3.0 ASSESSMENT METHODS

3.1 General Methods

This update differs from the 2013 EISA in that it builds on information provided in that EISA. Therefore, to varying degrees for each project component, an abbreviated impact assessment process was adopted based on the methods used in 2013. The disparate locations, size and nature of the eight assessed project components lent themselves to treatment in separate report chapters, with the level of assessment and the aspects assessed commensurate with the proposed change. That the City is undertaking two of the eight project components also favours the separate treatment of components, particularly with respect to mitigation development.

For each component, impact assessment examined specific key issues, for select Valued Environmental Components (VECs), used known design information and construction practices specific to that proposed change and did not consider those impacts that had already been addressed in the 2013 EISA. For this update, only new impacts were examined in detail.

3.2 Issue Identification

For each component, key project issues were identified by considering project component activities, issues raised for the overall Valley Line project, issues raised by the public through review of the released RFP documents, issues raised at the EISA Update open house held in February 2015 (see *Section 3.7*) and applying professional judgement. Each key issue was examined during impact assessment. The resolution of each identified key issues is described at the end of each component chapter.

3.3 Selection of Valued Environmental Components

VECs for this EISA Update were selected separately for each assessed project component. For each component, VECs from the 2013 EISA and the *Bylaw 7188* environmental review guidelines were reviewed to assess relevance. If no potential existed for the project component to interact with that VEC in a manner that resulted in additional or unique issues, no further consideration was given to that VEC. In instances where it was determined that some potential existed for additional or unique issues, that VEC was then examined with respect to relative abundance/status, public concerns, professional judgement, economic importance, and regulatory concerns to more specifically justify the inclusion of the VEC. This selection process is documented individually for each project component in subsequent sections of this report.

3.4 Assessment Spatial and Temporal Scope

The spatial boundaries, or discrete study areas, used for individual project components are shown in Figure 2.1a – 2.1d. For each component, the study area was generally defined by the lands to be directly affected by that component. For some component, for

a select few VECs, a component's study area was expanded to fully account for all potential interactions. Such expansions are detailed in Chapters 4 through 11.

For Project Co components, the construction period is anticipated to be 2016 to 2020. For City components, construction is anticipated to occur in 2015, possibly extending to 2016. As the Project Co components are not integral to LRT operation, this update covers only the construction period. All of the lands supporting the assessed components will be handed back to the City at Service Commencement or in the very early operations phases, once reclamation and landscaping work is fully complete. For the City components, the assessment focuses only on construction, including reclamation because 1) park connector trail operation is a known entity subject to standard maintenance practices and 2) a Muttart Storage building has been operating in the valley for many years, thus this is not a new activity.

3.5 Description of Existing Conditions

The description of existing conditions provides a current snapshot of the individual project component areas as documented by investigations during the period 2012 to 2014. Methodologies employed to describe existing conditions generally followed those used in the 2013 EISA and component-specific methods are specifically described in each project component chapter.

3.6 Impact Analysis

3.6.1 *Potential Impacts*

Where it was determined that the potential existed for *new or unique impacts* to individual VECs specific to a project component, impacts were investigated, described and classified using the same methodology as employed in the 2013 EISA.

Potential impacts were addressed based on the information presented in the component project description (in Chapter 2). Sound project planning involves incorporating best management practices and mitigation measures into early planning, and this has been done for these components. This initial assessment assumes that built-in mitigation measures noted in the project descriptions, such as compliance with all laws and best management practice guidelines are all effectively implemented. Additionally, previously-developed Project Agreement clauses (contractual obligations) specific to the Valley Line LRT were also considered in assessments for all project components to be undertaken by Project Co.

All identified impacts were described and classified as to their direction (positive, adverse), magnitude (negligible, minor, or major), and duration (short-term, long-term, or permanent) and our confidence in impact prediction (predictable or uncertain effect) noted. These descriptors were defined as follows:

Direction:

Positive Impact: An interaction that enhances the quality or abundance of natural or historical resources, or social pursuits or opportunities.

Adverse Impact: An interaction that diminishes the abundance or quality of natural or historical resources, or social pursuits or opportunities.

Magnitude:

Negligible Impact: An interaction that is determined to have essentially no appreciable effect on the resource. Such impacts are not characterized with respect to direction, duration or confidence.

Minor Impact: An interaction that has an appreciable effect but does not affect local or regional populations, natural or historical resources beyond a defined critical threshold (where that exists) or beyond normal limits of natural perturbation; or, an interaction that slightly alters existing or future recreational pursuits at established facilities or well-used areas.

Major Impact: An interaction that affects local or regional populations, natural or historical resources beyond a defined critical threshold (where that exists) or beyond the normal limits of natural perturbation; or, an interaction that changes the character or precludes existing or future social pursuits at established facilities or well-used areas.

Duration:

Short-term Impact: An interaction resulting in measurable change that does not persist for longer than two years.

Long-term Impact: An interaction resulting in measurable change that persists longer than two years, but at some point dissipates completely.

Permanent Impact: An interaction resulting in measurable change that persists indefinitely.

Confidence:

Predictable Impact: Effects on VEC are well understood through experience in projects of a similar nature.

Uncertain Impact: Effects on VEC are not well understood owing to lack of knowledge of the VEC and/or its response to disturbance.

3.6.2 *Residual Impacts*

In the next step of the assessment, mitigation measures were developed to address identified adverse, minor and major potential impacts. Residual impacts were then characterized. Residual impacts are impacts predicted to remain *after* application of mitigation measures. Residual impacts were characterized according to the above impact descriptors, with one exception:

Predictable Residual Impact: Efficacy of proposed mitigation measures is well understood through application in similar projects or circumstances.

Uncertain Residual Impact: Efficacy of mitigation measure is not well understood because of lack of previous experience in similar circumstances or lack of knowledge about the VEC.

3.7 Public Engagement Process

The 2013 EISA required that the public be engaged regarding any proposed changes to the Valley Line. Additionally, the City's Guide to Environmental Review Requirements in the North Saskatchewan River Valley requires public participation appropriate to the scope and scale of the proposed project. Taking this into consideration, LRT D and C developed a supplementary public engagement plan for the EISA Update which included the following objectives:

- Satisfy the requirements of Bylaw 7188 by:
  - Creating awareness of the project adjustments.
  - Providing an opportunity for public input.
- Ensure project adjustments and the context of EISA Update are understood.
- Exhibit responsiveness to public issues and concerns.
- Demonstrate process transparency.

Implementation of the public engagement plan took the form of a drop-in public open house, held from 17:00 to 20:30 hours on 03 February 2015 at the Old Timer's Cabin at 9430 Scona Road in Edmonton. Stakeholders were notified in advance of the open house through a variety of methods, including web/email notification, direct mail, roadside signs and social media. Representatives from LRT D and C and Spencer Environmental were present to discuss the update and receive public input. Display panels covering the 2013 EISA and Update, its purpose and objectives, the proposed changes being assessed and other supplementary information not directly related to the Update (i.e. trail detours and ongoing engagement) were presented to members of the public during the open house. Hard copy comment forms were provided to attendees and online comments were also accepted.