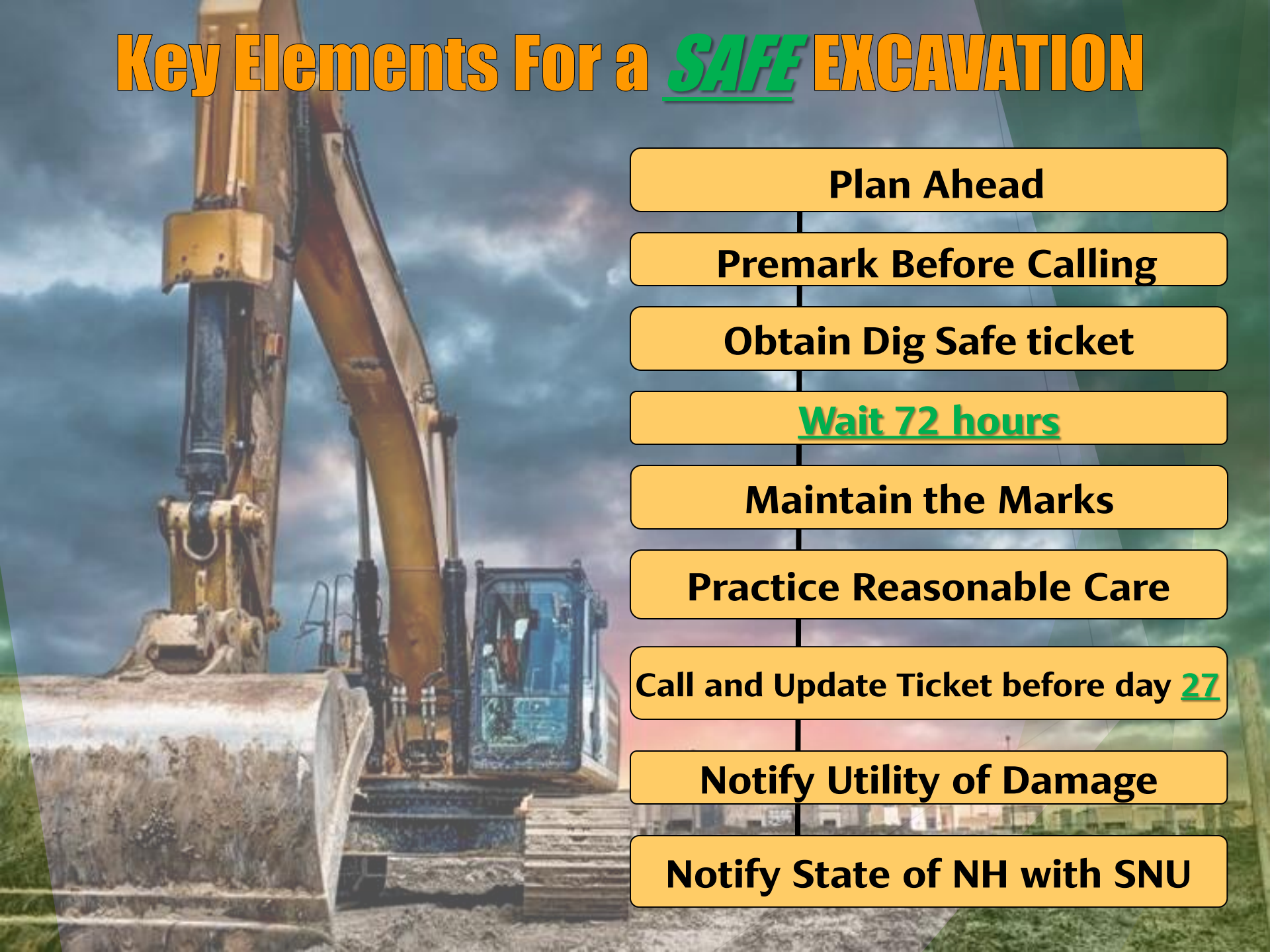
Maintain the Marks

Practice Reasonable Care

Call and Update Ticket before day 27

Notify Utility of Damage

Notify State of NH with SNU





WHO IS DIG SAFE?

- Free service for anyone to use
- Funded by Member Companies
- An Office that Makes Call Only

- Private, not-for profit organization
- Located in Wilmington, MA
- Serves 5 New England states

Dig Safe does not notify non-member facility owners including:

- Towns or Municipal who are not members, for example: water, sewer, electric and drainage will not be notified by Dig Safe call center.

-You must contact them directly.

- ALSO: Privately-owned facilities should be marked by its owner or private locator.
- Go to digsafe.com for a current list of member municipalities, and a list of private locators for your area.



