Minimum Submission Requirements for On-Site SWM Program

1.0 Introduction:

The *On-Site SWM for Small Residential Infill* program addresses the regulatory gap created by Bill 23, and a later exemption by Council which exempt residential developments of up to 12 units from Site Plan Control. The goal of the program is to ensure SWM measures protect existing neighborhoods from flooding due to intensified infill developments. More information can be found at On-Site SWM Program.

2.0 Minimum Submission Requirements

- **Grading & Drainage Plan**
  - Must include title block, key plan, north arrow, legend, property lines, ROW limits, easements, and existing access points.
  - Show existing and proposed elevations, spot elevations at critical points, drainage directions, emergency overland flow routes, and stormwater retention areas.
  - Identify swales, ditches, catch basins, water outlets, proposed on-site SWM measures, roof downspout locations, and regulatory flood or development limits.
  - Plan must be stamped, signed, and dated by a Professional Engineer (P.Eng.) or Certified Engineering Technologist (CET). An Ontario Land Surveyor (OLS) should verify property boundaries and existing conditions.
  - See Grading and Drainage Plan Terms of Reference for more information.
- **Servicing Plan**
  - Structures & Above-Ground Features:
    - Document all existing and proposed buildings, structures, retaining walls, and above-ground servicing elements, including manholes, catch basins, ditches, embankments, hydrants, valve boxes/chambers, service posts, curbs, sidewalks/walkways, fences/handrails, light/utility poles, transformers, trees, bushes, and proposed garbage/snow storage areas.
  - Underground Services:
    - Detail existing and proposed sanitary and storm sewers, foundation drains, and water mains/services (both domestic and fire), specifying pipe material, bedding, diameter, slopes, flow direction, and invert elevations.
  - Pavement & Access Elements:
    - Provide the estimated service trench reinstatement limits, proposed pavement resurfacing areas (with catch basin inlet elevations), locations of Siamese connections and meters (where applicable), curb/sidewalk depression locations, details on service connections to City infrastructure, and pavement design specifications (asphalt and granular thicknesses).
  - Proposed On-Site SWM measures
  - DR Reviewers shall ensure that the following note is included on plans that incorporate eaves with the On-Site SWM solution: All eaves that are connected

to the On-Site SWM system shall be provided with leaf/debris guards. The owner shall maintain the eaves in good repair in perpetuity.

  - See Servicing and Grading Plan Requirements for more information.

- **ECA or EASR**
  - In some cases, mostly in Central, there would be a requirement to acquire an Environmental Compliance Approval (ECA) for SWM connections to a combined sewer. It is expected that in 2025, the Ministry (MECP) will introduce a streamlined Environmental Activity and Sector Registry (EASR) approval process. In either instance, for clarification, contact Charles Warnock, Program Manager, Ops Projects - CLI-ECA.

- **QuickSWM Analysis *or* Stormwater Management (SWM) Brief**
  - If a QuickSWM analysis summary is not provided, a SWM Brief should be provided including the following details:
    - Site Mapping & Drainage:
      - Provide a drawing that shows the subject site, its surroundings, existing drainage patterns, and the proposed drainage route to the receiving watercourse (including outlet legality).
    - Proposed SWM Design & Storage:
      - Present the SWM concept with recommended product use.
      - Include water quantity control calculations with pre- and post-development peak flow calculations, storage requirements, and conveyance capacity for minor and major events.
  - See Site Servicing Study Terms of Reference for more information.

- *Geotechnical Investigation*, *only if infiltration methods are proposed.*
  - Investigation Scope & Method:
    - Conduct limited borehole or test pit investigations in the proposed infiltration areas to obtain key soil samples and stratigraphic data.
  - Soil Characterization for Infiltration:
    - Determine soil type and texture (e.g., sand, silt, clay) that directly influence infiltration rates.
    - Evaluate the soil's permeability and infiltration capacity through basic laboratory tests (e.g., grain size distribution, water content, Atterberg limits).
  - Groundwater & Site Conditions:
    - Measure the static groundwater level to ensure a safe separation between the infiltration system and the water table.
    - Identify any low-permeability layers or soil constraints that could limit infiltration effectiveness.

- Reporting & Compliance:
  - Prepare a concise geotechnical report summarizing the soil's infiltration potential and any limitations for SWM design.
  - Ensure the report is signed, stamped, and dated by a licensed geotechnical engineer in accordance with City standards.
- See Geotechnical Investigation and Reporting Guidelines for more information.