



Technical Standards and Safety Authority  
 www.tssa.org  
 14th Floor - Centre Tower  
 3300 Bloor Street West  
 Toronto Ontario M8X 2X4  
 Fax: 416.231.4078  
 Customer Service: 1.877.682.8772

**Level 1 Risk and Safety Management Plan (RSMP)**  
*Technical Standards and Safety Act*  
 Propane Storage and Handling Regulation

This Level 1 RSMP applies to: . a facility with a total propane storage capacity of 5,000 USWG or less; or  
 . a facility with a fixed propane storage capacity of exactly 5,000 USWG and no more than 500 USWG of portable propane storage capacity on site

Failure to fully complete this form may result in rejection.  
 Making a false statement may result in a fine or prosecution under the *Technical Standards and Safety Act*

Licence Number

Check applicable type of propane operations.

Cylinder     Motor Fill     Filling Plant     Card/Keylock

Submit along with this completed application a Facility Site Plan and a Map of the Surrounding Area.



**SECTION A: GENERAL INFORMATION**

The Undersigned applies to TSSA for a review for an RSMP under Ontario's *Technical Standards and Safety Act*, Propane Storage and Handling Regulation.

**A** Company Name  Corporation No.   
 Operator Name (if different from above)   
 Telephone No.  Fax No.  E-mail

**B** Street No.  Street Name / 911 Number / Address, if applicable   
 Town / City or Township / County  Province  Postal Code

**C** Mailing address if different from above.  
 Street No.  Street Name / 911 Number / Address, if applicable   
 Town / City or Township / County  Province  Postal Code

**Information on Container Refill Centre or Filling Plant**  
 Location of facility.  
**D** Street No.  Street Name / 911 Number / Address, if applicable  Nearest Major Intersection   
 Town / City or Township / County  Province  Postal Code

Name of Licence Holder   
 Name of a Senior Management person as defined in the regulation holding the Record of Training (ROT).  ROT type   
 Municipality (or municipalities if the facility or its hazard distance touches multiple borders)   
 Hours of operation

This document is valid until the next licence renewal date. You are required by law to notify TSSA of any change of information.

Declaration: I am aware that it is an offence to give false information in this document and I hereby declare that the information I have given here is true and complete.

| Print name   | Signature | Date (dd-mm-yyyy)                       |
|--|-----------|---|
| Name of Licence Holder <input type="text" value="Costco Wholesale Canada Limited (c/o: Robert Moyer)"/>                                |           | <input type="text" value="21/11/2016"/> |
| Name of Senior Management person as defined in the Regulation holding the Record of Training <input type="text" value="Robert Moyer"/> |           |   |



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**Technical Standards and Safety Act**  
Propane Storage and Handling Regulation

**SECTION A: GENERAL INFORMATION (cont'd)**

|  |   |
|--|---|
| Indicate the year the facility was established.<br>2016/2017 | Indicate the year of any significant modifications, as defined in s.1, O.Reg 211/01, since establishment.<br>None |
|--|---|

Identify the psig rating and serial number for each fixed propane storage tank on site.

|         | PSIG     | Serial Number                    |
|---------|----------|----------------------------------|
| Tank 1: | 250 PSIG | Not Available - New Construction |
| Tank 2: | _____    | Tank unknown at this time        |
| Tank 3: | _____    | _____                            |

Enter capacity of propane in USWG, fixed, portable, and mobile, and provide detailed inventory that includes the number of tank/vessel for each type (fixed, portable, and mobile) and the capacity of each tank/vessel, on a separate document.

Fixed: 1999 USWG      Portable: 72 Cylinders      Mobile: \_\_\_\_\_

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|  |                                       |  |
|--|---------------------------------------|--|
| Name of person completing this form (please print)<br>MMM Group Limited (c/o: Darryl Boyd) | Official Title<br>Project Coordinator |  |
| Signature<br>  | Telephone No.<br>(647) 381-0099       | Date (dd-mmm-yyyy)<br><b>12-Jul-2016</b> |



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**Technical Standards and Safety Act**  
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**SECTION A: GENERAL INFORMATION (cont'd)**

Activity Information

|  |  |   |                        |
|--|--|---|------------------------|
| <b>Name of Propane Supplier(s)</b><br>Superior Propane   |  | For Office Use - Party No.  |                        |
| Street No.<br>6750                                       | Street Name / 911 Number / Address, if applicable<br>Century Avenue, Suite 400 |   |                        |
| Town / City or Township / Country<br>City of Mississauga |  | Province<br>ON  | Postal Code<br>L5N 2V8 |
| Telephone No.<br>(613) 391-9604                          | Fax No.  | Contact Name<br>Ken Gillis - Safety and Technical Specialist, Ontario |                        |
| E-mail<br>GillisK@superiorpropane.com                    |  |   |                        |

