#### EXECUTIVE SUMMARY

RouteAhead Rapid Transit Corridors are a series of Bus Rapid Transit (BRT) projects stretching over 70 km across all four quadrants of the City. An update report (TT2016-0335) on four of the BRT projects: North Crosstown, South Crosstown, 17 Avenue SE and Southwest BRT (SW BRT) was presented at the April 20, 2016 Transportation and Transit (T&T) Committee meeting. This report is a follow-up report to TT2016-0335.

At the April 20, 2016 committee meeting, over 50 members of the public addressed the Committee and in doing so raised 62 questions specifically regarding the SW BRT. The April report was referred back to Administration to prepare responses to the 62 questions that were recorded at the meeting. Administration has provided a response to each question (Attachment 2) and further information in response to TT2016-0335 Recommendations 1 to 4. Administration recommends conducting further communication activities to connect with the public and stakeholders to ensure their questions have been responded to and input thoughtfully considered as The City completes the plan for the SW BRT corridor.

Administration reviewed the scheduling and phasing for the SW BRT in conjunction with the proposed ATCO Gas and ATCO Pipelines schedule. The ATCO work impacts construction on 14 Street SW from Glenmore Trail to 90 Avenue SW. Other areas of the project are not impacted by the ATCO work. As a result, it is proposed that the project will be split into two phases with the north part of the project from downtown to Glenmore Trail/14 Street SW being completed as Phase 1. Phase 2 will be the portion of the SW BRT from Glenmore Trail/14 Street SW to Woodbine.

#### ADMINISTRATION RECOMMENDATIONS

That the SPC on Transportation and Transit recommends that Council:

- 1. Receive this report for information;
- 2. Direct Administration to communicate responses to the 62 questions (Attachment 2) with the public and stakeholders;
- 3. Direct Administration to continue to work with the Mayor and the area Councillors on a detailed plan and budget that responds to travel demand while seeking to minimize impacts to key stakeholders and the travelling public, and to proceed with the implementation of the SW BRT project in a staged manner consistent with Option 1 as outlined in this report;
- 4. Direct Administration to continue working closely with ATCO on the development of an efficient staging plan, in conjunction with the BRT phasing plan, for construction on the 14 Street SW corridor which maximizes mobility and minimizes disruption to the surrounding communities, while ensuring construction is completed in a cost effective and timely manner;
- 5. Direct Administration that Program 566 is not to exceed the previously approved Council budget of \$208 million. Within the approved Program 566 budget, Administration can redistribute the funding between the North Crosstown, South Crosstown, 17 Avenue SE and Southwest BRT projects to effectively deliver a BRT network for Calgarians.
- 6. Direct Administration to report back with recommendations to Council through the

Priorities and Finance Committee with a progress report no later than 2016 December 31 with:

- a) Changes to the City's capital budgeting process, including but not limited to consideration of Class 1-5 cost estimating process;
- b) Criteria used to rank capital projects;
- c) Criteria for determining the appropriate contingencies for projects; and
- d) The Council approval process in relation to cost estimates, contingencies, budgets and scope changes;
- 7. Direct SPC on Transportation and Transit to forward report TT2016-0578 to the 2016 July 25 Regular Meeting of Council as an item of Urgent Business.

#### **RECOMMENDATION OF THE SPC ON TRANSPORTATION AND TRANSIT,** DATED 2016 JULY 20:

That Council:

- 1. Receive this report for information;
- 2. Direct Administration to communicate responses to the 62 questions (Attachment 2) with the public and stakeholders;
- 3. Direct Administration to continue to work with the:
  - a) Mayor and the area Councillors on a detailed plan and budget that responds to travel demand while seeking to minimize impacts to key stakeholders and the travelling public; and
  - b) to proceed with the implementation of the SW BRT project in a staged manner consistent with Option 1 as outlined in this report.
- 4. Direct Administration to continue working closely with ATCO on the development of an efficient staging plan, in conjunction with the BRT phasing plan, for construction on the 14 Street SW corridor which maximizes mobility and minimizes disruption to the surrounding communities, while ensuring construction is completed in a cost effective and timely manner;
- 5. Direct Administration that Program 566 is not to exceed the previously approved Council budget of \$208 million. Within the approved Program 566 budget, Administration can redistribute the funding between the North Crosstown, South Crosstown, 17 Avenue SE and Southwest Bus Rapid Transit projects with a consistent scope to these projects to effectively deliver a BRT network for Calgarians.
- Direct Administration to report back with recommendations to Council through the Priorities and Finance Committee with a progress report no later than 2016 December 31 with:

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## ROUTEAHEAD RAPID TRANSIT CORRIDORS UPDATE AND RESPONSE TO PUBLIC QUESTIONS ON THE SW BRT

- a) Changes to the City's capital budgeting process, including but not limited to consideration of Class 1-5 cost estimating process;
- b) Criteria used to rank capital projects;
- c) Criteria for determining the appropriate contingencies for projects; and
- d) The Council approval process in relation to cost estimates, contingencies, budgets and scope changes;
- 8. Direct Administration to undertake a facilitated citizen involvement approach for the proposed Southwest Bus Rapid Transit project south of Glenmore Trail, as soon as possible, to include but not limited to:
  - a) Utilizing the latest online tools;
  - b) Workshops; and
  - c) Citizen opportunities to provide input on project components (stations and sound attenuation), community impacts, risks (safety) and phasing.

**Oppositions to the Recommendations:** 

Recommendation 3 (a) Opposed: P. Demong

Recommendation 3 (b) Opposed: D. Colley-Urquhart, A. Chabot

Recommendation 5 Opposed: D. Colley-Urquhart, A. Chabot

Recommendation 8 Opposed: G-C. Carra, D. Farrell, E. Woolley

Excerpts from the Minutes of the Regular Meeting of the SPC on Transportation and Transit, held 2016 July 20:

"7. Direct SPC on Transportation and Transit to forward report TT2016-0578 to the 2016 July 25 Regular Meeting of Council as an item of Urgent Business.

#### CARRIED"

"AMENDMENT TO THE AMENDMENT, Moved by Councillor Chabot, that Councillor Colley-Urquhart's proposed amendment be amended by adding the words "south of Glenmore Trail" following the words "Southwest Bus Rapid Transit project".

#### ROLL CALL VOTE

For:

A. Chabot, D. Colley-Urquhart, P. Demong, R. Jones, B. Pincott, S. Keating

Against: G-C. Carra, D. Farrell, E. Woolley

#### CARRIED

AS AMENDED, AMENDMENT, Moved by Councillor Colley-Urquhart, that the Recommendations contained in Report TT2016-0578, as amended, be further amended by adding a Recommendation 8, as follows:

- \*8. Direct Administration to undertake a facilitated citizen involvement approach for the proposed Southwest Bus Rapid Transit project **south of Glenmore Trail**, as soon as possible, to include but not limited to:
  - a) Utilizing the latest online tools;
  - b) Workshops; and
  - c) Citizen opportunities to provide input on project components (stations and sound attenuation), community impacts, risks (safety) and phasing."

Opposed: G-C. Carra, E. Woolley

#### CARRIED

AMENDMENT, Moved by Councillor Carra, that Recommendation 5 contained in Report TT2016-0578, be amended by adding the words "with a consistent scope to these projects" following the words "Southwest Bus Rapid Transit project".

Opposed: D. Colley-Urquhart, A. Chabot

#### CARRIED"

#### **PREVIOUS COUNCIL DIRECTION / POLICY**

At the April 20, 2016 Transportation and Transit Committee Meeting, Report TT2016-0335 was referred with the following recommendations:

REFER, Moved by Councillor Chabot, that Report TT2016-0335, and Councillor Pincott's proposed amendments, as follows, be referred to the Administration to return to Council no later than 2016 July, through the SPC on Transportation and Transit, with a report which also includes a written response to the 60 questions received through citizen presentations at today's meeting:

"APPROVE, Moved by Councillor Pincott, that the Administration Recommendations 1, 2, 3 and 4 contained in Report TT2016-0335, be approved, after amendment, as follows: That the SPC on Transportation and Transit recommends that Council:

- 1. Receive this report TT2016-0335 and attachments along with written submissions for information.
- Direct Administration to continue to work with the Mayor and the area Councillors on a detailed budget and the development of a Phasing Plan for the SW Bus Rapid Transit (BRT) / Transitway project;
- 3. Direct Administration to continue working closely with ATCO on the development of an efficient staging plan, in conjunction with the phasing plan, for construction on along 14 Street SW corridor which maximizes mobility and minimizes disruption to the surrounding communities, while ensuring construction is completed in a cost effective and timely manner;
- 4. Direct Administration to report back with recommendations to Council through the Priorities and Finance Committee with a progress report no later than 2016 December 31 with:
  - a) changes to the City's capital budgeting process, including but not limited to consideration of Class 1-5 cost estimating process;
  - b) criteria used to rank capital projects;
  - c) criteria for determining the appropriate contingencies for projects; and
  - d) the Council approval process in relation to cost estimates, contingencies, budgets and scope changes".

