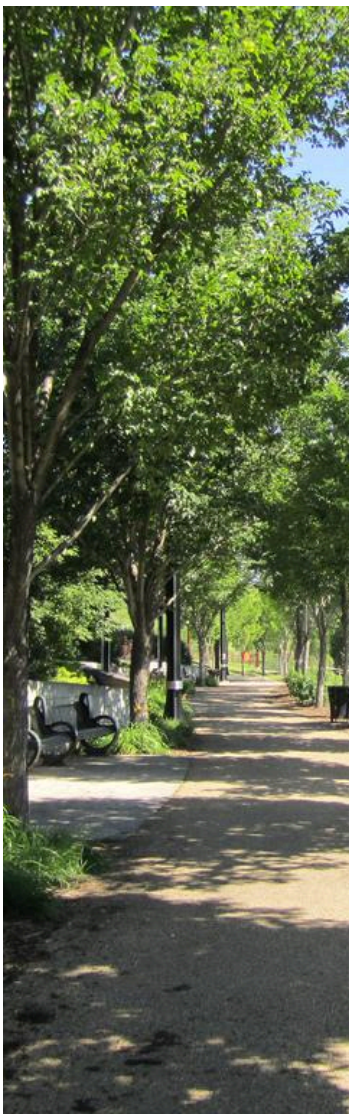

INTEGRATED INFRASTRUCTURE SERVICES
Open Space Planning & Design
Open Space Infrastructure Delivery

Open Space Consultant Manual

Volume 1

Design Process

and

Guidelines

COE-IM-GUIDE-0022
v05

Edmonton Tower
10111 - 104 Avenue
Edmonton, Alberta
T5J 0J4

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Contents

VER	Date	Revision Summary	Author	Checked	Appv'd
05	2025-07-10	Update: 2.3.5.8.11.4 Added Lifecycle maintenance model section Appendix F - Lifetime maintenance model sample added	H.M.	M.S.	D.H.
04	2025-04-16	Update: 2.3.4.1 Removed number of design options and adjusted language for clarity 2.3.4.4.1 Added Executive Summary requirement for design phase report Added Section: 3.1 Integrating Professional Engineers in Landscape Architecture Projects	M.S.	H.M.	D.H.
03	2024-08-29	Update: Percent for art references changed to Public Art Policy for clarity. 2.1 Project Development and Delivery Model (PDDM) graphic added 2.2.3.1 Replaced 'Business Partner' with City sponsor and stakeholders to maintain consistency. 2.2.3.3.3 and 2.2.4.4.7 and 2.2.4.4.9 and 2.2.5.5 and Appendix A Section 2 Removed references to 'Concept' and replaced with appropriate language to enhance clarity. 2.2.5.5 Replaced 'Pre-Consultation' with 'Informal Submission' to ensure consistency 2.2.5.8.14 Added 'Additional site utility plans as required' 2.2.5.12 Replaced 'Formal Consultation' to 'Formal Submission' and 'if required' to ensure consistency and increase clarity. 2.2.5.13 Replaced '...for Final Submission' to 'until confirmed as accepted' to increase clarity of expectations. 2.3.7.4 Updated As Built submission requirements 2.4.1.2 Revised language be consistent with EDC definitions. 3.3.1 Added Historical Resources Act reference 3.3.2.3 Added additional information.	H.M	M.S.	D.H.

02	2023-07-26	Updates 1.2.2 Update PSA definition to match Facilities and align with updated standing arrangement. 1.2.3 'IPR' revised to 'Project Call UP' to reflect terminology that will be used in the updated standing arrangements.. *All other references to IPR in the manual have been updated to 'Project Call Up'. 2.2.1.6 Updated authentication clause to align with other COE consultant manuals. 2.2.3.4.4 reworded to clarify that the consultant is expected to be physically onsite for site assessment. 2.2.7.3 and 2.2.7.7 Updated authentication clause to align with other COE consultant manuals. Appendix D naming updated to Construction Cost Estimates' from 'Project Estimates'. Added Sections 1.2.6 to 1.2.9 definitions 1.4 Safety 1.5 City Responsibilities 2.2.2 Project Reports Added clauses: 2.1.1.4 - related to Project meetings 2.2.7.5 - related to Consultant presence at site as requested by City.	H.M.	M.S.	D.H.
01	2022-04-11	Original Issue	H.M.	M.S.	D.H.

1 Introduction

1.1 *Purpose and Scope*

.1 This document is intended to be used for the following purposes:

.1 A reference for consultants providing services for new open space projects and redevelopments to existing spaces owned or operated by the City of Edmonton.

.2 A resource for the City of Edmonton when reviewing and evaluating the work performed by professional consulting firms on City open space projects. This evaluation will follow the City of Edmonton Supplier Performance Program. Contact Corporate Procurement & Supply Services Branch or the City's Project Manager for details.

.2 This document is divided into the following sections:

.1 Section 1 – Introduction: Establishes the scope of the document and gives general contact information.

.2 Section 2 – Design Process: Describes the information flow on a typical project, standard deliverables expected at each design phase and an overview of minimum document and CAD standards to be followed.

.3 Section 3 – Design Guidelines: Describes policies and design requirements specific to the City of Edmonton that are to be considered when designing open spaces. The contents of this section may not apply to all projects and should be clarified with the City's Project Manager.

.3 Except where otherwise noted, the technical information contained in this document is to be used as a guide only. The Consultant is expected to follow his or her professional judgment as well as all applicable codes and regulations. Projects may have specific requirements that supersede some material presented in this document. These requirements will be communicated to the Consultant at the outset of the project or during design as the need arises. When a deviation from these guidelines is either required or requested by the Consultant or owner, it shall be documented in writing.

.4 No content of this manual is designed for verbatim specification use and in general content should not be copied directly into a book specification for any project unless the Consultant is explicitly instructed to do so.

1.2 *Definitions*

.1 *Project Manager (PM):* As defined in the *City of Edmonton* Design and Construction Standards 'Volume 1: General Requirements'.

.2 *Professional Services Agreement (PSA)*: The agreement the Consultant enters into with the City to perform the Work. This document includes all documents listed within the Contract Form.

.3 *Project Call Up:* The invitation for Consultants to submit a quotation for individual projects. The project call up and the *PSA* are the basis upon which submissions should be submitted.

.4 *Consultant:* As defined in the *City of Edmonton* Design and Construction Standards 'Volume 1: General Requirements'.

.5 *City:* As defined in the *City of Edmonton* Design and Construction Standards 'Volume 1: General Requirements'.

.6 *Construction Budget*: Means the amount of money allotted by the City for a specific Project construction, including all anticipated costs and expenses of the construction process such as building permit fees, general contractor's fee, design contingency and all applicable taxes. The Construction Budget excludes any Consultant fees, owner internal costs, disbursements and City-held contingencies. The Construction Budget will be reviewed, adjusted or revised by the City in accordance with the Contract.

.7 *Construction Contingency*: An allowance of Ten Percent (10%) to Fifteen Percent (15%) has been included in the estimate for changes occurring during the construction period of the project. This amount may be expended due to unforeseen site conditions or unanticipated modifications to the drawings and specifications.

.8 *Construction Cost:* Is the value that is defined by an estimate at each milestone, identified in the Open Space Consultant Manual V1, to meet the construction budget. This value includes the contract price(s) of all Project elements designed or specified by, or on behalf of, or as a result of, the services of the Consultant, including cash allowances, building permit fees, general contractor's fees, design contingency, changes, and all applicable taxes, including the full amount of value-added taxes, whether recoverable or not. Construction Cost does not include Consultant's fee, owner internal costs, City-held contingencies, and disbursements.

.9 *Design Contingency:* A percentage value included in the Construction Cost to allow for continued development and completion of the contract documents. The value should progressively diminish as further clarity in design is achieved through typical advancement. Upon issuance of 100% Construction Documents the value should be nil.

1.3 *Contact Information*

.1 The latest version of this document may be obtained in electronic format from the *City of Edmonton* website, the *Project Manager*, or by contacting the individual below.

.2 *Consultant* input to the progressive updating of this document is invited as well as comments and feedback regarding CAD Drawing Standards. Please direct comments to:

Open Spaces Planning and Design
Building Great Neighbourhoods
Integrated Infrastructure Services
14th Floor, Edmonton Tower
10111 – 104 Avenue
Edmonton, AB T5J 0J4
openspaceplanninganddesign@edmonton.ca

1.4 *Safety*

.1 Alberta Occupational Health and safety regulations require the identification of Prime Contractor. The role of Prime Contractor shall be discussed and identified with the project team. If the role of Prime Contractor transfers it shall be clearly noted in the project minutes.

.2 The role of Prime Contractor will generally be fulfilled as follows:

.1 During the design phases, the *City* will retain the role of prime contractor..

.2 The *Consultant* will assume the role of Prime Contractor if site work such as survey or geotechnical investigations are required prior to construction.

.3 The role of Prime Contractor is transitioned to the Contractor once the projects has been awarded for construction.

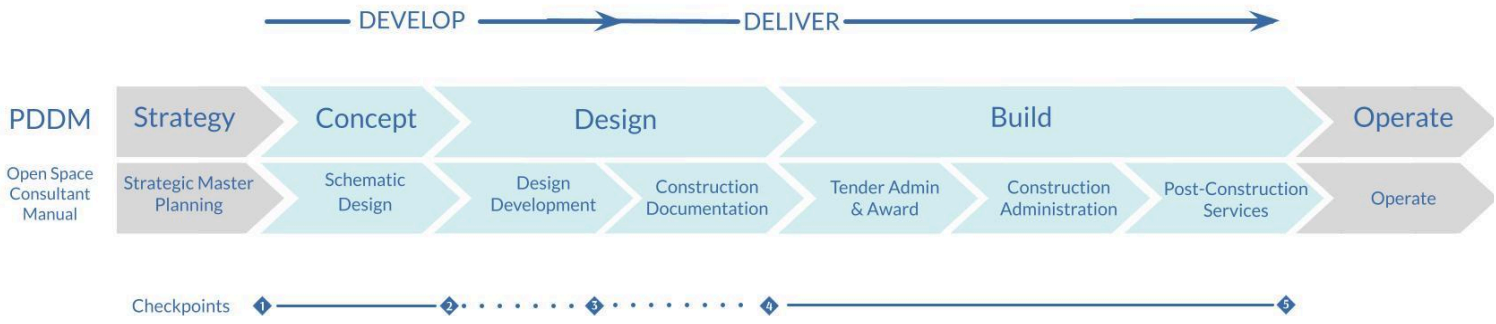
1.5 *City Responsibilities*

.1 The *City* shall provide all Project information reasonably accessible and known to the City, and for which it has the right to share with the Consultant, which the City reasonably believes is relevant to the Services to be provided by the Consultant.

2 Design Process

2.1 *Project Development and Delivery Model (PDDM)*

2.1.1 The Project Development and Delivery Model (PDDM) is the approach that the City takes to enhance capital infrastructure project oversight. This process involves structured reviews of projects at key points throughout the Project life cycle. Below is an illustration of the approximate alignment of Consultant Deliverables with the City's internal PDDM checkpoint system



2.2 *Project Communication*

2.2.1 General

.1 The *City* will assign a *Project Manager (PM)* for deliverables at each stage of the project lifecycle. At each stage of the project, the *Project Manager* will be the *Consultant's* single point of contact.

.2 The *Consultant* is to appoint one person to be the primary contact on the design team. If the design team consists of multiple sub-consultants in multiple firms, all official correspondence and submissions to the *City* should be through the Consultant representative appointed to the project.

.3 Any discussion between members of the design team that affects the project design, cost, or schedule should be recorded in writing by the *Consultant* and forwarded to all relevant team members, including the *Project Manager*. Internal discussions between the *Consultant* and their sub-consultants are to be documented internally. It is the responsibility of the *Consultant* to alert the *Project Manager* of any internal discussions that may affect the project scope, budget, schedule, etc.

.4 Project Meetings:

.1 The Consultant shall arrange, facilitate and record design meetings (Including meetings with sub-consultants, user groups, utility companies and the City) and distribute minutes to attendees, providing a copy to the Project Manager to ascertain that the services under this contract are being executed in reasonable conformity with the contract documents. The Consultant must ensure that:

.1 Design meetings are conducted in the City of Edmonton offices;

.2 Minutes include location and time of meeting, a list of attendees with contact information, all outstanding items carried forward from previous meetings, any updates discussed and any decisions made;

.3 All unresolved items are assigned to a responsible party, with a due date, and recorded in the minutes;

.4 Minutes are distributed within 5 business days of the meeting or faster if the minutes contain time-sensitive information.

.5 It reviews construction meeting minutes for accuracy and it has confirmed accuracy to the City within 2 days of distribution.

.2 Design meetings must be held every 2 weeks. Notwithstanding the foregoing, the frequency of design meetings may be modified by the City of Edmonton in its sole discretion to meet weekly if required to meet the schedule.

.3 The *Consultant* shall be physically present during the evening and on weekends when required by the City in order to support stakeholder meetings and public engagement activities as required.

.4 The Consultant will be required to participate with input for the Issue Log and Risk Register.

.5 Once the construction contract has been awarded, the Consultant shall attend site meetings every week, or as otherwise designated by the City of Edmonton Project Manager, to confirm that the work is being executed in conformity with the contract documents for the construction contract.

.5 Project meeting minutes and similar documentation is the responsibility of the *Consultant* and should be distributed to the *Project Manager*, sub-consultants, City-identified stakeholders and other parties as necessary. Refer to Section 'Drawing and Document Standards'.

.6 Addendums and construction documents such as contemplated change orders, site instructions, and inspection reports are to be distributed to the *Project Manager* through the *Consultant*. The *Project Manager* will distribute these documents to the *Consultant*, construction contractor, and/or other required parties. Refer to Section 'Drawing and Document Standards'.

.7 The *City* uses the Google ecosystem for email, calendaring, virtual meetings, and most documents. The *Consultant* will make every effort to use Google for file transfers to, and developing collaborative documents with, the *City*.

2.3 *Consultant Deliverables*

2.3.1 Introduction

.1 This section outlines typical deliverables at key project milestones. It is understood that all projects are different and the contents of this section may not wholly apply to all projects. For example, smaller projects may consist of reports only, or a larger project may be phased in such a way that more or less is required from the *Consultant* at each phase.

.2 Modifications to consultant deliverables required for projects are identified in the *Professional Services Agreement (PSA)*, or in the case of a standing arrangement, in the *Project Call Up*. In addition to the deliverables identified in the *PSA* or *Project Call Up*, it is the responsibility of the *Consultant* to prepare any submittals required by external authorities, such as, but not limited to, permit applications.

.3 The *Consultant* is responsible for ensuring they are aware of the project deliverables and preparing these submissions on time, with all required information contained therein.

.4 The *Consultant* shall submit an electronic copy of all consultant deliverables for the *City's* review and approval. Following the review and completion of any required additions or corrections the final deliverable shall be submitted via electronic PDF version. Confirm with the *Project Manager* if hard copies are required.

