



# **Construction Inspector Class**

## **Locate Rules & Regulations**

# Agenda

- Planning
- Locating
- Damage Prevention
- Best Practices
- Excavation

# Planning

- Damage prevention starts before a shovel is put in the ground.
- Engineering design and utility approval
- Most conflicts can be eliminated by design
- Request dig ticket through one call
- You should always verify dig ticket is correct
- Site inspection for conflicts and unmarked facilities.

# Who Are You Going To Call



# One Call Center

- Calling 811 will connect you to the local one call center.
- When working around one call center borders verify the correct one call has been notified.
- Some call centers have design tickets.

**EXCAVATOR HANDBOOK**



**811**  
Chicago


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

**312.744.7000**



<https://ipi.cityofchicago.org/Digger>

**EXCAVATOR HANDBOOK**



**Call Before You Dig**  
**JULIE**  
ILLINOIS  
ONE-CALL SYSTEM

[www.illinois1call.com](http://www.illinois1call.com)

# One Call Center Regulations

- Each one call center has different rules.
- Some states have more than one one call center
- Most states have apps or you may save a web address to view dig laws.
- Call811.com is a website where you can find one call laws by state.

# One Call Center Regulations

- Always check rules and regulations of appropriate one call center.
- You must wait until the appropriate start time on your ticket.



# Premarking

- Prior to calling for a dig ticket premark your excavation area.
- Use white paint. When snow is on the ground black paint should be used.
- Verbal premarks may be used in some instances.
- If the excavation will move outside the premark area you must call the one call center

# Requesting a Dig Ticket

- There are different ways to request tickets.
- By calling 811 by phone if using a cell phone you will be connected to the one call center in the location you are calling from.
- If available some one call centers have remote ticket entry.
- Some allow e request through email.

# Ticket Information

- When calling the one call center be prepared to give the following.
  - Company name
  - Location of work
  - Type of work being performed
  - Name and number of contact person on site
  - Start date
  - Email address
  - Areas where a permit is required to work in the public way may require the permit number.

# Prior to Digging

- You should always verify dig ticket is correct.
- Check the dig start date and the time on your ticket.
- Check the end date.
- Verify the correct location.
- Never dig without marks unless you receive notification of all clear.
- Most buildings have a gas service and a water service below grade.

# Prior to Digging

- Site inspection for conflicts and unmarked facilities.
- Look for cable drops from poles.
- Look for manholes and valve boxes
- Some buildings have below grade electric and communications lines.

# Types of Locate Requests

- Initial
- Emergency
- No Show/Incomplete
- Refresh/Remark
- Renew/Extend
- Incomplete Marks
- Joint Meet
- Design Stage

# Locating Methods

- Maps and Records
- Inductive
- Conductive
- Visual

# Privately Owned Facilities

- Most private facility owners are not members of the one call and do not receive tickets.
- Privately owned facilities are generally on larger properties such as shopping malls and business centers or schools or larger facilities.
- If you are working where privately owned facilities may exist you should ask the facility owner to mark privately owned facilities prior to excavation.



# Locating Frequency's

- Low Frequency's (128 Hz-1kHz) travel much farther than higher frequencies.
- Medium Frequency's (4-40 kHz) Are stronger and less susceptible to ambient noise such as power lines.
- High Frequency's 40-300 kHz have a tendency to bleed off on other utilities.

