



Appendix E – Operations and Maintenance Manual Requirements for Private Developments

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Appendix E – Operations and Maintenance Manual Requirements for Private Developments

E1.00 Operations and Maintenance Manual Requirements

A site-wide Operations and Maintenance Manual (O&M Manual) shall be submitted by the Proponent and approved by the Township, prior to approval of the Site Plan. This manual shall form a Schedule to the Site Plan Agreement, which will ensure ongoing adherence, even in the case that the Site changes Developers.

The Township has the right to enforce the requirements of this manual in the case it is not being adhered to. The Site Developer will be responsible for adherence. If the Developer does not adhere, the Township will complete the maintenance requirements at the Developer's cost.

This document applies to all commercial, residential, industrial, and institutional Site Plans within the Township.

The proceeding Sections outline what information the manual shall contain. However, this list is not exhaustive, and the Proponent shall include all components that require any ongoing maintenance. The Township reserves the right to require additional items above and beyond those outlined below.

In the case that the Site does not include components applicable to any of the Sections below, include in the O&M Manual, the Section header and "Not applicable" within the Section.

E2.00 Introduction

Complete as applicable to the Site.

E3.00 Site Location

Complete as applicable to the Site. Include a key map.

E4.00 Watermain Distribution System

- Domestic Supply
 - Size, material type.
 - Water meter location and details.
 - Backflow preventer or check valve details and associated maintenance / inspection requirements.
 - Backflow valve and meter located within a heated mechanical room of a building.
 - All valves exercised twice annually to ensure they are accessible and remain operational.

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- Fire Supply
 - Fire Hydrant
 - Details (type, location, etc.).
 - Hydrant to be inspected annually and after each use.
 - Hydrant and Valve inspection and maintenance in accordance with Subsection 6.6.5 of the Fire Code.
 - Associated snow removal requirements.
 - Anti-freeze process prior to winter.
 - Sprinkler System
- Siamese Connection Location / Details.
 - Watermain Testing Requirements
 - Shall conform to MECP, AWWA, OPSS, and Township testing procedures.
 - Backflow prevention requirements as per Ontario Watermain Disinfection Procedure.
 - Township requires 48-hours' notice prior to operation of valves.
 - Watermains are to be disinfected in accordance with Ontario Watermain Disinfection Procedure (latest revision).
 - Swab, hydrostatic pressure test OPSS 441, Chlorination, Chlorine Residual, Bacteriological Sampling – two sets (after 16-hours, per AWWA C651 Standard), Continuity test of the tracer wire.
 - Water Quality
 - Flushing infrastructure to ensure water quality for all consumers.
 - Prior authorization must be obtained from the Township for any maintenance activities that would result in abnormally higher flow rates.
 - O&M by Qualified Operator
 - Inspection and operation of valves, etc. shall be undertaken by a qualified operator certified by the MECP and a copy of the inspection / maintenance report is to be provided to the Public Works Department.
 - Alternatively, arrangements can be made with the Township to have the certified operators of the Public Works Department undertake the inspection and maintenance of hydrants and valves, at the Developer's expense.
 - The Developer is responsible for their service and associated maintenance from their Site to the trunk watermain situated within the Township ROW.
 - Backflow Prevention

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- An annual report prepared by a certified inspector must be submitted to the Township confirming that all backflow prevention devices have been inspected, tested, and certified in accordance with MECP and Building Code requirements.

E5.00 Sanitary Collection System

- MH at property line for access for inspection and cleanout
- SAN MH inspection twice annually
- In the event of blockage, a CCTV inspection may be undertaken by a plumber / mechanical contractor to determine the cause and subsequent cleaning or flushing requirements.
- All sanitary sewer lines 200 mm and over shall be flushed at minimum every two years and CCTV inspected every eight years.
- The Developer is responsible for their service and associated maintenance from their Site to the trunk sanitary sewer situated within the Township ROW.

E6.00 Storm Sewer System

- MH at property line for inspection / access.
- CBs, CB MHs, and Storm Maintenance holes must be inspected regularly to ensure that the grates and structures are not clogged with debris.
- CB sumps must be inspected every spring and fall and cleaned once annually to remove debris accumulated over the year including sand from winter snow clearing operations.

E7.00 Stormwater Management Facility

- Stormwater Quantity Control
 - Detention / Retention Facility.
 - Rooftop Storage Details (for commercial buildings only).
 - Maximum 150 mm depth.
 - Overflow weir details, location, etc.
 - Roof drain location, type, etc.
 - Controlled flow roof drains complete with anti-tampering screens.
 - Storm service connection details.
 - Parking Lot Storage Details.
 - Maximum 200 mm depth.
 - No ponding up to and including the 1:5-year events.

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- Overland Flow Route.
 - Reduced pipe / orifice plate details, location, etc.
- Lot level control / LID Details.
 - Type, location, and sizes of facilities.
- Stormwater Quality Control
 - Oil / Grit Separator.
 - Details.
 - Manufacturer's recommended maintenance requirements.
 - Removal of sediment and petroleum deposits, together with approved disposal location.
 - Local maintenance contractors.
 - SWM Pond
 - Sediment forebay cleanout frequency, measures, and estimated cost.
 - General maintenance requirements, etc.
 - Soakaway Pit
 - Details, location, etc.
 - Eaves trough and screens to be inspected at a minimum twice annually – spring and fall.
 - Access port cap – flushing.
 - Lot level control / LID Details.
 - Frequency of maintenance / cleanout.
 - Details for cleanout measures including depth of removals and disposal of materials.
 - Type and quantity of material required to replace filtration materials.

E8.00 Snow Storage / Removal

- The Developer is responsible to provide snow clearing operations for the parking facilities and all access routes.
- Snow storage locations must not encroach Township ROW or adjacent properties and must not conflict with drainage systems, including swales.
- In the event that the Site does not have sufficient area for snow storage in accordance with the accepted Site Plan, snow accumulation is to be removed off-site, at the Developer's expense.

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E9.00 Pavement Markings and Signage

- Site pavement markings including directional guidelines, parking stalls, and symbols are to be repainted at minimum once a year and / or as required, to maintain adequate information for motorists and pedestrians.
- All required traffic signage, such as, but not limited to Stop, Fire Route, No Parking, Accessible Parking, etc., is to be inspected and maintained regularly to ensure visibility and reflectivity.
- Estimated costs for maintenance.

E10.00 Conclusions and Recommendations

Complete as applicable to the Site.