Damage Prevention and Site Marking Guidelines

Creating a community of shared interest and common ground. Dedication to Excavation Safety and Damage Prevention

UTILITY TRAINING ACADEMY

0

Damage Prevention Orientation

Index

- What's in the Ground
- DIRT Damage Report
- What's at Stake?
- What's at Risk?
- 811 Process and Positive Response
- Damage Prevention at a National, State and Local Level

1

2

3

What's in the Ground?
Approximately 36,000,000 miles of active underground facilities

- Pipes
- Cables
- Wires
- Structures
- Placed at variable depths
- Assortment of different material, shapes, colors, sizes.
- Providing different products and services
- Many are buried along with abandon facilities from past generations.

The color of the site marking provides an indication of the product or service provided by the line. The color of the site marking is not an indication of the color of the line.

The goal of damage prevention is to keep everyone safe by keeping the product in the line.

4

2018 Damage Statistics Released in 2019

341,609 Damage reported in U.S. during the year 2018 *(this total number comes from a mostly voluntary damage reporting system*)
Released 2019 Data source: CGA Common Ground Alliance Dirt Report.

Excavation damages can happen (24 x 7 x 365)
936 Damages per day
39 Damages per hour
1 Damage every 1 minute 30 seconds

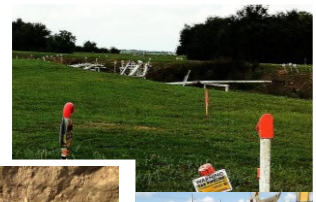
5

We are all stakeholders in damage prevention!

6

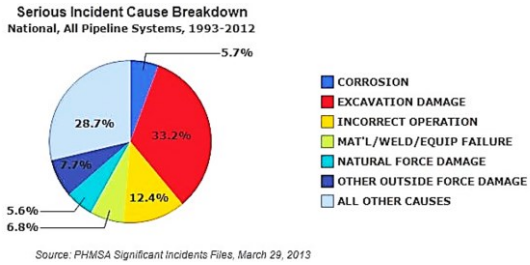
What's at Risk?

- Life
- Health
- Property
- Essential Public Services
- Financial Hardship



7

8



9

Excavation Notification Process
Contact 811 Before Digging

- Excavator pre-marks designated dig area (state requirements vary)
- Excavator contacts 811 a few days prior to the planned start date
- 811 assigns a ticket number to the notification
- 811 center transmits ticket information out to all utility and pipeline operators registered to receive notifications for that specific area

10

Notified Member's Give Positive Response to 811 Ticket

- Operators respond to notification within 2 to 3 business days
- Operator gives a Positive Response: Operator marks lines in conflict or informs excavator they have no facilities within designated dig area.

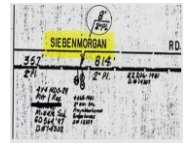
- *Operators may notify excavator of the need to monitor excavation near their high profile or critical facilities including Pipelines.

11

Site Investigations & Record Research

Gathering Evidence in a search for facts and clues

- **Read ticket carefully and identify the scope of work**
- **View existing maps and records off the job site**
- **Visual site inspection to search for facts & clues**



Combine the evidence to create a locating plan

- **Deductive Reasoning** is a process of reasoning in which a conclusion is reached by piecing together all of the known facts and clues to determine what appears to be true. The conclusion is assumed to be correct if the combined facts and clues are true.

12

Utilize available detection equipment to locate conductive lines








Transmitter

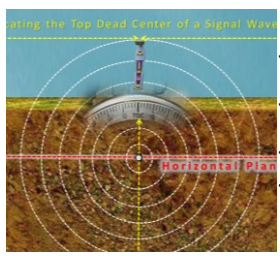
- Select the best method for transmitting
  - clip *direct connect
  - clamp *close induction ring clamp
  - induce *using transmitters internal signal broadcast antenna

Receiver

- Choose your signal detection mode
  - peak
  - null
  - combination
- Passive sweep of area
  - 60Hz/Power, Radio, CP 120Hz/**C**athodic **P**rotection **S**ignal etc.
- Consider using a minimum of two methods of locating for verification when identifying high profile or critical facilities

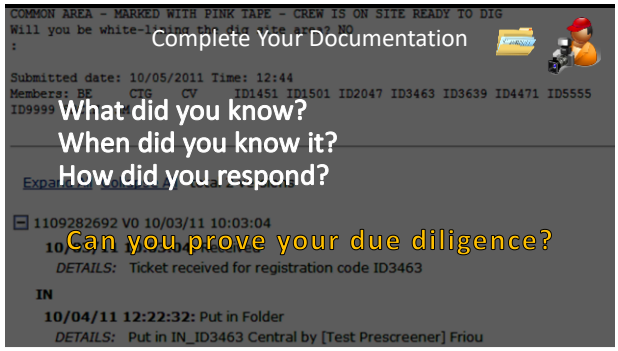

13

The Signal Receiver



- Detect signal fields broadcasting at a known frequency
- Designed to find (TDC) Top-Dead-Center of a perfectly round signal field
- Can determine location, orientation and depth
- Have auto or manual gain to adjust sensitivity

14


COMMON AREA - MARKED WITH PINK TAPE - CREW IS ON SITE READY TO DIG
Will you be white-lining
:
Submitted date: 10/05/2011 Time: 12:44
Members: BE CTG CV ID1451 ID1501 ID2047 ID3463 ID3639 ID4471 ID5555
ID9999
Complete Your Documentation
What did you know?
When did you know it?
How did you respond?
1109282692 V0 10/03/11 10:03:04
DETAILS: Ticket received for registration code ID3463
IN
10/04/11 12:22:32: Put in Folder
DETAILS: Put in IN_ID3463 Central by [Test Prescreener] Friou
Can you prove your due diligence?