Dig Safe does not

- Locate Underground Facilities
- Premark Excavation Sites

Locators do not

- Premark Excavation Sites
- Mark Outside of pre-marked Area
- Maintain Marks



NH Positive Response

NO CABLE

NO ELECTRIC

NO GAS

NO PHONE



Marking Is Not Infallible

Example of Some Limitations:

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

Know your Locator

A construction worker wearing a yellow safety vest and a yellow hard hat is using a handheld locator device on a paved road. The device is emitting a yellow light on the ground. In the background, there is a white van with "EDGE" written on it and a yellow excavator. The scene is outdoors with trees and a clear sky.

- It is important to know the contact information for the locators in your area.

- They can help answer any questions you have about their marks or methods.

- When applying for a Dig Safe ticket, ask for the locator to contact the excavator.

Are You Excavating?

RSA374:48, Section III

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 signpost installation, pile driving, wrecking, razing, rending or moving any structure or mass material...”



This Does Not Include...

Tilling of soil for agricultural purposes

Landscaping or maintenance of residential property with non-mechanized equipment

mechanized equipment intended to cut vegetation, lawn edging, aeration, and de-thatching,

Will You Be On Territory Covered By The Law?

Do you plan to excavate within 100 feet of underground facilities on:

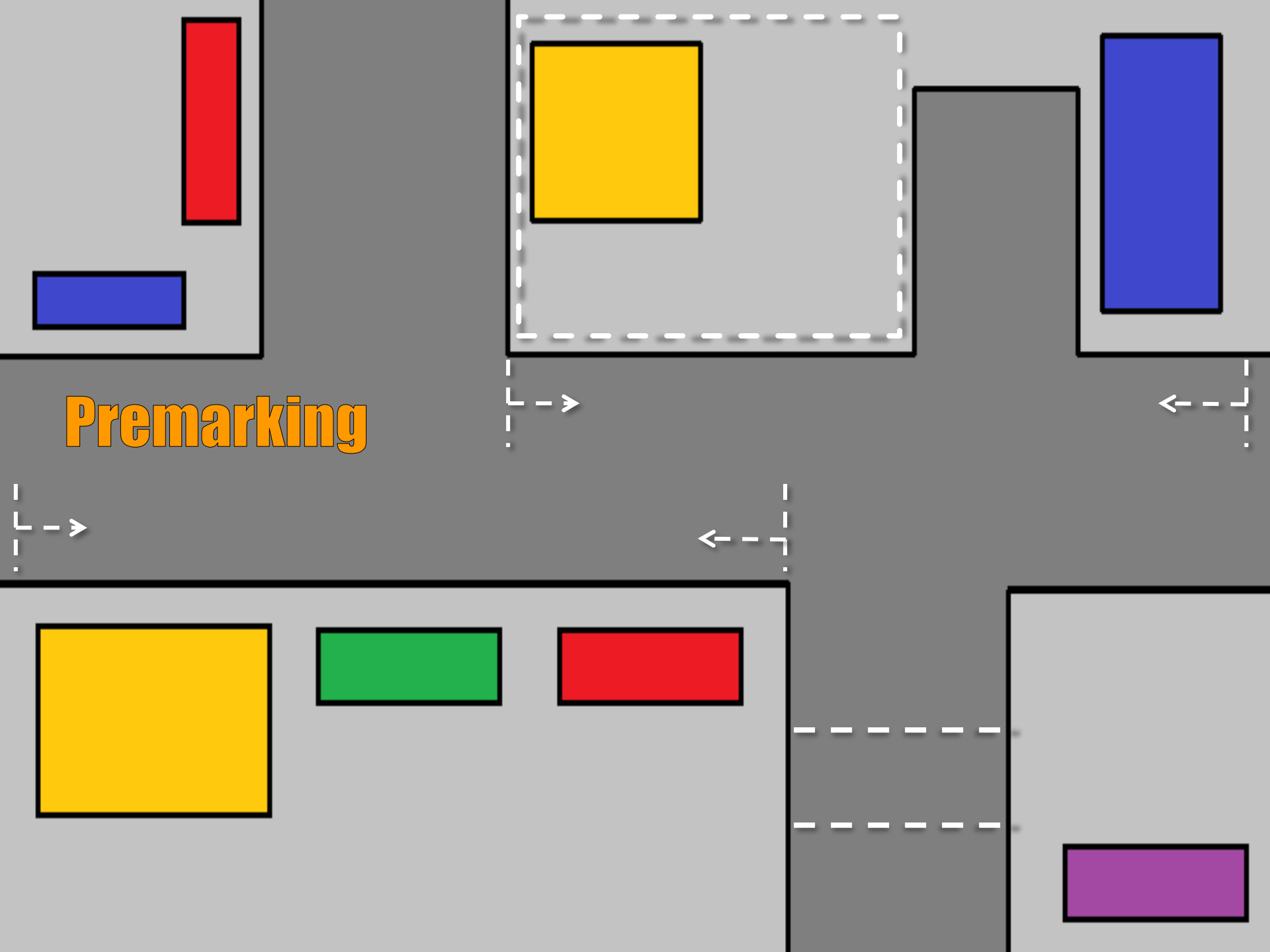
- ▶ Private Property
- ▶ Public Way
- ▶ Right-of-Way
- ▶ Easement
- ▶ Public Street or
- ▶ Any Other Public Place



