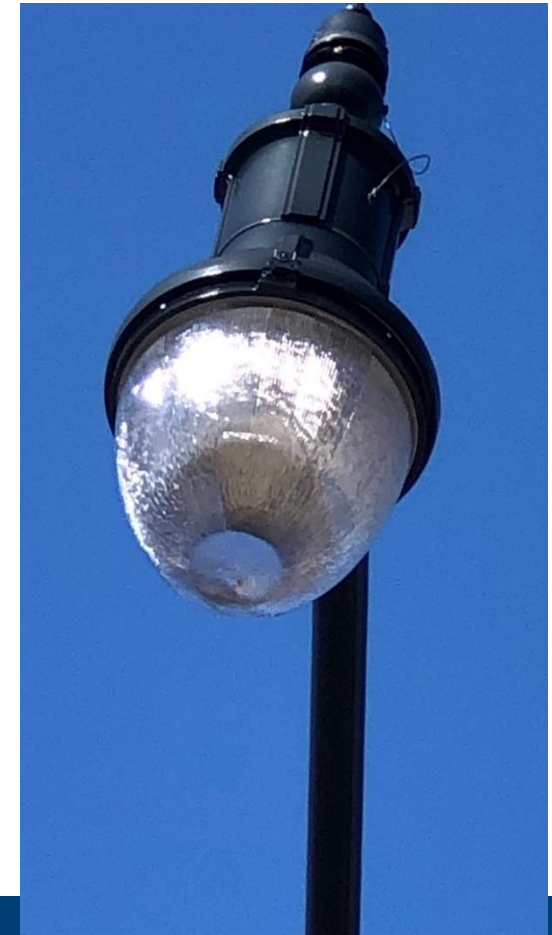


Street Lighting, Brampton Style!

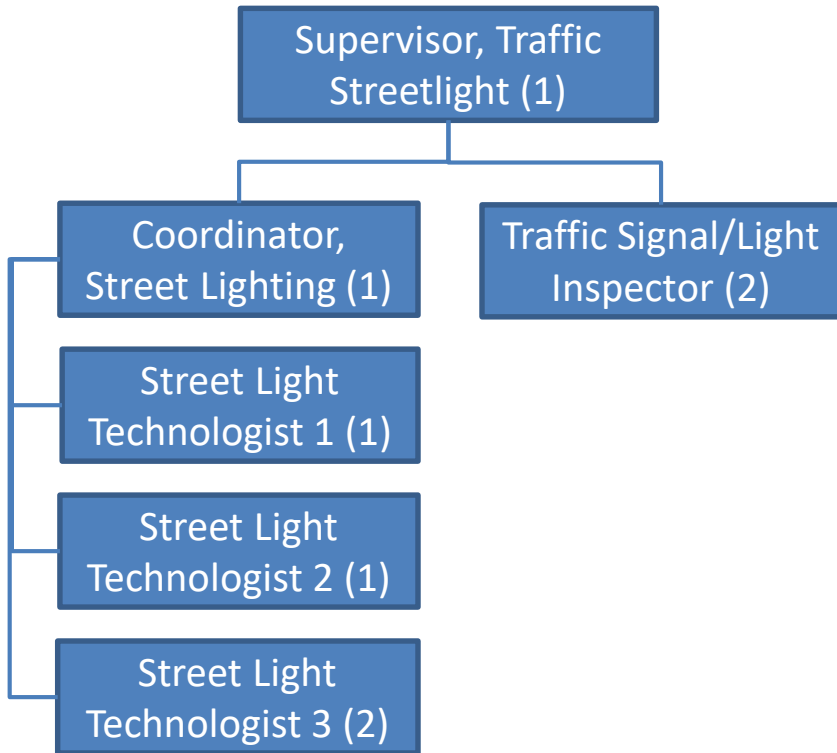


Overview of Street Light System

- ❑ 21,000 HPS
- ❑ 30,000 LED's
- ❑ 5000 Park Pathway poles
- ❑ 4,053KM of roadway lanes lit
- ❑ Combination of City Poles & Hydro Poles
- ❑ 4,500 Regional Road Street Lights serviced through maintenance partnership



Street Light Department



Supervisor

- Oversees street light group

Coordinator

- Oversees technical staff
- Assist supervisor

StLt Tech 1

- PUCG review
- Asset Updating in GIS/City Works
- City Works - reports/work order creation/assist others in CW etc.
- Accident recoveries
- Pole ID's

