Functional Servicing Report

A Functional Servicing Report (FSR) provides a review of functional serviceability for a proposed development and determines the overall impact of a land development proposal (i.e., subdivision), proposed conversion or changes of land uses and intensification, on the water and wastewater service capacities, and the storm drainage system. It also determines the required improvements to the municipal servicing infrastructure, stormwater management systems, water balance etc. as well as any mitigation measures to minimize negative impacts.

Required by Legislation

The Ontario Planning Act.

Who should prepare this report?

A Functional Servicing Report must be completed by a registered professional engineer qualified in municipal engineering. All drawings must be stamped, signed, and dated by a professional engineer, licensed in the Province of Ontario.

Why do we need this report?

A Functional Servicing Report is required to assist staff in determining if the existing water and wastewater services and stormwater management systems are adequate for the proposed development, or if services need to be upgraded.

How should this report be prepared?

A Functional Servicing Report should include sufficient details for the local municipal and Regional staff to determine the financial and infrastructure implications of servicing (water, wastewater, stormwater, site grading and utilities) the proposed development. The submission should include reports, plans, computer modeling results and/or design calculations relating to the designs, upgrades of municipal services and related reports.

A Functional Servicing Report should at a minimum contain:

Introduction

- Address of the subject property
- Development Application Number
- General site location of the subject property and neighbouring properties
- Project Name (if applicable)
- Applicant and owner's contact information
- Author name, title, qualifications, company name and appropriate stamp
- Brief description of the proposal
- Overview of the study area
- Purpose of the study
- Location and context map
- Reference to existing Master Environmental Servicing Plan (MESP) and master planning documents

How should this letter/report be prepared? (continued)

Proposal Description and Context

- A description of the proposal, development statistics (such as number of units, site area), type of development proposed, height, parking areas, access points, location of amenity areas, proposed phasing etc.
- A description of the existing on-site conditions as well as surrounding areas, roads, infrastructure, natural areas, buildings, parking areas
- Concept Plan and/or proposed servicing for the development including building location, parking, access, amenity areas, grading and natural features and any natural hazards

Minimum Investigation/Evaluation

Water Supply and Distribution:

- Existing and proposed services and pressure districts
- Hydrant flow pressure tests
- Demand calculations based on municipal design criteria to support estimated consumption and confirm current capacities of local and Regional water distribution systems (utilizing modeling where applicable)
- Water distribution concept plan, and phasing of development
- Demonstrate adequate system capacity for the proposed change in land use or development and other area intensification projects, and the need for expansion and upgrades (Note: instructions on how to demonstrate will be discussed with the municipality)
- Demonstrate conformity with municipal master plan, MESP and other relevant studies.

Wastewater:

- Existing and proposed services
- Wastewater flow generation calculations based on municipal design criteria to support estimated discharge, and confirm current capacities of local and Regional wastewater collection/trunk systems (utilizing modeling where applicable)
- Wastewater collection concept plan, and phasing of development
- Demonstrate adequate system capacity for the proposed change in land use or development, and other area intensification projects and the need for expansion and upgrades (Note: instructions on how to demonstrate will be discussed with the municipality)
- Demonstrate conformity with municipal masterplan, MESP and other relevant studies
- Assess compliance to municipal Consolidated Linear Infrastructure Environmental Compliance Approval (ECA) (for existing municipal or to be municipally owned infrastructure) for pre-authorization.

Stormwater Drainage:

- Identify and describe, pre-development and post-development conditions, grading plan, existing infrastructures, and their capacity etc.
- Identify the inlets (from upstream) and outlets (to downstream) for the minor and major systems, including overland flow routes

How should this letter/report be prepared? (continued)

Minimum Investigation/Evaluation (continued)

Stormwater Drainage (continued)**:**

- Identify all internal and external drainage areas under existing and future development conditions for minor and major flows
- Identify constraints and potential opportunities – quantitative, qualitative, erosion sensitivity and environmental concerns related to stormwater for both interim and ultimate development conditions
- Identify existing stormwater management requirements and/or criteria that apply specifically to the site (applicable watershed)
- Provide preliminary design calculation (including modelling) and drawings showing the size and concept location of Stormwater Management (SWM) facilities for stormwater quantity, quality, erosion, and water balance measures.

Phasing Plan (if required)**:**

- Describe required phasing of development into different phases
- Describe reasons for phasing if based on servicing availability financial constraints etc.)
- Show location of different phases and associated servicing infrastructure – existing and proposed water mains, wastewater, and stormwater management.

Impacts and Mitigation Measures

Water:

- Indicate if off-site land or works are required (servicing easement, new sewer within the other jurisdiction lands e.g., York Region, MTO, Hydro, etc.).

Wastewater:

- Indicate if off-site land or works are required (servicing easement, new sewer within the other jurisdiction lands e.g., York Region, MTO, Hydro, etc.)
- Identify the required existing downstream sanitary system upgrade
- Identify the need of any interim or permanent pumping station and the ownership of the proposed pumping station.

