

# 2022 MIDWEST DAMAGE PREVENTION TRAINING CONFERENCE

## Utilizing CCTV for Utility Locating

Sewers... The forgotten utility



# AUDIOVISUAL SERVICES PROVIDED BY



metronet<sup>TM</sup>



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UTILITY RESOURCES LLC

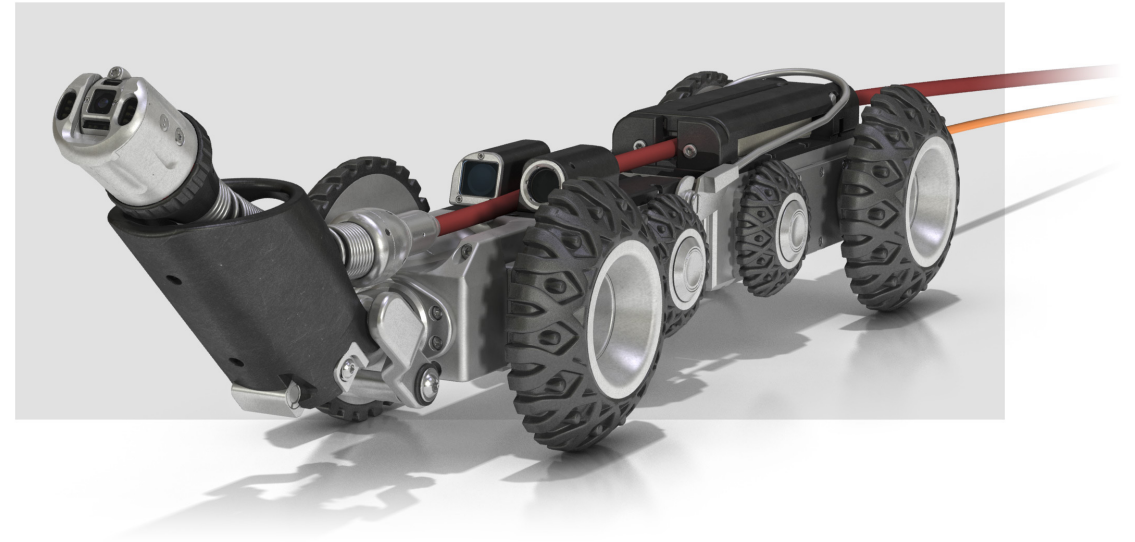


With Centuries of Experience, Mason Private Locating (MPL) has quickly become one of the leaders that specialize in all facets of private utility locating.





- Utility Locating
- Hand-Held Concrete Scanning
- Ground Penetrating Radar (GPR)
- Vacuum Excavation
- Subsurface Utility Engineering Field Services (SUE)
- And then also the reason we are all here today...