Will You Be On Territory Covered By The Law?



Excavator was 57' away from underground facility



Premarkarking





Where excavator drilled.



White premark where excavator planned to drill.





Rochester Hit No Fire

**Drilled through
high pressure gas
main.**

Color Code Used for Marking



Electric

Gas - Oil - Steam

Communications

Potable Water

Reclaimed Water

Sewer

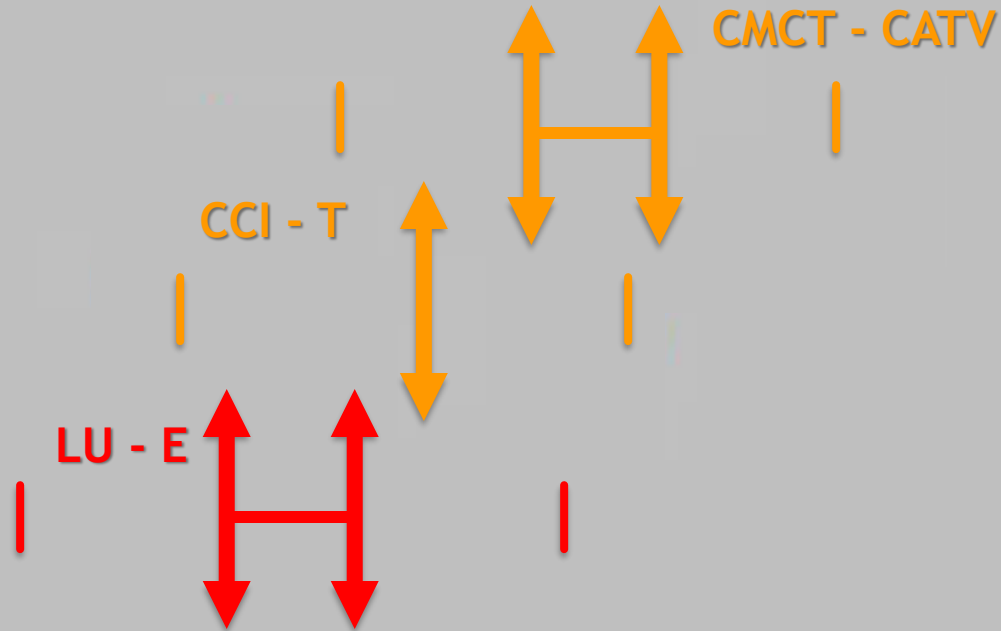
Temporary Survey

Pre-Mark

Single Cable or Wire

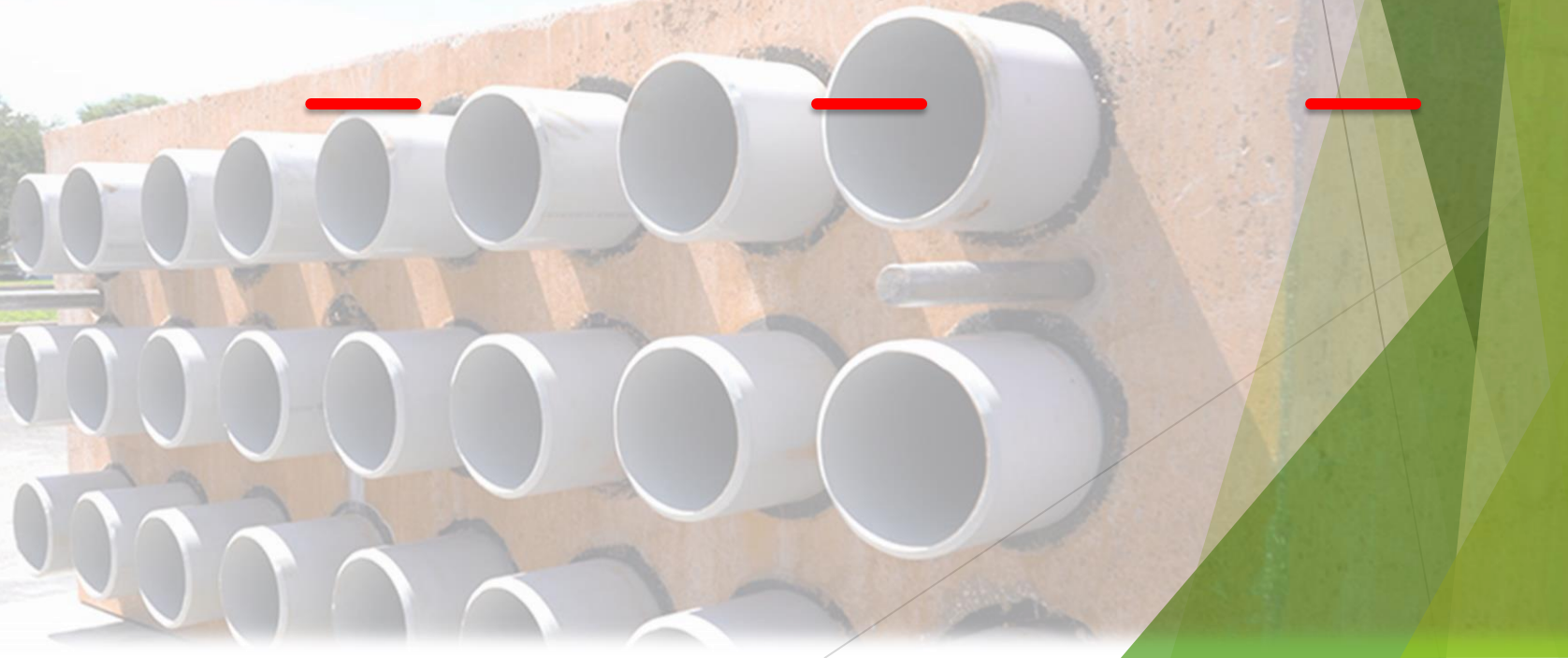
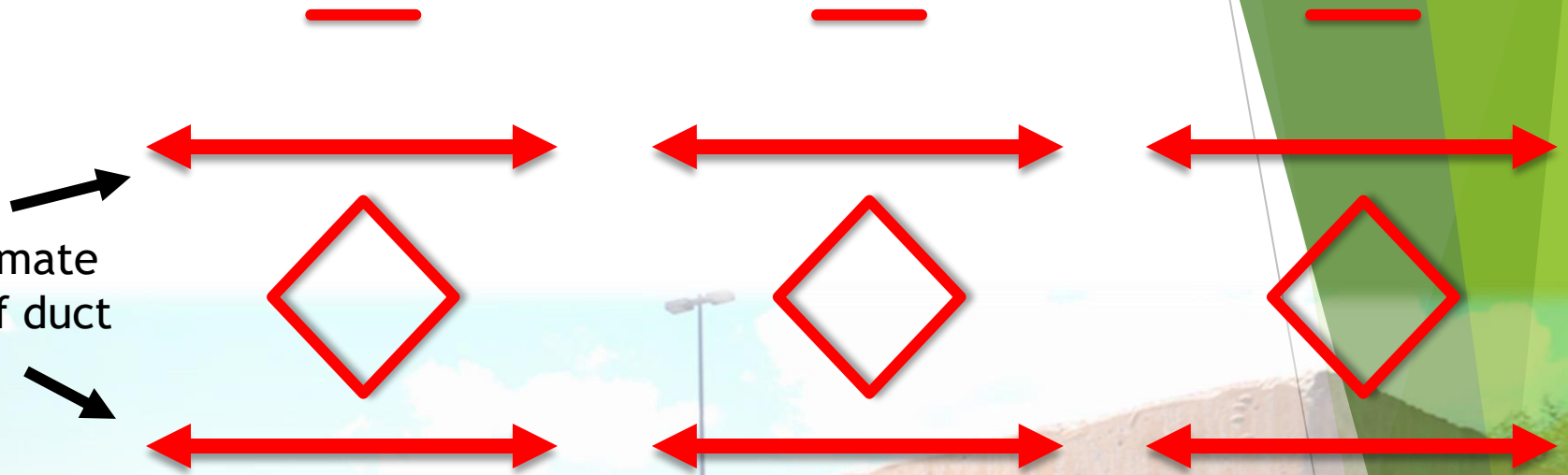


