

Yellowhead Trail - 149 Street Final Concept Plan

Recommendation:

That the October 7, 2015, Transportation Services report CR_2560, be received for information.

Report Summary

This report highlights the recommended concept for the area surrounding the intersection of 149 Street and Yellowhead Trail in support of the Yellowhead Trail freeway vision.

Report

Context

Yellowhead Trail is a very important cross-city connection and an integral piece of the City of Edmonton's inner ring road. It is designated as a future freeway in the Transportation System Bylaw (Bylaw 15101) and is a 24-hour truck and dangerous goods route. Furthermore, Yellowhead Trail through Edmonton is a key piece of the National Highway System, forming an important east-west connection between Manitoba and British Columbia.

At present, Yellowhead Trail within Edmonton carries between 63,000 and 81,000 vehicles per day, of which 18 percent (12,000 - 14,000 vehicles per day) are trucks. Over the next several decades, traffic on Yellowhead Trail is anticipated to grow significantly, in the range of 87,000 - 155,000 vehicles per day, of which approximately 25,000 are anticipated to be trucks.

Yellowhead Trail Strategic Plan

The Yellowhead Trail Strategic Plan (Attachment 1) outlines the long-term vision for Yellowhead Trail, including the proposed improvements required to achieve free-flow on Yellowhead Trail. Although there are a number of major improvements to Yellowhead Trail proposed through the Strategic Plan, 149 Street was selected to be reviewed first for a number of reasons, including:

- 149 Street is the first signalized intersection encountered when entering the city from the west.
- Yellowhead Trail at 149 Street experiences significant traffic and significant delay.
- The intersection is one of the highest collision locations in the city.
- The railway crossing of 149 Street north of Yellowhead Trail accommodates high train volumes, which block the crossing and cause significant traffic delays.

Generally, improvements at Yellowhead Trail/149 Street are considered to have great potential to reduce delay for drivers traveling along Yellowhead Trail, reduce emissions due to idling at the existing intersection, and improve safety.

Concept Development and Integration of Engagement

Concept planning work for freeway improvements at 149 Street along Yellowhead Trail began in May 2012. The project approach integrated the public engagement program with the technical development and evaluation of solutions. The public engagement program ensured that stakeholders were provided with multiple opportunities to be involved in the planning study and to help shape the plan development and guide decision making. Stakeholders were asked to participate during the development, refinement, and selection stages of the project to ensure that they would understand how and why the final plan was selected.

A Stakeholder Input Group was formed to work closely with Administration throughout the planning process. The Stakeholder Input Group consisted of area businesses, trucking association representatives, and residential stakeholders, among others, whose feedback influenced the option development, evaluation, and refinement of the final plan.

A series of workshops was held with the Stakeholder Input Group participants. These workshops included:

- **Workshop 1 - Visioning:** Development of a Vision and Guiding Principles.
- **Workshop 2 - Interchange 101:** To provide all participants with a basic understanding of freeway concepts to empower participants for later stages of developing and refining options for the corridor.
- **Workshop 3 - Option Review:** Review approximately 15 freeway configurations, including access scenarios.
 - The intent of this workshop was to work together to narrow down the configurations to a manageable set to be refined and evaluated in more detail.
 - Participants balanced freeway operations, network connectivity, and local access.
- **Workshop 4 - Option Refinement:** Using evaluation criteria developed by the Stakeholder Input Group, the team evaluated the freeway scenarios.
 - The City completed detailed technical analysis on the refined list and eliminated several options due to fatal flaws.
- **Workshop 5 - Final Option Evaluation:** Review three technically feasible options.
 - Partial diamond interchange with ramps on the northwest, northeast, and southeast quadrants.
 - One-way frontage roads with at-grade crossing of CN Mainline and closure of 149 Street across Yellowhead Trail.

- Full closure of 149 Street at Yellowhead Trail with an underpass of the CN Rail Mainline.

The Stakeholder Input Group provided candid feedback on these options, primarily expressing favour for the option that provided access to area businesses via one-way frontage roads. They expressed that this option provided adequate access to the surrounding area, with little disruption to existing businesses and the lowest cost. Two of the options were carried forward from the final Stakeholder Input Group workshop for further consideration by the Project Team and Transportation Committee.