### BACKGROUND

RouteAhead Rapid Transit Corridors are a series of Bus Rapid Transit (BRT) projects stretching over 70 km across all four quadrants of the City. An update report (TT2016-0335) on four of the BRT projects: North Crosstown, South Crosstown, 17 Avenue SE and Southwest BRT (SW BRT) was completed in 2016 April 20. A full copy of the April report, attachments and written public submissions is included as Attachment 1.

At the 2016 April 20 Transportation and Transit Committee Meeting, over 50 members of the public addressed the Committee and in doing so raised 62 questions that warranted a detailed response. A discussion of the recommendations of the April report was postponed so that Administration could prepare responses for Council to the 62 questions. Administration has provided a response to each of the questions which is included in this report as Attachment 2.

Transportation Report to SPC on Transportation and Transit 2016 July 20

### ROUTEAHEAD RAPID TRANSIT CORRIDORS UPDATE AND RESPONSE TO PUBLIC QUESTIONS ON THE SW BRT

#### INVESTIGATION: ALTERNATIVES AND ANALYSIS

Since the 2016 April 20 Committee meeting, Calgary Transit and Transportation Infrastructure have worked to address the issues raised by stakeholders. In many cases this entailed providing additional information, and in some cases revised plans were developed to address concerns raised.

The project schedule originally presented in Investing in Mobility was identified as 2015-2022. In the fall of 2015 the provincial government announced dedicated transit only funding, allowing the project to proceed. In response to the economic downturn, and with an approved project scope and budget, Administration worked to advance the design of the project with the objective of creating construction jobs starting in 2016. Working with stakeholders, it was subsequently determined that there was additional work required within the corridor, most notably by ATCO along 14 Street SW, that would require the project schedule's to be realigned.

#### ATCO Schedule and Design

Administration has been working closely with ATCO to coordinate the SW BRT project with ATCO's planned Urban Pipeline Replacement (UPR) Program work along 14 Street SW. Both Administration and ATCO are committed to ensuring public safety while minimizing the impact to local residents and motorists.

As part of ATCO's UPR Program, the existing high-pressure natural gas pipeline on 14 Street SW will be abandoned and replaced with a new pipeline in the Southwest Calgary Ring Road Transportation Utility Corridor (TUC).

The ATCO work within the 14 Street SW corridor is currently in the design phase, and is anticipated to involve the following components:

- Abandoning the existing high-pressure natural gas pipeline currently located in the 14 Street SW Right of Way.
- Installing a new high-pressure natural gas pipeline in the Southwest Calgary Ring Road TUC.
- Installing a new distribution (low-pressure) feeder line to be located under the existing 14 Street SW median.
- Removing an abandoned oil line located under the existing 14 Street SW.

There have been concerns raised regarding the condition, integrity, corrosion and pressure changes of the existing high-pressure pipeline. These concerns will be eliminated by its abandonment. The new low-pressure distribution feeder line will exceed current construction standards and employ the latest technologies to ensure safety. Low pressure distribution gas lines are commonly located under roadways and can be designed to safely withstand anticipated vehicle weights and traffic volumes.

Attachment 3 and Attachment 4 illustrate the location of the existing high pressure gas pipeline and the planned low pressure gas feeder line in the 14 Street SW right-of-way. The drawings

also serve to illustrate the function that public roadways serve to carry a variety of utilities and make efficient use of public lands.

ATCO is proposing to complete the work as follows:

- 2017 Begin construction of the new high-pressure gas pipeline in the Southwest Calgary Ring Road TUC and complete by the end of 2018.
- 2017 2018 Begin construction of a new distribution (low-pressure) natural gas line on 14 Street SW in a new line assignment approximately under the existing median of 14 Street. This activity will likely be completed using an open cut excavation to allow for the removal of an existing abandoned oil pipeline at the same time. As construction is expected to occur during off-peak periods, impacts to traffic will be minimal. A boring machine (trenchless methods) will be investigated to construct the line under the intersection at Heritage Drive to eliminate disruptions to traffic through the intersection.
  - 2018 Decommissioning and abandonment of the existing high pressure gas pipeline in 14 Street SW will be completed.

#### Phasing of BRT Work

Administration has reviewed its scheduling and phasing for the SW BRT based on the latest plans and schedules from ATCO and Alberta Transportation. The ATCO work will need to be coordinated with and completed prior to the SW BRT construction on 14 Street SW from Glenmore Trail to 90 Avenue SW. Other areas of the SW BRT project are not impacted by the ATCO work.

