

# Small Utility – Infinite Capability

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President and CEO  
Essex Power Corporation

**The Power of Data & Information**



# Essex Power's Innovation Highlights

- Sophisticated settlement solutions that have enabled complex two-way market transactions at both the retail and wholesale level;
- Implemented Advanced Metering Infrastructure enabling load and generation data slices down to the 5 min, 15 min or hourly level;
- Advanced outage management systems that triage outage areas and causes;
- Enhanced Asset Management tools that assess utilization rates, age and field conditions to properly plan for and optimize new investment;
- Advanced near real time grid monitoring that provides visibility from the bulk system down to the individual meter of every customer;
- Digital tools for our customers to understand how they are using their energy and where opportunities are for savings



# Creating Win/Win Opportunities with our Customers

- Our Single Voltage Utility initiative was a long term capital investment strategy backed up by high end grid analytics to optimize our systems performance
- Results: A more robust and capable system that has significantly reduced our line losses

**Over the next 10 years, Essex Powerlines customers are expected to save over **\$4,000,000** on their electricity bills!!!**



# Ongoing Innovative Objectives Self-Healing Grid

- Over 75% of EPLC outages are Loss of Supply related;
- This means that outage root causes are outside of EPLC control;
- Installing Line Monitors, Reclosers & upgrading Wholesale Meters to reduce the impacts of Loss of Supply events;
- These devices will allow EPLC's Smart Grid to automatically attempt to resolve outages and isolate/minimize the impact of outages;

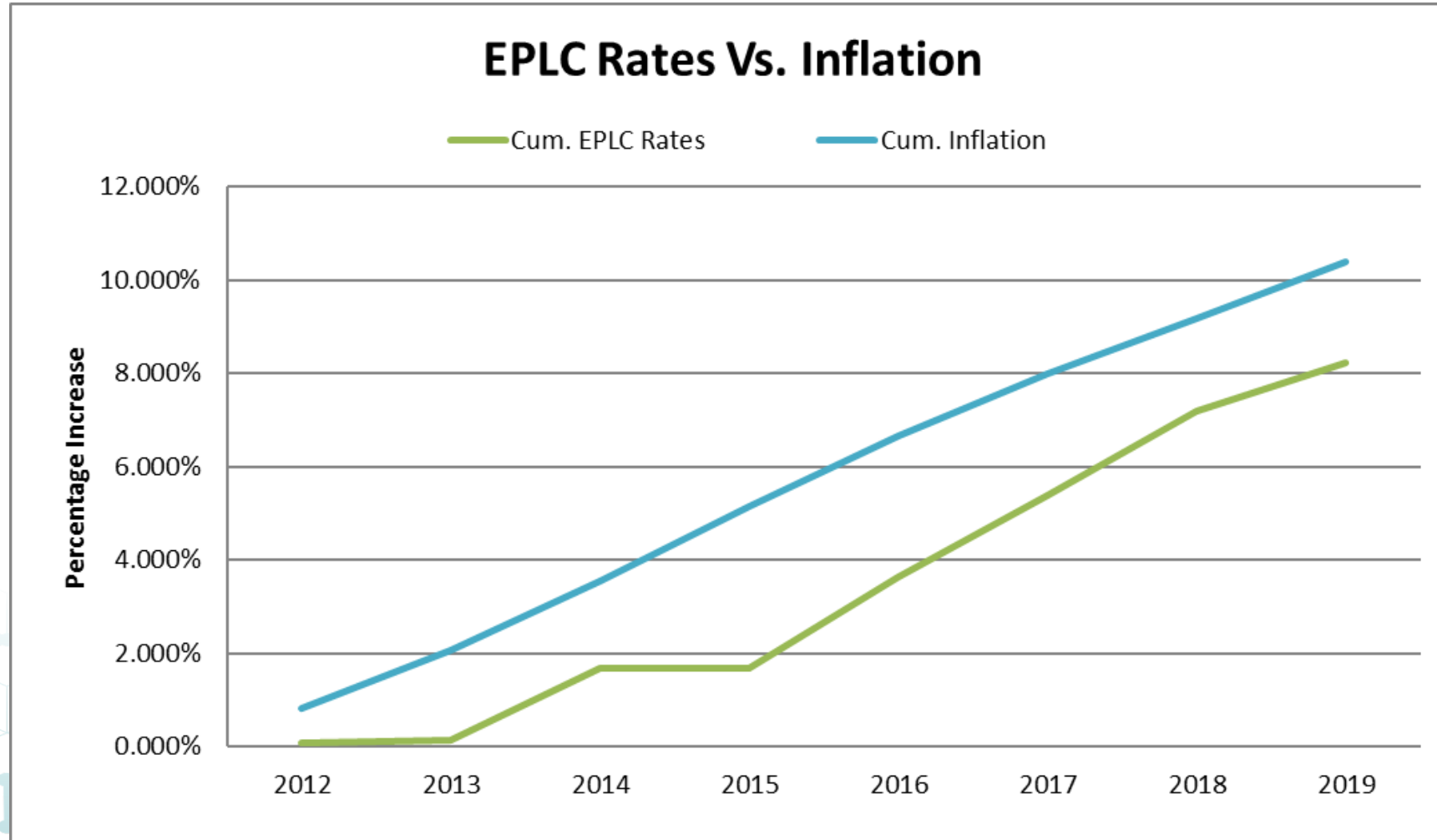


# Ongoing Innovative Objectives Sustainable Communities

- Approximately 20% of the energy needs of our customers is produced locally through sustainable energy projects driven by previous gov't incentive programs;
- Essex Power is committed, through community partnerships, to increase that to 100% as sustainable technologies trend to grid parity cost levels;
- Virtual Net Metering and New Storage technologies will be some of the tools that we are committed to implementing to enable that objective.