The Stakeholder Input Group process formed a critical component of the planning study and ultimately helped the Project Team to arrive at two concepts for the corridor that best balance the objectives of the planning study with the needs of area stakeholders. More importantly, Stakeholder Input Group participants had a better appreciation of the complexity of the planning study and understood how the final concepts were derived.

Previous Update to Transportation Committee

The following final two strategies were presented to Transportation Committee at the July 10, 2013, Transportation Committee meeting (Transportation Services report CR_370 – Yellowhead Trail – 149 Street Interchange Concept Plan – Public Project Update):

- Strategy A: Partial interchange at 149 Street with full grade-separation at CN mainline.
- Strategy B: Right-in, Right-out access to Yellowhead Trail using one-way service roads and an at-grade rail crossing of the CN mainline.

Both strategies have the ability to accommodate long-term traffic growth, while providing free-flow operation on Yellowhead Trail. Strategy A requires a number of improvements to surrounding intersections, while Strategy B requires more improvements to parallel roads.

As presented to Committee, the cost estimates for the two strategies differ substantially, primarily based on differences in land and structural requirements.

The project team highlighted a preference for the non-interchange strategy (Strategy B) due to the reduced impact on adjacent properties and lower estimated overall cost. This same sentiment was generally expressed by the external stakeholder group.

Council and Committee members expressed a preference for Strategy B due to lower capital cost, lower impacts on adjacent businesses, and lower land acquisition requirements. The project team has advanced Strategy B to a concept plan level of detail as the recommended plan. The recommended concept plan shown in

Attachment 2 is the culmination of technical studies, public involvement, and Council Policy.

Several questions were raised at the July 10, 2013, Transportation Committee meeting. The questions raised at this meeting, along with Administration's responses, are included in Attachment 3.

Overview of Recommended Plan

The final concept plan incorporates refinements based on input from the public and Transportation Committee. Furthermore, additional work was completed to better understand the traffic diversion that can be expected with reduced connectivity to/from Yellowhead Trail at 149 Street.

Traffic Diversion Resulting from Closure of 149 Street Across Yellowhead Trail

In the absence of the all-directional connections at Yellowhead Trail and 149 Street and 142 Street, traffic patterns in the area will change and the supporting road network will require modification. These modifications include upgrades to parallel avenues such as 123 Avenue, 124 Avenue, and 128 Avenue, as well as their corresponding intersections at 156 Street. These upgrades include widening, intersection improvements, and provision of sidewalk infrastructure for pedestrians.

The recommended concept plan includes the following plan refinements to the Strategy B plan:

- Inclusion of an eastbound right turn ramp from Yellowhead Trail directly to 149 Street south of Yellowhead Trail. This movement has been included to provide better network connectivity.
- Intersection improvements at key locations on the surrounding road network.
- Parallel roadway upgrades and sidewalks to better accommodate the diverted traffic and providing for pedestrians within this industrial area.
- Reduced land impacts along the one-way service roads north and south of Yellowhead Trail.

Conceptual Cost Estimate

It is anticipated that construction of the recommended concept plan, including cost of land acquisition, construction of service roads, and upgrades to adjacent routes and intersections will be \$245.75 million (2015 dollars). Of this total cost, approximately \$148 million is the estimated cost to purchase the land required for the freeway improvements.

The recommended concept plan Yellowhead Trail/149 Street achieves the freeway vision outlined in the Yellowhead Trail Strategic Plan, and more importantly, balances City objectives with the needs of stakeholders in the surrounding area.

Next Steps

Council has designated the Yellowhead Trail Freeway Conversion project a priority for application to the National Infrastructure Component of the New Building Canada Fund. Administration has submitted an application for funding under this program. Several other sections of the corridor also need this same level of planning to identify the overall corridor plan details and costs. This work is necessary to build the required business case to support our application for the National Infrastructure Component of the New Building Canada Fund, and will be part of Council's discussion of the 2016 - 2018 Operating Budget this fall.