.5 All submissions will be reviewed by *City* staff or external consultants associated with the project. This may include the Project Team, Project Managers, *City* Subject Matter Experts (Design, Technical Services, Facility Engineering Services, Operations, Maintenance), *City* groups, Commissioning agents, etc. All review comments will be forwarded to the *Consultant* by the *Project Manager*.

.1 The *Consultant* is to collect, correlate, evaluate, prioritize, and draft responses indicating how a comment has been addressed or acknowledged, for all review comments in writing to the *Project Manager* prior to commencing work on the next submission.

.2 In some cases, the *Consultant* may be required to re-submit based on the nature of the comments.

.3 Comments received from the *City* do not absolve the *Consultant* of their responsibility to comply with all applicable local codes, regulations, *City* standards, specifications, and policies. Regardless of comments received by the *City*, the *Consultant* will remain the Engineer of Record or professional equivalent.

.4 Where direction is provided, but there are concerns of non-compliance this must be documented, discussed, and addressed in writing.

.6 All final submissions shall be authenticated. Authentication and validation in accordance with the AALA/ AAA/ APEGA practice standards and their Interface Management Plan

2.3.2 Project Reports

.1 The *Consultant* shall submit Project Reports to the *Project Manager* as follows:

.1 Milestone Reports:

.1 Project phase reports (Strategic Master Planning, Schematic Design, Design Development, etc.) and associated deliverables as outlined in the following sections.

.2 Progress Reports:

.1 The *Consultant* shall submit monthly Progress Reports to the *Project Manager* for invoicing that summarizes tasks completed and percentage of work completed to date.

2.3.3 Strategic Master Planning

.1 In preparing a strategic master plan, the *Consultant's* main task is to examine the site and facilities in detail so as to define needs and objectives for strategic decision making by the City sponsor and stakeholders. Significant effort should be provided by the *Consultant* team to determine the project sponsor and stakeholders shared vision, complete with goals and objectives required to achieve said vision. These requirements will establish criteria for evaluating the feasibility of the project and any potential design solutions or other strategic alternatives.

.2 Should public engagement and communication material be required as part of this stage, material shall follow the *City of Edmonton* Guidelines for Visual Identity (refer to section Visual Identity

Standards). All information boards, graphics and any print materials shall be “print-ready” size and graphic quality. Refer to the Professional Service Agreement for required public engagement material deliverables.

.3 *Consultant* will submit a Strategic Master Plan Report for reviews as outlined in Section 2.2.1 Introduction above. Refer to Appendix A - Report Guidelines. Report is to include, at minimum, the following unless otherwise noted in the *Project Call Up*:

.1 Introduction - explaining the project origin and purpose

.2 Executive summary

.3 Brief narrative of the entire strategic master planning process, including:

.1 Engagement with public and stakeholders including a communications plan

.2 Site assessment and analysis activities

.3 Visioning and design planning

.4 Reference how project follows City Plan, Breathe: Edmonton’s Green Network Strategy, and any other relevant city strategy documents

.5 Implementation, phasing, and cost planning

.4 Requirements from stakeholders including the Community.

.5 Summary of public/stakeholder engagement and how results impacted the design program.

.6 A complete list of participants including advisory committees who were consulted during the programming process.

.7 Description of the existing site conditions, and any restrictions on how the site can be used, such as zoning restrictions, land ownership, community concerns, and circulation.

.8 Description of goals and objectives of the open space project:

.1 Nature and scope of the project parameters, needs and opportunities

.2 Information is required to develop an appropriate design response

.9 Identification of changing trends and needs based on the demographics of the service area, and identification of the current and future demands in response to the specific project.

.10 Description of desirable activities and operations to be included, and divided into regularly occurring, seasonal, or occasional.

.11 Description of spaces required to support those chosen activities and operations:

.1 How much and what type of space is needed?

.2 What space will be needed in the future to operate efficiently and/or meet the needs of the community? Future planning to be determined on a project by project basis.

.3 Include any important or unique physical characteristics of these defined spaces, such as size, topography, servicing, wildlife corridors, sensitive plant materials, circulation patterns, adjacent uses, known historical resources, etc.

.12 Summary of plans, documents, codes, standards, policies, etc. that need to be considered in the current and future design.

.13 Criteria that will govern the future planning of design elements, site planning, and landscape architecture.

.14 Cost sensitive items that the design team must respond to during the design phase, and any elements with significant impacts for funding of construction and/or operating costs.

.15 An explanation of the strategy for phasing and future expansion, where applicable.

.16 Project risk analysis.

.4 Attachments should include, at a minimum:

.1 Biophysical assessment that collects and compiles existing environmental information to identify constraints, requirements, opportunities, and reporting for required permitting.

.2 Phase 1 environmental site assessment (ESA) to identify potential and actual contamination and determine further action and reporting requirements.

.3 Review and evaluate if any other environmental approvals are required, and approximate timelines for when they need to be submitted for. See Appendix C (Environmental Approvals)

.4 Public and stakeholder engagement results and response data from events, surveys, meetings, etc.

.5 Current site servicing and utilities overview.

.6 Relevant geotechnical reports and studies.

.7 Parking review and analysis.

.8 Stakeholder Register - Appendix F - Standard Document Examples

.9 Risk Register - Appendix F - Standard Document Examples

.5 This submission should include a Class 5 cost estimate. Refer to Appendix D - (Project Estimates)

2.3.4 Schematic Design (City & Technical Review)

.1 Previously referred to as concept design, this phase typically consists of a report with drawings or sketches as necessary to properly convey the designs or ideas presented. The *Consultant* shall develop design options based upon background information provided by the *City*, unless noted otherwise by the project team. **Note: if no Strategic Master Planning phase occurred then those deliverables may be included in this phase, confirm with the *Project Manager*.**

.2 Should public engagement and communication material be required as part of the Schematic Design stage deliverable, material shall follow the *City of Edmonton* Guidelines for Visual Identity (refer to section Visual Identity Standards). Refer to the *Project Call Up* for required public engagement material deliverables.

.3 Confirm with the *Project Call Up* if the Public Art Policy applies for this project, if so, a meeting should be coordinated by the *Project Manager* to initiate discussions between the design team and the Edmonton Arts Council. This is a general discussion to develop a strategy and for planning purposes.

.4 *Consultant* will submit a Schematic Design Report for review as outlined in Section 2.2.1 Introduction. Refer to Appendix A - Report Guidelines. Report is to include the following unless otherwise noted in the *Project Call Up*:

.1 If a Strategic Master Plan was not completed, all listed items included in Section Strategic Master Planning report.

.2 Executive summary summarizing the key points of the report and highlighting the major takeaways that should be understood.

.3 Project background, site ownership, parcel details, utilities, associated site information, context plan, aerial photos, existing site photos, and zoning plan.

.4 Changes to the project as a result of previous planning/design submissions, or subsequent discussions.

.5 Results from on-site site analysis and condition assessment of existing infrastructure including a discussion on any anticipated problems and solutions.

.6 Zoning bylaw compliance review.

.7 Prepare a design rationale that speaks to the shared vision, and the objectives to achieve that vision. Refer back to City Plan, Breathe, and other strategy documents.

.8 Written summary of how Design Guidelines and Standards are being considered. Refer to Section Design Guidelines. At minimum, provide a summary of which guidelines and standards will be considered and how they influence the design options. The summary shall also include the identification of design elements that deviate from design requirements found in all relevant guiding documents.

.9 Drawings/sketches, description, and elaboration of the three (3) designs, including recommendations based on public engagement, costs, constructability, etc.

.10 Preferred design option shall be identified in final report submission.

.11 Public and stakeholder engagement results and response data from events, surveys, meetings, etc.

.12 Written summary on any outcomes from meetings with; transportation, drainage, operations, emergency services and/or facilities departments that will be required to be incorporated into the design.

.13 Written summary confirming barrier free design has been considered. The intent is to achieve best practices where possible indicated in the “Checklist for Accessibility & Universal Design” by *City of Edmonton* Accessibility Advisory Committee. Refer to section Universal Accessibility.

.14 As required, provide a written summary of recommendations provided by all subconsultant team members. This may include, but not be limited to, geotechnical, structural, electrical, civil, mechanical, environmental, architectural.

.15 If applicable, provide a written summary documenting any developments regarding the Public Art Policy. This does not need to represent final decisions, but rather it is intended to be a record of the discussion if the project is delayed pending funding allocation.

.16 Summary of what additional disciplines are required.

.17 Risks related to the project, including deferring the project.

.5 This submission shall include an updated Class 4 cost estimate for all 3 options and a comparison to any previous cost estimates developed for the project. Refer to 'Appendix D - Construction Cost Estimates'.

.6 This submission shall include a detailed work breakdown schedule to implement the recommended design option.

.7 This stage shall include any work associated with any preliminary permit applications that may be required.

.8 Attachments should include, at a minimum:

.1 Risk Register - Appendix F - Standard Document Examples

.2 Stakeholder Register - Appendix F - Standard Document Examples

2.3.5 Design Development (City & Technical Review)

.1 This phase was previously called preliminary design, typically consisting of a report and drawings. The *Consultant* develops the preferred option from the Schematic Design phase into a submission that provides sufficient detail on how all components are incorporated to satisfy the project requirements. Drawings are used extensively to convey all major elements and systems so the *City* can get an understanding of the completed site.

.2 The use of a percentage value to describe the overall submission is discouraged. It is expected that certain portions of the design will be developed ahead of others to ensure information necessary to maintain the design schedule is available and not subject to significant changes.

.3 Typically a technical review will only be completed once, near the end of this phase. Additional submissions may be requested in the *Project Call Up* or provided by the *Consultant* to demonstrate progress. These will not normally be subject to a technical review. Extraordinarily large projects or major design revisions may be an exception and have extra technical reviews.

.4 Should public engagement material be required as part of the Design Development stage deliverable, material shall follow the *City of Edmonton* Guidelines for Visual Identity *(refer to section 'Visual Identity Standards')*. All information boards, graphics and any print materials shall be "print-ready" size and graphic quality. Refer to the Professional Service Agreement for required public engagement material deliverables.

.5 Confirm *Project Call Up* scope if the Edmonton Design Committee (EDC) will be reviewing this project, if so, *Consultant* will prepare a presentation based on the Schematic Design plan for an Informal Submission to the EDC. Refer to *City of Edmonton*, Edmonton Design Committee Webpage.

.6 At the beginning of Design Development, the *Project Manager* will re-initiate the Public Art Policy Process, by arranging a meeting with the Edmonton Arts Council.

.7 *Consultant* will submit a Design Development Report for reviews as outlined in Section 2.2.1. Refer to Appendix A Report Guidelines. Report is to include the following unless otherwise noted in the *Project Call Up*:

.1 Changes to the project requirements as a result of the Schematic Design submission, or subsequent reviews and discussions.

.2 Description of elements mentioned in previous reports, revised and expanded upon to provide a more detailed description. Unapproved options are discarded and approved alternative(s) are discussed in greater detail.

.3 Complete description of all required discipline design strategies and required next steps. Including, but not limited to:

.1 Geotechnical, Architectural, Structural, Mechanical, Electrical, Civil, and Landscape Architectural.

.2 Completed “Design Environmental Permit Approval Checklist”. Note all outstanding items that must be determined during detailed design. Refer to Appendix C - Environmental Approvals.

.4 Updated discussion of design guidelines and standards including *City* design and construction standards, CPTED, LID, Winter City, etc. Refer to Section ‘Design Guidelines’.

.5 Outline technical specification containing all design disciplines.

.6 Design and Construction schedule and updates as applicable.

.8 *Consultant* will submit Drawings for reviews as outlined in Section 2.2.1 Introduction. Drawings are to include the following, but not limited to:

.1 Landscape plans and site details such as fencing, gates, outdoor patios and amenity spaces, and any other site elements shall be detailed for development permit application and Edmonton Design Committee presentation.

.2 Site Plan, indicating major grade elevations, land contours, material and dimensioned locations of primary site features.

.3 Planting Plan

.4 Tree Protection and/or Tree Preservation Plans

.5 Site Materials Plan

.6 Details of key site design elements

.7 Site Demolition and Removals Plan

.8 Site Grading and Storm Drainage Plan

.9 Site Lighting and Site Electrical Plan (or coordinate with Electrical design). Refer to Consultant Manual Volume 1 for requirements.

.1 Plans shall identify street lighting (right of way assets) versus park lighting (titled land assets).

.2 For streetlighting assets Volume 6 of City Standards shall apply.

.10 Site Irrigation Plan

.11 Utility Connections Plan and Municipal Improvement Agreement (MIA) coordination (where required).

.12 Environmental remediation plan

.13 Structural plan

.14 Additional site utility plans as required ie. sanitary, water etc.

.9 This submission shall include a Class 3 cost estimate. Refer to Appendix D - Construction Cost Estimates.

.10 This submission shall include an updated detailed work breakdown schedule.

.11 Attachments should include, at a minimum:

.1 Provide *City of Edmonton* "Checklist for Accessibility & Universal Design", complete with explanations as to why any criteria are marked as not met or not applicable. Refer to Universal Accessibility for a checklist.

.2 Risk Register - Appendix F - Standard Document Examples

.3 Stakeholder Register - Appendix F - Standard Document Examples

.4 Lifecycle Maintenance Model. Refer to Appendix F - Standard Document Examples

Prepare a design inventory, similar to a cost estimate. Include the names/types of all assets, quantities of assets, unit of measurement, the material used to construct the assets, indicate if there is a change in the design standards. The *Project Manager* will facilitate coordination with PARS to ensure the most recent template is provided to the *Consultant*.

.12 Between the midpoint and end of Design Development, the *Consultant* will prepare a presentation for a Formal Submission to the Edmonton Design Committee (EDC) if required. This stage of the process is tied to the issuance of the Development Permit for the project. Refer to *City of Edmonton*, Edmonton Design Committee Webpage.

.13 The report and drawings shall be submitted as a draft for review by the *City*. The *Consultant* will be responsible for receiving, correlating, prioritizing, and responding to all comments and reviewing them with the project team prior to updating the report and drawings until confirmed as accepted.

2.3.6 Construction Documentation (City & Technical Review)

.1 This phase was previously referred to as Detailed Design and concludes with a pre-tender submission. In this phase the *Consultant* prepares a complete set of drawings and specifications intended to convey all information necessary to allow a contractor to bid and construct the project. These documents must be in compliance with applicable codes, industry and *City of Edmonton* standards, and be based on the latest approved detailed design submission and estimate of construction cost. The information contained in the pre-tender submission is to be 100% complete with no further work intended, and is submitted to allow the *City* a final chance to review progress and ensure all requirements have been included.

.2 Progress submission(s) may be required as per the *Project Call Up*. Progress submissions shall include all items required for the pre-tender submission at the predetermined stage of development as discussed with the *Project Manager*. The progress submission should include a Class 2 cost estimate. Refer to Appendix D - Construction Cost Estimates.