|  |   |                              |                        |
|--|---|------------------------------|------------------------|
| <b>Name of Propane Transporter.</b> If same as above, please check box. <input type="checkbox"/> |   | For Office Use - Party No.   |                        |
| Superior Propane   |   |                              |                        |
| Street No.<br>63   | Street Name / 911 Number / Address, if applicable<br>Roydon Place |                              |                        |
| Town / City or Township / Country<br>City of Ottawa  |   | Province<br>ON               | Postal Code<br>K2E 1A3 |
| Telephone No.<br>(613) 314-8003  | Fax No.   | Contact Name<br>Heather Ross |                        |
| E-mail<br>osshe@superiorpropane.com  |   |                              |                        |

|  |         |                                   |                            |
|--|---------|-----------------------------------|----------------------------|
| <b>Off-site Cylinder and/or Mobile Storage</b>                 |         | Capacity stored off-site, in USWG | For Office Use - Party No. |
| Street No. / Street Name / 911 Number / Address, if applicable |         |                                   |                            |
| Town / City or Township / Country                              |         | Province                          | Postal Code                |
| Telephone No.  | Fax No. | Contact Name                      |                            |

Note: Customer storage is not considered off-site storage.

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| Signature<br>  | Telephone No.<br>(647) 381-0099 | Date (dd-mmm-yyyy)<br>12-30-2016      |  |





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**SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN**

The licence holder will complete Section B in consultation with the local Fire Services.

Description of the maximum volume, types and storage location of other hazardous materials on site, if any.

A Costco fuel facility is located to the west of the propane facility. A maximum of 300,000 L of gasoline would be on-site, stored in underground tanks below the Gas Bar. A MSDS for regular gasoline is provided herein (the MSDS for premium gasoline is similar). Approximately 1000 gallons of motor oil (4 drums @ 250 gallons each) will be stored in the oil room within the Tire Centre.

Description of fire and emergency equipment indicated on facility site map.

1. Fire extinguisher are located at: a) the inside pillar of the canopy by the propane filling station; b) inside the Tire Centre; and, c) inside the tire sales
  2. Emergency stop push buttons are located at: a) on a pedestal by the propane filling station; and, b) inside the Tire Centre
- The emergency stop push buttons will shut down the pump and close a solenoid valve upstream of the hoses.


List of fire protection controls (e.g., fire detection systems, fire notification systems, alarm systems, automatic shut off devices, fusible links, etc.) and describe their function, use and operation.

1. ISC Flow Valve: Closed by fusible link melting in fire scenario, or by closing door of pump enclosure. This will stop the flow from the tank.
2. System contains 3 leak detectors (2 scale units; 1 pump enclosure) which trigger system shutdown @ 40% LEL (cuts all power except 24 VDC)
3. E-stops: One on the fueling island, one inside the building (at MCCB). The E-Stops cuts all except 24 DC; will shut down pump and closes the solenoid valves to stop flow.
4. Leak Detection System triggers an audible alarm
5. A Fire Sprinkler system has been installed inside the warehouse.

Maintenance and testing schedule for fire protection controls and devices.

The Fire Extinguishers will be replaced as per manufacturer's recommendations. The gas detection/auto-shutdown/auto alarm system will be maintained and tested every 6 months by a certified service technician. All other equipment - e.g. pumps, valves etc. will be maintained/tested by Superior Propane according to the requirements in the Superior Propane Maintenance Standard. According to this Standard, ISC valves will be tested every 6 months; pumps will be maintained every 3 months. Fusible links will be inspected every 6 months.

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**SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)**

1. Contacts for Emergency Response

**1. Facility Contact Personnel - Key Contact**

|  |                            |
|--|----------------------------|
| Name   | For Office Use - Party No. |
| Robert Moyer   |                            |
| Official Title   |                            |
| Manager of Propane Operations  |                            |
| Telephone No.  | Fax No.                    |
| (703) 626-8398   | N/A                        |
| E-mail   |                            |
| robert.moyer@costco.com  |                            |
| Role and responsibilities in emergency   |                            |
| Identify the person(s) authorized to set emergency procedures in motion and include persons authorized to take charge of the premises. |                            |

**5. Facility 24-Hour Contact Person**

|  |                            |
|--|----------------------------|
| Name   | For Office Use - Party No. |
| Andy McDonald  |                            |
| Official Title   |                            |
| Assistant Director Operations, Tire Centres - Canada   |                            |
| Cell No.   | Fax No.                    |
| (613) 221-6119   |                            |
| E-mail   |                            |
| andy.mcdonald@costco.com   |                            |
| Role and responsibilities in emergency   |                            |
| Identify the person(s) authorized to set emergency procedures in motion and include persons authorized to take charge of the premises. |                            |

**2. Facility Contact Personnel - Alternate Contact**

|  |                            |
|--|----------------------------|
| Name   | For Office Use - Party No. |
| Andy McDonald  |                            |
| Official Title   |                            |
| Assistant Director Operations, Tire Centres - Canada   |                            |
| Telephone No.  | Fax No.                    |
| (613) 221-6119   |                            |
| E-mail   |                            |
| andy.mcdonald@costco.com   |                            |
| Role and responsibilities in emergency   |                            |
| Identify the person(s) authorized to set emergency procedures in motion and include persons authorized to take charge of the premises. |                            |

