

Fire Protection and Prevention Act, 1997 Loi de 1997 sur la prévention et la protection contre l'incendie

#### **ONTARIO REGULATION 213/07**

#### FIRE CODE

Consolidation Period: From March 14, 2019 to the e-Laws currency date.

Last amendment: 33/19.

Legislative History: [+]

This Regulation is made in English only.

#### TABLE OF CONTENTS

DIVISION A	COMPLIANCE, OBJECTIVES AND FUNCTIONAL STATEMENTS
PART 1	COMPLIANCE AND GENERAL
PART 2	OBJECTIVES
PART 3	FUNCTIONAL STATEMENTS
DIVISION B	ACCEPTABLE SOLUTIONS
PART 1	GENERAL
PART 2	FIRE SAFETY
PART 3	OUTDOOR AND INDOOR STORAGE
PART 4	FLAMMABLE AND COMBUSTIBLE
	LIQUIDS
PART 5	HAZARDOUS MATERIALS,
	PROCESSES AND OPERATIONS
PART 6	FIRE PROTECTION EQUIPMENT
PART 7	CHECKING, INSPECTION, TESTING
	AND MAINTENANCE OF FIRE
	EMERGENCY SYSTEMS IN HIGH
	BUILDINGS
PART 8	DEMOLITION
PART 9	RETROFIT

#### Combustion air

9.6.2.10. Where a **service room** is separated in accordance with Article 9.6.2.8., sufficient combustion air shall be brought directly from the outside for the proper combustion and safe operation of the **appliances**.

#### Refuse storage rooms

9.6.2.11. (1) Refuse storage rooms shall be

- (a) separated from the remainder of the building by a fire separation having a fire-resistance rating not less than 1 h, and
- (b) **sprinklered** to provide a minimum average density of 6.5 L/m<sup>2</sup> over the room area.

#### Vertical service spaces

9.6.2.12. (1) Vertical service spaces shall be separated from the remainder of the building by a fire separation having a fire-resistance rating not less than 45 min.

(2) Where openings in the **vertical service space**, including the top and bottom, are sealed with noncombustible materials having the same **fire-resistance rating** as the existing construction, the **vertical service space** is deemed to be in compliance with Sentence (1).

#### Refuse and linen chutes

9.6.2.13. (1) Each room into which a linen or refuse chute discharges shall be separated from the remainder of the **building** by a **fire separation** having a **fire-resistance rating** not less than 1 h.

(2) Automatic sprinklers shall be installed in each linen or refuse chute

- (a) at the top,
- (b) at alternate floor levels, and
- (c) in the room or bin into which the chute discharges.
- (3) An existing chute installation is deemed to be in compliance with Sentence (2) where
  - (a) the chute outlet in the discharge room is protected by an automatic, self-latching closure held open by a fusible link,
  - (b) the room into which the chute discharges is sprinklered, and
  - (c) at least one sprinkler head with a minimum discharge rate of 66 L/min is located at the top of the chute.

#### Transformer vaults

9.6.2.14. Transformer vaults to which the **Electricity Act, 1998** applies shall be separated from the remainder of the **building** by a **fire separation** having a **fire-resistance rating** not less than 2 h and shall be provided with **heat detectors** connected to the fire alarm system.

#### Storage garages

9.6.2.15. (1) A storage garage shall be separated from the remainder of the **building** by a **fire separation** having a **fire-resistance** rating not less than 1.5 h.

(2) Underground storage garages shall be sprinklered.

(2) Where the manual pull stations are relocated, alternate approved measures shall be used to maintain the level of life safety.

#### Repairs and alterations to fire alarm systems

6.3.1.8. Repair, replacement and alterations of fire alarm system components shall be in accordance with CAN/ULC-S524, "Standard for the Installation of Fire Alarm Systems".

Subsection 6.3.2. Check, Inspect and Test

#### **Obligation to ensure compliance**

6.3.2.1. (1) The **owner** shall ensure that any person performing the annual **tests** or annual **inspections** required by this Subsection for fire alarm systems or performing the repairs, replacements or alterations of fire alarm systems referred to in Article 6.3.1.8. is in compliance with the requirements of

(a) Clause 1.2.1.2.(1)(a) of Division C, or

(b) Sentence 1.2.1.2.(2) of Division C.

