

GREEN LINE SOUTHEAST ALIGNMENT AND STATIONS

EXECUTIVE SUMMARY

This report presents the recommended alignment and station locations for the southeast leg of the Green Line from Fourth Street/10th Avenue S.E. to the community of Seton. The alignment and station recommendations will shape the way the city grows by facilitating growth through Transit Oriented Development (TOD); connecting Calgarians with high quality public transit to the places they live, work and play.

A complimentary Report PUD2015-0765 (Green Line Southeast Transit Oriented Development Plan) was presented at the 2015 October 7 meeting of the SPC on Planning and Urban Development (PUD). Note that this report was completed prior to the PUD meeting and may not reflect the outcomes of that meeting.

ADMINISTRATION RECOMMENDATION(S)

That the SPC on Transportation and Transit recommends that Council:

1. Approve the recommended alignment and station locations for the southeast leg of the Green Line as per Attachment 1;
2. Direct Administration to proceed with land acquisition on the approved alignment and station locations; and
3. Direct Administration to report back on progress as part of the full Green Line project no later than April 2016 including updated funding, contracting strategy, and preliminary schedule.

RECOMMENDATION OF THE SPC ON TRANSPORTATION AND TRANSIT, DATED 2015 OCTOBER 14:

That the Administration Recommendations contained in Report TT2015-0678 be approved.

PREVIOUS COUNCIL DIRECTION / POLICY

At the 2014 March 31 Regular Meeting, NM2014-14 (Councillors Carra and Keating) was approved as follows:

“NOW THEREFORE BE IT RESOLVED that Council direct Administration to hire a consultant to work collaboratively with Administration on SETway vision and objectives, TOD scoping and planning in conjunction with the Pre-Design and other applicable processes and also undertake community-based visioning with the impacted neighbourhoods and stakeholders.

AND FURTHER BE IT RESOLVED that Administration report back to the Standing Policy Committee on Transportation and Transit no later than October 2015 with the associated functional plan amendments regarding any potential alignment and station location modifications including additions and report back to the Standing Policy Committee on Planning and Urban Development with TOD area plans and the associated policy amendments and/or replacements.”

GREEN LINE SOUTHEAST ALIGNMENT AND STATIONS

At the 2015 January 12 Combined Meeting of Council Report TT2014-0918 (The Green Line Work Plan Detail) was approved as part of the consent agenda. Recommendations of the Report:

1. Direct Administration to report back to the SPC on Transportation and Transit by 2015 October with a project update including schedule; and
2. Approve the recommendation outlined in Attachment 5 to provide internal loan financing, if required, from The City's working capital investments, to finance any deficits due to timing differences of cash flows during Green Line construction.

BACKGROUND

Functional planning studies for the Southeast Light Rail Transit (LRT) started in 1983 to establish alignment and station locations, and were completed in 2012. The Council approved alignment guided subsequent land use reviews and right-of-way purchases along the corridor.

A series of scoping and staging studies were undertaken from 2011 to 2014, validating previously completed work and identifying service options. In the absence of sufficient funding for LRT, options were developed including a staging plan for implementation using Bus Rapid Transit (BRT) on opening day.

In 2012 December the SETway Staging Update (TT2012-0754) report was approved. Related reports have been presented to Council specifically addressing TOD planning status updates (PUD2014-0675), work plan and cost benefit analysis summaries for the Green Line (TT2014-0676 and TT2014-0690), and detail work plans and options for advancement of construction and staged openings (TT2014-0918).

Funding for the Green Line Southeast has come in phases starting with \$8 million from the Government of Alberta's Green Transit Incentives Program (GreenTRIP) and \$4 million from the Municipal Sustainability Initiative (MSI) towards pre-design and TOD studies in December 2012. In November 2013 Council approved the Green Line Fund, an amount of \$52 million annually from 2015 to 2024. In July 2015, the Federal government announced funding of up to \$1.53 billion towards the Green Line LRT from the Public Transit Fund. Application guidelines and funding details have yet to be released from the Federal Government. Administration is preparing a report as directed by Council (NM 2015-09) for the December SPC on Transportation and Transit meeting in response to this funding opportunity.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

The Green Line is one of the backbones of the primary transit network and represents the highest priority in RouteAhead. The delivery of Green Line is focused on reducing ride time, improving reliability, and creating Transit Oriented Development (TOD) opportunities, with the objective of increasing transit ridership and supporting growth.