**6. Name of Facility Manager**

|  |                            |
|--|----------------------------|
| Name   | For Office Use - Party No. |
| Andy McDonald  |                            |
| Official Title   |                            |
| Assistant Director Operations, Tire Centres - Canada   |                            |
| Telephone No.  | Fax No.                    |
| (613) 221-6119   |                            |
| E-mail   |                            |
| andy.mcdonald@costco.com   |                            |
| Role and responsibilities in emergency   |                            |
| Identify the person(s) authorized to set emergency procedures in motion and include persons authorized to take charge of the premises. |                            |

**3. Local Fire Services - Key Contact**

|   |                             |
|---|-----------------------------|
| Name  | For Office Use - Party No.  |
| Duncan McNaughton   |                             |
| Official Title  | E-mail                      |
| Fire Protection Engineer  | Duncan.McNaughton@ottawa.ca |
| Telephone No.   | Fax No.                     |
| (613) 580-2424 ext. 29603   | N/A                         |
| Role and responsibilities in emergency                                      |                             |
| Coordinate/advise on Fire Service response and serve as liaison with Police |                             |
| Fire Services Address   |                             |
| 101 Centrepointe Drive, 3rd Floor, Ottawa, ON K2G 5K7                       |                             |

**7. Propane Supplier Key Contact Person**

|  |                            |
|--|----------------------------|
| Name   | For Office Use - Party No. |
| Heather Ross   |                            |
| Official Title   | E-mail                     |
| Market Manager   | rosshe@superiorpropane.com |
| Telephone No.  | Fax No.                    |
| (613) 314-8003   |                            |
| Role and responsibilities in emergency   |                            |
| The role of the key contact is to manage the situation by putting in place specific procedures appropriate to the type of emergency. |                            |
| Propane Supplier Address   |                            |
| 6750 Century Avenue, Suite 400, Mississauga, Ontario, L5N 2V8  |                            |

**4. Local Fire Services - Alternate Contact**

|   |                            |
|---|----------------------------|
| Name  | For Office Use - Party No. |
| Gerry Pingitore   |                            |
| Official Title  | E-mail                     |
| Fire Chief  | Gerry.Pingitore@ottawa.ca  |
| Telephone No.   | Fax No.                    |
| (613) 580-2880  |                            |
| Role and responsibilities in emergency                                      |                            |
| Coordinate/advise on Fire Service response and serve as liaison with Police |                            |
| Fire Services Address   |                            |
| 101 Centrepointe Drive, 3rd Floor, Ottawa, ON K2G 5K7                       |                            |

**8. Municipal Contact**

|  |                            |
|--|----------------------------|
| Name   | For Office Use - Party No. |
| M. Rick O'Connor   |                            |
| Official Title   |                            |
| City Clerk and Solicitor                                       |                            |
| Telephone No.  | Fax No.                    |
| (613) 580-2424 ext. 21215                                      | (613) 580-2416             |
| E-mail   |                            |
| rick.oconnor@ottawa.ca   |                            |
| Municipality Name and Address                                  |                            |
| City of Ottawa 110 Laurier Avenue West Ottawa, Ontario K1P 1J1 |                            |

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| MMM Group Limited (c/o: Darryl Boyd)               | Project Coordinator |
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|  | (647) 381-0099      |
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**SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)**

2. Additional Safety Measures

Describe any other measures in place at the facility that exceed the minimum Code and Standards requirements.

The Controller uses an employee access card to activate dispenser. The propane dispenser will not operate if employee's training has expired.

In the case of an emergency, there are two (2) Emergency Shut Off Push Buttons to shut down pump and close the solenoid valve upstream of dispensing hoses. In addition, a Fire Suppression System is located inside the Costco building.

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**SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)**

3. Record of Emergency Training Provided - For most recent 12-month period.

Training on Emergency Response Plan and Procedures provided to facility key contacts.

|                             |   |
|-----------------------------|---|
| Training Date (dd-mmm-yyyy) | Print Name of Training Provider: Costco - Standard Costco Safety Training to be provided by Key Contact |
|                             | Print Name of Instructor: TBD   |
| Training Date (dd-mmm-yyyy) | Print Name of Training Provider:  |
|                             | Print Name of Instructor: David Kennedy   |
| Training Date (dd-mmm-yyyy) | Print Name of Training Provider:  |
|                             | Print Name of Instructor:   |

Training on the facility's Emergency Management Procedures provided to staff.

|                             |   |
|-----------------------------|---|
| Training Date (dd-mmm-yyyy) | Print Name of Training Provider: Key Contact to train staff |
|                             | Print Name of Instructor: TBD                               |
| Training Date (dd-mmm-yyyy) | Print Name of Training Provider:                            |
|                             | Print Name of Instructor:                                   |
| Training Date (dd-mmm-yyyy) | Print Name of Training Provider:                            |
|                             | Print Name of Instructor:                                   |