(2) The **owner** shall ensure that any person performing the annual **tests** or annual **inspections** required by this Subsection for interconnected **smoke alarm** systems or performing the **tests** or maintenance for interconnected **smoke alarm** systems referred to in Article 6.3.2.6. is in compliance with the requirements of

(a) Clause 1.2.2.2.(1)(a) of Division C, or

(b) Sentence 1.2.2.2.(2) of Division C.

#### Fire alarm systems

6.3.2.2. (1) Except as provided in Sentence (2), a fire alarm system, with or without voice communication capability, shall be **inspected** and **tested** in conformance with CAN/ULC-S536, "Inspection and Testing of Fire Alarm Systems".

(2) Despite Clause 5.7.4.1.6. of CAN/ULC-S536, "Inspection and Testing of Fire Alarm Systems", a UL **listed smoke detector** sensitivity instrument may be used to conduct annual sensitivity **testing** of **smoke detectors**.

(3) A description of the fire alarm system as required in Clause 3.6 of CAN/ULC-S536, "Inspection and Testing of Fire Alarm Systems", shall be kept current and maintained in the **building** at an **approved** location.

(4) A record of each device, component and circuit of the fire alarm system that is **inspected** and **tested** in accordance with Sentence (1) shall

(a) indicate whether the device, component or circuit is in proper working order, and

(b) be kept in accordance with Subsection 1.1.2.

(5) Where a fire alarm system is monitored to transmit a signal to the **fire department**, the **owner** shall record whether all signals from the **tests** conducted in Sentence (1), or other events, are received by the monitoring station, and records shall be kept in accordance with Subsection 1.1.2.

#### Central alarm and control facilities

6.3.2.3. The central alarm and control facility shall be **checked** daily for indication of trouble in the system.

#### Voice communication systems



- <u>Careers</u>
- Media
- <u>Corporate</u>
- Investor Relations
- Regulatory Affairs
- <u>Corporate Responsibility</u>



Business Login

- <u>eBill</u>
- Time-of-Use

What are you looking for?

### Residential Login

- For Home
- For Business
- Electricity Conservation
- Power Outages
- Grid Investments
- <u>Contact</u>
- <u>Customer Care</u>
- <u>Billing</u>
- <u>Rates</u>
- <u>Are you moving?</u>
- <u>Metering</u>
- Electrical Safety
- <u>Service Connections</u>
- <u>Conditions of Service</u>
- <u>Customer Care</u>
- Billing
- Rates
- <u>Metering</u>
- <u>Electrical Safety</u>
- <u>Service Connections & Construction</u>
- <u>Attachments & Permits</u>
- Conditions of Service

- <u>Residential Conservation</u>
- <u>Business Conservation</u>
- <u>Conservation Tips for Business</u>
- Feed In Tariff Program
- <u>Reports</u>
- Electric Vehicles
- Energy Reporting and Benchmarking
- <u>Report an Outage</u>
- <u>About Outages</u>
- <u>Be Prepared</u>
- During An Outage
- How We Restore Power
- Outages At Work
- <u>Resources</u>
- <u>Neighbourhood Investments</u>
- Project Map
- Ensuring Reliability
- <u>Grid 101</u>

#### HomeFor BusinessElectrical SafetyVault Access Legislation

Customer Care Billing Rates Metering Electrical Safety Contact Voltage Vault Owner Resources Safety On The Jobsite Service Connections & Construction Attachments & Permits Conditions of Service <u>Home</u> > <u>For Business</u> > <u>Electrical Safety</u> > Vault Access Legislation

# Vault Access Legislation and Codes

### Vault Owners' Compliance with Applicable Legislation and Codes

## including Fire

Customers who own the transformer vault located in their buildings are responsible for ensuring their vault complies with all applicable laws and regulations in addition to complying with Toronto Hydro-Electric System Limited's ("Toronto Hydro") Conditions of Service.

Toronto Hydro's Conditions of Service, which apply to everyone who receives electricity from Toronto Hydro, state in part that:

#### 3.4.1 Electrical Requirements

Where a primary service is provided to a Customer-owned substation, the Customer shall install and maintain such equipment in accordance with all applicable laws, codes, regulations, and Toronto Hydro's Customer Owned Substation requirements for high voltage installations. Toronto Hydro will provide planning details upon application for service.

