

Rhode Island Division of Public Utilities and Carriers

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Pipeline Safety Engineer



Cape Cod Pipeline Safety Seminar 2011



Meter Set Protection

What are the odds of one of your gas meters getting hit by a car resulting in an explosion?

In Rhode Island we have about
186,000 gas meters.

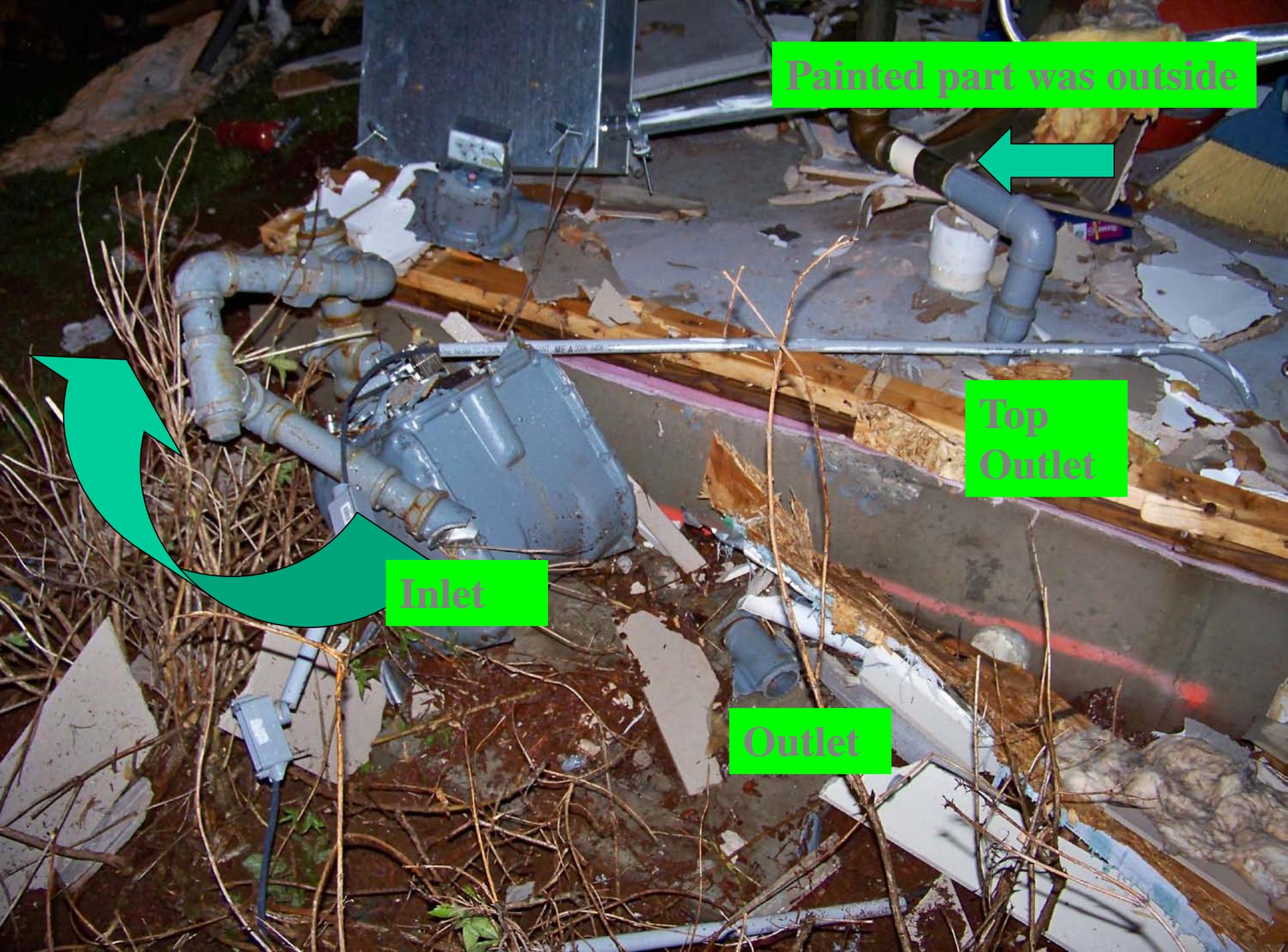
1 explosion divided by 186,000
meters equals =

$$1/186,000 =$$

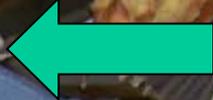
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May 9, 2009, Providence





Painted part was outside



Top
Outlet



Inlet

Outlet

October 11th, 2000

Cromwell, Connecticut

49 CFR §192.353

Customer meters and regulators: Location

- (a) Each meter and service regulator whether inside or outside of a building, must be installed in a readily accessible location and be *protected from* corrosion and *other damage*.