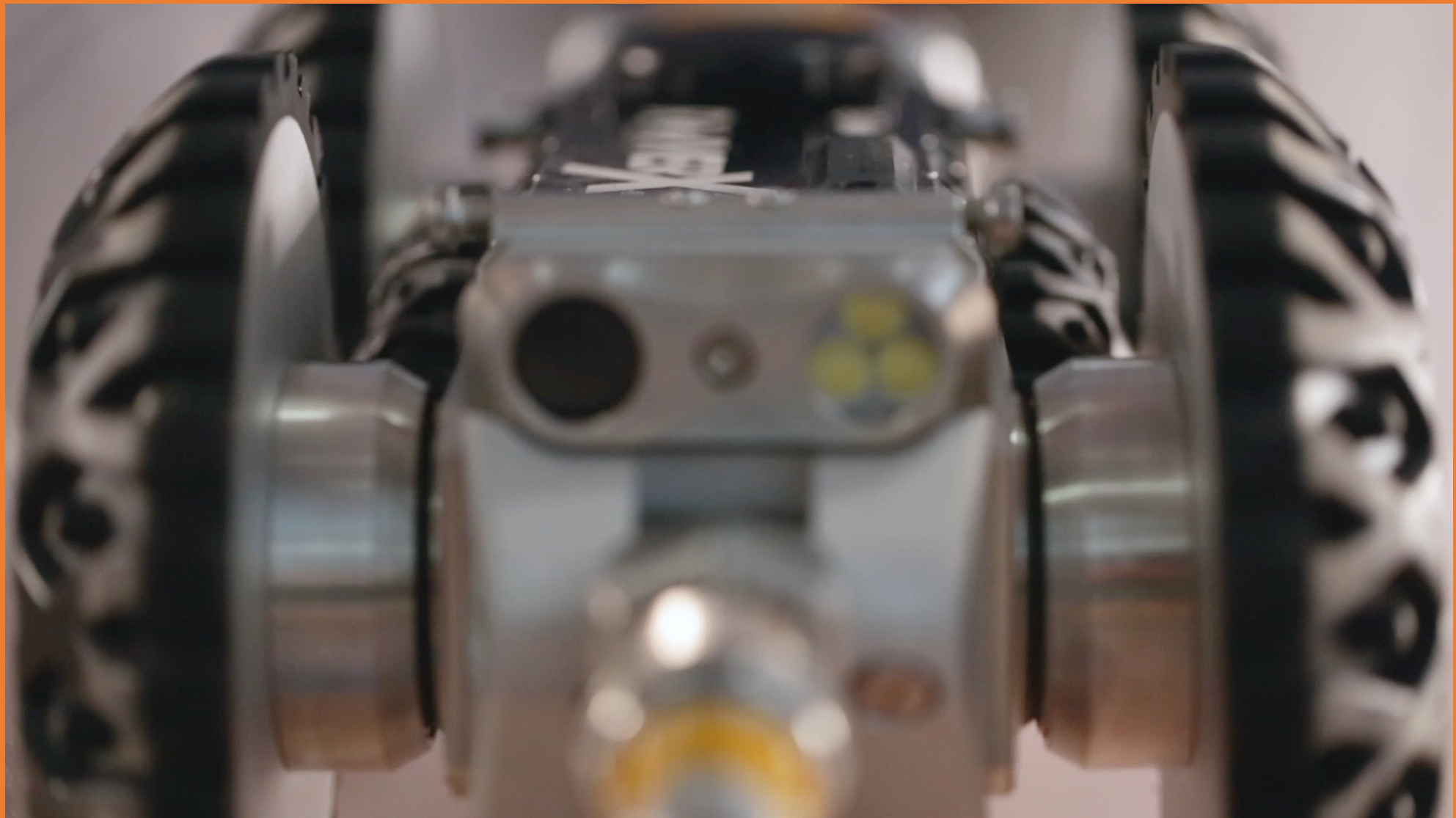






CCTV





# What is CCTV?

Closed Circuit Television Inspection (CCTV) is one of the most effective methods to determine defects, the likelihood of failure, and rehabilitation needs. It is also the industry's tried and true method of determining the location of the system, and any defect locations.



# What we do

## **CCTV Services Provided:**

- Video Pipe Inspection
- Preventative Maintenance
- Identifying Blockages & Defects
- Cross Bore Mitigation for Directional Drilling
- Locating Underground Pipes Prior to Excavation

# What we use

Steerable robots, manual push cameras, and many other devices equipped with various tools to televise and locate pipes.



Steerable Robot



Manual Push

Multiple set ups are available to view 2" – 60" pipe in high definition. Typically, the equipment is run through a computer system that records all video where the operator can also grade the pipe condition. Most robotic cameras have a sonde or beacon in the camera head that can be located above ground to identify the precise location of pipe defects and issues.