# Innovating Expenditure Balance





Failure to adopt innovation that  
provides customer value **TODAY** will  
leave utilities without customers  
**TOMORROW**

# DIGITAL UTILITY

## Digital Technologies and Services

**DIGITAL  
UTILITY  
DATA HUB**



**OUTAGE  
MANAGEMENT**

**VOLTAGE  
MANAGEMENT**

**TRANSFORMER  
MANAGEMENT**

**SYSTEM SIMULATION  
& MODELING**

**SETTLEMENT**

**CONSUMER  
ENGAGEMENT**

**CONTROL ROOM  
SERVICES**

**ASSET  
MANAGEMENT**

**ADVANCED  
SETTLEMENT**

**WORKFLOW  
MANAGEMENT**

**METER  
MANAGEMENT**

**DISTRIBUTION  
AUTOMATION**

**DSO**

**MICRO GRIDS  
MANAGEMENT**

**CENTRALIZED  
BILLING SERVICES**

**VIRTUAL UTILITY SUB-  
METERING SERVICES**

**DER**

**ELECTRIC VEHICLES  
MANAGEMENT**



# What Enables **COLLABORATION**?



**The DIGITAL GRID and a  
COMMON VISION**

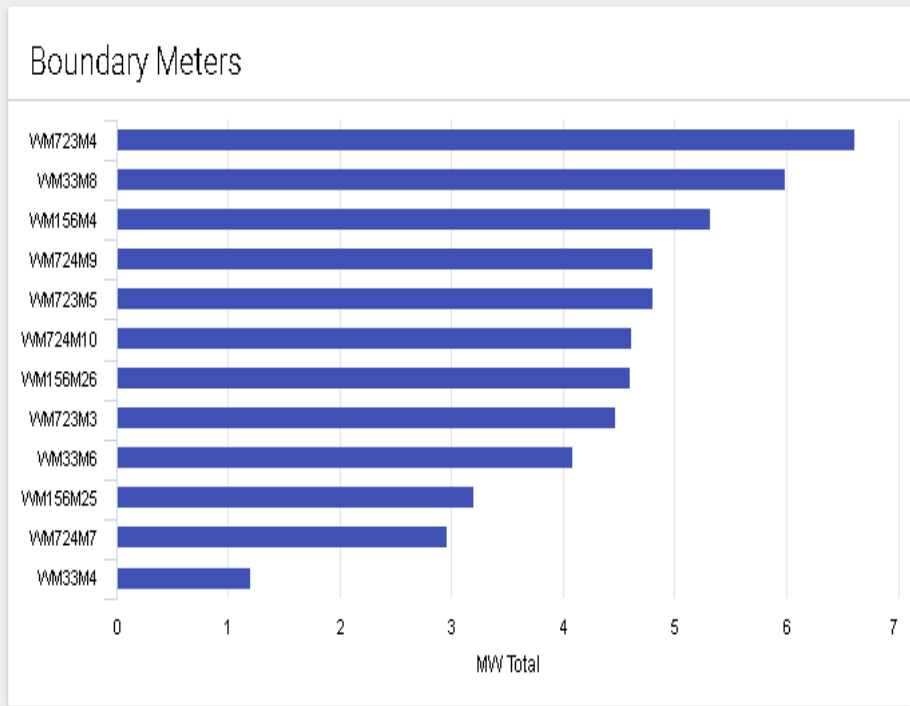
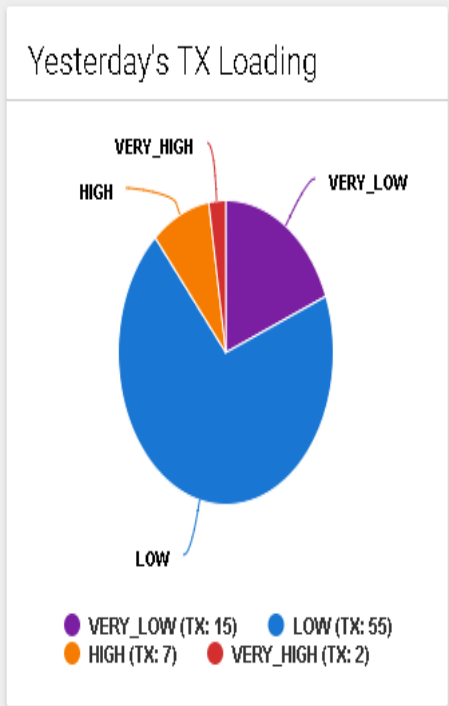


# We have Information Overload!

We need to **SIMPLIFY** the data  
and make it user friendly!

