

THE CITY OF EDMONTON
DESIGN-BUILD AGREEMENT
CAPITAL LINE SOUTH LRT EXTENSION

Schedule 26
Representatives and Key Individuals

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SCHEDULE 26

REPRESENTATIVES AND KEY INDIVIDUALS

1. CITY'S REPRESENTATIVE

1.1 Appointment of the City's Representative

- (a) The City has appointed the City's Representative to act as its representative and agent in relation to the Project, including in relation to Design, Construction, and all other aspects of the Project Work. The City's Representative shall be entitled to exercise the functions set out in Section 1.3 [*Functions of the City's Representative*].
- (b) During any period when there is no City's Representative, the functions which would otherwise be performed by the City's Representative shall be carried out by such other person as the City may designate by notice to Design-Builder, and such other person shall be treated in all respects as the City's Representative under this Agreement during such period. The City shall use commercially reasonable efforts to give reasonable advance notice of any such designation to Design-Builder where practicable.
- (c) Except as expressly stated in this Agreement, the City's Representative does not have any authority to release or relieve Design-Builder of any of its obligations under this Agreement or any other Project Document.
- (d) Design-Builder and Design-Builder Project Director, except as otherwise notified by the City to Design-Builder and subject to Section 1.1(e) below, are entitled to treat any act of the City's Representative as being expressly authorized by the City, and shall not be required to determine whether any express authority has, in fact, been given to such individual.
- (e) Any decision by the City's Representative is specific to the circumstances to which it relates, and shall not be construed as binding on, or limiting any other decision to be made by, the City or the City's Representative, whether in the same or similar circumstances or otherwise.
- (f) In the exercise of any of its functions, the City's Representative may:
 - (1) refer any matter to the City or any other person for advice or determination;
 - (2) rely upon any advice received or determination made following a reference pursuant to Section 1.1(f)(1) above;
 - (3) rely on any other advice that the City's Representative considers necessary or appropriate in the circumstances; and
 - (4) in accordance with, and subject to the limitations in, Section 1.4 [*Delegation*], designate any other person to attend any meeting, review, inspection, test or other activity that is permitted to be attended by the City under the terms of this Agreement.
- (g) The City's Representative shall work together with Design-Builder Project Director in the spirit of partnering and cooperation in the administration of this Agreement.

1.2 Change of the City's Representative

The City may at any time and from time to time by notice to Design-Builder terminate the appointment of the City's Representative or appoint one or more substitute City's Representatives or temporary "acting" City's Representative(s). Any such notice shall specify the effective date of such termination, appointment or substitution, and the City shall use commercially reasonable efforts to give reasonable advance notice of any such appointment to Design-Builder where practicable.

1.3 Functions of the City's Representative

The functions which may be performed by the City's Representative under this Agreement include the following:

- (a) monitoring all aspects and activities of the Project, and Design-Builder's performance of the Project Work in accordance with the Project Requirements, by any means, including the system of inspection, testing, surveys, certification, review and audits set out in this Agreement;
- (b) attending site and other progress and technical meetings (including in the company of such other City representatives, consultants, contractors, Governmental Authorities and/or advisors as the City's Representative considers appropriate) and receiving and reviewing records and reports;
- (c) monitoring and reviewing the obtaining and, where applicable, renewal or extension by Design-Builder, of Project Approvals, and the compliance by Design-Builder with Applicable Law, Project Approvals and the Project Requirements;
- (d) assessing, measuring, and verifying progress for the purposes of determining percent complete in accordance with Schedule 16 *[Payment Mechanism]*;
- (e) requesting Changes in accordance with Schedule 13 *[Changes]*, receiving and considering Innovation Proposals in accordance with Schedule 13 *[Changes]*, negotiating and making all consequential decisions on behalf of the City, including issuing Change Enquiries and Change Directives, under Schedule 13 *[Changes]* and countersigning Change Order Confirmations, under Schedule 13 *[Changes]* in respect of such Changes and Innovation Proposals;
- (f) making and receiving claims in respect of Force Majeure Events pursuant to Section 9 *[Force Majeure]* or in respect of Relief Events pursuant to Section 10 *[Relief Events and Limited Relief Events]*, of the Agreement, and negotiating and making all consequential decisions on behalf of the City in respect of such claims;
- (g) monitoring the performance by Design-Builder of Design-Builder's Environmental Obligations;
- (h) auditing and monitoring Design-Builder's implementation of, and compliance with, the Quality Management System and Quality Management Plan;
- (i) monitoring Design-Builder's implementation of, and compliance with, the Safety Management Plan;
- (j) inspecting and auditing the Project Records required to be retained pursuant to this Agreement;

- (k) performing all such functions as may be ascribed to the City's Representative under this Agreement or any other City Project Document, or otherwise under the Project Requirements;
- (l) receiving and dealing with all matters submitted to the Review Procedure or for information only pursuant to any provision of this Agreement or any other City Project Document, or otherwise under the Project Requirements;
- (m) performing any other functions under this Agreement or any other City Project Document, or otherwise under the Project Requirements, which are to be carried out by the City; and
- (n) performing such other functions in respect of this Agreement or any other City Project Document as the City may notify to Design-Builder from time to time.

1.4 Delegation

- (a) The City's Representative may delegate any of its authorities, duties or functions under this Agreement to a committee, individual or other representative by written notice to Design-Builder Project Director.
- (b) The City's Representative notice of delegation provided for above shall include the name of the committee, the individual or other representative to whom the authority, duty or function has been delegated and the time frame or period to which this delegation shall extend.
- (c) The City's Representative may rescind, change, modify, supplement or terminate in whole or in part any delegation as contemplated by Section 1.4 [*Delegation*] at any time by written notice to Design-Builder Project Director.