**“Protection of
meters and
regulators”**

September 15th, 2003
Washington, DC

Federal Regulations

- 192.353 Customer Meters and Regulators: Location.
 - (a) Each meter and service regulator, whether inside or outside a building, must be installed in a readily accessible location and be protected from corrosion and other damage, including, *if installed outside a building, vehicular damage that may be anticipated*. However, the upstream regulator in a series may be buried.

“Other Damage”

**What should we consider when
protecting meter sets from
“other damage”?**

Ice build up, falling ice and snow, cleaning off snow and ice.





Vandalism.



Buried meters.



Buried meters.



Waste Haulers.

**“Vehicular Damage
that may be
anticipated”**

What should we consider when protecting meter sets from “Vehicular damage that may be anticipated.”



Meters in parking spaces.



Parking Spaces not so obvious

**When we installed
the meter there
wasn't any
parking space
here!**





In front of garages



Meters in handicapped spaces.

Meters in handicapped spaces.





Trucks backing into loading docks.



Snow plows: 2:00 in the morning during a blizzard.



Heavy Equipment.



Fork Lifts.

What

is

Adequate

Protection?





Is one pole enough?



Can you drive a car through the opening.



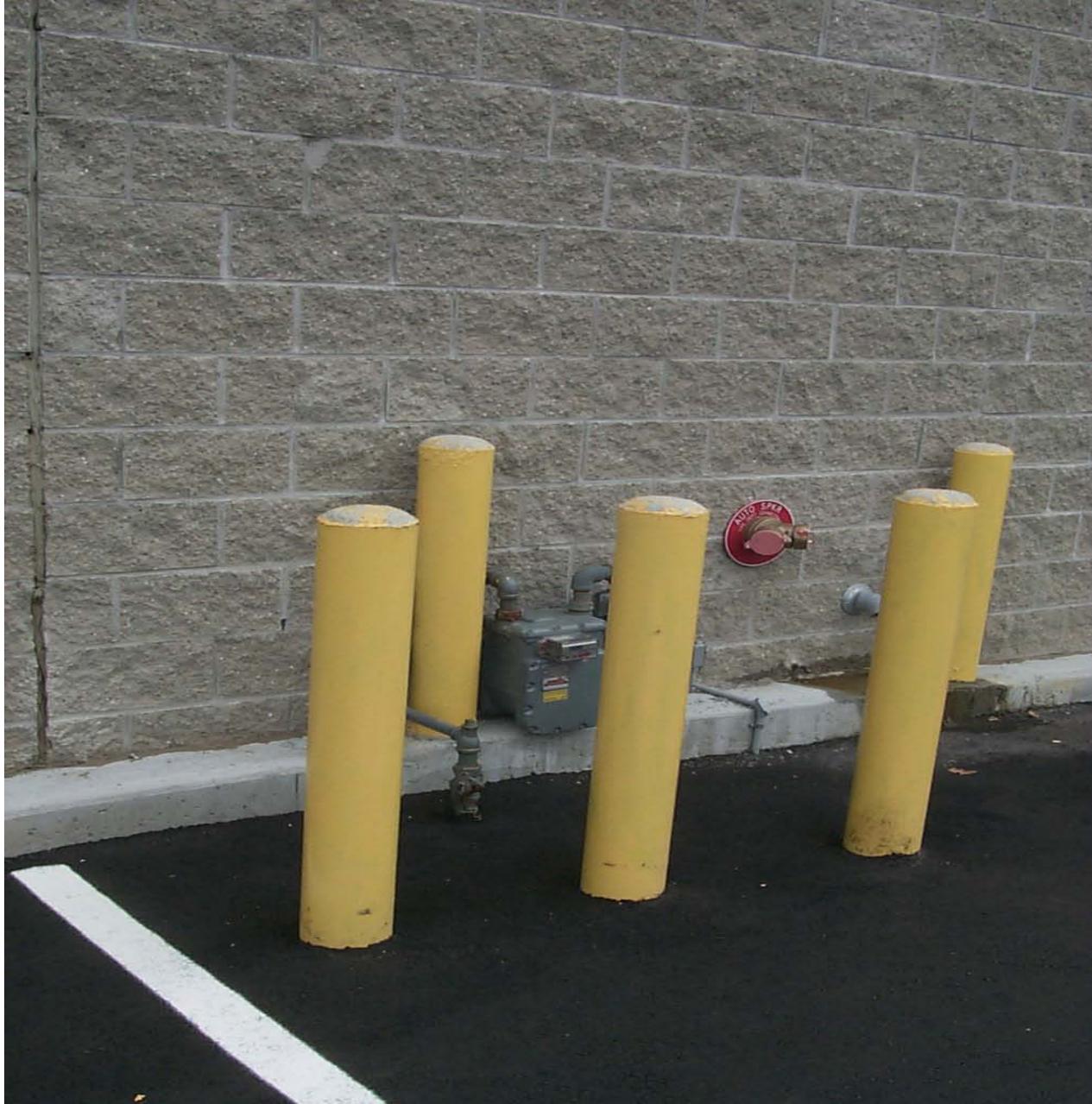
Post size matters.