Customer owned substations are a collection of transformers and switchgear located in a suitable room or enclosure owned and maintained by the Customer, and supplied at primary voltage: i.e. the Supply Voltage is greater than 750 volts.

Additionally, the "Requirements for the Design and Construction of Customer-Owned Structures", an appendix to the Conditions of Service, Section 6 – Reference #5, states, in part, that customers must comply with the following codes as applicable:

- a. Canadian National Electrical Code C22.1
- b. National Building Code of Canada
- c. National Fire Code of Canada
- d. National Plumbing Code of Canada

e. Occupational Health & Safety Act and Regulation for Construction Project 1990 and Ontario Regulations 213/91

- f. Ontario Building Code
- g. Ontario Electrical Safety Code

h. Ontario Highway Bridge Design Code, CAN/CSA-S6-06

i. Ontario Fire Code

As part of vault owners' obligations to ensure their vault complies with all applicable laws, codes and regulations, vault owners must assess whether their vaults comply with applicable fire codes and regulations. Fire/smoke/heat detectors and alarm systems may be required by law in certain customer owned transformer vaults. Whether or not a transformer vault is required by law to have a detector and alarm system is to be determined by the vault owner. If the vault owner determines a detector and alarm system is required, or that the vault is legally noncompliant in any other way, they must contact Toronto Hydro to prearrange access to the transformer vault at **416-542-3476.** 

Toronto Hydro will work with vault owners to ensure vault access is obtained from qualified Toronto Hydro personnel thereby promoting public safety and preventing contact with the high voltage electrical equipment contained within the transformer vault.

In the event of a fire inside the transformer vault, a fire/smoke/heat detector and alarm system should operate such that the building's main fire alarm will activate.

In the event that the building's main fire alarm is activated and indicates a fire in the transformer vault, the vault owner is to call 911 and advise Toronto Fire that a fire has been detected inside the transformer vault. Toronto Fire will respond and follow-up with Toronto Hydro directly.

From time to time, Toronto Hydro may contact customers who own underground transformer vaults containing Toronto Hydro electrical equipment to remind them of Toronto Hydro's procedure for providing access to transformer vaults with a view to assisting vault owners in determining if their vaults are legally compliant.

For example, vault access would be required:

1) if the vault owner's alarm technician wants to take an initial look inside the vault to determine if the vault is fire code compliant or if a detector and alarm system is required, to determine the best location to place the detector and alarm system;

2) if the vault owner's alarm technician is ready to perform the installation of the detector and alarm system;

3) if a power interruption is required to allow the vault owner's alarm technician to perform his/her work safely and to restore power after the work has been completed; or Vault Access Legislation | Toronto Hydro Electric System

4) if the vault owner must perform annual fire alarm inspection as required by law.

Toronto Hydro will provide transformer vault entry once per year, per vault location at no charge to the vault owner. If further entry into the transformer vault is required and/or an isolation of the electrical equipment inside the transformer vault, only the costs incurred by Toronto Hydro in accommodating the vault owner's request will be charged to the vault owner.



## **Follow Us**

## **Quick Links**

For Home For Business Electricity Conservation Power Outages Grid Investments Contact

#### Company

- Careers
- News Room
- Investor RelationsRegulatory Affairs
- Regulatory Analis
  Corporate Responsibility

Accessibility

# **Customer Care**

My TorontoHydro Login | <u>Register</u>

(416) 542-8000 8 a.m. - 8 p.m. Monday - Friday

- <u>Sitemap</u>
- Terms & Conditions
- <u>Privacy Policy</u>
- <u>Newsletter</u>



# GM6.7



# STAFF REPORT ACTION REPORT

# **City Hall Hydro Vault Fire**

Date:	August 27, 2015	
То:	Government Management Committee	
From:	Chief Corporate Officer	
Wards:	All Wards	
Reference Number:	P:\2015\Internal Services\FAC\Gm15020fac (AFS 21337)	

## SUMMARY

The purpose of this report is to provide an update on the City Hall Hydro Vault fire of September 25, 2014.

