

## 25th Avenue S LRT GRADE SEPARATION REVIEW

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### EXECUTIVE SUMMARY

This report outlines the work Administration has undertaken to review the feasibility of concepts which grade separate 25 Avenue S and the LRT that can be considered instead of an interchange at Macleod Trail and 25 Avenue S.

Administration explored the feasibility of alternative design solutions to the interchange. These solutions range from reconfiguring the at-grade crossing of 25 Avenue S, to elevating or tunneling the LRT over, or under, 25 Avenue S. The study reviewed two concepts in greater detail to test the feasibility and viability of these alternative design solutions. The study found that there are feasible and viable alternatives to an interchange and concluded that more detailed work is required to develop a recommended plan and cost estimate for the grade separation of 25 Avenue S and the LRT tracks, so that Council may consider adopting this as the official plan.

### ADMINISTRATION RECOMMENDATIONS

That the SPC on Transportation and Transit recommend Council direct Administration to develop a recommended plan to grade separate 25 Avenue S and the LRT tracks east of Macleod Trail.

### RECOMMENDATION OF THE SPC ON TRANSPORTATION AND TRANSIT, DATED 2016 JUNE 15:

That Council direct Administration to develop a recommended plan to grade separate 25 Avenue S and the LRT tracks east of Macleod Trail **and to report back to Council through the SPC on Transportation and Transit in Q1 2018.**

### PREVIOUS COUNCIL DIRECTION / POLICY

On 2015 June 15, Council adopted recommendations from the Macleod Trail Corridor Study (TT2015-0183), including:

6. Direct Administration to bring forward a follow-up report which investigates alternative design solutions which provide necessary traffic capacity to support redevelopment in the vicinity while improving pedestrian access and safety, along with reducing or eliminating conflicts with the Light Rail Transit (LRT), and to return to the SPC on Transportation and Transit no later than Q2 2016 with design recommendations and potential amendments to the land protection at 25 Avenue S.

### BACKGROUND

The LRT tracks cross 25 Avenue S east of Macleod Trail at grade. Due to the proximity of the LRT tracks to the intersection of Macleod Trail and 25 Avenue S, traffic signal operations are negatively impacted. In order to address the delays and safety concerns, The City developed a plan for an interchange as a grade separated solution. The interchange plan has impacts on private property and is shown on pages 4 and 5 of Attachment 1.

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### **INVESTIGATION: ALTERNATIVES AND ANALYSIS**

Administration considered several alternative design solutions during this study. Grade separation concepts that were initially considered included lowering the LRT below 25 Avenue S or elevating the LRT above 25 Avenue S. For the purposes of testing feasibility, two concepts were reviewed in further detail. Both concepts result in replacement of the existing Macleod Trail and 25 Avenue S intersection with two intersections, in an offset split T configuration. The analysis showed that without the impacts of the at-grade LRT, the two split intersections would operate better than the existing intersection. Both concepts tested during this study have been proven to be both functionally and technically feasible and viable alternate concepts to an interchange. The executive summary of the 25th Avenue S LRT Grade Separation Review is included as Attachment 1.

It should be noted that this preliminary study did not explore all options for the replacement of the interchange plan with a preferred alternate solution but rather explored a limited set of potential solutions to prove that these alternative solutions are feasible. A subsequent more detailed functional planning study would be required to further explore and develop an optimal design solution, as well as consult with the public on the recommended design.

### **Stakeholder Engagement, Research and Communication**

Administration had conversations with key internal and external stakeholders during this study. These conversations were used to discuss the planned interchange and the feasibility work that The City was undertaking to explore alternative design solutions. Conversations took place with impacted City Departments, the Calgary Exhibition and Stampede, the Erlton Community Association board, the Talisman Centre and Anthem Properties. A letter from the Calgary Exhibition and Stampede is included as Attachment 2.

### **Strategic Alignment**

This study aligns with multiple policies in the CTP, MDP and the 2020 Sustainability Direction including:

- CTP Goal 2: Promote safety for all transportation system users.
- CTP Goal 4: Transit, walking and cycling as preferred mobility choice for more people.
- MDP Policy 2.2.2.a: Increase development densities in proximity of Primary Transit.
- Sustainability Principle for Land Use and Mobility 2: Create walkable environments.
- Sustainability Principle for Land Use and Mobility 4: Provide a variety of transportation options.

### **Social, Environmental, Economic (External)**

This report has been reviewed for alignment with The City of Calgary's Triple Bottom Line (TBL) Policy Framework. The following implications were identified, further study is required.

#### Social

Grade separation of the LRT tracks and the roads in this area will change how the transportation facilities integrate with the surrounding land uses. Further study is required to establish a recommended infrastructure plan that provides the best social value.

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### Environmental

The intersection of Macleod Trail and 25th Avenue S and the surrounding lands are identified on Alberta Environment's Flood Hazard Map. Further study is required to establish a recommended plan that can provide the best resiliency requirements for the area.

### Economic

Grade separation of the LRT and 25 Avenue S has an impact on the development potential around the Erlton Station. Further study is required to establish a recommended plan that maximizes the collective value of the infrastructure and development opportunities in the area.

### **Financial Capacity**

#### **Current and Future Operating Budget:**

There are no current or future operating budget impacts associated with this report. The follow-up study would be undertaken as part of Transportation Planning's regular work program at a future date to be determined.

#### **Current and Future Capital Budget:**

There are no current or future capital budget impacts associated with this report.

### **Risk Assessment**

If further study is not undertaken, there is a risk of losing opportunities to develop a recommended plan that minimizes property impacts and provides for the best integration of transportation facilities in the area with the surrounding land uses.

### **REASONS FOR RECOMMENDATIONS:**

There are feasible alternate grade separation concepts of the LRT to the planned interchange at Macleod Trail and 25 Avenue S. The interchange plan, currently considered the official plan, has significant community impacts and is impractical to build given the adjacent development that has occurred since interchange design was adopted, as well as the evolution of city urban design.

### **ATTACHMENTS:**

1. Executive Summary – 25th Avenue S LRT Grade Separation Review
2. Letter from the Calgary Exhibition and Stampede (May 16, 2016)