StLt Tech 2

- Site plans & developments
- Locates contract for city including street lighting, traffic signals, transit & storm
- City Works/Database/GIS work

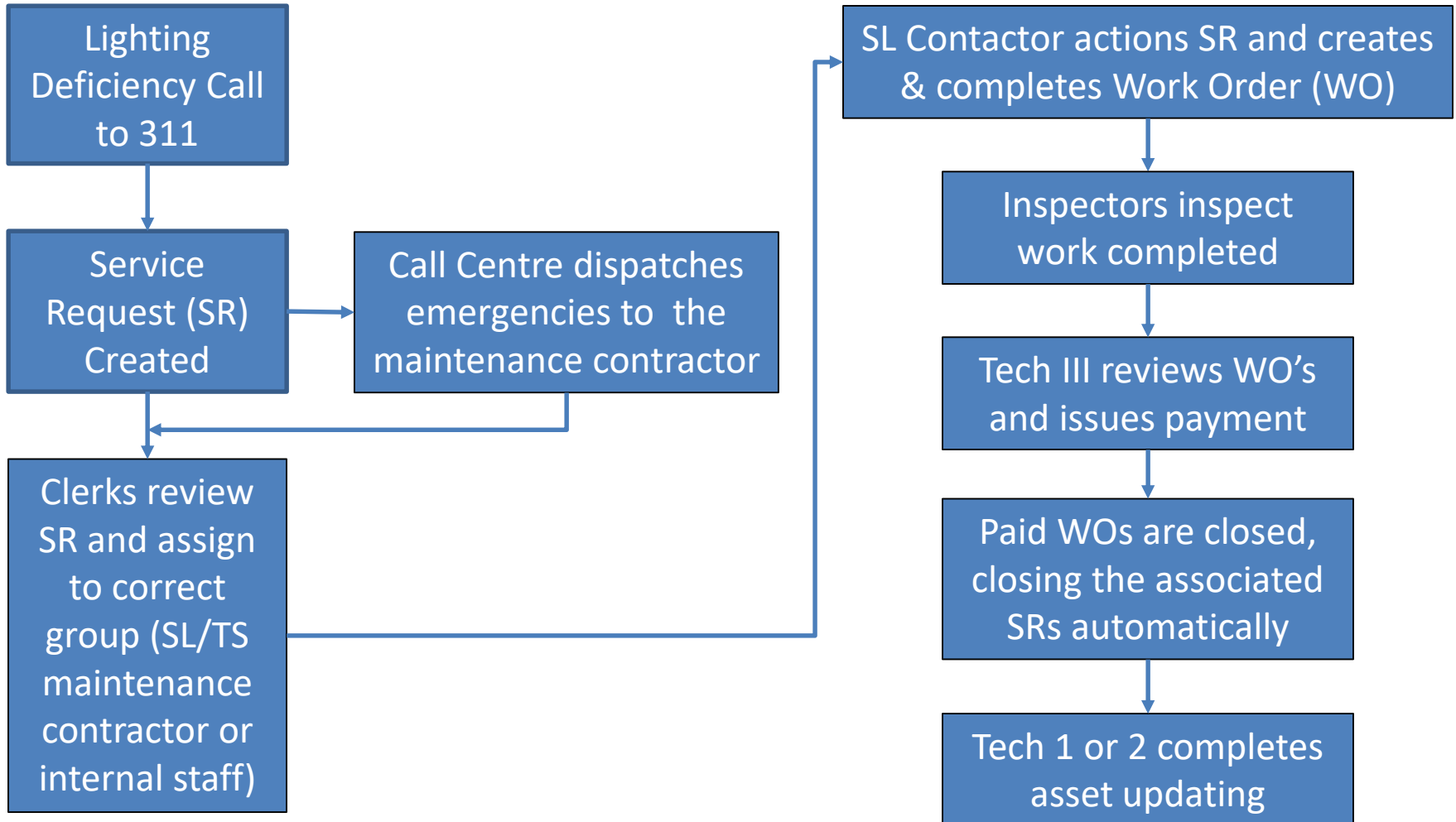
StLt Tech 3

- Maintenance contract management
- Capital works management in house projects i.e. pole replacements/cable replacements/rebuilds & Capitol works road widening's