Since the 2016 April 20 report, Alberta Transportation has progressed with moving toward the start of construction on the Southwest Calgary Ring Road for a planned opening to traffic for the section between Glenmore Trail and Fish Creek Blvd SW in late 2020.

As presented at the 2016 April 20 Committee meeting, Administration is recommending that the SW BRT project be split into two phases:

- Phase 1 North segment of the project from downtown to Glenmore Trail/14 Street SW
- Phase 2 South segment of the project from Glenmore Trail/14 Street SW to Woodbine

Proceeding with the north segment first responds to the existing demand which is strongest to and from Mount Royal University. It also allows for ATCO to decommission the high pressure gas pipeline and avoid unnecessary expenditures to protect it.

Over the past three months, development activity adjacent to the SW BRT route has seen approval of a new land use bylaw to accommodate expansion of existing facilities for mixed use at the Jewish Community Centre (Land Use Bylaw 115D2016). Site servicing of the Currie Barracks redevelopment is underway and the new interchange on Crowchild Trail at Flanders Approval(s): Logan, Malcolm concurs with this report. Author: Kai, Howard Transportation Report to SPC on Transportation and Transit 2016 July 20

### ROUTEAHEAD RAPID TRANSIT CORRIDORS UPDATE AND RESPONSE TO PUBLIC QUESTIONS ON THE SW BRT

Avenue SW is progressing for opening to traffic by late 2016. Other redevelopments along the BRT route known to be in preliminary planning have not been submitted to the City for land use amendments.

Timing of construction of Phase 2 of the SW BRT involves several factors. The projected construction cost of Phase 2 based on the current proposed plan exceeds the preliminary cost estimate from 2010. Design elements such as the grade separating of the bus way from 90<sup>th</sup> Avenue SW address the need to maintain good traffic mobility in the area, however they represent significant cost to the project. Administration is committed to delivering the four projects in the BRT program 566 within Council's approved budget of \$208 million. Administration is seeking approval to redistribute the project budgets within the program funding to implement the BRT network for Calgarians.

There are two options for staging the work in Phase 2 of the SW BRT project:

<u>Option 1: Construction of Phase 2 following ATCO work on 14 Street SW</u> Coordinate construction with ATCO so that The City's construction starts immediately after completion of ATCO's installation along 14 Street SW.

Once ATCO has installed the new (low pressure) natural gas distribution line, the area above the new natural gas distribution line could be paved and would serve as the first detour stage for the SW BRT. This would allow the current 6 lanes of traffic on 14 Street SW to remain available during the Phase 2 SW BRT construction, minimizing impacts to Calgarians traveling along 14 Street SW (see Attachment 2, page 35). This optimizes the use of infrastructure and provides the most efficient method of delivering the project.

This Option would have Phase 2 construction starting in 2018-2019 with the SW BRT operational by 2020 and completion of construction in 2021, one year ahead of the original 2022 operations date identified in Investing in Mobility.

<u>Option 2: Delivery starting in 2021 after the Southwest Ring Road opens</u> Construction would be coordinated to commence in 2021, following the opening of the Southwest Calgary Ring Road. This would provide an alternative route to 14 Street SW for some residents living in south Calgary.

The staging would require a three year break in construction activity along 14 Street SW from the completion of the ATCO construction work. Due to the three year break, the opportunities for construction coordination would not be realized, as the median on 14 Street SW would need to be restored to the existing conditions following the construction work of ATCO, and then reconstructed in 2021-2022 to accommodate the SW BRT Project.

#### Infrastructure Calgary Update

Administration was requested to review the budgeting and capital planning process as noted in Recommendation 4. Infrastructure Calgary has begun reviewing the request with Corporate

Analytics and Innovation, the Accelerating Capital for Economic Resilience (ACER) team and Corporate Project Management Framework Steering Committee in preparation for a report back no later than 2016 December.

#### Stakeholder Engagement, Research and Communication

Since the 2016 April 20 T&T Committee meeting, Administration has conducted follow-up meetings with the area Councillors and the Mayor's office to provide updates on the status of the project. Additional meetings have been held with Rockyview Hospital to review the 75 Avenue SW intersection, the BRT design, and the site access to the Rockyview Hospital. On 2016 June 24 a group of residents met with a representative of the Mayor's office along with project team members to discuss the Rockyview Hospital and Eagle Ridge area of the SW BRT project.