# Just how much sewer are we talking?

**Over 800,000 miles  
of Public Sewers in  
the U.S.**

**500,000 miles of  
Private Sewer Laterals  
connecting Private  
properties to public lines**

**Each of these is susceptible to  
structure failure, blockages,  
overflows, and utility strikes!**

**Across the U.S. Estimates Suggest there are:**

**More than 3.5 Million  
Miles of Storm Sewers**

**270 Million Storm  
Drains**

**2.5 Million Stormwater  
Treatment Assets**

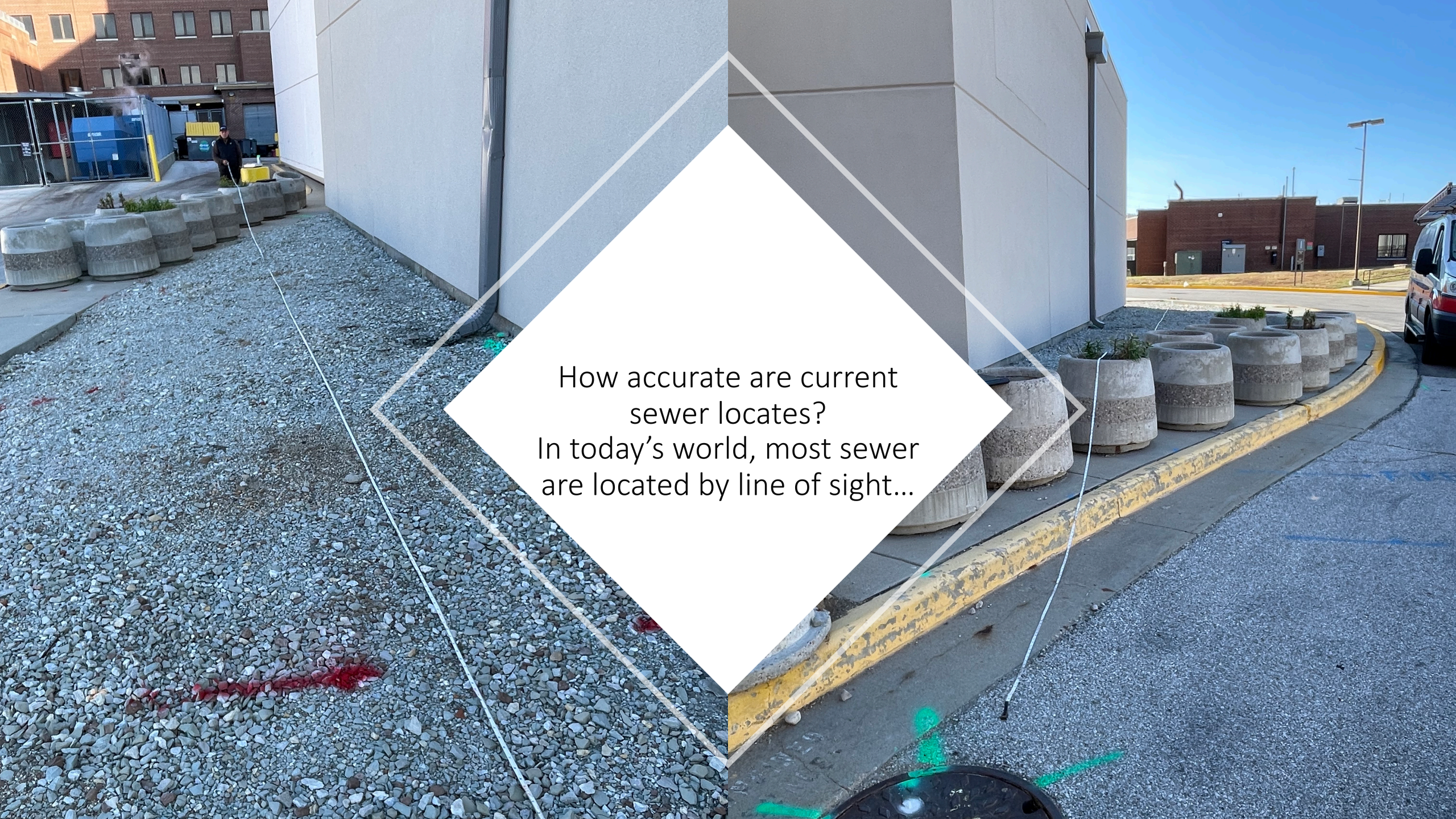
*Under the NPDES MS4 Program, Municipalities are now required to map their Stormwater Systems, but as of 2018 only about 40% of the facility owners have taken that step.*











How accurate are current  
sewer locates?  
In today's world, most sewer  
are located by line of sight...