Inspector

- Field inspection for maintenance contract & provide direction
- Development assumption inspection
- Capitol works inspections
- Traffic signal inspections
- Customer complaints

Street Light Coordination



Street Light Coordination

City Works Software

- Is an ESRI product - directly connects to ArcMAP
- Allows remote connection
- Ability to control users capabilities
- Contractor access
- Contains mapping and data components
- Provides a coordination tool – groups can see and add notes
- Easily retrieve historical information
- Automated work flows, task lists
- Ability to update assets

City Works Service Request (SR)



Inbox Service Request Work Order Inspection GIS Search Reports

Request Email Print Save New Close

Service Request

Description:
Street Lighting Request

Request Id: 51310 Infor #:
CRM #: COBI-1927982

Source: Traffic Services Category: Traffic Services Priority: Medium Status: Closed

Initiated By: COBIntegration, COBIntegration Initiated Date: 08/25/2022 8:28 AM Incident Date: 08/25/2022 8:28 AM Supervisor: Dispatch To: 08/25/2022 8:42 AM

Project Name: Prj. Comp. Date:

+ Project Tree

Cancel? Cancelled Date: Cancel Reason: Canceled By: Closed By: Beimes, Shane Closed Date: 10/17/2022 12:32:38 PM

Comments: Add Comment Sort

- COBIntegration, COBIntegration 08/25/2022 8:28 AM COBI-1927982 :Pole 104 is shinning purple Street...

Resolution: Labor: 0

Incident Information

Address: 104 GREENMOUNT RD Unit#: City: Province: Postal Code: Responsibility: Street Lighting Ward #: WARD 8 Map #: K3E District: ASSUMED Location: Initial Call Details: Street Light Issue Type: Other Number Of Lights: 1-2 Lights; Problem Type: Other; Pole 104 is shinning purple - Facility Id: Level Id: X: 603,639,630 Y: 4,843,381,749

Callers

Related Work Activities

Inspections

Add: Create

Work Orders

Add: Group assets? Create

Id	Description	Link Type	Priority	Status	Submit
<input type="checkbox"/> 240069	SL - Demand Maintenance	Related	2	CLOSED	

Open WOs Remove

Attachments

+ Add attachment... Remove all attachments

Drag and drop files here to attach them.

City Works Work Order (WO)

Work Order

Description: **SL - Demand Maintenance**

Number: **240069** Locate #: _____

Inspection Required: _____ PPC #: _____

2022-Hastings-003

Entity Type: **SL POLES**

Category: **TS - Traffic Services**

Initiated By: **Hastings, Admin01** Initiated Date: _____

08/31/2022 9:27 AM

Status: **Closed** Priority: **Medium**

Requested By: _____ Supervisor: _____

Submit To: _____ Submitted Date: _____

09/14/2022 9:32 AM

Projected Start: **08/31/2022 9:27 AM** Projected Finish: **08/31/2022 9:27 AM**

Opened By: **Hastings, Admin02** Date: _____

10/3/2022 11:43:46 AM

Closed By: **Beimes, Shane** Date Closed: _____

10/17/2022 12:32:38 PM

Completed By: _____

Actual Start: **09/14/2022 9:20 AM** Now

Actual Finish: **10/17/2022 12:32 PM** Now

Stage: **Actual** Expense Type: **Maintenance**

Comments: Add Comment Sort ▼

- Admin02** 10/3/2022 11:42 AM
wo#244161 created for new fixture
- Admin01** 09/14/2022 3:29 PM
Sept 14, Pole 104- installed temporary LED fixture until...
- Crew05** 09/14/2022 9:32 AM
Sept 14/2022 H342 - Arrived at call and found light ...
- COBIntegration, COBIntegration** 08/25/2022 8:28 AM
(Copied from Service Request 51310): "COBI-1927982 :Pole 104 is s...

Resolution: _____ Reactive?

Crew: **Select a crew...** Hours: _____

Details

Project: _____ Account: _____

Project Tree

Contract: _____ Contractor: _____

Recoverable Recovered

Asset Update Required: **No** Asset Update Completed: **No**

Location Information

WO Address: _____

104 GREENMOUNT RD

Location Details: _____

104 GREENMOUNT RD

Responsibility: **Street Lighting** Map #: _____

K3E

Ward #: **WARD 8** District: **ASSUMED**

X Location: **603,647.096** Y Location: **4,843,402.279**

Assets

Total Entities: 1

<input type="checkbox"/>	Asset	Asset Uid	Location	Work Completed	STRUCT_NUM	OBJEC
<input type="checkbox"/>	SL POLES	SLP_269416		<input type="checkbox"/>	104	79443

- Pink rows indicate inventory still under warranty.