2. DESIGN-BUILDER PROJECT DIRECTOR

2.1 Appointment of Design-Builder Project Director

- (a) Design-Builder shall appoint a competent and qualified person to act as its representative and agent in connection with the Project. Such appointment shall be subject to acceptance by the City's Representative, such acceptance not to be unreasonably withheld.
- (b) Design-Builder Project Director shall:
 - (1) be a Key Individual;
 - (2) serve as the single point of contact for Design-Builder to the City and the City's Representative for all purposes under this Agreement and all other City Project Documents;
 - (3) be an employee of, or an independent contractor directly engaged by, Design-Builder or an Affiliate of Design-Builder; and
 - (4) devote all working time, energy and skill to the Project and to carrying out the duties of Design-Builder Project Director.
- (c) Design-Builder Project Director shall have full authority to act on behalf of Design-Builder for all purposes of the Project, and the City and the City's Representative:

- (1) are entitled to treat any act of Design-Builder Project Director in connection with this Agreement or any other City Project Document as being expressly authorized by Design-Builder, and shall not be required to determine whether any express authority has in fact been given to such individual; and
 - (2) may refuse to recognize any act in connection with this Agreement or any other City Project Document of any employee or representative of Design-Builder other than Design-Builder Project Director.
- (d) Design-Builder Project Director shall work together with the City's Representative in the spirit of partnering and cooperation.

3. KEY INDIVIDUALS

3.1 Key Individuals

- (a) The individuals who are critical to the performance of the Project Work are identified in this Schedule (the "**Key Individuals**").
- (b) Design-Builder shall, at times during the Term, cause competent and qualified persons to act as Key Individuals in connection with the Project in compliance with this Schedule and the requirements set out in Appendix 26A [*Key Individuals Specific Mandatory Requirements*].
- (c) Design-Builder shall ensure that the Key Individuals remain involved in the Project Work in the capacity set out in and that each Key Individual provides the commitments described in Appendix 26A [*Key Individuals Specific Mandatory Requirements*] in respect of their particular role. For certainty, Design-Builder shall provide each of the Key Individuals sufficient access to Design-Builder's senior leadership and to the resources and information necessary for each Key Individual to perform its role and responsibilities. Design-Builder shall empower each of the Key Individuals such that each Key Individual is capable to perform its role and responsibilities.
- (d) Except for the role of Design-Builder Project Director, a Key Individual role may be filled by up to two individuals, if acceptable to the City acting reasonably, such that combined the individuals satisfy all the requirements of that Key Individual role as specified in this Agreement. For clarity, each individual fulfilling a Key Individual role or portion thereof is a Key Individual and is subject to all of the same requirements, including time and location commitments, described in Appendix 26A [*Key Individuals Specific Mandatory Requirements*] and Non-Performance Events.

3.2 Change of Key Individual or Job Specifications or Responsibilities

- (a) Design-Builder shall appoint, with the prior written consent of the City's Representative, such consent not to be unreasonably withheld, a substitute Key Individual to serve in the place and stead of the then current applicable Key Individual during any temporary unavailability of any Key Individual to ensure that at all times during the relevant period there is a Key Individual acceptable to the City available for each position in compliance with Appendix 26A [*Key Individuals Specific Mandatory Requirements*]. For the purpose of this provision, "temporary unavailability" arises as a result of vacation, illness, family emergencies, or other such temporary circumstances that may arise and are acceptable to the City acting reasonably, and not longer than 40 Business Days in the aggregate in any one calendar year.

- (b) Design-Builder shall not change any Key Individual or change any Key Individual's job specifications or responsibilities without the prior written consent of the City's Representative, such consent not to be unreasonably withheld, except in the case of death, serious illness, other bona fide extenuating circumstance that in the opinion of the City, acting reasonably, renders the change to the Key Individual to be in the best interests of the Project or resignation of the Key Individual from the organization through which he/she is employed on the Project (and, for clarity, a transfer, including by way of resignation and rehiring, or other reallocation of such Key Individual from one organizational entity to an affiliated organizational entity does not constitute a resignation of such Key Individual for the purposes of Section 3.2 [*Change of Key Individual or Job Specifications or Responsibilities*]). In the case of death, serious illness, bona fide extenuating circumstance or resignation as described above, Design-Builder shall:
- (1) use all reasonable efforts to retain a temporary replacement with similar qualifications and experience to the unavailable Key Individual, pending consent to a permanent replacement by the City's Representative; and
 - (2) seek the consent of the City's Representative to a permanent replacement, with qualifications and experience as outlined in Appendix 26A [*Key Individuals Specific Mandatory Requirements*], as soon as practicable following the unavailability of such Key Individual and shall have a consented to permanent replacement no later than 60 days following the date of first unavailability.
- (c) If Design-Builder considers it necessary to change any Key Individual other than in cases of death, serious illness, bona fide extenuating circumstance or resignation as described in Section 3.2(b) above, or to change a Key Individual's job specifications or responsibilities, Design-Builder shall request such change(s) in a written notice to the City's Representative together with relevant information on the proposed change(s) and shall consult with the City's Representative on the proposed change(s). Design-Builder shall not implement any such proposed change(s) without the prior written consent of the City's Representative, such consent not to be unreasonably withheld, and the following shall apply:
- (1) for each change of a Key Individual actually made within 18 months after the Effective Date, the City may, without prejudice to any of its other rights or remedies, deduct from any payment then or thereafter due to Design-Builder an amount of \$50,000 multiplied by the number of Key Individuals actually changed to the date of the then current change (inclusive of the then current change); and
 - (2) for each change of a Key Individual actually made after the 18 month anniversary of the Effective Date, the City may, without prejudice to any of its other rights or remedies, deduct from any payment then or thereafter due to Design-Builder an amount of \$50,000.
- The parties agree that the amounts to be paid pursuant to this Section 3.2(c) are liquidated damages in respect of damages suffered and costs incurred by the City related to such changes.
- (d) For the purposes of Section 3.2 [*Change of Key Individual or Job Specifications or Responsibilities*], the City will be deemed to be acting reasonably in withholding its consent to the proposed change to a Key Individual if the qualifications, work experience, commitment, and other credentials of the proposed replacement do not meet the requirements set out in Appendix 26A [*Key Individuals Specific Mandatory Requirements*] for that particular position. If there is a Dispute in respect of whether the City is acting reasonably or not for any particular decision, Design-Builder shall defer making the