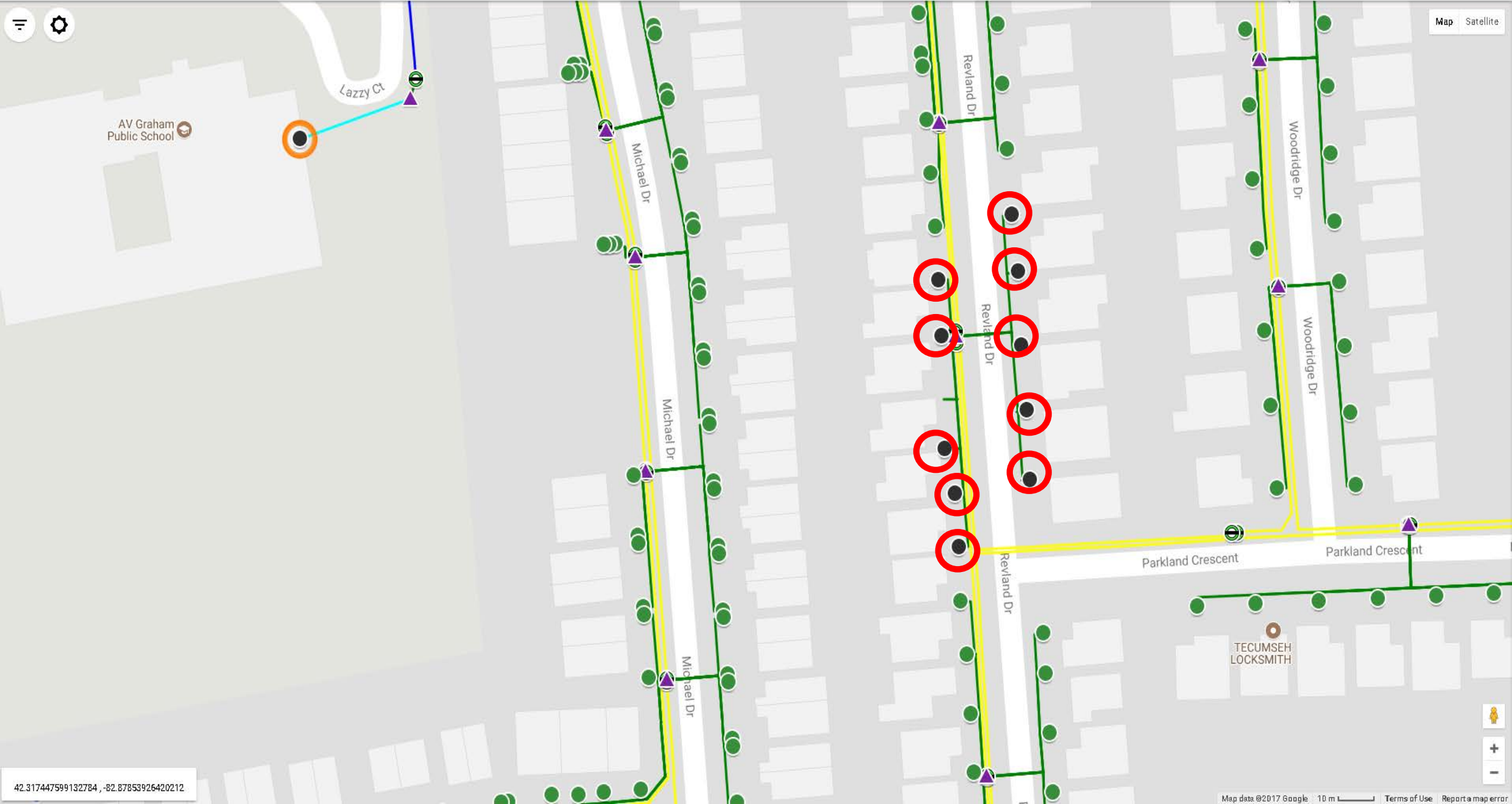


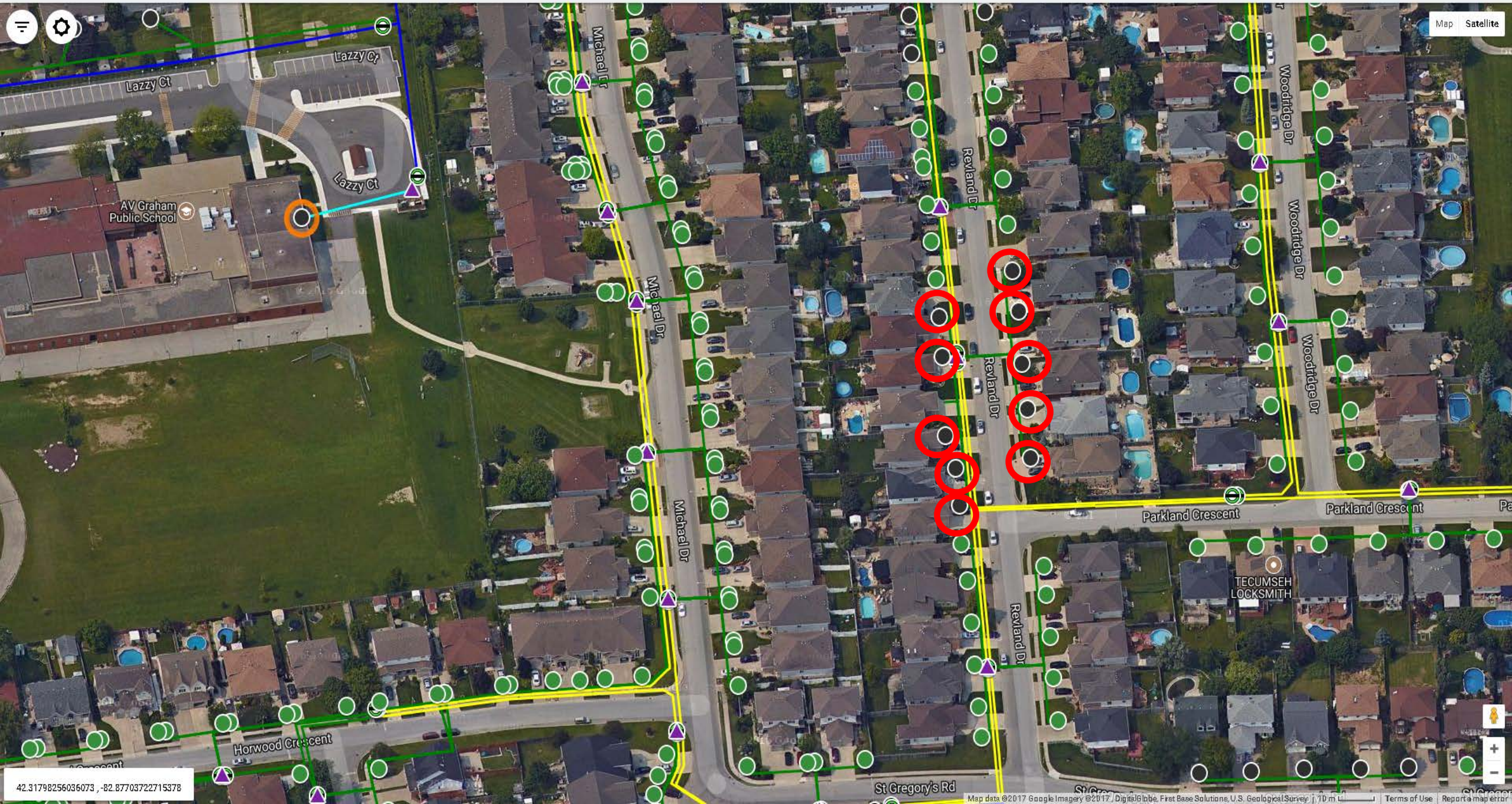
4 Outage Messages	0 Tilt/Tamper Messages	0 Hot Socket Messages	0 Brownout Messages	0 Line Monitor Faults	0 Recloser Faults
0 Recloser Issues	0 Outages Confirmed	0 Outages Planned	1 Outages Proposed	10 High Voltage Problems	44 Low Voltage Problems