.3 The construction specification containing all technical sections (including the Special Provisions Section, if required) should be coordinated with the *City's* Front-End specification to ensure section names and numbers are correctly cross-referenced, information is not duplicated, and there is no contradictory information.

.4 The *Consultant* shall submit the pre-tender package for reviews as outlined in Section 'Introduction'. The pre-tender submission is to include the following:

.1 All items in previous submission, 100% complete, with comments from previous submissions addressed.

.2 Reference Section 'Design Guidelines' for all design and technical information.

.3 All technical reports required to inform design and bidding (e.g., geotechnical report, soils report, etc.)

.4 Bid Form

.5 Structural

.1 General notes with project specific items added, categories not pertaining to the project deleted.

.2 Final pile layout is set, complete with pile schedules and sections have been partially detailed.

.3 Type of pile caps identified and sections have been partially detailed.

.4 Grade beam schedule created and sections have been partially detailed.

.5 Slab on grade and structural slabs created and sections have been partially detailed.

.6 Base plate and anchor bolt schedules have been created and sections have been partially detailed.

.7 Sections and details have been cut and detailed.

.8 Specifications

.6 Mechanical

.1 Mechanical legend.

.2 Site Plan indicating location of storm and sanitary sewers, connections to existing sewers, pertinent inverts, size and location of water services (domestic and fire), the location of gas services and Municipal Improvement Agreement (MIA) coordination (where required), property lines.

.3 Specifications

.7 Irrigation

.1 Irrigation legend

.2 Irrigation calculations including available water pressure, water capacity, and irrigation requirements.

.3 Site plan indicating locations of mains, laterals, valves, sprinklers, drip irrigation, connections points, controller, and any other associated information.

.4 Electrical requirements and locations, including coordination with electrical plans.

.5 Specifications

.8 Electrical

.1 Electrical site plan indicating location of power and low tension services, utility transformer, utility service boxes, event panels, site lighting, power, and parking pedestals.

.2 Lighting plan. Indicate luminaire types, mounting height, and lighting control types & locations.

.3 Power and distribution plan, including all major equipment shown to scale, and indicating clearances in front of/around equipment. Include emergency/standby power system (if applicable) and bonding study (if applicable).

.4 Electrical details, including utility transformer installation details, trenching/underground installations, equipment installation details, grounding/bonding details, and control diagrams.

.5 Luminaire schedule.

.6 Specifications.

.9 Landscape / Civil

.1 Site Plan, indicating major grade elevations, land contours, material and dimensioned locations of primary site features.

.2 Builders Pavement Plan

.3 Planting Plan

.4 Tree Protection and/or Tree Preservation Plans

.5 Site Materials Plan

.6 Details of key site design elements

.7 Site Demolition and Removals Plan

.8 Site Grading and Storm Drainage Plan

.9 Location of known utilities for reference

.10 Specifications

.10 Environmental

.1 Final “Design Environmental Permit Approval Checklist”, incorporating all outstanding items from the Design Development submission. This checklist is for the *City’s* records and is not required to be included in the tender documentation. Refer to Section ‘Environmental Management (Enviso)’ for more information.

.5 The pre-tender submission should include a Class 1 cost estimate. Refer to Appendix D - Construction Cost Estimates.

.6 Note: Responding to reviews done by COE will not relieve *Consultant’s* responsibility to provide COE 100% complete set of drawings and specifications for competitive bidding process. The Construction documents should be complete in all respects for the general contractor to price it accurately and in a timely manner.

2.3.7 Tender Administration and Award

.1 In this phase the *Consultant* prepares the “Issued for Tender” documents ensuring that any comments received during the pre-tender submission have been addressed. Once the tender process has been completed and the contract awarded, the *Consultant* will prepare “Issued for Construction” documents.

.2 The “Issued for Tender” documents are to consist of a complete set of drawings and specifications intended to convey all information necessary to allow a contractor to bid the project. These

documents must be in compliance with applicable codes and shall incorporate all review comments from the pre-tender review.

.3 Manage the authentication and validation of the Issued for Tender drawings and specifications in accordance with the AALA/AAA/APEGA practice standards and their Interface Management Plan.

.4 *Consultant* will conduct the pre-tender meetings, including the pre-tender site meeting, and answer questions during the bid period.

.5 The *Consultant* will provide any addenda required to clarify pre-tender discrepancies including revision of drawings or any other documents produced by the *Consultant.* The City will review and issue addendas.

.6 *Consultant* will assist with the prequalification of proponents as required.

.7 *Consultant* will assist with tender questions, site visits, and prepare/issue addenda.

.8 *Consultan*t will participate in the tender review process, evaluation of bids, and provide award recommendations.

.9 The “Issued for Construction” documents shall consist of a complete set of drawings and specifications intended to convey all information necessary to allow a contractor to construct the project. These documents must be in compliance with applicable codes and shall incorporate any addendums issued during tender. Consultant shall manage the authentication and validation of Issued for Construction drawings and specifications in accordance with the AALA/AAA/APEGA practice standards and their Interface Management Plan.

2.3.8 Construction Administration

.1 In this phase, the *Consultant* shall complete field reviews and inspections, manage communications, documentation, claims, and prepare record drawings as identified by the *Project Call Up*. Refer to Section ‘Standard Document Guidelines’.

.2 *Consultant* shall record, manage, prepare all appropriate construction administration documents. This may include Site Instructions, Requests for Information, Contemplated Change Orders, Change Orders, Shop Drawings, Design Addendums, etc. Refer to Section ‘Standard Document Guidelines’.

.3 The *Consultant* shall prepare and maintain a tracking log for the above construction administration for reference at project meetings.

.4 The *Consultant* may be required to organize and chair construction meetings with the *Project Manager* and other project team members as required: frequency at the discretion of the project needs; create the agenda, record the minutes and circulate minutes to group within agreed process by project team. These requirements will be specified for each individual project.

.5 During regular business hours, the Consultant shall be physically present at the Project site during construction within eight hours of a request from the City.

.6 *Consultant* will complete field reviews and issue reports (with photos) documenting the execution of construction as it relates to the contract drawings and specifications. Site inspections shall be constructed with sufficient frequency (minimum weekly recommended) during construction to ascertain that the work is being executed in compliance with drawings and specifications. All relevant sub-consultants are required to sign off on their related field reviews, reports, and schedules.

.7 *Consultant* shall review and verify the contractor's progress work aligns with the progress claims. Recommendation of payment shall be submitted to the *Project Manager* within 4 working days of receipt of progress claim from the contractor.

.8 *Consultant* shall review and verify quantities through survey prior to contract close out. Survey data shall be submitted to *Project Manager* upon completion.

.9 *Consultant* will be responsible for ensuring the site is ready for a Declaration of “Substantial Performance” as defined in the Alberta Builders Lien Act. If such legislation is not in force, “substantial performance of the work” is reached when the work is ready for use, or is being used for the purpose intended, and is certified as such by the professional of record.

.10 *Consultant* will coordinate and attend Construction Completion Certificate (CCC) and recheck inspections. *Consultant* will issue deficiency reports and follow up on corrections.

.11 Upon receipt of the redline drawings from the contractor, the *Consultant* shall submit them to the *City* for informational purposes.

.12 Within one month of the receipt of the redline drawings from the contractor, the *Consultant* shall submit to the *City* one complete set of electronic As-Builts. The *City* will review the submission for compliance. The *Consultant* shall make any necessary corrections and submit. Refer to Section ‘Drawing Quality Guidelines’.

2.3.9 Post Construction Services

.1 *Consultant* shall prepare and submit operation and maintenance manuals as outlined in the *Project Call Up*.

.2 *Consultant* will complete field reviews and issue reports documenting the execution of repairs and maintenance as it relates to the warranty and maintenance specifications.

.3 *Consultant* will coordinate and attend Final Acceptance Certificate (FAC) and recheck inspections. *Consultant* will issue deficiency reports and follow up on corrections.

2.4 *Drawing and Document Standards*

2.4.1 References

.1 *City of Edmonton Design and Construction Standards*. These documents can be downloaded from the *City of Edmonton* Website.

.2 Appendix F - Standard Document Examples.

2.4.2 Introduction

.1 The drawing standards outlined in Section ‘CAD Drawing Standards’ are to be followed for all projects.

.2 Further to the contents of Section ‘CAD Drawing Standards’, the basic guidelines presented in this section should be considered when preparing reports, drawings, specifications or other documents for the *City of Edmonton*.

2.4.3 General

.1 Follow a consistent format throughout. Where information for a submission is provided by multiple sub-consultants, it is to be incorporated into a single document that follows the same format throughout. This includes header/footer, title block, font size, and type.

.2 Tender documents are to clearly identify the entire scope of work to allow bidders to bid accurately.

.1 Coordinate with the *Project Manager* to include provisions for alternate pricing where site conditions affecting scope are not known when the tender documents are produced. Alternate pricing will not be allowed in situations where an inspection of the existing site/amenities, as-built drawings, or Operation and Maintenance manuals would clarify any unknowns.

.2 Drawings should generally be produced in a monochrome format, with legible line types, so that the information will be clear when reproduced by a black and white printer/plotter. While photos are generally discouraged, if they are used in a drawing, any photos should be high quality grayscale or colour and must print out clearly in both black and white, and colour.

.3 Wording in documents that provide direction to the Contractor (e.g., specifications, drawings, site instructions) is to be directed to the general contractor, and not distinguish between subcontractors. It is the responsibility of the general contractor to manage his/her own forces as necessary.

.4 Perform an internal peer review prior to submission to the *City*.

.1 Coordinate all submission materials between disciplines.

.2 Compare the submission to the most recent approved design report and all subsequent design documentation to ensure compliance with *City of Edmonton* requirements. Ensure comments received from the *City* from previous submittals are addressed in the current submission.

.3 Proof-read for spelling, grammatical errors and readability. It is recommended that this be performed by an individual not involved in writing or producing the document.

.4 Submit Quality Assurance/Quality Control record(s).

2.4.4 Standard Document Guidelines

.1 Reports and Studies

.1 All reports and studies are to comply with the guidelines set out in Appendix A –Report Guidelines.

.2 Specifications

.1 Unless otherwise indicated by the *City,* specifications on drawings are not permitted. All specifications are to be in the latest adopted edition of MasterFormat™ (50 Divisions).

.2 The *City* will provide a draft copy of their front-end specification for coordination purposes. Ensure duplicate or conflicting information between front-end and technical specifications is eliminated. Specific attention should be given to coordinating Allowances, Separate & Alternate Pricing, Submittals (shop drawings, samples, mock-ups, O&M manuals, as-built drawings, etc.), Training, Testing, and Commissioning requirements.

.3 Use the same formatting as the *City* front-end specification. This includes the header, font size and type, numbering and formatting conventions. Font is to be Arial, 11pt.

.4 The final specification is to be submitted in Google Docs and PDF formats on optical disc, memory stick, portable drive, or via file sharing system. The PDF specification is to contain all

sections in one document, with individual sections bookmarked and to be fully text searchable/OCR'd.

.5 Do not include consultant fees to perform additional services for the contractor in the specification if these services are already included in the *Consultant's* contract with the *City*, or if these services are to be performed by a third party. Examples include CAD record drawing preparation from as-built mark-ups or survey.

.3 Addenda

.1 All Requests For Information (RFI's) that may result in issuing of addendum should be issued by *Consultant* in 48 working hours or a timeline agreed upon with the *Project Manager*.

.2 Prior to preparing an addendum, the *Consultant* is to obtain the current addendum number from the *Project Manager*. All addendum documents are to include this number.

.3 Each addendum item should make reference to a specific drawing detail, drawing note, or specification article in the contract documents.

.4 Each addendum item should indicate whether the item referenced is to be added, deleted, or revised, with further clarification(s), as required.

.5 Include sketches with addenda, where necessary. Hand-drawn sketches are unacceptable. Sketches issued with addenda are to be incorporated into the construction drawing set.

.6 Use the *City's* addendum format for all addenda. A copy of the *City's* addendum format in Word may be requested from the *Project Manager*. An example of an Addendum using the *City's* format is included in Appendix F.

.7 Addenda that do not follow these requirements will be returned for resubmittal.

.4 Submittals Registry

.1 Prepare a submittals registry prior to the construction start-up, to be handed over to the Prime Contractor. Registry is to be updated and reviewed, as required for the duration of the project.

.2 This registry is to include a list of all submittals (tender submittals, shop drawings, samples, mock-ups, O&M materials, etc.) to be submitted by the Contractor. Include reference to the specification section where the item is described.

.5 Site Instructions (SI), Contemplated Change Orders (CCO), and Change Orders (CO) - Appendix F - Standard Document Examples

.1 Use site instructions to answer contractor questions or clarify specific items in the contract documents. Unless otherwise instructed by the *Project Manage*r, site instructions are only to be used when the work described therein does not substantially change the scope of work and has no anticipated change to the construction contract value and construction schedule.

.2 Issuance and submission of draft SIs, CCOs, and COs to the *Project Manager* shall occur within 48 hours or as agreed upon with *Project Manager* to ensure established construction schedules maintained are not negatively impacted.

.3 Use contemplated change orders when proposing changes to the contract documents. These changes may or may not result in an adjustment to the construction contract amount and/or construction schedule.

.4 Sketches issued with SIs and CCOs must NOT be hand-drawn.

.5 Site instructions and contemplated change orders are to be submitted to the *City* using the format dictated by the *Project Manager*.

.6 The *City* will issue all SIs, CCOs and COs to the Contractor.

.7 The use of electronic contract administration programs to monitor and issue SIs, CCOs and COs is permitted, providing the requirements of this section are adhered to. Prior to implementation, get approval from the *Project Manager*.

.6 Meeting Minutes - Appendix F - Standard Document Examples

.1 Record and distribute minutes for all design meetings.

.2 Include a list of attendees with contact information, location, and time of meeting.

.3 Meeting minutes are to include all outstanding items carried forward from previous meetings and any updates discussed in subsequent meetings. All unresolved items noted in the minutes are to be assigned to a responsible party.

.4 Minutes are to be distributed within 4 business days of the meeting or faster if the minutes contain time-sensitive information.

.5 An example of a Meeting Minutes format acceptable to the *City* is included in the appendices.

.6 Review Construction Meeting Minutes for accuracy and confirm with the *City* within 2 days of distribution.

.7 Inspection Reports and Field Reviews - Appendix F - Standard Document Examples

.1 Include date, time, weather conditions, person(s) performing inspection, date of previous inspection.

.2 Indicate items being inspected.

.3 Note the reason for inspection (progress, rough-in, substantial completion, warranty, etc.).

.4 Give a description of construction progress, as it relates to the items being inspected. Indicate progress since the previous inspection.

.5 Note specific deficiencies and action items. Include description of item, relevant background information, and party(s) responsible for next steps.