## RECOMMENDATIONS

#### The Chief Corporate Officer recommends that:

1. The Government Management Committee receive this report for information.

#### **Financial Impact**

The City's damages total \$752,783.81. In consideration of all the circumstances of this loss, agreement was reached between the City, Toronto Hydro and the respective insurance companies involved to apportion payment of all expenses.

The Deputy City Manager & Chief Financial Officer has reviewed this report and agrees with the financial impact information.

## **DECISION HISTORY**

At its meeting on May 11, 2015, the Government Management Committee requested the Chief Corporate Officer, to consult with Toronto Hydro, and review and report to the August 31, 2015 Government Management Committee meeting on:

- a) Findings related to the cause, costs and repairs undertaken as a result of the electrical explosion and fire in the basement of City Hall on September 25, 2014.
- b) The inventory of City of Toronto buildings with interior hydro vaults, including agencies, the standard program of maintenance, roles and responsibilities of the City and Toronto Hydro with respect to this maintenance.
- c) A summary of other known hydro vault explosions in Toronto, and their causes.

This report is available on line at:

http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.GM4.16

## COMMENTS

a) i) <u>Cause of the Fire:</u>

On September 25, 2014, a crew employed by Toronto Hydro was conducting a planned replacement of distribution equipment as part of the annual 2015 Electric Distribution Capital Work Program within a City of Toronto owned vault located at 100 Queen Street West.

The crew was in the process of conducting the routine removal of secondary cables from the customer owned secondary equipment in preparation for replacement of the vault transformers. During this removal process one of the secondary cables came into contact with an adjacent piece of customer owned secondary equipment causing a short circuit. An electric arc ensued which ignited the fire. The fire propagated through a portion of the customer owned equipment. There was no explosion, and the crew did not sustain any injuries.

a) ii) <u>Repairs and Cost</u>

City of Toronto Repairs:

Repairs undertaken by the City of Toronto included emergency response; electrical, mechanical, fire safety and environmental engineers were brought in to respond as quickly as possible to restore City Hall. The sprinkler system was activated which resulted in water damage to areas of the basement. Smoke from the fire entered the permit offices on the first floor and councillor's offices on the second floor. Contractors were brought in to clean and sanitize affected areas.

These costs have been submitted through the City's insurance program for coverage. Two of the City's insurance policies respond to this loss. The property policy (FM Global) responds to clean up costs and building repairs. This policy is subject to a \$5M deductible therefore the full amount was funded from the City's Insurance Reserve Fund. The boiler and machinery policy (RSA Insurance) pays for equipment breakdown and resultant damage subject to a \$200,000 deductible.

The City's damages total \$752,783.81. Apportionment between the property and boiler and machinery policies is still being negotiated with RSA Insurance.

In consideration of all the circumstances of this loss, agreement was reached between the City, Toronto Hydro and the respective insurance companies involved to apportion payment of all expenses.

Toronto Hydro Repairs:

The repairs that were undertaken by Toronto Hydro and which arose specifically from the incident were limited to procuring portable generation to supply City Hall during the remediation work and to the clean-up and washing of the distribution equipment/structure. The post incident repair work included the replacement of the transformers and associated distribution equipment. However, the cost of the transformers and associated distribution equipment is not included in the cost of the repairs arising from the incident because the equipment was scheduled for an end of life replacement and was in fact, at the time of the incident, in the process of undergoing the planned end of life replacement.

The cost of the repairs, including generator rental, installation and demobilization, fuel and labour, paid for by Toronto Hydro was approximately \$1.12 million.

b) i) <u>The inventory of City of Toronto buildings with interior hydro vaults, including agencies:</u>

There are approximately 94 buildings City of Toronto owned buildings with interior hydro vaults.

ii) Standard Program of Maintenance:

Toronto Hydro inspects and maintains its distribution assets in accordance with a recognized industry leading best practice methodology called Reliability Centered Maintenance II (RCM II). These programs have been in place since 2003. Every interior building vault is inspected and maintained at least once every three (3) years depending on the electrical capacity and the nature of the equipment in the vault. Other vaults are inspected as frequently as every six (6) months.