proposed appointment, change or substitution until the Dispute has been resolved in accordance with the Dispute Resolution Procedure.

- (e) A Key Individual cannot and shall not delegate any of his or her authority or power under this Agreement, except where a delegation is expressly provided for by a specific provision of this Agreement, or the delegation is agreed to by the City in writing.

3.3 Key Individuals General Requirements

- (a) Design-Builder represents and warrants to the City that the following are the Key Individuals for the Project as at the Effective Date:

- (1) Design-Builder Project Director: [REDACTED]
- (2) Design Manager: [REDACTED]
- (3) Integration Manager: [REDACTED]
- (4) System Design Manager: [REDACTED]
- (5) Construction Manager: [REDACTED]
- (6) Quality Manager: [REDACTED]
- (7) Environmental Manager: [REDACTED]
- (8) Communications Manager: [REDACTED]
- (9) Safety Manager: [REDACTED]
- (10) O&M Leader: [REDACTED]
- (11) Project Sponsor: [REDACTED]

- (b) For each of the Key Individuals referred to in Section 3.3(a) above, such Key Individual shall:

- (1) be specifically designated for the purpose of such role and devote sufficient working time, energy and skill as required for carrying out the duties of and meeting the commitment requirements for the respective Key Individual role; and
- (2) be instructed and enabled by Design-Builder to act in a fair and impartial manner in carrying out their roles; and
- (3) be fluent in the English language.

4. NON-PERFORMANCE EVENTS

Failure by Design-Builder to comply with the obligations set forth in this Schedule may constitute Non-Performance Events and may result in adjustments to the Payments, as more particularly provided in Schedule 16 [*Payment Mechanism*].

**APPENDIX 26A
KEY INDIVIDUALS SPECIFIC MANDATORY REQUIREMENTS**

1. Design-Builder Project Director

Role Description

This Key Individual is the project manager, director and leader of Design-Builder's organization, including Subcontractors, who is the ultimate point of authority and decision-making on the Project and who has the day-to-day responsibility for ensuring that Design-Builder fulfills its on-going obligations to the City.

Design-Builder Project Director shall be directly responsible for and fully engaged in the performance of Design-Builder's obligations under this Agreement and the other City Project Documents, and in all aspects of the Project Work. Without limiting the generality of the foregoing, Design-Builder Project Director's role includes:

- (1) being the project manager ensuring that all Project Work, including the Design, Construction, Commissioning and LRV integration, is in full compliance with this Agreement;
- (2) serving as the single point of contact for Design-Builder to the City and the City's Representative for all purposes under this Agreement and all other City Project Documents;
- (3) developing the Integrated Project Management Plan, and ensuring compliance to such plan throughout the Project;
- (4) performing integrated project management and stewardship of Design-Builder, the Subcontractors, and of the Project Work;
- (5) oversight of contract management of all Subcontractors, including addressing and communicating to the City's Representative any issues raised by the Subcontractors in respect of the Project Work;
- (6) managing Design-Builder's relationships with all Design-Builder Persons, and Subcontractors, Other Contractors and any other key Stakeholders (including Alberta Infrastructure, Alberta Transportation, Utility Companies, and Pipeline Companies);
- (7) all decision making on behalf of Design-Builder in fulfillment of its obligations under this Agreement;
- (8) maintaining high performing Key Individuals compliant with this Agreement and empowering each to perform their roles and responsibilities efficiently and effectively;
- (9) overseeing safety, environmental and quality performance; and
- (10) ensuring public communications strategies and plans are consistent with City's guidelines and Stakeholder expectations.

Design-Builder Project Director shall not, except in accordance with Section 3.2 [*Change of Key Individual or Job Specifications or Responsibilities*], abdicate or delegate to any other individual any of its duties or responsibilities.

Commitment

Design-Builder Project Director shall:

- (1) throughout the Construction Period, be physically located and reasonably present all Business Days of every week in the greater Edmonton area and be accessible at Design-Builder's primary place of business in Edmonton; and
- (2) at all times throughout the Term, be available to fulfill the full extent of his or her role and be reasonably available to meet in-person with the City's Representative on 24 hours' notice, or as otherwise required in the circumstances.