Update Work Order XY when adding/removing assets?

Map Layer Fields

Tasks

SeqID	Name	Description	Status	Proceed	Rework
1	Line Items Verified	Line Items Verified	COMPLETE	True	False

Work Cycle

Related Work Activities

Service Requests

Link Request: _____

<input type="checkbox"/>	Id	Date Initiated	Description	Link Type	Priority	Catego
<input type="checkbox"/>	51310	8/25/2022	Street Lighting Request	Related	2	TOS

Inspections

Link Inspection: _____

SL - Maintenance Inspection COB

Work Orders

Link Work Order: _____

Permits

City Works Inspection



Inspection Details

Id:

Location:

Status: Resolution:

Insp. Date: Inspected By:

***Maintenance Inspection**

Type of Inspection

None
 Routine Maintenance
 Deficiency Work Order Inspection (Re-inspection)
 Underground Fault
 Reactive Maintenance
 Pole Replacement
 Overhead Installation
 Other

Pole Inspection

Passed Inspection
 Ground Reqd./Incorrect
 Pole is Leaning
 Not Applicable
 Hand Hole Cover is Missing
 Incorrect Pole Installed
 Fusing Required
 Pole # is Missing
 Improper Connections

Fixture / Bracket Inspection

Passed Inspection
 Photocell Failure
 Fixture is not level
 Not Applicable
 Wattage Sticker Required
 Incorrect Fixture Installed
 Fixture Requires Cleaning
 Missing/Non-standard Bracket Bolts
 Fixture/Bracket Straightening Required

Underground Fault Repair Inspection

Passed Inspection
 Not Applicable
 Remove Temporary Overhead

Overhead Installation Inspection

Passed Inspection
 Yellow Guy Guard Required
 Lashing not installed correctly
 Not Applicable
 Incorrect Cables
 Improper Connections
 Fusing Required
 Drip Loop not installed correctly
 Back Guy Required and/or loose

Disconnect Inspection

Not Applicable
 Installation incorrect
 Conduit Cliff Required
 Ground is Required
 Label Required
 Breaker ID Missing
 Weather Head incorrect
 Ground Plates are Required

Junction Box Inspection

Passed Inspection
 Installation incorrect
 Not Applicable
 Broken Lid
 Improper Grade
 Lid Bolt Missing

Restoration Inspection

Passed Inspection
 Sinkage
 Not Applicable
 Restoration Required at Multiple Locations
 Restoration Required

Inspection Details

Type:

Submit To: Submitted Date:

Priority:

Initiated By: Initiated Date:

Projected Start: Projected Finish:

Actual Finish:

Closed By: Date Closed:

Cancel Insp? Cancel Date:

Cancel Reason: Canceled By:

Location

District: Responsibility:

Map #: Ward #:

Facility Id: Level Id:

Update Map:

Map Layer Fields

Entity

Update Inspection XY when adding/removing asset?

Editable Fields: All Fields:

SL POLES

Work Cycle

Repeat:

Interval: Months

From:

Related Work Activities

Link Request:

Work Orders:

Link Work Order:

Create Work Order:

<input type="checkbox"/>	Id	Description	Link Type	Priority	Status	Submit To
<input type="checkbox"/>	240069	SL - Demand Maintenance	Related	2	CLOSED	

Inspections:

Link Inspection:

Attachments

Details

Project: Account:

+ Project Tree

Contract: Contractor:

Recoverable Recovered

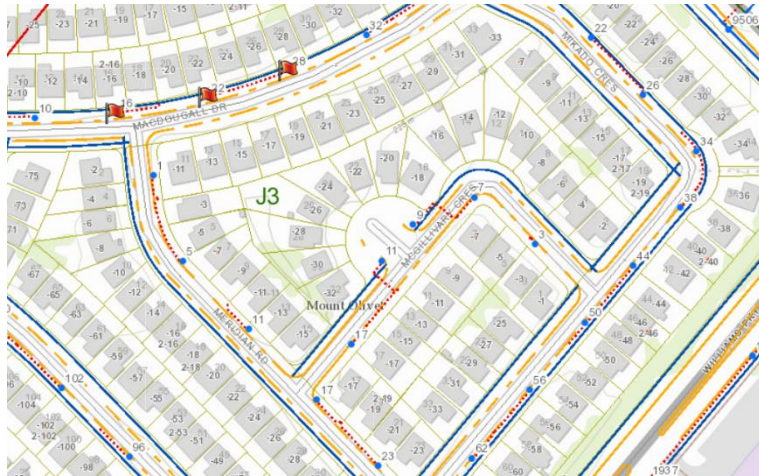
Asset Update: No Asset Update: No

Required: Completed:

City Works

Asset Updating

- Update is identified in the work order details
- No GIS experience is required
- Updates GIS
- Done individually
- Controlled



[City Works Link](#)
(SR51310)

Attributes	Work History	Relationships
STRUCT_NUM		104
OBJECTID		79443
MAP_NUM		K3E
STREET_NAME		GREENMOUNT RD
INSTALL_DATE		02/28/2019 7:00 PM
POLE_HEIGHT		32.5FT
POLE_CLASS		B
POLE_MATERIAL		Concrete
USAGE_TYPE		SingleUse
OWNERSHIP		COB
TEST_DATE		
FOUNDATION		DirectBuried
POLE_STYLE		Round
MODEL_NUM		
PAINT_TYPE		NotLoaded
OTHER_UTILITIES		NotLoaded
OTHER_UTILITIES2		NotLoaded
BACKGUY		No
WARD		WARD 8
TRANS_ID		NotLoaded
SEGKEY		
COMPKEY		478612
ASSET ID		269416
ASSETID		SLP_269416
Classification		
Business Owner		
Maintenance Owner		
Condition		
Condition Date		
Condition Update User		
Expired		
CREATED_USER		
CREATED_DATE		
LAST_EDITED_USER		GISPRD
LAST_EDITED_DATE		Tue May 25 2021 17:16:03 GMT-0400 (Eastern Daylight Time)
Expired Date		
Expired Reason		

Save Return Map

Preventative Maintenance Programs

1) Re-Lamping/Cleaning

- Yearly: currently postponed due to LED retrofits
- Will be changing to a Cleaning Program

2) Pole Inspection

- Approximately 1000 per year
- Based on age and previous inspection results
- Yearly by maintenance contractor
- Includes hammer test and visual inspection

3) Pole Replacement

- Yearly based on pole inspection
- Approximately 100 per year budget dependent
- Done by maintenance contractor
- Accident poles are actioned one at a time through maintenance contract



Preventative Maintenance Programs

4) Stray Voltage Inspection

- In house by Inspector and co-op students
- Completed with a stray voltage detecting wand
- Aim to complete 1000+ a year

5) Night Inspection

- Completed by contractor
- Entire city is completed yearly
- Broken into grids done monthly by the street light contractor
- Contractor creates WO for deficient lights & puts them into the que for repair