Toronto Hydro's distribution asset registry contains 4,727 interior building vaults. Included in this population are those vaults that service City of Toronto installations. As of June 30, 2015, 4,687 or 99.2 % of vault maintenances have been completed pursuant to the RCM program. The remaining 40 vaults have been rescheduled for a variety of operational reasons and do not include City of Toronto locations i.e. 100% of the City of Toronto interior building vault locations have been maintained as per the prescribed Reliability Centered Maintenance Program.

#### iii) Roles & Responsibilities:

Pursuant to the Electric Distribution System Code, Appendix C – Minimum Inspection Requirements, Toronto Hydro maintenance programs are limited to the inspection and repair of electric distribution assets <u>owned and operated</u> by Toronto Hydro. For example, typical vault maintenance activities will include, but are not limited to, a variety of tasks such as visual inspection of the transformer, primary switchgear, cables, terminations and auxiliary systems, and telemetry gauges such as oil and winding temperature of the transformer. Inspection observations can exceed 110 discrete observations per maintenance inspection. Toronto Hydro <u>does not</u> inspect or maintain electric infrastructure that is not owned and operated by Toronto Hydro.

In regards to the civil infrastructure of the building vault itself, Toronto Hydro does inspect customer owned civil infrastructure for deficiencies and will provide a Customer Action Form i.e. CAF (formerly known as a Customer Advisory Form) to the building owner if a defect of vault civil infrastructure is discovered. Notwithstanding, the obligation to maintain and repair customer owned civil infrastructure and ensure compliance with applicable regulations such as the Ontario Building Code and the Distribution Service Code, is exclusively that of the building/property owner.

#### City Hall; 100 Queen Street West:

The City Hall interior building vault located at 100 Queen Street West (vault #4518) was inspected prior to the September 2014 incident on April 7, May 16, and July 14, 2014, and subsequently after the incident of September 2014, on April 9, 2015. No material defects were detected or observed in either inspection.

#### c) <u>Summary of other Known Hydro Vault Explosions in Toronto, and their Causes:</u>

In a dense urban utility such as Toronto Hydro, the nature of electric distribution equipment failures can range from minor non-detectable failures to major system disruptive failures such as transformer and switchgear equipment failures. In fact, on average the Toronto Hydro distribution system experiences more than 1050 equipment failures on an annual basis.

On July 20, 2008, an explosion did occur at 2 Secord Avenue in the former municipality of East York (now the City Of Toronto). Subsequent inspection of one of the transformers revealed that it had sustained an internal failure causing an electric arc within the transformer windings eventually resulting in a catastrophic rupture of the transformer tank.

An explosion is defined as a violent expansion in which energy is transmitted outward as a shock wave and ultimately results in the catastrophic rupture the transformer tank.

Notwithstanding the July 20, 2008 incident at 2 Second Avenue, Toronto Hydro is unaware of any other material explosions within customer owned vaults.

## CONCLUSION

The Government Management Committee receive this report for information.

## CONTACT

Sunil Sharma, General Manager Facilities Management Tel: 416-397-5270 <u>Ssharma5@toronto.ca</u> **SIGNATURE** 

Josie Scioli Chief Corporate Officer

# EX11.10



## STAFF REPORT ACTION REPORT

## **Hydro Vaults and Heat Detectors**

Date:	December 14, 2015
То:	Executive Committee
From:	Chief Corporate Officer
Wards:	All Wards
Reference Number:	P:\2015\Internal Services\FAC\Ec16004fac (AFS 21955)

## SUMMARY

This report provides the Executive Committee with additional information concerning the following:

- 1. The installation of heat detectors in vaults containing Toronto Hydro-Electric System Limited's ("Toronto Hydro") equipment ("Hydro Vaults") located within apartment buildings in Toronto.
- 2. The pro-active "Cooperative Inspection Program" of Toronto Fire Services and Toronto Hydro for Hydro Vaults located within privately owned buildings in Toronto, including a proposed plan and budget for accelerating the critical safety prevention work.
- 3. Toronto Fire Services' inspection of Hydro Vaults located within City Owned properties and a recommended schedule for completion of these inspections.
- 4. A summary of significantly disruptive hydro transformer fires in Toronto, and their causes.

This report has been written in consultation with Ben LaPianta, Executive Vice President Toronto Hydro-Electric System Limited.

## RECOMMENDATION

#### The Chief Corporate Officer recommends that:

1. The Executive Committee receive this report for information.

#### **Financial Impact**

There is no financial impact resulting from this staff report.