### Shortcuts

- SEARCH
- MAP
- METERS
- LINE MONITORS
- OUTAGES
- FAULTS





42.31798256036073, -82.87703722715378



TX10227

Michael Dr

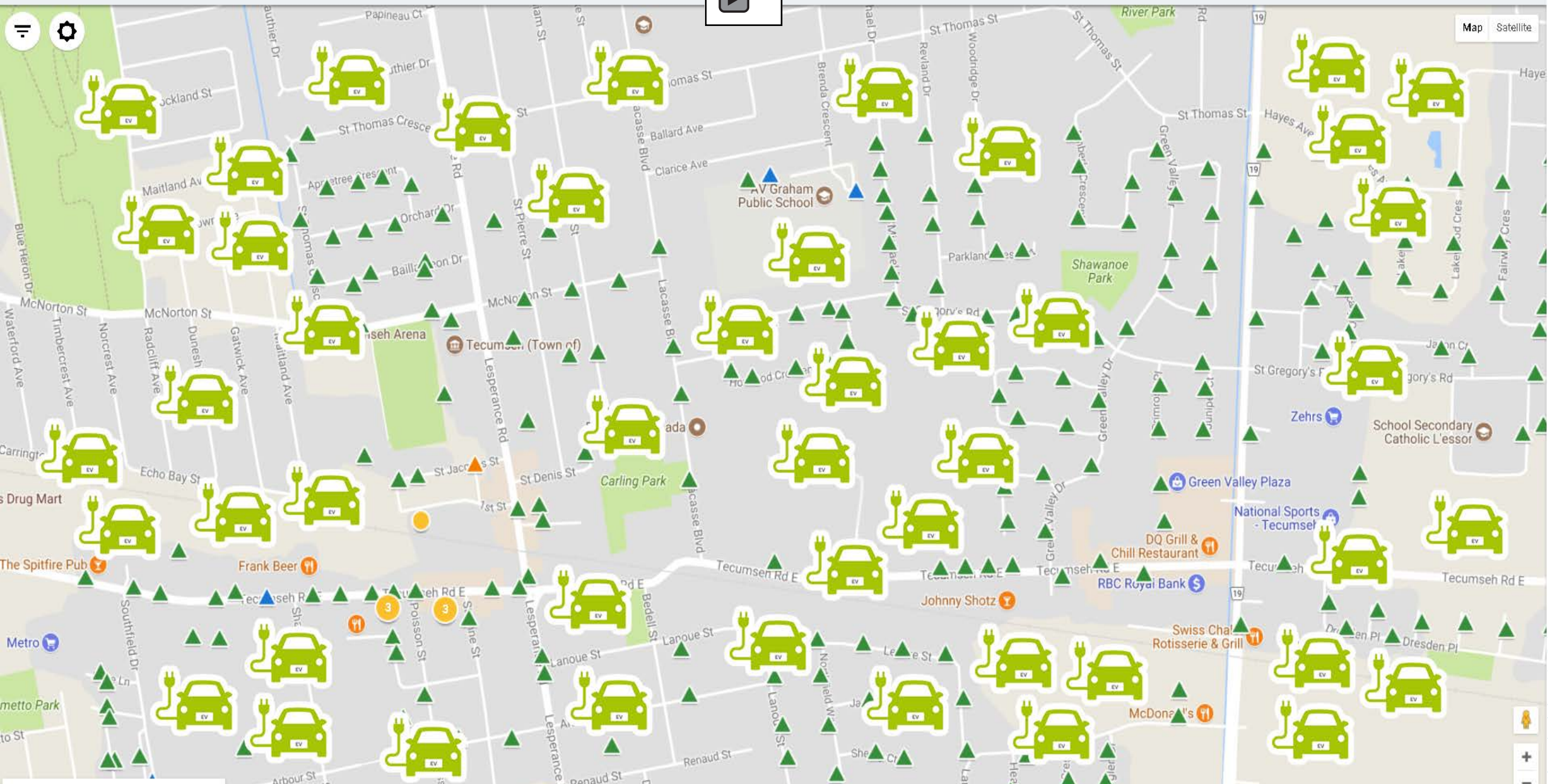
**Does Your Morning  
Look Like This?**



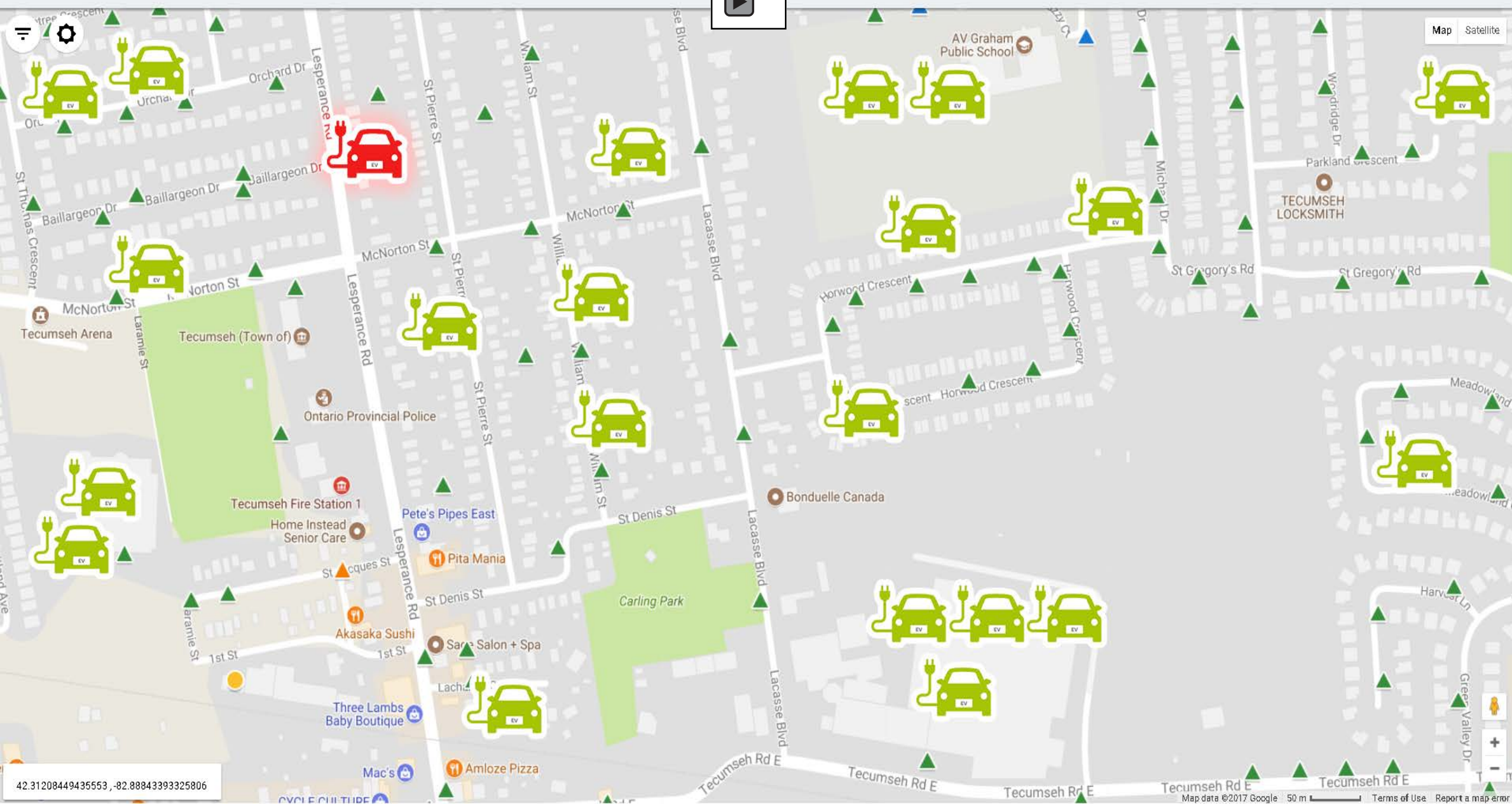
# Or Like This? Multiple Systems? Multiple Problems