Post size matters.



Post size matters, just keep adding them until you have enough.



But you don't have to go overboard by adding too many posts.



But you don't have to go overboard by adding too many posts.

$$\mathbf{F=MA}$$

- Force equals mass times acceleration...

$$\mathbf{F=MA}$$

- Acceleration varies...
- Consider someone backing up at 5-10 mph.
- Skidding on ice.
- A snow plow operating at 10-15 mph

$$\mathbf{F=MA}$$

- Mass also varies...
- A dump truck with 10 yards of crushed stone
- A cement truck with 10 yards of cement
- A flatbed trailer with 20 tons of i-beams



LIGHTED METRO BOLLARD SLEEVE



Landscape Lighting



Customize With Graphics



Easily Update Promotions!

“AD” Value! Display Graphics to Promote Your Company!

- Low Density Polyethylene (LDPE) Plastic!
- 57" Tall! Lower Heights Available!
- Fits 6" Diameter Standard Post!
- Ultra Violet (UV) LED Technology!
- White LED's Have 75,000 Hour Rating! Color LED's Have 100,000 Hour Rating!





BEFORE AFTER

PVC] FOR 4"

Protects & Be
Unsightly Woc

- Snaps together in 4 pie
- Covers posts up to 9 feet
- Simple to install
- Inexpensive
- Maintenance Free
- Strong, Resilient, Exteri
- Easy to clean
- Available in White or Wc
- Two trim collars with ea

(Trim collars come as a 2 pc. s

SPECIFICATIONS		
	PPC-49	PPC-69
MATERIAL	PVC	PVC
MATERIAL THICKNESS	1/8"	1/8"
WALL THICKNESS	5/16"	5/16"
INSIDE DIMENSIONS	3-3/4"	5-5/8"
OUTSIDE DIMENSIONS	4-5/16"	6-3/16"

PART #	F
PPC-49-*	
PPC-TC4-*	
PPC-69-*	
PPC-TC6-*	

*Please use

Installation I

Hollow Pipe



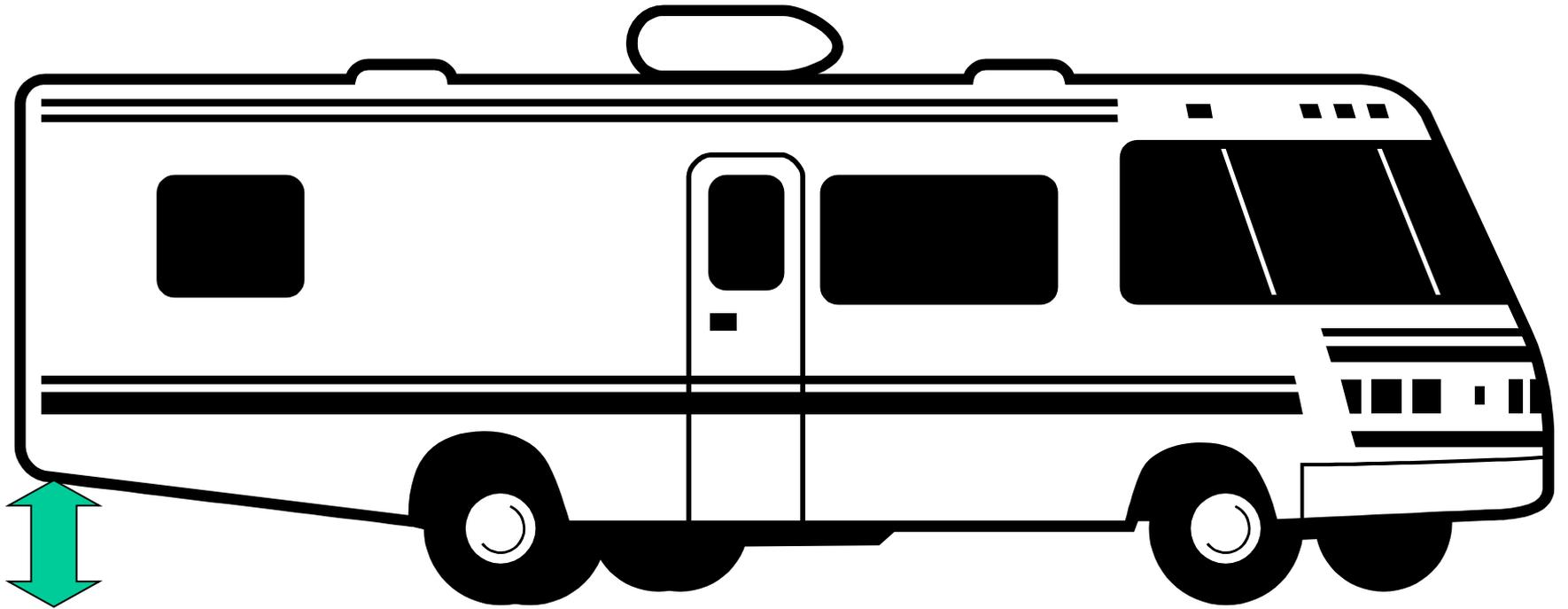
Typical 3 - 12" o.d.

