

City of Saskatoon
Design and Development Standards Manual

Section Ten
Consultant Guidelines for Inspection & Construction

Version 16



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1 General Requirements

1.1 Introduction

The purpose of this guideline is to provide direction for Private Development and to outline the City's general requirements of the Private Developer, the Developer's Consultant Engineers and Contractors for the construction and inspection of municipal services and infrastructure within the City of Saskatoon (City) and is to be used in conjunction with the City Specifications and Standards, including and other sections of the Design & Development Standards Manual. The City's Private Development Team is comprised of the Private Development Engineer, Supervising Inspector, and Inspectors and is responsible for the oversight and regulation of private development of municipal infrastructure.

It is not the intent of this guideline to outline the City's role and requirements. Private Developers are responsible for ensuring that design, construction and municipal servicing are performed in accordance with the current versions of approved engineering design drawings, City Specifications, Design & Development Standards Manual, servicing agreements, bylaws, permits and policies. **Developers' consulting engineers are expected to ensure compliance with the City's standard specifications. Where the specifications indicate that exceptions and deviations may be authorized "by the engineer" this should be understood to mean a City of Saskatoon employee (Private Development Engineer or Designate.)**

This guideline will be revised periodically to be current with the City design criteria and standards. In the event that clarification is required, the reader is to contact the City.

1.2 Approvals & Continuation

No construction work may proceed without written approval. Approval to construct will be granted, in part or in whole, or withheld on the following basis:

- Compliance with the requirements that are outlined in the City Standards and Specifications;
- The submission of the appropriate detailed design documents; and,
- The payment of the appropriate fees.

Written decision from the City to construct will be granted upon review of submission of all the above information or reasons will be given for withholding approval. Approval may be accompanied by terms and conditions at the discretion of the City.

Throughout the life cycle of all new development construction projects, it is the responsibility of the Developer, Developer's Consultant Engineer and Contractor to adhere to the requirements of City Standards and Specifications.

Phasing of construction may include, but is not limited to area grading, water and sewer installation, sidewalk works, and road works. Approval to the next phase of construction will only be allowed if the current stage is substantially complete and accompanied with a written submission by the Consulting Engineer. Only with written approval from the City, will the next construction phase be allowed to proceed.

Proceeding prior to obtaining approval for the current phase of work may result in delays and potential removal of unapproved infrastructure at the Developer's cost.

1.3 Health & Safety

Throughout the life of all construction projects it is the responsibility of all personnel to adhere to the requirements outlined in The Saskatchewan Employment Act and The Occupational Health and Safety Regulations.

Copies of the safety policy and emergency response plan shall be posted at the work site location and have available safe work procedures for tasks of that construction project.

2 City and Consulting Engineer's Role and Responsibilities

2.1 City Responsibilities

The City does not provide full time construction inspection of the privately constructed municipal services; however, the City will perform periodic inspections on an as required basis to generally monitor the quality and progress of the construction activities. The City will monitor the servicing progress and assess the conditions of the Servicing Agreement. As indicated in the agreement, it is the responsibility of the Developer to administer the service and to provide full time construction inspection and supervision through the services of a qualified consulting engineer with permission to consult in the Province of Saskatchewan.

The City will liaise with the Developer's Consulting Engineer on matters pertaining to the construction process and progress.

2.2 Consulting Engineer's Responsibilities

2.2.1 Consulting Engineer Inspections

The Consulting Engineer is to carry out full-time inspection and supervision of all infrastructure construction until issuance of Final Acceptance Certificate.

If sub-consultants (e.g., geotechnical, environmental) are hired, all technical documents, inspections, testing results are to be made available through the Consulting Engineer.

As part of the Servicing Agreement, project documentation, inspection, and testing shall include as part of the Consultant Engineer's responsibilities, but not be limited to the following:

- **All geotechnical testing shall be managed, controlled and contracted thru the Consulting Engineer or Sub Consultants**
- Coordinate works within the site and ensure all required documentation (design and geotechnical reports, drawings, certifications, permits, approvals, etc.) are received by the City and by relevant regulators (e.g., Water Security Agency).
 - No construction shall proceed without appropriate regulatory approvals. A copy of the approvals must be submitted to the City for record.
- Review all grade sheets relating to underground, above ground servicing, and all roadworks to ensure information complies with City approved design drawings. Consultant is to notify the contractor and City of any discrepancies.
- Prepare formal sign-off of completion of approved area grading, and provide copy to the City.
- Daily inspection reports of construction work shall include, but not be limited to the following:
 - Underground and above ground servicing, sub-grade and granular material.

- All roadworks including concrete curbs, sidewalks, asphalt, boulevard grading and seeding/sodding.
- Review all geotechnical testing results of soil, **aggregates**, concrete, and asphalt to ensure the construction meets City Standards and Specifications.
- Review, monitor and provide plan on dealing with environmental issues including, but not limited to: erosion, dust and sediment control, tree preservation, well monitoring, and water quality requirements as set out in the contract or as required by the relevant municipal, provincial and federal agencies (e.g., Ministry of Environment, Water Security Agency, City of Saskatoon Environmental Guidelines, etc.).
- Notify the Contractor of any deficiencies in the construction work, instructing the Contractor to take the appropriate corrective measures and confirm action taken; these occurrences are to be logged.
- Provide monthly progress maps to the City on complete infrastructure.
- Ensure trench excavation abides by the Occupational Health & Safety Regulations. Typical contract language can be provided by the City to ensure consistency amongst shared contractors working on City projects and privately developed projects.
- Identify the acceptability of all materials, course of action for rejected material and recorded within daily inspection report.
- Submit field design variance requests and proposed changes to the City for review and acceptance/rejection prior to conducting work. Allow for minimum five (5) business days for written response depending on the complexity of the proposed change.
- Coordinate and attend all project construction and progress meetings including preparation and distribution of meeting agendas and minutes to those in attendance.
- Coordinate all water main testing and sampling with the Contractor and the City's Inspector.
 - Prepare and submit the following to the City:

- Water main pressure testing plan (site plan, limits of testing, pressure test calculations as per City Standards and Specifications).
- Chlorination plan (site plan, limits of testing, testing points, flushing points, confirmation of conformance to City Standards and Specifications).
- Maintain plans and documentation on the work site while testing is being executed to allow City to review and assess. The City will take samples for all field and laboratory tests.
- Coordinate with the City and undertake above ground and underground testing to ensure all infrastructure meets City Standards and Specifications prior to next phase of construction. The following testing, inspections to be coordinated with the City include, but are not limited to the following:
 - Submit approval reviews of all asphalt and concrete mix designs prior to installation.
 - Proof rolling and density testing of all water and sewer trench backfill, road sub-grade, subbase and base granular material prior to the placement of bottom lift asphalt.
 - Water main disinfection, pressure testing and laboratory sampling including the necessary coordination with the City's Water and Waste Operations Department for the operation of valves.
 - Inspections for purposes of construction completion and final acceptance certificates of municipal services.
- During the time of active development and build-out of private developed areas, on-site works shall not affect surrounding lands and City owned right-of-way (e.g., traffic signage, lighting, pot holes, garbage, debris, mud tracking, dust, erosion, redirected runoff), and if they do, the Consulting Engineer/Developer to coordinate for restoration.
- Submit a full as-built package (including product and material information) to the City within six months of the construction completion; failure to submit the required documentation within the required time may affect the Developer's ability to acquire approvals for future phases of development.

- Ensure that the type, frequency, location, and results of all tests undertaken are sufficient to ensure compliance to the City Standards and Specifications.
- Communicate any insufficient or negative testing results to the City and Contractor in a timely manner to allow for rectification without delaying progress.
- Provide plan for dust control, road sweeping and snow removal, weed control, and landscaped maintenance. This would include but not be limited to the following:
 - Method(s) to be used for each source,
 - A schedule, rate of application, and frequency
 - Provisions for monitoring and record-keeping,
 - The name and phone number of the person(s) responsible for the plan implementation and the direct contact person in the event of any complaint.
- Ensure construction abides by City Environmental Protection Specification Section 01035.

2.2.2 Related Inspections

Depending upon the project, the following agencies may require inspection of the works as it relates to their services and jurisdiction:

- Canadian National Railway
- Canadian Pacific Railway
- Department of Fisheries and Oceans
- Ministry of Environment
- Ministry of Labour.

2.3 Reporting of Infractions

- Any infractions or deviation from Consulting Engineer responsibilities related to the above items, will be reported by the City to the Developer/Consulting Engineer in writing for the necessary corrective actions. Should the Developer/Consulting Engineer fail to initiate the required corrective actions in a reasonable time as agreed upon by the Developer, Consulting Engineer and the City, the City may make arrangements to have the corrective actions

undertaken by City contract services. Should this action be taken, all related costs will be charged back to the Developer.

3 Communication and Traffic Management Plans

Where servicing or construction occurs within the City Right-of-Way, easement or open space, the Consulting Engineer shall provide a Communication Plan to the City. Refer to [Appendix A: Private Development Communication Plan](#) Form.

4 Dispute Resolution Process and Work Stoppage

4.1 Dispute Resolution Process

The City's Private Development Team consists of an Inspector, Supervising Inspector, and Private Development Engineer. In the case of a dispute, the process of resolution and escalation is to be followed in the order below.

1. The City's Inspector or Supervising Inspector, and the Consulting Engineer will address issues directly, through constructive communications followed-up by writing.
2. If an issue is not resolved, or if the issue continues, the City's Inspector or Supervisor Inspector will inform the related City's Private Development Team members. The City's Private Development Engineer or designate shall communicate with the Consulting Engineer designated Project Engineer regarding the issue and the action plan for resolution.
3. If the issue continues, or is not resolved, the City's Private Development Engineer will contact both the Consulting Engineer and Developer.
4. If the issue continues, or is not resolved, the City's Engineering Manager will contact both the Consulting Engineer and Developer.

Every resolution is to be clearly communicated to all affected parties including the Developer as soon as possible. These disputes shall be documented accordingly via email or written letter.

* If any individual outside of the City's Private Development Team is contacted before Steps 1 through 3 have been completed, they require communication to the City's Private Development Team.

4.2 Work Stoppage

1. Under the following circumstances, the City will require an immediate work stoppage.
 - Major Non-Conformance
 - Refusal to correct non-conforming practices or work

Note that Minor Safety Violations and Minor Non-Conformances require corrective action.

2. Under the following circumstances, the City will prevent the Developer/Consulting Engineer from progressing to next phase of construction (such as from area grading to water and sewer installation):
 - Consulting Engineer has not demonstrated that necessary steps were completed during the current phase and documentation does not exist
 - Critical non-conformances have not been addressed.