Development Programs

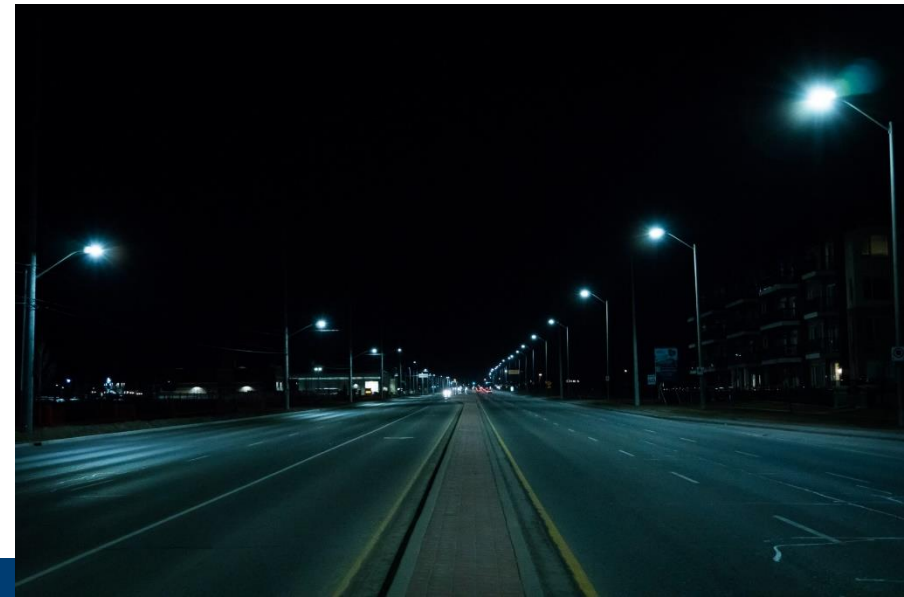
1) Subdivision Development Plan Review

- Street light design and photometric cursory review & sent to 3rd party retained consultant & developer is billed for the peer review and inspection fees
- Pre-Construction meeting
- Once drawings are approved update database & locates are provided for area
- Inspections during construction by 3rd party consultant
- Assumption inspection by City Inspector
- Update database as per as built drawing, assign pole #'s & change ownership to City

Development Programs

2) Site Plan Review

- Review all site plans coming into City, photometrics may be required
- Securities are required from applicant
- Pre-Construction meeting
- Pole relocations are done at applicant expense with pre-approved contractor
- Infill lighting may be requested at applicants expense
- Inspected upon completion by city Inspectors



Capital Investment Programs

1) Street Light Rebuilds in Mature Areas

- Based on infrastructure condition, age, residential complaints, Council direction
- Design is done by consultants and is reviewed/approved by Techs
- Construction tendered out to pre-approved contractor list and managed by Tech III
- Assumption inspection completed by Inspector
- New design/infrastructure updated in data base

2) City Urbanization & Road Widening Projects

- Driven by our Capital Engineering group
- Tech III reviews photometric designs and equipment specs
- SL Inspector completes the assumption inspection once construction is complete
- New design/infrastructure updated in data base

Capital Investment Programs

3) LED Retrofit Program

- City oversees and project manages LED Retrofit
- Completed as part of the Association of Municipalities of Ontario (AMO) LED Street Lighting Program
- Real Term Energy (RTE) does data collection, design and contract administration
- Installation completed by contractors from COB approved contractor list: 8500 decorative lights to change in next months
- Third party contractor inspects work
- Data base is updated to capture new infrastructure and updated wattage info is used for billing by Alectra
- RTE coordinates incentives



System Maintenance

1) Street Light Maintenance Contract

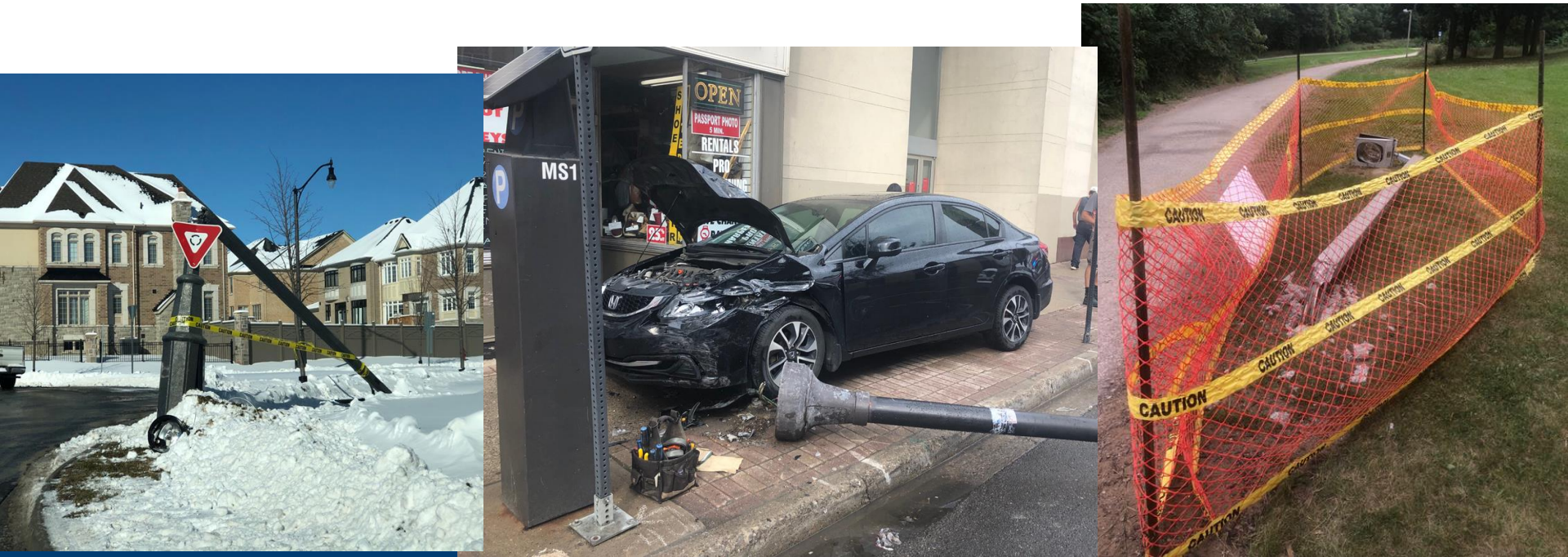
- Contractor resolves issues reported by the public through CW software
- Tech III coordinates all maintenance work and reviews WOs for payment
- Contract is task based contract not time based