The Deputy City Manager & Chief Financial Officer has reviewed this report and agrees with the financial impact information.

## **DECISION HISTORY**

At its meeting on October 20, 2015, the Executive Committee referred the item to the City Manager to report back to Executive Committee with a more fulsome answer to Council's request. This report is available on line at: http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.EX9.4

At its meeting on June 10, 2015, City Council requested the City Manager, in consultation with Toronto Hydro, to provide a status report to the Executive Committee on the implementation of the installation of heat sensors in Toronto Hydro transformers in apartment buildings in Toronto. This report is available on line at: http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.EX6.4

At its meeting on September 17, 2015, the Government Management Committee:

- Requested the Fire Chief and General Manager, Fire Services, in consultation with the Executive Director, Municipal Licensing and Standards, and the Chief Executive Officer, Toronto Hydro, to report to the November 9, 2015 meeting of the Government Management Committee with a review of the pro-active "Cooperative Inspection Program" for inspections of hydro vaults by Toronto Fire Services, Municipal Licensing and Standards, with Toronto Hydro, and a proposed plan and budget for accelerating this critical safety prevention work.
- 2. Requested the General Manager, Facilities Management to report to the November 9, 2015 Government Management Committee meeting on the joint inspections by Toronto Hydro and Toronto Fire of hydro vaults owned by the City of Toronto and a recommended scheduled for completion of these inspections.
- 3. Requested the Chief Corporate Officer, in consultation with Toronto Hydro, to review and report to the November 9, 2015 meeting of Government Management Committee with a summary of significantly disruptive hydro transformer fires in Toronto, and their causes.

This report is available on line at: <u>http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.GM6.7</u>

### COMMENTS

#### 1. Implementation of the Installation of Heat Detectors – Apartment Buildings

#### Nature of the Program

In 2011, Toronto Hydro-Electric System Limited ("Toronto Hydro") and Toronto Fire Services ("TFS") entered into a cooperative inspection program agreement to ensure that TFS, is provided access to of Hydro Vaults located within privately owned buildings in Toronto to ensure compliance with the *Fire Prevention Protection Act*, 1997 ("FPPA") or the *Fire Code*, as applicable (the "Cooperative Inspection Program"). Where a Hydro Vault is out of compliance with the FPPA or the *Fire Code*, TFS may take appropriate actions to have the property owner bring it into compliance.

#### **Logistics of the Program**

Toronto Hydro participates in the Cooperative Inspection Program by identifying, and providing TFS with access to, Hydro Vaults located within privately owned buildings within Toronto.

In practice, Toronto Hydro provides TFS with a person-in-attendance ("PIA") to provide TFS with access to between four (4) to six (6) Hydro Vaults located within privately owned buildings per week. TFS selects the area of the city for the vault inspections and Toronto Hydro provides the specific location of Hydro Vaults within this area it has selected for inspection. A TFS representative, accompanied by the PIA, is given access to each Hydro Vault in order to carry out the inspection. The property owners at each Hydro Vault location are notified in advance of the inspection to facilitate ease of access. Upon completion of the inspection, where there is non-compliance with the FPPA or the *Fire Code*, TFS may issue an order obligating the property owner to remedy the violation.

If steps are required to remedy non-compliance, the property owner will contact Toronto Hydro directly for access to undertake work in the Hydro Vault. Under its standard Conditions of Service, Toronto Hydro provides all property owners' opportunity to access the interior of the Hydro Vault once per year without incurring a fee from Toronto Hydro. Under Toronto Hydro's Conditions of Service Property owners are charged Toronto Hydro's actual cost of providing vault access, for any additional visits by the property owners.

#### **Current Status**

Approximately 249 Hydro Vaults within privately owned buildings have been inspected (as of June 2015) by TFS pursuant to the Cooperative Inspection Program. The Cooperative Inspection Program continues to operate through 2015 and beyond.

#### 2. <u>Cooperative Inspection Program</u>

In 2011, Toronto Hydro and TFS negotiated a resolution to charges laid under the FPPA against Toronto Hydro. Under the terms of the Minutes of Settlement Toronto Hydro entered into an inspection program Toronto Hydro provided TFS with co-operative access to Hydro Vaults in privately owned buildings (the "Cooperative Inspection Program"). The Cooperative Inspection Program continues to operate through 2015 as agreed to in the Minutes of Settlement.

