

Stony Plain Road One-Way Traffic Option

Recommendation

That the October 30, 2018, Integrated Infrastructure Services report CR_5848, be received for information.

Previous Council/Committee Action

At the October 23, 2018, Agenda Review Committee meeting, the October 29, 2018, Integrated Infrastructure Services report CR_5848, was re-routed to the October 30, 2018, Urban Planning Committee meeting.

At the March 21, 2018, City Council meeting, the following motion was passed:

That Administration provide a report on the engagement and analysis of the one-way option presented by the Stony Plain Road Business Improvement Area.

Executive Summary

This report summarizes the results of a design review for Stony Plain Road between 149 Street and 156 Street. In particular, this report considers possible one-way roadway operations, combined with two-way LRT, and presents outcomes of public engagement and online feedback. This report reviews the potential benefits and impacts of each design option on adjacent property owners, businesses, commuters, pedestrians and residents.

Administration will continue with centre-running LRT and two-way roadway operations along Stony Plain Road between 149 Street and 156 Street, presented as Option 5 in this report. Option 5 is consistent with the Council-approved West LRT Concept Plan.

Report

Background

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 and to prepare the project for construction procurement. The West LRT Concept Plan was approved in January 2011 and the preliminary design for the 14-kilometre west segment of the Valley Line was completed in 2013. The 2017-2018

preliminary design update provides the opportunity to assess and incorporate new information such as changes to design requirements, plans and policies, land use and development potential, and to conduct and consider input from further public engagement.

Through the engagement process, stakeholders proposed an alternative of converting Stony Plain Road into a one-way operation for vehicles. At the March 21, 2018 City Council meeting, a motion was passed directing Administration to carry out additional design and public engagement work to better understand possible one-way options.

Design Options

Administration undertook a design review to explore possible one-way westbound roadway options along Stony Plain Road between 149 Street and 156 Street. The review considered factors such as LRT operations, safety, pedestrian connectivity and walkability, emergency access, impact to stakeholders, bus operations, and roadway network operations. Pedestrian crossings on Stony Plain Road have been incorporated into all design options at all intersection between 149 Street and 156 Street.

Stony Plain Road between 149 Street and 156 Street is a constrained corridor with limited road right-of-way and established land use on both sides. The introduction of LRT on Stony Plain Road will utilize approximately eight metres of the existing typical 20 metre road right-of-way. A sidewalk on each side requires a minimum total width of approximately four metres. With a one-way roadway concept, the removal of the eastbound lane frees up space that could be utilized in a variety of ways. Administration has developed a number of options for using this additional space, ranging from wider sidewalks, a second westbound travel lane which can be shared with off-peak parking/loading, or dedicated left turn lanes. Each design option has its unique benefits and impacts that are summarized below.

For the purpose of this report, the one-way design review is focused between 149 Street and 156 Street. Examination of additional design along Stony Plain Road and 100 Avenue, public engagement, and subsequent approvals may require an additional 18 to 24 months to complete. This would likely result in Valley Line West LRT procurement delays and additional budget implications.

Summary of Design Options

A total of four one-way options were developed and are compared with the two-way concept design. A summary of the design options considered for Stony Plain Road between 149 Street and 156 Street is provided below. A comparison of the options and illustration of the design concepts are presented in Attachment 1.

Option 1 - One-Way “Split” Roadway, Two Westbound Through Lanes Divided by LRT

This option’s design includes centre running LRT alignment with a lane of traffic on either side, both in the westbound direction. This concept was suggested through the public engagement process, as a way to maintain current westbound traffic capacity while retaining the benefits of centre-running LRT.

Option 2 - One-Way Roadway, LRT South Alignment with Two Westbound Through Lanes

This option’s design includes south side running LRT alignment with two westbound through lanes. This option provides the opportunity to use the north curb lane for on-street parking during off-peak periods.

Option 3 - One-Way Roadway, LRT South Alignment with One Westbound Through Lane and One Left Turn Lane

This option’s design includes south side running LRT alignment with one dedicated westbound left turn lane and one westbound through lane.