.6 Note the Contractor's work plan for the following inspection period (what work is planned, who will be involved, what products will be arriving and/or will be installed, upcoming testing, and any special construction equipment or procedures).

.7 Record details of any discussions held on site between *Consultant* and contractor, *City*, etc.

.8 Inspection Reports are NOT a substitute for a Site Instruction or Contemplated Change Order. Issues identified during inspections are to be followed up with SIs or CCOs, as required.

.9 Inspection reports and Field Review notes are to be distributed within 3 business days of the date of inspection. Time sensitive inspection items are to be addressed verbally to the *Project Manager* at the time of inspection.

.10 A Project Inspection Plan template file is included in Appendix F. Confirm with the *Project Manager* that it is the most recent version.

2.4.5 Drawing Quality Guidelines

.1 Clarity of submitted drawings is of paramount importance. Submissions will be reviewed to ensure they meet the project requirements and clearly convey the entire scope of work to bidders. Submissions not meeting these criteria will be returned for resubmittal.

.2 The following are suggestions to help minimize errors and increase the clarity of drawings:

.1 Provide a drawing index.

.2 Utilize the same labels, terminologies, etc., on the entire drawing set, including sub-disciplines.

.3 To minimize errors where a change is made on one drawing, but not on the others, do not duplicate specific information on multiple sheets or details.

.4 Include a key plan for drawings containing a partial site plan.

.5 Scaled and geo-referenced site plan(s).

.6 Notes and Legends:

.1 Place notes, legends, and frequently referenced details on the right side of the drawing, or opposite the side on which the drawing set will be bound. Symbols used on drawings and legends should be legible when viewed in both electronic or printed formats.

.2 Place general notes and legends on the first drawing sheet for each discipline, or on each drawing in the set. If general notes and legends are placed on each drawing, include only those notes and symbols that apply to that drawing.

.3 Use general notes for information that applies to the entire drawing or group of drawings.

.4 Text notes should be preferentially used for plans and details. When the amount of description or number of notes suggests the use of callouts and keynotes for clarity, the list of keynotes shall be sheet or detail specific and complete. That list shall include all callouts, and only those callouts, relevant to that sheet or detail. Each keynote must be referenced by a consistent callout symbol and numbering system specific to that sheet or detail. Skipped numbers, “note not used”, and unreferenced or unmatched callouts-keynotes links are unacceptable.

.5 When using standard details or drawing templates, delete or cross out all notes that do not apply to the specific project.

.6 Keep notes on drawings concise and specific. Do not include notes when the same information is explained graphically in a plan or detail.

.7 Separate densely-packed information into multiple drawings to improve readability.

.8 For projects involving demolition, clearly indicate items to be demolished, relocated or refurbished, as well as all information needed to convey the scope of the demolition to the bidders. Include a demolition plan for each discipline, clearly identifying all equipment and materials to be demolished, relocated or refurbished. Provide separate plans for demolition and new construction.

.3 As-Built Drawings:

.1 The As-Built documents consist of a complete set of drawings intended to convey all information necessary to document the actual construction of the site. The As-Built drawings allow the *City* to update their inventories and databases to continue maintenance once the

project is accepted by the *City*. Submission of As-Built documents shall be 4-6 weeks following CCC. Refer to Section 'Drawing Submission Requirements'.

2.4.6 CAD Drawing Standards

.1 All CAD drawings are to be provided as AutoCAD *.dwg format. If drawings are converted from other CAD software, the *Consultant* is responsible for ensuring the accuracy of the final AutoCAD files. Confirm with the *Project Manager* what version of AutoCAD the final *.dwg files are to be submitted as.

.2 Drawings are to be prepared for ANSI D (864 x 559 mm) sheet size. The following alternate drawing sizes may be used, with approval by the *Project Manager*:

.1 A0: (1189 x 841 mm)

.2 A1 (841 x 594 mm)

.3 ANSI B (Ledger): (432 x 279 mm)

.3 Drawing units:

.1 All drawings are to be created using metric units using the millimetre as the standard unit of measurement (1 unit = 1 mm). Draw all objects in model space 1 to 1 scale (e.g., A 3000 mm long object is drawn 3000 mm long in CAD).

.2 All dimensions and measurements are to be in metric units. Do not round numbers on drawings when converting imperial measurements to metric.

.4 Title Blocks:

.1 Use an approved *City of Edmonton* title block for all drawings. A copy of the title block in *.dwg format is available upon request from the *Project Manager*. *Consultants* may use company title blocks if previously submitted and approved for use by the *Project Manager*.

.2 The "Project Number" field on the title block refers to the *City's* project number, which can be obtained from the *Project Manager*. The *Consultant's* internal project number may be included under their logo on the title block, if desired.

.3 The drawing file name is to comply with the drawing naming convention. The building code number can be obtained from the *Project Manager*. Refer to Appendix B – Drawing Naming Convention.

.4 Include the building address on all title blocks. The address can be obtained from the *Project Manager*.

.5 Include the Consultant Logo(s) on all title blocks.

.6 Revision Blocks:

.1 All drawings in a submission are to have the same revision number/letter, submission name and date of issue. This information is to be coordinated for all disciplines in the drawing set.

.2 All new submissions are to utilize the next number/letter in sequence and have a unique Submission Name. This requirement also applies to re-submissions. Refer to the example below.

.3 Include, in the revision block, the current submission and a list of all previous submissions. When submitting “Issued For Tender” drawings, delete the list of pre-tender submissions and re-start the revision numbering with ‘0’.

.4 Refer to the following Revision block examples:

Pre-Tender:

Revision	Submission Name	Date (YY/MM/DD)
A	Schematic Design	08/12/31
B	Design Development	09/02/28
C	Des Dev Re-sub 1	09/03/01
D	Progress Submission 1	09/03/31
E	Pre-Tender Submission	09/04/25

Tender and Post-Tender:

Revision	Submission Name	Date (YY/MM/DD)
0	Issued for Tender	09/06/20
1	Revision #1	09/06/27
2	Issued for Construction	09/07/15
3	As-Built	10/04/31

.5 Layers:

.1 Use a consistent layering standard on all drawings. Layers are to be used to separate different drawing and building elements. Layer names are to clearly describe the contents of that layer.

.2 The Monochrome.ctb or COE.ctb plot style table must be used for all drawings. If using the COE.ctb plot style table, use only colors 1 to 8 for each layer and ensure the color used corresponds to the intended line-weight. If using the Monochrome.ctb plot style table, ensure the intended line-weight is assigned directly to each layer used. All drawings in the set are to use the same *.ctb file. A copy of the COE.ctb plot style file is available upon request from the *Project Manager.*

.3 Drawings not complying with these requirements will be returned for resubmission.

.4 A layering standard acceptable to the *City* is included as a reference in Appendix E – Sample CAD Layering Standard. This standard is compatible with the COE.ctb plot style table. It is not a requirement to use this standard.

.6 Plans, details, and related text are to be created in Model space. Paper space is to be used for laying out the drawing sheet and defining views. Title blocks, general notes, schedules, charts and other non-graphic information may be placed in Paper space. All viewports in Paper Space should be locked.

.7 Submitted AutoCAD files are to have only one sheet in Paper space per *.dwg file.

.8 Use only standard AutoCAD font styles. Do not use third party fonts. Text height should be between 2.0 and 5.0 mm for the final plot. Use a consistent text height throughout submission.

.9 Do not use nested blocks. Create new blocks in layer '0' only.

.10 Bind all x-refs in all *.dwg files submitted to the *City*. Purge all unused blocks, dimstyles, layers, styles, linetypes and shapes.

.11 When images are used in drawings, they are to be inserted as OLE objects to ensure they are attached to the drawing file.

2.4.7 Drawing Submission Requirements

.1 Drawings not complying with the following requirements will be returned for resubmission.

.2 All drawing submissions are to be provided in the latest PDF format.

.1 All drawings and elements thereof must ***exactly*** match the native CAD design documents in page format, size, line weight, etc.

.2 All drawing PDFs must be of the vector type format; bitmap or scanned drawings are unacceptable.

.3 Submissions prior to As-Builts shall generally be in the form of a single PDF file bookmarked by discipline. In cases where aggregate PDF file size may be an issue, separating into one file per discipline is acceptable.

.3 Drawings in AutoCAD format may be requested, prior to As-Built stage, for use by the *City* or a Contractor. If so, these DWG files shall be provided as per the As-Built section requirements below.

.4 As-Built Drawings

.1 As-built files will be submitted to the City within 90 days of the receipt of CCC. Any changes to the site that occur between CCC and FAC will need to be reflected in an updated as-built submission to the City.

.2 As-Built submission will consist of the following:

.1 PDF set of the Issued for Construction drawings set complete with redline mark ups of any changes that occurred. Confirm with the PM if supplementary digital files are required.

.2 DWG topographic survey produced from the as-built survey. A .csv file shall accompany the as-built DWG file.

.3 The topographic survey needs to identify all assets. The owner and operator for each asset needs to be identified (Eg EPCOR vs City). Assets should include the following, this list is not exhaustive.

1. Softscape - turf, plant material, mulch beds, naturalization beds, rip rap, boulders, etc.
2. Hardscape - trails, paths, plazas, pads, etc
3. Amenities - benches, waste receptacles, shade structures, fences, bollards, lights, etc.
4. Utilities - power, gas, water, sanitary, storm, subdrainage pipes, sumps, soil cells, etc.

.3 Submit all files on memory stick or via file sharing system for *City of Edmonton* download.

.1 As-built files will be reviewed by the Open Space Design team as well as the Project Manager.

.4 Confirm with *Project Manager* if any supplementary hard copies are required.

2.5 *Edmonton Design Committee*

2.5.1 General

.1 The Edmonton Design Committee (EDC) reviews presentations from both Civic Departments and the public in regards to major developmental applications, direct control rezoning applications and public projects with a predetermined geographical area. Refer to Edmonton Design Committee Bylaw 19784.

.2 The *Consultant* may be required to participate in Informal and Formal presentations to the EDC. This will be determined on a case-by-case basis.

.3 All information regarding the Edmonton Design Committee can be accessed from the *City of Edmonton* webpage.

.4 The deliverables required for presentations to the EDC and their timing in the design process are outlined in Section 'Consultant Deliverables'.

2.6 *Public Art Process*

2.6.1 General

.1 If projects are required to adhere to the Public Art Policy, the *Consultant* shall follow the appropriate process and provide deliverables as outlined in the *Project Call Up*.

3 Design Guidelines

3.1 *Integrating Professional Engineers in Landscape Architecture Projects*

3.1.1 General

.1 These guidelines are intended to help determine when to involve engineers in landscape and open space projects, ensuring compliance with professional standards and best practices while maintaining landscape architecture design leadership.

3.1.2 Engineering involvement is required for:

.1 Structures: Any work that affects or defines the structural integrity of an element or system (e.g., wood/steel/concrete structures and elements, retaining structures, foundations, load carrying elements, Low Impact Development, etc.) requires engineering involvement. In addition, any structure falling under the National Building Code (Alberta Edition) or any bridge must involve engineers.

.2 Earthworks: A geotechnical review is required at the outset of all projects involving excavation, fill, or compaction, including cross-sections, structures, pathways, and trails. This initial review will evaluate potential risks and determine the need for a more in-depth geotechnical engineering

assessment, design, and construction recommendations. Existing engineering specifications or details must not be implemented into designs without a qualified professional engineer appropriately characterizing and evaluating the site and development-specific conditions, and taking professional responsibility for them.

.3 Stormwater/Drainage: Engineers are responsible for the design of stormwater management systems both overland and underground. This includes performing hydrological calculations to determine system sizing and capacity, specifying drainage infrastructure, and ensuring structural integrity of associated elements. Engineers must be involved in drainage elements beyond common grading and basic subdrain systems.

.4 Proximity to Infrastructure: Any work near infrastructure such as buildings (e.g., foundation integrity) or a roadway/rail right-of-way that impacts the operations, including alterations to road networks, alterations to existing drainage patterns, or effects on signal sight lines (or if required by legislation), necessitates engineering involvement.

.5 Materials: When City specifications already exist for particular materials, engineers are typically still required to assess the suitability and performance of materials for the systems in which they are used (e.g., site-specific conditions may impact material suitability). Factors affecting materials like structural requirements, lifecycle impacts, safety considerations, and overall technical performance within the system must be evaluated by an engineer.

.6 Emerging Technologies: Engineering involvement is required to assess emerging, new, or unfamiliar technologies to determine their implications, limitations, and long-term effects on infrastructure.

.7 Electrical/Mechanical Works: Any work involving electrical design or modification (e.g., power services, lighting, electrical design, etc.) or mechanical design or modification (e.g., HVAC, plumbing, sanitary, etc.) involve engineering.

.8 Scope Changes: Any consequential change that impacts the integrity of any element above must involve engineering to reassess its impacts.

3.1.3 Collaboration Strategies

.1 It is important for the design lead to address compliance and regulatory requirements proactively by integrating engineers into the design and implementation processes. Key collaboration strategies include:

.1 Early and Continuous Engagement: Consult with engineers during the initial design phases for projects containing engineering scope of work to discuss project needs and determine the appropriate level of engineering support. Maintain engagement throughout design phases.

.2 Ongoing Collaboration: Maintain communication with engineers throughout the project lifecycle, particularly regarding changes to the site, materials, or specifications, to jointly

problem-solve and develop solutions that satisfy technical project requirements while respecting the overall design intent.

3.2 *Accessibility*

3.2.1 Universal Accessibility

.1 General

.1 All public spaces are to be universally accessible (barrier-free, gender neutral, and age-friendly).

.2 The level of barrier-free accessibility for renovations, upgrades, and/or additions is to be determined by the *City of Edmonton* on an individual project basis.

.3 Best practices in the “Checklist for Accessibility & Universal Design” by the *City of Edmonton* Accessibility Advisory Committee shall be achieved, wherever possible. Check the *City of Edmonton* website for the latest version of this checklist.

.2 References

.1 Required References:

.1 *City of Edmonton* Policy C602: Accessibility for People with Disabilities. This document can be found on the *City of Edmonton* website.

.2 Recommended References:

.1 “Barrier-free Design Guide”, Barrier-free Design Advisory Committee of the Safety Codes Council and with the assistance of Alberta Municipal Affairs.

.2 “City of Edmonton Access Design Guide”, *City of Edmonton*.

.3 CAN/CSA B651-95, Barrier-free Design, Canadian Standards Association.

.4 Any additional sources as referenced in the above documents.

3.3 *City Department Design Standards*

3.3.1 General

.1 Some departments within the *City of Edmonton* have supplementary design standards that must be incorporated into new projects. These departments include, but are not limited to:

.1 City Design & Construction Guidelines

.1 Volume 1 - General

.2 Volume 2 - Complete Streets Design and Construction

.3 Volume 3 - Drainage

.4 Volume 2 - Water

.5 Volume 5 - Landscaping

.6 Volume 6 - Street Lighting Standards

.7 Volume 7 - Power

.8 Volume 8 - Pavement Marking

.2 Facility Engineering Services. Refer to Facility and Design Construction Consultant Manuals.