Under the Cooperative Inspection Program, where a Hydro Vault in a privately owned building is out of compliance with the FPPA or *Fire Code*, TFS will take appropriate actions to have the property owner bring it into compliance with same. Toronto Hydro participates in the Cooperative Inspection Program by revealing to TFS the location of, and providing TFS with access to, certain Hydro Vaults located within privately owned buildings within the City of Toronto. In practice, Toronto Hydro provides TFS with a person-in-attendance ("PIA") to provide TFS with access to between four (4) to six (6) Hydro Vaults located within privately owned buildings per week. TFS selects the area of the city for the vault inspections and Toronto Hydro provides the specific location of Hydro Vaults within this area it has selected for inspection. A TFS representative, accompanied by the PIA, is given access to each selected Hydro Vault in order to carry out the inspection. The property owners at each Hydro Vault location are notified in advance of the inspection to facilitate ease of access. Upon completion of the inspection, where there is non-compliance with the *Fire Code*, TFS will take appropriate actions through the *FPPA* to have the property owner bring the Hydro Vault into compliance.

Records indicate approximately 249 Hydro Vaults within privately owned buildings have been inspected (as of June 2015) pursuant to the Cooperative Inspection Program; approximately 28 of the vaults did not contain a heat detector. Toronto Hydro reports there are approximately 4082 Hydro Vaults located in privately owned buildings within the City of Toronto and currently performs approximately 1500 inspections of Hydro Vaults located in privately owned buildings each year. Toronto Hydro reports this program requires nine (9) full time equivalents (FTEs). At the current rate of access which Toronto Hydro is willing to provide to TFS pursuant to the negotiated terms of settlement referenced above, the inspection of the 4082 Hydro Vaults in privately owned buildings would take approximately thirteen (13) years to complete.

#### **Additional Inspection Activities:**

In addition to, and in no way covered by the terms of the Cooperative Inspection Program mentioned above, Toronto Hydro, has now agreed to notify TFS of situations where, in the course of their own internal inspections for Toronto Hydro purposes, Toronto Hydro Staff are unable to establish visual confirmation of a heat detector within a Hydro Vault located within a privately owned building. Where TFS receives a complaint from Toronto Hydro, TFS will conduct an assessment of the complaint as required under *O.Reg. 365/13*, and where appropriate conduct a fire safety inspection pursuant to the FPPA. TFS will obtain access to the Hydro Vaults for purposes of conducting an inspection as permitted by the FPPA. Upon inspection, where TFS determines that the

Hydro Vault is not in compliance with the FPPA and or Fire Code, TFS will take the appropriate actions to ensure that any and all parties responsible for the Hydro Vault to bring the Hydro Vault into compliance with the appropriate legal requirements. TFS believes this information provided by Toronto Hydro concerning the location and status of Hydro Vaults, in addition to the information provided under the Cooperative Inspection Program, will allow TFS staff to more effectively utilize Fire Inspectors to more efficiently address the fire safety concerns with respect to Hydro Vaults.

#### 3. <u>Inspections Hydro Vaults</u> Located within City Owned Properties:

Facilities Management has compiled a list of the 29 Hydro Vaults located within City-owned buildings (see below) and are working with Toronto Hydro to develop a schedule to undertake to allow City Staff access, including Toronto Fire Services Staff to conduct a visual inspection of each of these Hydro Vaults by mid- 2016.

The inspections will address all aspects of the Hydro Vaults, including but not limited to, architectural, structural, electrical, mechanical, and any other deficiencies.

Based on the results of these inspections, Facilities Management will establish and lead a state of good repair program to rectify all the deficiencies. Facilities Management and Toronto Hydro will continuously collaborate and coordinate throughout the inspection and repair phases.