Policy

There are a number of factors in support of converting Yellowhead Trail to a freeway, including:

- On March 22, 2012, the Transportation System Bylaw 15896 was amended to reflect Yellowhead Trail as a future freeway.
- *The Way We Move* promotes upgrading Yellowhead Trail to a more free-flowing facility to better accommodate the movement of goods and services as part of the Access and Mobility Strategic Goal. Also, Strategic Objective 7.3 reinforces the role of Yellowhead Trail as it directs Administration to focus roadway improvements on the efficient movement of goods, services and transit vehicles.
- Goods Movement Strategy
 - Results of surveys completed highlight that Yellowhead Trail serves truck traffic with an origin or destination within the City of Edmonton, the region, and outside the region.
- Upgrades to Yellowhead Trail are needed in support of the City's Corporate Performance Measures.
 - Access and Mobility Measure 5 (AM.5) is *Travel Time and Reliability for Goods and Service Movements on Select Corridors* which gives the vehicle travel time on the inner ring road and highway connectors. Over time, increasing traffic volumes on Yellowhead Trail will degrade the performance of this system.
- Reduced congestion on Yellowhead will in turn have benefits in terms of societal costs related to reduction of greenhouse gas emissions, reduced collision costs, and travel time savings.

Public Consultation

The Yellowhead Trail/149 Street planning study was heavily focused on balancing technical analysis with stakeholder involvement and feedback. An extensive public engagement program for the immediately impacted stakeholders and the immediately

neighbouring communities was undertaken for this study. The engagement strategy aimed at building mutual understanding and ownership of the final recommendation for both the City and the area stakeholders. The public involvement process was completed in accordance with the Public Involvement Policy C513, and included local business owners, property owners, area residents, road users, trucking associations, as well as other stakeholders. Commuter and city-wide public input was received through road side signs, surveys, and media attention.

The public engagement process for this planning study took place between June 2012, and September 2013. It included a number of opportunities for stakeholders to participate and to provide input, including:

- two public meetings
- eleven stakeholder interviews
- five Stakeholder Input Group workshops

The public engagement program was tied directly to the plan development, refinement, and evaluation stages of the concept planning study and specifically helped Administration to arrive at the preferred plan. The recommended plan is based on Strategy B which had the support of the majority of the stakeholders and was modified to include their suggestions for improvement.

Further details on the public engagement program are included in Attachment 4.

Budget/Financial Implications

There is currently no funding in place for the next stages of design or land acquisition related to this project. Administration has developed a Project Profile for this project (Attachment 5). The total estimated cost for this project is \$245.75 million.

Yellowhead Trail has been identified by City Council as a priority under the National Component of the New Building Canada Fund. An expression of interest is currently being prepared to apply for funding through this program. If successful, the City would be eligible to receive up to 1/3 of the eligible costs. Land costs are not considered to be eligible for funding through this program.

Legal Implications

Statutory Liability

The City has potential statutory liability every time a road is closed. The extent of such liability depends on the impact of these actions on affected landowners and other affected parties. Road closures require passage of a bylaw and the public must be given the opportunity to be heard by City Council prior to a decision being made.

The City has potential statutory liability for closure of accesses. Liability can be avoided through existence of or provision of alternate access. Access closures require passage of a bylaw and impacted landowners are provided the opportunity to speak at Committee.

In addition, the City has potential statutory liability under section 534 of the *Municipal Government Act* upon completion of any public work if that work has permanently reduced the value of abutting property.

Expropriation

Should the City need to expropriate lands (either whole parcels or portions thereof), in addition to the market value of those lands, the City is liable for all damages that are a direct and reasonable consequence of the taking and typically include relocation costs, business losses and legal fees and in the case of partial takings, damage to the remainder land as a result of the taking ("Injurious Affection"). Injurious Affection damages can be considerable and are in addition to any other damages an affected owner may incur. Damages are potentially payable to both owners of land, tenants and any party holding an interest in the lands.

Because of the additional costs/damages described above, purchase of land is always more desirable and expropriation should only be considered as a last resort where a purchase cannot be made.

Damages can be mitigated by pursuing opportunity purchases, staging closures and providing ample lead time to affected owners.

Attachments

1. Yellowhead Trail Strategic Plan
2. Yellowhead Trail 149 Street Concept Plan
3. Previous Committee Questions and Responses
4. Public and Stakeholder Involvement Final Report
5. Yellowhead Trail (Stage 2) 149 Street Interchange - Capital Profile

Others Reviewing this Report

- T. Burge, Chief Financial Officer and Treasurer
- K. Rozmahel, General Manager, Corporate Services