# CCTV provides the most accurate way to mark any sewer line!

*By utilizing CCTV Cameras, this line was accurately marked and inspected, and now they have learned that it actually runs under the building to another manhole that no one was aware of!*





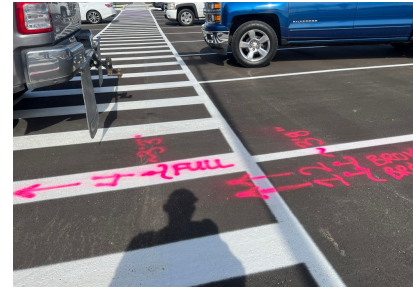




# What else can be located with CCTV?

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CONDUIT 1 FROM BLDG

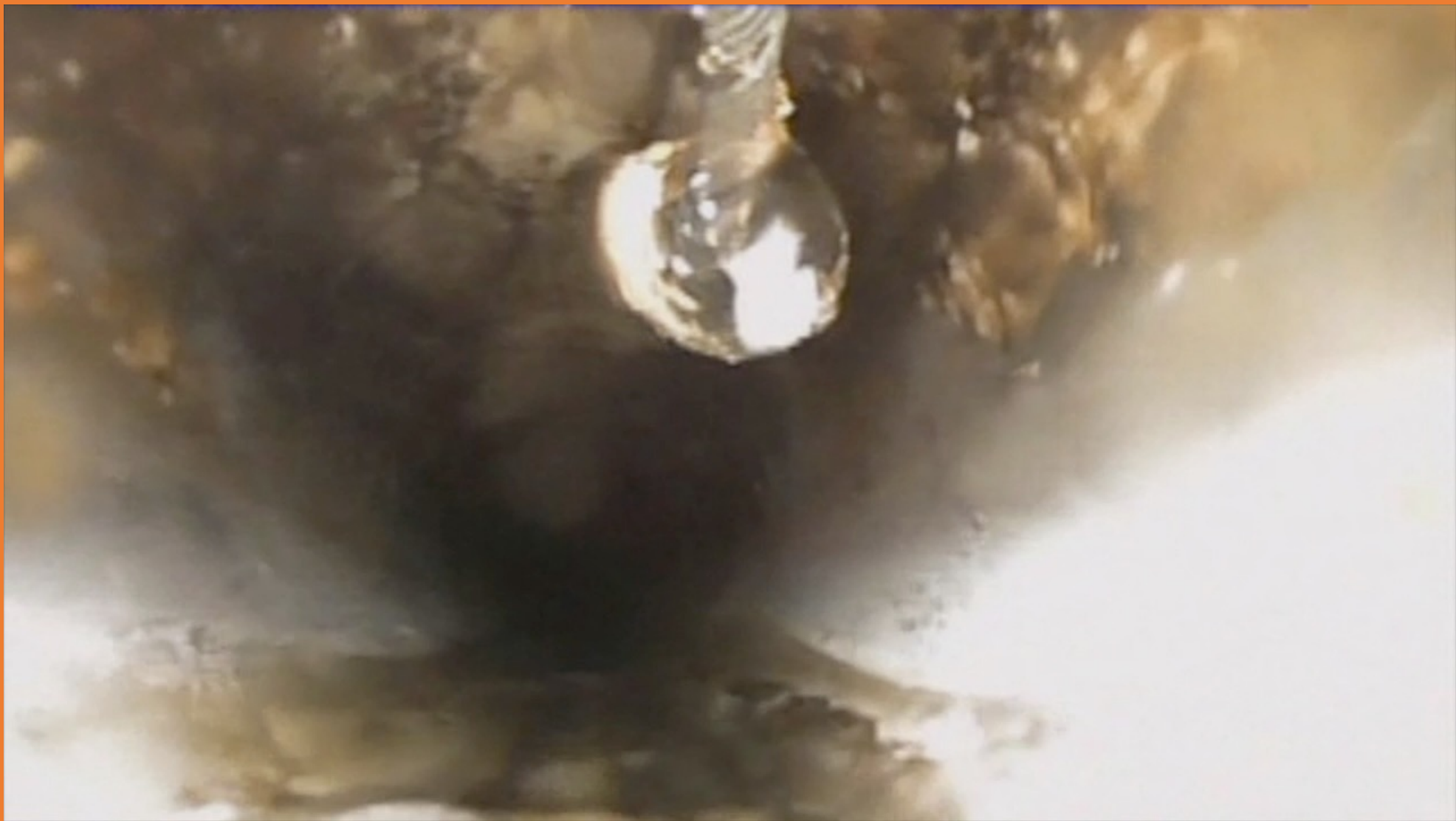


CONDUIT 2 FROM BLDG



18:18:25 20-OCT-2022







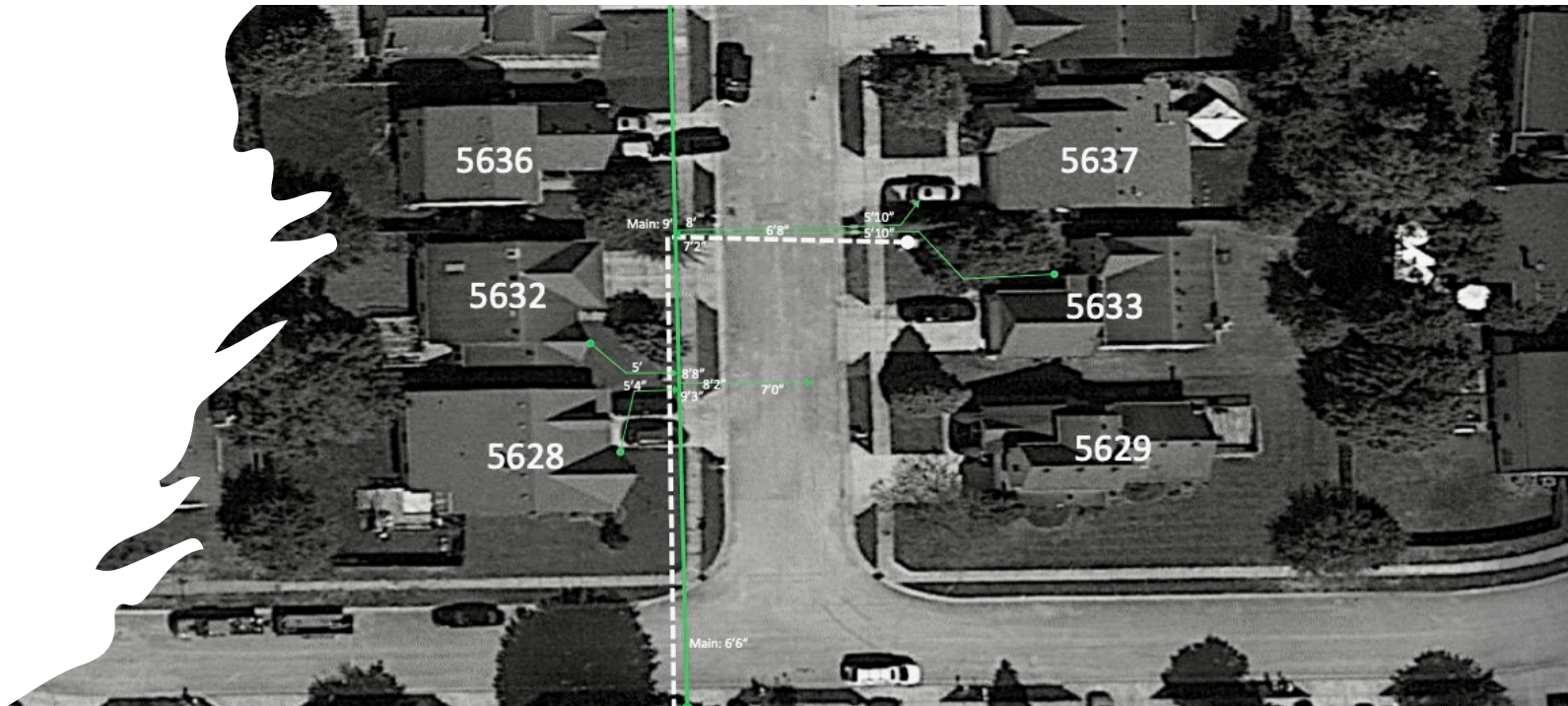
# And sometimes you don't even know what is there...

