2023 Landscape Inspector Guidelines

Development Inspections

City of Edmonton

Edmonton

TABLE OF CONTENTS

(back to top)

(back to top)

(back to top)

APPENDICES

(back to top)

Terms of Use:

The City of Edmonton recognizes the 2023 Landscape Inspectors Guidelines as accurate and comprehensive, and approves its use within the City.

We do not intend these guidelines to replace any of the City Design and Construction Standards, nor any bylaws and legislations - the latest editions of these documents will continue to govern.

If any user has concerns about the accuracy or intent of these guidelines, they can seek clarification from the Landscape Development Inspector Supervisor.

Guidelines Revision Notice:

This section typically lists the date of each revision, the person responsible for the changes, and a summary of the changes made. This section provides a record of the changes made to the document over time to help ensure that all stakeholders are aware of the most up-to-date information.

Please note that this year's edition of the document underwent a major revision and because of the extent of the changes, it is not feasible to present an itemized list of each individual revision made.

(back to top)

PART 1: GENERAL

1. INTRODUCTION

The Development Inspections Landscape Inspector Guidelines (herein referred to as Guidelines) provides comprehensive guidance for inspecting private development projects in the City of Edmonton. **Its primary aim is to improve the consistency, transparency, and accountability between the City and the private development community, including Developers, Consultants, and Contractors.**

This document is useful for inspectors at all levels of experience, outlining their duties and expectations, as well as providing examples of standardized forms, inspection checklists, and reference tables. Adherence to the procedures outlined in this document will ensure the standardized administration of Servicing Agreements, leading to a better experience for all parties involved. It is important to note that the procedures for obtaining a Construction Completion Certificate (CCC) and Final Acceptance Certificate (FAC) are based on the latest version of the Servicing Agreement and may differ from previous versions.

2. DEFINITIONS

The following terms that are used in the Guidelines are defined as follows:

AALA: Alberta Association of Landscape Architects.

Agreement or Servicing Agreement: Refers to a contractual agreement between one or more Developers and the City of Edmonton that specifies the contractual obligations and the terms and conditions for the construction and warranty of Municipal Improvements necessary to service lands approved for development and includes technical set of landscape drawings that communicate the design and construction, as intended by a Landscape Architect. This will include the supplementation of details, elevations, grading, and any other detailed representation of the asset.

APEGA: Association of Professional Engineers and Geoscientists of Alberta.

As-Built Drawings: As-Built drawings show how the site was built versus the way it was originally designed. At the completion of the construction and installation of an improvement, the as-built drawings describe what was actually built. This must be a scaled drawing that documents the changes from the approved drawings submitted by the Landscape Architect. This submission must be stamped, signed, and dated with the most

(back to top)

recent submission referencing “Issued for As Built”. This must reflect the as-is conditions at the time of signing.

Asset: Refers to any future public land, infrastructure or facilities that are designated for recreational or leisure use. This can include parks, playgrounds, sports fields, community gardens, and other similar areas that are intended for the enjoyment and use of the general public. Open Space Assets are typically owned and maintained by the City of Edmonton and are designed to provide safe and accessible spaces for residents to enjoy a range of outdoor activities.

Audit Inspection: Unannounced and unscheduled site visits conducted by the Landscape Development Inspector to ensure that the site is being built in accordance with City Standards. These inspections can encompass, among others, physical examinations or site visits, assessments from vehicle drive-bys, conversations with the Contractor/Consultant, taking measurements and/or conducting sampling and testing, as required.

Balled & Burlap: Trees established in the ground that have been harvested by digging with a soil ball so that the soil within the ball remains undisturbed. Trees harvested by this method will have been field grown for at least 3 years prior to harvesting.

Business Day: Refers to a regular workday and typically excludes weekends and statutory holidays.

City: Refers to The City of Edmonton (COE) as a corporate body or a City-owned corporation.

Construction Completion Certificate (CCC): Refers to a document signed and sealed by a Professional Engineer or PM (as applicable); a Professional Technologist within their professionally permitted scope of work; or, a Landscape Architect, certifying that a Municipal Improvement has been constructed in accordance with the applicable approved Engineering Drawings and the terms of the corresponding Servicing Agreement, and is operational, functional, and safe.

Consultant: Refers to the Professional Engineer or Professional Technologist responsible for the preparation of designs, reports, studies, Engineering Drawings and associated documents and for the execution and implementation of such designs, normally on behalf of a Developer. The Consultant must hold a valid Permit to Practice, as defined by the Association of Professional Engineers and Geoscientists of Alberta (APEGA) and be registered as a Professional Engineer in good standing with APEGA, or be registered as a Professional Technologist within the Province of Alberta and be in good standing with the

(back to top)

Association of Science and Engineering Technology (ASET) Professionals of Alberta, and be operating within the defined scope of practice for which the Professional Technologist is professionally permitted. For any landscape designs, reports, studies, drawings, or other associated documents, the Consultant must be a member in good standing of the Alberta Association of Landscape Architects (AALA).

Contractor: Refers to a person, partnership, company, or group of persons who work for the Developer and undertake all or part of the work.

Days: Refers to the number of business days, unless noted otherwise.

Deficiency: Refers to any fault or defect that impedes functionality, poses a safety hazard, does not meet City specifications and standards, or deviates from the approved drawing, as outlined in the Guidelines.

Deficiency Inspection Report (Deficiency Report / Deficiency Plan): Refers to a site plan that clearly labels the locations of all identified deficiencies from a CCC or FAC Inspection. This Deficiency Plan will be used by the Consultant to direct the Contractor on how to correct the deficiencies in order to obtain an approved CCC or FAC.

Department Review: All aspects of the certification approval process which includes the Landscape Development Inspector reviewing uploaded documents on ePlan once an inspection has been approved on eServices.

Design and Construction Standards (City Standards): Refers to all specifications contained in the City of Edmonton Design and Construction Standards, Volume 5: Landscaping. All projects that are initiated into circulation as of April 1, 2021 shall follow the 2021 edition or later. Change with circulation as of April 1, 2022, shall follow the 2022 edition or later.

Developer: Refers to the proponent developing land, or the Owner as defined in the Servicing Agreement. Requirements of the Developer, as stated in the Design and Construction Standards, may, where appropriate, be deferred to a Consultant, Contractor or other agent acting on the Developer's behalf.

Document Package: Refers to the supporting documentation required to support the CCC/FAC certification. This is submitted to ePlan for review and must be approved by COE prior to certification approval.

Engineer: Refers to the Engineer allowed by the City or utility agency to enforce the Design and Construction Standards, and review and approve design submissions, reports,

(back to top)

proposals, and Engineering Drawings. In addition, when applicable, the Engineer refers to the authority in the Servicing Agreement to enforce conditions of the Servicing Agreement in relation to servicing proposals and designs of Municipal Improvements under the terms of a Servicing Agreement between the City and a Developer(s). The Engineer must hold a valid permit to practice within the Province of Alberta and be registered as a Professional Engineer in good standing with APEGA. The Engineer also includes individuals authorized by the Project Engineer to perform any engineering functions on their behalf.

Engineering Drawings: Refers to the plans that set out the scope and detail of the Municipal Improvements to be provided by the Developer under the terms of the Servicing Agreement and shall refer to or include, where applicable, landscape drawings. The Engineering Drawings must be assembled under the cover of a Consultant eligible to practice engineering within the Province of Alberta and registered with APEGA.

Environmental Reserve (ER): Refers to land that is set aside specifically for the protection and preservation of the natural environment. These areas may include parks, wetlands, woodlands, and other ecosystems that are important for the maintenance of biological diversity and ecological health.

ePlan: Refers to an online tool that Consultants use for the electronic application of inspection requests and review of Engineering Drawings.

eServices: Refers to an online tool that Developers and Consultants use to submit inspection requests for Municipal Improvements and obtain development certificates.

EPCOR: Refers to the utility company that provides services including electricity, natural gas, and water.

Final Acceptance Certificate (FAC): Refers to a document signed and sealed by either a Professional Engineer or PM (as applicable); a Professional Technologist within their professionally permitted scope of work; or, a Landscape Architect, certifying that a Municipal Improvement/asset has been constructed and maintained in accordance with the applicable approved Engineering Drawings and meets the terms of the corresponding Servicing Agreement. It also signifies that the Developer's obligation to maintain the Municipal Improvement will be transferred to the City. It confirms that the improvement has been constructed and maintained in accordance with the City of Edmonton Design and Construction Standards, meets the terms of the Servicing Agreement, and is constructed as per the approved engineering drawings It confirms that the asset is operational, functional

(back to top)

and safe and that it does not contain any construction deficiencies, with the exception of normal wear and tear.

FOIP: Freedom of Information and Protection of Privacy.

Hardstop Inspection (Milestone Inspection): Required inspections conducted at certain points of the construction process.

Inspection: Refers to a scheduled site visit to conduct a visual and physical review of various aspects of the landscaping assets and identify any deficiencies that require corrective action. It must be requested through eServices and conducted by or with the City's Landscape Development Inspector.

Landscape Development Inspector: Refers to an individual specifically delegated by the City as having the authority to conduct an Audit Inspection and approve CCC and FAC Inspections, including Tree Buyouts.

Landscape Development Supervisor: Refers to the individual who oversees the Landscape Inspections Team within the Development Inspections Unit of the Development Services Branch within the Urban Planning and Economy (UPE) Department at the City of Edmonton.

Low Impact Development (LID): Refers to the land development and stormwater management approach that works with nature to manage stormwater as close to the source as possible. LID focuses on maintaining and restoring the natural hydrological processes of a site.

Maintenance Logs: Refer to a listing of the maintenance tasks that have been performed on a specific site. As each site requires different levels of maintenance and service, it becomes important to generate, track, and review the list of completed action items on an ongoing basis. Maintenance Logs can be used to determine what level of care is still required, based on site conditions, to ensure a functional and viable asset. Maintenance Logs should correspond closely to the predetermined Maintenance Schedule but often, due to changing site conditions, variances will be found between the two documents.

Maintenance Schedule: Refers to a list, or program, created by the Contractor with the aim of ensuring that proper care is given to a constructed site (based on City Standards). The schedule helps determine the number of times a Contractor will visit the site and the intervals between these visits. The Maintenance Schedule is also used to predetermine the

(back to top)

type of appropriate maintenance for a given site and should be updated regularly, as part of a proactive approach, to reflect the current site conditions.

Milestone: Key hold points throughout the construction process. An audit or an inspection may be required prior to progressing to other related activities.

Municipal Improvement (or "Infrastructure"): Refers to both underground and surface structures including, but not necessarily limited to, water mains, sewer systems, storm drainage systems, roadways, walkways, park areas, shallow utilities, signage, retaining walls, fencing, and other improvements as required by the City, all of which shall become the property of the City to operate and maintain.

Municipal Reserve (MR): Refers to an area of land that is set aside for specific public purposes, as designated by the municipality. These lands may serve as protection for natural areas, wetlands, or wildlife habitats, or may be used for community facilities, such as parks, schools, or utility infrastructure.

Naturalization: Refers to a type of habitat restoration; the deliberate reintroduction of species that are native to a given area or are well adapted to the climate circumstance; activities that are intended to improve and enhance the natural environment and reduce the required operational maintenance. The biodiversity and ecosystem function of a naturalized ecosystem is lower compared to a reference habitat but higher compared to a reclaimed ecosystem.

Public Utility Lot (PUL): Refers to a titled lot that is intended to provide for infrastructure and utility facilities, maintenance facilities and public transportation use. They can be operated (individually or jointly) by the Federal, Provincial, and Municipal levels of government.

Ready Site: Refers to a site that is deemed to be constructed and completed according to the approved Engineering Drawings. The site meets the City's Design and Construction Standards and poses no safety risk to those using the space. The site should be free of construction equipment, maintenance activity, vehicles, material stockpiles, or debris that may prevent access or impede the inspection.

Redline Drawings: Refer to changes to the Engineering Drawings that occur after the original approval of the Engineering Drawings. These changes must follow the City's standard process for Redline Drawings, as described in the City's Design and Construction Standards, Volume 1: General.

(back to top)

Right of Way (R.O.W): Refers to an agreement that grants an individual, company or municipality the right to use private property in some way.

Stormwater Management Facility (SWMF): Refers to stormwater ponds, including dry ponds, wet ponds, wetlands, and any combinations thereof (hybrid ponds). It is an integral part of a major storm drainage system that receives stormwater runoff from conveyance systems (ditches, drainage swales, roads and gutters, and storm sewers) and discharges to receiving waters such as wetlands, lakes, ponds, streams, and/or to downstream conveyance systems.

Tangible Capital Asset (TCA) Form: Refers to a record of the cost of an asset and may include the gross amount to acquire, construct, develop or improve a tangible capital asset at the date of contribution. This includes installing the asset at the location and in the condition necessary for its intended use.

Tree Buyout: Refers to agreements made and funds received from development or capital projects for the buyout on Servicing Agreement or capital projects, upon agreement with the City Manager, to transfer site deficiencies to the City to achieve a Final Acceptance Certificate.

Tree Protection Policy: Refers to a set of regulations and guidelines designed to protect the urban forest and maintain the health and vitality of trees in the community. The policy outlines measures for protecting trees during development, construction, and other activities, as well as guidelines for planting and caring for trees on private and public lands.

Utility Encroachment: Refers to Refers to infrastructure such as power, gas, telecommunications, water lines and sewers that are installed within private lands

Warranty Period (Maintenance Period): Refers to the period of time that the Developer shall maintain the asset in accordance with the Servicing Agreement.

3. GENERAL ROLES AND RESPONSIBILITIES

Once a project is ready to start, certain key stakeholders should be involved. The responsibilities of each stakeholder are defined in the following subsections. Each party should be familiar with the Guidelines and should refer to them for submission of inspection applications and specific documentation required for CCC and FAC.

The roles and responsibilities of the City may be fulfilled by representatives from an applicable City department, EPCOR Water Services Inc. – Water Canada, EPCOR Water

(back to top)

Services Inc. – Drainage Services, or EPCOR Distribution and Transmission Inc., as appropriate in each situation.

In addition, the roles and responsibilities of the Owners/Developers may be fulfilled by their employees, Consultants, Contractors or agents, as appropriate.

3.1. CITY OF EDMONTON LANDSCAPE DEVELOPMENT INSPECTOR

The City of Edmonton Landscape Development Inspector's main task is to ensure that work is carried out and that Municipal Improvements are constructed in accordance with the City Design and Construction Standards and the approved Engineering Drawings. This objective is satisfied by conducting site visits to check construction progress, and offering guidance, as required. The Landscape Inspector's main responsibility is to observe, verify, record, and report any problems, issues, or non-compliance observed. They must report these to the Consultant or their representatives. The Landscape Development Inspector has no direct authority over private development construction, which is governed by the Servicing Agreement. They cannot direct or manage Contractors or their work beyond the Guidelines, the City's Design and Construction Standards, and the Servicing Agreement. Therefore, the Landscape Development Inspector cannot be held accountable for any non-compliance or necessary corrections. The best results are achieved through informed, cooperative, and collaborative efforts.

During the inspection process, the Landscape Development Inspector will track each site via an internal Google Form. This tool is used to record project activity, milestones, informal and CCC/FAC Inspections, and any related issues on an ongoing basis. Entries should be made at the Landscape Development Inspector's earliest convenience and with as much pertinent detail as practical. At the end of the year, the Landscape Development Supervisor can share the statistical summary with the industry at the City's discretion and with Freedom of Information Protection (FOIP) protocols followed.

3.2. CONSULTANT

The Consultant refers to the Professional Engineer or Professional Technologist responsible for the preparation of designs, reports, studies, landscape drawings, and associated related documents. They oversee and manage the construction and implementation of the approved Engineering Drawings on behalf of the Developer, including on-site project

(back to top)

management and supervision. The Consultant must have a valid Permit to Practice from APEGA and be registered as a Landscape Architect in good standing with the AALA.

3.3. DEVELOPER

The role of ensuring feasible implementation methods throughout the development process falls to the Consultant. They assign responsibilities to ensure that all Municipal Improvements are built according to the Servicing Agreement and sound engineering practices.

Clause 1.5.3 of the Design & Construction Standards Volume 1 (General Provisions for Developers) states that the Developer is responsible for ensuring that the Consultant provides all necessary equipment, tools, and labor for inspection, quality control, and administrative duties during construction. The City's role in inspecting the project is limited to monitoring and does not absolve the Developer of their responsibility for all aspects of the work. The Developer remains fully responsible for the quality control, coordination, and safety of the construction process.

3.4. CONTRACTOR

The companies engaged and directed by the Developer and/or Consultant to construct the improvements as per the approved Engineering Drawings package and align with the City's Design & Construction Standards. The Contractor may act as a representative for the Developer if declared accordingly.

4. CODE OF CONDUCT AND RESPECTFUL WORKPLACE

As a City Employee, the Landscape Development Inspector must comply with the City of Edmonton Code of Conduct Handbook and Guide (refer to Appendix A). Landscape Development Inspectors must read, understand, and comply with these regulations.

On-site, the Landscape Development Inspector is the liaison between the City and the Developer, and between the City and the general public. The Landscape Development Inspector must perform their duties in a courteous and respectful manner. A Landscape Development Inspector is a highly visible representative of the City and must remain above reproach in both conduct and appearance. They must be honest, reliable, and impartial.

(back to top)

The Landscape Development Inspector should maintain a positive and helpful attitude toward the project - this benefits all aspects of the work. When dealing with the Developer and/or Consultant, the Landscape Development Inspector should stay impartial and avoid conflicts of interest.

The Landscape Development Inspector should address any requests, questions or recommendations from the Developer and/or Consultant. If there is any uncertainty in what they are proposing, the Landscape Development Inspector should contact the Landscape Development Supervisor for direction.

The City of Edmonton is committed to creating and maintaining a vibrant, healthy, safe and respectful workplace for all employees. A respectful workplace is one that is free of harassment and discrimination, where all employees are treated fairly, diversity is acknowledged and valued and there is a culture of inclusion. Every employee has a shared responsibility to create and maintain a respectful workplace, where you can do your best work.

5. SAFETY

Safety regulations can reduce risk, but never eliminate it. A construction site is a dangerous place – think and act accordingly. Traffic and pedestrian safety is the responsibility of the Developer. The Landscape Development Inspector should ensure safe practices are being followed. All unsafe conditions and actions should be reported to the Contractor and/or Consultant. Compliance with the Occupational Health and Safety (OH&S) Act is mandatory. When on-site, the Landscape Development Inspector must follow the Prime Contractor's site safety protocol at all times.

5.1. PERSONAL SAFETY

Personal safety is the individual responsibility of everyone on site. The following items should be considered at all times:

- Remain alert
- Ensure that you are visible
- Wear all applicable personal protective equipment (PPE) (safety helmet & footwear, high-visibility vest, etc.)

(back to top)

- Report all near misses as outlined in OH&S standards
- Landscape Development Inspectors Should be informed of machinery on site or areas with safety concerns prior to the start of the inspection.
- Ensure the area to be inspected is accessible, free of obstructions and not behind construction fencing.
- The Landscape Development Inspector has the right to postpone an inspection if the weather conditions are not suitable (ie. thunder or too cold/icy).

5.2. FIELD LEVEL HAZARD ASSESSMENT

- All possible hazards should be assessed and documented each day on the Landscape Development Inspector's Inspection Tracker (refer to Appendix B)
- Safety audits will be conducted throughout the City by Development Landscape Supervisor at a frequency of at least 12 random inspections per year.

6. SCOPE OF WORK

See Section 3.0 “Roles and Responsibilities” and Section 3.1 “Code of Conduct/Respectful Workplace” for details of general inspection expectations.

The Servicing Agreement and the approved Engineering Drawings agreed upon by the City and the Developer establish the minimum acceptable standards of work for each Municipal Improvement. The Landscape Development Inspector is responsible for thoroughly understanding the Standards, Servicing Agreement, and approved Engineering Drawings to ensure that all stakeholders comply with these requirements throughout the project. The Landscape Development Inspector and the City of Edmonton may, at their discretion, decide to surpass the minimum specifications in certain situations.

Unless the design specifications indicate a particular technique, the Contractor may choose any reasonable method to produce the desired end result. This method must be first approved by the City. If the Landscape Development Inspector believes that a particular method will result in an unacceptable product, they must advise the Consultant.

According to the Design and Construction Standards, if the Developer wishes to apply methods which differ from a standard or specification in this document, or if these standards or specifications do not cover a subject of concern to a specific design, or if the

(back to top)

Developer proposes to use materials not approved in this document, then the responsibility shall be on the Developer to justify the proposal or resolve the concern to the satisfaction of the City. The concern shall be the subject of a report that the Developer shall have prepared by a Landscape Architect or Professional Engineer and signed, sealed and submitted to the City for review.

The Landscape Development Inspector must be aware of what is in the Project's Servicing Agreement, the approved Engineering Drawings and the type of Municipal Improvement, and must notify the Developer or Developer representatives when the expectations are not being met. Note that the Landscape Development Inspector should work with the Developer, Consultants, and Contractors rather than against them. By consistently enforcing the City of Edmonton Design and Construction Standards fairly, the Developer will understand what is expected of them and achieve consistent outcomes.

The Landscape Development Inspector should not direct or perform any of the work. This impairs the Landscape Development Inspector's ability to inspect objectively.

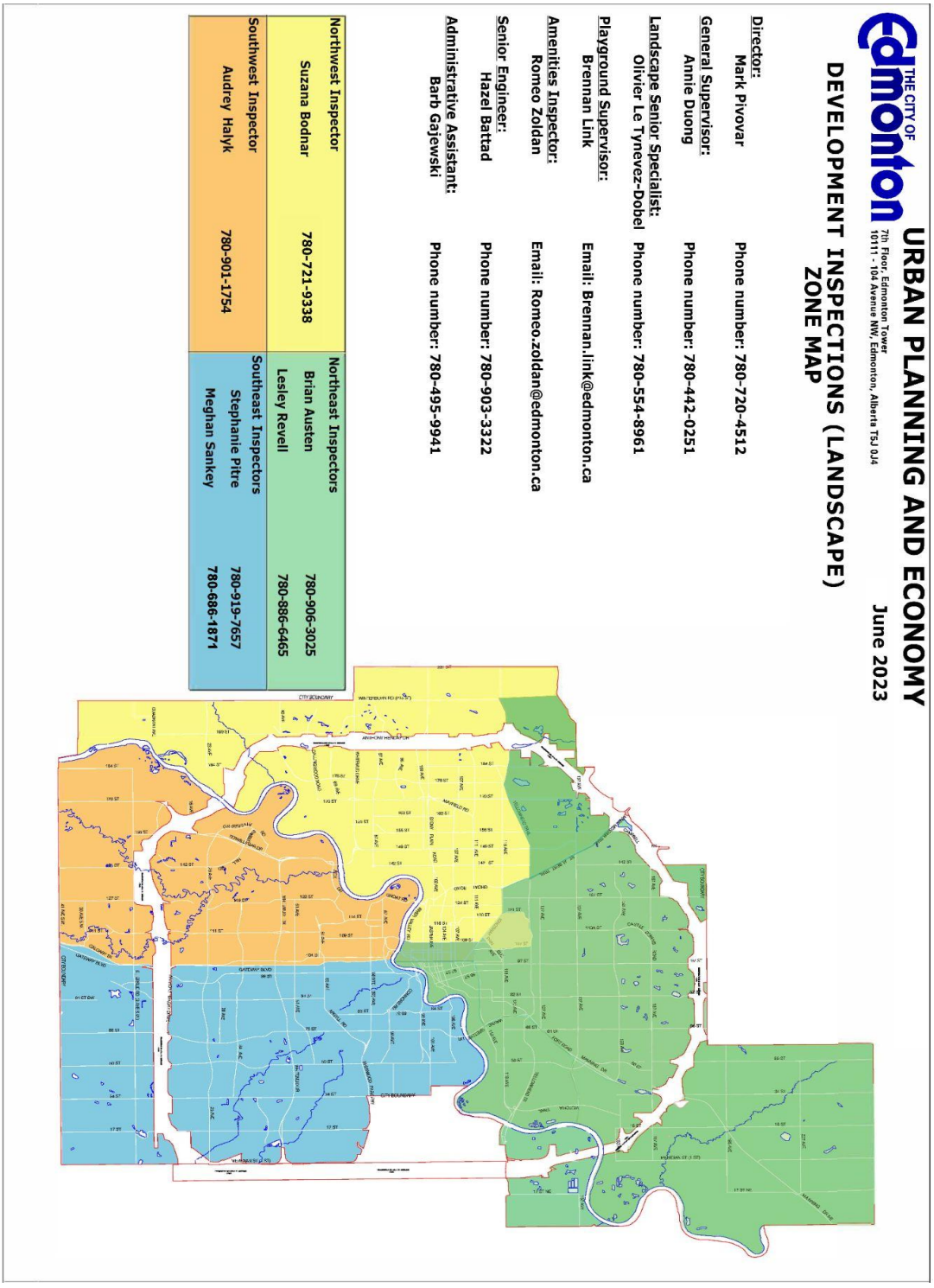
7. ANNUAL COLOUR TREE STAKES

2020	
2021	
2022	
➡**2023**	
2024	

(back to top)

8. QUADRANT INSPECTORS MAP AND CITY WEBPAGE

Development Landscape Inspector City Webpage and Resources



(back to top)

PART 2: MUNICIPAL IMPROVEMENT CONSTRUCTION

Please refer to Article 5 of the Servicing Agreement - Construction, Operation and Warranty of Municipal Improvements.

9. ROLES AND RESPONSIBILITIES

9.1. Landscape Development Inspector

Refer to the 2022 Servicing Agreement, Section 5.5.

- Completing inspections of the work is being performed in accordance with the approved Engineering Drawings, Specifications, applicable laws and regulations, and the City of Edmonton Design and Construction Standards.
- Conducting visual and physical inspections.
- Monitoring and enforcing erosion and sedimentation control measures.
- Having representatives from other City Departments or Units assist with the Audit Inspections, as required.
- Keep detailed records of all inspections, tests, and observations, and maintain an accurate and up-to-date project file.
- Communicating any noted deficiencies to the appropriate party for correction.
- Ensuring that assets are in a state of the intended quality and function.
- Recommending alternatives if Audit Inspections reveal construction practices that are not up to the current standards.
- Recommending ongoing communication between the Consultant and the Landscape Development Inspector during this phase.
- Ensuring that any noted major deficiencies can be addressed before the formal inspection.

(back to top)

9.2. Developer/Consultant

Refers to 2022 Servicing Agreement, Section 5.4 (Ongoing Obligation During Construction).

- Being aware of the progress of the site construction and directing the work as needed.
- Contact the Landscape Development Inspector for all Major Milestone Audit Inspections that are required via the 2023 Informal Inspection Request Form, within a minimum of 2 business days.
- Notifying the Landscape Development Inspector via the 2023 Informal Inspection Request Form is crucial. Failure to do so may result in the asset being requested to be removed and replaced in the inspection report.
- Recommending ongoing communication between the Consultant and the Landscape Development Inspector during this phase to ensure the majority of major deficiencies can be addressed before the inspection.
- Referring to inspection requirements as per Section 18.0, Section 20.0 and Section 23.0 of this document for more details.
- Submitting Redline Drawings to the City for approval for any deviations from the approved Engineering Drawings, as deemed necessary by the City and in accordance with Volume 1 of the City's Design and Construction Standards prior to construction of affected infrastructure.
- Collect and record as-built information for Municipal Improvements.

9.3. Contractor

- Building the Municipal Improvement according to the approved Engineering Drawings and the City'sDesign and Construction Standards.
- Taking direction from the Consultant, as necessary, and/or if changes are required.
- Ensuring ongoing communication between the Contractor and the Consultant during this phase to ensure the site is constructed appropriately.

(back to top)

- Addressing major and minor deficiencies before inspections, where possible.