.1 Volume 1 Design Process and Guidelines

.2 Volume 2 Technical Guidelines

.3 Transportation / TransEd (LRT & bus terminals)

.4 Edmonton Public Library

.5 Edmonton Police Service

.6 Fire Rescue Service

.7 Urban Forestry. Refer to Public Tree Bylaw and associated tree preservation/protection requirements.

.2 Prior to commencing design work, consult with the *Project Manager* to determine any additional standards to be used.

3.4 *Historic Resources*

3.4.1 References

.1 Designation and Rehabilitation of Municipal Historic Resources in Edmonton, Policy Number C450B, *City of Edmonton*, September 2008. This document can be found on the *City of Edmonton* website.

.2 Historical Resources Act, Province of Alberta. This document can be found on the provincial website.

3.4.2 General

.1 These policies provide guidelines for the identification, management, protection, and promotion of historic resources.

.2 Prior to commencing design work, consult with the Project Manager to determine if any part of the site is a Provincial Historic resource and/or a Municipal Historic Resource, so they can track the project and ensure that legislation is being followed and the heritage designations are being preserved.

.3 If an activity is likely to result in the potential alteration of, damage to or destruction of a historic resource, the following may be required:

- conduct a Historic Resources Impact Assessment (HRIA)
- submit a report of the HRIA results
- avoid any historic resources endangered by activity
- mitigate potential impacts by undertaking comprehensive studies
- document historic structures
- consult with First Nations

3.5 *Environmental Management (Enviso)*

.1 References

.1 *City of Edmonton* Enviso Website: www.edmonton.ca/enviso

.2 Contractor Environmental Responsibilities Package: Engineering Design & Architectural Services, *City of Edmonton*. This document can be found on the *City of Edmonton* website.

.2 General

.1 Enviso is the name of the *City's* environmental management system.

.2 The *Consultant* is to identify and understand the potential environmental implications of the project. Environmental considerations include, but are not limited to, spills and releases, contamination discovery, noise, erosion and sedimentation control, water conservation & efficiency, drainage of wastewater & stormwater, energy conservation & efficiency, tree protection, natural area protection, waste management, and material & resource conservation. Refer to the *City of Edmonton* Enviso website for further details on the program.

.3 The *Consultant* may be required to sign an Environmental Acknowledgement Form prior to commencing work on the project. This form is included as an appendix in the *Consultant's* Environmental Responsibilities Package: Engineering Design & Architectural Services document. When required, this will be identified in the *Professional Services Agreement (PSA)*.

3.6 Environmental Permits/Approvals Checklist

3.6.1 References

.1 Refer to Appendix C - Environmental Approvals.

3.6.2 General

.1 The *Consultant* is required to complete the "Design Environmental Permits/Approvals Checklist" during design for all growth and renewal projects with site disturbance, or hazardous material

remediation affecting the site. This form is to ensure environmental permits, approvals, and restrictions are identified and in place before construction.

.2 The *City* requires up-to-date copies of this checklist to be submitted with the Design Development submission and pre-tender submission, however it is the *Consultant's* responsibility to ensure the process of identifying requirements and seeking approvals happens as early as necessary in design to ensure the project schedule is not impacted. The Checklist User Guide indicates typical approval timelines.

.3 Obtain a copy of the most recent version of the Checklist and the Checklist User Guide from the *Project Manager* at the start of every project.

3.7 *Erosion and Sedimentation Control Guidelines*

3.7.1 References

.1 Erosion and Sedimentation Control Guidelines, *City of Edmonton*, Jan 2005. This document can be found on the *City of Edmonton* website.

.2 Erosion and Sedimentation Control Field Manual, *City of Edmonton*, Jan 2005. This document can be found on the *City of Edmonton* website.

3.7.2 General

.1 The Erosion and Sedimentation Control Guidelines and Field Manual were developed to assist *City of Edmonton* departments and staff, owners and developers, consultants, and contractors to understand the *City's* ESC requirements to achieve effective stewardship of environmental resources and continual improvement.

.2 If the project has potential erosion and sedimentation impacts on the environment, the City's Erosion and Sedimentation Guidelines are available to assist the Consultant in complying with all regulatory requirements.

3.8 *Tree Management Policy*

3.8.1 References

.1 Corporate Tree Management Policy - C456C

.2 Corporate Tree Management and Tree Reserve Procedure - October 5, 2020

.3 Refer to the Edmonton Zoning Bylaw 12800 for Landscaping requirements, including incentives for preserving Existing Trees and Shrubs.

3.9 *Commissioning Guidelines*

3.9.1 References

.1 Commissioning Consultant Manual Volume 1 and Volume 2, *City of Edmonton*, November 2018. This document can be obtained through the *Project Manager.*

3.9.2 General

.1 The Commissioning Consultant Manual was developed as a reference for consultants providing commissioning services for new and renovated facilities owned or operated by the *City of Edmonton*.

.2 Commissioning of mechanical, electrical, communications and controls systems installed on Open Spaces projects (such as spray parks) should follow similar commissioning procedures to ensure the proper function and operation of these systems.

3.10 *Additional Guidelines and References*

The following is a list of recommended guidelines and manuals. This list may not be exhaustive. Any additional references within the following manuals should also be used where applicable.

.1 Crime Prevention through Environmental Design (CPTED)

.2 North Saskatchewan River Valley Area Redevelopment Plan

.3 Visual Identity Standards

.4 Downtown Streetscape Manual

.5 Transit Oriented Development (TOD) Guidelines

.6 Urban Design Manual

.7 Winter City Design Guidelines

.8 Low Impact Development

.9 City Plan

.10 Breathe

.11 Connect Edmonton

.12 River Valley Wayfinding

.13 GBA+ (Refer to Facilities Consultant Manual Vol.1, Section ‘Gender Based Analysis + (GBA+)’

APPENDIX A - REPORT GUIDELINES

1. General

a. The purpose of this guideline is to establish a standardized format for reports and studies not defined in Section '*Consultant Deliverables*'.

2. Contents

a. In general, each report and study will contain the following:
    i. Introduction
    ii. Executive Summary
    iii. Findings, Analysis, and Conclusions (collated for each major design option in the report)
    iv. Recommendations and Cost Estimates (collated for each major design option in the report)
    v. Appendix

3. Structure

a. The head of each page shall list the name of the open space under study, the title of the study, the report section, the *City of Edmonton* project number, and the section page number.
b. Each report will begin with a cover page displaying the project title, project number, list of consultants, and date of submission of the final report.
c. Provide a detailed table of contents, including a listing of all appendices.
d. Depending on the length and complexity of the report, cover pages for each individual report section may be provided.

4. Introduction

a. Provide a general description of the open space under review:
    i. Address
    ii. Date of construction
    iii. Current zoning
    iv. Brief description of the site and its uses
b. The introduction shall contain a clear statement of the purpose of the report. This statement will address:
    i. Why the work is being done; and
    ii. What is to be accomplished by doing the work (ie. the end result).
c. Provide a brief outline of the scope of work, how the work is to be done, and when the work will be completed.

5. Executive Summary

a. The executive summary shall be a synopsis of the report purpose, conclusions, and recommendations, complete with a total estimated cost figure for each recommendation.
b. Identify the extent of design and project management work required, and that cost estimates do not include fees for such work.

c. The executive summary shall not be longer than one page, except for exceptionally comprehensive reports.

6. Findings, Analysis, and Conclusions

a. Findings:

   i. Describe existing site conditions, and give source of information (examination of construction documents, site inspections, interviews with knowledgeable personnel, or examination of previously prepared reports).

   ii. Describe existing open space area and uses.

b. Analysis:

   i. Present an analysis of the findings, and examination of methods of solving the problem under review.

   ii. Include the results of calculations which may be required to evaluate conditions or solutions.

c. Conclusions:

   i. Include a brief description of all remedial action considered, advantages and disadvantages of each (this is to include actions which are considered but may be rejected). Provide evaluation matrix, as appropriate.

   ii. Determine optimum solution. Where alternatives are presented, such alternatives should be prioritized.

7. Recommendations and Cost Estimates

a. Provide a statement of recommended courses of action, complete with total estimated costs.

b. Where more than one action is required, recommendations should be prioritized where possible (to suit budget constraints, time constraints, etc.). Prioritize on the basis of:

   i. Life hazard;

   ii. Code violation;

   iii. Environmental Contamination;

   iv. Functional upgrade (high priority); and

   v. Functional upgrade (low priority).

c. Where recommendations are made, sufficient detail shall be given to ensure that remedial work can in fact be carried out as envisaged. Provide sketch drawings, as required.

d. Where applicable, explain the effect of recommended construction on the operation of the open space in question (closures, personnel relocation required, after hours work, service shut-down, etc.).

e. Where applicable, identify opportunities for phasing of the work. This will be of value in project planning, where budget constraints may dictate a phased approach, occurring over several years.

f. Where applicable, give preliminary estimates of time of construction, and highlight any items of long delivery which may affect the schedule. Specify that estimates are for time of construction only.

g. Where applicable, give preliminary estimates for recommended measures with breakdown. Specify that costs do not include design or project management fees. Specify the limits of accuracy of the estimates.

8. Appendix

a. The appendix shall contain:

   i. Copies of all information referenced in the body of the report (e.g., technical papers, product information, previous related information);

   ii. Detailed photographs illustrating existing conditions;

   iii. Detailed calculations of estimated costs;

   iv. Sketch drawings and schematics showing existing and recommended construction; and

   v. Copies of calculations carried out to support analysis and recommendations.

9. Report Presentation

a. All reports may be submitted in Google Doc and PDF format on optical disc, memory stick or file sharing system.

10. Report Submission

a. The *Consultant* shall submit an electronic copy of all consultant deliverables for the *City's* review and approval. Following the review and completion of any required additions or corrections the final deliverable shall be submitted via electronic PDF version. Confirm with the *Project Manager* if hard copies are required.

APPENDIX B - DRAWING NAMING CONVENTION

General

1. File names for all project drawings are to follow the convention described in this Appendix. Include the drawing name under “CAD File Name” in the lower right-hand corner of the title block. Due to limited space on the title block, the name can be shortened by excluding the Project Title and Drawing Name (e.g., xxxL-L01 PLANTING PLAN.dwg).

Sample drawing name:
xxxL-L01 PLANTING PLAN.dwg

xxx	Project Name
L	Drawing Discipline

C	Civil (Site)
A	Architectural
S	Structural
M	Mechanical
P	Plumbing (may use Mechanical)
F	Fire Protection (may use Mechanical)
PL	Pool
E	Electrical
L	**Landscape Architecture**

L01	Drawing number in the set
PLANTING PLAN	Drawing Name
.dwg	AutoCAD file extension

APPENDIX C - ENVIRONMENTAL APPROVALS

General

1. Environmental Permit/Approval Checklist - Please confirm with the *Project Manager* that this is the most recent version.

Environmental Permit / Approval Checklist					
Project:				**IIS Project Manager:**	
Project Description:					
Federal Agency	**Federal Regulation**	**Requirement**	**Applicable Y/N**	**Completed or Received Date**	**Comments and Restrictions / Conditions to be Followed**
Fisheries and Ocean Canada (previously DFO) (Federal)	Fisheries Act	Fisheries "Request for Review" Form required if criteria not met			
		"Application Form for Authorization" if required			
		Authorization or Letter of Advice obtained			
		Fish Habitat Compensation Plan required			
Transport Canada (Federal)	Canadian Navigation Waters Act (formerly the Navigation Protection Act)	Review list of navigable waters in the CNWA, Minor Works and Waters Order (MWWO)			
		Request required from TC in order to determine if navigable if unsure			
		"Application for Approval" required			
		Approval/Work Assessment obtained			
Impact Assessment Agency (Federal)	Impact Assessment Act	Impact Assessment required			
Environment Canada (Federal)	Migratory Birds Convention Act (MBCA)	Restrictions on Work Activities (varies, May 1-August 10 general rule of thumb)			
		Field Assessment (Nest Sweep) required before or during construction			
	Species at Risk Act (SARA)	Search of ACIMIS, FWMIS and COSEWIC			
		Field Assessment required			
		Permit or Agreement required			
		Restrictions on Work Activities			
Provincial Agency	**Provincial Regulation**	**Requirement**	**Applicable Y/N**	**Completed or Received Date**	**Comments and Restrictions / Conditions to be Followed**
Alberta Environment (Provincial)	Water Act	Codes of Practice (CP) review			
		Notification sent if CP applicable			
		Approval/License Required if CP is not applicable i.e. cannot meet requirements in CP			
		Wetland Assessment required by a QAES			
		Compensation Plan required			
		Restricted Activity Periods (RAPs)			
	Environmental Protection and Enhancement Act (EPEA)	Consultation with Regulators			
		Screening Report or Environment Impact Assessment (EIA) required			
		Public consultation required			
Historical Resources	Historical Resources Act (HRA)	HRA approval			
		Consultation with First Nations required			
		Consultation with accredited archaeologist			
		Statement of Justification (SOJ) notification required			
		Historical Resource Impact Assessment (HRIA) required			
		Clearance Letter received from ACCS			
	Public Lands Act	Department Licence of Occupation (DLO) or Temporary Deposition (TFA) required			
	Wildlife Act	Wildlife Assessment required			
		Restriction on activities			
Municipal	**Municipal Regulation**	**Requirement**	**Applicable Y/N**	**Completed or Received Date**	**Comments and Restrictions / Conditions to be Followed**
Municipal (City of	COE Tree Management Policy	Notification to COE Urban Forestry if trees could be impacted			

Edmonton)	Community Standards Bylaw	Noise Exemption Permit required			
	River Valley Bylaw 7188	North Saskatchewan River valley ARP			
		Environmental Impact Assessment required			
	Contaminated Sites	COE - Engineering Services consultation to check their database and ESAR			
		Further assessment recommended			
	Drainage Bylaw	Permit required to discharge site effluent into Storm / Combined / Sewer			
	Erosion & Sedimentation Control	Permanent ESC Design required			
	Wildlife Passage Engineering Design Guidelines (WPEDG)	Wildlife Passage Design required **&** Complete Appendix D Checklist of WPEDG			
	Natural Area Systems Policy	Natural Area may be impacted by project			
Completion Verification					
Completed By:				**Date:**	
Comments:					
					Version 1.16

APPENDIX D - CONSTRUCTION COST ESTIMATES

1. Construction Cost Estimates

1.1 The *Consultant* is required to provide the estimates stated below to the accuracies shown:

Project Phase	Growth and Renewal Projects
Strategic Master Plan	-50% To +100% (Class 5)
Schematic Design	-30% To +50% (Class 4)
Design Development	-20% To +30% (Class 3)
Construction Documentation	Progress submissions: -15% To +20% (Class 2) Final Submission: -10% To +15% (Class 1)

Strategic Master Plan: A broad vision with minimal on-site investigation of actual conditions. Based on a theoretical approach that uses existing information available.

