

NORTH CENTRAL LRT ROUTE PLANNING STUDY UPDATE

EXECUTIVE SUMMARY

Administration is investigating the alignment for the North Central LRT to achieve improved mobility for Calgarians in conjunction with optimal corridor redevelopment. This report provides an update on the status of phase one of the project.

ADMINISTRATION RECOMMENDATIONS

That the SPC on Transportation and Transit recommends that Council direct Administration to report back to the SPC on Transportation and Transit no later than 2014 December with findings and recommendations from phase one of the study.

RECOMMENDATION OF THE SPC ON TRANSPORTATION AND TRANSIT, DATED 2014 MARCH 12:

That the Administration Recommendation contained in Report TT2014-0227 be approved.

PREVIOUS COUNCIL DIRECTION/POLICY

At the 2012 April 09 Combined Meeting of Council, the North Central Light Rail Transit Planning (TT2012-06) report was approved, initiating the current study. The report outlined technical and long-term land use and transportation concerns with the previously approved Nose Creek Valley alignment. Public engagement events held in 2011 indicated the public was in support of examining alignments that brought LRT closer to their communities. Recommendations of TT2012-06 stated:

That the SPC on Transportation and Transit recommends that Council direct Administration to:

1. Conduct a route planning study as the first phase of a two-phase planning study based on The City's Sustainability Direction principles. This study will identify a route for NC LRT that also addresses ridership projections, vehicle and right of way technology, station locations and amenities, opportunities for transit oriented development (TOD), and projected capital and operating costs.
2. Report back to the SPC on Transportation and Transit no later than the end of 2014 with findings and recommendations from Phase 1 of the study.

BACKGROUND

The North Central LRT Route Planning Study involves two phases. Phase one of the study, currently underway, will identify:

- A route for North Central LRT;
- Station locations and amenities (e.g. opportunities for transit oriented development, bus terminals, park and ride lots);
- Bus, bus rapid transit and LRT network connections, including a possible connection to the future Southeast LRT;
- LRT vehicle technology and right of way concepts (elevated, in-street, segregated right of way, etc);

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- Ridership and traffic projections; and
- Projected high level costs and land implications.

Phase two of the study will involve more detailed planning and design of the required infrastructure. Each phase of the study will take approximately two years and involve extensive public and stakeholder engagement.

The North Central LRT is the north leg of the next LRT corridor, named the Green Line, in Calgary's rapid transit network. As outlined in RouteAhead, a 30-year strategic plan for transit in Calgary, the Green Line will include LRT from North Pointe in North Central Calgary to Seton in the Southeast. The first phase for transit network development in the North Central corridor is the Centre Street Transitway which will allow existing transit services to move faster and more reliably in the advance of funding to build the LRT.

Administration is recommending the abandonment of the Nose Creek Valley alignment of the North Central LRT as it falls short of current mobility and land use goals identified in the Municipal Development Plan (MDP) and Calgary Transportation Plan (CTP). Additionally, Calgary Transit has identified LRT network and operational issues related to the Nose Creek Valley alignment. Issues that have been identified with the Nose Creek alignment include, but are not limited to:

- Requirement to construct the 8 Avenue subway (a major capital cost) as the 7 Avenue Transitway would be over capacity with the addition of trains from the North Central LRT connecting to the Northeast LRT line at Zoo Station.
- Nose Creek Valley is isolated and access for pedestrians and cyclists is relatively difficult. There are few existing developments within walking distance of possible station locations. Steep grades would also cause issues for buses in the winter.
- Opportunities for transit oriented development (TOD) are limited.
- Travel speed is not as advantageous as previously thought due to the longer length of this alignment and potential congestion on 7 Avenue and the Northeast LRT corridor.

In 2011, Administration engaged the communities in the North Central corridor to explore alternative alignments. There was overwhelming response to investigating Centre Street, Edmonton Trail and Nose Creek Valley as possible routes for the North Central LRT. In response to the public support and the issues identified with the Nose Creek Valley alignment, Administration requested Council approval in 2012 to undertake the North Central LRT Route Planning Study.

The North Central LRT Route Planning Study involves more than selecting a preferred alignment. The project is about enhancing communities with renewed development and providing an improved mobility network for all Calgarians.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

The North Central LRT Route Planning Study is The City's first large transit infrastructure project to adopt The City's sustainability approach to decision making. The sustainability approach is based on The City's 2020 Sustainability Direction and informed by stakeholder input. This input was used to determine what is important to community members and how the

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future transportation network can contribute to enhancing communities. This input also helped the project team to develop criteria for the analysis (discussed below) that would reflect the communities' aspirations.