Option 4 - One-Way Roadway, LRT South Alignment with 1 Westbound Through Lane and Wider Sidewalks

This option’s design includes south side running LRT alignment with one westbound through lane and approximately three metre wide sidewalks and amenity spaces.

Option 5 - Two-Way Roadway, LRT Centre Alignment with One Lane Each Direction

This option’s design includes centre running LRT alignment with one eastbound and one westbound lane.

In Options 1-4, which provide for a one-way westbound roadway, a south side running LRT alignment would be more feasible and is recommended over a north side running LRT. This is to optimize intersection operation at the Stony Plain Road and 156 Street intersection, and optimize placement of the 149 Street LRT Stop. Due to unconventional design and complex intersection configurations, the idea of a centre running LRT combined with one-way roadway operation, as shown in Option 1, is not recommended.

In general, the removal of the eastbound traffic lane on Stony Plain Road has a negative impact on local access and traffic circulation, particularly for properties located south of Stony Plain Road. The removal of the eastbound traffic lane between 149 Street and 156 Street reduces traffic volume along Stony Plain Road by diverting eastbound traffic to parallel arterial roadways such as 100 Avenue and 107 Avenue.

With a south side running LRT alignment, access to the abutting south side properties is directly impacted. With no fronting roadway, emergency response would require the use of LRT track right-of-way to access adjacent properties, resulting in an LRT service disruption with each incident. Roadway access from the south side onto Stony Plain Road would also be limited, with roadway closure and no vehicle access permitted in two of the four one-way options.

From a roadway network perspective, the consideration of one-way operation between 149 Street and 156 Street would trigger further consideration of additional one-way conversions, such as extending westbound one-way operation along Stony Plain Road towards 170 Street, and/or converting 100 Avenue to a one-way eastbound operation between 149 and 170 Streets to create a one-way couplet with Stony Plain Road.

These additional changes to existing operation would require further design review and consultation with the public. Considerations may include: where the one-way westbound configuration will start and end, how accesses will be managed, what impacts there will be for properties, and other design factors such as Complete Streets guidelines, sidewalk width, provision of on-street parking, and lane configurations.

Roadway Network Considerations

The introduction of a one-way roadway on Stony Plain Road between 149 Street and 156 Street would have an impact on the overall roadway network. Eastbound traffic on Stony Plain Road would reroute to adjacent arterial corridors. The surrounding grid network has the capacity to accommodate this traffic redistribution. The overall network impact between the one-way design options are relatively similar.

An overview of the projected traffic network change for a typical one-way operation between 149 Street and 156 Street is presented in Attachment 2.

Results

Based on public engagement feedback (summarized further below), assessment of the design options, and taking into consideration all operational and urban design impacts, Administration will continue with Option 5, with two-way LRT and roadway operations along Stony Plain Road between 149 and 156 Streets, as originally outlined in the approved Valley Line West Concept Plan. A centre running LRT alignment balances access impact between the north and south side properties and can accommodate land use changes over time.

Public Engagement

A key stakeholder meeting was held with the Stony Plain Road Business Improvement Area Board on May 15, 2018. A follow-up meeting took place on July 18, 2018 to present a design review update. Discussions regarding one-way traffic on Stony Plain Road also took place with area Citizen Working Groups in Q2 2018.

A formal public engagement session took place on July 26, 2018, attracting more than 250 visitors. 205 comment forms were collected at the engagement event and subsequently through the Valley Line West project website for a two week period. Respondents were asked to rank the options in order of preference.

Among the 160 respondents who ranked the options, 90 (56 percent) favoured Option 5, the original concept plan with two-way traffic. 33 (approximately 21 percent) gave first-place ranking to Option 2, two one-way through lanes westbound. Option 3 was favoured by 19 (12 percent), followed by Option 4 by 12 (8 percent) and Option 1 by two (1 percent).