15


N
NE
E
0
30
60
90
120
53°NE (T) 39°19'27"N, 82°5'51"W ±164.1ft 444ft
Photo 1: ticket 1109282692
Date & Time: 23 May 2019, 8:20:27 AM
39°19'27"N, 82°5'51"W ±164.1ft
444ft
DATUM: WGS-84
53°NE (true)

16


Safely Expose, Protect and Support

17

18

Damage Prevention goes beyond just digging safely!

Heavy Equipment Pose a Clear Risk to Buried Facilities

19

Damages are caused and discovered. They <u>should</u> all be reported to the operator

20

Damage Prevention at Every Level

- Common Ground Alliance (National and Regional)
- National Excavation Initiative
- Pipeline and Hazardous Material Safety Administration (DOT)
- State One Call Boards
- State or Regional 811 Notification Center
- Area Damage Prevention Councils and Committees
- Utility Coordination Committees
- Where the shovel meets the dirt! Excavation Site Meetings

21

National Common Ground Alliance Damage Prevention Best Practice Guide

CGA Best Practices created for:

- Planning & Design
- One Call Center
- Location & Marking
- Excavation
- Mapping
- Compliance
- Public Education
- Reporting & Evaluation
- A Misc. Statement from Homeland Security

IT'S FREE TO VIEW THE CURRENT BEST PRACTICE GUIDE

GO TO **www.commongroundalliance.com**

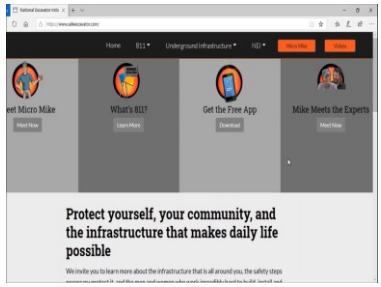
22

Another great re
for damage prev
information.

safeexcvator.com

National Excavator Initiative

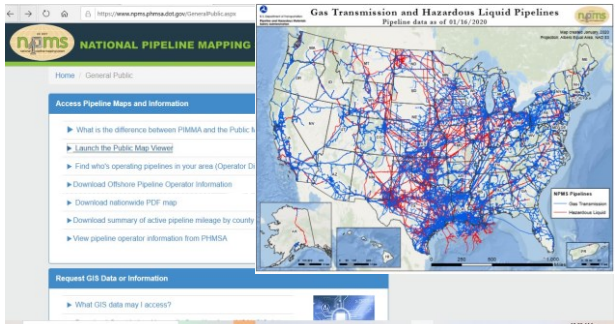
23


Home
811
Underground Infrastructure
What's 811?
Get the Free App
Mike Meets the Experts
Protect yourself, your community, and the infrastructure that makes daily life possible

24


NATIONAL PIPELINE MAPPING SYSTEM
GOVERNMENT OFFICIAL
PIPELINE OPERATOR
GENERAL PUBLIC
FIRST-TIME VISITOR
PIMMA USER LOGIN
PASSWORD PROTECTED VIEWER RESTRICTED TO GOVERNMENT OFFICIALS AND PIPELINE OPERATORS
LOGIN
APPLY FOR PIMMA ACCESS
PIMMA iPHONE APP
PUBLIC MAP VIEWER
PIPELINE MAPS FOR THE GENERAL PUBLIC – NO PASSWORD REQUIRED
ABOUT PUBLIC MAP VIEWER
USE PUBLIC MAP VIEWER
PUBLIC VIEWER iPHONE APP

25


NATIONAL PIPELINE MAPPING
Home / General Public
Access Pipeline Maps and Information
Launch the Public Map Viewer
Request GIS Data or Information
Gas Transmission and Hazardous Liquid Pipelines
Pipeline data as of 01/16/2020

26

Internal Damage Prevention Processes

- Improve the quality of your mapping. Capture GPS data anytime your line is exposed. Detail location, size and type
  - This can be done by construction and maintenance crews as part of their work assignment or job scope. Some hand-held GPS devices can provide sub meter accuracy.
- Damage Prevention starts In the planning stages
  - Plan to avoid conflict with existing lines
  - Build locatable lines. Place a tracer wire with non-conductive lines
  - Do not bury to excessive depths if possible.
  - Write specifications for pre-marking job site and damage avoidance

27

Report any Errors or Omissions

There are many reasons why your maps and records may be inaccurate

- *Delays in posting new records after a new line is installed*
- *Changes made during line construction due to site conditions*
- *Mis-drawn records*
- *Different type of line used during emergency repairs.*
- *Historical Records where incomplete*

28