10. PRE-CONSTRUCTION

Prior to the start of any Municipal Improvements, the Developer or their representatives shall arrange for an on-site pre-construction meeting to take place with all relevant City Departments and EPCOR.

At least three business days prior to the Pre-Construction Meeting, the Developer or their representatives shall provide written notice to all relevant City Departments and EPCOR of their intention to start construction and provide copies of approved Engineering Drawings (digital and hard copies) to, and to the satisfaction of, all relevant City Departments.

11. SOIL TESTING

As identified in Volume 5: Landscaping of the City's Design and Construction Standards, **soil testing will be required for all drawings entered into circulation after April 1, 2021**. Please refer to Volume 5 for detailed information regarding soil sampling and submissions. Please note that pre-circulation for your drawing package is not part of the drawing circulation task.

11.1. ROLES AND RESPONSIBILITIES

11.1.1. Landscape Development Inspector

Refer to the City's Design and Construction Standards, Volume 5, Section 02910, 2.4.

- Reviewing proposed sample locations within 5 days upon receiving the sampling location plan from the Consultant
- Reviewing the lab analysis report supplied with the CCC application and verifying that it meets the topsoil standards for specific end-use.

11.1.2. Developer / Consultant

Refer to the City's Design and Construction Standards, Volume 5, Section 02910, 2.4.

(back to top)

- Prior to sampling, the Consultant or Contractor shall submit the proposed sampling locations map with the site address to the Landscape Development Inspector via the 2023 - Informal Inspection Request form for location approval (Appendix M).
- Follow the procedure outlined in the City's Landscape Design and Construction Standards, Section 02910, 2.4.
- Ensure topsoil meets the parameters outlined in Table 2 of the City's Construction and Design Standards, Topsoil Types and Associated Topsoil Properties Recommended for End Uses.
- Submit test results for the application of CCC.

11.1.3. Contractor

- Construct the improvement as per approved Engineering Drawings.

11.2. SOIL TESTING PROCEDURE

The Consultant shall submit a landscape plan with soil testing locations via the 2023 - Informal Inspection Request form (Appendix M) prior to site construction for Landscape Development Inspector approval. This request can happen as early as once the drawings are approved. The Landscape Development Inspector must respond within 5 Days or sampling locations will be deemed approved.

The collection of required samples shall be based on area and end-use. These samples must be submitted to a City-approved commercial laboratory.

The laboratory analysis results must include soil type (texture), pH, Electric Conductivity (EC), Organic Matter (OM) percentage, and nutrient content. All samples are to include a signed Chain of Custody form.

Upon receiving the results, ensure that soil samples meet specific end-use requirements outlined in Table 2 of the Standards. If the sample results do not meet the specifications, amend the soil as necessary to meet the parameters.

Soil test results may be provided to the Landscape Development Inspector prior to CCC application as a courtesy using the 2023 informal Landscape Inspection request but formal approval for results will not be provided at such time.

It is mandatory to submit your soil test results for each specific Municipal Improvement with your CCC application.

(back to top)

12. AUDIT INSPECTIONS

The objective of conducting audits during construction is to guarantee that the procedures being employed will result in a functional and successful site, as well as to provide assurance to the Landscape Development Inspector that the site is being built in accordance with City Standards. These inspections can encompass, among others, physical examinations or site visits, assessments from vehicle drive-bys, conversations with the Contractor/Consultant, taking measurements and conducting sampling and/or testing, as required. Another purpose of these audits is to confirm that the appropriate construction techniques are being utilized, thereby minimizing the occurrence of issues prior to the official inspection.

12.1. AUDIT INSPECTION PROCEDURES

Audit Inspection procedures are a set of processes that are designed to verify that the landscaping construction work is being performed in accordance with the approved Engineering Drawings, landscaping drawings, specifications, as well as applicable laws and regulations. These procedures involve a detailed review of construction work and materials. During an Audit Inspection, the Landscape Development Inspector will document observations, identify deficiencies and non-conformities and communicate their findings to the Consultant for corrective action. Audit Inspection procedures are typically an important part of construction quality assurance programs, and are intended to ensure that construction work meets the required standards of quality and safety.

Prerequisites required for an Audit Inspection to occur, with the exception of Natural Areas (refer to Section 23), are:

- **Approved Engineering Drawings**
- **Signed Servicing Agreement**

12.1.1. Audit Inspection Timelines

- Audit Inspections can occur prior to and at any time during landscape construction or during the Warranty Period, based on weather conditions.

(back to top)

- Audit Inspections may be done randomly and informally to monitor construction progress, based on the Landscape Development Inspector's schedule, current location, and available time.
- Audit Inspections are done independently by the Landscape Development Inspector. The Consultant is not required to be present during the audit, but they are free to attend if preferred.
- The Contractor's schedule will not be impeded by Audit Inspections.

12.1.2. Major Milestones

Major Milestone Audit Inspections are conducted at certain points of the construction process. Major Milestones include activities that need to be seen prior to construction completion (ie. trenching). Major Milestone Audit Inspections will not hold up the Contractor's schedule as long as proper coordination between the Contractor and Consultant occurs and sufficient notice is provided.

The Consultant will be required to provide the Landscape Development Inspector with a minimum of two (2) business days notice of the commencement of the construction of the milestone via the 2023 - Informal Inspection Request Form (Appendix N) for the following Major Milestone events:

- Natural / Existing Landscape Features prior to construction (such as sites adjacent to ER, MR, tree stands, etc.). Refer to Section 23.0 of this document.
- Trenching / Coring
- Root Barrier
- Playground
- Amenities
- Soil Mapping for Testing Locations
    - See Table 3 in Section 02910 of Volume 5: Landscape of the City's Design and Construction Standards
    - APPENDIX M: SOIL SAMPLE MAP

(back to top)

The Landscape Development Inspector's top priority will always be to attend the CCC and FAC Inspections. Therefore, it may not be possible for the Landscape Development Inspector to see all Major Milestone construction events.

In order for the Landscape Development Inspector to be aware of the status of the site, the Consultant must notify them of Major Milestone construction events. If the Landscape Development Inspector believes that the site may not fully comply with the approved construction requirements, the Landscape Development Inspector may request that the asset be removed and replaced. With this in mind, the Major Milestone construction should be documented by the Consultant to represent the type, quality, and method of construction used during the construction event. It is recommended the Consultant provide photos during the construction of any Major Milestone to demonstrate proper construction practices are being applied.

Trenching

Root Barrier

(back to top)

Tree Planting

Improper Tree Planting

Proper Root Ball Size

Root Ball is Too Small

(back to top)

Soil Cell Installation

12.2. TREE TRENCH AUDIT

Refer to detail LA113 Typical Tree Root Trench in the City's Design and Construction Standards, Volume 5: Landscape.

The Landscape Development Inspector requires verification that the boulevard construction matches what is indicated on the approved Engineering Drawings. Inspecting tree trenching/coring is difficult to do when the site is already constructed. Therefore, the Landscape Development Inspector will need to verify the following:

- Depth of trench
- Scarification of the trench
- Width based on the type of roadway
- Proper topsoil type based on its end use is installed

It is recommended that photos with scale references be taken during the tree trenching construction and for the Consultant to forward these photos to the Landscape Development Inspector for reference. As a guideline:

- Photographs should be provided every 20m along the length of the boulevard or area that is being trenched as the site is being constructed.
- Photos need to include the measuring tape showing the depth and width measurements of the tree root trench.

(back to top)

- Markers should be positioned along the trench to help distinguish the location where the photo was taken.
- Visual markers should also be used to reference the scale of the trench and the immediate surroundings which aid in the verification of length and depth of the trench.
- All photos must be provided as part of the inspection application in ePlan (if the Landscape Development Inspector did not conduct a site visit during construction), prior to the beginning of any CCC Inspections.

Trenching

12.3. ROOT BARRIER INSTALLATION

Inspections involve evaluating the root barrier's location, depth, and integrity to ensure that it adequately restricts tree root growth and prevents damage to hardscape elements.

12.4. MUNICIPAL AND ENVIRONMENTAL RESERVE

Landscape Development Inspectors will:

- Assess the site for compliance with natural area management plans; control of weeds as per Alberta Weed Control Act; absence of stockpiling and dumping; and, ensure the site is in its intended natural state. The site is to be left in a satisfactory

(back to top)

state that meets the City's expectations and natural areas shall be maintained as per the Servicing Agreement and Natural Area Management Plan.

- Ensure that the work is complete in accordance with any Federal and Provincial regulations and laws such as Migratory Birds Convention Act, Wildlife Act, and any applicable others.

Additional Audit Inspections that may be conducted upon request include but are not limited to:

- **Rough Grade Inspection:** involves assessing the site for proper slope, drainage, and erosion control measures.
- **Shrub Bed Inspection:** confirm the location, shape, depth, and soil type of shrub beds, and ensure they comply with approved Engineering Drawings. Additionally, the Landscape Development Inspector will ensure that the beds are free of weeds, debris, and excessive compaction.
- **LID (Low Impact Development) Inspection**: verify proper compaction and gradation of soil. Please refer to Section 24.0 of this document for further details.
- **Tree Planting:** review the tree planting process and evaluate key factors including the placement of the root ball within the excavated tree pit, proper folding of burlap and basket to one-third from the root flare, excavation of soil to the tree stem's root flare, and scarification of the tree pit's sides. The goal is to ensure that the tree is planted in accordance with the standards outlined in the latest City of Edmonton Design and Construction Standards, Volume 5: Landscape and the approved Engineering Drawings.

(back to top)

PART 3: INSPECTIONS AND CERTIFICATIONS

13. SERVICING AGREEMENT

Municipal Improvements and their terms of certification are defined in the Project's Servicing Agreement and will be assigned to the area Landscape Development Inspector to inspect and approve the certificate.

13.1. ROLES AND RESPONSIBILITIES

13.1.1. Landscape Development Inspector

The Landscape Development Inspector will ensure that the Municipal Improvements completed by the Developer and their representatives meet the requirements and standards set forth in the Servicing Agreement and approved Engineering Drawings. Duties include conducting site inspections, reviewing documentation, and certificate approvals and are further detailed below:

- Act as a point of communication between the Developer and their representatives and the City and will respond to any concerns or issues that may arise.
- Conduct inspections of the landscape Municipal Improvements during the CCC and FAC process to verify that the landscaping has been installed in accordance with the Servicing Agreement, the approved Engineering Drawings and any relevant specifications.
- Work with the Developer and their representatives to address any deficiencies or issues identified during the inspection and ensure that the landscaping meets the City's Standards and approved Engineering Drawings.
- Assess the quality of the hard and soft landscaping installation.
- Review documentation related to the landscaping installations, such as Maintenance Logs and warranty information, to ensure that the Developer has met all of their obligations under the Servicing Agreement.

(back to top)

13.1.2. Developer/Consultant

When obtaining a certificate for a Municipal Improvement, the Developer / Consultant shall ensure compliance with all applicable regulations and standards, conduct required inspections, address any deficiencies or issues that arise and provide a Warranty Period during which they are responsible for addressing any defects or issues. Other responsibilities include:

- Submit all necessary documentation and obtain approvals from relevant authorities for the proposed Municipal Improvement during the pre-construction phase.
- Ensure that the Municipal Improvement is constructed in accordance with approved plans and specifications, as well as any applicable laws and regulations during the construction phase.
- Ensure that all required inspections are conducted and any deficiencies are addressed promptly.
- Apply for a CCC when construction is complete. This involves submitting an inspection application, along with any required documentation, to demonstrate that the Municipal Improvement meets all applicable requirements and is in compliance with all relevant regulations and standards and the approved Engineering Drawings.
- Provide maintenance during the Warranty Period and address any defects or issues that arise with the Municipal Improvement following the issuance of the CCC.
- Apply for FAC certification just before the Warranty Period expires.
- Conduct quality assurance checks throughout the project lifecycle to ensure that the project is meeting the required standards and specifications.
- Complete all required closeout procedures, including final inspections, obtaining necessary approvals, and providing all required documentation to the City.

(back to top)

13.1.3. Contractor

The Contractor shall:

- Build the project according to the approved Engineering Drawings and specifications, and ensure that all applicable regulations and standards are followed.
- Ensure that the site is safe for workers and the public and that all workers on the construction site follow safety procedures and guidelines.
- Conduct quality control checks throughout the construction process.
- Ensure that any defects or issues that arise are addressed in a timely and effective manner.

It should be noted that a Warranty Period comes into effect after the CCC certificate is issued. During the Warranty Period, the Contractor is responsible for addressing any defects and maintaining the site as per the City's Design and Construction Standards for FAC certification when the Warranty Period ends.

14. CONSTRUCTION COMPLETION CERTIFICATE (CCC)

When the Municipal Improvement, as outlined in the Servicing Agreement, has been completed as per the approved Engineering Drawings, the Developer/Consultant can initiate the certification process. A CCC will be approved when the Municipal Improvement satisfies the Servicing Agreement and is constructed in accordance with the approved Engineering Drawings and the City's Design and Construction Standards.

Refer to Appendix C for the complete Landscape Inspection Checklist.

14.1. CCC INSPECTION SEASON

Inspections for landscape CCC will be conducted by the City's Development Inspections Unit from June 1 to October 15. This window of time may be extended one week at a time, based on a review of the weather forecast, at the Landscape Development Supervisor's discretion. It is important to note that inspections are weather dependent.

(back to top)

Inspections will be scheduled chronologically once the pre-screen is approved. At the end of the season, inspections will be completed as time permits, pending on schedule availability and weather.

The following criteria will result in the end of the CCC Inspection season:

- Snow accumulation greater than 5cm in the last two weeks of the season, and/or
- Multiple consecutive daytime temperatures below zero degrees Celsius leading up to the CCC season deadline.

14.2. PRELIMINARY CCC INSPECTION

Please note that preliminary CCC landscaping inspections are no longer being conducted by the Landscape Development Inspector due to time constraints.

The Developer and their representatives are required to have their own preliminary CCC Inspections as indicated in the Project's Servicing Agreement. A template for the pre-inspection report is available in Appendix G of this document.

14.3. CONSULTANT REQUIREMENTS PRIOR TO CCC APPLICATION

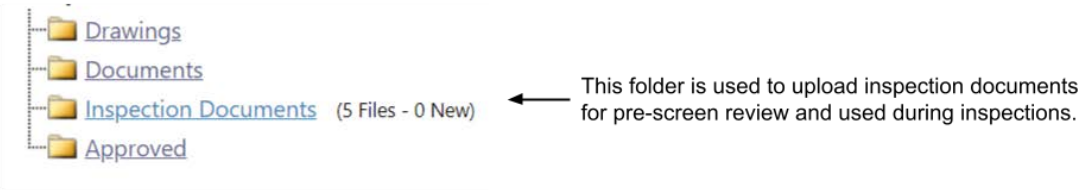
Prior to the CCC application, the Developer/Consultant must:

- Ensure the improvement is ready to be inspected (clean, accessible and unobstructed).
- Ensure all work is concluded and construction is complete as per the approved Engineering Drawings.
- Formally acknowledge that the improvement is complete and is free of safety hazards. This will be confirmed in the “Pre-Inspection Inspection Report” supplied with the application for inspection. (See Appendix G).

14.4. CCC INSPECTION APPLICATION

The CCC Inspection request must be initiated through eServices. An upload of supporting documents to the Inspection Documents folder of the specified ePlan Municipal Improvement is required.

(back to top)



The upload to ePlan must include:

- CCC Landscape Inspection Request Form
- Pre-inspection Report (See Appendix G)
- The latest City approved Engineering Drawings (and/or Redline Drawings). If any changes have occurred from the approved Engineering Drawings, upload the approved updated plans. Failure to not provide the updated plans may result in an incomplete inspection and CCC rejection.
    - The drawings must be highlighted in green to identify the scope of the inspection, matching the specified improvement within the Servicing Agreement. (Refer to Appendix H).
    - Where amenities are included as part of the Municipal Improvement, highlight each amenity and detail pertinent to that improvement. This is required to ensure that the Landscape Development Inspector coordinates a joint inspection with an Infrastructure Maintenance Inspector for the amenities.
    - Do not use the color red to highlight as this may get confusing with redlined drawings.
    - Highlight the elements being requested for inspection in green. The highlighting needs to be translucent so that the plan elements are visible and not covered.
    - Only the landscape elements pertaining to the improvement along with the details and corresponding plant list are to be highlighted.
    - The drawings must be submitted in a single PDF document.
    - Include grading drawings, seed mix breakdown, details sheet and any other pertinent information in the submission.

(back to top)

- Soil sample testing results if the Municipal Improvement was initiated into circulation after April 1, 2021.
- Any other required documentation such as photos of site installations.

Once the upload is complete, the Landscape Development Inspector will accept the task in ePlan and conduct an audit of the submission package. If the document submission is in order, the Landscape Development Inspector will approve the ePreScreen task and schedule the CCC Inspection.

See link for eServices instructions: eServices User Manual

See link for ePlan best practice: City_of_Edmonton_ePlan_Best_Practices_for_Consultants

Construction Not Complete

Site Too Wet

(back to top)

Ready Site (Boulevard)

Ready Site (Outfall)

14.5. CCC INSPECTION

The City will conduct the CCC Inspection within 30 days of the approved pre-screen.

For the on-site inspection, the following will occur:

- The Consultant and the Landscape Development Inspector will individually mark up their own Inspection Report.
- The Consultant and the Landscape Development Inspector will compare notes during and/or immediately after the inspection to discuss and confirm the deficiencies.
- The Consultant shall take photos of the Landscape Development Inspector's inspection report after the inspection is complete, for reference.
- The Consultant shall provide their markup plan to the Landscape Development Inspector if requested.

(back to top)

- The Landscape Development Inspector will share, via email, their inspection report with the Consultant, if requested, in order to confirm the noted deficiencies during the CCC Inspection process.

If additional deficiencies are discovered after the CCC Inspection:

- The Consultant will have 14 days to complete the repairs for deficiencies, as required, and request a re-inspection.
- A re-inspection will be requested through the Google Form for Informal Inspection Requests (refer to Appendix N).
    - No new deficiencies will be added to the list during the re-inspection, unless the deficiencies occurred between the initial inspection and re-inspection, create a safety issue, or are significant in nature.

Only one re-inspection will be permitted during the inspection process. If the identified deficiencies from the inspection are not rectified for the re-inspection, the inspection will be rejected on eServices and the Consultant will have to re-apply and request another inspection.

If the Consultant needs additional time to amend the deficiencies prior to the deadline, they may request, using the Google Form, to extend the re-inspection deadline. Extensions may be granted at the Landscape Development Inspector's discretion, keeping in mind that the CCC deadline is October 15th, subject to weather.

When the inspection process is completed, the Landscape Development Inspector will input the inspection result in eServices.

The Warranty Period will start once the inspection is approved in eServices.

14.6. CCC INSPECTION APPEAL PROCESS

If, for any reason, there is a disagreement with the observations of the Landscape Development Inspector, the Developer/Consultant may request a review of the deficiencies list by the Landscape Development Supervisor. The Developer/Consultant shall collect documentation for the deficiencies in question and present them to the Landscape Development Supervisor within 14 days of the initial CCC Inspection. Upon review, the Landscape Development Supervisor, along with the Landscape Development Inspector that conducted the initial CCC Inspection and Developer/Consultant will re-inspect the entire site

(back to top)

within 14 days of the appeal. It should be noted that the Landscape Development Supervisor may note additional deficiencies to be added to the list or may remove deficiencies from the list. This version of the deficiencies list will be deemed final and no other appeals will be granted.

14.7. CCC DOCUMENTATION REQUIREMENTS

When the Landscape Development Inspector inputs the site inspection result in eServices, the documentation package must be submitted by the Developer/Consultant within 30 business days of the approved CCC Inspection. If the Consultant does not complete the task within the 30 business days timeline, the inspection approval will expire in eServices, at which time the Consultant will have to reapply for CCC and the process will restart.

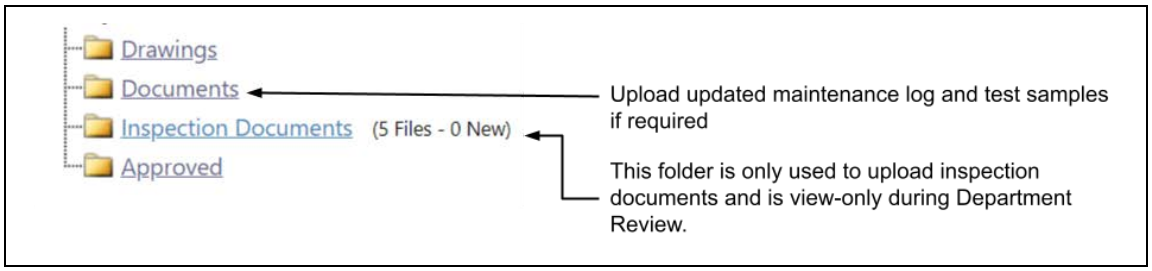
If an extension is to be requested, the Consultant will be required to provide written documentation to the Landscape Development Inspector as to why the extension is being requested. The City is required to review the complete documentation package within 42 days of submission. If the CCC documentation package is submitted between June 1 and October 15, then the City shall have ninety (90) days to provide a review.

The required submission for the CCC documentation package in ePlan includes:

- Maintenance Schedule
    - Used by the Landscape Development Inspector during the Maintenance Period (between CCC and FAC) to plan their Audit Inspections
- Soil Test Result
- Any other relevant testing results (if required)
- Updated Maintenance Logs (if required)
- Other supplemental information requested by the Landscape Development Inspector for certificate approval.

The following provides a guide on where the documents should be uploaded in ePlan:

(back to top)



If a documentation package is submitted and conforms to all requirements, the department review will be approved by the Landscape Development Inspector by marking the ePlan task accordingly.

A documentation package that does not conform to the above-noted requirements is considered deficient. The CCC will not be approved until all deficiencies have been addressed in the documentation package submission.

If correct documentation is not uploaded in ePlan within 30 business days, or after three attempts are made to submit and the submission package still does not meet requirements, the application will be rejected. The Consultant will need to reapply for a new inspection, within the inspection season, as per City Standards.

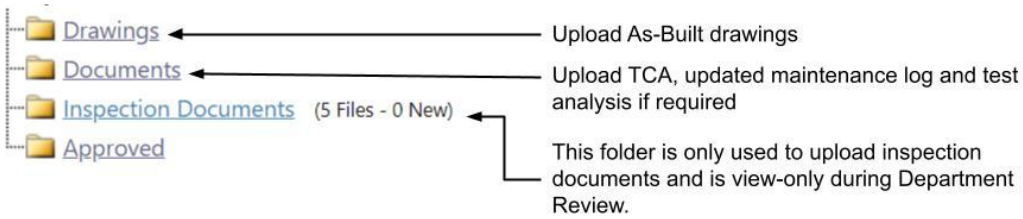
The submission for CCC Only documentation package in ePlan Includes:

Projects that do not require FAC (excluding fencing), and will be taken over by the City after CCC (ex. Municipal Reserve, Environmental Reserve where no improvement is added), will require a complete and accurate document package submission at CCC application.

When FAC is not required for the Municipal Improvement, the required CCC documentation package submission in ePlan includes:

- Tangible Capital Asset (TCA) Form
- As-Built Drawings (refer to Appendix K)
    - Approved & accepted by the City of Edmonton, in PDF with professional signature and date stamp
    - AutoCAD file to match PDF
    - As-Built Paperwork (Common Accuracy Items in As-Built Paperwork)
- Maintenance Logs (as required)

(back to top)



14.8. CCC PROCESS FLOW CHART

A visual representation of the CCC approval process is shown below. The Project's Servicing Agreement provides additional information if required.

(back to top)

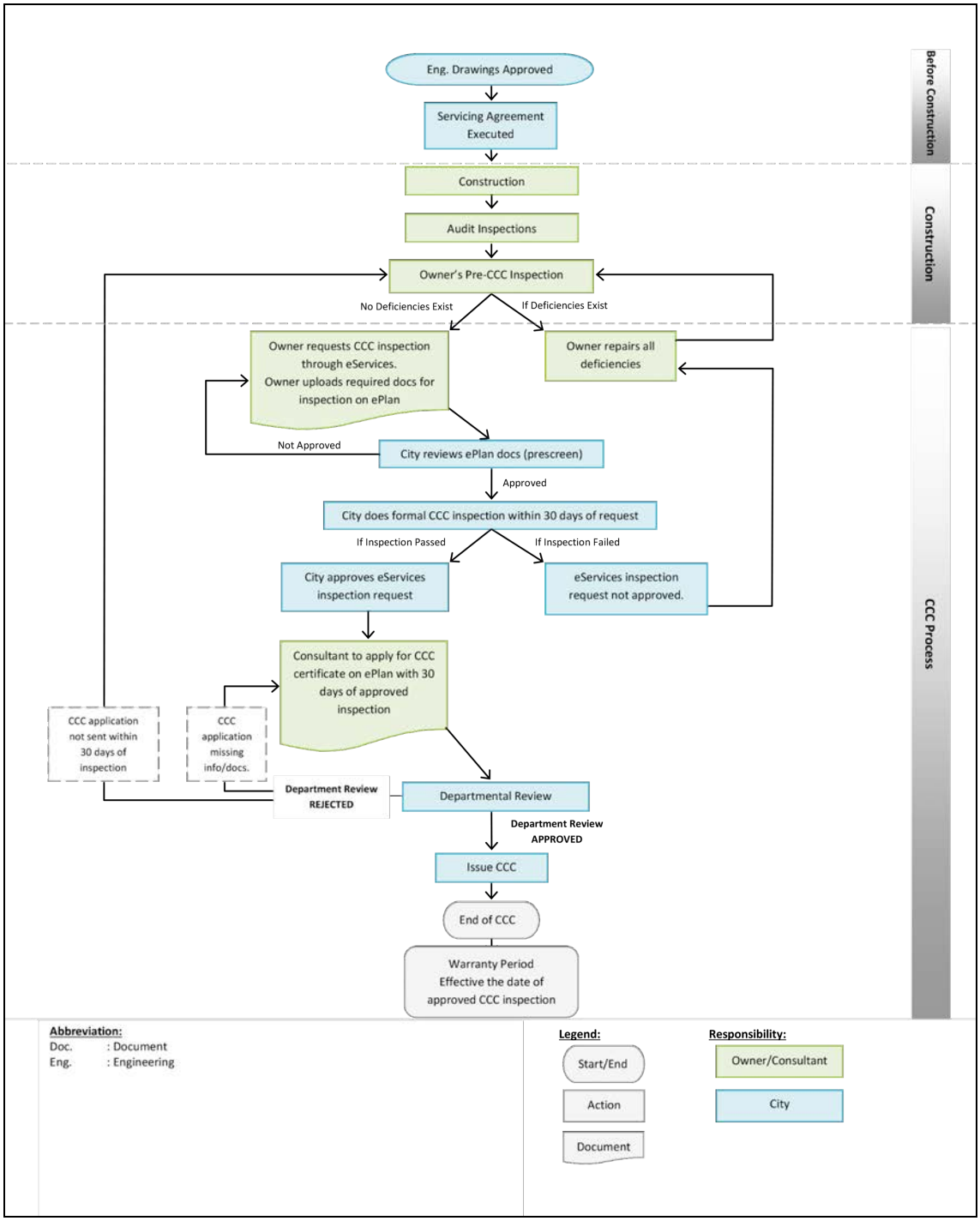


Figure 1: CCC Inspection and Documentation Review Process

(back to top)

15. LANDSCAPE INSPECTION DEFICIENCIES

Any fault or defect that impedes functionality poses a safety hazard, does not meet City Design and Construction Standards or deviates from the approved Engineering Drawings is considered a deficiency.

Refer to Appendix C for the complete Landscape Inspection Checklist for CCC.

15.1. SOD, SHRUBS AND GENERAL

For turf, ensure that:

- Correct sod/seed mix is used;
- No safety hazards exist;
- Sod is even with adjacent surfaces;
- Weeds are controlled; and
- Low points are regraded for proper drainage.