Multiple Cables

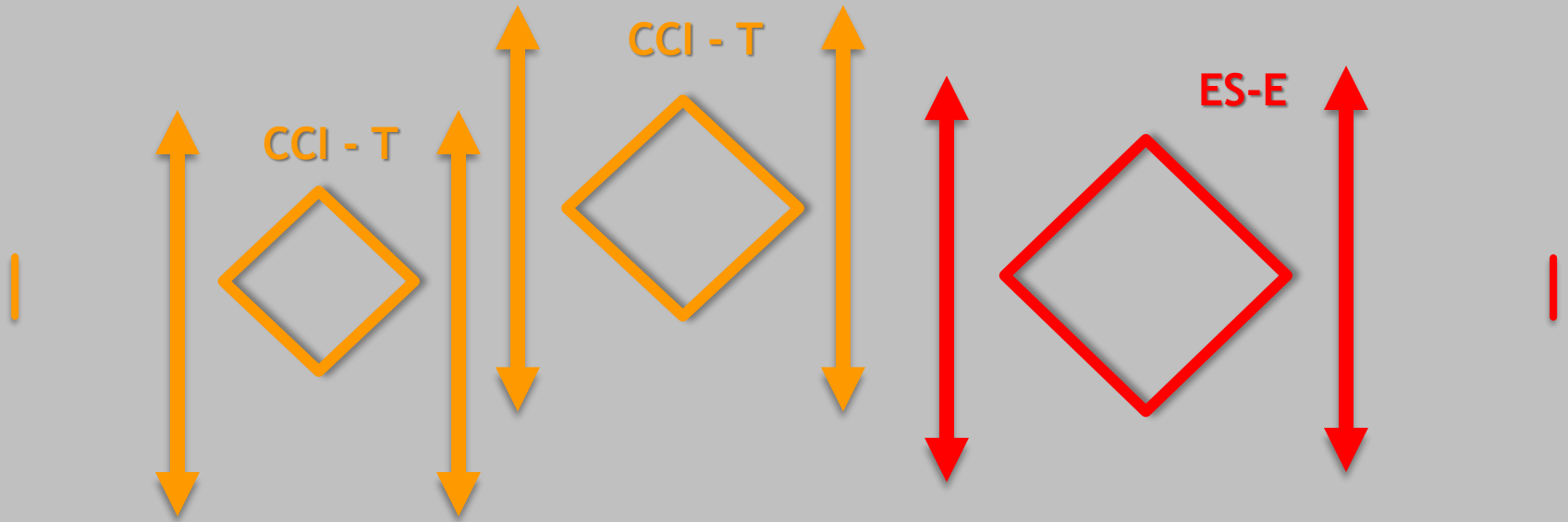


Electric Duct Bank Marks

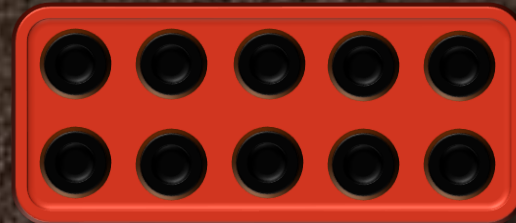
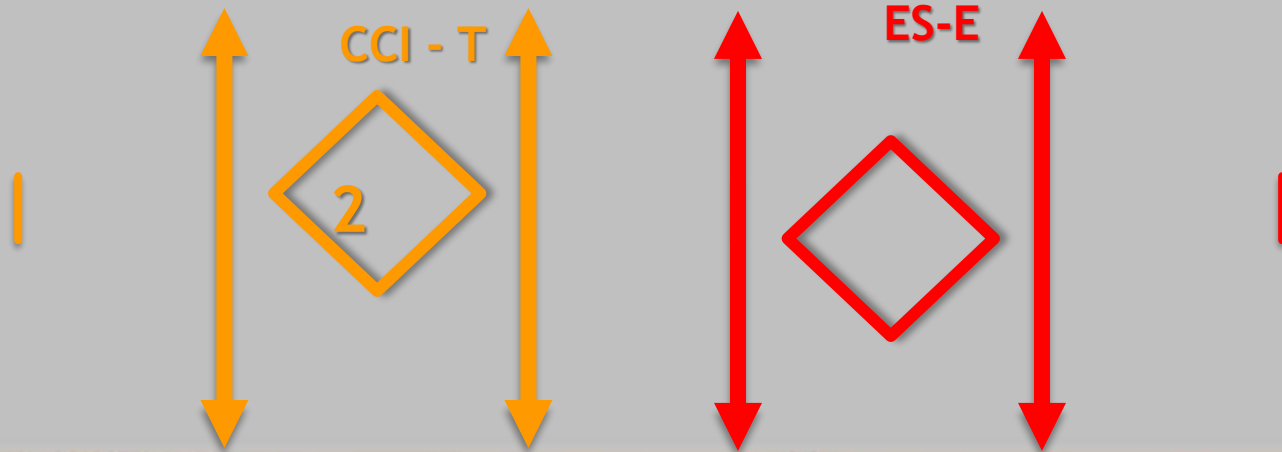
Approximate
width of duct