Among the 21 respondents who identified themselves as business owners in the Stony Plain Road Business Improvement Area, 19 ranked their preferences. The two-way Option 5 ranked first, with 13 respondents. Option 2 was favoured by three respondents, Option 3 was ranked first by two, Option 4 received a single first-place ranking, and Option 1 received no first-place rankings.

In addition to the choice of route, the most frequently cited concerns overall were access-related impacts to the local business area, community impacts, convenience of transit access for seniors and those with mobility challenges (i.e. separation between stops), and parking availability.

A summary of the July 26, 2018 public engagement event and the feedback gathered on the design options is presented in Attachment 3.

Subsequent to the July engagement event and the presentation of design options, Administration also received formal feedback from RioCan, property owner of the Jasper Gates Shopping Centre located at the southwest corner of Stony Plain Road and 149 Street. RioCan expressed concerns in regards to access constraints associated with one-way options and supported the approved Valley Line West Concept Plan with a two-way roadway and a centre running LRT alignment.

Corporate Outcomes and Performance Management

Corporate Outcome(s): Edmontonians use public transit and active modes of transportation

Outcome(s)	Measure(s)	Result(s)	Target(s)
Edmontonians use public transit and active modes of transportation	Transit ridership (rides per capita)	91.6 (2017)	105.0(2018)
	Journey to work mode (percent of survey respondents who select auto passenger, transit, walk, cycle or other)	26.1% (2017)	25.9% (2018)

Corporate Outcome(s): Edmonton is attractive and compact

Outcome(s)	Measure(s)	Result(s)	Target(s)
Edmonton is attractive and compact	Edmontonians' assessment: Well-designed, attractive City (percent of survey respondents who agree/strongly agree)	53% (2017)	55% (2018)

Corporate Outcome(s): The City of Edmonton has sustainable and accessible infrastructure

Outcome(s)	Measure(s)	Result(s)	Target(s)
The City of Edmonton has sustainable and accessible infrastructure	Edmontonians' assessment: Access to amenities and services that improve quality of life (percent of survey respondents who agree/strongly agree)	68% (2017)	70% (2018)

Risk Assessment

Risk Element	Risk Description	Likelihood	Impact	Risk Score (with current mitigations)	Current Mitigations	Potential Future Mitigations

Public Perception	Concept plan amendment would impact stakeholders who have made decisions based on West LRT concept plan approved in Jan 2011. Additional public engagement may be required.	4 - Likely	2 - Moderate	8 - Medium	Engage with stakeholders as part of design development process. Present plan forward to City Council and communicate to the public.	Communicate results of design option assessment to the public. Develop and execute communication plan for newly impacted stakeholders.
Project Management	Concept plan amendment would result in higher project cost and schedule delay. West LRT concept plan was approved in Jan 2011. Subsequent project decisions and actions, such as preliminary design and cost estimates, were made based on approved concept plans.	5 - Almost Certain	2 - Moderate	10 - Medium	Adopt risk-based approach in preliminary design efforts, focusing design effort in areas with less uncertainties first. Continuous monitoring of project scope, cost and schedule.	Assess impact of design change and quantify changes in project scope, cost and schedule. Communicate changes with impacted stakeholders and seek additional approvals where necessary.
Project Management	If alternate design is directed or decisions are delayed, this would have a direct impact on project schedule with cost and procurement implications.	3 - Possible	4 - Severe	12 - Medium	Development and review of design options prior to presenting to City Council for approval. Conduct engagement with stakeholders in advance to understand opportunities and impacts.	Assess impact and quantify changes in project scope, cost and schedule. Communicate impacts with impacted stakeholders and seek additional approvals where necessary.

Attachments

1. Design Options Overview
2. Projected Traffic Pattern Change with One-Way Operations
3. Public Engagement Report - Valley Line West

Others Reviewing this Report

- C. Owen, Deputy City Manager, Communications and Engagement
- G. Cebryk, Deputy City Manager, City Operations
- P. Ross, Acting Deputy City Manager, Urban Form and Corporate Strategic Development
- R. Smyth, Deputy City Manager, Citizen Services