

# Groat Ravine and MacKinnon Ravine Environmental Impact Assessments and Site Location Study

## Valley Line West

### Recommendation

That Executive Committee recommend to City Council:

1. That the Valley Line West Light Rail Transit (LRT) Crossing at Groat Ravine Environmental Impact Assessment, the Valley Line West Light Rail Transit (LRT) Activities Near MacKinnon Ravine Environmental Impact Assessment, and the Valley Line West Light Rail Transit (LRT) Crossing at Groat Ravine and Activities near MacKinnon Ravine Site Location Study as outlined in Attachments 1, 2 and 3 of the October 29, 2018, Integrated Infrastructure Services report CR\_6345, be approved.
2. That the locations of the LRT infrastructure within the boundaries of the North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188) as outlined in Attachments 1, 2 and 3 of the October 29, 2018, Integrated Infrastructure Services report CR\_6345, be deemed essential and approved.

### Executive Summary

To advance the Valley Line West project, Administration seeks Council's approval of two Environmental Impact Assessments and one joint Site Location Study in accordance with the requirements of the North Saskatchewan River Valley Area Redevelopment Plan Bylaw No. 7188. The independent assessments outline mitigation measures for potential impacts in a number of areas, including but not limited to surface water, ravine slope stability, vegetation, wildlife and ecological connectivity. Administration also requests that City Council deem essential and approve the location of the LRT Infrastructure as outlined within the Environmental Impact Assessments and joint Site Location Study.

### Report

#### Valley Line Project Overview

The Valley Line is a 27-kilometre urban-style low floor LRT line that will operate between Mill Woods in southeast Edmonton and Lewis Farms in West Edmonton. The

Valley Line was separated into two stages for project delivery: Valley Line Southeast (between 102 Street downtown and Mill Woods Town Centre) and Valley Line West (between 102 Street downtown and Lewis Farms Transit Centre).

The timeline of the Valley Line includes the following milestones:

- In 2009, the LRT Network Plan was approved;
- In 2009, the Valley Line Corridor was approved;
- In 2011 and 2012, the concept plans for the Valley Line were approved;
- In 2013, preliminary Engineering for the Valley Line was completed;
- In 2013, the Environmental Impact Screening Assessment and Site Location Study for Valley Line Southeast was approved;
- In 2015, the Environmental Impact Screening Assessment and Site Location Study Update for Valley Line Southeast was approved; and
- In 2018, updates to the Valley Line West concept plan were approved.

In September 2016, the City of Edmonton received funding through the Government of Canada's Public Transit Infrastructure Fund to update the Valley Line West preliminary design, determine the most appropriate delivery method, develop a business case for construction funding, and ultimately ensure that the project is ready for construction procurement.

### **Valley Line West Environmental Impact Assessments and Site Location Study**

The Valley Line West Light Rail Transit (LRT) Crossing at Groat Ravine Environmental Impact Assessment (Attachment 1) and the Valley Line West Light Rail Transit (LRT) activities near MacKinnon Ravine Environmental Impact Assessment (Attachment 2) examined impacts to valued ecosystem components within the boundaries of the North Saskatchewan River Valley Area Redevelopment Plan. The assessments outline mitigation measures for potential impacts related to the following areas: surface water, ravine slope stability, vegetation, wildlife and wildlife habitat, ecological connectivity, wildlife movement, and project incidents. The Valley Line West Light Rail Transit (LRT) Crossing at Groat Ravine and Activities Near MacKinnon Ravine Site Location Study was also prepared (Attachment 3). This location study discusses project scope and social, financial, environmental and institutional constraints.

Administration has identified numerous mitigation strategies for each area for inclusion in the project agreement that will define contractual requirements for Valley Line West construction.

Examples of specific mitigation measures that will be implemented for each impact category in the Crossing at Groat Ravine Environmental Impact Assessment include:

- Surface water - Since there are no natural water courses in the area, mitigation measures considered accidental releases into the drainage system. Complying

with Enviso and ISO14001 standards; developing a spill prevention and emergency response plan and a hazardous waste plan.