On-site specific training provided to certificate holders / persons with Records of Training.

|                             |  |   |
|-----------------------------|--|---|
| Training Date (dd-mmm-yyyy) | Print Name of Training Provider: FSN Training or Other | PLEASE NOTE: a ROT is valid for 3 years |
|                             | Print Name of Instructor: TBD                          |   |
| Training Date (dd-mmm-yyyy) | Print Name of Training Provider:                       |   |
|                             | Print Name of Instructor:                              |   |
| Training Date (dd-mmm-yyyy) | Print Name of Training Provider:                       |   |
|                             | Print Name of Instructor:                              |   |

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**SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)**

4. Emergency Training Plan for Coming Year

Training on Emergency Response Plan and Procedures provided to facility key contacts.

|                           |   |
|---------------------------|---|
| Target Date (dd-mmm-yyyy) | Print Name of Training Provider: Costco - Standard Costco Safety Training to be provided by Key Contact |
|                           | Print Name of Instructor: TBD   |
| Target Date (dd-mmm-yyyy) | Print Name of Training Provider:  |
|                           | Print Name of Instructor: David Kennedy   |
| Target Date (dd-mmm-yyyy) | Print Name of Training Provider:  |
|                           | Print Name of Instructor:   |

Training on the facility's Emergency Management Procedures provided to staff.

|                           |   |
|---------------------------|---|
| Target Date (dd-mmm-yyyy) | Print Name of Training Provider: Key Contact to train staff |
|                           | Print Name of Instructor: TBD                               |
| Target Date (dd-mmm-yyyy) | Print Name of Training Provider:                            |
|                           | Print Name of Instructor:                                   |
| Target Date (dd-mmm-yyyy) | Print Name of Training Provider:                            |
|                           | Print Name of Instructor:                                   |

On-site specific training provided to certificate holders / persons with Records of Training.

|                           |  |   |
|---------------------------|--|---|
| Target Date (dd-mmm-yyyy) | Print Name of Training Provider: FSN Training or Other | PLEASE NOTE: a ROT is valid for 3 years |
|                           | Print Name of Instructor: TBD                          |   |
| Target Date (dd-mmm-yyyy) | Print Name of Training Provider:                       |   |
|                           | Print Name of Instructor:                              |   |
| Target Date (dd-mmm-yyyy) | Print Name of Training Provider:                       |   |
|                           | Print Name of Instructor:                              |   |

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**SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)**

The licence holder will complete Section B in consultation with the local Fire Services.

**5. Emergency Response Communications Plan**

**Warnings and Actions**

Describe who gives warnings to whom, and how and when the warning will be given (including public notification as appropriate).

The Key Contact/operator or alternate (both ROT staff) will contact emergency services by calling 911 and will provide warnings as outlined in the attached Propane Emergency Response Procedures (to be posted at site and will be part of employee training). If it is safe to do so, this could involve advising neighbours to evacuate. The Key Contact will also contact Superior Propane via the emergency number provided in the ERP.

Describe what action is to be taken and by whom when a warning is issued (including details of a meeting place in a safe identified area and activating the evacuation plan, if necessary).

The Key Contact/operator or alternate will follow the actions listed in the ERP's provided. If the release of propane cannot be stopped by cutting electrical power, staged evacuation may be required. The initial muster location will be determined by the Warehouse Safety Plan away from the site and a possible dispersing propane cloud. Subsequent evacuation instructions potentially up to the Hazard Distance to be provided by municipal emergency responders. Residences and businesses beyond the site boundary will be notified by municipal emergency responders.

**Communication with Emergency Response Authorities**

Describe when and how the licence holder will give early warning to emergency response authorities (including a process to ensure that a call is placed to 911).

When the system is operation, site staff will be on duty within the propane tank area. The Key Contact or alternate will be implementing emergency response actions and notifications, includign notifying emergency responders. 911 will be called immediately after any attempts to shut down the system. When the system is not in operation, the ISC valve (main isolation valve) is closed and the system is shutdown.

Describe provisions for fire department entry when there are no operations or staffing at the propane site.

The propane tank system is located in a wide, open area that is easily accessible from either Strandherd Drive, Jackvale Road or Maravista Drive. The access routes foremergency responders (e.g. Fire Trucks and Ambulances etc.) are identified in the Site Plan submitted as part of this TSSA application.


Describe how the licence holder will ensure continual flow of updated information to authorities.

The license holder will provide critical information on how to shut down the system. This information will be provided either verbally (if on-site) or via cellular. Further, if known, the fill level of the tank will be provided to authorities. Fill level information is relevant from a time-to-BLEVE perspective, as a near empty tank will BLEVE sooner than a full tank, if there is a fire impingement on the tank.

How long will it take the facility liaison person to respond to the site.

It would take the Andy McDonald, or the authorized alternate contact approximately 60 minutes to arrive on site after having received the emergency call.