Qualifications

Design-Builder Project Director shall have qualifications that are, in the opinion of the City, substantially equivalent to the following:

- (1) be an employee of, or an independent contractor directly engaged by, Design-Builder or an Affiliate of Design-Builder;
- (2) have direct experience performing in a similar role (with similar responsibilities to what is described in the role description for this Key Individual) for at least two years on a similar project (type, complexity, duration and delivery method) at least once in the last 10 years;
- (3) have demonstrated leadership ability in managing large multidisciplinary design build teams on urban rail transit projects valued over \$500M CAD and achieving project objectives;
- (4) have demonstrated relevant experience being the single point of contact with a public sector client;
- (5) hold a professional designation relevant to the role, such as a P.Eng, MBA or relevant equivalent, or is eligible to and subsequently does obtain such a designation within 18 months of the date the individual assumes the role;
- (6) have strong municipal construction experience in Canada or the United States or equivalent experience after obtaining prior written authorization from the City; and
- (7) be reasonably able to commit for the duration of the Project.

2. Design Manager

Role Description

This Key Individual is responsible for the day-to-day direction, management and coordination of all of the Design work, having the authority within the Design-Builder organization to give direction on all Design responsibilities and decisions. This Key Individual reports directly to Design-Builder Project Director (or their designate acceptable to the City) and shall be independent from those individuals responsible for Construction.

The Design Manager shall be directly responsible for and fully engaged in:

- (1) ensuring the design is in full compliance with this Agreement, including matters relating to quality, safety, environment, and life cycle performance;

- (2) developing the Design Management Plan, and ensuring compliance to such plan throughout the Project;
- (3) having the authority within the design build organization to give direction on design decisions;
- (4) integrating all aspects of design, including those from different disciplines and subcontractors;
- (5) managing the design teams and design process to ensure design deliverables are coordinated and delivered in a timely manner and aligned with the Construction Schedule;
- (6) liaising with the Integration Manager to ensure integration between all aspects of design;
- (7) liaising with the Construction Manager to jointly ensure constructability of the design;
- (8) working with other Key Individuals to ensure the design and construction are implemented in a coordinated fashion meeting the Project Requirements and the Project vision;
- (9) as part of the Quality Management System, ensuring the construction is according to the design and that changes are performed in accordance with this Agreement, including obtaining designers' prior approval;
- (10) liaising with the Communications Manager to ensure integration between communications activities and the design;
- (11) liaising with the Utility Companies and Pipeline Companies to jointly ensure utility and pipeline conflicts do not impact construction and the Construction Schedule;
- (12) providing Project closeout documentation related to design as constructed;
- (13) ensuring appropriate resources to support the design program, including clear communication and roles within design team structure;
- (14) demonstrating leadership and partnering/team experience ability;
- (15) establishing and confirming design concepts, and design, to meet identified criteria and commissioning requirements;
- (16) continuing the ongoing development of the design criteria;
- (17) coordinating with other project team leads to ensure that procedures for addressing interface/integration requirements are fully established and implemented;
- (18) ensuring that the quality of the engineering designs meet or exceed the specified standards;
- (19) ensuring appropriate authentication of drawings, reports and other materials;
- (20) performing detailed quality and technical checks of design inputs and documentation to be submitted; and
- (21) acting as the lead point of contact between the Design Team and the Project.

The Design Manager shall not, except in accordance with Section 3.2 [*Change of Key Individual or Job Specifications or Responsibilities*], abdicate or delegate to any other individual any of its duties or responsibilities.

Commitment

The Design Manager shall:

- (1) throughout the Construction Period, be physically located and reasonably present at least 10 full Business Days of every month in the greater Edmonton area with the core Design personnel and be accessible at the Design-Builder's primary place of business in Edmonton, with the core Design personnel or onsite; and
- (2) at all times throughout the Construction Period, be available to fulfill the full extent of his or her role and be reasonably available to meet in-person with the City's Representative on no less than 72 hours' notice.

Qualifications

The Design Manager shall have qualifications that are, in the opinion of the City, substantially equivalent to the following:

- (1) be an employee of, or an independent contractor directly engaged by, Design-Builder, an Affiliate of Design-Builder or a Subcontractor;
- (2) have direct experience performing in a similar role for a substantive time period on a similar urban rail transit project in the last 15 years, with at least one project being in Canada or the United States;
- (3) have demonstrated leadership ability in managing large multidisciplinary design teams on projects valued over \$250M CAD and achieving project objectives; and
- (4) be reasonably able to commit for the duration of the Project.

3. Integration Manager

Role Description

This Key Individual is responsible for implementing and managing all system engineering processes to ensure that the multi-discipline works and subsystems, when integrated, will produce an LRT system that meets the technical and operational performance and safety objectives of the Project. The Integration Manager shall have the full authority to act on behalf of Design-Builder in directing the Subcontractors in all Infrastructure integration matters. This Key Individual reports directly to the Design-Builder Project Director.

The Integration Manager shall be directly responsible for and fully engaged in providing leadership and oversight for the application of Design-Builder's programs in multiple LRT design areas using system engineering expertise and approaches to ensure integrated designs that meet the Project Requirements, including the enforcement of enterprise-wide project management systems consisting of:

- (1) design management;
- (2) integration management;
- (3) requirements management;

- (4) System safety assurance and security certification;
- (5) integration testing & commissioning; and
- (6) RAM Programs.

The Integration Manager shall also liaise with the Design Manager and the Systems Design Manager to ensure integration between all aspects of design.

The Integration Manager shall not, except in accordance with Section 3.2 [*Change of Key Individual or Job Specifications or Responsibilities*], abdicate or delegate to any other individual any of its duties or responsibilities.

Commitment

The Integration Manager shall:

- (1) throughout the Construction Period, be physically located and reasonably present at least 10 full Business Days of every month in the greater Edmonton area with the core Design personnel and be accessible at the Design-Builder's primary place of business in Edmonton, with the core Design personnel or onsite; and
- (2) at all times throughout the Construction Period, be available to fulfill the full extent of his or her role and be reasonably available to meet in-person with the City's Representative on no less than 72 hours' notice.