Attachment 1 provides a detailed summary of the alternatives and analysis evaluation criteria used to determine the recommended alignment, station locations, and short to medium-term TOD viable sites. Below is a synopsis of the detailed report (Attachment 1):

GREEN LINE SOUTHEAST ALIGNMENT AND STATIONS

Alternative Alignments

Refinements to station locations, engineering pre-design, and TOD planning are based on Council direction in December 2012 to use a low floor LRT system for the Green Line. In response to Council's request to review potential amendments to the functional alignment and station locations, Administration investigated alternate alignments for the southeast corridor. The investigation took an integrated approach to transportation and land use planning. The alignment and station location recommendations included in Attachment 1 build upon the functional studies previously completed and reflect the evolution of integrated transportation and planning.

Alignment alternatives were evaluated using the Multiple Account Evaluation (MAE) table (Attachment 2). The MAE builds on The City's Triple Bottom Line decision process and includes technical considerations, stakeholder consultation, and transportation and growth management objectives. The resulting recommendations for adjustments to the alignment and station locations of the southeast leg of the Green Line are supportable and evidence based, documenting a thorough and merit based assessment. Attachment 1 provides a detailed description of how the alignment, stations, and TOD sites are integrated.

A brief summary of the alignment recommendation is provided below:

Inglewood/Ramsay – The alignment adjacent to Canadian Pacific Railway (CP) remains the same however, the profile was revised to provide an elevated bridge station at 11th Street S.E. This elevated alternative follows the CP alignment behind the Snowdon building and Ramsay Design Centre. Subject to CP's final approval, this recommendation can be accommodated primarily within the railway corridor, by incorporating a relocation of CP's existing tracks to make room for the elevated guideway on the east side of 11th Street S.E.

Highfield – In coordination with Water Resources, the alignment has been revised further west and south to accommodate the future Bonnybrook Wastewater Treatment Plant expansion.

Ogden – The alignment transitions from the Canadian National Railway right-of-way to the west side of Ogden Road and includes a tunnel under Ogden Road to rejoin with the CP right-of-way on the east side of Ogden Road at 69 Avenue S.E.

Quarry Park – Shifted 200 meters to the west, to the edge of the Quarry Park dry waste landfill and parallel to 24th Street S.E., the alignment fronts the existing Quarry Park employment centre.

Station Placement

Community input and site opportunities along the alignment influenced the refinement of some station locations versus the functional Council-approved station locations. Guidelines for adjustments to stations, detail description of each station, and the rationale as to their location is included in Attachment 1.

The following is a summary of the recommended station location changes:

GREEN LINE SOUTHEAST ALIGNMENT AND STATIONS

Inglewood/Ramsay Station – Elevated bridge station over 11th Street S.E. and connecting the communities of Inglewood and Ramsay.

Highfield Station – Relocated to the north side of Highfield Boulevard, the station avoids a major overhead power line transmission tower and supports a currently proposed development site.

Lynnwood/Millican Station – Relocated to the south side of Millican Road, the station is accessible via Millican Road and adjacent to Pop Davies Park.

Ogden Station – Centrally located in the community at the intersection of 72nd Avenue/25th Street/Ogden Road S.E. where it is more accessible and offers redevelopment opportunity.

Quarry Park Station – Located adjacent to 24th Street S.E. and easily accessed by both north and south Quarry Park Boulevard intersections.

Mobility Connections

The success of Green Line will be built on balancing the accessibility to the stations by all modes; pedestrians, cycling, bus based transit, and private vehicles. In the southeast corridor, station locations have been optimized to support connections that promote multi-modal use and enable development. Effective and efficient multi-mode connections will be critical to attracting riders. Additional to the transit functionality are the infrastructure investments that improve connectivity to the surrounding area and enable TOD. These infrastructure investments although not all included in the current Green Line budget may be delivered through separate public or private development projects.

Travel Time, Reliability and Ridership

Existing transit service to the southeast is in the form of express bus, feeder bus and in-street Bus Rapid Transit (BRT). The objectives of the primary transit network and the Green Line LRT are to provide frequent, faster, reliable, and community connected service. The southeast leg of the Green Line LRT from Fourth Street/10th Avenue S.E. to Seton station will save approximately 20 to 25 minutes from the current schedule BRT route and improve travel time reliability significantly as compared to the current transit service.

Administration is currently updating the Regional Transportation Model (RTM) to reflect the plan to provide LRT service on opening day and the resulting changes to travel mode choice, land use plans and community development. Changes are expected to include favourable mode splits, increased transit ridership and increased development in TOD areas. Previous RTM projections were anticipating 50 per cent of future growth occurring at nodes and corridors. The introduction of the Green Line supports and promotes this growth and is substantiated by a real estate market study undertaken by Coriolis Consulting as part of the TOD study. Further detail is provided in the PUD2015-0765 report.