The alignment development and analysis was divided into two sections; 1) Central Section - 16 Avenue N to 96 Avenue N; and 2) South Section - South of 16 Avenue into the Centre City. The North Section, north of 96 Avenue N has a dedicated LRT right of way along Harvest Hills Blvd and has not been revisited as this alignment has been integrated into land use decisions along the corridor.

Project Vision and Community Principles Development

The project vision, developed with stakeholders, is the overall purpose of the project. The vision calls for the project to achieve:

- A transit service that improves mobility in existing and new communities in North Central Calgary, connecting people and places, and enhancing the quality of life in the city.

Through the stakeholder consultation process, a number of comments were received that help make the project vision more specific. As a result, a set of principles were developed for the project. The 'Community Principles', developed with stakeholders, state the North Central LRT should:

- Enhance connectivity between people and places, connecting to all modes of transportation in the community;
- Contribute positively to community development and revitalization;
- Be the affordable transportation mode;
- Be accessible for people to get to, board and use;
- Contribute to the character and cohesion of the community through integrated design with no barriers to accessibility;
- Contribute to an efficient traffic management system that promotes the optimal transportation choice, and reduces congestion and travel times;
- Contribute to the vitality of businesses in the community by promoting business development and access;
- Enhance the environment by reducing greenhouse gases (GHG), protecting natural areas and urban beautification;
- Create a positive transportation experience - safe, accessible, efficient; and
- Contribute to complete streets including landscaping, urban form, pedestrian and cycling systems.

Evaluation Criteria

High level criteria were developed to highlight the differences between the various options. The criteria were selected based on the 2020 Sustainability Direction, stakeholder input, city-wide goals, data availability and the level of effort required to undertake the evaluation given the number of potential options identified for this initial assessment. The criteria used in the high-level analysis are summarized below and discussed in more detail in Attachment 1:

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- Capital Financial Capacity/Sustainable Corporation: an affordable and cost-effective service. A service that has costs that are achievable, sustainable in the longer term and provide value for money.
- Community Well-being: a safe, secure and socially inclusive service that improves access to key community destinations.
- Prosperous Economy: a service that promotes economic development by improving access to employment and commerce, without adversely impacting goods movement.
- Transportation: a high priority transit service that attracts transit use, walking and cycling as preferred mobility choices for Calgarians and that integrates with, improves customer experience, meets the future demand of, and strengthens the regional and frequent transit networks.
- Urban Development/Urban Realm: a service that supports current and future land use and intensification of development along the corridor, integrating with the character of the communities it passes through.
- Sustainable Environment: a service that facilitates a reduction in GHG emissions while not impacting The City's current natural environment.
- Deliverability: a service that can be constructed and operated without significant technical issues or constraints.

Alignment Options – Central Section (16 Avenue N to 96 Avenue N)

Exploration of alignment options with public input created a set of 10 possible alignments for North Central LRT:

	At-grade	Underground	Elevated
Nose Creek Valley	X		
Edmonton Trail	X	X	X
Centre Street	X	X	X
4 Street NW	X	X	X

The evaluation criteria was used to reduce the list of 10 possible alignments to a short-list of two alignments:

- Centre Street North at-grade
- Edmonton Trail at-grade

Centre Street North at-grade and Edmonton Trail at-grade received the highest rank based on the criteria and will be carried forward for further analysis. Attachment 1 provides additional information on the analysis and ranking of the alignments between 16 Avenue North and 96 Avenue North.

Alignment Options – South Section (16 Avenue N to Centre City)

A separate analysis was conducted for the alignments south of 16 Avenue North because of the complexity of the project in the Centre City (see Attachment 2). The evaluation was conducted in two parts. The first part included 18 different alignments for the North Central LRT in the Centre City. The 18 alignments were ranked using the evaluation criteria discussed above and input from a workshop with Administration and the consultant team. The workshop helped to

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define the goals for the LRT alignment in the Centre City, based on the principles of Council-approved Calgary Transportation Plan, RouteAhead and the Centre City Plan. This high-level ranking selected seven alignments that were brought forward for further analysis.