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**SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)**

The licence holder will complete Section B in consultation with the local Fire Services.

**6. Building and Site Security and Procedures**

|   | Yes                                 | No                       |
|---|-------------------------------------|--------------------------|
| 1. Does the propane location have controlled access to limit unnecessary risk and entry (lock out procedures)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Is there adequate night lighting at the site?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Are procedures in place that ensure access routes, aisles, storage area, filling areas and the grounds are kept clear from unwanted materials?                                     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Are there procedures that capture and record the daily inspection of hoses and inspection requirements for filling systems and mechanical devices used in the transfer of propane? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Does the facility have procedures that include a process to isolate and purge any overfilled propane cylinders?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Are weighing systems validated for accuracy?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Are storage areas clearly marked with the vessels' capacity status (i.e., filled, empty, purged and other hazardous materials)?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8. Are quality assurance procedures in place to ensure that all valves are closed after the propane cylinders are filled?(e.g., QCC valves)   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9. Is the schedule of maintenance and testing activities retained on site?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**7. Water Supply**

The propane licence holder should work with the local fire department to determine water supply capabilities that are available based on the propane facility's location.

|   | Yes                                 | No                       |
|---|-------------------------------------|--------------------------|
| 1. Is a pressurized water system available at the propane facility site?  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Can the municipal fire department pump 375 GPM (1420 LPM) of water at this location?   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. What is the unobstructed distance to the closest water supply that could be used for firefighting activities? (distance in metres only)            |                                     | <u>19.79 m</u>           |
| 4. What is the unobstructed distance to the closest approved water supply with year round access if there are no hydrants? ( distance in metres only) |                                     | <u>N/A</u>               |

**Declaration: I am aware that it is an offence to give false information in this document and I hereby declare that the information I have given here is true and complete.**

|  |  |                                       |                                   |
|--|--|---------------------------------------|-----------------------------------|
| Name of person completing this form (please print)<br>MMM Group Limited (c/o: Darryl Boyd) |  | Official Title<br>Project Coordinator |                                   |
| Signature<br>  |  | Telephone No.<br>(647) 381-0099       | Date (dd-mmm-yyyy)<br>12-Jul-2016 |





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www.tssa.org

14th Floor - Centre Tower  
3300 Bloor Street West  
Toronto Ontario M8X 2X4  
Fax: 416.231.4078  
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**Level 1 Risk and Safety Management Plan (RSMP)**  
*Technical Standards and Safety Act*  
Propane Storage and Handling Regulation

**SECTION B: EMERGENCY AND PREPAREDNESS RESPONSE PLAN (cont'd)**

The licence holder will complete Section B in consultation with the local Fire Services.

**8. Licence holder and local Fire Services Review**

**To be completed by the Local Fire Services**

Has the local fire service had an opportunity to review the Emergency Response and Preparedness Plan?

Yes  No

If not, please explain (e.g., no fire services).

*No comments.*

Fire services comments, if any:

*No comments.*

**To be completed by the Licence Holder**

In response to the above comments, the following action(s) is required:

\_\_\_\_\_

\_\_\_\_\_

The licence holder will respond to the Local Fire Services comments by: \_\_\_\_\_ (dd-mmm-yyyy)

**LOCAL FIRE SERVICES**

The undersigned has reviewed Section B of the Risk and Safety Management Plan Fire Services.

|   |                                |                                 |   |
|---|--------------------------------|---------------------------------|---|
| <i>DUNCAN</i><br>Local Fire Services Name | Print name<br><i>MENAUOHAN</i> | Signature<br><i>[Signature]</i> | Date (dd-mmm-yyyy)<br><i>June 21/2016</i> |
|---|--------------------------------|---------------------------------|---|

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|  |  |
|--|--|
| Name of person completing this form (please print)<br>MMM Group Limited (c/o: Darryl Boyd) | Official Title<br>Project Coordinator    |
| Signature<br><i>[Signature]</i>  | Telephone No.<br>(647) 381-0099          |
|  | Date (dd-mmm-yyyy)<br><i>12-Jul-2016</i> |



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**SECTION C: SUBMISSIONS**

Applicant must include a Facility Site Plan and Map of Surrounding Area

**Facility Site Plan.**

The licence holder will submit a copy of the original facility site plan updated with the following information:

1. The storage location of fixed, portable, and mobile vessels.
2. The maximum volume, types and storage location of hazardous materials.
3. Location of permanent structures on site.
4. Access and egress points and location of barriers.
5. Location of fire and emergency equipment (e.g., sprinkler systems, extinguishers, suppression systems) on site and location of fire hydrant or water supply where available.
6. Location of emergency shut off/shut down switches/valves.