Stormwater Drainage:

- Indicate the design assumptions and the stormwater management schemes to manage the storm runoff including, quantity, quality and erosion control, water balance, Low Impact Development (LID) techniques etc.
- Identify how the water balance requirement is to be achieved using green infrastructure and/or Low Impact Development (LID) techniques
- Assess mitigation measures to minimize any negative impacts on the drainage system by applying appropriate on-site controls
- Demonstrate that the proposal has maximized source control measures to reduce runoff from the site and maximized conveyance control measures to infiltrate and/or treat runoff as appropriate consistent with water quantity and quality objectives
- Indicate if off-site land or works are required to implement the stormwater management proposal and comment to what extent (e.g., easements, dedication, land acquisition, etc.)

How should this letter/report be prepared? (continued)

Impacts and Mitigation Measures (continued)

Stormwater Drainage (continued)**:**

- Indicate the interim measures required for erosion, pond siltation and sedimentation, downstream works, and riparian flow considerations during the construction phase
- Indicate if other agencies have jurisdiction and if their approvals or permits are required; provide record of approvals (e.g., Ministry of Transportation Ontario (MTO), Ministry of the Environment Conservation and Parks (MECP), Department of Fisheries and Oceans (DFO), Conservation Authorities (CAs), etc.)
- Indicate if the proposed development requires temporary (during construction) and/or permanent dewatering. Describe the proposed discharge location(s) and impact mitigation measures if de-watering is required, recognizing that permanent dewatering discharges will not be permitted to the municipal sanitary system and temporary discharges only permitted where it is demonstrated that no reasonable alternatives are feasible..

Recommendations

- Summary of the identified Water Supply System, Wastewater Servicing and Stormwater Management strategy for the proposed development.

Drawings and Supporting Information

- Submit all plans, reference reports, computer modeling results and calculations to support the proposed water servicing, wastewater servicing and stormwater management scheme.

What else should we know?

The scope of the study should be discussed with the local municipal engineer assigned to project and/or other staff or agencies as part of the pre-consultation process.

A Functional Servicing Report should be based on established municipal engineering design principles, applicable guidelines (e.g., Ministry of the Environment Conservation and Parks Guidelines), regulations and by-laws and infrastructure information available from the local municipality and Region.

The level of detail required depends on the type of application and the size of the proposed development. For example, a report in support of an application for an Official Plan and/or Zoning By-law Amendment will be more conceptual than a report in support of an application for a Draft Plan of Subdivision, which will include more details, such as where lot, block or right-of-way dimensions are approved in principle.

An Environmental Impact Study (EIS) may also be required to address the impact of development on water resources features or functions on- and off-site.

When a development is located adjacent to a roadway, the Functional Servicing Report should also address what the impact of storm drainage from the development has on the road and/or associated drainage system.

Depending on the proposed works and the proximity to the valleys, significant slopes and watercourses, the recommendations within a Functional Servicing Report may warrant additional natural heritage, geomorphic, geotechnical/slope stability studies in support of the proposed works.

Additional Terms

To be identified by the local municipality where proposed development is located.

Study Submission Instructions

To be identified by the local municipality where proposed development is located.

What other resources are there?

Professional Engineers of Ontario – Why employ a professional engineer?

Ministry of the Environment Stormwater Management Planning and Design Manual

Stormwater Management Guidelines, City of Markham

Stormwater Management Criteria, TRCA

Low Impact Development (LID) Guidelines, City of Markham

LID Design Guide, CVC/TRCA

Lake Simcoe Stormwater Criteria

Lake Simcoe Protection Act

York Region Road Design Guidelines, York Region

York Region Mid- and High-Rise Development Process and Implementation Guide, York Region

Design Guidelines for Sewage Works, MECP

City of Toronto references including:
- Standards for Designing and Constructing City Infrastructure, City of Toronto
- MESP/Modelling data
- Design guidelines for drinking water systems, MECP

About these Terms of Reference

These Terms of Reference were developed as a joint effort with participation by representatives from all York Region municipalities and the Region. The Terms of Reference are in widespread use across the Region, with local requirements added as prescribed by each municipality at the pre-consultation stage.

The need and scope for this study will be decided by a municipality during initial pre-consultation process with input from partner agencies. This pre-consultation process may include:

- Determination if this study is applicable
- Confirmation of criteria within these Terms of Reference that are appropriate for your development project
- Identification of specific technical components that need to be addressed
- Identification of detailed standards to be met

Notes:
If the proposed development is revised, the study/report shall reflect the revisions by an updated report or letter from the author indicating the changes and whether or not the recommendations and conclusions are the same (Note: this is subject to the extent of the revisions).

A peer review may be required. The cost of the peer review will be borne by the applicant.

If the submitted study is incomplete, is authored by an unqualified individual or does not contain adequate analysis, the applications will be considered incomplete and returned to the applicant.