Schematic Design: Uses some site investigation in conjunction with more detailed calculations and a closer look at the options available. All of the Project participants are involved at this stage, and any public consultation will have taken place. At the end of this stage the final budget for the Project is approved.

Detailed Design: The approved schematic design is more fully developed to fix and describe the size and character of all elements and materials.

Construction Documentation: Detailed calculations undertaken and all detailed drawings and specifications prepared. This estimate is sometimes referred to as the pre-tender estimate.

Award: Prepared after the acceptance of the construction contractor's bid to include the accepted bid plus any additional costs, for example supervision costs and utility charges, not included in the tender.

APPENDIX E - SAMPLE CAD LAYERING STANDARD

1. General

.1 This appendix contains a sample CAD layering standard that may be used on projects for *City of Edmonton*, Buildings, and Landscape Services. This is not a mandatory requirement; however, any layering standard used must comply with the requirements indicated in *CAD Drawing Standards*.

.2 This standard has been designed to:

.1 Organize graphical information so that it can be effectively grouped and manipulated for display, editing and plotting purposes.

.2 Ensure that all CAD based design drawings are structured and formatted consistently for archival and retrieval purposes.

.3 Organize drawing information in layers that can be used for both initial project development and ongoing facility management purposes.

.3 Table D-1: CAD Layering Standard

X-YYYY-ZZZZ

X	Major Group		
		C	Civil Engineering and Site Work
		A	Architecture, Interiors and Facilities
		S	Structural
		M	Mechanical (HVAC)
		E	Electrical and Electrical Auxiliary Systems
		L	**Landscape Architecture**
		P	Plumbing (optional)
		F	Fire Protection (optional)
YYYY	Minor Group		
	This group comprises 4 characters and is used to subdivide the major group on the basis of construction components or building contents. Refer to Table D-2.		
ZZZZ	Modifiers Group		
	These 4 characters may be used to further differentiate minor groups. The use of a modifier is optional and is not required if the major and minor group designations for a layer are sufficient. Refer to Table D-3.		

Table D-2: Minor Group

.1 This table indicates common labels for the Minor Group (YYYY). Additional Minor Groups may be added as necessary.

.2 Except where indicated, layer color may be any of the ACAD colours. Select color to ensure the appropriate line-weight is plotted when using the COE.ctb plot style table.

Different colours may be used for different layers within the Minor Group. For example, L-PLNT-TREE may use a different colour than L-PLNT-TEXT.

.3 Drawing Information Layers may be used with any discipline, as necessary.

DRAWING INFORMATION LAYERS (Minor Group)

Layer Name	Description	Colour
*-SHBD	Sheet Border & Title Block	White
*-SCHD	Schedules	White
*-LEGN	Legend of Symbols	White

ARCHITECTURAL, INTERIORS AND FACILITIES

Layer Name	Description	Colour
A-WALL	Walls	
A-DOOR	Doors	
A-GLAZ	Windows, Glazing, Curtain Walls	
A-FLOR	Floor Information	
A-FURN	Furniture	
A-EQPM	Equipment	
A-CLNG	Ceilings	
A-ROOF	Roof	
A-FENC	Fencing	
A-PMFN	Materials & Finish Plan	
A-FIRE	Fire Separations	

STRUCTURAL

Layer Name	Description	Colour
S-GRID	Column Grid	
S-FNDN	Foundation Piles, Piers & Reinforcing	
S-SLAB	Concrete Slab	
S-ABLT	Anchor Bolts	
S-COLS	Columns	
S-WALLS	Structural Bearing and Shear Walls	
S-METL	Miscellaneous Metal	
S-FRAM	Framing (Beams, Joists)	

MECHANICAL

Layer Name	Description	Colour
M-CONT	Controls & Instrumentation	
M-DUST	Dust and Fume Collection Systems	
M-ELHT	Electrical Heat Equipment	
M-ENER	Energy Management Systems	
M-EXHS	Exhaust Systems	
M-FUEL	Fuel Systems (excluding natural gas)	
M-HVAC	HVAC Systems	
M-HOTW	Hot Water Heating System	
M-CWTR	Chilled Water System	
M-NGAS	Natural Gas System	
M-PROC	Process System	

M-REFG	Refrigeration System
M-STEM	Steam System
M-DOMW	Domestic Water System
M-SANR	Sanitary Drainage
M-STRM	Storm Drainage
M-EQPM	Misc. Plumbing Equipment
M-CO2S	CO2 System
M-SPRN	Fire Sprinkler System
M-STAN	Standpipe System

ELECTRICAL

Layer Name	Description	Colour
E-LITE	Lighting	
E-POWR	Electrical Power	
E-FIRE	Fire Protection System	
E-CTRL	Electrical Control System	
E-GRND	Ground System	
E-CCTV	Closed Circuit Television System	
E-VOIC	Voice Communication Connections	
E-DATA	Data Communication Connections	
E-SERT	Security System	
E-SOUN	Sound and Public Address System	
E-EMER	Emergency System	

CIVIL

Layer Name	Description	Colour
C-PROP	Property Lines, Easements, Right of Way	
C-TOPO	Contour Lines and Elevations	
C-BLDG	Building Footprint	
C-PKNG	Surface Parking Lots	
C-ROAD	Roads including Lines & Curbs	
C-STRM	Storm Drainage Site Services	
C-ELTR	Electrical Site Services	
C-COMM	Communications Site Services	
C-WATR	Domestic Water Site Services	
C-FIRE	Fire Protection Site Services	
C-NGAS	Natural Gas Site Services	
C-SSWR	Sanitary Sewer Site Services	

LANDSCAPING AND SITE WORK

Layer Name	Description	Colour
L-PLNT	Plants and Landscaping	
L-IRRG	Irrigation System	
L-WALK	Walkways and Steps	
L-SIGN	Site Signage	
L-SITE	Site Improvements	

.4 Table D-3: Modifiers Group

.1 This table indicates common labels for the Modifiers Group (ZZZZ). Additional Modifiers may be used as necessary. Modifiers may be used with any Minor Groups, as needed.

SITE INFORMATION LAYERS

Layer Name	Description	Colour
*-****-IDEN	Identification Data	
*-****-PATT	Cross-hatching Pattern	
*-****-DEMO	Existing to be Demolished (Hidden Linetype)	
*-****-NEW	New or Proposed Work	

DRAWING INFORMATION LAYERS

Layer Name	Description	Colour
*-****-NOTE	Notes	
*-****-TEXT	General Information and Specification	
*-****-SYMB	Symbols, Bubbles, etc.	
*-****-DIMS	Dimensions	
*-****-PATT	Cross-hatching Pattern	
*-****-DETL	Detail	
*-****-ELEV	Elevation	
*-****-EXTR	Exterior	
*-****-NAME	Name (e.g., Room Name)	
*-****-SECT	Section	
*-****-EQPM	Equipment	
*-****-PIPE	Piping	
*-****-DUCT	Ductwork	
*-****-FIXT	Fixtures	
*-****-WALL	Wall Mounted Equipment	
*-****-CEIL	Ceiling Mounted Equipment	
*-****-CIRC	Circuit	
*-****-UNDR	Underground	
*-****-OVHD	Overhead	
*-****-NPLT	Non-plot Information and Construction Lines (Defpoint layer)	
*-****-PLOT	Plotting Targets and Windows (Defpoint layer)	
*-****-RDME	Read-Me layer (Defpoint layer)	

APPENDIX F - STANDARD DOCUMENT EXAMPLES

ProjectNameLine1
ProjectNameLine2
ProjectNumberLine1

ADDENDUM NO. 1

Date: _____
Page 1 of 1
Tender Number: _____

THIS ADDENDUM FORMS PART OF THE TENDER DOCUMENTS AND MODIFIES THEM AS HEREIN STATED

ITEM NO. 1	SUPPLEMENTARY GENERAL CONDITIONS	SECTION 00 73 00
DELETE:	11.6.1.1; 11.6.1.2; and 11.6.1.3.	
ADD:	11.6.1 Materials removed during the demolition shall be the property of the Contractor.	

ITEM NO. 2	SELECTIVE DEMOLITION	SECTION 02 41 19
ADD:	1.1.2 Hazardous Materials - Section 02 61 33	

ITEM NO. 3	HAZARDOUS MATERIALS	SECTION 02 61 33
ADD:	SECTION 02 61 33 - HAZARDOUS MATERIALS Pages 1, 2, 3 and 4 of 4, enclosed at end of Addendum No. One.	

ITEM NO. 4	COMMON WORK RESULTS - ELECTRICAL	SECTION 26 05 01
REVISE:	3.4 Mounting Heights .2 Mounting height of equipment is from finished floor to centreline of equipment. To read: .2 Mounting height of equipment is from finished floor to centreline of equipment, unless indicated otherwise on the drawings.	

ITEM NO. 5	QUESTIONS
Q1:	xxxxxxxxx?
A1:	xxxxxxxxx.

END OF ADDENDUM NO. ONE

Change Log

Add project name here

Branch/Section:	Add branch/section here
Project Sponsor:	Add project sponsor name here
Project Manager:	Add project manager name here
Updated on:	Enter date of the last update here

Consultant:	Add Consultant Here
Contractor:	Add Contractor Here
Contract #:	Add Contract# Here
Contract Amount:	Add Contract Amount Here
Contingency:	Add Original Contingency Amount Here

	Change Total	Contingency Remaining	% Remaining
Completed:	$0.00	$0.00	0.00%
Approved:	$0.00	$0.00	0.00%
In Review:	$0.00	$0.00	0.00%

Change Request (CR)#	Change Order (CO) # or Site Instruction (SI) #	Stage/Phase	Category	Change Description	Reason Code	Date Issued	Approval Date	Completion Date	Status	Cost

Change Log

Add project name here

Branch/Section:	Add branch/section here
Project Sponsor:	Add project sponsor name here
Project Manager:	Add project manager name here
Updated on:	Enter date of the last update here

Consultant:	Add Consultant Here
Contractor:	Add Contractor Here
Contract #:	Add Contract# Here
Contract Amount:	Add Contract Amount Here
Contingency:	Add Original Contingency Amount Here

	Change Total	Contingency Remaining	% Remaining
Completed:	$0.00	$0.00	0.00%
Approved:	$0.00	$0.00	0.00%
In Review:	$0.00	$0.00	0.00%

Change Request (CR)#	Change Order (CO) # or Site Instruction (SI) #	Stage/Phase	Category	Change Description	Reason Code	Date Issued	Approval Date	Completion Date	Status	Cost

Change Log

Add project name here

Branch/Section:	Add branch/section here
Project Sponsor:	Add project sponsor name here
Project Manager:	Add project manager name here
Updated on:	Enter date of the last update here

Consultant:	Add Consultant Here
Contractor:	Add Contractor Here
Contract #:	Add Contract# Here
Contract Amount:	Add Contract Amount Here
Contingency:	Add Original Contingency Amount Here

	Change Total	Contingency Remaining	% Remaining
Completed:	$0.00	$0.00	0.00%
Approved:	$0.00	$0.00	0.00%
In Review:	$0.00	$0.00	0.00%

Change Request (CR)#	Change Order (CO) # or Site Instruction (SI) #	Stage/Phase	Category	Change Description	Reason Code	Date Issued	Approval Date	Completion Date	Status	Cost

Change Order

City of Edmonton
xxth floor, Edmonton Tower
10111 - 104 Avenue NW
Edmonton, AB T5J 0J4

Tel: 780-xxx-xxxx
Email: first.last@edmonton.ca

Project Name: _____ **Project Number:** _____

Branch Name: _____ **Date:** _____

Contract (D #): _____ **Change Order #:** _____

Purchase Order #: _____

Consultant / Contractor Name: _____

Company Name: _____

Under the terms of your contract with the City of Edmonton, you are hereby authorized to proceed with the changes set forth in the referenced documents, drawings, and/or specifications.

Reference Document Description:

Project Change Request #: _____ (if applicable)

Contemplated Change Order #: _____

Description of Change: _____

_____

Change Order Summary	
Original Contract Value	**($)**
Previous extras	**($)**
Previous credits	**($)**
Previous Balance	**($)**
This Change Order Amount	**($)**
Balance to Date	**($)**

Adjustment to the contract completion date, add (or subtract) _____ days

The overall completion date is: _____

The total amount of this change order represents the full and final obligation of the City of Edmonton for all costs associated with the referenced items, including delays, if any.

Authorized by: _____

Project Manager | Signature | Date

Authorized by: _____

Title (if applicable) | Signature | Date

PLEASE SIGN AND RETURN TO PROJECT MANAGER

Authorized by: _____

Consultant/Contractor | Signature | Date

Attachments: _____

Copies to: *Contractor, Consultant, Client, CPSS City of Edmonton.*

Communication Matrix

Add project name here

Branch/Section:	Add branch/section here
Project Sponsor:	Add project sponsor name here
Project Manager:	Add project manager name here
Updated on:	Enter date of the last update here

Communication Method	Purpose / Description	Frequency	Distribution Method	Internal or External	Target Stakeholders or Stakeholder Groups

Communication Matrix

Add project name here

Branch/Section:	Add branch/section here
Project Sponsor:	Add project sponsor name here
Project Manager:	Add project manager name here
Updated on:	Enter date of the last update here

Communication Method	Purpose / Description	Frequency	Distribution Method	Internal or External	Target Stakeholders or Stakeholder Groups

Contemplated Change Order

City of Edmonton
xxth floor, Edmonton Tower
10111 - 104 Avenue NW
Edmonton, AB T5J 0J4
edmonton.ca

Branch Name:
Project Name:
Project #:
CCO #:
Contract #
Purchase Order #

Fax No: **Date:**
File No:

TO:

FROM:

SUBJECT:

DESCRIPTION:
Submit an itemized quotation to the City within xx day(s) of the date hereof, for all labour, materials and equipment necessary to complete the following work included in this Contemplated Change. All work shall be in accordance with the General Conditions and Contract Documents of the original construction contract. Changes shall be done in close coordination with all affected sub-trades. Quotation shall include associated changes to the schedule and shall cover all costs generated by the adjustments to other works to suit the changes, and a complete cost breakdown shall be submitted for all affected sub-trades.

CHANGES OUTLINED HEREIN MUST NOT BE UNDERTAKEN WITHOUT A DULY SIGNED CHANGE ORDER.