The highest ridership is anticipated to be to and from the downtown, TOD areas and hubs where transfers between transit routes occur. The Green Line benefits from having a number of major activity centres along the route, such as Quarry Park, Shepard and the South Health Campus that promote reverse peak direction.

GREEN LINE SOUTHEAST ALIGNMENT AND STATIONS

Transit Oriented Development (TOD) potential

Council directed that transportation pre-design and TOD planning studies be integrated and conducted simultaneously. A related report presented at SPC on Planning and Urban Development (PUD2015-0765) provides a detailed overview of the TOD plan recommendations.

Stakeholder Engagement, Research and Communication

Public engagement has been ongoing since the development of the functional studies. Continued engagement over the past year has included three streams of stakeholders: The development market sector, City wide business units, and the public. Input from all three streams has been critical to the recommendation for alignment, station locations, and development of TOD concepts. Coordination with adjacent developers/landowners was critical to integrating the alignment and station locations to influence development plans and reflect those already underway. The recommendations balance community priorities, are supportable by the market, align with City objectives, and demonstrate the vision that the Green Line is more than a transit line; it is a city shaping initiative.

A detail summary of the public engagement and the influence on the southeast leg Green Line is illustrated in Attachment 1. The public engagement process was a successful, collaborative endeavour with stakeholders who have expressed support for not only the recommended alignment, stations, and TOD sites, but also for the Green Line initiative being a transformational urban development mechanism.

The letters of support received from the various stakeholders are included in Attachment 3.

Strategic Alignment

The Green Line is identified as part of the City's RouteAhead 30-year Strategic Plan for Transit in Calgary. The RouteAhead plan is aligned with the policy direction and strategic goals of the Municipal Development Plan (MDP) and Calgary Transportation Plan (CTP), the 2020 Sustainability Direction and Council's Action Plan priorities. RouteAhead was developed in coordination with Investing in Mobility to ensure strategic alignment within the Transportation Department capital plans. The identification of priorities in this report are consistent with the Growth Management Framework and the balance of growth between established communities and new green-field communities.

The Green Line project team continues to coordinate with several City departments and business units and has been supported throughout the process. Key projects from other departments include: Main Streets, Pedestrian Strategy, Bonnybrook Wastewater Treatment Plant expansion, 12th Street S.E. bridge replacement, Ninth Avenue S.E. bridge replacement, Inglewood Sanitary Trunk, Seton Recreation Facility, Glenmore Trail/Ogden Road S.E. Interchange, and the Highfield Landfill Remediation. Coordination with OLSH has focused on maximizing the TOD potential of City-owned lands in alignment with the citywide TOD strategy.

Social, Environmental, Economic (External)

The Green Line will contribute directly to The City's social, environmental, and economic goals. The Green Line is a strategic infrastructure investment that facilitates more compact

GREEN LINE SOUTHEAST ALIGNMENT AND STATIONS

development patterns identified in the MDP. Improving travel options in established communities makes them more attractive to live in and develop. This potentially slows the rate of urban expansion, which reduces the associated loss of natural habitat and agricultural land, instead promoting urban densification. Transit that spans the City helps create complete communities in suburban areas while encouraging development.

Social

Great communities are adaptable to the needs of current and future residents. Communities that provide a broad range of housing choices and commercial services, supported by high quality transit and transportation choices, allow people to meet day-to-day needs within their own neighbourhood.

As a city shaping initiative, the Green Line requires the project to plan with the intent of delivering on TOD sites that are mixed used, mixed income and provide for all generations, thereby attracting and maintaining a diverse community that ensures economic development and vitality. Mixed-use neighbourhoods are the places where people live, work, play, shop and learn. Mixed income communities are financially accessible to all Calgarians. Consideration for multi-generational communities and the places where residents can transition through all stages of life ensure a long term, sustainable plan.

Environmental

Investment in transit provides environmental benefits that extend beyond the reduction of green house gases with every vehicle removed from the road. Improved, higher quality transit service and complete communities attract higher levels of ridership, decreasing the environmental impacts associated with urban travel but also support compact growth which in turn provides health benefits. The Canadian Urban Transit Association (CUTA) has outlined the public health benefits of public transit to include improved urban air quality and increased physical activity, which can lower the risk for many diseases. Reduction in green house gases and social health benefits are therefore realized by maximizing the transit investment.

