

# Hillsborough County, FL, Expands Focused Electrode Leak Location (FELL) Program to Locate & Measure Sewer Infiltration

*After Completing a Successful 25-Mile Project in 2019, County Adds Another 7-Mile Network of Underground Sewer Mains to Help Target Rehabilitation*

SACRAMENTO, CALIFORNIA, US, May 11, 2020 /EINPresswire.com/ -- Sacramento-based [Electro Scan](#), Inc. has again been engaged by Hillsborough County, Florida for its second significant sewer line condition assessment program in 6 months. The County is the fourth largest wastewater/water utility in the state of Florida, with a 286-square mile service area.

Work for the 7-mile (35,000 linear foot) condition assessment project began on May 6. After completing a 25-mile inspection project in late 2019, and seeing the direct benefits of [Focused Electrode Leak Location](#) technology to set rehabilitation priorities, the County understands the power of FELL data to exactly locate inflow/infiltration sources, and then to quantify flow rates in Gallons per Minute (GPM).



Following CDC safety measures Electro Scan is "open for business" beginning its latest inspection project in Hillsborough County's South Service Area. (ABOVE) Certified FELL operator, Dan Wise, and Regional Director, Matt Campos.

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Electro Scan is scalable, repeatable and quantitative. We believe in the technology and hope to utilize Electro Scan in all future I&I studies.”

*Richard Cummings, Division Director of Field Maintenance Services*

During wet-weather events, stormwater enters sewers & stormwater pipes through defective pipe joints, cracks, and poorly installed customer taps.

Frequently causing sewer backups, overflows, and flooding, municipal utilities have traditionally used Closed-Circuit Television (CCTV) cameras inserted in pipes traveling from manhole to manhole to look for leaks, with rehabilitation often scheduled based exclusively on visual inspection.

Up until recently, CCTV cameras were used to 'certify' repairs, rehabilitation, and renewals, including Cured-In-

Place Pipe (CIPP) installations, until liners were found having significant permeability if incorrectly installed, that CCTV cameras inadvertently approved.

The new inspection work is being conducted in Clair-Mel City, in the County's South Service area. Electro Scan is providing turn-key services with its field crews and inspection and water jet trucks.

"We are thrilled to be part of the County's adoption of FELL technology. In these unprecedented times, fiscal responsibility is essential, and FELL data allows the County to establish definitive rehabilitation priorities to make the most of precious capital funds," commented Mike Condran, PE, Electro Scan's Southeast Regional Vice President.

"We are always open to utilizing new technology to improve operations here in Hillsborough County," stated Richard Cummings, Director, Field Service Maintenance Division, Hillsborough County Utilities.

Continued Cummings, "Electro Scan is interesting and innovative! In the past we performed expansive amounts of slip lining to correct physical defects, but in the future we will target I&I as well. Our goal is to reduce I&I and the first objective is finding out where it is happening. Electro Scan is scalable, repeatable and quantitative. We believe in the technology and hope to utilize Electro Scan in all future I&I studies and if possible, procure Electro Scan for in-house work as well."

Working in full compliance and guidance issued by the Centers for Disease Control and Prevention (CDC) for safe work practices, Electro Scan is "open for business."

Field crews are able to work completely independently, and there is no need for direct interaction with County O&M personnel, enabling this essential service to proceed even with the state's COVID-19 restrictions in place.

FELL technology precisely locates pipeline defects that contribute to inflow and infiltration to within 1 cm, and then documents the potential I/I flow rate in GPM.

Unlike legacy CCTV inspection, which cannot effectively find or measure I/I sources, Electro Scan's inspection will provide the County a targeted list of pipes that require rehabilitation, and just as important, which pipes do not contribute to I/I.

"Electro Scan is delighted to continue serving Hillsborough County, which now joins large and



Hillsborough County Public Utilities Department operates and maintains over 1,400 miles of gravity sewer mains in a 286-square mile service area. The County's system is the fourth largest in the state of Florida.



Electro Scan is providing turnkey FELL inspection services with its equipment and crews, working independently and not requiring County oversight.

small utilities alike from across the country in embracing this innovative inspection technology," stated Chuck Hansen, Chairman.

"Municipalities can no longer accept & pay for legacy pipe inspection techniques that don't work to locate, much less measure, infiltration sources," continued Hansen.

The previous 25-mile condition assessment project in the Dale Mabry Collection Basin included a side-by-side comparison of CCTV and FELL inspection results for 33,000 linear feet of pipe. CCTV inspection conducted by industry certified operators identified only 14 defects with the potential to contribute to infiltration.