Qualifications

The Integration Manager shall have qualifications that are, in the opinion of the City, substantially equivalent to the following:

- (1) be an employee of, or an independent contractor directly engaged by, Design-Builder, an Affiliate of Design-Builder or a Subcontractor;
- (2) be a Professional Engineer, or equivalent, acceptable to the City, with demonstrable relevant project and systems engineering experience;
- (3) be skilled in the design and construction of complex urban transit projects, including multi-disciplinary experience with at least five of: operational modelling, signals, communications, train control systems, traffic systems, traction power, OCS, station electrical & mechanical, track structure, special trackwork, operations and maintenance facilities, municipal civil works, and LRVs;
- (4) have experience in requirements management, including documenting high level project requirements, generating derived requirements, analyzing, tracing, prioritizing and confirming all requirements are incorporated in final designs;
- (5) have experience in interface/integration management, including defining, controlling, and communicating the information needed to enable integration of unrelated design elements, using a well-defined, transparent and systematic approach;
- (6) have experience in identification, analysis, and mitigation of LRT system and operational risks using techniques such as fault tree analysis, failure mode and effect analysis, Hazard Analysis, and need for design change;

- (7) have an understanding of safety, security and quality requirements for complex urban transit systems;
- (8) have experience applying system engineering processes on LRT projects for the following integration activities:
 - (a) LRV dynamic wheel to rail interfaces, considering wheel wear, noise mitigation, and flange interface with track infrastructure;
 - (b) LRV clearance envelopes and Station platform interfaces;
 - (c) LRT pre-emption for Automatic Grade Crossing Warning System/train signalling/LRV on-board interfaces;
 - (d) Track elevation/road elevation interfaces;
 - (e) LRV pantograph to OCS interfaces;
 - (f) LRV EMI impacts to infrastructure;
 - (g) ADA compliance, including platform/LRV thresholds;
 - (h) Electrical power interfaces;
 - (i) Stray current mitigation;
 - (j) Utility coordination; and
 - (k) CCTV interfaces to SCADA; and
- (9) be reasonably able to commit for the duration of the Project.

4. Systems Design Manager

Role Description

This Key Individual is responsible for the day-to-day direction, management and coordination of all of the systems Design work, having the authority within the Design-Builder organization to give direction on all systems Design responsibilities and decisions. This Key Individual reports directly to the Design Manager and shall be independent from those individuals responsible for Construction.

The Systems Design Manager shall be directly responsible for and fully engaged in:

- (1) ensuring the system design is in full compliance with this Agreement, including matters relating to quality, safety, environment, commissioning and life cycle performance;
- (2) having the authority within the Design-Builder to give direction on system Design decisions;
- (3) integrating all aspects of system design, including those from different disciplines and Subcontractors;
- (4) managing the system Design teams and design process to ensure design deliverables are coordinated and delivered in a timely manner and aligned with the Construction Schedule;

- (5) liaising with the Integration Manager and Design Manager to ensure integration between all aspects of Design;
- (6) liaising with the Construction Manager to jointly ensure constructability of the Design;
- (7) working with other Key Individuals to ensure the Design and Construction are implemented in a coordinated fashion meeting the Project Requirements and the Project vision;
- (8) as part of the Quality Management System, ensuring the Construction is according to the Design and that changes are performed in accordance with this Agreement, including obtaining Designers' prior approval;
- (9) ensuring appropriate resources to support the system Design program, including clear communication and roles within Design team structure;
- (10) demonstrating leadership and partnering/team experience ability;
- (11) establishing and confirming system design concepts to meet identified criteria and Commissioning requirements;
- (12) continuing development of the system Design criteria;
- (13) coordinating with other project team leads to ensure that procedures for addressing interface/integration requirements are adequate;
- (14) ensuring that the quality of the engineering designs meet or exceed the specified standards;
- (15) ensuring proper authentication of drawings, reports and other materials;
- (16) performing detailed quality and technical checks of design inputs and documentation to be submitted; and
- (17) acting as the lead point of contact between the Design Team and the Project.

Commitment

The Systems Design Manager shall:

- (1) throughout the Construction Period, be physically located and reasonably present at least 10 full Business Days of every month in the greater Edmonton area with the core Design personnel and be accessible at the Design-Builder's primary place of business in Edmonton, with the core Design personnel or onsite;
- (2) at all times during the Construction Period, be available to fulfill the full extent of his or her role and be reasonably available to meet in-person with the City's Representative on no less than 72 hours' notice.

Qualifications

The Systems Design Manager shall have qualifications that are, in the opinion of the City, substantially equivalent to the following:

- (1) be an employee of, or an independent contractor directly engaged by, Design-Builder, an Affiliate of Design-Builder or a Subcontractor;
- (2) be a Professional Engineer, or equivalent, acceptable to the City;
- (3) have direct experience performing in a similar role for a substantive time period on a similar urban rail transit project at least twice in the last 15 years, with at least one project being in Canada or the United States;
- (4) be reasonably able to commit for the duration of the Project.

5. Construction Manager

Role Description

This Key Individual is responsible for day-to-day management and coordination for all of the Construction work, having the authority within Design-Builder organization to give direction on all Construction responsibilities and decisions. This Key Individual reports directly to Design-Builder Project Director.