For shrubs/perennials, ensure that:

- Plants are healthy and placed according to plan, with optimal spacing and bed size for mowers to pass through; and
- Bollards or light standards are incorporated within the bed and no mulch is installed below flood lines.

In general, the Contractor must ensure that:

- There are no safety concerns outstanding;
- All Municipal Improvements are installed in accordance with the approved Engineering Drawings and with proper offsets;
- There are no encroachments on City property;
- Erosion and sediment control measures are installed;
- Debris is removed from the site; and.

(back to top)

- Grading has positive drainage.

Remediation must be done for damaged landscaping, and laydown restoration should be done to restore the land to a natural and healthy state.

15.2. TREE INSPECTION DEFICIENCIES

Edmonton's City Council has the mandate to increase the overall urban tree canopy coverage in Edmonton by 20 percent. Trees provide ecological, social, and economic benefits to the City and its citizens. Trees are a very important and complex element of the urban landscape and deserve special consideration. The following sections provide details on specific areas of concern that should be taken into consideration when inspecting trees.

The Landscape Development Inspector will assess the tree's vitality and structure/form, and will check for pests or diseases. If there is an excessive display of one or a combination of several factors, even to a lesser degree, the tree may be rejected. Promptly addressing any deficiencies identified during the inspection is necessary to ensure the safety and health of the tree and its surroundings.

15.2.1. Pests and Disease

Pests and diseases on trees often have common indicators such as physical damage to the tree (i.e. an exit hole, a gallery, pests feeding on the leaf, and/or lesions in the leaf). A symptom is a tree's response to an insect or disease such as dead branches, thinning of the crown, and/or premature yellowing of the foliage. If there is uncertainty about what type of pest or disease is present, a sample can be taken from the tree and provided to a pest diagnostics lab by the Consultant and the results forwarded to the Landscape Development Inspector for reference.

The following actions should be taken when a pest or disease is found in a tree:

- If an active infestation of an insect or a disease is found on a tree at the time of inspection, the tree will be rejected as this is evidence of present activity by that organism, which is visible in, on, or under the canopy, or in or on debris under the tree.
- If signs or symptoms of insect or disease are present on a tree at the time of inspection, the tree may be rejected, at the discretion of the Landscape Development Inspector.

(back to top)

- If the level of infestation can be controlled then it is up to the Consultant and/or Contractor to determine an appropriate treatment plan and to perform the treatment. The Consultant and/or Contractor must provide a copy of the treatment plan and all logs of all treatments performed to the Landscape Development Inspector via ePlan. The Landscape Development Inspector will re-inspect the tree after treatment is completed. It should be noted that the Landscape Development Inspector may reject the tree after treatment is applied if the level of infestation is not deemed controlling.
- Should a Regulated Pest be present, then all necessary procedures defined by the Canadian Food and Inspection Agency shall be followed.
- Should a Named Pest be present, then all necessary procedures defined by the City's Community Standards Bylaw 14600 shall be followed.

15.2.2. Tree Vitality

Tree vitality is defined as the plant's ability to respond to physiological stress and thrive in a given environment. In other words, it refers to the tree's overall health, capacity to grow and resistance to stress.

The following factors are used in determining tree vitality:

- Presence of insects and/or disease
- Canker
- Decay
- Slime flux
- Deadwood
- Internodal growth comparison from year to year
- Appearance and quantity of buds (colour and size)
- Size and colour of foliage
- Thinning of canopy
- Presence of epicormic growth

(back to top)

- Abundance of cones on young trees (conifers only)
- Presence of seeds on seedless varieties (deciduous only)

15.2.3. Tree Structure and Form

Tree structure and form refer to the shape or growth habit of a tree. There are many different tree forms, each with its own distinctive characteristics.

Some common tree forms include:

- Columnar: These trees have a narrow, upright shape, with branches that grow vertically.
- Conical (Also known as Pyramidal): These trees have a cone-shaped form, with a single dominant trunk and branches that grow upward and outward.
- Weeping: These trees have drooping branches that create a flowing, cascading effect.
- Spreading: These trees have a broad, spreading canopy, with branches that grow outward and downward.
- Vase-shaped: These trees have a broad, open canopy that flares out at the base, resembling a vase.

The form of a tree can be influenced by a variety of factors including genetics, pruning activities, and environmental conditions. Tree form can have important practical and aesthetic implications such as determining how much space a tree will require; how it will interact with other plants and structures in a landscape; and, what kind of visual impact it will have.

The following factors are used in determining tree structure and form:

- Crack: The separation of wood fibres and predisposed to failure.
- Included Bark: This occurs when two stems or branches grow closely together and the bark grows inward, forming a V-shaped crotch. Included bark can weaken the union between the stems or branches and increase the risk of breakage.
- Double Leader: The tree has multiple stem attachments, which may require maintenance or monitoring over time.

(back to top)

- Narrow Branch Angles: This occurs when a branch grows at a narrow angle from the trunk or main stem, rather than a wider, U-shaped angle. Narrow branch angles can weaken the branch attachment and increase the risk of breakage.
- Overextended Branches: This occurs when a branch grows too long without adequate support from other branches, resulting in a weak attachment point that can break easily.
- Trunk Injury: Injury affecting tree health.
- Poor Trunk Taper: This occurs when the diameter of the trunk does not decrease gradually as it moves upward, resulting in a weak point in the tree's structure. Exposed tree collar.
- Poor Structure: When the tree’s structure is deformed and defective/unsightly and not properly pruned or maintained, it may develop weak branches or a lopsided crown, which can increase the risk of damage from high winds or heavy snow.
- Crown Imbalance: This occurs when one side of the tree's crown is significantly larger or heavier than the other, putting extra stress on the weaker side.
- Crook, Sweep in the Trunk; This is characterized by a leaning lower trunk and a more upright top.
- Tree Root Issues: The roots of a tree may show signs of damage or decay, which can lead to instability and potentially cause the tree to fall. Signs of root issues may include soil heaving, soil erosion, and exposed roots.

(back to top)

15.2.4. Examples of Some Common Tree Deficiencies

Sawfly

Black Knot

Ash Borer

Birch Leaf Miner

(back to top)

Epicormic Growth

Small Leaves and Thin Crown

Crown/Root Gall

Pitch Moth

(back to top)

Dessicated Aspen

Heavy Seed Crop

Thin Canopy (Recently Installed)

Thin Canopy and Light Coloured Foliage

(back to top)

16. WARRANTY PERIOD MAINTENANCE

The Warranty Period begins upon CCC approval, during which time the Developer must conduct maintenance activities, repair deficient areas, and maintain the Municipal Improvement in accordance with the Project's signed Servicing Agreement and the City's Design Construction Standards. The Developer/Consultant is responsible for repairing any damage or deficiencies within 30 days of written notification from the City, except for items identified as exceptions in the Servicing Agreement. If deficiencies are not repaired and FAC is not obtained within the prescribed timelines, the City may draw on the security holdback to carry out the repairs.

The Developer must establish and maintain all plant material and turf areas in acceptable, vigorous, and healthy growing conditions. The Consultant/Contractor must conduct regular inspections, respond to complaints, make necessary repairs, provide maintenance services, and document all work performed during the Warranty Period, per the City's Design and Construction Standards, Volume 5, Section 4.8.

Safety concerns during the Warranty Period should be immediately repaired.

The maintenance start date will correspond to the on-site CCC Inspection approval date.

Some deficiencies noted during the CCC Inspection are allowed to be repaired during the Warranty Period. These exceptions are permitted at the discretion of the Landscape Development Inspector and must be clearly noted on the Deficiency Plan.

Deficiencies noted during inspections may include, but are not limited to:

- Maintenance pruning
- Structural pruning, as outlined by the Landscape Development Inspector
- Weeds (must be 'controlled' for CCC and 'eradicated' for FAC). Refer to the Alberta Weed Control Act for additional information.
- Minor straightening of tree stakes
- Some turf deficiencies (minor ruts, snow grader damage, etc)
- Trip hazards - must be remediated immediately as a safety concern
- Unacceptable ruts - may be classified as a trip hazard.

(back to top)

The Warranty Period Maintenance Log shall include, but not be limited to, the following information:

- Watering (Date, Time, Volumes, Locations, Duration)
- Turf (Date, Time, Locations, Activity ie: mowing, reseeding)
- Fertilizing (Date, Time, Locations, Product, Volumes)
- Tree/Shrub (Date, Time, Locations, Activity ie: replacements, mulch, tree stakes)
- Weeding (Date, Time, Locations)
- Chemical Spraying (provide Pesticide log book report)
- Litter removal (date, Locations)

If subcontractors were used during the maintenance of the project, the Contractor must coordinate with them to ensure that any defects or issues related to their work are addressed during the Warranty Period.

17. FINAL ACCEPTANCE CERTIFICATE (FAC)

At the end of the Warranty Period, the Developer/Consultant may apply for a Final Acceptance Certificate (FAC). Upon approval of the FAC, the City will take the asset into the City of Edmonton inventory and all responsibility for the maintenance of the work will transfer to the City.

Before the FAC is issued, the entire Municipal Improvement must be in conformance with the Project's Servicing Agreement and inspected for the establishment, as per the City's Design and Construction Standards.

17.1. FAC INSPECTION SEASON

Inspections for Landscaping Final Acceptance Certificates (FAC) will be conducted by the City's Development Inspections Unit from June 1 to September 30, weather dependent. This window of time may be extended one week at a time, based on a review of the weather forecast, at the Landscape Development Supervisor's discretion. It is important to note that inspections are weather dependent.

(back to top)

Landscaping projects with a FAC anniversary date that falls after August 1 are eligible for early inspection between August 1 and the end of the FAC season. **The Consultant and Contractor are responsible to maintain the site (should it be approved) for the remainder of the Warranty Period.**

The City may conduct audits before June 1st, weather permitting (with Landscape Development Inspector's discretion).

Inspections will be scheduled on a first-come, first-served basis. At the end of the season, inspections will be completed as schedules and weather permit.

The following criteria will result at the end of the FAC Inspection season:

- The occurrence of "Hard Frost"
    - Hard Frost is defined as 4 consecutive hours of below minus 4 degrees Celsius, as reported by Environment Canada Weather Site.
    - Should Hard Frost occur, the FAC Inspection season will end for caliper trees to be accepted into City's inventory.
- Snow accumulation greater than 5cm in the last two weeks of the season.
- Multiple consecutive daytime temperatures below zero degrees Celsius leading up to the FAC season deadline.

Note that in order for trees to be inspected, they must be in full leaf in order to assess their health and vitality.

Inspections for Landscape Amenities and Fencing will be conducted throughout the year, weather permitting. Snow must be cleared from the improvement in order for the Landscape Development Inspector to complete the inspection.

17.2. PRELIMINARY FAC INSPECTION

Please note that preliminary FAC landscaping inspections are no longer being conducted by the Landscape Development Inspector due to time constraints.

The Development and their representatives are required to have their own preliminary FAC inspections as indicated in the Servicing Agreement. A template for the pre-inspection report is available in Appendix G of this document.

(back to top)

17.2.1. Examples of Sites NOT Ready to Request FAC Inspections

Turf not ready for FAC

Deficient tree well

Construction fencing prohibits inspection of trees and turf

Weeds eradicated for FAC

(back to top)

Tree has low vitality and will not be accepted into the City inventory. This tree should have been replaced prior to requesting an inspection

Site not ready as plant material has not been installed prior to the recheck

Site is not ready for inspection

(back to top)

17.3. CONSULTANT REQUIREMENTS PRIOR TO FAC APPLICATION

Prior to the FAC application, the Developer/Consultant must:

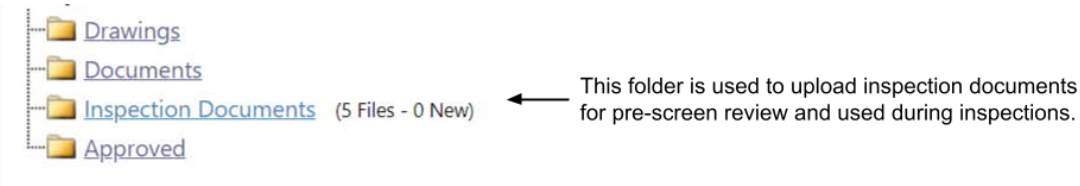
- Ensure the improvement is ready to be inspected (clean, accessible and unobstructed)
- Ensure all work is concluded and construction is complete as per the approved Engineering Drawings.
- Formally acknowledge that the improvement is complete and is free of safety hazards. This will be confirmed in the "**Pre-Inspection Inspection Report**" supplied with the application for inspection. (See Appendix G)

Once these requirements have been achieved, the improvement will be eligible for FAC Inspection.

17.4. FAC INSPECTION APPLICATION

The FAC Inspection request must be initiated through eServices. An upload of supporting documents to the Inspection Documents folder on the specified ePlan Municipal Improvement is required.

Consultants upload documents to ePlan for FAC pre-screen review in this configuration:



The upload to ePlan must include:

- FAC Landscape Inspection Request Form (Appendix D)
- Pre-inspection Report (See Appendix G)
- The latest City approved Engineering Drawings (and/or Redline Drawings). **If any changes have occurred from the approved Engineering Drawings, upload the**

(back to top)

approved updated plans. Failure to provide the updated plan may result in an incomplete inspection and FAC rejection.

- The drawings must be highlighted in green to identify the scope of the inspection, matching the specified improvement within the Servicing Agreement (See Appendix N).
- Where amenities are included as part of the Municipal Improvement, highlight each amenity and detail pertinent to that improvement. This is required to ensure that the Landscape Development Inspector coordinates a joint inspection with an Infrastructure Maintenance Inspector for the amenities.
- Do not use the color red to highlight as this may get confusing with redlined drawings.
- Highlight the elements being requested for inspection in green. The highlighting needs to be translucent so that the plan elements are visible and not covered.
- Only the landscape elements pertaining to the improvement along with the details and corresponding plant list are to be highlighted.
- The drawings must be submitted in a single PDF document.
- Include grading drawings, seed mix breakdown, details sheet and any other pertinent information in the submission.

- A Maintenance Log for landscaping improvements.

Once the upload is complete, the Landscape Development Inspector will accept the task in ePlan and conduct an audit of the submission package. If the document submission is in order, the Landscape Development Inspector will approve the PreScreen task and schedule the FAC Inspection.

See link for eServices instructions:

https://www.edmonton.ca/city_government/documents/eServices_User_Manual.pdf

See link for ePlan best practices:

(back to top)

https://www.edmonton.ca/sites/default/files/public-files/documents/City_of_Edmonton_ePlan_Best_Practices_for_Consultants.pdf

17.5. FAC INSPECTION

The City will conduct the FAC Inspection within 30 days of the approved pre-screen.

For the on-site inspection, the following will occur:

- The Consultant and the Landscape Development Inspector will individually mark up their own Inspection Report.
- The Consultant and the Landscape Development Inspector will compare notes during and/or immediately after the inspection to discuss and confirm the deficiencies.
- The Consultant shall take a photo of the Landscape Development Inspector's inspection report after the inspection is complete, for reference.
- The Landscape Development Inspector's notes are based on observed existing conditions at the time of an inspection and are representative of deficiencies observed during that particular active inspection for a particular Municipal Improvement.
- The Consultant may, at their discretion, need to revisit the site to note existing site conditions for the accuracy of the final as-built drawings. The Consultant shall provide a marked-up plan that captures their observations to the Landscape Development Inspector if requested.
- The Landscape Development Inspector may share, via email, the City copy marked-up plan with Consultants, if requested, in order to confirm deficiencies.

If additional deficiencies are discovered after the FAC Inspection:

- The Consultant will have 14 days to complete the repairs for the deficiencies, as required, and request a re-inspection
- Request a re-inspection (or re-inspection inspection) by Google form, Informal Inspection Requests (Appendix N)

(back to top)

- No new deficiencies will be added to the list on the re-inspection unless the deficiencies create a safety issue, are significant in nature, or are not completed within 14-days of the previous FAC Inspection date

Only one re-inspection will be permitted during the inspection process. If the identified deficiencies from the inspection are not rectified at the re-inspection, the inspection will be rejected on eServices and the Consultant will have to re-apply and request another inspection.

If the Consultant needs additional time to amend the deficiencies (identified from the inspection only) prior to the deadline, they may request, using the Google Form, to extend the re-inspection deadline. Extensions may be granted at the Landscape Development Inspector's discretion, keeping in mind that the FAC deadline is September 30th, subject to weather.

If the re-inspection is booked by the Consultant and the deficiencies are not repaired for the re-inspection, the site will be rejected and the Consultant must reapply for the re-inspection when the site is ready.

When no deficiencies are noted during the FAC Inspection, the Inspection Result checkbox in eServices will be marked 'approved'.

17.6. FAC INSPECTION APPEAL PROCESS

If, for any reason, there is a disagreement with the observations of the Landscape Development Inspector, the Developer/Consultant may request a review of the deficiencies list by the Landscape Development Supervisor. The Developer/Consultant shall collect documentation for the deficiencies in question and present them to the Landscape Development Inspector within 14 days of receipt of the deficiencies list. Upon review, the Landscape Development Supervisor, along with the Landscape Development Inspector that conducted the initial FAC Inspection and Developer/Consultant will inspect the entire site within 14 days of the appeal. It should be noted that the Landscape Development Supervisor may note additional deficiencies to be added to the list or may remove deficiencies from the list. This version of the deficiencies list will be deemed final and no other appeals will be granted.

(back to top)

17.7. EXTENDING ESTABLISHMENT PERIODS

Establishment of landscapes can be observed and assessed through the general growth level of a specific plant and vegetation over time. Acceptable establishment means an increase in plant and vegetation growth and quality from the time it was planted, whereas a non-established asset remains static or has a decrease in overall plant and vegetation growth. The establishment includes, but is not limited to, being well-rooted and healthy; exhibiting vitality (thriving in the given environment); and, requiring reduced levels of maintenance.

For landscape inspections where FAC is rejected due to deficient plant material, an extended establishment period is required for the site before re-applying for FAC.

The landscape inspection establishment period will be extended until the following growing season for sites with:

- 25 shrubs or less, where 50% or more of the total shrubs have not been established.
- More than 25 shrubs, where 25% or more of the total shrubs have not been established.
- 10% or more of the turf that has not been established:
    - Concentrate bare area is considered as a deficiency and must be remediated.
    - 0.5 m on the arterial road only, deficient plant material will be permitted as an exception to the 10% ratio.
- If over 10% of the trees are rejected and replaced on sites with 41 or more trees, or when tree root balls were disturbed during the current year, the site will be rejected.
- If over 25% of trees are rejected and replaced on sites with 40 trees or less, or when tree root balls were disturbed during the current year, the site will be rejected.

When the site encounters any of the scenarios above, the Developer may re-apply after 12 months of establishment, or August 1st of the following year, as per the City's Design and Construction Standards, Volume 5, Section 4.8.2 (Warranty Period). Should the site be rejected because of tree conditions, the Developer may, alternatively, pursue a FAC tree

(back to top)

Buyout. Refer to Section 18.0 of this document for more details on FAC Tree Buyout eligibility.

Should a landscape inspection be cancelled due to weather or because the FAC Inspection season has ended, the inspection will be scheduled for the following growing season, as soon as the FAC Inspection season begins.

17.8. FAC DOCUMENTATION REQUIREMENTS

When the Landscape Development Inspector inputs the site inspection result in eServices, the documentation package must be submitted by the Developer/Consultant within 30 business days of the approved FAC Inspection. If the Consultant does not complete the task within the 30 business days timeline, the inspection approval will expire in eServices, at which time the Consultant will have to reapply for FAC and the process will restart.

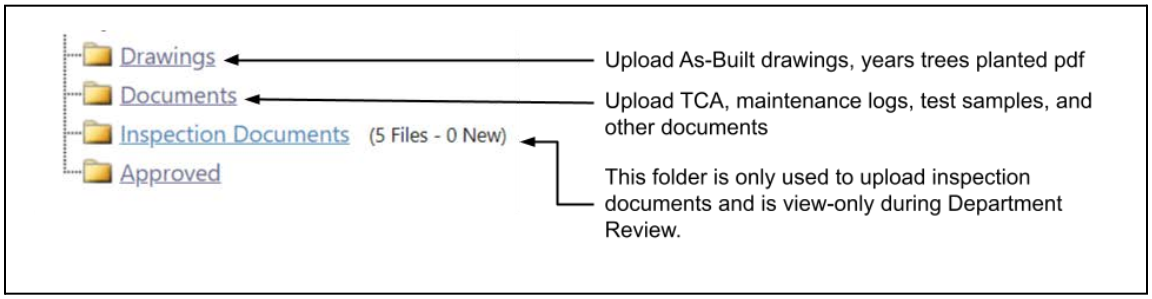
If an extension is to be requested, the Consultant will be required to provide written documentation to the Landscape Development Inspector as to why the extension is being requested. The City is required to review the complete documentation package within 60 days of submission. If the FAC documentation package is submitted between June 1 and October 15, then the City shall have ninety (90) days to provide a review.

The required submission for the FAC documentation package in ePlan includes:

- Tangible Capital Asset form (TCA form, .xls format)
- As-Built plans in AutoCAD as one bound file (.dwg)
- As-Built plans in a single PDF (.pdf) The pdf should be searchable, not a scan (See Appendix K)
- Separate Landscape Plan (PDF) indicating the year planted (single searchable PDF) for all trees. Must be indicated on a copy of the as-built drawing (See Appendix L)
- Any other records requested at the time of FAC (ex. Spray logs, correspondence)
    - For playgrounds, a Letter of Warranty for the playground structure and any pour-in-place surface is required.

The following provides a guide on where the documents should be uploaded in ePlan:

(back to top)



If a documentation package is submitted and conforms to all requirements, the department review will be approved by the Landscape Development Inspector by marking the ePlan task accordingly. This will mark the end of the Maintenance Period and the FAC certificate will be issued and dated for when the FAC Inspection was conducted.

A documentation package that does not conform to the above-noted requirements is considered deficient. When revisions are required in the documentation package, the Consultant may **upload the updated document using the same file name** so it can be viewed as a new version (ie. V.2) in order to avoid any confusion. **The FAC certificate will not be issued until all deficiencies have been addressed in the documentation package submission.**

If correct documentation is not uploaded in ePlan within 30 business days, or after three attempts are made to submit and the submission package still does not meet requirements,, the application will be rejected. The Consultant will need to apply for a new inspection, within the inspection season, as per City Standards.

17.9. COMMON ACCURACY ITEMS IN AS-BUILT DRAWINGS

- Correct species and locations
- Correct quantities, including labels and plant lists
- CAD drawings are bound (one .dwg file including refs, base plans, details etc.)
- All sheets are included for area inspected including details specific to the highlighted improvement (See Appendix K)
- Only the area being taken into inventory is shown on the as-built. Areas with other improvements can be greyed out, removed from the drawing set, or the

(back to top)

improvement in question can be highlighted. It must be clear from the as-built plan which assets are being taken into inventory with the specific improvement.

- If grading has changed from the approved drawing, an updated grading plan must be submitted with the as-built.
- Linework and hatches are shown correctly as required
- TCA form is completely filled out and has correct values and quantities
- Documents submitted are only for the improvement being applied for
- All submitted documentation correspond to each other and accurately reflects the site

17.10. FAC PROCESS FLOWCHART

The FAC process flowchart below visually summarizes the steps involved in obtaining an approved FAC from the City. The Project's Servicing Agreement provides additional information if required.

(back to top)

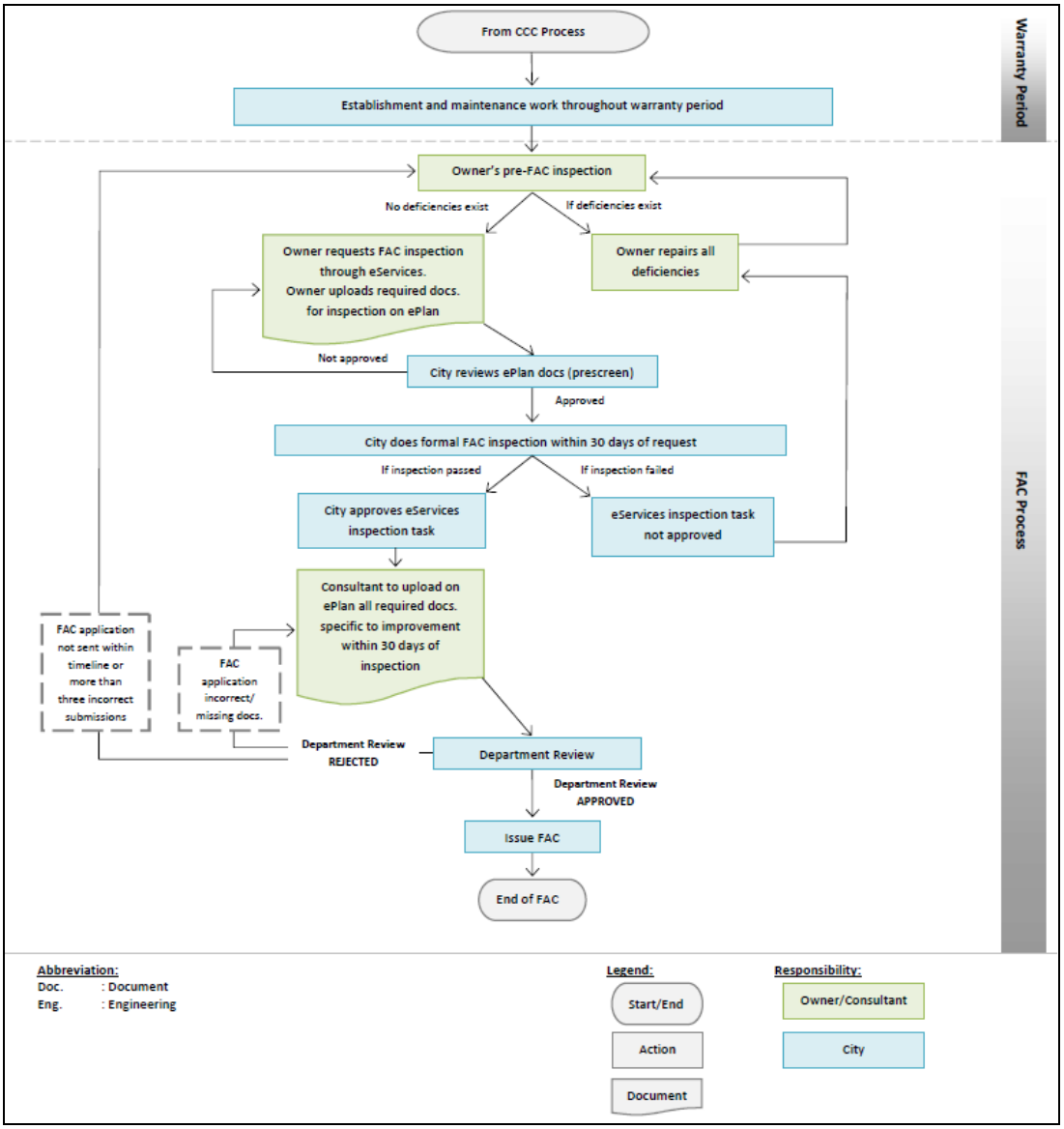


Figure 2: FAC Inspection and Documentation Review Process

(back to top)

PART 4: SUPPLEMENTARY MUNICIPAL IMPROVEMENT INFORMATION

18. FAC TREE BUYOUT PROGRAM

The FAC Tree Buyout Program is an option when trees do not meet the City's FAC acceptance criteria listed in the City's Design and Construction Standards, Volume 5, Section 4.9.2.

In a Buyout, the Developer will pay the City an agreed-upon dollar amount to cover the replacement and/or maintenance cost of the remaining tree deficiencies that are preventing the approval of the FAC.