- Ravine slope stability - Undertaking detailed geotechnical studies, including analysis and reporting; identifying limits on slope steepness; mitigating slope displacement; monitoring slope stability through all project phases.
- Vegetation - Complying with the Corporate Tree Management Policy (C456A); adhering to tree removal and protection specifications; reclaiming temporary working areas with native species using a detailed reclamation plan, a tree protection plan, an Environmental Construction Operations (ECO) plan, and a weed control plan.
- Wildlife and wildlife habitat - Reclaiming habitat in response to habitat loss due to permanent infrastructure but with a net gain in habitat quality; developing and implementing worker/wildlife encounter protocols; avoiding disturbance to bat maternity roosts, migratory birds and their nests; adhering to timelines and protocols for vegetation clearing and existing bridge removal.
- Ecological connectivity and wildlife movement - Reclaiming wildlife movement corridor habitat but with a net gain in habitat quality; providing a minimum 0.5 metre wide level surface on the abutment slope for animals such as hares and porcupines; installing two critter crossings for animals as large as hares and porcupines according to the Wildlife Passage Engineering Design Guidelines.
- Project incidents - Adhering to required compliance with Enviso; developing a spill prevention and emergency response plan, a hazardous waste management plan, a site-specific erosion and sedimentation control plan, and a site-specific water management plan.

Examples of specific mitigation measures that will be implemented for each impact category in the Activities near MacKinnon Ravine Environmental Impact Assessment include:

- Surface water - Since there are no natural water courses in the area, mitigation measures considered accidental releases into the drainage system. Complying with Enviso and ISO 14001; developing a spill prevention and emergency response plan and a hazardous waste plan.
- Ravine slope stability - Undertaking detailed geotechnical studies, including analysis and reporting; identifying limits on slope steepness; mitigating slope displacement; monitoring slope stability through all project phases; installing a retaining wall to minimize slope impact to facilitate construction.
- Soils - Excavating potential contaminated material to depth to facilitate construction; backfilling with clean material; ensuring appropriate disposal of contaminated material.
- Vegetation - Complying with the Corporate Tree Management Policy (C456A); adhering to tree removal and protection specifications; reclaiming temporary working areas and decommissioned bus turnaround with native species using a

detailed reclamation plan, a tree protection plan, an Environmental Construction Operations (ECO) plan, and a weed control plan.

- Wildlife and wildlife habitat - Reclaiming and restoring habitat in response to habitat loss due to permanent infrastructure but with a net gain in habitat quality and total area; implementing worker/wildlife encounter protocols; monitoring the area for signs of migratory birds and their nests; adhering to timelines for vegetation clearing.
- Project incidents - Adhering to required compliance with Enviso; developing a spill prevention and emergency response plan, a hazardous waste management plan, a site-specific erosion and sedimentation control plan, and a site-specific water management plan.

The procurement process is the City's next opportunity to ensure that sound stewardship of the environmental resources in the River Valley is carried out by the successful contractor. Specific comments and suggestions identified in the Environmental Impact Assessments will be included in procurement documents as further details are developed. These documents will then be used during proposal evaluation through to the construction phase.

Few residual impacts are anticipated to remain following the implementation of the mitigation measures identified in the Environmental Impact Assessments and Site Location Study. With these mitigation measures applied, Administration expects the potential project construction impacts identified to date can be mitigated to ensure that any adverse residual impacts are minor or negligible.

## Legal

The North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188) requires that the two Environmental Impact Assessments and the joint Site Location Study be approved by City Council before the proposed development can proceed. Further, Bylaw 7188 requires the locations of the Light Rail Transit infrastructure within the boundaries of the North Saskatchewan River Valley Area Redevelopment Plan to be deemed essential and approved by City Council before construction can proceed.

## Public Engagement

A public information session was held on August 28, 2018 to share information and invite comments in relation to the Environmental Impact Assessment reports. Advertised via newspaper announcements, social media, the project website, the City's engagement calendar, direct emails and roadside signs, the session attracted 121 signed-in attendees. A total of 29 comment forms were collected at the event, with one additional form received online the following week.

Half of the respondents live in Glenora and Grovenor, while the remainder were fairly

evenly distributed among other neighbourhoods westward along the route as far as Elmwood.