The Construction Manager shall be directly responsible for and fully engaged in:

- (1) ensuring the Construction is in full compliance with this Agreement, including matters relating to quality, safety, environment, and life cycle performance;
- (2) developing the Construction Management Plan, and ensuring compliance to such plan through the Project;
- (3) managing the Construction teams and Construction process to ensure the Infrastructure is constructed in accordance with the Construction Schedule;
- (4) liaising with the Design Manager to jointly ensure constructability of the design;
- (5) liaising with the Utility Companies to jointly ensure utility and pipeline conflicts do not impact construction and the Construction Schedule;
- (6) working with other Key Individuals to ensure the design and construction are implemented in a coordinated fashion meeting Project Requirements and the Project vision;
- (7) as part of the Quality Management System, ensuring the construction is according to the design and that design changes are not implemented without the Engineer of Record's prior approval and City's acceptance;
- (8) planning, coordinating, communicating and implementing safe and accepted traffic accommodations and control measures during construction;
- (9) supporting Design-Builder communication by supplying appropriate information to effectively communicate construction to the general public and impacted stakeholders;
- (10) ensuring the construction is completed in accordance with the design and that changes are not made without the appropriate designers' prior approval; and
- (11) providing Project closeout documentation related to design as constructed, in accordance with Project Requirements.

The Construction Manager shall not, except in accordance with Section 3.2 [*Change of Key Individual or Job Specifications or Responsibilities*], abdicate or delegate to any other individual any of its duties or responsibilities.

Commitment

The Construction Manager shall:

- (1) throughout the Construction Period, be physically located and reasonably present all Business Days of every week in the greater Edmonton area and be accessible at the Design-Builder's primary place of business in Edmonton or onsite; and
- (2) at all times throughout the Construction Period, be available to fulfill the full extent of his or her role and be reasonably available to meet in-person with the City's Representative on no less than 24 hours' notice.

Qualifications

The Construction Manager shall have qualifications that are, in the opinion of the City, substantially equivalent to the following:

- (1) be an employee of, or an independent contractor directly engaged by, Design-Builder, an Affiliate of Design-Builder or a Subcontractor;
- (2) hold a professional designation, or equivalent acceptable to the City;
- (3) have experience in prime contract role;
- (4) have direct experience performing in a similar role for a substantive time period on a similar urban rail transit project in an urban environment at least twice within approximately the last 20 years, with at least one project being in Canada or the United States;
- (5) have demonstrated leadership ability in managing large multidisciplinary construction teams on projects valued over \$250M CAD and achieving project objectives; and
- (6) be reasonably able to commit for the duration of the Project.

6. Quality Manager

Role Description

This Key Individual is responsible for quality management and will have the authority to immediately stop any work activity not being performed in accordance with the Project Requirements, the Final Designs or any applicable Quality Documentation. This Key Individual reports directly to Design-Builder Project Director.

The Quality Manager shall be directly responsible for and fully engaged in:

- (1) developing, implementing and maintaining, and ensuring the effective operation of, the Quality Management System;
- (2) developing, implementing and maintaining, and ensuring the effective operation of, the Design Quality Management Plan and Construction Quality Management Plan;

- (3) preparing Quality Audit Plans and scheduling and coordinating Quality Audits of key processes with Design-Builder and applicable Design-Builder Persons;
- (4) developing and effectively maintaining an effective process for:
 - (a) Nonconformity identification and reporting;
 - (b) implementing Corrective Action and Preventive Actions; and
 - (c) identifying and implementing continuous improvement;
- (5) managing and overseeing the Design Quality Managers;
- (6) managing and overseeing all reviews, checking, testing and inspection activities and personnel;
- (7) managing and overseeing the Quality Team;
- (8) managing any third party testing agencies and sub-contracted parties;
- (9) ensuring all materials or equipment received for the Project Work meet the specified requirements for quality;
- (10) directing, managing, and coordinating with Field Review Monitors and the applicable Appropriate Person on scheduling of field reviews on matters related to Design and on matters related to Construction;
- (11) ensuring a complete and accurate record of all quality-related activities is maintained;
- (12) conducting Design-Builder management reviews on an annual basis;
- (13) effectively liaising on all quality matters with the City; and
- (14) carrying out any other matters which, in accordance with this Agreement, are the responsibility of the Quality Manager.

The Quality Manager shall not, except in accordance with Section 3.2 [*Change of Key Individual or Job Specifications or Responsibilities*], abdicate or delegate to any other individual any of its duties or responsibilities.

Commitment

The Quality Manager shall:

- (1) throughout the Construction Period, be physically located and reasonably present all Business Days of every week in the greater Edmonton area and be accessible at the Design-Builder's primary place of business in Edmonton or onsite; and
- (2) at all times throughout the Construction Period, be available to fulfill the full extent of his or her role and be reasonably available to meet in-person with the City's Representative.

Qualifications

The Quality Manager shall have qualifications that are, in the opinion of the City, substantially equivalent to the following:

- (1) be an employee of, or an independent contractor directly engaged by, Design-Builder, an Affiliate of Design-Builder or a Subcontractor;
- (2) be a Professional Engineer, or equivalent acceptable to the City;
- (3) have a minimum of 10 years of relevant quality management experience in one or more quality management representative role(s) for similar projects within the last fifteen years;
- (4) have successfully completed formal training and certification as a QMS Lead Auditor; and
- (5) be reasonably able to commit for the duration of the Project.

7. Environmental Manager

Role Description

This Key Individual is responsible for overseeing all environmental matters and ensuring conformance to all applicable requirements.