**Map of Surrounding Area.**

The licence holder will submit a scaled aerial map of the surrounding area showing the following information:

7. The capacity and placement of the single largest propane storage vessel, including its setback from the front, rear and side property lines.
8. GPS co-ordinates of the single largest vessel.
9. Visual indication of the single largest fixed vessel and a circle made using the distance in Table 1 as the radius from the single largest fixed vessel.
10. Clear indication of the municipality or municipalities present within the circle.
11. Visual indication of property line information.
12. The location and name of roads within or abutting the site.
13. Key note to the drawing indicating the facility's municipal address, municipal lot number(s) and concession lines as applicable, and the date the map was prepared.
14. Address and contact information for each municipality (municipal clerk or secretary-treasurers of planning board). (Refer to page 5.)
15. Complete "Required Mapping Information from Updated Site Plan" in table below .

**Required Mapping Information from Updated Site Plan**

|  |   |
|--|---|
| Date map prepared (dd-mmm-yyyy)<br>20-01-2016                                      | Capacity of single largest propane storage vessel (USWG)<br>5000 USWG |
| Tank setback coordinates. Indicate placement on the map.                           |   |
| Front: <u>86.29 m east</u>   | Right side property line: <u>70.03 m south</u>                        |
| Rear: <u>188.01 m west</u>   | Left side property line: <u>138.42 m north</u>                        |
| GPS coordinates of single largest vessel: <u>Lat: 45.2596101 Long: -75.7686585</u> |   |

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|  |  |
|--|--|
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| Signature<br>  | Telephone No.<br>(647) 381-0099          |
|  | Date (dd-mmm-yyyy)<br><u>12-Jul-2016</u> |





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Level 1 Risk and Safety Management Plan (RSMP)  
Technical Standards and Safety Act  
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**SECTION C: SUBMISSIONS (cont'd)**

Applicant must include a Facility Site Plan and Map of Surrounding Area

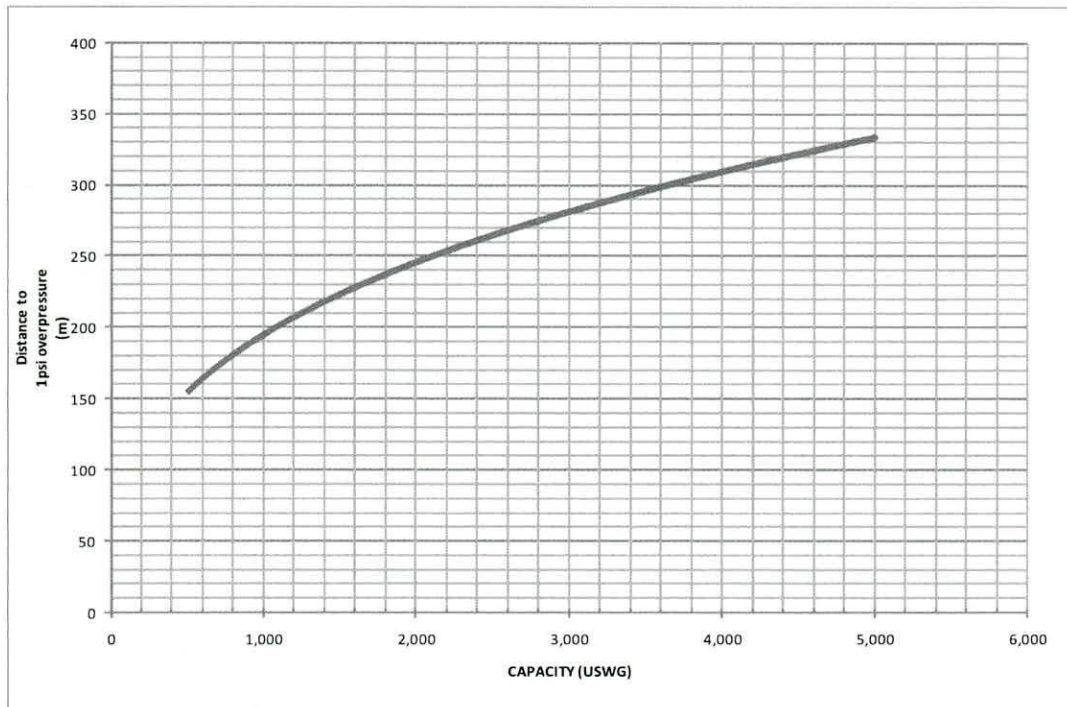
Table 1: Distance Table

| Water Capacity (litres) | Nominal Water Capacity (USWG) | Distance to 1 psi overpressure (m) |
|-------------------------|-------------------------------|------------------------------------|
| 1,890                   | 500                           | 155                                |
| 3,780                   | 1,000                         | 195                                |
| 4,920                   | 1,300                         | 213                                |
| 6,620                   | 1,750                         | 235                                |
| 7,130                   | 1,885                         | 241                                |
| 7,560                   | 2,000                         | 246                                |
| 18,900                  | 5,000                         | 333                                |

**Formula:**  $D = 16.94 \times (1.524 \times C)^{1/3}$   
 D = Distance to overpressure of 1 psi (meters)  
 C = Tank Total Capacity in USWG

**Parameters:** Density of Propane is 0.5033 kg per litre @ 15 C  
 Assume all vessels are 80% full  
 1 gallon [US, liquid] = 0.003785411784 cubic meter  
 1 cubic metre = 264.17 USWG

Hazard Distance Chart (EPA-TNT model)





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**SECTION C: SUBMISSIONS (cont'd)**

Applicant must include a Facility Site Plan and Map of Surrounding Area

As an accompaniment to the Map of Surrounding Area, provide the following information about buildings and features present within the circle in Table 2.