Imagine beginning your project and then finding this in the middle of it and you had no idea it was there, as well as all of the pipes leading to and from it.


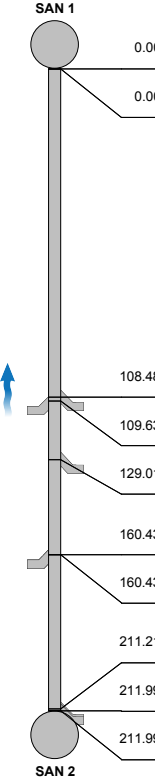
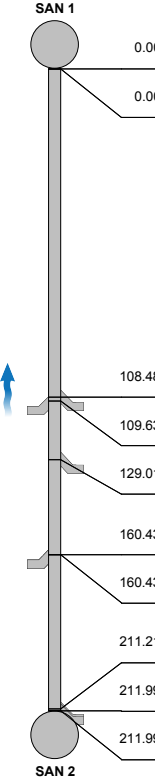
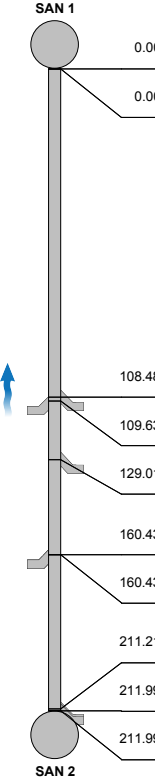




What should a  
finished Locate  
look like?



What kind of information can you expect to receive?