Project Manager's Signature Date

c: c:

Contractor Start-Up Meeting Minutes

City of Edmonton
xxth floor, Edmonton Tower
10111 - 104 Avenue NW
Edmonton, AB T5J 0J4

Project Name:			
Branch/Section:			
Project Manager:		**Recorded by:**	
Date:		**Time:**	
Location:			

Attendees:

Representative	Representing (Company or Branch/Section)	Attended	Regrets
		✔	
		✔	
		✔	
		✔	
			✔

Copies To: (all in attendance as well as)

Representative	Representing (Company or Branch/Section)
	CoE, Director
	CoE, OH&S

Item	Discussion	Action / Assignment
1.0	**Introduction**	
1.1	Introductions / Sign-in Sheet •	INFO
1.2	Emergency exit locations, washrooms, etc. •	INFO
1.3	Emergency response procedures (fire alarms, muster point, etc.) •	INFO
2.0	**Project Contacts**	
2.1	Contact persons and reporting lines •	

2.2	Roles and responsibilities: CoE, Consultant, … •	
3.0	**Communication Plan and Protocol**	
3.1	Communications •	
3.2	Project Meetings •	
4.0	**Enviso**	
4.1	Consultant's Environmental Responsibilities •	
5.0	**Occupational Health & Safety**	
5.1	Certification of Recognition (COR) •	
5.2	Prime Contractor Role •	
5.3	Field Level Risk Assessment •	
5.4	Hazard Assessment •	
6.0	**Performance Evaluation**	
6.1	Evaluation Criteria •	
7.0	**Contract Status**	
7.1	Contract Status Update •	
8.0	**Scope of Work**	
8.1	Background •	
8.2	Project Needs/Goals •	
8.3	Project Dependencies •	
8.4	Requirements •	
9.0	**City Policies**	
9.1	LEED •	

9.2	% for Art •	
9.3	Edmonton Design Committee •	
9.4	Permits •	
9.5	Accessibility •	
10.0	**Budget**	
10.1	Budget Confirmation •	
10.2	Consultant Estimates •	
10.3	Payment •	
11.0	**Schedule**	
11.1	Overall Schedule •	
11.2	Report/Drawing Reviews •	
12.0	**Scope Change Control**	
12.1	Change Management Process •	
13.0	**Issues**	
13.1	Issue Management Process •	
13.2	Known Issues •	
14.0	**Risk Management**	
14.1	Risk Management Process •	
14.2	Identified Risks •	
15.0	**Other Business**	
15.1	Other Business •	
16.0	**Next Meeting**	

16.1	Scheduled for: •	

SITE INSTRUCTION

To:	Project: Project name Branch: Branch name Project No.: Contract D No.: P.O. No.:
Attn:	S.I. No.: Date:

SUBJECT:

DESCRIPTION:

Site instructions are issued only in relation to any clarification or interpretation of the Contract or in order to provide direction from an unforeseen Work Site condition that will not affect the critical path schedule of the Work. These instructions are subject to the provisions of the Contract Documents, and unless stated herein and specifically co-authorized by the City, will not change the Contract. Should the Contractor require a change in the Contract Sum or project schedule, the Contractor shall submit to the City within _____ Working Days of the date hereof, a written proposal in accordance with the Changes to the Work Section in the General Conditions. If the proposal is accepted by the City, this Site Instruction will be superseded by a Change Order.

Project Manager | Date

SITE INSTRUCTION ACKNOWLEDGEMENT:

Contractor's Signature | Date

Attachment:

c:

Open Space Infrastructure Delivery - CCC/FAC Inspection Report
Safe - Helpful - Accountable - Integrated - Excellent

Project Name & CP#		Inspection Date	
Project Address		CCC or FAC	
Photo Folder Link		Weather	

In Attendance:						
Open Spaces (OSPD & OSID)	☐	Name & Title				
OSID Inspector	☐	Name & Title				
PARS	☐	Name & Title				
Consultant	☐	Name & Title				
Contractor	☐	Name & Title				
Other	☐	Name & Title				

Deficiency Item	Notes	Photo Link *(as needed)*	Responsibilty	Description of Action taken and date

Role	Signatures	Date
City Project Manager		
City Landscape Architect		
Construction Project Inspector		
Consultant (if applicable)		
Contractor		

INSPECTION TASKS	
PLANNING	**In Scope (Mark Yes)**
Book scope review meeting with PM; invite all relevant parties	
Review approved construction drawings	
Confirm any questions/concerns about project and inspection scope	
START UP/SAFETY	
Attend start up meeting	
Attend Safety Systems & Enviso Inspection	
Pre-construction Site Assessment: Existing conditions report w/ thorough photo documentation	
CONSTRUCTION REQUIREMENTS	
Safety Orientation w/ Prime, and FLHA as required	
Construction fence in place and site is secure	
Tree hoarding, as required.	
Signage posted as discussed in start up meeting	
Access/egress functional and safe	
Minimum __, maximum __ ,visits per week in addition to formal weekly meeting	
Safety check in with Prime, FLHA as required	
Attend weekly site meetings with PM and Contractor (date to be coordinated by PM/PC)	
CONSTRUCTION - PLAYGROUNDS, HARD SURFACE, AMENITIES	
Excavation to subgrade for hard surface	
Excavation to subgrade for playground	
Lay of the sub-drainage weeping tile pipe	
Survey invert shots of the weeping tile	
Curb measurement off stakes	
Compaction of sub base	
Inspection of playground, shelter and site furniture installation	
Safety inspection of playground	
Grading of topography (berms and bumps)	
Testing of surfacing (sand/EWF/PIP)	
Copy of permits and inspection reports	
Follow up to safety inspection of playground	
Testing of hard surface materials (asphalt/concrete)	
System test	
Backflow prevention valve test	
CONSTRUCTION – SOFT LANDSCAPING	
Tree hoarding	
Rough Grading/Subgrade Installation - HARDSTOP	
Top soil placement & testing - HARDSTOP	
Final grade – verify prior to seed, sod or mulch - HARDSTOP	
Shrub bed preparation - HARDSTOP	
Sod install	

Seed certificate verification – PM	
Soil mix install (prior to shrub planting)	
Top soil amendment (as required)	
Mulch install	
Compost certificate – PM	
Tree pre inspection (arrange for forestry if still possible) – PM	
Tree install (according to design detail) - HARDSTOP	
Shrub install (according to design detail) - HARDSTOP	
Pre CCC inspection – LA/PM, or inspector alone	
Coordinate CCC inspection – hort, turf, forestry, PM, LA, Contractor / In House	
COORDINATION SERVICES	
Schedule survey for construction layout & grade verification	
Schedule compaction and hard surface testing	
CCC INSPECTION	
CCC planning/coordination	
CCC inspection/re-inspection	
WARRANTY	
Turf establishment inspections	
Trees, shrubs, perennial and bed inspections	
Quantity inspections & reports	
FAC INSPECTION	
FAC planning/coordination	
FAC inspection/re-inspection	
SUPPORTING DOCUMENTS	
IFC/txt	
Link to project folder - Filing of Inspection Photos	
COE Design & Construction Standards	
Volume 5 Landscaping: 2017	
Volume 5 Landscaping: 2021	
COE Services & Contact Information	
NWA - Inspection Time	

Open Space Infrastructure Delivery - Internal Inspector, Inspection Report
Safe - Helpful - Accountable - Integrated - Excellent

Inspector Name		**Inspection Date**	
Project Name		**Phase: Build/Warranty**	
Weather		**Photo Folder Link**	

Notes *(deficiencies, progress, positive items, coordination tasks, safety, etc.)*	**Photo Link** *(as needed)*	**Description of Action to fix deficiencies**	**Action Complete** *(Yes/No)*

Forces On Site	**Contractor/Subcontractor**
# of Workers / Employees on Site	
Equipment on Site	

Issue Log

Add project name here

Branch/Section:	Add branch/section here
Project Sponsor:	Add project sponsor name here
Project Manager:	Add project manager name here
Updated on:	Enter date of the last update here

Fill for e-Builder projects only		Issue								Action/Recommendation				
eB Project ID	Subject	Issue #	Stage/Phase	Category	Issue Description	Reported On [1]	Reported By	Assigned To	Date Due [2]	Action/Recommendation	Action Priority	Action Status	Date Closed [3]	Comments

Provided By IIS/UPE or Representative					Calculated by PARS								
Asset Type	**Inventory**	**Inventory Unit of measure**	**Design Standard Change** (Y/N) If Yes, note	**Estimated In-Service Year**	**PARS Section**	**Services**	**Service Unit of measurement**	**Unit Cost**	**SLA**	**SLA Comment**	**Conversion for unit of measure**	**Annual Cost**	**Comments**
Trails (Shared Use Path)	7.5	km											
	7.5	km											
	7.5	km											
	7.5	km											
Waste Receptacles	10.0	each											
		each											
Benches	5.0	each											
Shrub -Beds	250.0	m2											
Turf Mowing/Trimming	1,500.0	m2											
Total Annual Cost												**$0.00**	

Inspection and Testing Plan (ITP)
Safe - Helpful - Accountable - Integrated - Excellent

Project:		**Prime Contractor:**	
CP/OP		**Playground Equipment:**	
Date:		**PIP:**	
Legend:	**RE:** Review Point (documents); **HP:** Hold Point; **WP:** Witness Point; **N/A:** Not Applicable COE Design & Construction Standards	**Revision**	1

Activity Description	Control Document	Acceptance Criteria	Record Docs.	Inspection Points						Comments
				Contractor Initial		Date	COE Initial		Date	
Stormwater Infrastructure bedding installation inspection	Bedding Material Composition	Complete Streets: Section 3	Compaction Tests	HP			RE, WP			Hold after excavation for bedding materials and to check the subgrade to be undisturbed and free from any loose, soft, wet or otherwise deleterious material. Review bedding installation.
stormwater infrastructure backfill compaction testing	N/A	Section 02722	Compaction Test	HP			RE, WP			Hold after lifts, for a compaction test
Subgrade Excavation for asphalt trails & concrete seating areas	N/A	Complete Streets: Section 4	Compaction Tests	HP			RE, WP			Hold after excavation for a compaction test and to check the subgrade to be undisturbed and free from any loose, soft, wet or otherwise deleterious material
Granular for asphalt trail & concrete seating areas	Sieve Analysis	Complete Streets: Section 4 & 5	Compaction Test	HP			RE, WP			Hold after 600mm lift and every 150mm lifts there after, for a compaction test
Concrete Plazas	Mix Design	Complete Streets: Section 7	Concrete Test, Pictures	HP			RE, WP			Inspector to verifty depth of concrete and witness during installation and concrete pour
Asphalt Trails	Mix Design	Complete Streets: Section 6	Asphalt Test	HP			RE, WP			Inspector to verifty depth of asphalt and witness during installation and concrete pour
1.8m Chain Link Fence Post	Mix Design, Chain Link Spec Sheet	Section 02821	Concrete Test, Pictures	HP			RE, WP			Inspector to measure hole depths and witness during installation and concrete pour
Trench excavation & compaction	N/A	Complete Streets: Section 3	Concrete Test, Pictures	HP			RE, WP			Inspector to verifty depth of concrete and witness during installation and concrete pour
Light Standard Concrete Pile & Cabinet Concrete Base	Mix Design		Concrete Test, Pictures	HP			RE, WP			Inspector to verifty depth of concrete and witness during installation and concrete pour
Excavation and compaction for Ball Diamond infield shale installation	N/A	Complete Streets: Section 4	Compaction Tests	HP			RE, WP			Hold after excavation for a compaction test and to check the subgrade to be undisturbed and free from any loose, soft, wet or otherwise deleterious material
Subsurface drainage trenching installation for Ball Diamond	Sieve Analysis	Complete Streets: Section 4	pictures	HP			RE, WP			Inspector to verify trenching/granular fill
Sports Fixtures - pile installation	Mix Design (if concrete) Design parameters (if helical)		Concrete Test, Pictures	HP			RE, WP			verify installation (helical/scre pile or concrete piles)
Topsoil Placement	Soil Composition & Nutrients	Section 02910	Topsoil Test	N/A			RE			Approval of Topsoil Test and required amendments.
Shrub Bed	Spec Sheet	Section 02930	Topsoil Test, Pictures	N/A			RE			
Seed & Sod	Manufacurer's data on seed and fertilizer	Section 02920	Seed Ticket verification, Pictures	N/A			RE			

Introduction

The Risk Register keeps the information of the risks of a project and is updated on a regular basis. PMRG Risk Register Template is an Excel Workbook containing four worksheets:

1	The "Instruction" worksheet presents the instructions for users, who need to enter the data into the Risk Register.
2	The "Risk Register" worksheet is the table that contains the information of the risks, resulted from performing the Risk Management Processes. Some of the cells of the risk register are associated with specific options that users need to select from the drop-down lists and some of the cells are calculated based on the predefined formulas. The cells associated with the drop-down lists and the cells calculated automatically are locked and protected to prevent accidental changes.
3	The "Tables" worksheet includes the fundamental information used for the drop-down lists and formulas used in the worksheet "Risk Register".
4	The "Revision History" worksheet keeps the information about the changes of the Risk Register template.

All columns of the "Risk Register" worksheet have filters that allow the users to hide/show information based on the criteria that they select. Users can also sort the data by choosing the sort criteria in all columns except the columns, “Likelihood (rating)”, “Risk Impact", “Risk Score”, “Risk Horizon”, “Response Strategy”, “Risk Contingency”, and “Status” columns, which are locked. To sort the data based on the values of the cells of these columns, the user needs to “Unprotect” this worksheet, select the sorting criterion in the desired column(s), and “Protect” the worksheet again.

Please note that because of the limitations of Microsoft Excel, when you sort the data and save and close the excel file, you cannot undo sorting. However, you could re-sort the data based on the values of the cells of another column.

Steps for Populating the Risk Register

1.0 Fill in the project information at the top of the risk register (branch, captial profile, project name and number, etc.)

2.0 Define a unique ID for the new risk that you need to capture in the Risk Register.

3.0 Risk Identification

Populate the following fields in the Risk Identification section:

Field	Description
Stage/Phase	Use this field to identify when the risk could occur, not identify which stage the project is currently in.
Category	Use this field to categorize your risks for easy sorting and analysis (e.g. design, geotechnical, construction, etc.).

Event/Risk Factor	Event/Risk Factor: Title or description of the risk (e.g. encounter poor soil conditions during construction).
Cause	Identify what could cause the event or risk factor to occur (e.g. not enough geotechnical investigation).
Consequence	Describe the outcome of the risk event occurring (e.g. need to install a structural slab).

4.0 Risk Assessment (Prior to Risk Response)

Enter information in the following fields in the Risk Assessment (Prior to Risk Response) section:

Field	Description
Risk Horizon	Select the risk horizon from the drop-down list. This field identifies how soon you anticipate the risk event to occur (e.g. Short-Term, Medium-Term, Long-Term). The risk horizon will help in prioritizing the risks that have the same score.
Risk Likelihood	Select the likelihood of the risk event occurring from the drop-down list.
Risk Impact	Select the magnitude of the impact should the risk occur, from the drop-down list.
Risk Score	You do not need to enter any information in this field. It is automatically calculated based on to the risk likelihood multiplied by the risk impact. This score provides you with a basis to prioritize the risks.
Cost Impact	Determine the monetary impact if the risk is realized.

4.1 Risk Contingency (Prior to Risk Reponse)

Make note of the risk contingency (prior to risk response). The goal is to reduce the risk impact ($) and contingency amounts through risk response planning.