Additional analysis produced two alignments for the Centre City: underground from 16 Avenue North, connecting with the SE LRT alignment under the Centre City; and at-grade over the Centre Street bridge, descending into a tunnel to travel south under 7 Avenue and the future 8 Avenue subway, east on 10 Avenue to connect with the SE LRT. Attachments 1 and 2 provide detail on the analysis of the alignment options and the multiple account evaluation and ranking of the options. Maps of the top-ranking alignments are provided in Attachment 3. The connection between the Central Section and the South Section will be assessed in the next report.

Public engagement and technical analysis will now continue in order to identify and assess the challenges and opportunities of the short-listed alignments. A recommended alignment will be determined and presented to Council in 2014 December via the SPC on Transportation and Transit.

Stakeholder Engagement, Research and Communication

The North Central LRT Route Planning Study began in spring 2013 and the first public events were held in summer 2013. PlaceSpeak, an online forum for idea sharing and discussions, has been used throughout the project to engage citizens.

Stakeholders were notified of the events and online engagement using social media, email distribution lists, Calgary Transit's website and temporary signs on busy roads in the North Central communities.

Three interactive open house events held in 2013 June attracted 675 participants. The events continued the conversation and built on the feedback that was received during the 2011 open houses. Participants were asked to provide information that would help the project team to identify community characteristics and values. The information was used to develop the evaluation criteria for analyzing the alignments. Administration provided participants with background information on the LRT alignment options, how urban low-floor LRT integrates with land use and how participants can stay involved in the project. As a result of participant input at the open houses the project team added 4 Street Northwest to the analysis.

Two interactive workshops were scheduled for late 2013 June. The interactive workshops were cancelled and rescheduled due to the June floods. The workshops were combined and one event was held on 2013 July 23. Approximately 60 people attended the event. Participants completed three activities that helped to inform the project team. The first activity asked participants to identify important places and destinations in their communities. The second activity involved arranging pieces of infrastructure on a cross-section to determine the difficulties in fitting all desired features (LRT, wide sidewalks, bike lanes, trees, etc) in a narrow roadway. The third activity provided input to the draft vision and evaluation criteria for the project.

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In the fall of 2013, the project team concentrated on analysis and technical evaluations of each of the alignments. Engagement with City staff continued and a workshop was held in 2013 December to craft the goals for the LRT alignment in the Centre City. The project team utilized input from Administration to assist with determining the LRT alignment in the Centre City. Additional information on the analysis of the alignments in the Centre City and the workshop is included in Attachment 2.

Strategic Alignment

This report is aligned with the following long-term plans: Calgary Transportation Plan and Municipal Development Plan (2009), RouteAhead: A Strategic Plan for Transit in Calgary (2013) and the Centre City Plan (2007).

The project team will continue to coordinate with ongoing projects, including the Green Line (Centre Street Transitway, Southeast Transitway and Southeast LRT) projects.

Social, Environmental, Economic (External)

Social

High quality public transit service is an essential requirement for the creation of attractive, vibrant and economically competitive cities. Public transit provides affordable mobility and accessibility to people, places, goods and services. Public transit also provides public health benefits by increasing physical activity which can lower the risk for many diseases, such as heart and vascular disease, strokes and diabetes.

Environmental

Movement of people on public transit makes the most efficient use of natural resources, allows for a more compact city and offsets the need for motor vehicle travel, resulting in fewer impacts to existing communities. Implementing a network of rapid transit services is a fundamental objective in the Municipal Development Plan and Calgary Transportation Plan. Improved, higher quality transit services will attract higher levels of ridership and decrease the environmental impacts associated with urban travel.

Economic

The North Central rapid transit corridor represents a substantial opportunity to positively influence the private investment along the corridor. LRT level of investment by The City will increase the attractiveness of adjacent areas to redevelop.

Financial Capacity

Current and Future Operating Budget:

The project is on time and on budget.

Current and Future Capital Budget:

The final report will include high level cost estimates of constructing the LRT in the recommended alignment. This report makes no capital budget recommendations.

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Risk Assessment

There are no significant risks associated with this interim report. In order to manage project risks and elevate project issues, a governance structure has been put in place to manage this project. Attachment 4 indicates the governance structure, including internal and external groups that provide input and decisions to guide the project team.

REASONS FOR RECOMMENDATIONS:

Continue to work with stakeholders to refine the analysis and produce a preferred alignment for the North Central LRT.

ATTACHMENTS

1. Calgary North Central LRT: High Level Evaluation Report
2. Calgary North Central LRT: The Centre City Connection Between the North Central and Southeast LRT Lines
3. Alignments to be Carried Forward for Further Analysis
4. North Central LRT Project Governance Structure