18.1. FAC TREE BUYOUT ELIGIBILITY

FAC Tree Buyouts will be considered by the City of Edmonton on sites where all of the following criteria apply:

- All deficiencies not identified as part of the Buyout must be remediated prior to proceeding with the site re-inspection.
- The site is over the maximum allowable percentage of rejected and/or deficient trees:
    - For sites with 41 or more trees, 10% of the trees are rejected or root balls disturbed within the current year.
    - For sites with 40 trees or less, 25% of the trees are rejected or root balls disturbed within the current year.
    - Sites requiring pruning maintenance.
    - Additional pest control on trees is required.
- Must have a previously rejected FAC Inspection and the current FAC Inspection would be rejected, if not proceeding with the Buyout.
- All of the required paperwork and payment in the form of a cheque must be submitted within the outlined timelines. Otherwise, the City reserves the right to reject or cancel the Tree Buyout application.

(back to top)

NOTE: All trees identified as part of the Buyout Deficiency Plan will be included in the Buyout estimate and must not be replaced or altered for the Tree Buyout to proceed. If the Buyout trees are altered in any way, the site will not be eligible for FAC until the following year.

18.2. ROLES AND RESPONSIBILITIES

18.2.1. Landscape Development Inspector

- Confirm with the Consultant that the Municipal Improvement is eligible for a Tree Buyout.
- Provide the cost estimate to the Developer or their representative.
- Review documents for accuracy and completeness.
- Record the Buyout information in the 2023 Landscape Inspector Tracker.
- Approve the FAC Inspection on eServices once payment is received from the Developer.
- File all appropriate documents in the project folder.

18.2.2. Consultant

- Submit the required Tree Buyout documents to the City of Edmonton.
- Ensure all submitted documents are accurate and complete.
- Maintain ongoing communication with the Developer and the Landscape Development Inspector during the Buyout process.
- Ensure all necessary documents and required payments are submitted within the specified timeline.

18.2.3. Developer

- Initiate the Tree Buyout process with their Consultant.
- Authorize the form for the Tree Buyout.

(back to top)

- Provide payment to the City of Edmonton within the specified timeline.

18.2.4. Contractor

- Must not replace any trees for Municipal Improvement following the initial FAC Inspection.

18.2.5. Landscape Development Inspector Supervisor

- Sign the appropriate documents.
- Confirm the disbursement of funds with the Development Engineer.

18.3. FAC TREE BUYOUT APPLICATION

All Information and documentation can be found on the City's Tree Buyout Website.

After the initial FAC Inspection, the Consultant must request a Buyout via the 2023 Tree Buyout Application Form for Phase 1 and then Phase 2.

Phase 1: Using the 2023 Tree Buyout Application Form, the applicant will provide a high-level FAC Tree Buyout application request. It is recommended that the application be submitted using the form rather than sending it directly to the Landscape Development Inspector in order to avoid being missed and allow for immediate processing and ease of tracking.

The Landscape Development Inspector will confirm whether or not the site is eligible for the Tree Buyout Program within 2 business days.

Phase 2: Using the 2023 Tree Buyout Application Form, The applicant must provide the following documents:

- Tree Buyout Deficiency Inspection Plan
    - The plan must highlight and identify only the trees and the specific deficiencies included in the Buyout (Appendix J).
- Tree Buyout Cost Estimate (from City Forestry)
    - Note, additional Buyout deficiencies identified during the re-inspection may require an updated cost estimate.

(back to top)

- Alberta First Call

The Landscape Development Inspector will provide City Forestry with the documentation package. City Forestry will provide a quote for the Tree Buyout within 5 business days to the Consultant and copy the Landscape Development Inspector.

The Developer's representatives will review the provided cost estimate and request a re-inspection of the site which will include verification of the Tree Deficiency Plan and any relevant deficiencies from the original FAC Inspection. The re-inspection may be booked using the 2023 Informal Landscape Inspection Form.

Following the re-inspection, confirmation of the final cost will be provided by the Landscape Development Inspector to the Consultant. This confirmation of the final cost will start the 30-day window for the Developer to provide payment in the form of a certified cheque, payable to the City of Edmonton, and the signed Tree Buyout Declaration Form.

18.4. FINALIZATION OF FAC TREE BUYOUT PROCESS

Finalization of the Tree Buyout Process will require:

- A complete and signed FAC Tree Buyout Declaration Form from the Developer:
  - A digital copy may be sent to the Landscape Development Inspector but a signed physical form must accompany the payment.
- The Developer is to submit the cheque, payable to the City of Edmonton, via mail or courier to:
  - Development Servicing Agreement Unit
    Attention: (Provide Person's Name)
    2nd Floor Edmonton Tower
    10111-104 Avenue NW
    Edmonton AB T5J 0J4.
  - The cheque must be marked, "Tree Buyout + Servicing Agreement Reference Number".

(back to top)

- **Payment is due within 30 business days after receiving the confirmation of the final cost for the Tree Buyout from the Landscape Development Inspector.**

The Development Engineer will notify the Landscape Development Supervisor when the cheque and signed Tree Buyout Declaration Form have been received. After confirming that the payment amount is correct for the Tree Buyout, the Landscape Development Supervisor will sign the form and notify the Landscape Development Inspector that the signed form is complete and the Tree Buyout is approved. Additionally, the Landscape Development Supervisor will confirm the disbursement of funds with the Development Servicing Agreement Engineer.

The Landscape Development Inspector will update the status of the Tree Buyout / FAC requirement eServices accordingly. The FAC application will then proceed to the Department Review Task on ePlan. Please refer to Section 17.8 of this document for info on the required documentation for FAC and submission procedures.

All documents pertaining to the FAC Tree Buyout Process will be saved in the project folder.

18.5. MAINTENANCE END DATE

The Developer and their representatives will be required to continue maintaining the asset until the Tree Buyout payment, Tree Buyout documentation and approved FAC As-Built documents have been received by the City. The City will be monitoring the site throughout the Maintenance Period and reserves the right to cancel or reject the Tree Buyout Process, should the Developer and their representatives fail to maintain the site, to the satisfaction of the Landscape Development Inspector.

19. AMENITIES INSPECTIONS

Refer to the City's Design and Construction Standards, Volume 5, Section 8.2 (Supplementary Standards, Manufacturer's Manual, Servicing Agreement, and Engineering Drawings) as primary inspection guides.

(back to top)

19.1. ROLES AND RESPONSIBILITIES

19.1.1. Infrastructure Maintenance (IM) Inspector

- Conduct Hardstop Inspections.
- Conduct CCC and FAC Inspections.
- Provide the Consultant with a written report following the CCC/FAC Inspection.
- Update eServices whether the inspection is Approved or Not Approved.

19.1.2. Landscape Development Inspector

- Review and approve pre-screen and department review submissions in ePlan.
- Assign IM Inspector to the Municipal Improvement in eServices.
- File CCC and FAC Inspection documents, including inspection reports in the project Google Drive.

19.1.3. Transportation Development Inspector

- Review and inspect hard surfacing related to the stage of development.

19.1.4. Developer/Consultant

- Invite applicable stakeholders to a pre-construction meeting, where the scope of work, schedule, timelines and communication plans are discussed.
- Contact the appropriate Municipal Improvement Inspector to arrange Hardstop Inspections prior to CCC Inspections.
- Apply for CCC and FAC Inspections through eServices.
- Upload all required documents for inspection and certification through ePlan.

(back to top)

19.1.5. Contractor

- Construct the Municipal Improvement, as per the approved Engineering Drawings and specifications.

19.2. PRE-CONSTRUCTION MEETING

The Consultant/Developer is required to invite all applicable stakeholders to a kick-off or pre-construction meeting where the scope of work, schedule, timelines, communication plans and any other relevant business will be discussed.

19.3. HARDSTOP INSPECTION APPLICATION

To schedule a Hardstop Inspection, the Consultant must contact the appropriate Municipal Improvement Inspector via email or phone:

- Romeo Zoldan, Infrastructure Maintenance Inspector (**Romeo.Zoldan@edmonton.ca**)

The IM and Transportation Development Inspectors will document the required audits using a Construction Hardstop Inspection Form, in which the Consultant must upload a completed form when applying for CCC.

19.3.1. Hardstop Inspection Stages

Required Hardstop	Inspection Team *
Base excavation and sub-base compaction of the sub-base of any hard surface.	Transportation Group
Forms and reinforcement	Transportation Group
Rebar in concrete slabs if required	Transportation Group
Concrete testing, pouring and finishing	Transportation Group
Amenities inspection - Post contractor installation	Infrastructure Maintenance

(back to top)

***NOTE:** Hardstop Inspections must be requested between May 1st and November 30th, weather permitting dependent (i.e. frozen ground, low temperatures, rain, snow, etc.) and may be cancelled at the Landscape Development Inspector's discretion.

19.4. LANDSCAPE AMENITIES CCC INSPECTION APPLICATION

See Section 14.4 of this document for the general CCC Inspection process and document submission requirements.

If the CCC document submission is in order, the Landscape Development Inspector will approve the pre-screen task on ePlan. The CCC Inspection for the amenities will be coordinated by the IM Inspector, directly with the Consultant.

19.5. LANDSCAPE AMENITIES CCC INSPECTION

The CCC Inspection for landscape amenities will be conducted by the IM Inspector for Municipal Improvement.

The IM Inspector will conduct an on-site inspection to verify that:

- All amenities are installed, as per the approved plan and specification.
- The correct quantity of the amenity is provided and installed at the proper locations.
- All boards, slats, arms, or any other components are securely fastened - no loose or detached elements present.
- Stain colors are accurate and not chipped or faded.
- Waste receptacle lids are attached to the base.
- The amenity is undamaged and fully functional.
- There are no missing parts/components.
- The amenity is mounted on concrete and attached as per the specified details.
- Vandal-proof hardware (tamper resistant and locking) are provided for all site furniture, with a minimum of:
    - One per waste receptacle;

(back to top)

- Two per bench; and,
- Two per picnic table.

The Transportation Inspector will conduct an on-site inspection to verify that:

- Concrete is not cracked and/or exhibiting honeycombing;
- The amenity meets required standards for texture, levelness and smoothness; and,
- Dimensions and elevations are as per specifications.

If deficiencies are noted during the CCC Inspection:

- The Consultant will have 14 days to repair deficiencies and request a re-inspection by contacting the appropriate inspectors.
- No new deficiencies will be added to the deficiencies list during the re-inspection unless the deficiencies:
  - Occurred between the initial inspection and the re-inspection;
  - Creates a safety issue; and/or
  - Are significant in nature.
- Only one re-inspection will be permitted during the inspection process. If the identified deficiencies during the inspection are not rectified at the re-inspection, the inspection will be rejected on eServices and the Consultant will have to re-apply and request another inspection.
- If the Consultant requires more time to address deficiencies identified in the inspection before the 14-day deadline, they may request an extension but approval will be at the discretion of the Landscape Development Inspector.
- When no deficiencies are found during the CCC Inspection, the IM Inspector will mark the Inspection Results as 'Approved' in eServices, which will establish the benchmark date for the start of the Warranty Period.
- The Landscape Development Inspector will review and approve the documents uploaded in ePlan and maintain copies of the documents in the project file folder.

(back to top)

19.6. LANDSCAPE AMENITIES WARRANTY PERIOD

Please refer to the project Servicing Agreement for the specific length of the Warranty Period. The IM Inspector will perform audits following CCC in order to monitor any safety issues or defects in the hardware or structure.

The Developer and their representatives are responsible for maintaining and cleaning waste receptacles until FAC for them is obtained.

19.7. LANDSCAPE AMENITIES FAC INSPECTION

Refer to Section 17.8 of this document for general FAC Inspection processes and document submission requirements.

The IM Inspector will conduct an inspection to verify that:

- All the amenities are still in place, as per plans and that they are properly attached to a concrete pad.
- All boards, slats, arms, or any other component is securely fastened - no loose or detached elements are present.
- Stain colors are accurate and not chipped or faded.
- Waste receptacle lids are attached to the base.
- Waste receptacles are not overflowing.
- The amenity is undamaged and is fully functional as intended.
- Vandal-proof hardware (tamper resistant and locking) is provided for all site furniture, with a minimum of
    - One per receptacle;
    - Two per bench; and,
    - Two per picnic table.

(back to top)

When no deficiencies are noted during the FAC Inspection, the IM Inspector will mark the Inspection Results as 'Approved' in eServices.

Refer to Section 17.8 of this document for general FAC Inspection processes and document submission requirements. The Landscape Development Inspectors will review and approve the FAC documents uploaded in ePlan and maintain copies of the documents in the project folder.

20. FENCING INSPECTIONS

Refer to the City's Design and Construction Standards, Volume 5, Section 8.3 for general fencing requirements, manufacturer's manual, Servicing Agreement, and Engineering Drawings as primary inspection guides.

Fencing installed on City property will require a CCC and FAC Inspection by the Landscape DevelopmentInspector. Fencing that is installed on private property will only require a CCC Inspection, which may be conducted independently by the Developer/Consultant and providing the Landscape Development Inspector with photographs of the fence and its immediate surrounding properties for reference and record-keeping. This applies to wood screens, chain-linked fencing, wildlife fencing, Post and Rail fencing, decorative steel fencing, vinyl fencing, and any other approved styles.

It should be noted that fencing with metal pickets extending beyond the top rail are prohibited and may not be installed by the Developer.

20.1. ROLES AND RESPONSIBILITIES

20.1.1. Landscape Development Inspector

- Conduct a CCC and FAC Inspection for fencing installations on City Property.
- Input the inspection results in eServices and file documents in the project folder.

20.1.2. Transportation Development Inspector

- Conduct CCC and/or FAC Inspections for noise attenuation fencing, masonry pillars, and masonry entry features.

(back to top)

20.1.3. Developer/Consultant

- Apply for CCC certification for fencing in ePlan for fences on City Property and via photo submission for fences constructed on private properties.
- Oversee and manage the installation of the fence and ensure that inspection requirements for CCC and/or FAC are satisfied.

20.1.4. Contractor

- Install fencing as per the approved Engineering Drawings.
- Address any deficiencies identified by the Landscape Development Inspector, within the specified timeframe.
- Provide maintenance and repair services during the Warranty Period, as required.

20.2. FENCING CCC INSPECTION APPLICATION

Refer to Section 14.0 of this document for general CCC Inspection processes and document submission requirements.

For photo submissions, the CCC application requires additional information, as outlined below.

20.3. APPLICATION FOR PHOTO CCC INSPECTION

The Consultant shall upload the following documents to ePlan:

- Fencing CCC Inspection Checklist
- CCC Inspection Request Form
- Pre-inspection Deficiency Report (See Appendix G):
    - Ensure any deficiencies are noted on the plan and clearly show their locations, referring to the corresponding numbered ePlan photograph.
- The latest City approved Engineering Drawings and any other supplementary drawing details:

(back to top)

  - The approved Engineering Drawings must be highlighted to identify the extent of the Municipal Improvement, as per the Project's Servicing Agreement.
  - The drawings must be submitted in a single PDF document.
  - The highlighted plan must indicate the direction in which the photographs were taken.

- Photographs, uploaded to ePlan, showing the entire fence (numbered, labelled, and dated).

NOTE: If the City discovers incorrect information or any misrepresentation in the report within 30 days of the report being submitted, the CCC will be rejected. The application will have to be re-submitted for inspection with corrections.

20.4. ELIGIBILITY FOR PHOTO INSPECTIONS

Photo inspections may be used for small lengths of fencing (up to 40m), such as those along walkways and flankages. Longer sections of fencing and larger sites are not eligible for photo inspections and an on-site inspection with a Landscape Development Inspector is required.

When submitting photos of fencing inspections, continuous photos for the entire fencing should be provided to the City as one complete package, documenting the state of the fence at the time of inspection. A minimum of one photo per 5 panels (approximately every 15 meters or 50 feet) is recommended.

The photographs must show the following:

- Installation as per approved Engineering Drawings and any other supplementary details. Any deviations will require Redline Drawings.
- Height of the fence, using a measuring tape as reference.
- Entire length of the fence, ensuring no sections are missing.
- Height of the bottom gap, using a measuring tape as reference.

(back to top)

To ensure ease of reference and review, photographs must be taken in sequential order, with temporary markers as reference points placed on or near the fence. All photographs should be numbered sequentially, appropriately labelled, and dated.

If deficiencies are identified during the inspection, the Consultant must take a photograph of the deficiency followed by another photograph showing the corrected deficiency.

The fence must not be covered in debris, such as mud, dirt, or snow, to the degree that the Landscape Development Inspector cannot properly inspect the fence. The Landscape Development Inspector must be able to observe and measure the gap between the bottom of the fence and the existing grade.

20.5. COMMON ISSUES FOR FENCE INSPECTIONS

Significant cracks may be present in the vertical posts of a Wood Screen Fence. Fence posts that have severe cracking threaten the structural integrity of the fence and should be replaced before approval may be provided by the Landscape Development Inspector.

Wood Screen fencing must be stained prior to installation. All wood cuts are to be coated with two coats of approved wood preservatives. All posts are to be pressure treated.

(back to top)

All posts to be pressure treated

Post and Rail fencing require wood stain

Final Grading and Landscaping: The final grade landscaping may not be completed at the time of the fence inspection. This may make it difficult to determine the final gap between the bottom of the fence and the ground and concrete pilings may be visible. Survey stakes may be requested on City land to show the final grade.

When the surrounding landscape has achieved FAC and the fence is yet to be inspected, it is pertinent to leave a gap between the bottom of the fence and the existing grade of about 50 mm - 75 mm (as specified in the City's landscape drawing details). ESC socks and silt

(back to top)

fencing should be removed from City Property and the area should be restored, as required.

ESC sock needs to be removed and the landscape restored by the Developer.

ESC sock and silt fencing are located inside the private property and do not interfere with the city landscape.

20.5.1. Fencing FAC Inspection

Fencing improvements on City Property will require FAC. For general FAC processes and documentation submission requirements, , please refer to Section 17.0 of this document.

(back to top)

21. PLAYGROUND INSPECTIONS

Refer to:

- City's Design and Construction Standards, Volume 5: Landscaping, Section 9.3.
- Manufacturer's Manual, Servicing Agreement, and latest approved Engineering Drawings.
- Playspaces and Wheeled Sport Facility Design and Construction Standards.

21.1. ROLES AND RESPONSIBILITIES

21.1.1. Landscape Development Inspector

- Review and approve pre-screen and department review submissions in ePlan.
- Assign IM Inspector for the Municipal Improvement in eServices.
- File CCC and FAC Inspection documents including the inspection report in the project Google Drive.

21.1.2. Infrastructure Maintenance (IM) Inspector

- Conduct pre-inspections, Hardstop Inspections, Audit Inspections, CCC and FAC Inspections for playground installations.
- Provide the Consultant with a written report following the completion of a Hardstop Inspection and CCC/FAC Inspections.
- Input the inspection results in eServices.

21.1.3. Transportation Development Inspector

- Conduct Hardstop Inspections related to subgrade, concrete sidewalks, curbs and playground skirts.

(back to top)

21.1.4. Developer/Consultant

- Invite all applicable stakeholders to a pre-construction meeting where the scope of work, schedule, project timelines, and communication plans are discussed.
- Contact the appropriate IM Inspector to arrange Hardstop Inspections and pre-inspection prior to conducting CCC Inspections.
- Upload required documents into ePlan prior to any scheduled inspection (see pre-inspection requirements).
- Upload required documents to ePlan after the approval of an inspection as part of the department review.

21.2. PLAYGROUND PRE-CONSTRUCTION MEETING

Consultants/Developers are required to invite all relevant stakeholders for a kick-off or pre-construction meeting where the scope of work, schedule, project timelines, communication plans and any other relevant business are discussed.

Refer to APPENDIX O: PLAYGROUND CCC/FAC CITY FORM

21.3. PLAYGROUND CONSTRUCTION HARDSTOP INSPECTION REQUIREMENTS

There are stages in the playground construction process that are critical to ensure the safety and quality of the equipment. These critical inspection stages are referred to as hardstops that must be inspected before proceeding.

Hardstop Inspections must be conducted throughout the construction of the playground and tracked and recorded to be uploaded for the CCC Inspection application.

If a majority of the Hardstop Inspections are missed, the infrastructure installed will need to be removed and replaced at the discretion of the Inspectors (IM, Transportation, and/or other Subject Matter Experts).

(back to top)

21.3.1. Hardstop Inspections Application

To schedule a Hardstop Inspection, the Consultant must contact the appropriate inspector(s):

- Brennan Link, Infrastructure Maintenance Supervisor (**brennan.link@edmonton.ca**)
- Transportation Development Inspector Group, contact the quadrant Inspector
- Subject Matter Expert - Landscape Development Supervisor, Olivier Le Tynevez-Dobel (**olivier.letynevez-dobel@edmonton.ca**)

The Infrastructure Maintenance, Transportation, or Subject Matter Expert inspector will document the required audits using a Playground Construction Hardstop Inspection Form, in which the Consultant must upload a completed form when applying for CCC.

21.3.2. Hardstop Inspection Stages

Hardstop Inspections must be requested between May 1st and November 30th, weather dependent (i.e. frozen ground, low temperatures, rain, snow, etc.) and may be cancelled at the Landscape Development Supervisor's discretion.

Required Hardstop Inspection	Inspection Team
Base excavation and sub-base compaction for hard surfaces	Subject Matter Expert
Base excavation and sub-base compaction for playgrounds	Subject Matter Expert
Inspect the drainage pipe and weeping tile prior to the next step of the project	Subject Matter Expert
Inlet hook up and verification of grades with invert shots of weeping pipe drainage	Subject Matter Expert
Compaction of the sub-base of any hard surfaces and pour-in-place surfaces	Transportation Development Inspections
Testing as per the Landscape Development Inspector's request, ie. Head Impact Criteria (HIC) test	Infrastructure Maintenance Operations
Rebar in concrete slabs	Transportation Development Inspections

(back to top)

Required Hardstop Inspection	Inspection Team
Curb pours	Transportation Development Inspections
Any concrete sidewalks / concrete skirts	Transportation Development Inspections
Equipment layout inspection - before pile foundation drilling	Infrastructure Maintenance Operations
Inspect and approve the auger holes with playground structure in place before concrete is poured, verify the size of the hole for footings (as per manufacturer) and plumb and level prior to pouring of footings	Infrastructure Maintenance Operations
Inspection of concrete pour for playground structures and any concrete clean-up needed on the play structures	Infrastructure Maintenance Operations
Inspect and approve the playground structures in place before safety surfacing is installed	Infrastructure Maintenance Operations
Final Inspection - post protective surfacing installation. Verify positive grading of the sub-base	Infrastructure Maintenance Operations
Inspection of the final surfacing and sub material as per drawing details	Infrastructure Maintenance Operations
Testing as per the Landscape Development Inspector's request, ie. HIC test	Infrastructure Maintenance Operations

21.4. PLAYGROUND CCC INSPECTION REQUEST REQUIREMENTS

Prior to the CCC application, the Developer/Consultant must:

- Ensure the improvement is ready to be inspected (clean, accessible and unobstructed).
- The work must be concluded, and construction complete as per the approved Engineering Drawings.

(back to top)

- Formally acknowledge that the improvement is complete, and is free of safety hazards. This will be confirmed by a "Deficiency Plan" supplied with the application for inspection. (See Appendix G).
- Arrange an Inspection with Infrastructure Maintenance after the installation of all equipment and protective surfacing prior to the CCC Inspection application.

21.5. PLAYGROUND CCC INSPECTION APPLICATION

The inspection request must be initiated through eServices. An upload of supporting documents, to the Inspection Documents folder, on the specified ePlan Project is required to complete the request.

The upload to ePlan must include:

- CCC Landscape Inspection Request Form
- Pre-inspection Deficiency Plan (See Appendix G)
- The latest City-approved Engineering Drawings (and/or Redline Drawings), updated with the changes made at CCC. **If any changes have occurred from the approved plans, upload updated plans. Failure to provide the updated plan for the inspection may result in an incomplete inspection.**
    - The drawings must be highlighted accordingly in order to identify the scope of inspection, matching the specified improvement within the Project's Servicing Agreement. (See Appendix H)
- Playground Construction Hardstop Inspection Form, with noted and corrected deficiencies from the Hardstop Inspections conducted with the IM Inspector.
- Equipment installation manual
    - Submit compaction tests for subbase for review (compaction of subbase 98%, or as per plans, including under the playground curbing)
    - Concrete materials test (as per City's Design and Construction Standards)
    - Submit Head Impact Criteria (HIC) tests

(back to top)

21.6. PLAYGROUND CCC INSPECTION

Once the document submission is in order, the Landscape Development Inspector will approve the pre-screen task on ePlan, assign the improvement to the IM Inspector in eServices and the CCC Inspection will be coordinated by the IM Inspector with the Developer/Consultant.

At the time of CCC Inspection, the IM Inspector shall receive a maintenance kit from the Developer/Consultant:

- Maintenance kit (paint and hardware samples) to be provided to the City Playground Inspector at CCC Inspection. These items are requested to aid in the replacement of components or to complete minor repairs to the playground structure. These may include items such as paint samples, general bolts or rivets to verify size and style.

The IM Inspector will provide the Consultant with an inspection report.

If deficiencies exist after the CCC Inspection:

- The Consultant will have 14 days to repair deficiencies and request a re-inspection by contacting the IM Inspector.
- No new deficiencies will be added to the list during the re-inspection, unless the deficiencies occurred between the initial inspection and the re-inspection, create a safety issue, or are significant in nature.
- Only one re-inspection will be permitted during the inspection process. If the identified deficiencies from the inspection are not rectified at the re-inspection, the CCC Inspection will be rejected in eServices and the Consultant will have to re-apply and request for a new inspection.

If the Consultant needs additional time to amend the deficiencies prior to the deadline, the Consultant may request to extend the 14-day deadline. Extensions may be granted at the IM Inspector's discretion.

If the inspection fails, the IM Inspector will input 'Not Approved' for the Inspection Results in eServices and the Consultant will need to reapply for a new CCC Inspection once the deficiencies are corrected.

(back to top)

When no deficiencies are noted in the CCC Inspection, the IM Inspector will input 'Approved' for the Inspection Results in eServices. The date for which the CCC Inspection was approved will be the benchmark date that will initiate the Warranty Period.

The Landscape Development Inspector will review and verify documents uploaded in ePlan for the CCC Department Review and file the documents in the project folder in Google Drive.

21.7. PLAYGROUND WARRANTY PERIOD

Refer to the Servicing Agreement for the length of the Warranty Period.

The IM Inspector will conduct audits of the playground installation after CCC is achieved. These Audit Inspections are intended to identify any safety concerns and defects in the hardware/structure.

21.8. PLAYGROUND FAC INSPECTION

See Section 17.0 for general FAC Inspection and document requirements. FAC is to be conducted by the IM Inspector.

After completing the inspection, the IM Inspector will provide the Consultant with an inspection report.

When no deficiencies are noted during the FAC Inspection, the IM Inspector will input 'Approved' for the Inspection Results in eServices.

See FAC documents required at department review. In addition, the Developer must submit a Letter of Warranty for the playground structure and any poured-in-place surface.

The Landscape Development Inspector will review and verify documents uploaded in ePlan for the FAC Department Review and file the documents in the project folder in Google Drive.

(back to top)

22. SHARED PARK SITE INSPECTIONS

The Shared Park Development (SPD) Program is an agreed-upon partnership program between the City of Edmonton and the development industry where Developers design, construct and pay for a substantial cost of park development. These parks are developed to provide communities with amenities such as sports fields, landscaping, social gathering areas, playgrounds and much more. A clear understanding of all stakeholders' roles is imperative to ensure efficiencies in the program and the quality of these parks.

Shared Park Sites consist of multiple components and as such, coordination with different inspectors is required. Any hard surfacing component will be inspected by the City's Transportation Development Inspections Unit and will include CCC and FAC approvals. Landscape components in relation to shared park sites will be inspected by the Landscape Development Inspections Unit and will only require CCC approval. If there are any variances, the terms of the certification are defined in the Shared Parks Agreement.