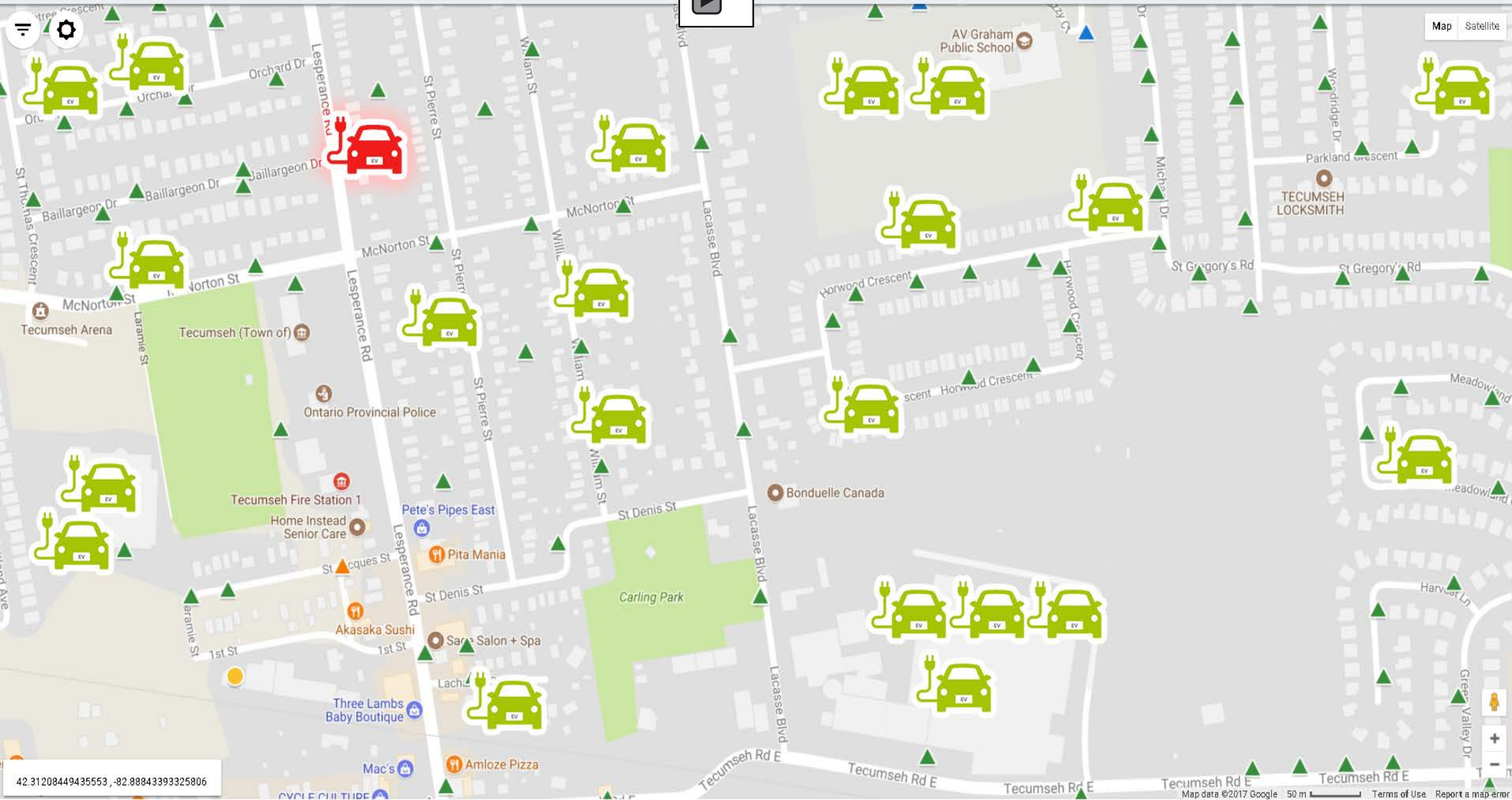






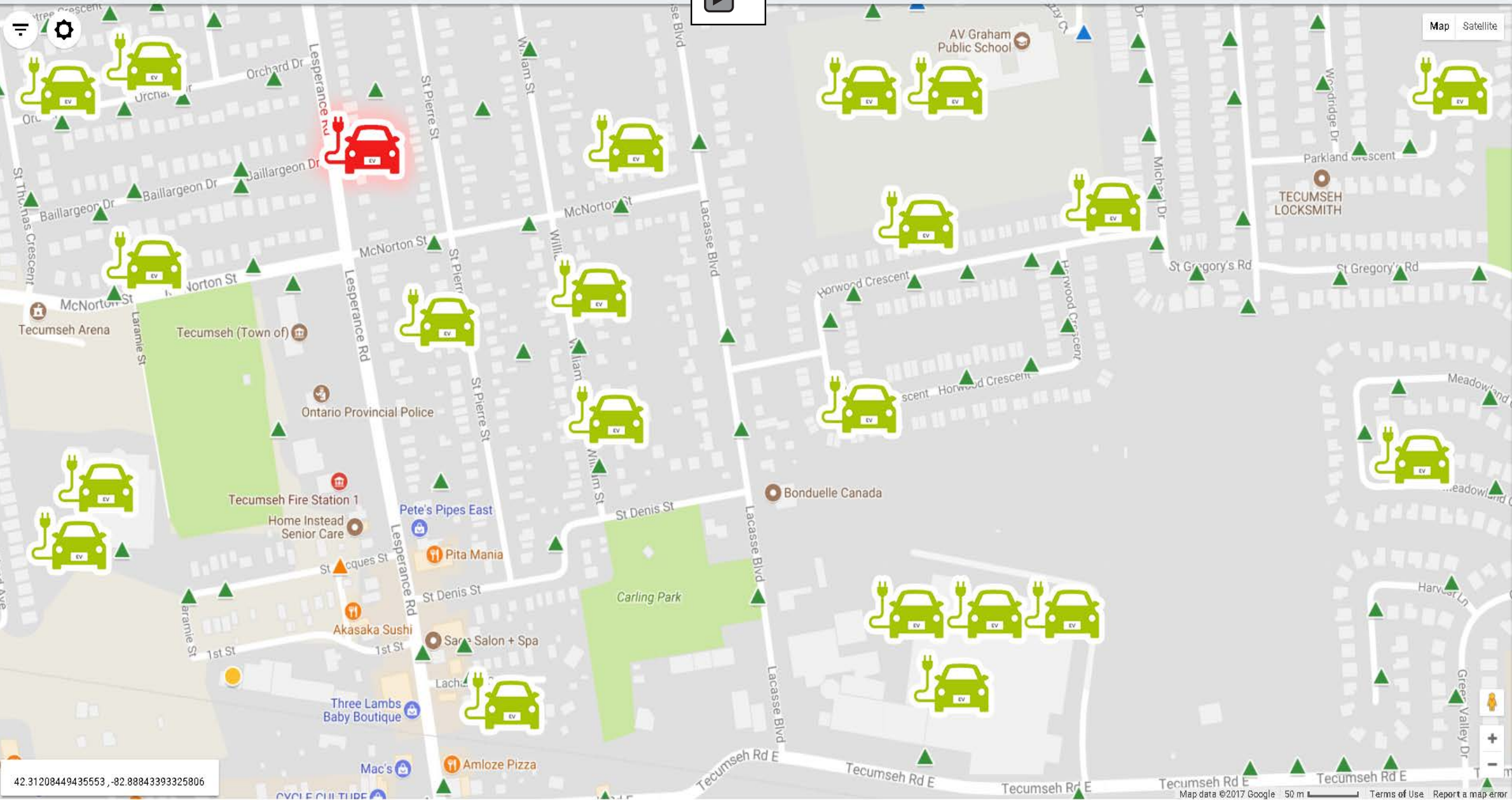