Risk Contingency	You do not need to enter information in this field. It is automatically calculated based on the Cost Impact ($) and the selected Risk Likelihood.

5.0 Risk Response

Enter information in the following fields in the Risk Response section:

Field	Description
Response Strategy	From the drop-down list, select a Response Strategy.
- Avoid	An action that avoids the risk.
- Transfer	Transfer the risk to another party.
- Mitigate	An action that reduces the probability and/or impact of the risk occurring.
- Accept	Don't take any preventative actions and deal with the risk if it occurs.
Response Description	Describe the Response Strategy action.
- Avoid	e.g. 'Change roadway alignment (to avoid a potentially poor soil conditions).

- Transfer	e.g. 'Include “dealing with the poor soil conditions” in the construction contract.
- Mitigate	e.g. 'Perform more geotechnical investigation.
- Accept	N/A.
Response Cost	If possible, determine what the cost of implementing the Risk Response is (e.g. cost to perform more geotechnical investigation. Not all risks will have a response cost).
Response Owner	Identify who is responsible for performing the Risk Response.
Response Due Date	The date when the Risk Response is to be completed.

6.0 Residual Risks Assessment (Post Risk Response)

For each risk with a "Mitigate" response strategy, enter information in the following fields in the Risk Assessment (Prior to Risk Response) section:

Field	Description
Residual Risk Likelihood	Select the likelihood of the risk event occurring from the drop-down list.
Residual Risk Impact	Select the magnitude of the impact should the risk occur, from the drop-down list.
Residual Risk Score	You do not need to enter any information in this field. It is automatically calculated in the Risk Register template, it is the Rating corresponding to the risk likelihood multiplied by the Impact corresponding to the risk impact magnitude. This score provides you with a basis to prioritize the risks.
Residual Cost Impact	Determine the monetary impact if the risk is realized.

6.1 Risk Contingency (Post Risk Reponse)

The risk contingency under the residual risk assessment (post risk response) can be used as a recommended risk contingency to be applied to the project.

Field	Description
Residual Risk Contingency	You do not need to enter information in this field. It is automatically calculated based on the selected Risk Response. For Mitage risk responses, the value is based on the and Cost Impact ($) and the selected Risk Likelihood enter under the residual risk assessment (post risk response).
- Avoid	No impact (no contingency is calculated).
- Transfer	No impact (no contingency is calculated). If transferring the risk does not eliminate it, you will face a new risk and you will need to add it as a new item in the Risk Register and assess it.
- Mitigate	Contingency amount is calculated based on the likelihood and Cost impact ($) entered under the Residual Risk Assessment (Post Risk Response) section.
- Accept	The risk contingency from the Risk Assessment (Prior to Risk Response) amount is carried over)

7.0 Risk Budget (Summary)

The summary table located above the residual risk assessment (post risk response) will show (in the row labelled "current") th

8.0 Risk Control

Review and update the risks as the project progresses and enter information in the following fields in the Risk Control section:

Field	Description
Status	Determine the status of the risk
Comments	Add required extra information.

9.0 Enter the date of last update in the "Updated on" field at the top of the risk register

Likelihood Rating Table

Likelihood	Probability	Description	Rating	Probability for Contingency
Almost Certain (5)	Over 75%	Can expect to occur in most circumstances; more than 75% chance of occurring	5	0.200
Likely (4)	50% - 75%	Will probably occur in most circumstances; 50-75% chance of occurring	4	0.150
Possible (3)	25% - 50%	Might occur at some time; 25-50% of occurring	3	0.100
Unlikely (2)	<25%	Could occur at some time, less than 25% chance of occurring	2	0.050
Rare(1)	0.01% - 1%	May occur in exceptional circumstances	1	0.010

Risk impact Table

Impact	Minor (1)	Moderate (2)	Major (3)	Severe (4)	Worst Case (5)
Impact	1	2	3	4	5
Explanation	Trivial effect to project outcome	Material effect to project outcome	Significant effect to project outcome	Fundamental threat to project outcome	Serious threat to project outcome in current form

The outcome of the project can be impacted by a number of factors such as: Public Confidence, Safety, Quality, Environmental, Political, Design, Legal, Cost, Time, Legal, etc...

Risk Likelihood and Impact Matrix (Risk Score)

Impact / Likelihood	Minor (1)	Moderate (2)	Major (3)	Severe (4)	Worst Case (5)
Almost Certain (5)	Low	Medium	High	High	Extreme
Likely (4)	Low	Medium	Medium	High	High
Possible (3)	Low	Low	Medium	Medium	High
Unlikely (2)	Low	Low	Low	Medium	Medium
Rare(1)	Low	Low	Low	Low	Low

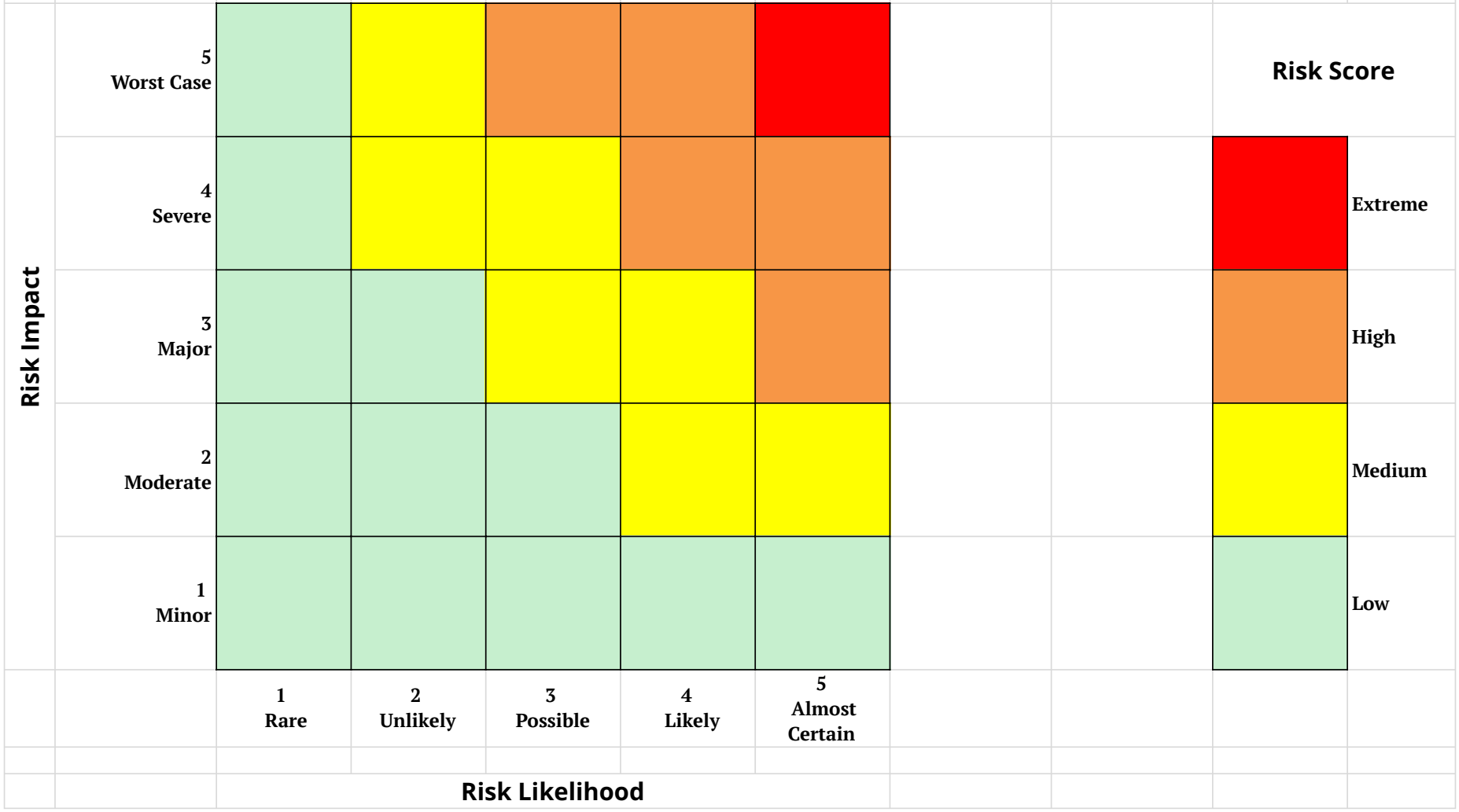
Risk Score Threshold

Risk Score Descriptor	Low	Medium	High	Extreme
Intervals	6	12	20	25
Range	1-6	7-12	13-20	21-25

Stage - Phase
Concept
Development Design
Detailed Design
Build

Risk Categories
Commercial
Competition
Corporate Governance
Customers / Citizens
Economic
Employees
Environmental
Financial
Fraud
Human
Information
Legal / Regulatory
Natural Disasters
Occupational Health & Safety
Political Influences
Professional / Service Liability
Project Management - Cost
Project Management - Schedule
Project Management - Quality
Property Damage
Public Liability
Public Perception
Security
Suppliers
Technology / Equipment

Risk Heat Map



Risk Register

Add project name here

Branch/Section:	Add branch/section here
Project Sponsor:	Add project sponsor name here
Project Manager:	Add project manager name here
Updated on:	Enter date of the last update here

Summary		Response Cost	Contingency	Total
Budgeted (approved)		Enter Amount	Enter Amount	
Current (recommended)				
Variance (+/-)				

Risk Identification				Prior to Risk Response						Risk Response						Post Risk Response						Risk Control	
				Risk Assessment			Risk Impact									Residual Risk Assessment (for "Mitigate" Response Strategy)							
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Risk ID	Stage/Phase	Category (ERM or main impact type)	Risk Description (Event and Consequence)	Risk Likelihood [1]	Risk Impact [2]	Risk Score [3]	Time (wks) [4]	Cost($)	Contingency (pre)	Response Strategy [5]	Response Description (Actions)	Response Schedule (wks)	Response Cost ($)	Response Owner	Response Due Date [6]	Risk Likelihood [7]	Risk Impact [8]	New Risk Score [9]	Time (wks)	Cost Impact ($)	Contingency (post)	Status	Comments

Revision History

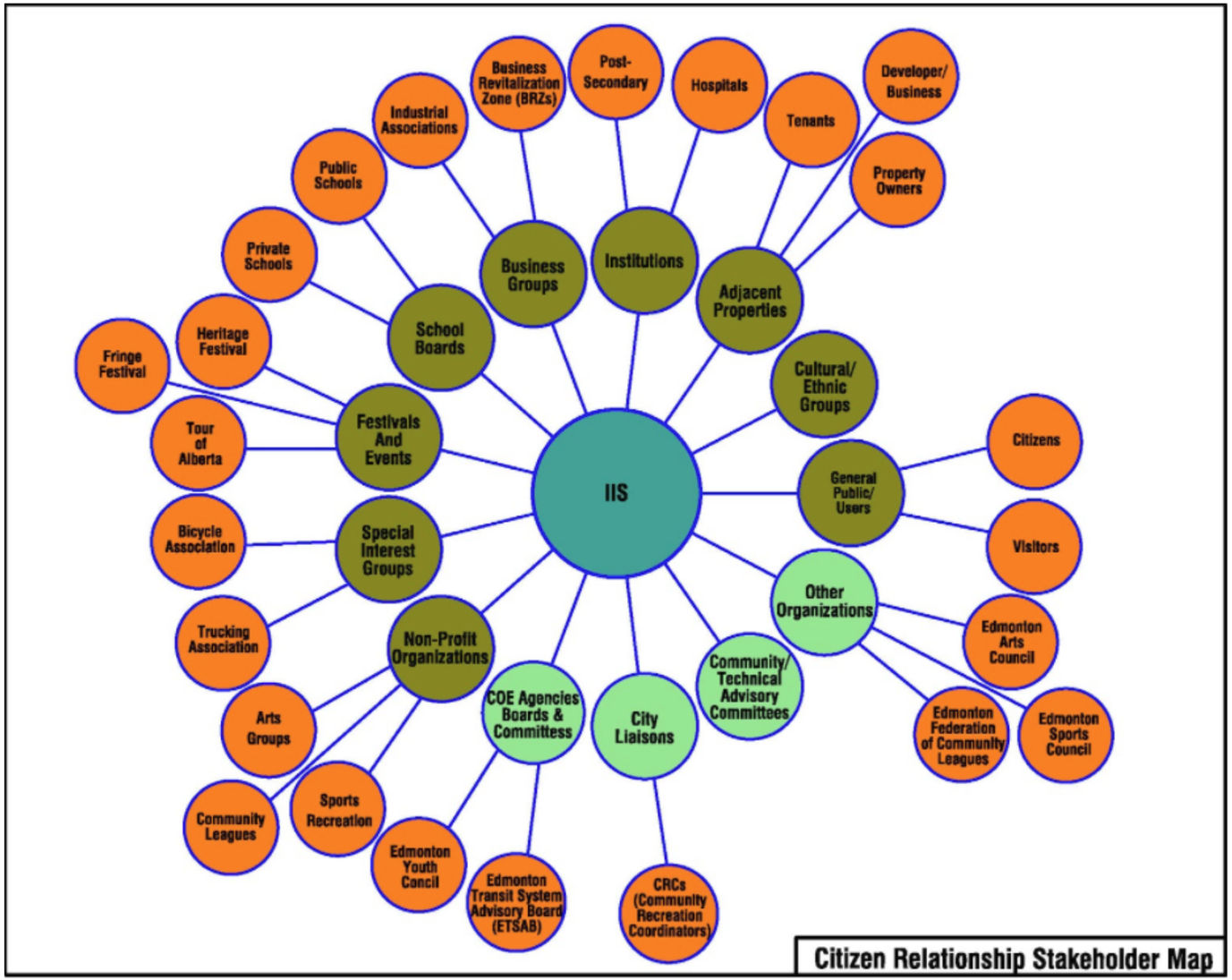
Version	Date	Description
0.1		Initial Draft

STAKEHOLDER REGISTER

Add Project Name here

Branch/Section:	Add branch/section here
Owner or Sponsor:	Add project sponsor name here
Project Manager:	Add project manager name here
Updated on:	

Fill for e-Builder projects only		Stakeholder Identification											Analysis						
							Contact Information												
eB Project ID	Subject	Ref#	Internal/External	Category	Stakeholder Name or Group	Role on Project	Contact First name	Contact Last Name	Title	Contact Phone	Contact Email Address	Key Stakeholder	Primary / Secondary	Power	Interest	Recommended Communication Strategy	Communication Needs (i.e. Status Reports, Meetings, Email, Phone, etc.)	Comments



Stakeholder categories have been taken from the first tier of bubbles. City of Edmonton Departments have been added to this list in order to be able to capture internal stakeholders that may not be captured within one of these categories.
The second tier of bubbles align with the Organization, Title column of the Stakeholder Register, and will have to be filled in manually.