22.1. ROLES AND RESPONSIBILITIES

The following outlines the roles and responsibilities of the different stakeholders throughout the CCC Inspections and approval process for Shared Park Sites.

22.1.1. Developer/Consultant

The Developer/Consultant is responsible for overseeing the construction of the site. They will ensure that start-up meetings are set up prior to construction including all relevant stakeholders and inspection units. They will ensure that proper steps are taken in order to certify completion by way of a CCC. This includes the markup of site deficiencies and circulation of the marked-up plan to all relevant inspection parties.

22.1.2. City's Development Inspections Unit

The City's Development Inspections Unit is responsible for completing the inspections for Shared Park Sites projects. They will perform audits and major milestone inspections during construction and will be responsible for communicating with the Consultant and the Shared Park Development Group throughout the certification process (inspections, ePlan, eServices and deficiencies). The Development Inspections Unit will issue CCC and FAC approvals

(back to top)

following conjunction with the Shared Park Development Group. Documentation supporting the certificate approvals would be collected and reviewed.

22.1.3. Shared Park Development Group

As the owner of the Shared Park Development Agreement, this group will act as the Project Manager throughout the lifecycle of the project. This includes concept development, design, construction and establishment of the site. If the scope of any part of the project, including inspections, is beyond the landscape construction standards, the Shared Park Development Group will be the ultimate decision-making entity. This group will provide the final approval of the project at CCC, with consultation of the City's Development Inspections Unit.

22.1.4. City Operations

City Operations will be involved in the concept development and design review stages of the Shared Park project. They will assume responsibility for the maintenance of the site, in accordance with the SPD agreement once CCC is achieved.

22.2. SHARED PARK CCC APPLICATION

Prior to the construction of a Shared Park, the Developer/Consultant must:

- Ensure Engineering Drawings are approved.
- Ensure the Development Permit application is approved.
- Ensure on-site pre-construction meetings are conducted.
    - Parties involved include the Developer/Consultant, Contractor, Development Inspection Unit, and Shared Park Development Group
    - The list of milestone audits and the Municipal Improvements from the SPD Agreement are to be reviewed by all parties
    - The project timelines, lines of communication and the inspection requirements and process should be reviewed during the pre-construction meeting.

(back to top)

22.3. SHARED PARK CCC INSPECTION REQUEST REQUIREMENTS

Shared Park inspections shall follow the procedures outlined in this guideline as follows:

- Milestone Audit Inspections shall be conducted by the City's Development Inspections Unit, as noted in Section 5.0 of this document, with notification to the SPD Group. Refer to the Shared Park Agreement for the list of required Milestone inspections. The Informal Inspection Request Google Form is available in the City's website and is to be submitted 48 hours prior to construction.
- Refer to Section 8.0 of this document for CCC Inspection procedures, with notification to the SPD Group of all inspections and Deficiency Plans.

22.4. SHARED PARK CCC CERTIFICATE REQUIREMENTS

Since Shared Park projects are handed over to the City at CCC, all documentation is required to be provided at CCC application. New Shared Park projects are in ePlan and documentation is submitted through the normal department review processes. Any Shared Park projects not in ePlan will require submission of the document package with the paper application.

The submission of the documentation package for department review in ePlan must include the following:

- Signed Milestone Audit Inspection Form
- Maintenance Logs
- Separate Landscape Plan (PDF file format) indicating the year planted (single searchable PDF document) for all trees. Must be indicated on a copy of the as-built drawing (See Appendix L)
- Tangible Capital Asset (TCA) Form
- As-Built Drawings
    - PDF
    - AutoCAD

(back to top)

22.5. APPEAL PROCESS

If there is a disagreement with the observations of the Landscape Development Inspector, the Developer/Consultant may request a review/appeal to the Landscape Development Inspector. The Developer/Consultant shall identify areas of concern noted on the Deficiency Plan and present them to the SPD Group within 14 days.

If the scope is beyond the landscape construction standard, the Developer/Consultant will determine the reason and justification for the discrepancy and present it to the SPD Group. Depending on the deficiency presented, a site inspection may be required. The SPD Group will then make the decision to approve or reject the deficiencies, based on the reasoning provided. The SPD Group will need to document the justification of their decision and ensure that all affected stakeholders are contacted.

The SPD Group may approve the CCC and provide written notification to the Development Inspections Unit to complete the approval in eServices and the documentation approval tasks in ePlan.

23. NATURAL AREAS INSPECTIONS

23.1. INTENT OF INSPECTION FOR NATURAL SITES

See Appendix F for the Natural Area Inspection Checklist.

References:

- Project's Servicing Agreement
- Site-specific Natural Area Management Plan (NAMP)
- City Policy - C531 Natural Area Systems supersedes City Policy - C467
- Corporate Tree Management Policy (C456C)
- Municipal Government Act (MGA)
- Migratory Birds Act (Federal)
- Fish and Wildlife Act (Provincial)
- Weed Act.

(back to top)

23.2. PRE-CONSTRUCTION INSPECTION

The Pre-Construction Inspection is required for documenting any disturbance to the natural area after the Engineering Drawings are approved and prior to construction, during the inspection season. This will identify safety concerns and any requirements still needing remediation, as per the Natural Area Management Plan (NAMP). Failure to contact Landscape Development Inspections may result in additional deficiencies at the time of CCC as the Landscape Development Inspector will be unable to determine or establish the condition of the site prior to the construction occurring. The Natural Area Inspection Checklist shall be completed by the Consultant to track the site conditions before, during and after construction, see Appendix F for the checklist.

To conduct the Pre-Construction Inspection, the following steps must be taken:

- The Consultant shall submit a request for inspection using the appropriate Google Form with a minimum of 48 hours notice prior to the start of construction activities.
- Submit plans highlighting the entirety of the natural area boundary.
- The site should be staked out, clearly indicating the boundaries of the improvement being inspected.
- Confirmation of the inspection appointment by the Landscape Development Inspector following coordination with all applicable inspectors and stakeholders.
- During the pre-construction inspection, items of concern are documented on the highlighted map provided.
- Photographs to document pre-construction conditions shall be taken. Refer to the Checklist requirements for more info.
- Documentation created for and during the pre-construction inspection will be saved in the project folder in Google Drive by the Landscape Development Inspector.

23.3. AUDIT INSPECTIONS

See Section 12.0 of this document for general audit requirements.

(back to top)

The Landscape Development Inspector will monitor the site throughout the construction of the development area in order to ensure that no disturbance of the identified Natural Area(s) occur(s).

23.4. NATURAL AREAS CCC / FAC INSPECTIONS

As per the Project's Servicing Agreement, some natural areas will not require FAC since no other improvements to the site will be added (left in the intended state).

The CCC and FAC Inspections are to follow the inspection processes outlined in Section 14.0 and Section 17.0 of this document, respectively. **In addition to these requirements, when applying for an inspection, Natural Areas shall have the following uploaded to ePlan for Pre-Screen approval, prior to inspection:**

- Pre-construction inspection report capturing site conditions prior to construction. Other supporting documents may include:
    - Supplementary documentation in adherence to the NAMP.
    - Site photos indicating pre-construction conditions.
- A pre-inspection report.

The Landscape Development Inspector shall inspect the Natural Area for the following inspection criteria outlined below:

- Disturbance: The Landscape Development Inspector shall look for evidence of disturbance in the Natural Area, including but not limited to:
    - Dumping and stockpiling
    - Change in grade
    - Noxious and prohibited noxious weeds, in accordance with the Alberta Weed Control Act
    - Identify any environmental issues and ensure appropriate corrective action or controls are in place
- Sensitive or protected features to be aware of:
    - Wildlife and wildlife habitat (consider both terrestrial and aquatic animals)

(back to top)

- Evidence of birds nests or presence of birds
- Water bodies (e.g., wetlands, streams, creeks)
- Vegetation (e.g., trees, rare plants, noxious weeds)
- Archeological, paleontological, and/or other historical resources
- Parks, protected and other designated lands
- Site contamination and/or other underground infrastructure (e.g., monitoring wells, and pipelines)

- Approved development in a Natural Area (ie. trails) should be a separate improvement item.
- If the Natural Area is affected by any construction related activities, restoration and/or remediation will be assigned to the Natural Area improvement.
- If hazardous tree removals are required in relation to the trails adjoining the Natural Area, that requirement will be assigned to the "top of bank" improvement.

Disturbance to Natural Areas

(back to top)

Disturbance to Natural Areas

Natural Sites, Undisturbed

(back to top)

24. LOW IMPACT DEVELOPMENT (LID) INSPECTIONS

Refer to the City's Design and Construction Standards, Volume 3 and Volume 5, for information, along with other resources available in the City of Edmonton website:
Low Impact Development (LID) | City of Edmonton

(back to top)

APPENDIX A: CODE OF CONDUCT AND RESPECTFUL WORKPLACE

Refer to the City of Edmonton website for the current code of conduct:

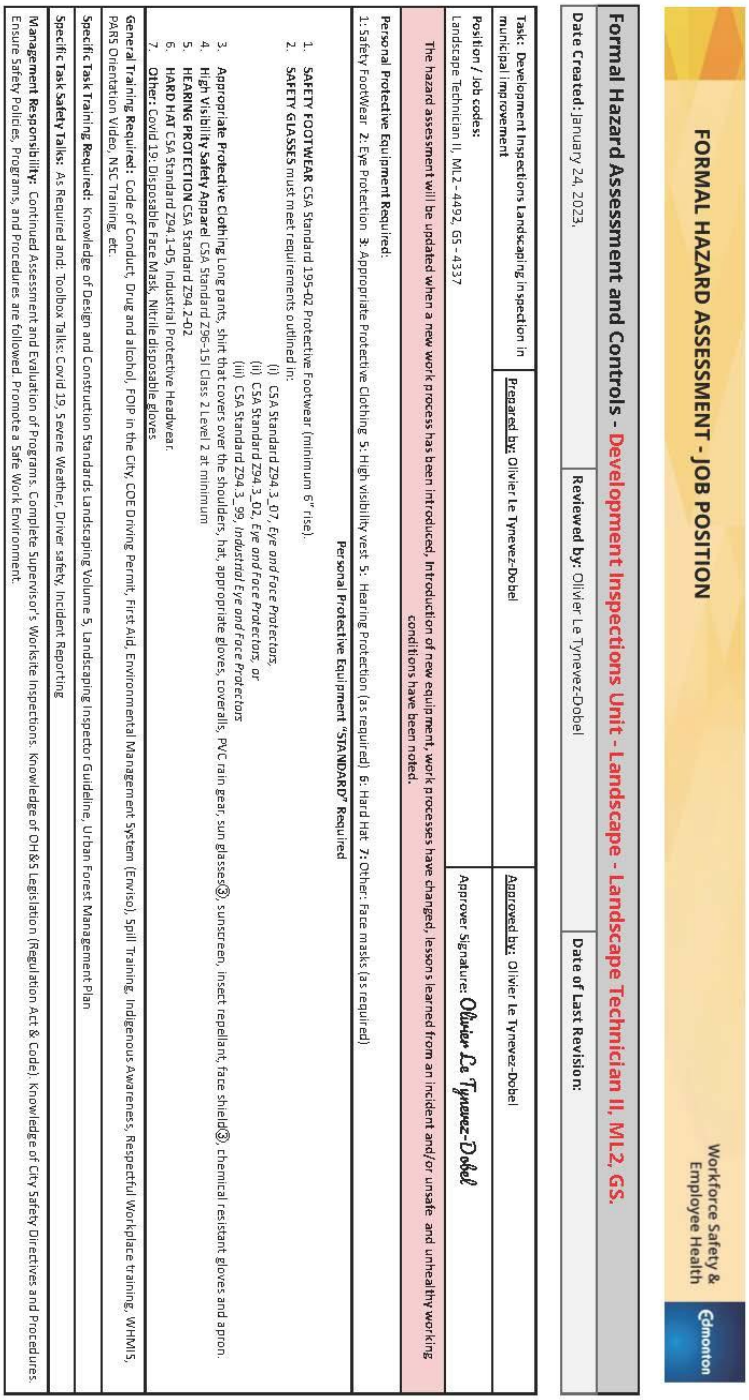
Code of Conduct | City of Edmonton

Respectful Workplace

(back to top)

APPENDIX B: LANDSCAPE INSPECTIONS HAZARD ASSESSMENT

The following hazard assessment form is for Landscape Development Inspectors:



FORMAL HAZARD ASSESSMENT - JOB POSITION

Workforce Safety & Employee Health

Edmonton

Formal Hazard Assessment and Controls - Development Inspections Unit - Landscape - Landscape Technician II, ML2, GS.

Date Created: January 24, 2023.	**Reviewed by:** Olivier Le Tyvevez-Dobel	**Date of Last Revision:**

Task: Development Inspections Landscaping inspection in municipal improvement	**Prepared by:** Olivier Le Tyvevez-Dobel	**Approved by:** Olivier Le Tyvevez-Dobel
Position / Job codes: Landscape Technician II, ML2 – 4492, GS – 4337		Approver Signature: *Olivier Le Tyvevez-Dobel*

The hazard assessment will be updated when a new work process has been introduced, introduction of new equipment, work processes have changed, lessons learned from an incident and/or unsafe and unhealthy working conditions have been noted.

Personal Protective Equipment Required:

1: Safety FootWear 2: Eye Protection 3: Appropriate Protective Clothing 5: High visibility vest 5: Hearing Protection (as required) 6: Hard Hat 7: Other: Face masks (as required)

Personal Protective Equipment "STANDARD" Required

1. **SAFETY FOOTWEAR** CSA Standard 195-02 Protective Footwear (minimum 6" rise).
2. **SAFETY GLASSES** must meet requirements outlined in:
   (i) CSA Standard Z94.3_07, *Eye and Face Protectors*,
   (ii) CSA Standard Z94.3_02, *Eye and Face Protectors*, or
   (iii) CSA Standard Z94.3_99, *Industrial Eye and Face Protectors*
3. **Appropriate Protective Clothing** Long pants, shirt that covers over the shoulders, hat, appropriate gloves, coveralls, PVC rain gear, sun glasses(3), sunscreen, insect repellant, face shield(3), chemical resistant gloves and apron.
4. **High Visibility Safety Apparel** CSA Standard Z96-15| Class 2 Level 2 at minimum
5. **HEARING PROTECTION** CSA Standard Z94.2-02
6. **HARD HAT** CSA Standard Z94.1-05, Industrial Protective Headwear.
7. **Other:** Covid 19: Disposable Face Mask, Nitrile disposable gloves

General Training Required: Code of Conduct, Drug and alcohol, FOIP in the City, COE Driving Permit, First-Aid, Environmental Management System (Enviso), Spill Training, Indigenous Awareness, Respectful Workplace training, WHMIS, PARS Orientation Video, NSC Training, etc.

Specific Task Training Required: Knowledge of Design and Construction Standards Landscaping Volume 5, Landscaping Inspector Guideline, Urban Forest Management Plan

Specific Task Safety Talks: As Required and: Toolbox Talks: Covid 19, Severe Weather, Driver safety, Incident Reporting

Management Responsibility: Continued Assessment and Evaluation of Programs. Complete Supervisor's Worksite Inspections. Knowledge of OH&S Legislation (Regulation Act & Code). Knowledge of City Safety Directives and Procedures. Ensure Safety Policies, Programs, and Procedures are followed. Promote a Safe Work Environment.

(back to top)

(back to top)

Senior Landscape Technician III: Annual Update of Hazard Assessments & Controls (Annually by March 31st). Complete Supervisor's Worksite Inspections. Ensure delivery of Safety Talks. Knowledge of OH&S Legislation (Regulation, Act & Code.) Knowledge of City Safety Directives and Procedures. Ensure Safety Policies, Programs and Procedures are followed. Promote a Safe Work Environment.
Landscape Technician II: Adhere to Hazard Assessments & Controls. Complete Worksite Inspections. Report any Safety Hazards. Follow Safe Working Procedures. Use Appropriate PPE. Put Safety First. Ask Questions if unsure. Private vehicle conditions: minimum Class 5 driver's licence, Public Liability business insurance, the employee responsible for all private vehicle maintenance.

Rating Matrix			
Assigned Value	**1**	**2**	**3**
Severity	First Aid	Lost Time Injury (Medical Aid or Temporary LTI)	Fatal (LTI Permanent Disability or Fatal)
Probability	Unlikely	Probable	Likely
Exposure	Rarely (less than once a month)	Often (three times a week)	Every Day
Rating Score	Serious 7, 8, 9 Moderate 5, 6 Low 3, 4	Note: Rate 1 is to be completed with no controls in place, and Rate 2 to be completed with controls in place	

The hazards listed on the forms are assessed according to the guidelines in the City of Edmonton Hazard Assessment and Control Standard. A summary of the terms used on the forms is given below		
S = Severity	If the hazard may result in a **1st Aid incident, medical aid incident or minor property damage**	**Assign 1 point**
	If the hazard may result in **a lost time incident or significant property damage**	**Assign 2 points**
	If the hazard may result in a **permanent disability, fatality or major property damage**	**Assign 3 points**
P = Probability	If an incident due to exposure to this hazard is **unlikely to occur (i.e possible but not probable)**	**Assign 1 point**
	If an incident due to exposure to this hazard is **likely to occur**	**Assign 2 points**
	If an incident due to exposure to this hazard **will occur**	**Assign 3 points**

Updated November 23 2021

(back to top)

E = Exposure	If the exposure to this hazard is **rare (once per month or less)**	**Assign 1 point**
	If the exposure to this hazard is **often (more than once/month but less than 3 times per week)**	**Assign 2 points**
	If the exposure to this hazard is **routine (more than 3 times per week)**	**Assign 3 points**
T = Total	Add points assigned from each category. Total is used to determine the level of risk that is associated with the identified hazard.	
Rating	Total = 3 or 4	**Low - L**
	Total = 5 or 6	**Moderate - M**
	Total = 7, 8 or 9	**Serious- S**
Definition of Rate	Rate 1 - is without controls in place - Rate 2 - is with controls in place	

Updated November 23 2021

(back to top)

Tasks (List all tasks/activities of the job/position)	***Hazards*** (biological, chemical, ergonomic, physical, psychological, safety)	S	P	E	T	Rate 1	***Existing Controls*** (List the controls for each hazard: Elimination, Engineering, Administrative, PPE Controls)	S	P	E	T	Rate 2
General Office Duties	Collisions with other people at blind corners	1	2	3	5	M	• All staff are responsible for paying attention while walking - do not use a cell phone while walking • All staff responsible for walking - don't run in the office • Remove objects that create blind corners or visual obstruction • Utilize convex mirrors where possible • Don't cut corners, walk around the corner assuming someone is there.	1	1	2	4	L
	Exposure to Biohazards: Examples: Cold and flu viruses Workstation Shared workspace	2	1	3	6	M	• Utilize COVID-19 Employee guide, COVID-19 Hazard assessment, as well as Pre-Screen Checklist • Practice Physical Distancing and utilize face covers when distancing is not attainable • Avoid high touch surfaces when possible and sharing of personal items • Contact an Occupational Health Nurse if concerned about an unusual exposure (e.g. Tetanus or Hepatitis). Contact 780-496-7853 • Encourage staff to get annual flu shots. • Frequent handwashing with soap and water or hand sanitizers • Sanitize phones, keyboards, and other surfaces with disinfectant wipes on a routine basis	1	1	1	3	L
	Slips/Trips/Falls: Examples: Protruding/frayed carpet Slippery Surfaces Inappropriate footwear Uneven walking surfaces Obstructions or loose cords	2	2	2	6	M	• Cover or tape down cords or cables • Keep walkways and cubicle/office entryways clear of clutter and other obstructions • Clean up spills and mark or identify wet areas • Select and wear appropriate footwear • Ensure that emergency exits are kept clear at all times • Regularly inspect work areas to ensure it is free of slip and trip hazards • If maintenance issues are found, report to the floor representative so they can communicate to property management. • Housekeeping/cleaning • Keep eyes on the path of travel and remain attentive to task when moving from area to area	1	1	1	3	L
	Ergonomics	2	2	3	7	S	• Utilize the Remote Work Location Hazard Assessment & Inspection Form to assess	1	1	3	4	L

Updated November 23 2021

(back to top)

	Examples: Musculoskeletal injury and or reduced productivity due to poor and incorrect workstation setup or design -Eye strain						Working From Home conditions. Review and confirm that all Mandatory Safety Measures are implemented in the Remote Location • Employees are aware of the Corporate Office Ergonomic Self-assessment Tool and One-City Ergonomic Supports. All concerns should be addressed to the supervisor and Corporate Ergonomist if needed ○ Corporate purchasing standards should be in place to address the acquisition of new office furniture to ensure furniture is suitable for work tasks and ergonomically designed (Desks & Chairs) ○ Use designated methods and expertise to set up and or redesign workstation initially • Employee makes efforts to work in a neutral and supportive position with proper posture and maintains awareness while seated, i.e. (lower back supported and feet flat on floor or footrest) • Ensure monitor is at the proper height and distance level with the eyes, display screen clean and lighting is adequate, keyboard and mouse are within easy reach • Avoid extended phone use or utilizes headset to avoid deviated neck or shoulder positioning • Utilize safe manual lifting techniques • Take small breaks from tasks to stretch, move and change postures and take periodic rest breaks for eyes. • Use appropriate equipment (i.e. Step Stool) to retrieve equipment and supplies from levels where reaching is required					
	Manual Material Handling Examples Awkward postures or overexertion due to oversized, awkward or heavy loads.	2	2	1	5	M	• Assess and improve material handling conditions (e.g. weight of the object and the manner and frequency in which it is handled) • Awareness of proper body positioning • Staff should ask for assistance when required if the object is too heavy • Use equipment (dollies) to assist with manual material handling activities whenever practical • All staff are responsible to "Warm Up" and/or prepare themselves before handling the object • Staff should assess their readiness and capability for lifting the object before doing so	1	1	1	3	L
Walking to other sites	Severe weather conditions - cold, heat, snow,	1	1	2	4	L	• Anticipate potential problems by listening to local weather forecasts	1	1	1	3	L

Updated November 23 2021

for meetings from office	reduced visibility						• Be familiar with the emergency procedures and prepared to respond appropriately if necessary • Be prepared for the conditions by wearing hot or cold weather clothing, proper footwear, or rain gear • If walking in the Downtown area, use indoor traffic routes (pedways) when possible						
Dealing with difficult colleagues or workload demands	Physiological Hazards: Stress in the workplace Overwork or burnout Fatigue or shift work Violence, Harassment, Bullying in the workplace	2	2	2	6	M	• Employee Wellness and Supports page for emotional, physical, mental, and spiritual resources • Employee and Family Assistance Program Lifeworks by Morneau Shepell 1-855-798-7289, 24/7 assistance • Peer Support and City Chaplain John Dowds 780-496-7863 • Mental Health First Aiders or Mental Health Living Consultants • Safe disclosure office 1-844-298-6782 or safedisclosure.ca • Utilizing the Disability Management team if needed • The Working Mind training for employees and supervisors • Respectful workplace training and directive for employees and supervisors	2	1	1	4	L
Landscape Inspection Site Visits	Weather Elements - Sun Exposure (sun burns, dehydration, heat stroke), Lightning Exposure, Cold exposure, Air quality (Dust, Fires)	2	2	2	6	M	• Sunscreen • Keep Hydrated • Dress appropriately to the weather conditions • Take breaks when needed • Use shaded areas on sunny days to cool down • In extreme weather conditions, job may have to be rescheduled, consult with your supervisor • Pay attention to public health warnings and Reference Air quality index • Reduce levels of physical activity as necessary to decrease inhaling pollutants when air quality index is high • When air quality health index is high, utilize vehicle and keep windows closed, set ventilation to recirculate	2	1	1	4	L
	Severe weather conditions - cold, heat, snow, reduced visibility	1	1	2	4	L	• Anticipate potential problems by listening to local weather forecasts • Be familiar with the emergency procedures and prepared to respond appropriately if necessary • Be prepared for the conditions by wearing hot or cold weather clothing, proper	1	1	1	3	L

Updated November 23 2021

							footwear (ie ice cleats, CSA rubber boots), or rain gear						
	Working Alone Site Inspections (residential neighbourhoods, schools, parks, river valley/ravines)	2	2	3	7	S	• Employee orientation, review working alone SOP v3 • Ensure to conduct FLHA prior to start inspection • Review location and establish site environment factors listed • Carry cell phones, inform Supervisor, colleagues and others of location prior to entry • Work in pairs if able to • Use check-in/out system after long periods with Supervisor • Wear required PPE. Ensure you are wearing CSA approved footwear and that your footwear is in good condition • Be prepared for the conditions by wearing hot or cold weather clothing, proper footwear (ie ice cleats, CSA rubber boots), or rain gear • On school sites - wear COE identification - if children present leave site immediately - notify Supervisor - revisit in pairs • Be aware of footing (slopes, surface conditions) • Be aware of your surroundings • Ensure adequate lighting is in place • Do not enter restricted or unsafe areas • Ensure proper Safe Work Procedures are in place • Establish safe distances from suspicious citizens or animals • Contact RV Rangers for assistance if required when homeless camps or animals are present • In extreme situations, job may have to be rescheduled, consult with your Supervisor	1	1	3	5	M
	Dealing with difficult members of the public or the vulnerable population Physiological Hazards: Stress in the Workplace Violence and Harassment Verbal Abuse Domestic Violence Working in transient areas	2	2	1	6	M	• Conduct a thorough hazard assessment on-site and implement controls to minimize violent situations. Involve a supervisor if needed. • Develop Emergency response plans if needed • Be aware of your surroundings when dealing with difficult people, de-escalate if required, and remove yourself from the situation • Report all incidents of violence in SDMS • Education and training: De-escalation (dealing with difficult people training), Violence in the workplace training and prevention guide for staff that meets with	1	2	1	4	L

Updated November 23 2021

(back to top)

							external stakeholders or members of the public • Corporate Administrative Directive and Procedures A1438 outline mitigation techniques • Restricted building access (card-keys, locking/arming doors, etc.) • Follow the City of Edmonton Working Alone Program requirements, i.e employees and supervisors utilize check in system • Involve Corporate Security if needed						
	Working near/around mobile equipment, vehicles	3	1	1	5	M	• Avoid the working zone if possible • Avoid positioning within a blind spot • Avoid walking or working under a suspended load • Maintain eye contact with the equipment operator • Maintain awareness of surroundings at all times • Hazard assessment and site orientation • Watch the spotter on the ground for direction • Ensure use of proper PPE including High-Vis Vest • Avoid use of cell phone when working around mobile equipment • Leave site and return when all construction activity is shut down	2	1	1	4	L
	Noise	2	2	2	6	M	• Hazard Assessment and Contractors identifying high noise area using signage (if possible) • Wear hearing protection when exposed to noise over 85 dB.and follow Occupational exposure limits	1	1	1	3	L
	Restricted and confined spaces	3	3	1	7	S	• Do not enter confined spaces • Do not enter restricted areas • Ensure proper Safe Work procedures are in place	1	1	1	3	L
	Simultaneous operations	2	2	3	7	S	• Communication and coordination with project managers and contractors • Landscape Inspections guidelines, establishing their work site/zone access/egress areas	1	2	1	4	L
	Slips/trips/falls: Walking in adverse weather conditions, uneven ground, obstructions on ground, exposed or loose cables, wires or cords	2	2	2	6	M	• Be aware of footing • Ensure you are wearing CSA approved footwear and that your footwear is in good condition • Ensure adequate lighting is in place	1	1	1	3	L

Updated November 23 2021

(back to top)