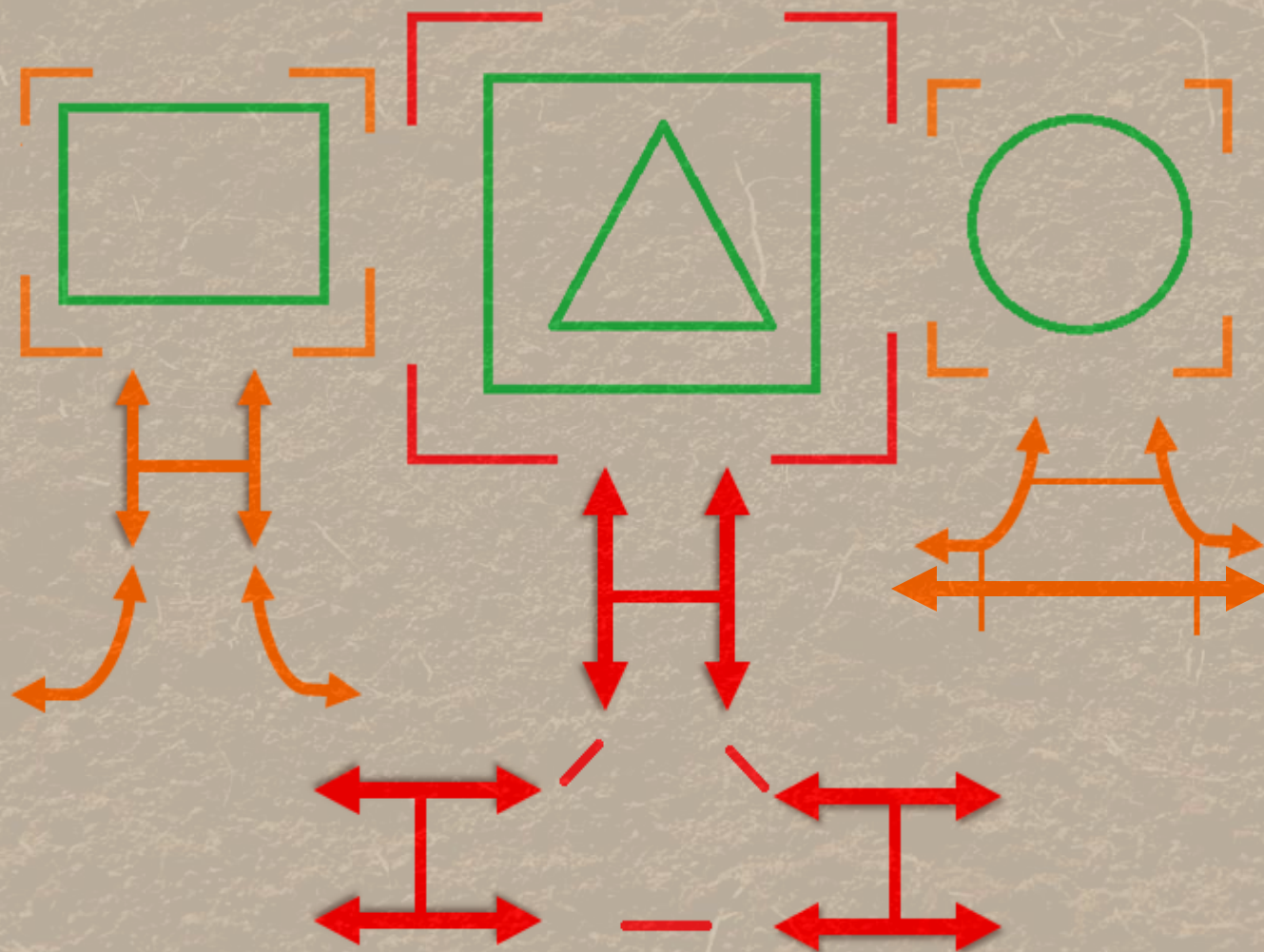
Duct Bank Marking



Multiple Duct Bank Marking



Marking Pedestals, Transformers & Poles



Gas Pipeline Marking

Marks shows center of 4-inch cast iron (CI) gas line.