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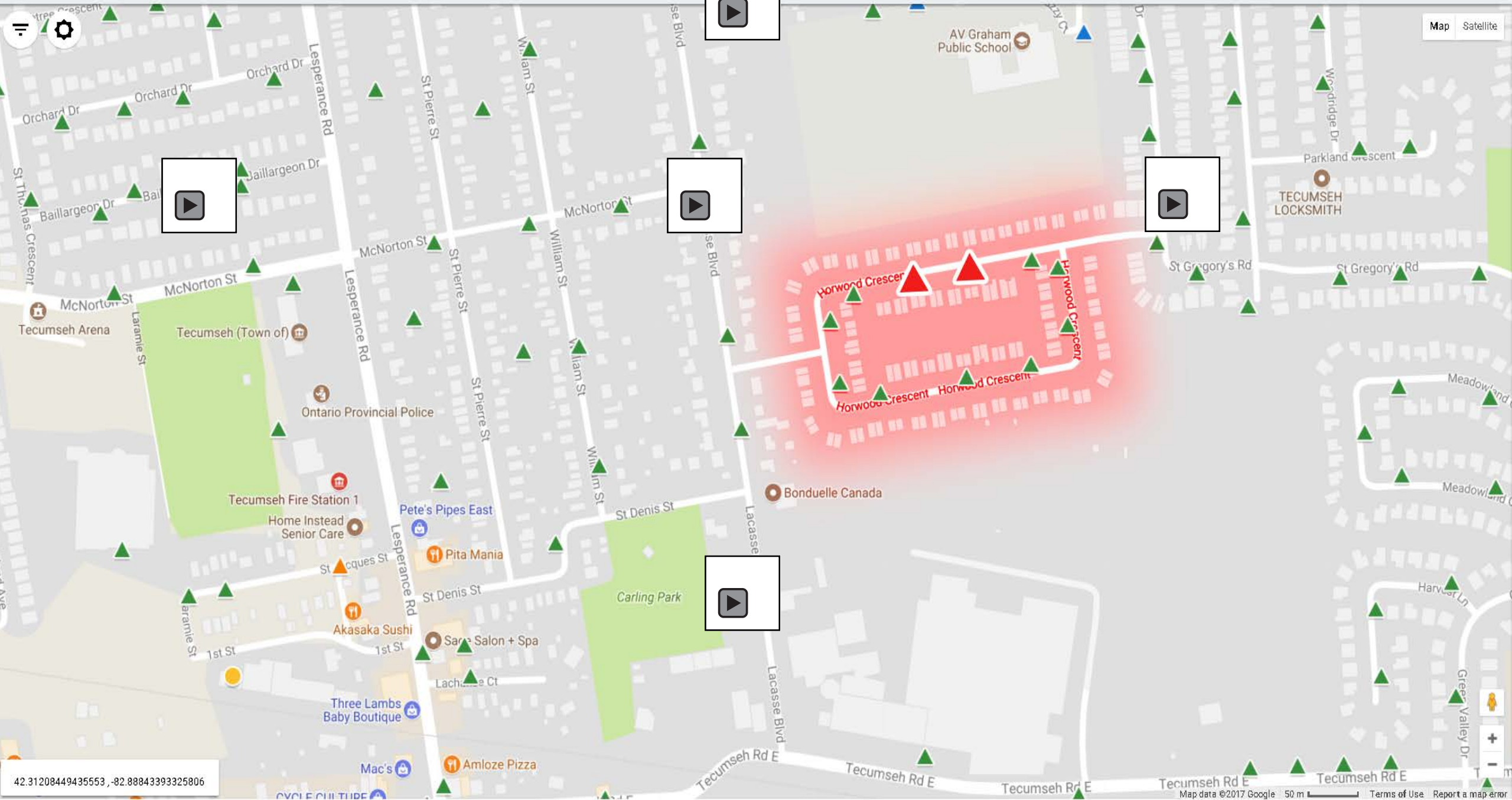
Map Satellite