							• Use designated walkways if possible • General housekeeping, ensure pathways are free of trip hazardsGravel paths, sand, ice melt • Utilize Ice cleats when needed					
	Working around Traffic	3	2	2	7	S	• Use vehicle traffic advisory lighting when operating/parking COE vehicles. • Field Level Hazard Assessment, , pylons or cones, look in all directions – be aware of surroundings. • OSCAM permit to detour traffic • Wear required PPE (hi-vis vest). • Work within barricades. • Contractor is responsible for adequate traffic control layouts (barricades, signage, reduced speed limits) • Be aware of surroundings, include traffic zone in FLHA • Avoid distracted walking and do your best to work facing oncoming traffic • Trained flag person • Whenever possible, stay away from traffic (ie. walk on the sidewalk vs on roadway) • When backing up on site, use a spotter • Contractors responsible for adequate lighting • Ensure use of high vis-vest and other required PPE	2	1	1	4	L
	Animal/Insect Exposure - Mosquitoes, Wasps, Bees, Flies, Spiders, Dogs and Cats, Coyotes, Mice, Moose, Birds	2	1	1	4	L	• In extreme situations, job may have to be rescheduled, consult with your supervisor • Insect Repellent • Be aware of your surroundings, survey the area prior to work starting • Maintain a safe distance from animals • Hand protection • Site orientation • FLHA	1	1	1	3	L
Driving to Inspection Locations	Exposure to adverse weather conditions while driving	2	2	2	6	M	• Plan ahead to use safer routes and to travel at safer times, utilize 511 for the most up to date province-wide road information • Drive at reduced speeds and lengthen your following distance behind the vehicle ahead of you. • Driving to the road conditions and driver capability	1	2	2	5	M

Updated November 23 2021

(back to top)

							• Ensure windshield if free of obstruction and that tires are in good condition • Following the City Driver Handbook and Distracted Driving Standard • If working alone, ensure you have a cellular phone to stay in contact with your supervisor • Do not drive if you are fatigued						
	Distracted driving and being Struck By or Striking other vehicles, pedestrians, objects	3	2	2	7	S	• Business insurance coverage for personal vehicles • Comply with the Distracted Driving Standard, City Driver Handbook, or City Policy regarding Car Rental A1415F if applicable • Ensure employees are aware of Drug and Alcohol policies • Before driving, walk around your vehicle to check that the path in front of and behind the vehicle is clear and that the blind zone is free of obstacles • Follow all rules of the road and comply with Alberta Traffic Safety Act • Wear your seat belt • Ensure windshield if free of obstruction and that tires are in good condition • Actively scan road and look for potential hazards that may develop ahead of you • Concentration on task, awareness of road conditions and other hazards • Obtain appropriate vehicle licenses and any stay informed about chemical hazards including WHMIS and TDG where applicable • Maintain safe distance behind vehicles ahead of you • Understand and Follow the City of Edmonton Distracted Driving Standard and the Traffic Safety Act • Avoid cell phone use, eating and multitasking, while driving • Limit number of passengers and level of activity inside the car	3	1	1	4	M
	Mechanical Failure	2	1	1	4	L	• Complete a walk-around of your vehicle • Following City Driver Handbook • Regular Preventative Maintenance (PM) on City vehicles to ensure vehicle is in good working condition • Winterize vehicle when winter weather approaches • Carry an emergency kit in your vehicle • If working alone, ensure you have a cellular phone to stay in contact with your supervisor	1	1	1	3	L
	Slips/Trips/Falls From Vehicle	2	2	2	6	M	• Maintain 3 point contact when entering and exiting vehicles	1	1	2	4	L

Updated November 23 2021

APPENDIX C: LANDSCAPE INSPECTION CHECKLIST

LANDSCAPE CHECKLIST AT CCC

The following is a list of common items that must be inspected for a successful landscape inspection at CCC. This list is not exhaustive and other deficiencies may exist:

Trees *(Landscape Design and Construction Standards Specification No. 02930)*

- ❑ Trees are planted according to plan (location and species)
- ❑ Trees have acceptable vitality and form
- ❑ Correct size/caliper of specified plant material is installed.
- ❑ Tree planted as per city specification and approved drawing detail - the size of a tree well, flare, soil bump, amount of mulch, stakes and wires etc.
- ❑ Ensure wire baskets are cut or folded ⅓ down
- ❑ Trees are straight and aligned as necessary, especially along boulevards.
- ❑ Pests and diseases are not present or are controlled appropriately if applicable
- ❑ No wounds present
- ❑ Root form, no J root or girdling, no major root cuts
- ❑ Root flare is 40mm above grade
- ❑ Stakes are painted the correct colour by year planted.
- ❑ Dead, diseased and damaged plant material has been pruned and removed
- ❑ Suckers have been removed.
- ❑ All tree ties and flagging to be removed
- ❑ The Landscape Development Inspector can request tree protection and hoarding if located within 5m of active construction
- ❑ Ensure enough distance (2.5m) for mowers to pass through areas between individual trees and fences or other obstacles.
- ❑ Ensure the public boulevard is free of homeowner-installed items that are detrimental to the City trees such as landscape fabric or rock mulch. If these items

(back to top)

are present at the time of audit or inspection, they should be pulled back from the base of the tree or removed entirely. It is the responsibility of the Developer/Consultant to contact the homeowner to educate them on how their private landscape items are impacting the City of Edmonton landscaping and how to avoid this from reoccurring in the future. However, if the Landscape Development Inspector deems that the homeowner's landscaping does not impede Operations, it can be left alone.

Shrubs / Perennials *(Landscape Design and Construction Standards Specification No. 02930)*

- ❏ Shrubs and perennials are planted according to plan (size, location and species)
- ❏ Topsoil and mulch are installed to the proper depth.
- ❏ Bed edges are cut in.
- ❏ Shrub spacing within beds is optimal for mature growth and a 0.5m offset from the edge of mature branch spreading (not of the new plant) to the edge of the bed, hardscape, fencing, gates, etc
- ❏ Plant material is healthy, has acceptable vitality, pest and disease free. If shrubs/perennials are not healthy and thriving in their current conditions, propose to add more instead of replacements, at the discretion of the Landscape Development Inspector and Consultant/Contractor.
- ❏ Ensure that if bollards or light standards are located near shrub beds, they are incorporated within the bed.
- ❏ Ensure enough distance (2.5m) for mowers to pass through areas between shrub beds and fences or other obstacles. If not enough distance, increase bed size to remove narrow turf areas.
- ❏ Ensure beds that taper along hard surfaces or fences allow mowers ease of maintenance with min. 45 degrees from fence lines etc.
- ❏ Ensure no mulch is installed on beds straddling, or below the 1:5 flood line of Stormwater Management Facilities (SWMFs).
- ❏ Pull soil/mulch away from the base of plant material.
- ❏ Are site conditions suitable for the proposed plant material? If not, an alternative species/design suggestion may be an option.
- ❏ For naturalized settings, ensure small shrubs and trees are visible/flagged for ease of inspection.

(back to top)

Turf *(Landscape Design and Construction Standards Specification No. 02920)*

- ❏ Sod/seed is installed - Exception: Local boulevards are not required to have turf installed for CCC but must have, at a minimum, rough grade and no apparent safety hazards. Turf must be installed and established for FAC.
- ❏ Correct sod/seed mix is used.
- ❏ Are there any ruts? Ruts that pose a safety hazard must be repaired.
- ❏ Sod is even and flush with adjacent surfaces (manholes, vaults, mailboxes, walks, curbs, etc). Sod should never create an elevated lip above these surfaces as it will likely pose a drainage concern. Sod installed too low will cause a tripping hazard and is a safety concern.
- ❏ Weeds are being controlled - weeds show signs of die-back and no new weeds or seed-heads are present. Ensure the Contractor/Consultant are using all appropriate and required signage when spraying for weeds.
- ❏ Mow strip along the trail or fence line is present as per approved drawings
- ❏ Any low points or areas of uneven ground must be regraded to ensure proper drainage and to allow mowers to maintain.
- ❏ If sod won't grow, the Consultant can suggest alternative solutions with the approval of the Landscape Development Inspector.

General

- ❏ Everything is installed as per plans, in its correct quantity and location as per the approved design and details.
- ❏ Proper offsets are maintained from utilities, property lines, street furniture, etc.
- ❏ No safety concerns exist.
- ❏ Ensure there are no encroachments on city property (ie. homeowner landscaping). Contact Bylaw for encroachment issues (have Consultant contact 311).
- ❏ Soil requirements provided as per City of Edmonton Topsoil Specification.
- ❏ Homebuilder debris shall be removed.
- ❏ Is there remediation for damaged landscaping? This applies to sites within the same construction/development boundary and adjacent sites disturbed from the active construction of the improvement being inspected. This includes third party damage.
- ❏ Imminent hazards must be rectified prior to issuing certificate
- ❏ Aeration required in areas of soil compaction.

(back to top)

- ❏ Erosion Control Measures have been installed and are functioning as designed as per approved drawings. Contact the EPCOR Drainage Inspector for erosion control issues.
- ❏ Debris, garbage, hazards, and run-off on site are removed.
- ❏ Any erosion cracking/washouts must be repaired.
- ❏ Ensure plant material is not blocking gates on chain link fence and they are able to fully open.
- ❏ Grading has positive drainage and does not pool (is there ponding or indication of too much moisture in locations – lack of plant health or indication of aquatic type plant material).
- ❏ Swales are not running through, or directed towards mulch beds.
- ❏ Side slopes that must be maintained by a mower are to have no more than a 3:1 slope.
- ❏ Boulders: Installation is permanent, safe and as per the detail/Standards
- ❏ Existing plant material: Trees that are existing on site, such as natural tree stands. This would be shown as per plan, have no safety hazards, and should have no construction disturbance. The plant material remains viable
- ❏ Other special features: As per plans for intended use (e.g. animal habitat)
- ❏ Low Impact Development (LID) features : Bioretention gardens & basins, soil cells and box planters installed as per plan
- ❏ Landscape Tie-In: This involves taking into account the natural features of the site, such as topography, existing vegetation, and waterways,so that the new landscaping project feels like it is part of the existing landscape. The goal of landscape tie-in is to create a harmonious relationship between the project in construction and the surrounding environment. (Transition to existing landscape)
- ❏ Lay down restoration: The goal of lay down area restoration is to restore the land to a natural and healthy state, while also ensuring that it is safe and stable for future use.

(back to top)

AUDITS DURING ESTABLISHMENT PERIOD

The following are general maintenance activities to be completed during the establishment period:

- ❑ Following maintenance plan
- ❑ Dead plant material replaced in a timely manner (2 weeks)
- ❑ Watering
- ❑ Fertilizing
- ❑ Mowing
- ❑ Weeds; controlled at CCC, eradicated for FAC.
- ❑ Pruning
- ❑ Pest control
- ❑ Garbage removal, as necessary

LANDSCAPE CHECKLIST AT FAC

The requirements listed above for CCC Inspections are also applicable deficiencies for FAC Inspections. The following is a list of additional specific items to inspect at FAC.

General

- ❑ Comments from CCC have been addressed ex. Redline Drawings was submitted and approved (if required), etc.
- ❑ Minor deficiencies have been corrected from CCC
- ❑ Everything on the most recently approved design plan is still present, alive, and exhibits good vitality.
- ❑ Erosion control may need to be added to protect the improvement from an adjacent site, or removed if no longer needed. Contact EPCOR Drainage Inspector if clarification or support is needed.

Trees *(Landscape Design and Construction Standards Specification No. 02930)*

- ❑ Tree rejection criteria - the Landscape Development Inspector shall uphold the

(back to top)

10% Tree Rejection Allowance Rule for sites with 41+ trees and 25% tree rejection allowance for sites with 40 trees or less etc. See Section 4.8 (Warranty Period), or its equivalent, in the Design and Construction Standards (Volume 5: Landscaping) for additional information

- ❏ Trees that were installed after issuance of CCC and prior to FAC Inspection must be identified and will be inspected using CCC criteria.
- ❏ Trees from CCC are established and exhibit good vitality.
- ❏ The Landscape Development Inspector may request tree stakes to be removed if the tree is adequately established
- ❏ Tree wires are to be loosened prior to FAC Inspection to allow for further tree growth or are removed as necessary
- ❏ Trees have had structural pruning if necessary
- ❏ Mulch depth is installed as per detail

Shrubs / Perennials *(Landscape Design and Construction Standards Specification No. 02930)*

- ❏ Mulch is installed to the required depth.
- ❏ Weed control was successful during the Maintenance Period as per the Alberta Weed Control Act.
- ❏ Plant material is established, disease/pest free, and shows good vitality
- ❏ Quantities are correct from CCC Inspection.
- ❏ Flagging on small shrubs/trees is removed prior to approval, unless otherwise specified.
- ❏ Shrub rejection criteria - The Warranty Period will be extended to the following year for sites with more than 25 shrubs, where 25% or more of the total shrubs have not established and for sites with 25 shrubs or less, where 50% or more of the total shrubs have not been established.

Turf *(Landscape Design and Construction Standards Specification No. 02920)*

- ❏ Sod must be knit, and seed established.
- ❏ The Warranty Period will be extended to the following year for sites where more than 10% of the turf has not been established.
- ❏ Sod/Seeded area is able to withstand the stresses of the environment in which it is being grown
- ❏ Where naturalized seed is specified, sod is not a suitable alternative due to specific

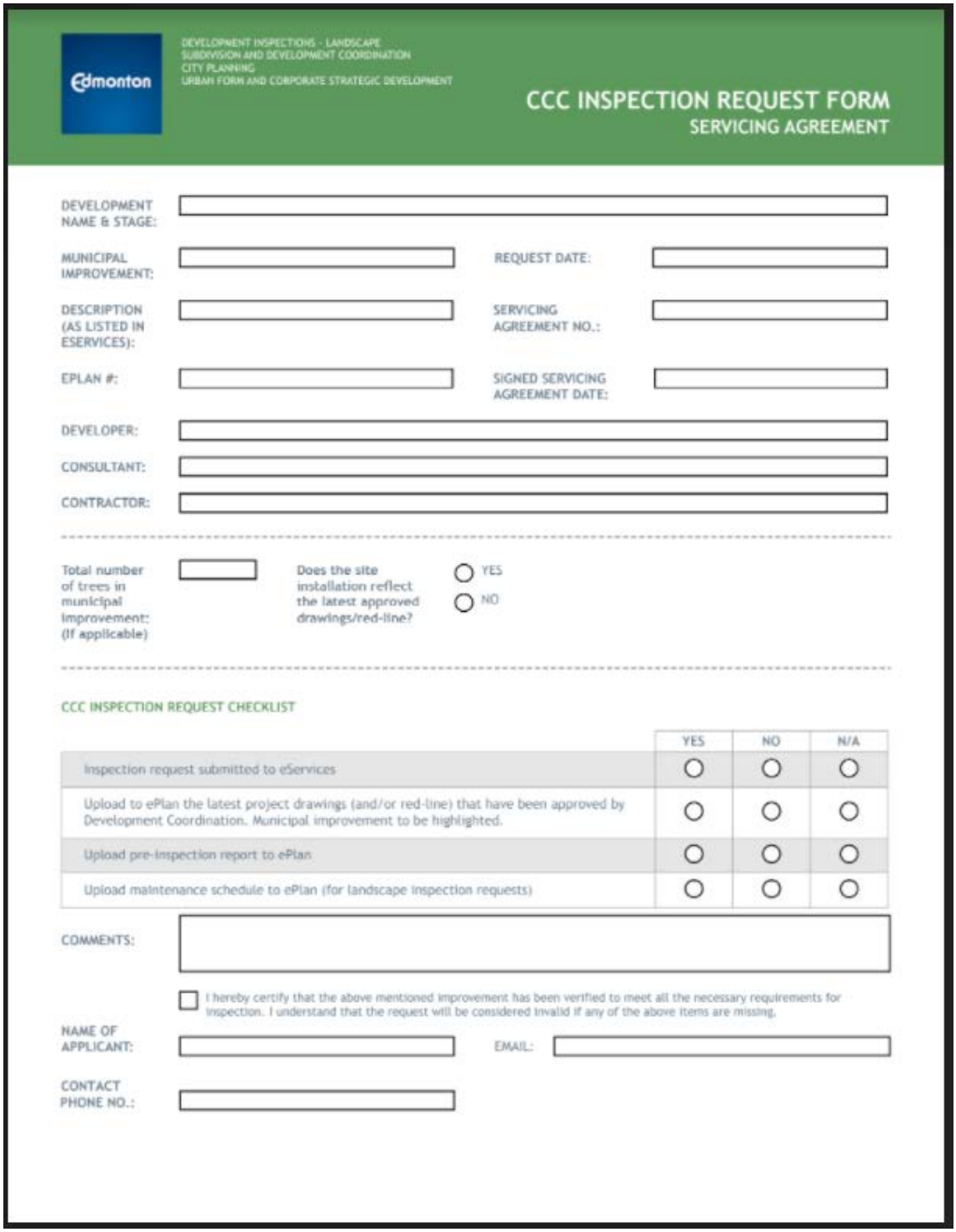
(back to top)

site conditions.

- ❏ Ruts and damage are repaired. Imminent hazards need to be repaired prior to issuing certificate.
- ❏ Weeds are managed as per the Alberta Weed Control Act.
- ❏ Surface grading/tie-ins have not been changed or been damaged from CCC.
- ❏ Naturalized seed is not mowed below 150 mm height and is of the correct variety.
- ❏ If turf has too many damages from compaction, weeds etc., replace turf in all affected areas. Must be established at FAC application

(back to top)

APPENDIX D: CCC/FAC LANDSCAPE INSPECTION REQUEST FORMS



Edmonton

DEVELOPMENT INSPECTIONS - LANDSCAPE
SUBDIVISION AND DEVELOPMENT COORDINATION
CITY PLANNING
URBAN FORM AND CORPORATE STRATEGIC DEVELOPMENT

CCC INSPECTION REQUEST FORM
SERVICING AGREEMENT

DEVELOPMENT NAME & STAGE:

MUNICIPAL IMPROVEMENT:

REQUEST DATE:

DESCRIPTION (AS LISTED IN ESERVICES):

SERVICING AGREEMENT NO.:

EPLAN #:

SIGNED SERVICING AGREEMENT DATE:

DEVELOPER:

CONSULTANT:

CONTRACTOR:

Total number of trees in municipal improvement: (If applicable)

Does the site installation reflect the latest approved drawings/red-line? ○ YES ○ NO

CCC INSPECTION REQUEST CHECKLIST

	YES	NO	N/A
Inspection request submitted to eServices	○	○	○
Upload to ePlan the latest project drawings (and/or red-line) that have been approved by Development Coordination. Municipal improvement to be highlighted.	○	○	○
Upload pre-inspection report to ePlan	○	○	○
Upload maintenance schedule to ePlan (for landscape inspection requests)	○	○	○

COMMENTS:

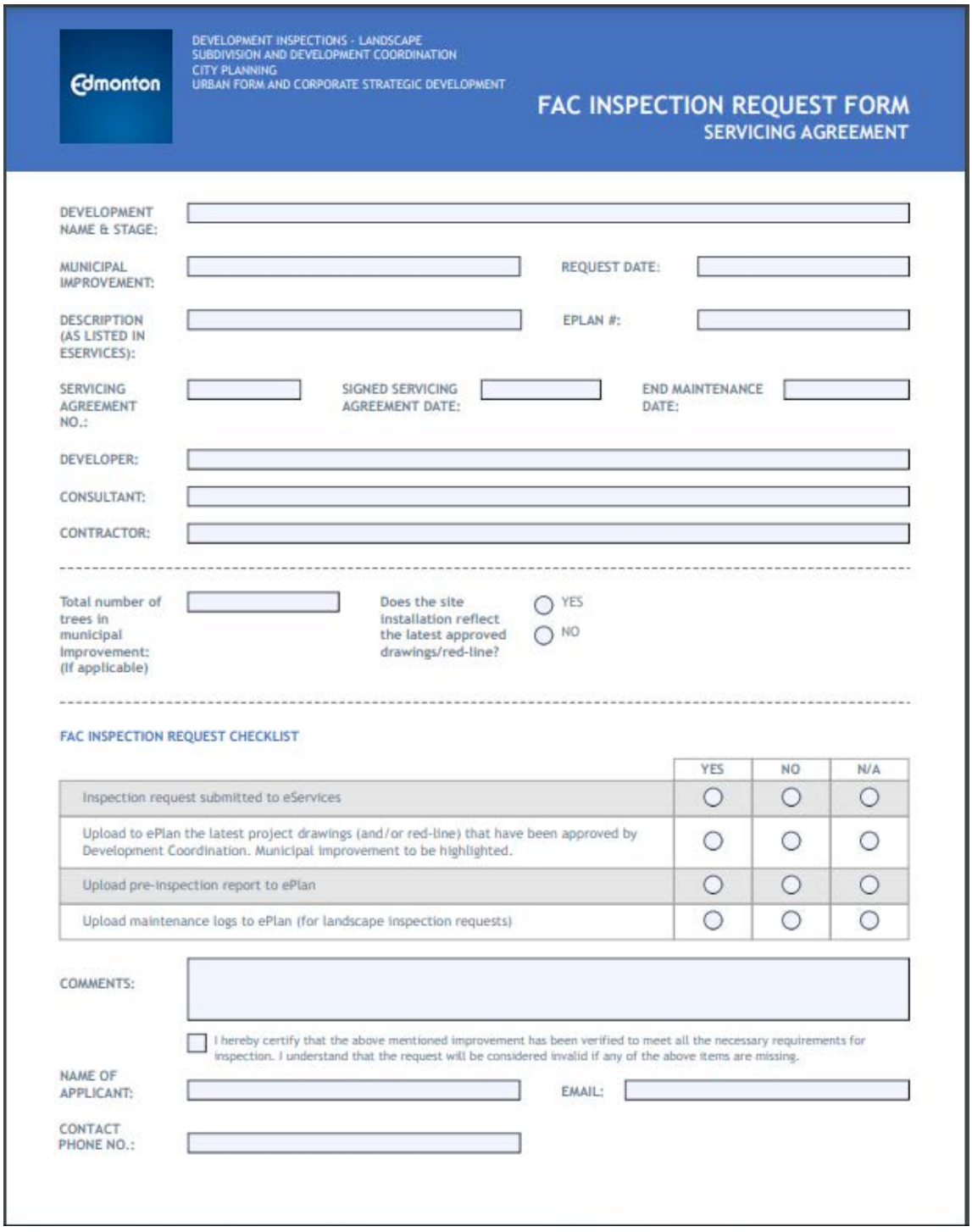
☐ I hereby certify that the above mentioned improvement has been verified to meet all the necessary requirements for inspection. I understand that the request will be considered invalid if any of the above items are missing.

NAME OF APPLICANT:

EMAIL:

CONTACT PHONE NO.:

(back to top)



DEVELOPMENT INSPECTIONS - LANDSCAPE
SUBDIVISION AND DEVELOPMENT COORDINATION
CITY PLANNING
URBAN FORM AND CORPORATE STRATEGIC DEVELOPMENT

FAC INSPECTION REQUEST FORM
SERVICING AGREEMENT

DEVELOPMENT NAME & STAGE:

MUNICIPAL IMPROVEMENT:

REQUEST DATE:

DESCRIPTION (AS LISTED IN ESERVICES):

EPLAN #:

SERVICING AGREEMENT NO.:

SIGNED SERVICING AGREEMENT DATE:

END MAINTENANCE DATE:

DEVELOPER:

CONSULTANT:

CONTRACTOR:

Total number of trees in municipal improvement: (If applicable)

Does the site installation reflect the latest approved drawings/red-line? ○ YES ○ NO

FAC INSPECTION REQUEST CHECKLIST

	YES	NO	N/A
Inspection request submitted to eServices	○	○	○
Upload to ePlan the latest project drawings (and/or red-line) that have been approved by Development Coordination. Municipal improvement to be highlighted.	○	○	○
Upload pre-inspection report to ePlan	○	○	○
Upload maintenance logs to ePlan (for landscape inspection requests)	○	○	○

COMMENTS:

☐ I hereby certify that the above mentioned improvement has been verified to meet all the necessary requirements for inspection. I understand that the request will be considered invalid if any of the above items are missing.

NAME OF APPLICANT:

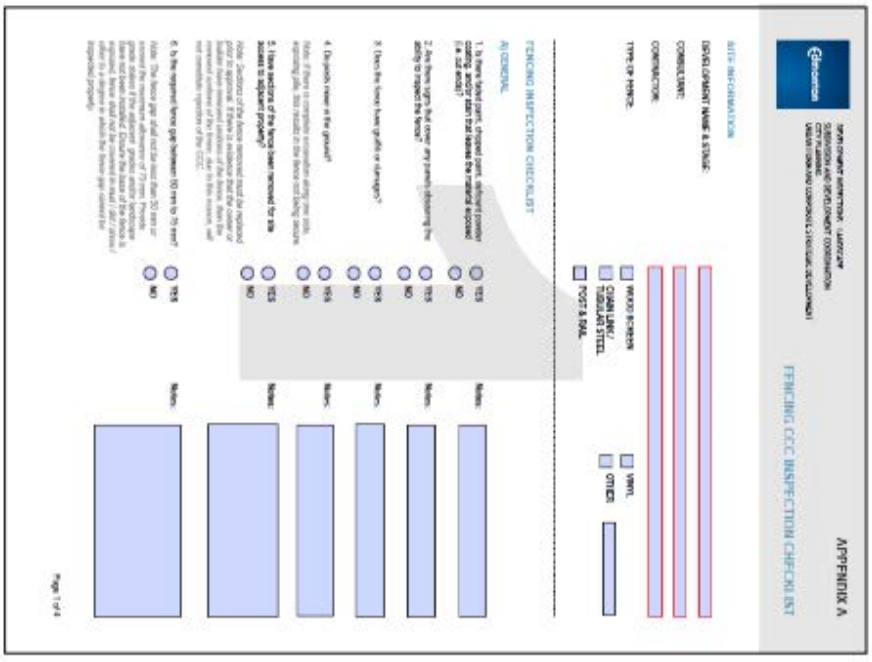
EMAIL:

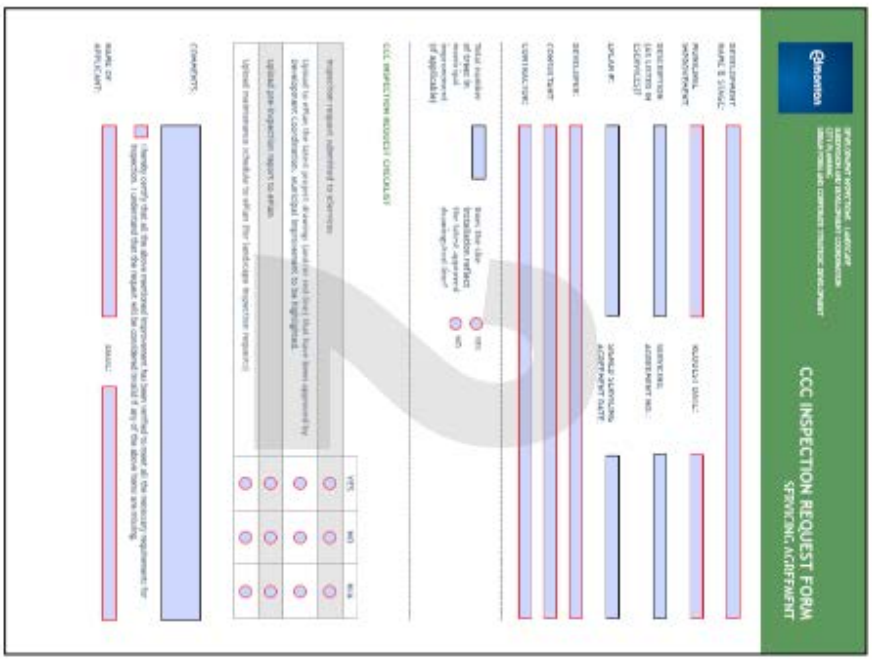
CONTACT PHONE NO.:

(back to top)

APPENDIX E: FENCING CCC INSPECTION PHOTO SUBMISSION

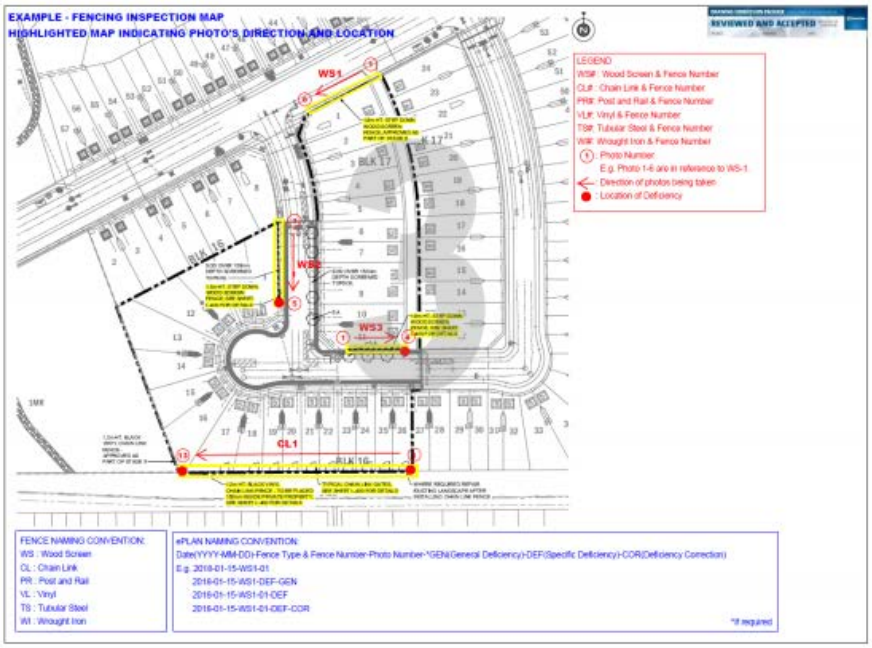
The following are instructions for fencing applications via photo submission. This applies to small sections of fencing such as flankages and walkways. For larger fence improvements, an onsite inspection will be required.