By contrast, FELL results found 1,227 individual defects that contributed to infiltration. This remarkable discrepancy allows the County to take meaningful actions to directly reduce unwanted I/I flows.

Moreover, of the 25 miles of gravity sewer inspected by FELL, 25% of the pipes were responsible for 76% of the potential I/I flow. The result means the County can precisely identify and select specific pipes for rehabilitation that contribute the most to I/I.

The Clair-Mel assessment work is expected to be complete within 2-3 weeks. Daily production rates for the previously completed 2019 Dale Mabry FELL project averaged 3,000 feet per day, substantially more efficient than CCTV inspection.

Last week, [Innovyze](#) + Electro Scan sponsored a joint webinar to introduce a proven end-to-end roadmap for identification, elimination, and same-day measurement of rehabilitation effectiveness.

Utilities are encouraged to contact Electro Scan to arrange for a complimentary field demonstration of FELL data collection "in action" in their own system. Results are delivered the same day, and will clearly show how any wastewater collection system owner will benefit from unbiased and unambiguous data to prioritize its own rehabilitation programs.

**ABOUT ELECTRO SCAN**

Headquartered in Sacramento, Calif., the company designs, develops, and markets proprietary pipe condition assessment equipment, delivers field services, and offers cloud-based data

### CCTV Results

TOTAL DEFECTS

# 14

CCTV completed by NASSCO certified CCTV operators detected 14 sources of infiltration, including: 1-Joint Offset Large (JOL), 1-Joint Offset Medium (JOM), 3-Deformed (D), 1-Hole Visible (HSV), 2-Infiltration Continuous Flow (IR), 1-Infiltration Dripper (ID), and 5-Tap Factory Defective (TFD).

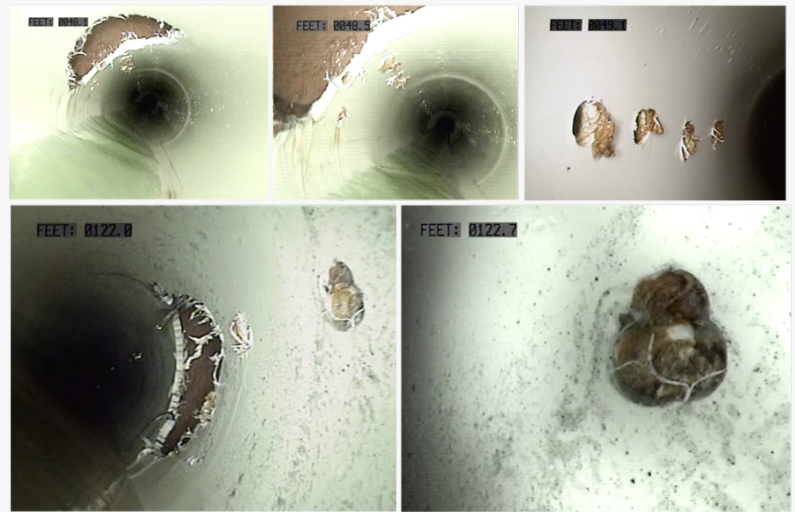
### FELL Results

TOTAL DEFECTS

# 1,227

FELL completed in accordance with ASTM F2550 located 1,227 sources of potential infiltration measured in Gallons per Minute.

In 2019 Electro Scan compared results of both FELL and CCTV inspection for 33,000 feet of sewer. Results show the dramatic benefit to FELL for locating and quantifying defects contributing to infiltration.



Segment	Structural					Quick	Index	O & M					Quick	Index	Overall						
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5			Rating	Grade 1	Grade 2	Grade 3	Grade 4			Grade 5	Rating	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
0329MH183-0329MH184	0	0	0	0	0	0	0000	0	0	0	0	0	0	0000	0	0	0	0	0	0	0000

Still shots from CCTV video showing pipe with obvious and significant defects for which the resulting inspection report showed as a "perfect" liner. Municipalities can no longer accept inspection work that does not and cannot find defects and infiltration.

processing and reporting applications that automatically locate, measure, and report defects typically not found using legacy inspection methods. In 2020, the company was named to Government Technology's esteemed GovTech 100 list for the second year in row. Electro Scan field crews and its authorized partners have been designated 'essential workers' adopting Coronavirus Health & Safety Standards, including appropriate use of Personal Protective Equipment (PPE) and Social Distancing standards, in accordance with state mandates and CDC recommendations. Electro Scan is Safe Contractor Approved.

#astmf2550 #awwam77 #cctv #cipp #faultycipp #fell #I&i #infiltration #leak #leakdetection #pacp #m77 #mscc #nassco #trenchless #wsaa #wrc

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