**Table 2: Buildings and Features**

| Buildings and Features Present within the Circle on the Map of the Surrounding Area<br>AND Name and Address of Closest Building or Feature   | * Number of Buildings and Features (mark with an "X") |   |      |     | Distance from Tank to Closest Building or Feature |
|--|---|---|------|-----|---|
|  | 0   | 1 | 2-10 | 11+ |   |
| Industrial buildings or parks or golf courses<br>Name: <u>None within hazard distance</u><br>Address: _____<br>City: _____ Province _____ Postal Code _____  | X   |   |      |     | <u>0</u> m  |
| Residential building units specifically permanent single family dwellings, condominiums, and apartments.<br>[Redacted]   |   |   |      | X   | <u>320</u> m                                      |
| Commercial building units specifically retail, restaurants, entertainment, theatres, and sporting complexes.<br>Name: <u>None within hazard distance</u><br>Address: _____<br>City: _____ Province _____ Postal Code _____                                 | X   |   |      |     | <u>0</u> m  |
| Commercial building units – continuous occupancy specifically hotels, campgrounds, and resorts.<br>Name: <u>None within hazard distance</u><br>Address: _____<br>City: _____ Province _____ Postal Code _____  | X   |   |      |     | <u>0</u> m  |
| Sensitive institutions specifically hospitals, schools and day cares, nursing and retirement homes, mental health institutions, and prisons.<br>Name: <u>None within hazard distance</u><br>Address: _____<br>City: _____ Province _____ Postal Code _____ | X   |   |      |     | <u>0</u> m  |
| Emergency responders specifically fire stations, ambulance stations, and police stations.<br>Name: <u>None within hazard distance</u><br>Address: _____<br>City: _____ Province _____ Postal Code _____  | X   |   |      |     | <u>0</u> m  |

\* For multi-unit buildings, count each unit as "1".

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|  |                                       |
|--|---------------------------------------|
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| Signature<br>  | Telephone No.<br>(647) 381-0099       |
|  | Date (dd-mmm-yyyy)<br>12-Jul-2016     |





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**WORKSHEET**

**Portable Storage Additional Information Worksheet**

| Cylinder Size                  | Capacity in USWG | Quantity           | Total Volume in USWG |
|--------------------------------|------------------|--------------------|----------------------|
| # 420                          | 123.9            |                    |                      |
| # 100                          | 29.5             |                    |                      |
| # 40                           | 11.75            |                    |                      |
| # 33.3                         | 9.62             |                    |                      |
| # 30                           | 8.8              |                    |                      |
| # 20                           | 5.8              | 72 (3 cages of 24) | 417.6 USWG           |
| # 10                           | 2.9              |                    |                      |
| # 5                            | 1.5              |                    |                      |
| <b>Total Cylinder Capacity</b> |                  |                    |                      |