The questions on the form were open-ended, inviting comments on each of the Environmental Impact Assessments, as well as any additional comments. Out of the 30 total submissions, 12 addressed the Environmental Impact Assessments directly and generally expressed approval or acceptance of the assessment of impacts and the approach to mitigation. There were 11 submissions that expressed disapproval of the LRT route in general, six that were supportive, and the remainder expressed neither approval nor disapproval. Several forms contained incidental comments on a variety of matters, including three suggestions to construct a stairway at the new bridge to create a pedestrian connection between Stony Plain Road and Groat Road, and two references suggesting the bus loop at MacKinnon Ravine has historical significance that should be recognized.

As the comments were received while the Environmental Impact Assessments reports were being prepared, they have not been incorporated into the reports themselves.. All comments, whether relevant to the Environmental Impact Assessments or other aspects of the project, are being reviewed by the project team for response or consideration in the implementation of the project.

### Corporate Outcomes and Performance Management

<b>Corporate Outcomes: The City of Edmonton has sustainable and accessible infrastructure</b>			
<b>Outcomes</b>	<b>Measures</b>	<b>Results</b>	<b>Targets</b>
The City of Edmonton has sustainable and accessible infrastructure	Compliance with environmental permits/approval and regulations	100% compliance (2017)	100% compliance (Q4 2018)
The City of Edmonton has sustainable and accessible infrastructure	Edmontonians' Assessment: Access to Infrastructure, Amenities and Services that Improve Quality of Life (percent of survey respondents who agree/strongly agree)	68% (2017)	70% (2018)

<b>Corporate Outcome(s): The City of Edmonton's operations are environmentally sustainable.</b>			
<b>Outcome</b>	<b>Measure</b>	<b>Result</b>	<b>Target</b>
The City of Edmonton's operations are environmentally sustainable.	Compliance with environmental permits/approval and regulations	100% compliance (2017)	100% compliance (Q4 2018)

<b>Corporate Outcome(s): Edmonton is attractive and compact</b>			
<b>Outcome</b>	<b>Measure</b>	<b>Result</b>	<b>Target</b>
Edmonton is attractive and compact.	Edmontonians' assessment: Well designed, attractive city (percent of survey respondents who agree/strongly agree)	53% (2017)	55% (2018) positive survey results

### Risk Assessment

<b>Risk Element</b>	<b>Risk Description</b>	<b>Likelihood</b>	<b>Impact</b>	<b>Risk Score (with current mitigations)</b>	<b>Current Mitigations</b>	<b>Potential Future Mitigations</b>
Corporate Governance - Approval is denied or delayed	VLW LRT construction will be delayed	2 - Unlikely	3 - Major	6 - Low	Studies completed to ensure proposed project is planned and implemented to ensure minimal project impacts.	
Environmental regulatory requirements are not met	VLW construction delays, additional work to ensure mitigation measures are met	2 - Unlikely	2 - Moderate	4 - Low	Ensure all requirements are met with assistance from environmental experts.	None
Environmental	Potential impacts as identified in the Environmental Impact Assessment	2 - Unlikely	1 - Minor	2 - Low	Recommendations regarding mitigation of environmental impacts in the Environmental Impact Assessment have been	Mitigation measures will be implemented by Contractor during construction of project.

					reviewed by Administration to ensure completeness.	
Public Perception	Public perceives risks to be worse than they are, resulting in additional delays	2 - Unlikely	1 - Low	2 - Low	Good understanding of the project and the ability of staff to explain the impacts and mitigation measures.	Communication management if further information is required to address media questions.

**Attachments**

1. Environmental Impact Assessment Pursuant to Bylaw 7188 for Valley Line West Light Rail Transit (LRT) Crossing at Groat Ravine - Final Report
2. Environmental Impact Assessment Pursuant to Bylaw 7188 for Valley Line West Light Rail Transit (LRT) Activities Near MacKinnon Ravine - Final Report
3. Site Location Study Pursuant to Bylaw 7188 for Valley Line West Light Rail Transit (LRT) Crossing at Groat Ravine and Activities Near MacKinnon Ravine - Final Report

**Others Reviewing this Report**

- T. Burge, Chief Financial Officer and Deputy City Manager, Financial and Corporate Services
- G. Cebryk, Deputy City Manager, City Operations
- C. Owen, Deputy City Manager, Communications and Engagement
- P. Ross, Acting Deputy City Manager, Urban Form and Corporate Strategic Development