Address	Building Name	Responsible City Division or City Board	Ward #
1515 Albion Rd.	Albion Public Library	Toronto Public Library	01
140 Antibes Dr.	Antibes Community Centre & Indoor Pool	Parks, Forestry & Recreation	10
700 Arrow Rd.	Arrow Road Bus Garage	Toronto Transit Commission	07
3230 Bayview Ave	Bayview Arena	Parks, Forestry & Recreation	24
155 Bonis Ave	Agincourt Public Library	Toronto Public Library	40
255 Bremner Blvd	Roundhouse Complex - Don Train Station	Economic Development & Culture	20
255 Bremner Blvd	Roundhouse Complex - Switch Cabin D	Economic Development & Culture	20
89 Church Ave	Mitchell Field Community Centre & Arena	Parks, Forestry & Recreation	23
205 Cummer Ave	Cummer Lodge	Long-Term Care Homes & Services	24
30 Dee Ave	Dee Avenue Laboratory	Toronto Water	11

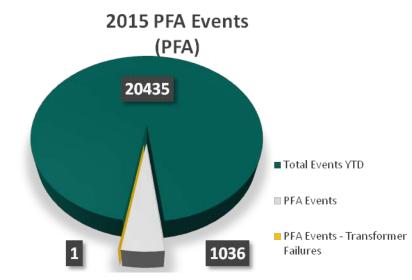
List of City-Owned Buildings containing Interior Hydro Vaults, in Order of Street Address

35 Fairview Mall Dr.	Fairview Public Library	Toronto Public Library	33
306 Finch Ave E	Carefree Lodge	Long-Term Care Homes & Services	24
1026 Finch Ave W	Finch Yard – Bldg. D	Toronto Water	08
319 George St	O'Neil Seaton House	Shelter, Support & Housing Administration	27
165 Grenoble Dr.	Angela James Arena	Parks, Forestry & Recreation	26
50 Ingram Dr.	Ingram Transfer Station	Solid Waste Management	12
1806 Islington Ave	Richview Public Library	Toronto Public Library	04
2233 Kipling Ave	Kipling Acres & Kipling Child Care Centre (Phase	Long-Term Care Homes & Services	02
3197 Lake Shore Blvd W	Lakeshore Lodge	Long-Term Care Homes & Services	06
2920 Lawrence Ave E	Bendale Acres	Long-Term Care Homes & Services	38
5 Leaside Park Dr.	Leaside Park - Outdoor Pool Service Bldg	Parks, Forestry & Recreation	26
9 Neilson Rd	Seven Oaks Senior Home & Centenary Child Care Centre	Long-Term Care Homes & Services	43
160 Neptune Dr.	Baycrest Arena	Parks, Forestry & Recreation	15
8270 Sheppard Ave E	Winter Maintenance Depot & Patrol Yard	Transportation Services	42
60 Tiffield Rd	Toronto Water Centre – Bldg. C	Toronto Water	41
545 Van Horne Ave	Pleasantview Arena & Community Centre	Parks, Forestry & Recreation	33
5100 Yonge St	Douglas Snow Aquatic Centre & Community Centre	Parks, Forestry & Recreation	23
5100 Yonge St	Mel Lastman Square - Outdoor Rink Service Bldg	Parks, Forestry & Recreation	23
5120 Yonge St	North York Central Library	Toronto Public Library	23

#### 4. <u>Hydro Transformer Fires:</u>

As of September 2015, Toronto Hydro has responded to a total of 20,435 events of which Police, Fire and Ambulance (PFA) events total of 1036 events, or 5 % of the total year to date volume. Of the 1036 PFA events received, only 1 was attributed to a building transformer vault. Upon arrival, TFS did not find an active fire in progress but only smoke arising from overheated polyethylene cable insulation.

This equates to 0.09% of the total PFA events YTD, or 0.004% of the total for all events YTD.



There is no evidence of a systemic distribution system failure mode that is causing fire in electric building vaults.

#### CONCLUSION

This information has been provided to the Executive Committee in response to the requests made by the Government Management Committee at its meeting held on September 17, 2015 and City Council at its meeting held on June 10, 2015. It is recommended that the Executive Committee receive this report for information.

## CONTACT

Sunil Sharma General Manager Facilities Management Tel: 416-397-5270 Ssharma5@toronto.ca Jim Jessop, Deputy Chief Fire Prev. & Public Education Toronto Fire Services Tel: 416-338-9052 Jjessop2@toronto.ca

## SIGNATURE

Josie Scioli Chief Corporate Officer