# It is an Art and a Science

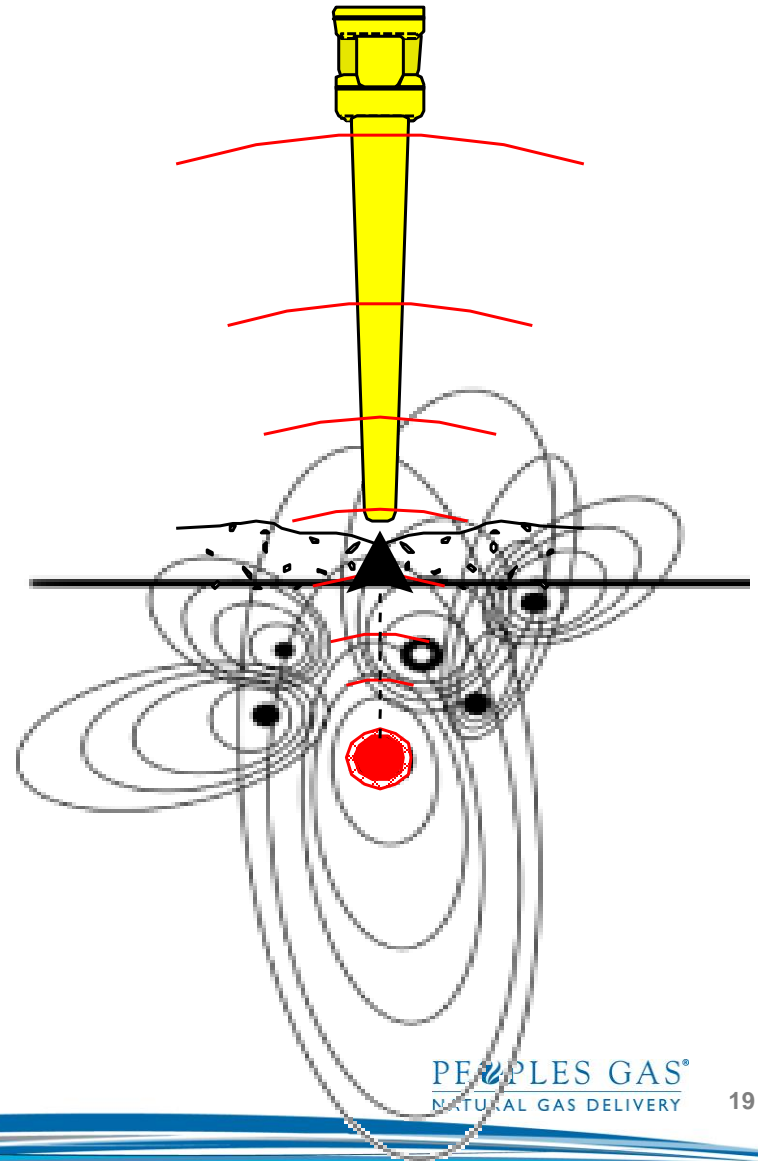
- Locating is an art because of the high dependency on operator skill and interpretation.
- The locate operator must also master the science of knowing how frequency and current signals behave on different conductor properties.

# Electronic Marker (EM) Balls

- Electronic Markers (EM) contain RFID tags
- The tags remain inactive until activated by the locating device.
- EM returns the signal to the locator, indicating the marker's exact position.
- Operate without a battery and have a life span of the utility.

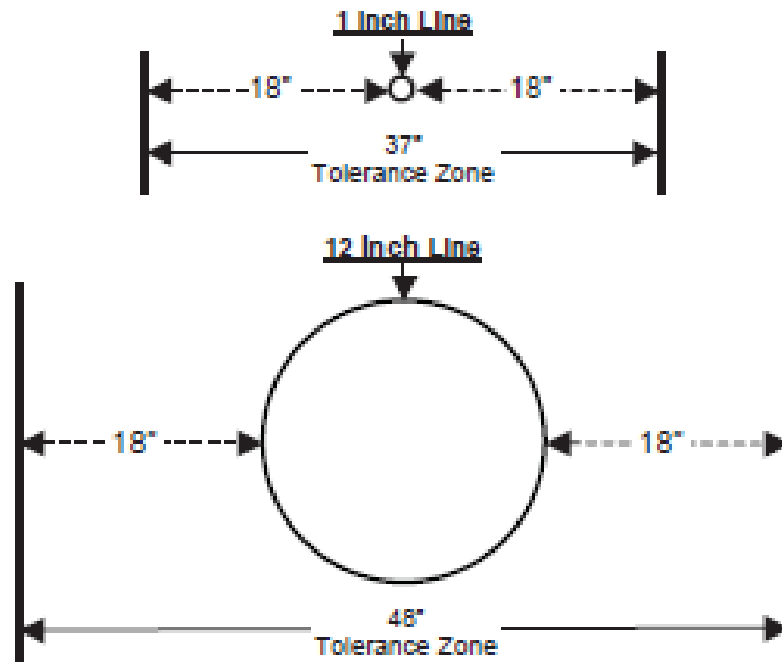


- Using a locating device linked to the 83 kHz RFID, the marker ball can easily be pinpointed.