The Environmental Manager shall be directly responsible for and fully engaged in:

- (1) ensuring that Design-Builder and all Design-Builder Persons comply with Design-Builder's Environmental Obligations;
- (2) overseeing and directing all aspects of Design-Builder's environmental program for the Project, including the development and implementation of all plans and procedures required to ensure such compliance and to monitor and verify such compliance;
- (3) overseeing the environmental auditing program as required;
- (4) ensuring that all reports required under this Agreement with respect to compliance with Design-Builder's Environmental Obligations are prepared and delivered as required; and
- (5) stopping any or all of the Project Work if any environmental monitoring, inspection or audit indicates that the Project Work does not comply with any of Design-Builder's Environmental Obligations.

The Environmental Manager shall not, except in accordance with Section 3.2 [*Change of Key Individual or Job Specifications or Responsibilities*], abdicate or delegate to any other individual any of its duties or responsibilities.

Commitment

The Environmental Manager shall:

- (1) during the Construction Period be present at all Sites a sufficient amount of time to demonstrate to the City's satisfaction a working knowledge of the on-Site work, the status of the Project Work and all environmental issues and conditions associated with the Project, the Project Work, the Infrastructure and the Lands; and
- (2) at all times throughout the Construction Period, be available to fulfill the full extent of his or her role and be reasonably available to meet in-person with the City's Representative on no less than 48 hours' notice.

Qualifications

The Environmental Manager shall have qualifications that are, in the opinion of the City, substantially equivalent to the following:

- (1) be an employee of, or an independent contractor directly engaged by, Design-Builder, an Affiliate of Design-Builder or a Subcontractor;
- (2) have current registration with appropriate governing body such as Alberta Institute of Agrologists (AIA), Alberta Society of Professional Biologists (ASPB), Association of the Chemical Profession of Alberta (ACPA), Association of Professional Engineers and Geoscientists of Alberta (APEGA), Association of Science and Engineering Technology Professionals in Alberta (ASET), or College of Alberta Professional Foresters (CAPF);
- (3) have a bachelor degree or a higher degree in an appropriate field, such as biology, ecology, environmental science, environmental engineering or natural resources management;
- (4) have a minimum of 10 years of relevant experience in project management and environmental management, including two years of experience with major projects in urban settings;
- (5) have a minimum of two years' experience acting as an environmental manager or environmental lead or equivalent position on at least one linear infrastructure project in North America involving a design-build and having an estimated capital cost of at least \$150M;
- (6) have experience with developing or auditing ISO 14001 environmental management systems and environmental construction operations plans prepared under the ECO Plan Framework, or equivalent tool, on a major infrastructure project;
- (7) have a minimum of two years' experience in environmental conformance and compliance auditing on major linear infrastructure projects; and
- (8) be reasonably able to commit for the duration of the Project.

8. Communications Manager

Role Description

This Key Individual shall have the authority and access within the Design-Builder organization to promote, manage and direct communications in accordance with Schedule 12 [*Communications and Engagement*].

The Communications Manager shall be directly responsible for and fully engaged in:

- (1) developing and implementing all communications plans for day-to-day project Design and Construction for the duration of the Term;
- (2) maintaining full access to Design-Builder's technical information and personnel, including detailed designs, construction designs and schedules, construction traffic management plans and any other details relevant to communications;
- (3) managing the Design-Builder's communications team to ensure all work is done to meet the Project Requirements; and

- (4) promoting, managing and directing communications in accordance with Schedule 12 [*Communications and Engagement*].

The Communications Manager shall not, except in accordance with Section 3.2 [*Change of Key Individual or Job Specifications or Responsibilities*], abdicate or delegate to any other individual any of its duties or responsibilities.

Commitment

The Communications Manager shall:

- (1) throughout the Construction Period, be physically located and reasonably present all Business Days of every week in the greater Edmonton area and be accessible at the Design-Builder's primary place of business in Edmonton or onsite; and
- (2) at all times throughout the Construction Period, be available to fulfill the full extent of his or her role and be reasonably available to meet in-person with the City's Representative.

Qualifications

The Communications Manager shall have qualifications that are, in the opinion of the City, substantially equivalent to the following:

- (1) have a minimum of five years' experience in communications or public affairs relating to construction and/or infrastructure;
- (2) have demonstrated experience in developing, implementing, and reporting on strategic communications and marketing plans and conducting research to support the development and evaluation of those plans;
- (3) have International Association for Public Participation (IAP2) certification, or equivalent acceptable to the City;
- (4) have demonstrated experience in stakeholder relations;
- (5) have demonstrated experience in issues and crisis identification and management, and in managing sensitive and complex issues;
- (6) have demonstrated understanding in delivering services to audiences via multiple technologies including social media;
- (7) have demonstrated strong media relations skills;
- (8) have demonstrated experience in leading communication teams in a similar context and ability to work in a politically sensitive environment;
- (9) have demonstrated outstanding verbal and written communication skills;
- (10) have demonstrated ability to work in a fast-paced, high pressure and fluid environment; and
- (11) be reasonably able to commit for the duration of the Project.

9. Safety Manager

Role Description

This Key Individual is responsible for directing and managing safety in accordance with Schedule 11 [*Construction Safety Requirements*] and any other relevant requirements.

The Safety Manager shall be directly responsible for and fully engaged in:

- (1) directing all aspects of Design-Builder's implementation and compliance with the Health and Safety Management System and the SMPs, including oversight of all worksite safety inspections, independent audits and other safety audits;
- (2) ensuring occupational health and safety and public safety issues are addressed and requirements are met, in accordance with this Agreement and the Health and Safety Management System; and
- (3) managing all occupational health and safety issues associated with the Project on a day-to-day basis.

The Safety Manager shall not, except in accordance with Section 3.2 [*Change of Key Individual or Job Specifications or Responsibilities*], abdicate or delegate to any other individual any of its duties or responsibilities.