Utility Name



Approximate center of pipe



Pipe diameter

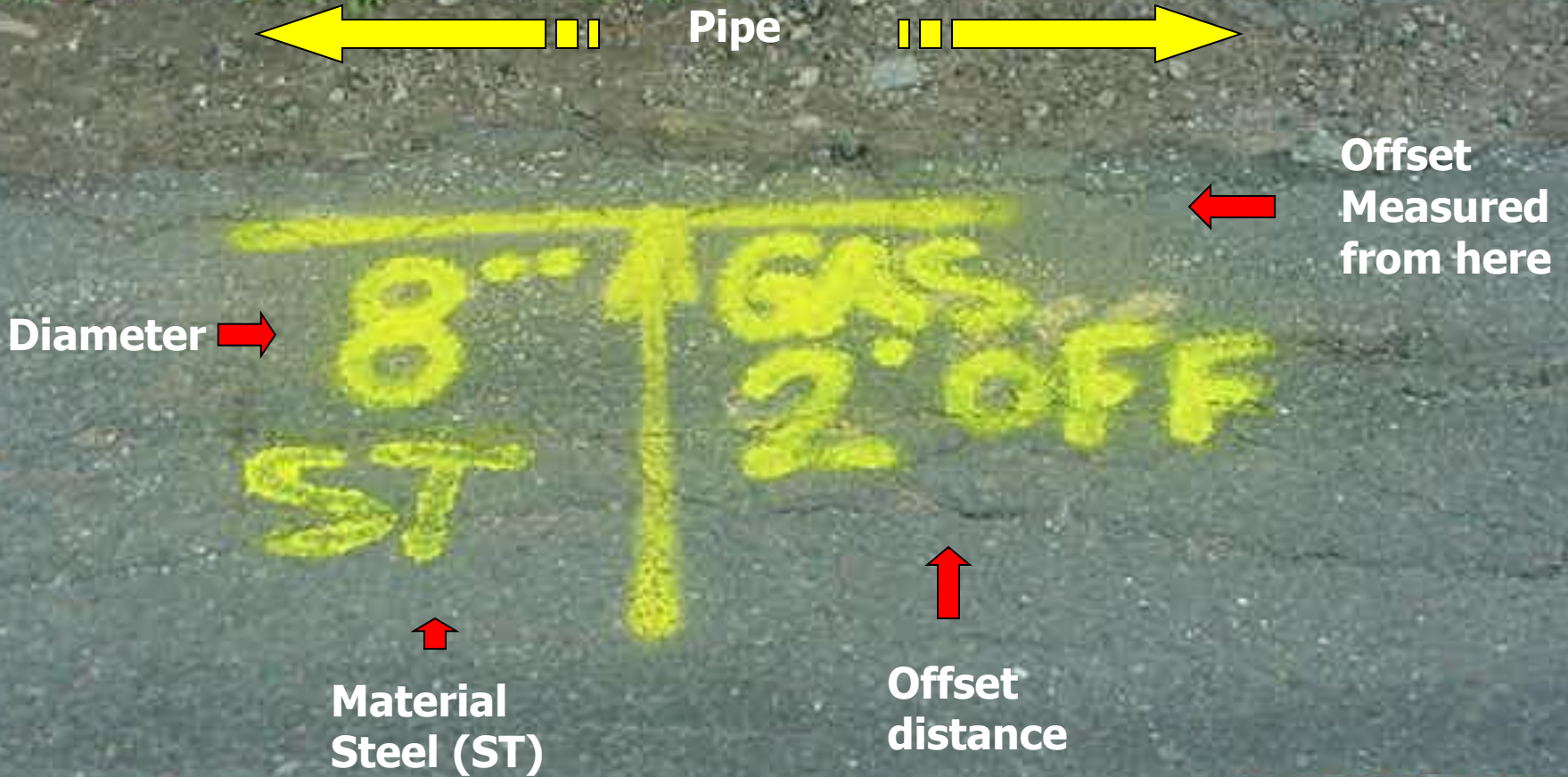


Pipe material
(Cast Iron)



Offset Gas Marking

Shows 8 in. steel (ST) gas line is approximately 2 ft. from end of arrow.





Excavating on an Expired Dig Safe Ticket



If you hit an Underground Facility...

- ▶ Call 911 if there is a hit and gas is being released
 - ▶ Evacuate nearby structures if necessary
 - ▶ **DO NOT** attempt repairs
 - ▶ Call the affected utility company
 - ▶ Call 811 or 888 DIG-SAFE

Never Bury a Damaged Underground Facility

If You Hit an Underground Facility...