System Maintenance

2) Accidents/Dig in recoveries

- Inspector attends dig in site and gathers info and coordinates repairs
- Tech 1 goes through list of recoverable WOs and creates recovery documentation.
- Risk and Insurance group recovers costs from driver



System Maintenance

3) Regional Maintenance

- Maintenance is completed through our contactor and costs are recovered from the Region quarterly by the SL Coordinator.



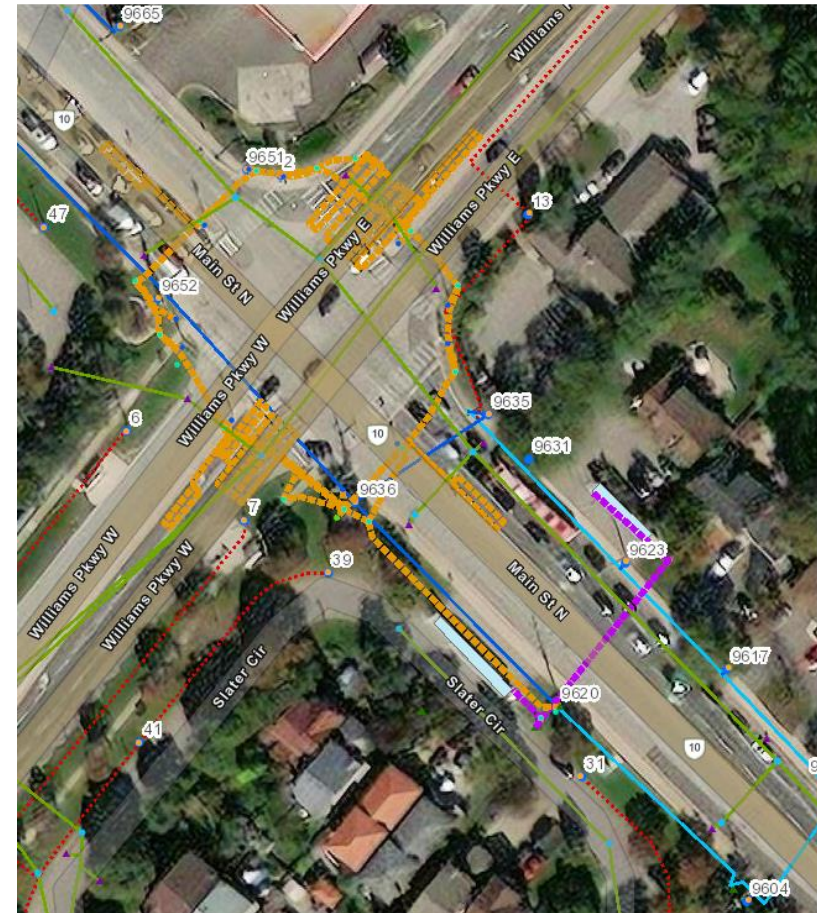
Locates

Quantity

- Approximately 12,000 electrical locates per year

Contract

- 2 year plus three 1 year optional extensions
- Office look up
- Includes:
 - Electric (Traffic Signals, Transit, Street Lighting, Park Lighting)
 - Storm
- Billed by street segment
- Contractor is provided access to City Works for Mapping
- Contractor locates unassumed areas for electric
- Contractor provides updates for database
- Contractor assists with damage investigations



Questions



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M: 416.801.8424

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