(back to top)

Standard Operating Practice (SOP) – Fencing CCC Inspections



Example of naming convention for photographs on ePlan

YYYY-MM-DD-TYPE OF FENCE & FENCE NUMBER-PHOTO NUMBER *(DEF (SPECIFIC DEFICIENCY), COR (DEFICIENY CORRECTION.GEN (GENERAL DEFICIENCY)

*If required

- 2018-01-15-CL1-01
- 2018-01-15-CL1-01-GEN
- 2018-01-15-CL1-02
- 2018-01-15-CL1-03
- 2018-01-15-CL1-04 -DEF
- 2018-01-15-CL1-04 -DEF-COR
- 2018-01-15-CL1-04
- 2018-01-15-CL1-05
- 2018-01-15-CL1-06
- 2018-01-15-CL1-07
- 2018-01-15-CL1-08
- 2018-01-15-CL1-09
- 2018-01-15-WS1-01
- 2018-01-15-WS1-02
- 2018-01-15-WS1-03
- 2018-01-15-WS1-04

4

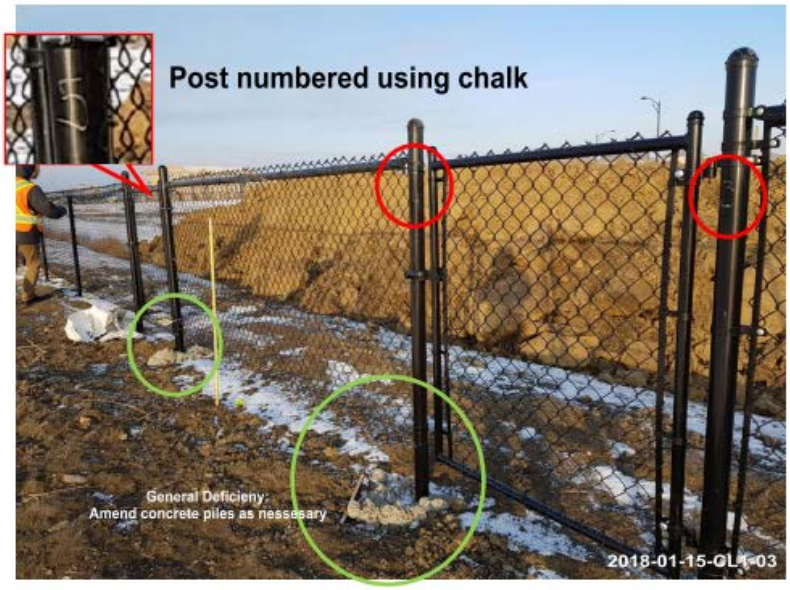
Page **2** of **4**

(back to top)

Standard Operating Practice (SOP) – Fencing CCC Inspections

(back to top)

Standard Operating Practice (SOP) – Fencing CCC Inspections



Page **4** of **4**

(back to top)

APPENDIX F: NATURAL AREA INSPECTION CHECKLIST

Natural Areas Site Inspection Report

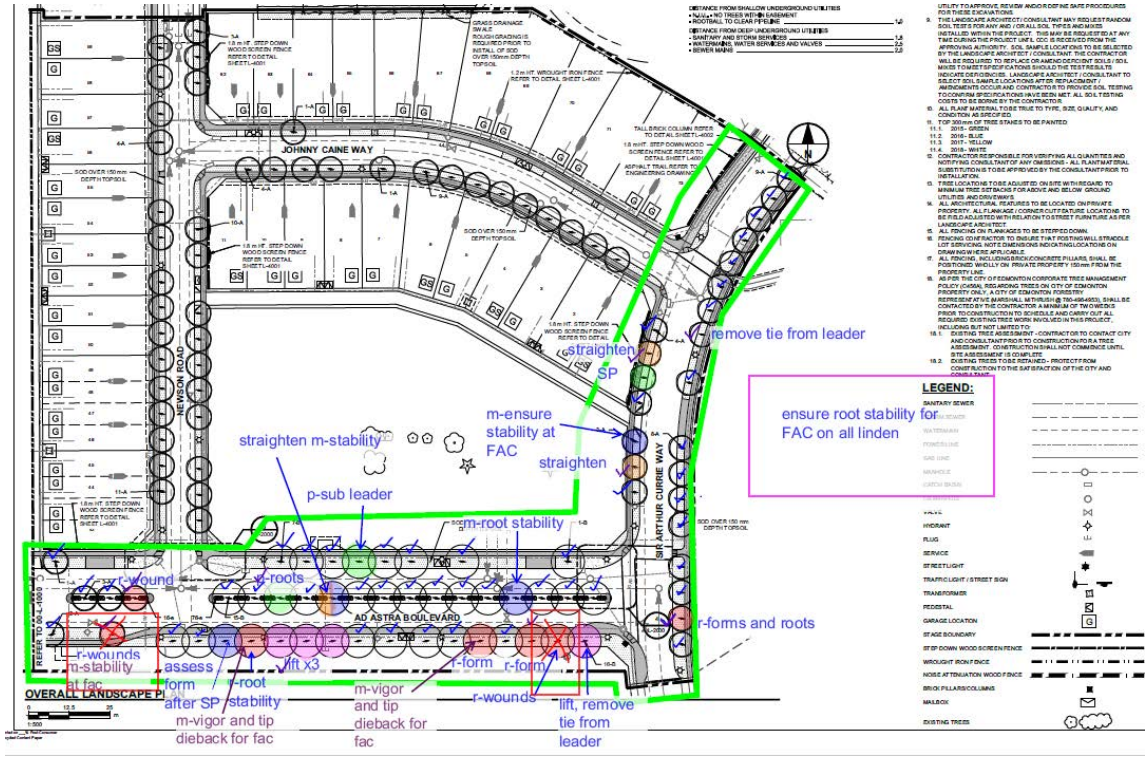
Site Conditions Found	Recommended Amendments
Structures - previous landowner hazards	
Dumping - Garbage, debris or remaining potential hazards from previous Land Owner i.e. barbed wire, metals, equipment, etc.	
Noxious Weeds and/or Prohibited Noxious Weeds	
Site Disturbances - grade changes, stockpiling, compaction, evidence of staging, etc.	
Tree Concerns - Potential hazards or targets i.e. Shared use paths or damage to private property.	
Tree pests or disease concerns	
Contamination or disturbance to water bodies (e.g., wetlands, streams, creeks, etc.)	
Site contamination and/or underground infrastructure that is active or not (e.g., monitoring wells, pipelines, spills etc..)	
Parks, provincial lands, protected and other designated lands	
Archeological, paleontological, and/or other historical resources	

(back to top)

Wildlife and wildlife habitats (terrestrial, avian, migratory bird act, and aquatic animals, spawning) (check federal and provincial regulations)	
Vegetation (e.g., sensitive trees, rare plants, etc.) (check NAMP or other resources)	
Encroachments	
Other deficiencies and safety concerns	

(back to top)

APPENDIX G: EXAMPLE OF A CONSULTANT PRELIMINARY DEFICIENCIES INSPECTION REPORT

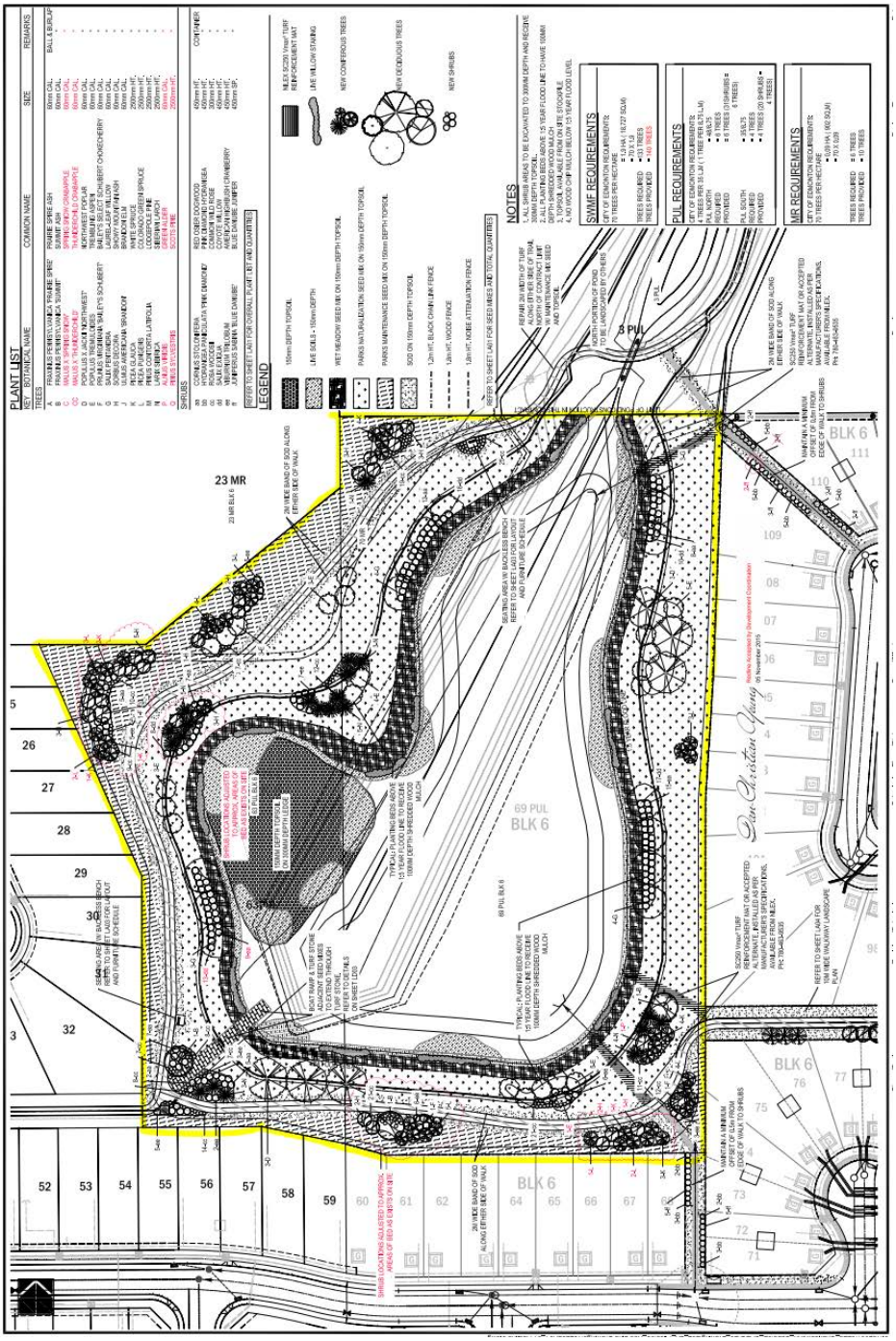


The Consultant's preliminary deficiencies inspection Report indicating the deficiencies to be corrected prior to inspection.

(back to top)

APPENDIX H: EXAMPLE HIGHLIGHTED MAP FOR INSPECTION

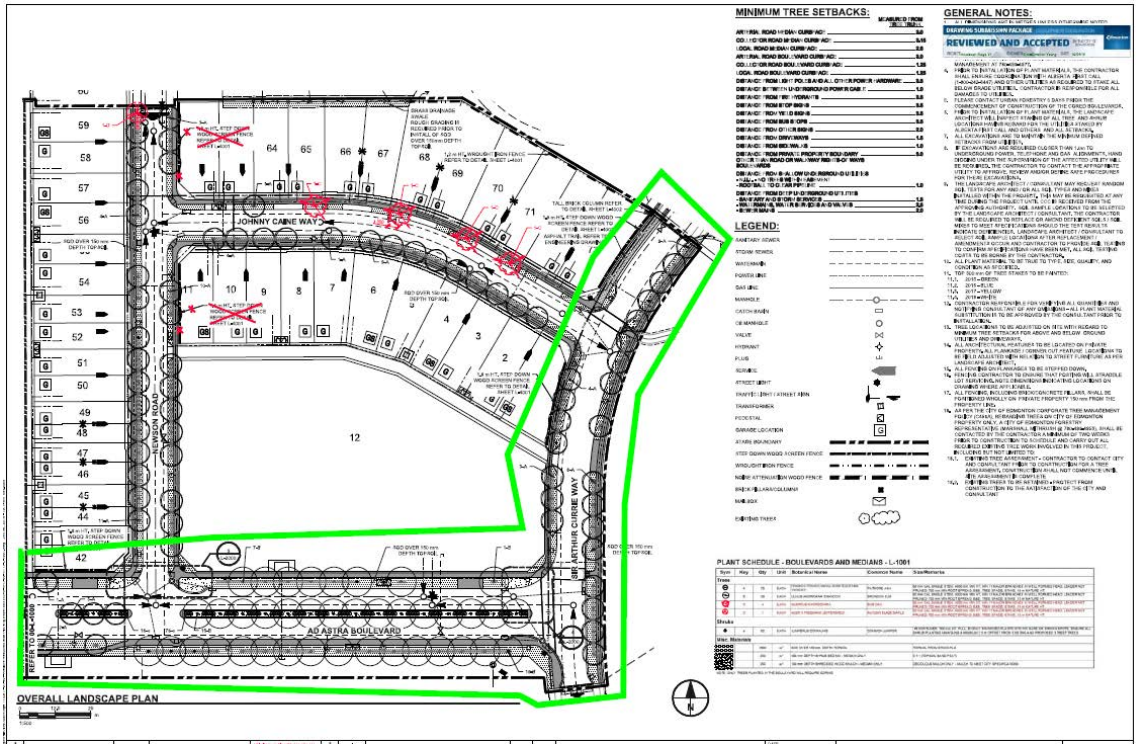
Example A - Highlighted Inspection Report:



(back to top)

Specific improvement area is highlighted with a bold line and it is translucent so that it is not blocking any labels.

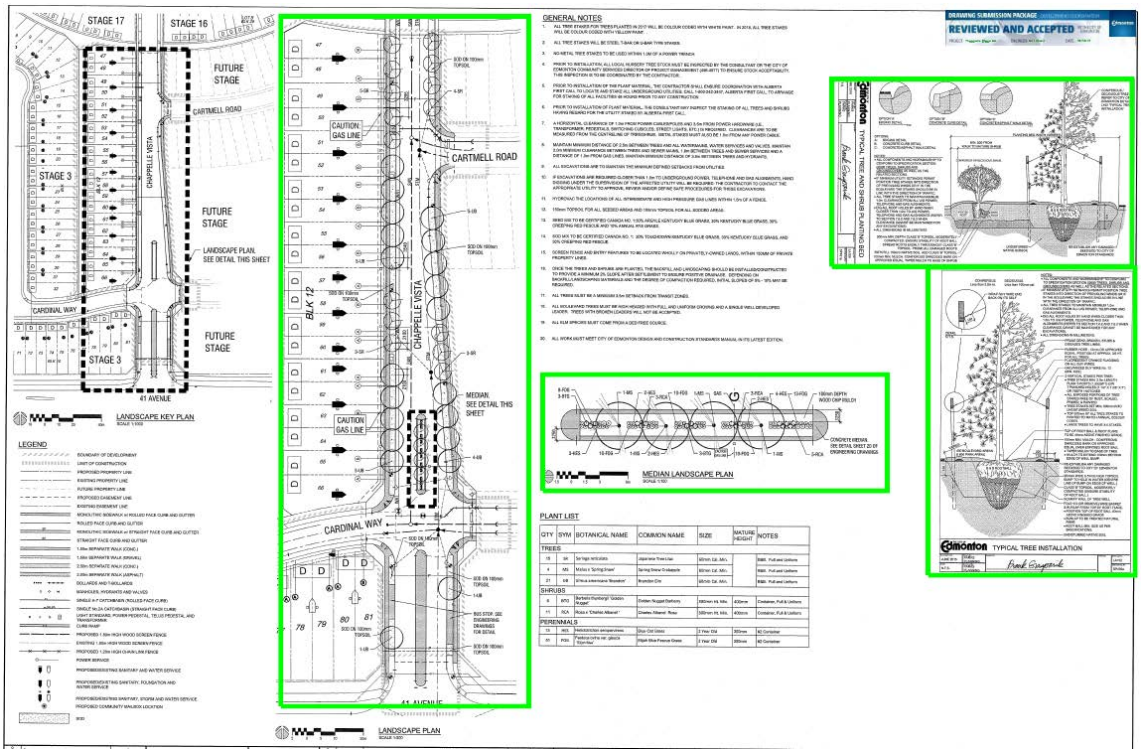
Example B - Highlighted Inspection Report:



Highlight is surrounding only the area of the specific improvement and excludes adjacent improvements. In this case the collector roads are a separate improvement from the local roads.

(back to top)

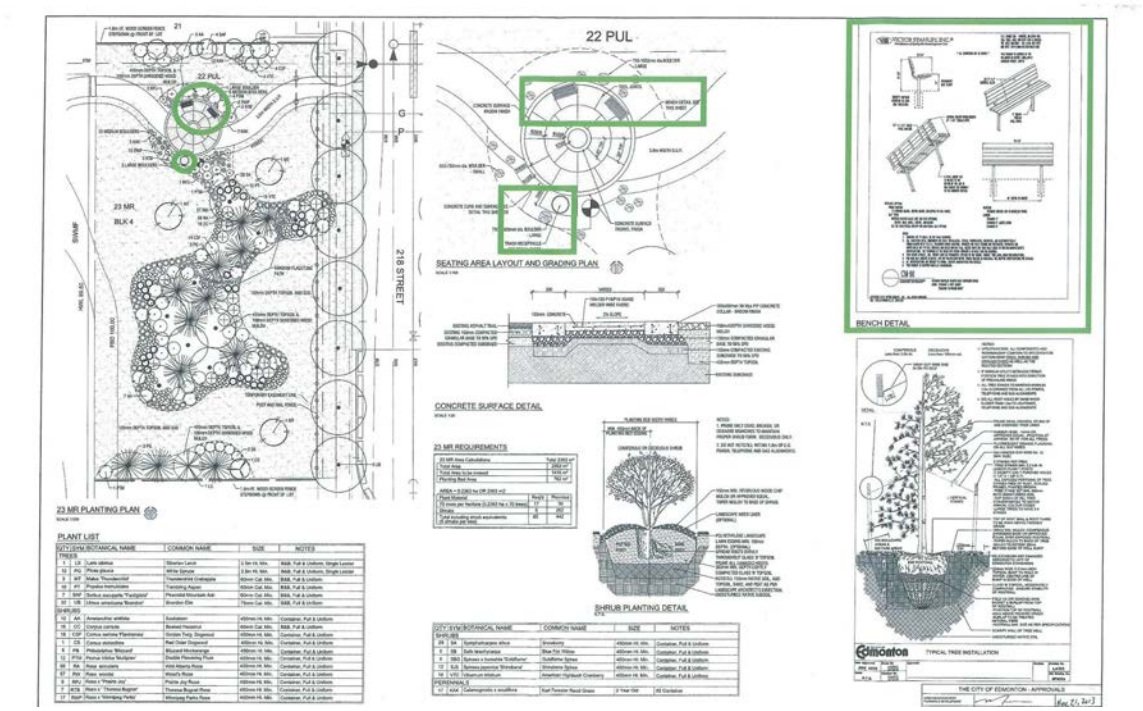
Example C - Highlighted Inspection Report:



The plan, the enlargement and the details specific to the improvement are all highlighted individually.

(back to top)

Example D - Highlighted Inspection Report (Amenities Only):

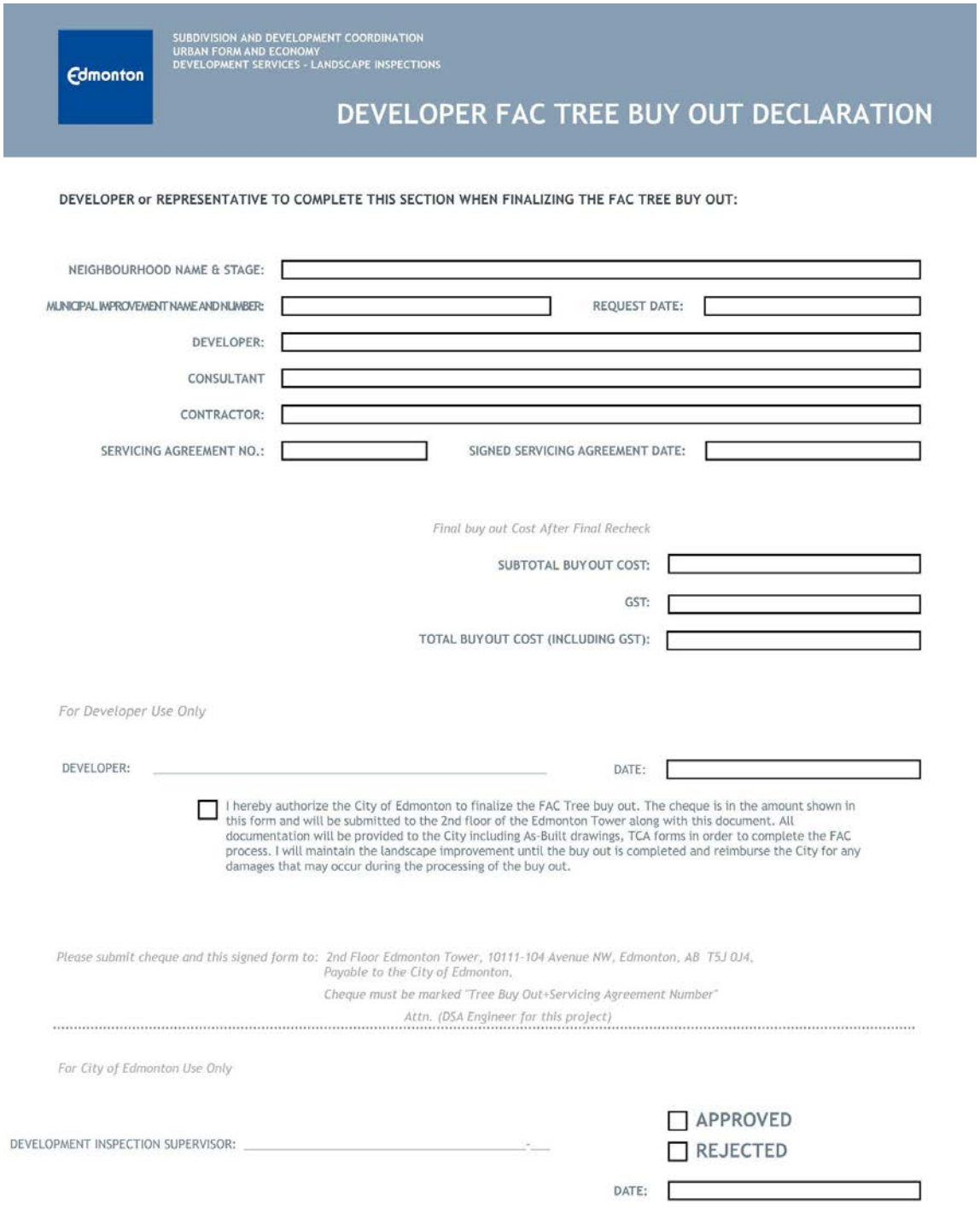


For Amenity improvements, ensure that each piece of furniture (bench, waste receptacle etc.) is highlighted individually in order to identify them on the plan. Do not draw a box around the whole page.

(back to top)

APPENDIX I: EXAMPLE OF TREE BUYOUT SUBMISSION

Tree Buyout Request Form:



Edmonton

SUBDIVISION AND DEVELOPMENT COORDINATION
URBAN FORM AND ECONOMY
DEVELOPMENT SERVICES - LANDSCAPE INSPECTIONS

DEVELOPER FAC TREE BUY OUT DECLARATION

DEVELOPER or REPRESENTATIVE TO COMPLETE THIS SECTION WHEN FINALIZING THE FAC TREE BUY OUT:

NEIGHBOURHOOD NAME & STAGE:

MUNICIPAL IMPROVEMENT NAME AND NUMBER: REQUEST DATE:

DEVELOPER:

CONSULTANT

CONTRACTOR:

SERVICING AGREEMENT NO.: SIGNED SERVICING AGREEMENT DATE:

Final buy out Cost After Final Recheck

SUBTOTAL BUYOUT COST:

GST:

TOTAL BUYOUT COST (INCLUDING GST):

For Developer Use Only

DEVELOPER: DATE:

☐ I hereby authorize the City of Edmonton to finalize the FAC Tree buy out. The cheque is in the amount shown in this form and will be submitted to the 2nd floor of the Edmonton Tower along with this document. All documentation will be provided to the City including As-Built drawings, TCA forms in order to complete the FAC process. I will maintain the landscape improvement until the buy out is completed and reimburse the City for any damages that may occur during the processing of the buy out.