		<b>Mason Private Locating</b> Tel. (888) 316-3933 www.masonprivatelocating.com																																																																				
<b>Inspection report</b>																																																																						
Date: <b>6/13/2022</b>	Work Order:	Weather:	Surveyed By: <b>Eric Mandery</b>	Certificate Number: <b>U-117-07006590</b>	Pipe Segment Ref.: <b>SAN 1 - SAN 2</b>																																																																	
Year laid:	Pre-cleaning: <b>No Pre-Cleaning</b>	Direction: <b>Upstream</b>	Pipe Joint Length:	Total Length: <b>212.0 '</b>	Length Surveyed: <b>212.0 '</b>																																																																	
City: <b>Indianapolis, IN</b> Street: <b>Orchardgrass Lane</b> Location Code: Location Details:		Drainage Area: Media Label: Flow Control: Sheet Number:		Upstream MH: <b>SAN 2</b> Up Rim to Invert: <b>0.0</b> Downstream MH: <b>SAN 1</b> Down Rim to Invert: <b>0.0</b>																																																																		
Pipe shape: <b>Circular</b> Pipe size: <b>8 "</b> Pipe material: <b>Polyvinyl Chloride</b> Lining Method:		Sewer Use: Sewer Category: <b>SEC</b> Purpose: Owner:		Total gallons used: <b>0.0</b> Joints passed: <b>0</b> Joints failed: <b>0</b>																																																																		
Additional Info:																																																																						
<table><thead><tr><th>1:1600</th><th>Distance</th><th>Code</th><th>Observation</th><th>Counter</th><th>Grade</th></tr></thead><tbody><tr><td rowspan="2"></td><td>0.00</td><td>AMH</td><td>Manhole / SAN 1</td><td>00:00:01</td><td></td></tr><tr><td>0.00</td><td>MWL</td><td>Water Level, 5% of the vertical dimension</td><td>00:00:03</td><td></td></tr><tr><td></td><td>108.48</td><td>TF</td><td>Tap Factory Made at 10 o'clock, 6inch dim / 5628</td><td>00:04:11</td><td></td></tr><tr><td></td><td>109.63</td><td>TF</td><td>Tap Factory Made at 2 o'clock, 6inch dim / 5629</td><td>00:04:17</td><td></td></tr><tr><td></td><td>129.01</td><td>TF</td><td>Tap Factory Made at 10 o'clock, 6inch dim / 5632</td><td>00:05:05</td><td></td></tr><tr><td></td><td>160.43</td><td>TF</td><td>Tap Factory Made at 2 o'clock, 6inch dim / 5633</td><td>00:07:47</td><td></td></tr><tr><td></td><td>160.43</td><td>TF</td><td>Tap Factory Made at 2 o'clock, 6inch dim / 5637</td><td>00:07:54</td><td></td></tr><tr><td></td><td>211.21</td><td>TF</td><td>Tap Factory Made at 10 o'clock, 6inch dim / 5636</td><td>00:10:38</td><td></td></tr><tr><td></td><td>211.99</td><td>TF</td><td>Tap Factory Made at 10 o'clock, 6inch dim / 5640</td><td>00:10:43</td><td></td></tr><tr><td></td><td>211.99</td><td>AEP</td><td>End of Pipe / Cleared scope of work</td><td>00:10:45</td><td></td></tr></tbody></table>						1:1600	Distance	Code	Observation	Counter	Grade		0.00	AMH	Manhole / SAN 1	00:00:01		0.00	MWL	Water Level, 5% of the vertical dimension	00:00:03			108.48	TF	Tap Factory Made at 10 o'clock, 6inch dim / 5628	00:04:11			109.63	TF	Tap Factory Made at 2 o'clock, 6inch dim / 5629	00:04:17			129.01	TF	Tap Factory Made at 10 o'clock, 6inch dim / 5632	00:05:05			160.43	TF	Tap Factory Made at 2 o'clock, 6inch dim / 5633	00:07:47			160.43	TF	Tap Factory Made at 2 o'clock, 6inch dim / 5637	00:07:54			211.21	TF	Tap Factory Made at 10 o'clock, 6inch dim / 5636	00:10:38			211.99	TF	Tap Factory Made at 10 o'clock, 6inch dim / 5640	00:10:43			211.99	AEP	End of Pipe / Cleared scope of work	00:10:45	
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		<b>Mason Private Locating</b> Tel. (888) 316-3933 www.masonprivatelocating.com		
<b>Section Pictures - 6/13/2022 - SAN 1 - SAN 2</b>				
City <b>Indianapolis, IN</b>	Street <b>Orchardgrass Lane</b>	Date <b>6/13/2022</b>	Pipe Segment Reference <b>SAN 1 - SAN 2</b>	Nr. <b>1</b>
				
3, 00:04:17, 109.63ft Tap Factory Made at 2 o'clock, 6inch dim / 5629				
				
4, 00:05:05, 129.01ft Tap Factory Made at 10 o'clock, 6inch dim / 5632				



# What happens when things go wrong?





# What happens when things go wrong?

Cross-Bores occur when other utilities are directionally drilled, and the proper equipment was not used to mark sewer lines when the work took place.

Most utilities are at risk such as gas, electric, communications, etc.







You NEVER know what you're gonna find.



# What would accurate Sewer Locates mean to your industry?

Engineers	Contractors/Excavators	Directional Drillers	Facility Owners
Know where the sewer mains and laterals are located during design.	Save time and money knowing where the sewers are located before you begin your work.	Increase efficiency by saving time and money, while increasing safety for everyone by knowing where the sewers are located and avoiding those costly and dangerous cross-bores.	Know the location of your facilities, as well as their condition.



# Questions?

As you can see, just because everything looks nice above ground, it doesn't mean there isn't danger lurking below. Due to the age and availability of maps and records, sewers are typically one of the most difficult, and often ignored, utilities when it is time to have locates performed.

## See us at Booth # 207







## CEU & SCHOLARSHIP ATTENDEES:

Attendees who would like to receive CEU credit or who are scholarship recipients, please scan the QR code OR visit the link below and fill out the online form.

<https://www.midwest811conference.com/utilizing-cctv/>