- Take photos or video of the scene
(best before starting dig)
- Dig Safe marks
 - ✓ Pictures of the actual damage
 - ✓ Other conditions that may factor in
 - ✓ Get witness(es) name(s)
- Take notes
- File SNU report with Dept. of Energy, Division of Enforcement



Reporting Damages

Damage to coating

Damaged Conduit

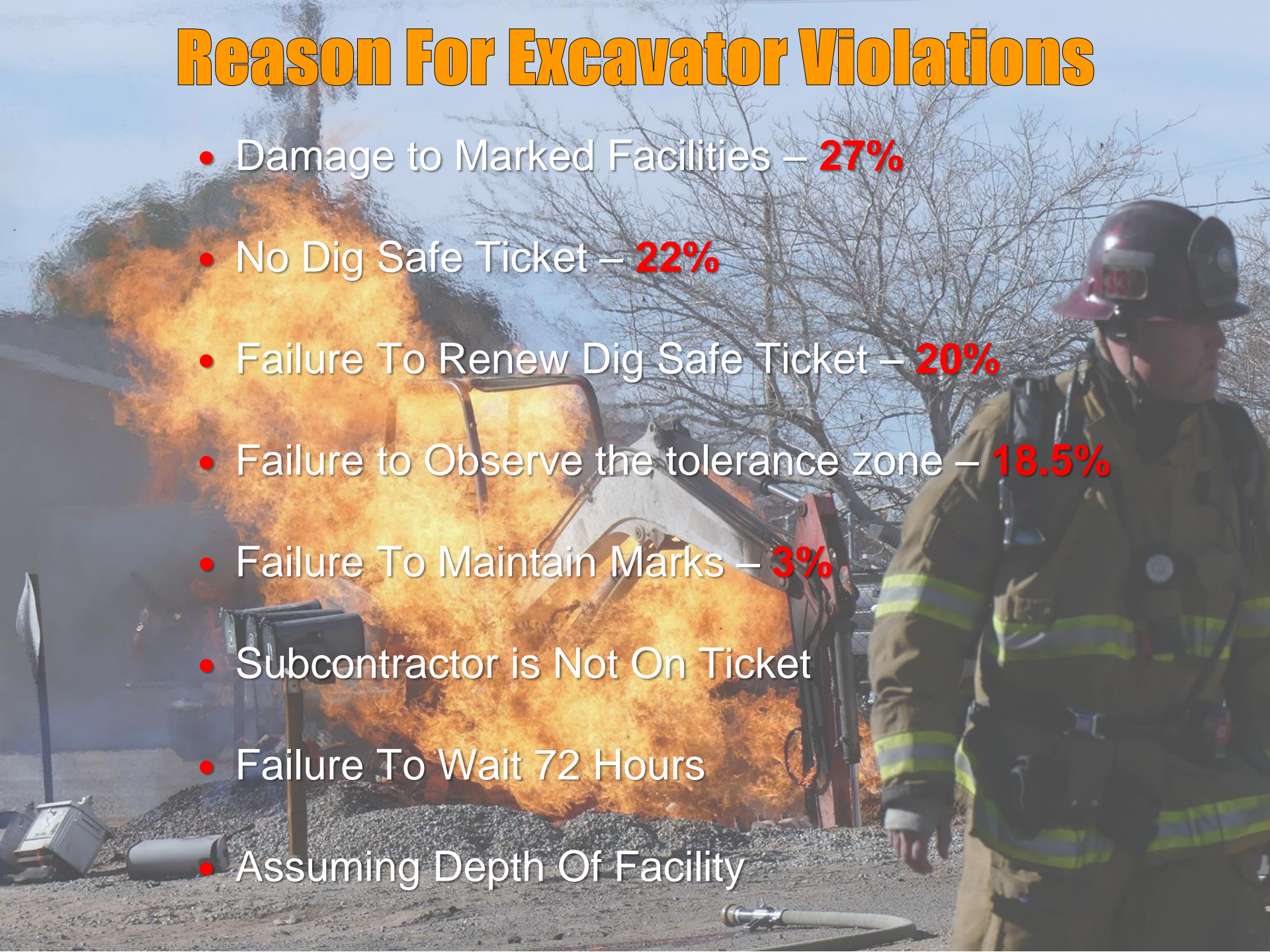
Broken tracer wire or warning tape

Unmarked Gas Facilities

Corrosion Control

Reason For Excavator Violations

- Damage to Marked Facilities – **27%**
- No Dig Safe Ticket – **22%**
- Failure To Renew Dig Safe Ticket – **20%**
- Failure to Observe the tolerance zone – **18.5%**
- Failure To Maintain Marks – **3%**
- Subcontractor is Not On Ticket
- Failure To Wait 72 Hours
- Assuming Depth Of Facility



Reason For Operator Violations



- Failure To Clearly Mark Location – **33.5%**
- Locator Error – **17%**
- Failure To Mark Within 72 Hours – **11%**
- Incorrect records – **8%**
- Failure To Mark Using Prescribed Methods
- Failure To Mark in Correct Color

Thank you for Continuing to Dig Safely



Know what's below.
Call before you dig.