Please submit cheque and this signed form to: 2nd Floor Edmonton Tower, 10111-104 Avenue NW, Edmonton, AB T5J 0J4.
Payable to the City of Edmonton.
Cheque must be marked "Tree Buy Out+Servicing Agreement Number"
Attn. (DSA Engineer for this project)

For City of Edmonton Use Only

DEVELOPMENT INSPECTION SUPERVISOR:

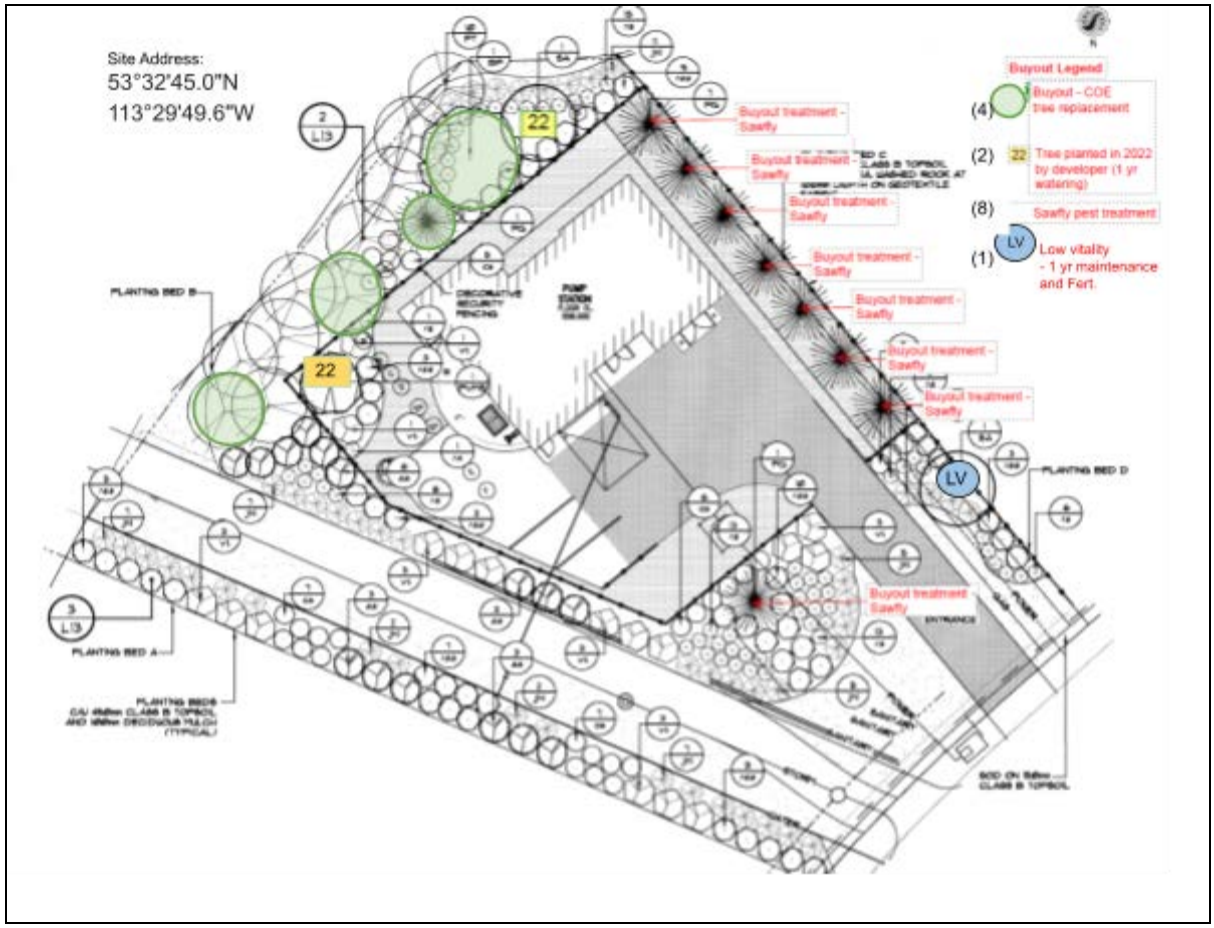
☐ APPROVED
☐ REJECTED

DATE:

(back to top)

APPENDIX J : EXAMPLE TREE BUYOUT DEFICIENCY REPORT & COST ESTIMATE SHEET

Tree Buyout Deficiency Report Example:



The specific replacement or maintenance items that are being bought out are clearly indicated on the plan.

(back to top)

Tree Buyout Cost Estimate Excel Sheet Example:

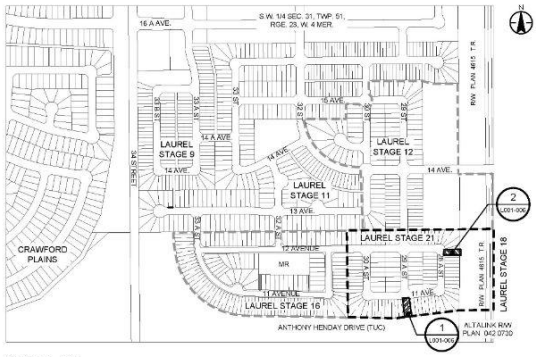
TREE BUYOUT COST ESTIMATE FORM 2022			
Project Name:	Neighbourhood and Stage		
Consultant Contact:	Name		
Date:			
	Consultant to fill out	Forestry use only	Forestry use only
Activity	Number of Trees	Unit Rate	Cost
Tree Planting			
Basic site, 50-60 mm cal	4		$ -
15 gallon pot			$ -
Hard surface area (soil cells, tree grates,etc)			$ -
Watering			
1 year for establishment (2023 COE Replacements)	4		$ -
1 year for establishment (2022 developer plantings)	2		$ -
Extra year due to lack of vitality (14 day rotation)	1		$ -
Tree Maintenance			
Slow release injection	1		$ -
Pruning (Structural or Maintenance)			
Trees up to 100mm cal and/or sucker removal			$ -
Trees 110 - 250 mm cal			$ -
Mature trees larger than 250mm cal			$ -
Tree Removal			
Under 100mm cal (Includes stump grinding)	4		
110-250 mm cal (Includes stump grinding)			$ -
Stump grinding			$ -
Insect Treatment (List Issues)			
Treatment to be determined based on issue - Sawfly	8		$ -

The Consultant fills out the sections outlined in red and Forestry will provide a cost estimate within 5 days of receiving the uploads of the Tree Buyout Submission.

(back to top)

APPENDIX K: EXAMPLE AS-BUILT PLANS

Example A - As Built Plans:



KEY PLAN
SCALE: N.T.S.

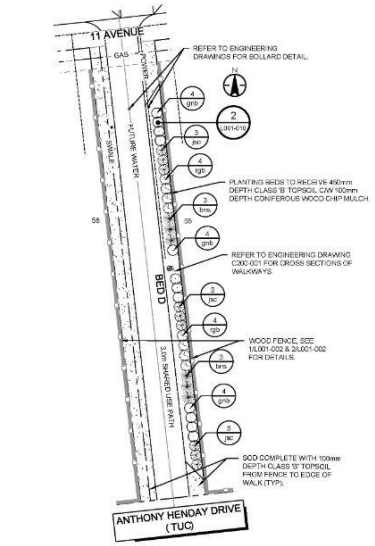
PLANTING REQUIREMENTS FOR 6.0m WALKWAY:

THE WALKWAY WILL RECEIVE PLANT MATERIAL AS FOLLOWS:

REQUIRED PLANTING: MIN. 4 TREES PER 35 METERS (MAY SUBSTITUTE 7 SHRUBS FOR 1 TREE UP TO A MAXIMUM OF 10%)

PROPOSED PLANTING: TOTAL LENGTH = 44m = 5 TREES
0 UNITS OF 60mm CAL. TREES
35 UNITS OF 1 GAL. (OR LARGER) POTTED SHRUBS

* NO TREES, DUE TO CONFLICTS WITH UTILITIES.



1 WALKWAY PLANTING PLAN
SCALE:1:200

SOD MIX

CERTIFIED CANADA NO 1 CULTIVATED TURF SOD, WITH STRONG FIBROUS ROOT SYSTEM, THICK AND HEALTHY GROWTH DELIVERED 24 HOURS FROM THE TIME OF CUTTING. SOD TO BE FREE OF STONES, WEEDS, DRY SPOTS, AND TRASH. SOD TO BE DELIVERED MOIST, CUT IN UNIFORM STRIPS, WIDTH AND THICKNESS, AND OF THE FOLLOWING MIX OR APPROVED EQUAL:

70-90% KENTUCKY BLUEGRASS
0-10% CREEPING RED FESCUE
0-30% PERENNIAL RYEGRASS

TOTAL AREA
WALKWAYS = 133 m²

PLANTING BED AREAS

LABEL	AREA	MULCH TYPE
D	52 m²	CONIFEROUS SHREDDED BARK
E	42 m²	CONIFEROUS SHREDDED BARK

PLANT MATERIAL LIST: (THIS SHEET ONLY)

QTY./SYM.	BOTANICAL/COMMON NAME	SIZE	CONDITION
DECIDUOUS SHRUBS			
20 grg	*Berberis thunbergii 'Golden Nugget'* GOLDEN NUGGET BARBERRY	300 mm HT. MIN. #2 CONTAINER	CONTAINER GROWN, 4 CANES OR MORE 300mm HT. WITH MIN ROOT SPREAD 200mm
16 rgb	*Berberis thunbergii 'Rose Glow'* ROSE GLOW BARBERRY	300 mm HT. MIN. #2 CONTAINER	CONTAINER GROWN, 4 CANES OR MORE 300mm HT. WITH MIN ROOT SPREAD 200mm
CONIFEROUS SHRUBS			
12 sns	*Picea abies 'Nidiformis'* BIRDS NEST SPRUCE	300 mm SPR. #2 CONTAINER	CONTAINER GROWN, OR BALLED & BURLAPPED WITH A MIN. ROOT BALL DIA. OF 200mm WITH DEPTH NOT LESS THAN 75% OF DIA.
15 jsc	*Juniperus sabina 'Calgary Carpet'* CALGARY CARPET JUNIPER	300 mm SPR. #2 CONTAINER	CONTAINER GROWN, OR BALLED & BURLAPPED WITH A MIN. ROOT BALL DIA. OF 200mm WITH DEPTH NOT LESS THAN 75% OF DIA.

NOTE: ALL PLANT MATERIAL MUST CONFORM TO THE CITY OF EDMONTON DESIGN AND CONSTRUCTION STANDARDS.

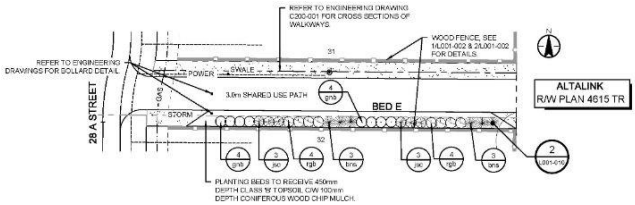
PLANTING REQUIREMENTS FOR 6.0m WALKWAY:

THE WALKWAY WILL RECEIVE PLANT MATERIAL AS FOLLOWS:

REQUIRED PLANTING: MIN. 4 TREES PER 35 METERS (MAY SUBSTITUTE 7 SHRUBS FOR 1 TREE UP TO A MAXIMUM OF 10%)

PROPOSED PLANTING: TOTAL LENGTH = 36m = 4 TREES
0 UNITS OF 60mm CAL. TREES
28 UNITS OF 1 GAL. (OR LARGER) POTTED SHRUBS

* NO TREES, DUE TO CONFLICTS WITH UTILITIES

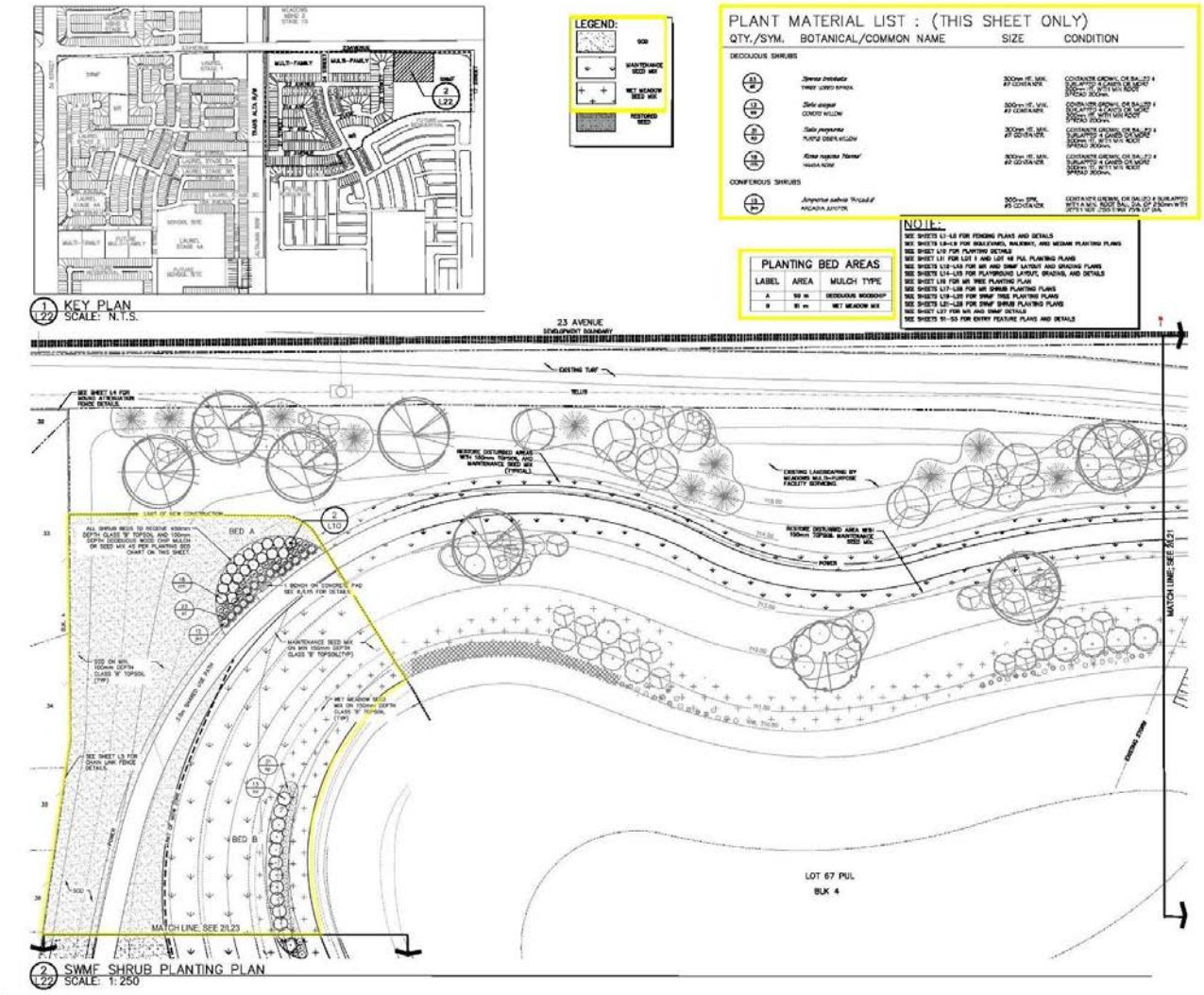


2 WALKWAY PLANTING PLAN
SCALE:1:200

Clear and concise As-Built drawing indicating what improvement(s) is being added to city inventory.

(back to top)

Example B - As Built Plans:

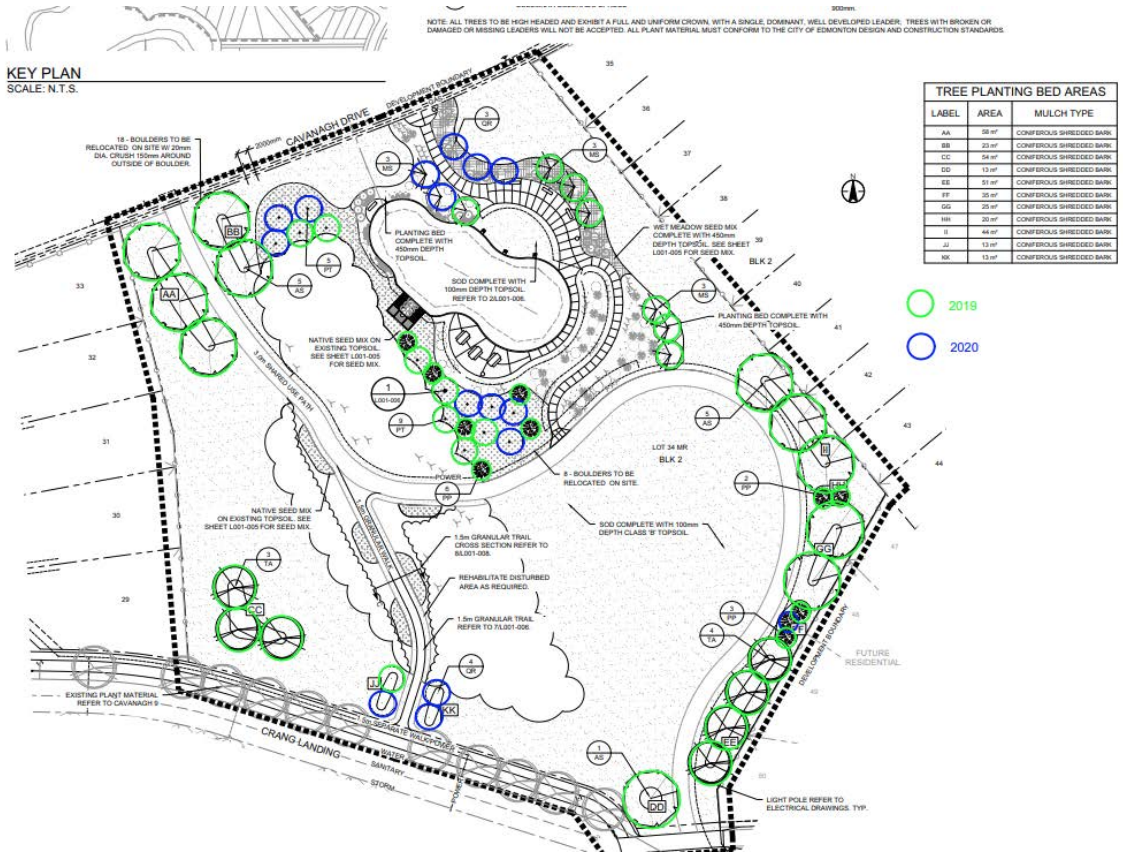


Areas highlighted are areas within the specific improvement on the As-Built plans, with all of its pertinent information including planting list, details, area calculations etc.

(back to top)

APPENDIX L: EXAMPLE LANDSCAPE PLAN INDICATING YEARS ALL TREES PLANTED

Example A - Years Planted Plan:

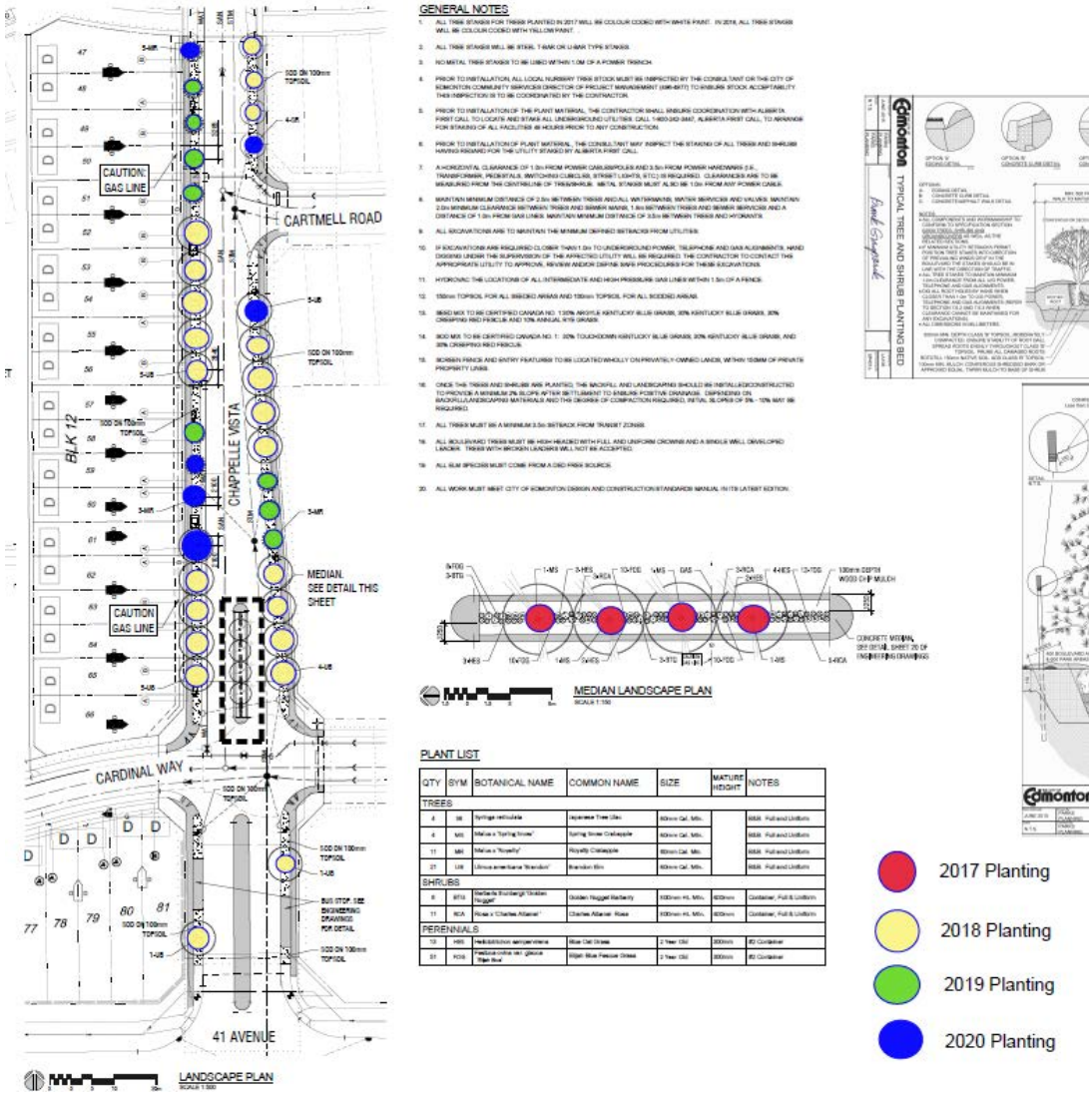


(back to top)

Colour legend that corresponds to tree stake planting colour is preferred. Ensure that the labels are visible and are not covered up.

(back to top)

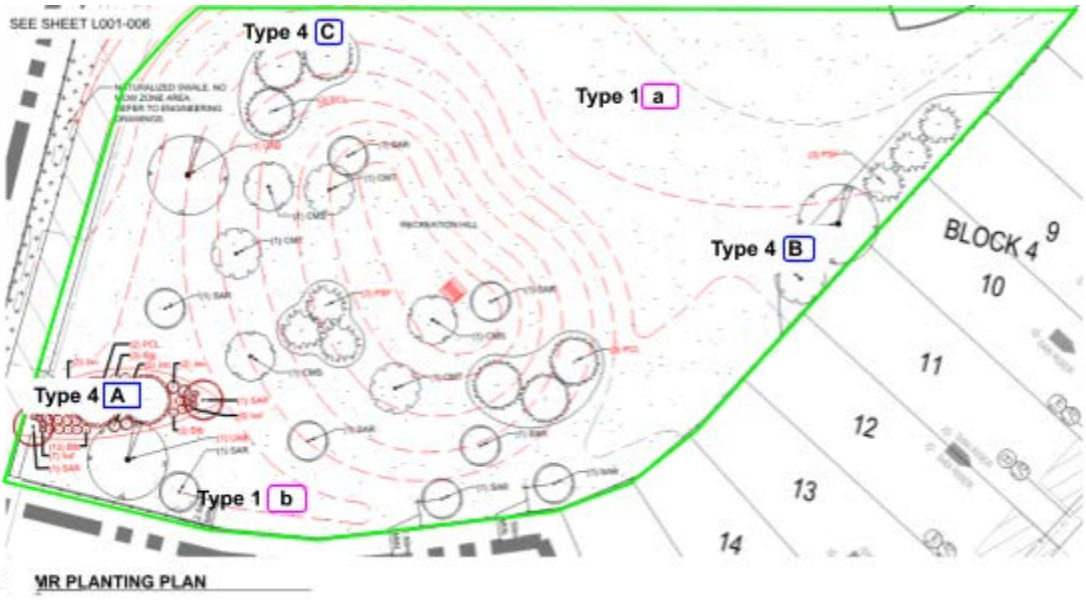
Example B - Years Planted Plan:



This example uses the colour legend and clearly identifies the year planted, however translucency of the colour coding would be preferred for legibility.

(back to top)

APPENDIX M: SOIL SAMPLE MAP



In this example, the basic/native soil Type 1 will be sampled in 2 distinctly different places and to the depth of 300 mm (refer to Table 1 in Section 02910 in the Standards). The ornamental shrub beds have Type 4 soil which is sampled at a higher rate, 3 samples will be taken at a depth of 450 mm.

(back to top)

APPENDIX N: WEBSITE LINKS AND REFERENCE DOCUMENTS

Landscape Inspector Guidelines | City of Edmonton (webpage Link)

(back to top)

APPENDIX O: PLAYGROUND CCC/FAC CITY FORM

Parks and Roads Services
Infrastructure Maintenance
Bridges Structures and Open Space Maintenance

City of Edmonton
10517 – 95 Street NW
Edmonton, AB T5H 2C2

INSERT Playground: Construction Completion & Final Acceptance Inspections (CCC/FAC)

CCC Inspection Date: Project Contact:

Inspector(s):

FAC Inspection Date: Project Contact:

Inspector(s):

Deficiencies Noted

The following observations were noted during the playground inspection. Results are in reference to the CAN/CSA Z614-20 Childrens' Playspace Standards and the City of Edmonton Playspace and Wheeled Sport Facility Design and Construction Standards.

Link to picture folder (if applicable):

Deficient Item (link picture)	CSA Z614 / COE Clause	Class Hazard *	Suggested Correction	Target Completion:	Correction Date:
Example: Structure: Wood Structure as slivers	**12.3.1.1** There shall be no accessible sharp points or sharp edges.	C	Remove or sand down slivers	July 20, 2022	July 18, 2020

Checklist	Status			Comments, design revisions or other results:
All assets installed as per as-built	☐ Yes	☐ No	☐ Unknown	

(back to top)

Drainage inspected	☐ Yes	☐ No	☐ Unknown	
Post holes inspected before and after concrete	☐ Yes	☐ No	☐ Unknown	
Loose fill surfacing is 12" deep	☐ Yes	☐ No	☐ Unknown	
Surfacing meets HIC drop testing	☐ Yes	☐ No	☐ Unknown	
Playground meets CAN/CSA Z614-20 Standards	☐ Yes	☐ No	☐ Unknown	
Playground meets Playspace and Wheeled Sports Facility Design and Construction Standards (Ver 03, date 2022-08-11)	☐ Yes	☐ No	☐ Unknown	
Playground equipment manual and maintenance kit received	☐ Yes	☐ No	☐ Unknown	

CCC Approval	**Status**		**Date:**
Construction completion approval once deficiencies are mitigated:	☐ Yes	☐ No	

FAC Approval	**Status**		**Date:**
Final Acceptance approval once deficiencies are mitigated:	☐ Yes	☐ No	

Additional Considerations

The following were not tested but should be considered in the evaluation:

Item	CSA Z614-20 Clause
Natural Materials: Wood	**7.4.1** Natural logs, branches, or similar that are provided (with or without manufacturing or machining) shall

	be selected for durability as well as structural integrity as per the requirements of Clause 9. Note: Consideration of dimensional size, shape, and weight is acceptable criteria for the natural stability requirements of Clause 9.2.
Ropes	**7.6** Ropes shall be selected on the basis of durability, strength, elasticity, weight, resistance to vandalism, potential to cause skin burns or abrasion, and requirements for maintenance. Ropes shall be resistant to ultraviolet degradation. If ropes are mounted permanently on support(s), the rope should be steel-cored or equivalently cut-resistant.
Surfacing	**10.1** Energy absorbency of a surfacing material: The surfacing material in the protective surfacing zone shall have a gmax not exceeding 200 and an HIC not exceeding 1000 when tested for the defined fall height.

Appendix

EQUIPMENT HAZARD CLASS*	CRITERIA
CLASS 'A'	Any condition which has the potential to be life threatening or can cause severe, permanent injury.
CLASS 'B'	Any condition which has the potential to cause serious but non-disabling injury.
CLASS 'C' (Equipment hazards and all construction-related deficiencies)	Any condition which can cause slight injury, or may not have caused injury but does not meet current standards.