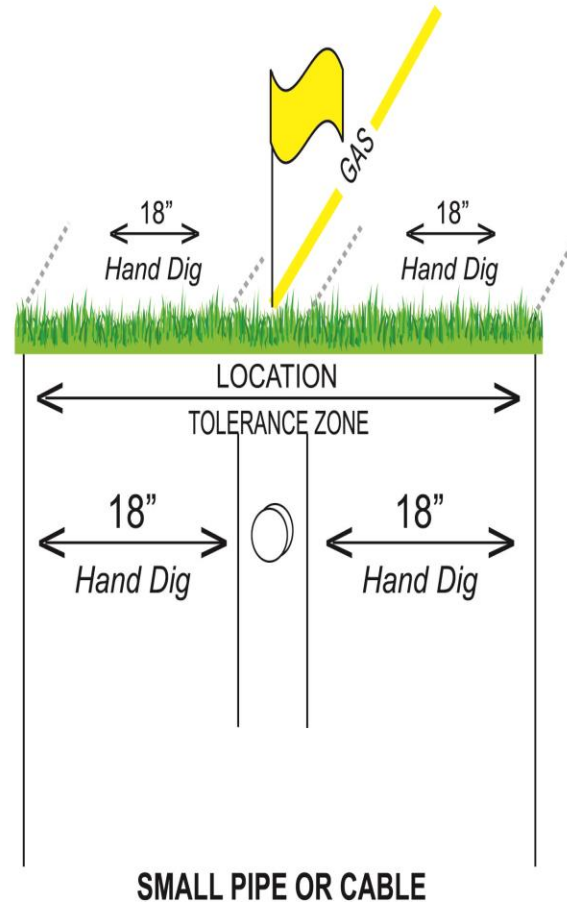
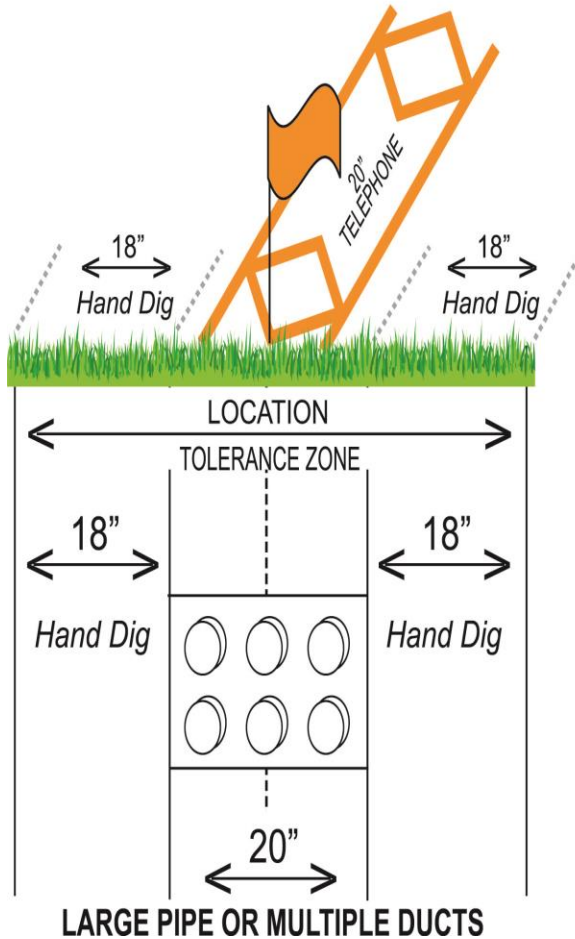


# Damage Prevention

- Excavation begins - respect entire tolerance zone.



# TOLERANCE ZONE



# Damage Prevention

- If flammable product is leaking call 911
- If you damage a facility you must let the facility owner know
- Never burry a damaged facility it may be leaking some were other than excavation due to damage
- Wrapping removed for steel pipe and backfilled will corrode call to have repaired.
- Plastic that has been gouged has a weakened wall call to have inspected.
- Damaged utilities that have not been reported and backfilled put the public at risk.

# Damage Prevention

- Never assume once you locate a marked facility it is the only facility expose the entire tolerance zone.
- Never blind bore past marked utilities.



# Never assume only one facility



# Digging Dangers 25

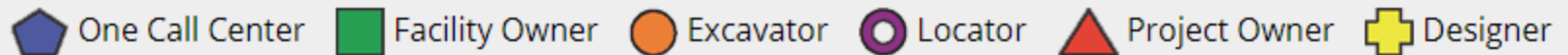
[DD25 Flipside: Strike Zone - YouTube](#)

# Best Practices

Common Ground Alliance was established in 2000 and is committed to saving lives

## CGA Mission

The Common Ground Alliance is dedicated to preventing damage to underground utility infrastructure and protecting those who live and work near these important assets through the shared responsibility of our stakeholders.



<https://bestpractices.commongroundalliance.com/>

# Safety Sweep

<https://www.youtube.com/watch?v=7xUwsDZYJrI>

# Excavation Safety

- Never enter excavation deeper than 5' without shoring.
- Never enter excavation deeper than 4' without ladder in opening ladder must extend 3' above surface.
- Spoil must be 2' away from edge of opening.
- Stay out of swing radius of all equipment that is running.
- Correct all unsafe conditions you discover.
- If you see something say something.
- Introduce yourself at the job sight ask if there are any safety concerns you should be aware of.

# Questions