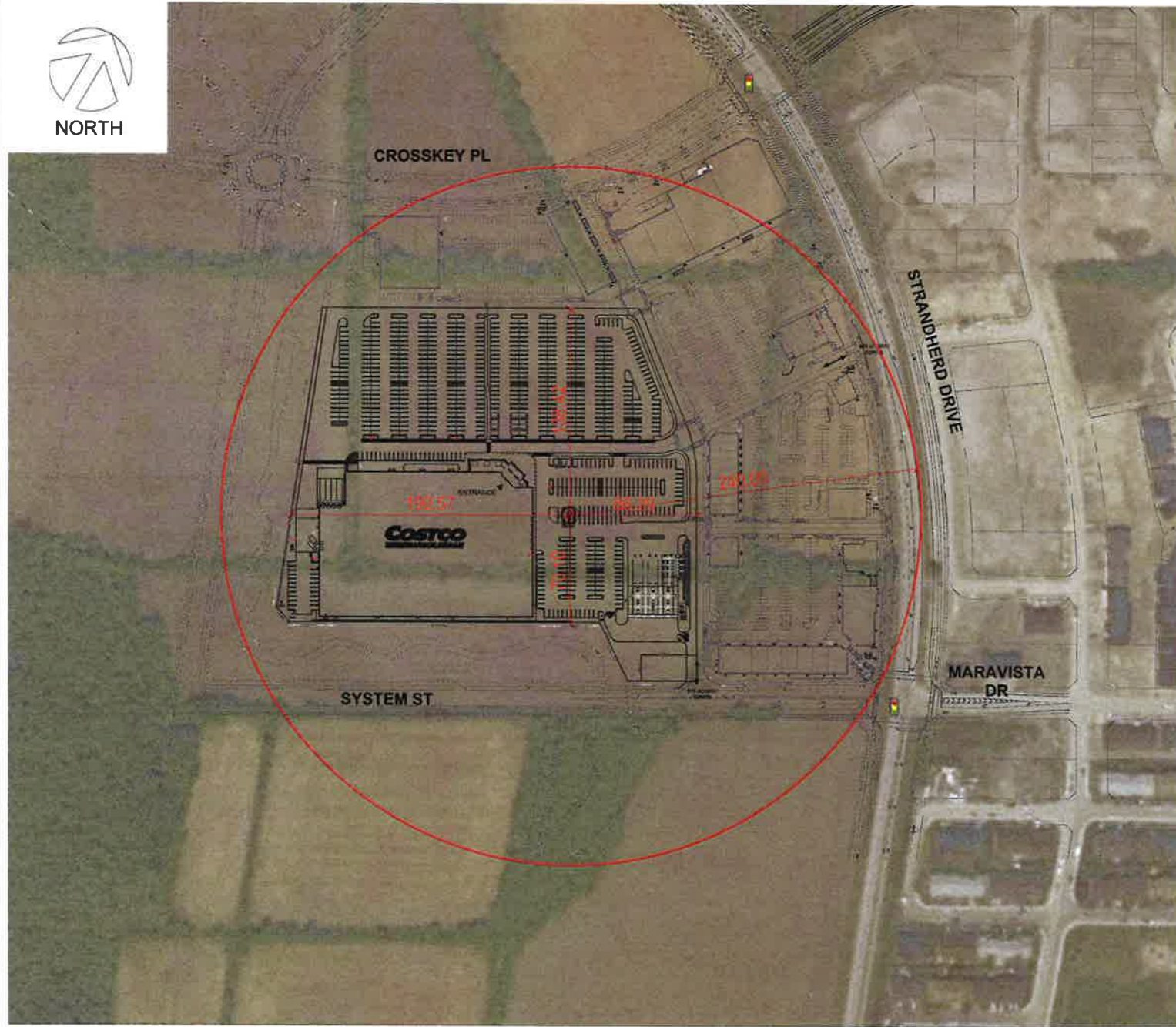
**Tanks Stored On-site Not Connected for Use**

| Tank Size In USWG          | Quantity | Total Volume in USWG |
|----------------------------|----------|----------------------|
|                            |          |                      |
|                            |          |                      |
|                            |          |                      |
|                            |          |                      |
|                            |          |                      |
|                            |          |                      |
|                            |          |                      |
|                            |          |                      |
|                            |          |                      |
|                            |          |                      |
| <b>Total Tank Capacity</b> |          |                      |

|   |                   |
|---|-------------------|
| <b>Total Cylinder Capacity</b>  | 418 USWG estimate |
| <b>Total Tank Capacity</b>  | 0 USWG            |
| <b>Total Portable Capacity</b><br>(Total Cylinder Capacity + Total Tank Capacity) | 418 USWG estimate |



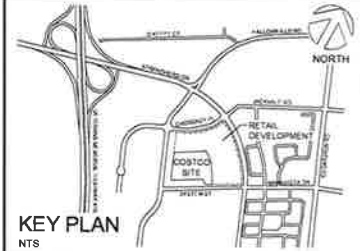
NORTH



BARRHAVEN, ONTARIO  
NEW WAREHOUSE AND GAS BAR

**COSTCO  
WHOLESALE  
CORPORATION**

999 LAKE DRIVE  
ISSAQUAH, WA 98027  
T: 425.310.8100  
Costco.com



**KEY PLAN**  
NTS

**PROJECT DATA**  
PROJECT ADDRESS: 3415 STRANDHERD DRIVE  
OTTAWA, ONTARIO

**TOTAL AREA:** 59,134.2m<sup>2</sup> (5.91 ha) /  
636,515ft<sup>2</sup> (14.61 ac)

**ZONING:** GENERAL MIXED USE ZONE

**JURISDICTION:** CITY OF OTTAWA

**BOUNDARY INFORMATION:** THIS DRAWING IS BASED ON AN E-FILE FROM PETROFF PARTNERSHIP ARCHITECTS, DATED NOVEMBER 12, 2015.

**MUNICIPAL CONTACT:** M. RICK O'CONNOR  
CITY CLERK & SOLICITOR  
CITY OF OTTAWA  
110 LAURIER AVENUE WEST  
OTTAWA, ON  
K1P 1J1  
(613) 580-2424 x.21215

**TANK GPS COORDINATES:** LATITUDE 45.268931 LONGITUDE -75.783441

**CAPACITY OF PROPANE TANK:** 1999 USWG HORIZONTAL TANK



**AREA MAP**

CONSULTANT



**MMM GROUP**

DESIGNED: CJM/SODG DRAWN: CJM CHECKED: DRTB

SCALE: 1:1000 DATE: JANUARY 20, 2016

PROJECT NUMBER: 14.13257.001.P01 DWG NUMBER: AM-1