Cement Filled

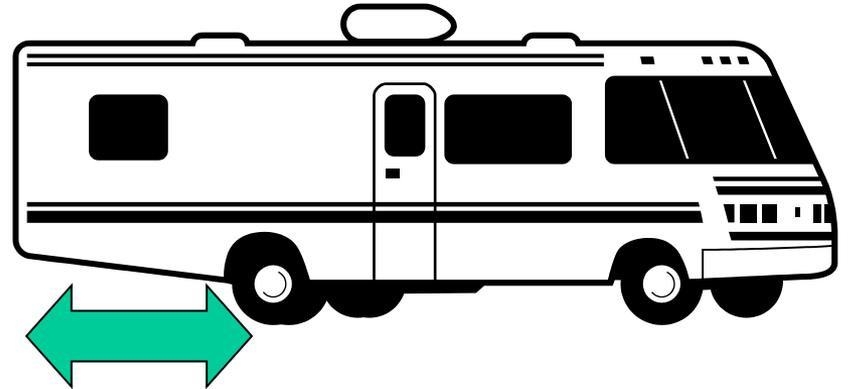
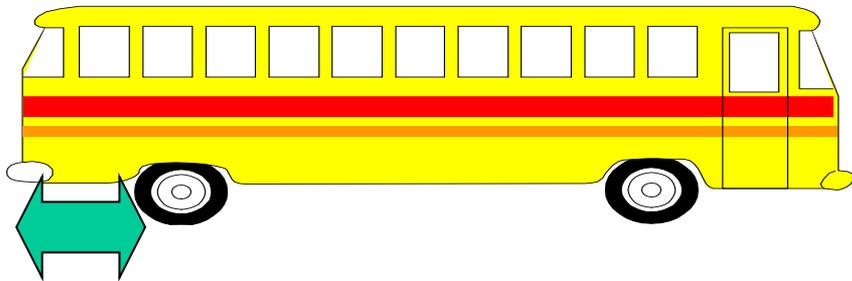
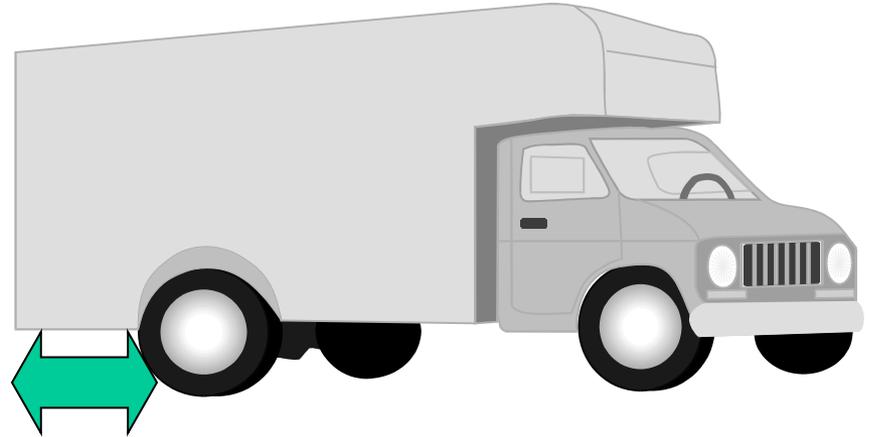
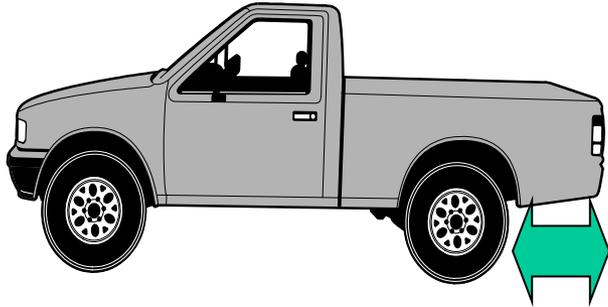


Cement adds bulk but not strength.

Height



Set back





Consider Reflective Tape?



Last point:

**Repair posts after they get
damaged...**



Boots on the ground

- 1.) Leak Survey Technicians**
- 2.) DigSafe Line Markers**
- 3.) AMR drivers**
- 4.) Service Technicians**



Time's Up....