Commitment

The Safety Manager shall:

- (1) during the Construction Period, be physically located and present as needed in Edmonton to perform the required duties and manage their full-time onsite field teams; and
- (2) at all times throughout the Construction Period, be available to fulfill the full extent of his or her role and be reasonably available to meet in-person with the City's Representative.

Qualifications

The Safety Manager shall have qualifications that are, in the opinion of the City, substantially equivalent to the following:

- (1) be an employee of, or an independent contractor directly engaged by, Design-Builder, an Affiliate of Design-Builder or a Subcontractor;
- (2) have a minimum of five years of relevant safety management experience in one or more safety management role(s) for similar projects within the last 10 years;
- (3) have certification as a safety practitioner, specialist, professional or equivalent from an accredited organization; and
- (4) be reasonably able to commit for the duration of the Project.

10. O&M Leader

Role Description

This Key Individual is responsible for leading the operations and maintenance compliance and is directly responsible for overseeing the development, implementation and integration of the High Floor Operations and Maintenance Parameters into the Design and Construction. The O&M Leader shall have the authority to act on behalf of Design-Builder in providing operability and maintainability direction on Design and Construction decisions. This Key Individual reports directly to Design-Builder Project Director.

The O&M Leader will be instrumental in ensuring that the Design and Construction outcomes meet the City's operations and maintenance expectations for the Project. The O&M Leader shall be directly responsible for and fully engaged in:

- (1) leading and overseeing the team of individuals responsible for ensuring operations and maintenance requirements are met in the Design and Construction;
- (2) ensuring the Design and Construction meet all the High Floor Operations and Maintenance Parameters;
- (3) liaising with the Design Manager and the Integration Manager to ensure integration of the High Floor Operations and Maintenance Parameters into all aspects of the Design;
- (4) liaising with the Construction Manager to ensure integration of the High Floor Operations and Maintenance Parameters into all aspects of Construction;
- (5) liaising with the City and ETS;
- (6) liaising with the Testing and Commissioning Manager to validate that the Infrastructure as commissioned, meets the High Floor Operations and Maintenance Parameters;
- (7) leading and partnering with all relevant participants on the Project to ensure the operations and maintenance perspective is fully considered and up-held in Design and Construction decision making.

The O&M Leader shall not, except in accordance with Section 3.2 [*Change of Key Individual or Job Specifications or Responsibilities*], abdicate or delegate to any other individual any of its duties or responsibilities.

Commitment

The O&M Leader shall:

- (1) throughout the Construction Period, be physically located and reasonably present at least 10 full Business Days of every month in the greater Edmonton area with the core Design personnel and be accessible at the Design-Builder's primary place of business in Edmonton, with the core Design personnel or onsite; and
- (2) at all times throughout the Term, be available to fulfill the full extent of his or her role and be reasonably available to meet in-person with the City's Representative on no less than 72 hours' notice.

Qualifications

The O&M Leader shall have qualifications that are, in the opinion of the City, substantially equivalent to the following:

- (1) be an employee of, or an independent contractor directly engaged by, Design-Builder, an Affiliate of Design-Builder or a Subcontractor;
- (2) hold accreditation relevant to the role and acceptable to the City;
- (3) have a minimum of 10 years of relevant operations and maintenance experience in a climate similar to Edmonton, in one or more operations and maintenance role(s) for similar projects or as the operator and maintainer of a transit system within a climate similar to Edmonton, within the last 15 years;
- (4) have direct experience of either developing maintenance and rehabilitation plans for a similar project and/or working as an operator/maintainer on the maintenance of a rail-based transit system;
- (5) have demonstrated experience in the development of operations plans for LRT systems;
- (6) have demonstrated partnering/team experience ability; and
- (7) be reasonably able to commit for the duration of the Project.

11. Project Sponsor

Role Description

This Key Individual is the corporate sponsor of Design-Builder's organization whose mandate is to provide overall guidance, LRT/transit project mentorship, and corporate support to the Design-Build Project Director in fulfillment of the Project Director's roles and responsibilities as outlined in this Schedule. This role does not assume direct responsibility for any of the Project Director's Role Description as provided in this Schedule. This role will also provide corporate sponsor level engagement with the City Representative as required throughout the Construction phase.

Design-Builder Project Director shall not, except in accordance with Section 3.2 [Change of Key Individual or Job Specifications or Responsibilities], abdicate or delegate to any other individual any of its duties or responsibilities.

Commitment

Project Sponsor shall:

- (1) throughout the first year of the Construction Period, be physically located and reasonably present in Edmonton as necessary to fulfill the role; and
- (2) at all times throughout the Construction Phase, be available to fulfill the full extent of his or her role and be reasonably available to meet in-person with the City's Representative with reasonable notice.

Qualifications

Project Sponsor shall have qualifications that are, in the opinion of the City, substantially equivalent to the following:

- (1) be an employee of, or an independent contractor directly engaged by, Design-Builder or an Affiliate of Design-Builder;
- (2) have direct experience performing in a similar role (with similar responsibilities to what is described in the role description for this Key Individual) for at least two years on a similar project (type, complexity, duration and delivery method) at least once in the last 10 years;
- (3) have demonstrated leadership ability in managing large multidisciplinary design build teams on urban rail transit projects valued over \$500M CAD and achieving project objectives;
- (4) hold a professional designation relevant to the role, such as a P.Eng, MBA or relevant equivalent, or has previously held such professional designation and remains in good standing whether a practicing member or not;
- (5) have strong municipal construction experience in Canada or the United States or equivalent experience after obtaining prior written authorization from the City; and
- (6) be reasonably able to commit for the duration of the Project.