Economic

Recommendations in this report were strategically conceived by integrating transit and planning. Leveraging the transit investment maximizes the economic return through land use with the intent of providing new and redevelopment opportunities along the corridor. This reduces the fiscal impact of growth, and promotes integrated and sustainable development. The investment in transit provides the opportunity to attract global corporations in innovative industries to promote a diversified economy in Calgary. As a result, more population and activity generates sustained ridership and economic growth thereby creating a multiplier effect of the infrastructure investment.

Emphasis was placed on demonstrating the development potential that transit offers and the benefit of having all modes of travel choice. The success of community-based visioning and the DAG engagement created awareness and interest in potential development sites presented by the Green Line. Complete communities that are connected and served by the Green Line support economic growth and offer significant investment opportunities.

GREEN LINE SOUTHEAST ALIGNMENT AND STATIONS

Financial Capacity

Current and Future Operating Budget:

Alignment and station recommendations may have no implications on the operating budget in Action Plan, as no transitway/LRT operating costs are included in the 2015-2018 period. There are minimal net long-term operating cost implications associated with the minor adjustments to station locations and alignment. There are revenue/operating cost improvements associated with some changes (e.g. Quarry Park station ridership) and increased costs associated with others (e.g. maintenance/heating costs of 11 Street S.E. station). These net costs will be refined in detail design and staging/procurement analysis.

Current and Future Capital Budget:

The Green Line has seen a number of milestones over the past year with the most notable being the recent Federal funding announcement dedicating upwards of \$1.53 billion from the Public Transit Fund to construction.

To respond to the Federal funding announcement and Council's direction to investigate the delivery of LRT on opening day, a refined estimate of the cost for LRT will be prepared as part of the completion of the pre-design of the southeast leg of the Green Line and as part of the functional planning for the north/downtown legs.

The current funding from the GreenTRIP fund of \$520 million will be used to continue land acquisition and finalize design to be ready for construction in coordination with the overall Green Line.

Risk Assessment

The following risks are the focus of Administration's ongoing risk management:

- Land acquisition continues to present one of the highest risks to the project schedule and budget. Total land cost estimates continue to be reviewed and refined as negotiations proceed and the design advances. Administration has advanced negotiations with both CN Rail and CP with the goal of reaching negotiated agreements in time for soonest possible construction start and dependent on the procurement method. In addition to the above, Administration has identified 39 private property impacts from 4th Street S.E. to Douglas Glen which includes several complex land acquisitions and the acquisition of over 60 acres of industrial land for construction of a Light Rail Vehicle Maintenance Storage Facility. Administration has initiated contact with all of the 39 private property owners and upon finalization and Council approval of the final alignment a land acquisition strategy will be presented to the Land and Asset Strategy Committee for approval. It's important to note that the land impacts for the Green Line continue to be refined as the project team works through the design process; until detailed design is complete the exact impacts will not be known. The potential exists for additional property requirements to be identified as the design advances. Administration will make every effort to achieve negotiated agreements with impacted property owners; however expropriation may be required in order to ensure that the required land is available to meet the construction schedule.

GREEN LINE SOUTHEAST ALIGNMENT AND STATIONS

- There is additional risk related to the acquisition of land from The Province at the proposed 4th Street/10th Avenue S.E. station as Administration understands that the required lands may be the subject of ongoing litigation. Until such time that the aforementioned is resolved, Administration has been advised that The Province is unwilling to enter into negotiations with The City which could have a negative impact on the project delivery.
- Review and value engineering of the design for LRT opening day scenario may not align with the scope of work and cost estimates planned to date. Aspects may include connection to the north leg and downtown, operational parameters, right of way needs, and contracting strategy.
- Uncertainty of environmental severity and/or extents that was not foreseen through the preliminary site investigation and that may impact the budget and schedule for the project.
- Development of TOD adjacent to freight railway corridors is at risk due to the potential restrictions imposed from The City's review of land use policies and risk mitigation requirements for developments in proximity to heavy rail corridors. An increase in awareness of hazardous goods movements has raised a number of concerns across Canada. Municipalities are reviewing the implications of this potential risk to development.

REASON(S) FOR RECOMMENDATION(S):

The alignment and station location recommendations on the southeast leg represent the balance of efficient and reliable transit with land use planning. The proposed plan aligns with strategy, is supported by many stakeholders, and maximizes the return on transit investment. Recommendations were reached after broad base consultation and multiple option consideration. Continued stakeholder support for the Green Line LRT will be based on the certainty of the alignment and station locations.

ATTACHMENT(S)

1. The Green Line Southeast - Where We Are and Where We're Going
2. Multiple Account Evaluation Summary Table
3. Letters of Support