42.31208449435553, -82.88843393325806

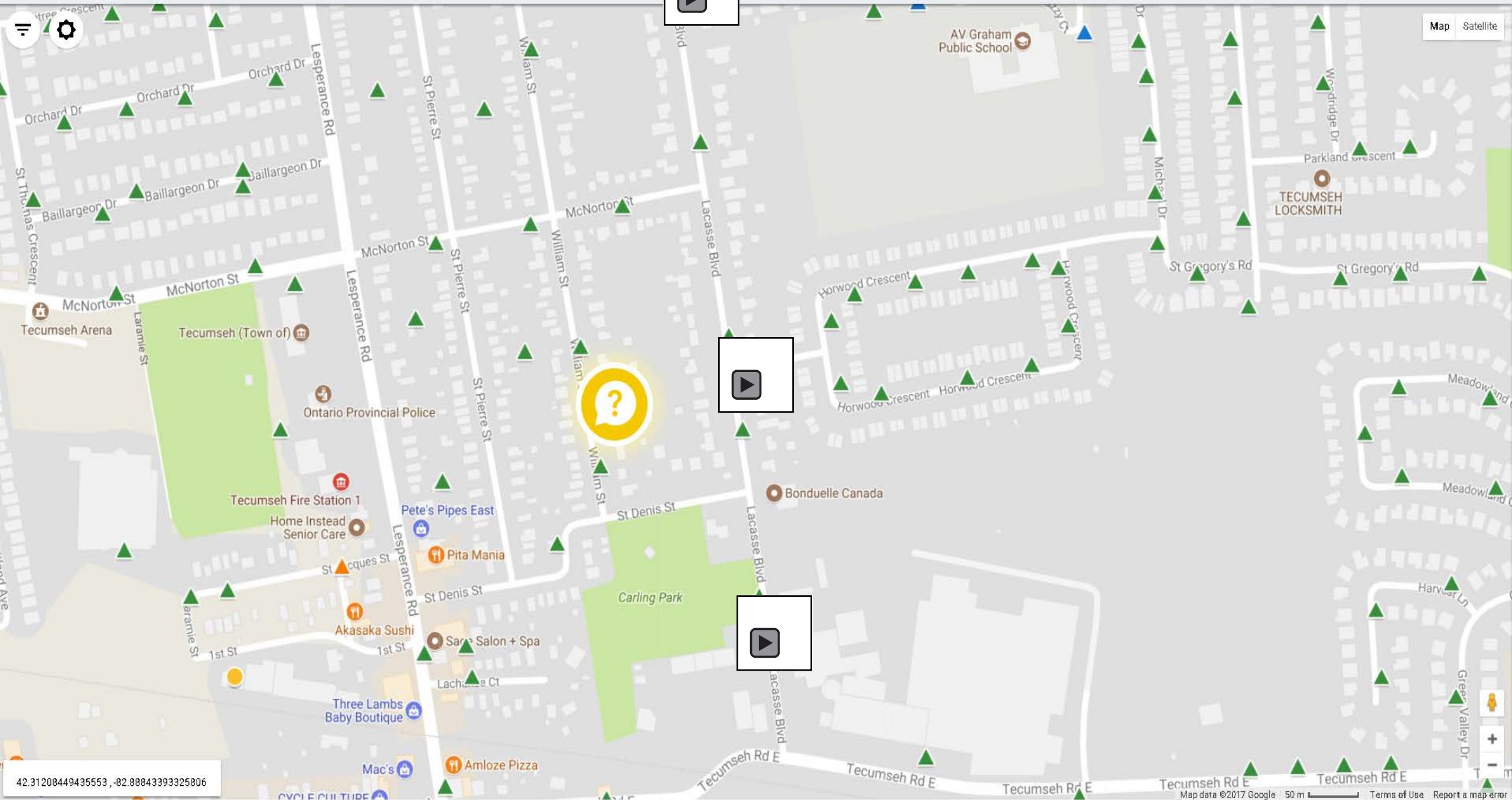


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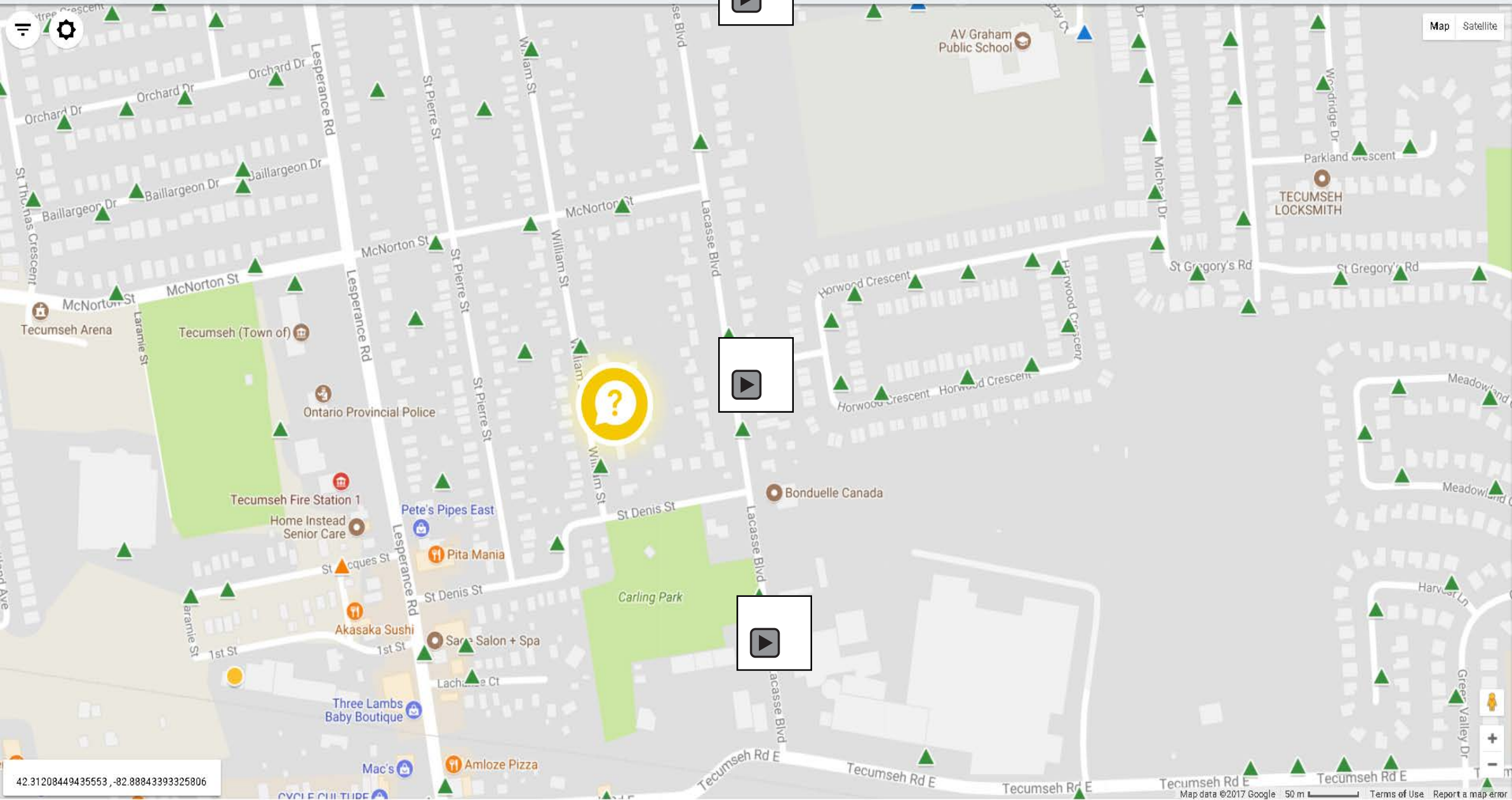


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**WALK THE TALK**





Thank you!  
Any Questions?