Ward 13 Councillor Colley-Urquhart held an open house to discuss the project on 2016 June 8 and a citizens group in Pump Hill – Bayview – Palliser held a public meeting on 2016 June 28. Administration was not asked to attend either meeting but has been advised of many of the issues raised.

On 2016 March 23, the engagement moved to an online format and continued until 2016 May 20. The project team collected feedback, answered questions, provided information, and clarified misinformation through the online portal and social media correspondence. A summary of the feedback received through the City's Online Engage Portal for all four projects comprising the BRT Program has been posted to the City web page, and an Executive Summary of the report is included in Attachment 5.

The project team listened to and reviewed all feedback provided by the public and project stakeholders in 2015 and 2016. Throughout engagement, the project team re-evaluated elements of the project that had caused concern for members of the public, and in several cases were able to incorporate the public's input into updated project plans. A summary of all the engagement for the SW BRT project is shown in Attachment 6.

Administration is recommending that the project team reconnect with the public to provide updated information about the project plans, how those plans have been modified in response to feedback from the public and the current status of The City's plans. The communications actions will include but not necessarily be limited to community association meetings, pop-up information kiosks, direct mail drops, and social media advertising.

As part of that engagement work, the project team would also continue to meet with stakeholders whose property is directly adjacent to the SW BRT project to fine-tune station locations, ensure effective integration of station features with nearby destinations, clarify noise wall requirements and construction plans and coordinate urban realm and landscaping improvements.

Closer to opening date of the BRT, Calgary Transit will conduct customer engagement to refine the transit service plans for new service in the corridors, including connections to other local transit routes.

#### **Strategic Alignment**

Considerations remain unchanged form TT2016-0335.

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

Considerations remain unchanged form TT2016-0335.

#### Financial Capacity Current and Future Operating Budget:

There are no operating cost implications associated with the recommendations of this report.

As outlined in RouteAhead Update (TT2016-0193), the draft 2017–2018 operating budget includes a request for additional operating funding requirements associated with accelerating capital projects. Timing of the operating funds for BRT are dependent on completion of the projects. Costs will include the vehicle service as well as station cleaning, maintenance and power/communications.

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

There is no request to amend the approved budget for Program 566 associated with this report.

The cost estimate of \$57.0-65.6 million (Class 3 estimate) for SW BRT has remained the same as provided in report TT2016-0335. The cost estimate is being displayed as a range estimate. The low end of the range includes all currently known costs including: construction estimates, utility relocations, noise mitigation triggered by the project, engineering and design, temporary traffic control, and the required public art allocation. The high end of the range includes all of the items listed in the low end of the range along with a contingency for unknown risks.

With the recommended phasing plan the breakdown in costs for Option 1 is:

Phase 1	Downtown to Glenmore Trail/14 Street SW	\$ 8.5M – 9.8M
Phase 2	Glenmore Trail/14 Street SW to Woodbine	\$ 48.5M – 55.8M

Following direction from Council and final community and stakeholder engagement, the SW BRT project detailed design for Phase 2 will recommence and the cost estimate will continue to be refined. This refinement is a normal process as additional project details are finalized and risks are quantified.

#### **Risk Assessment**

The primary risks were discussed in detail in report TT2016-0335 (see Attachment 1).

There are several risks associated with the two options for the delivery of Phase 2 of the SW BRT project:

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# ROUTEAHEAD RAPID TRANSIT CORRIDORS UPDATE AND RESPONSE TO PUBLIC QUESTIONS ON THE SW BRT

- 1. Option 1: Construction of Phase 2 following ATCO work on 14 Street SW
  - a) Limited north/south roadway alternatives for communities south of Glenmore Trail to utilize as a detour route.
  - b) Extended sustained period of construction activity along 14 Street SW.
- 2. Option 2: Delivery starting in 2021 after the Southwest Ring Road opens
  - a) Assumes that the Southwest Calgary Ring Road between Fish Creek Blvd and Glenmore Trail will be complete by the end of 2020.
  - b) The current economic downturn is providing a favorable environment for pricing of municipal infrastructure investments. The longer construction is pushed out on the Phase 2, the higher degree of uncertainty regarding construction costs. This could have implications on the overall project budget.
  - c) Having the Phase 2 SW BRT project in place provides additional travel options for residents in SW Calgary, and also has the potential to assist in alleviating downstream traffic impacts of the South West Calgary Ring Road, which have been reviewed in detail through previous Council reports (C2014-0949 and TT2015-0828).
  - d) Requires duplication of work within the right-of-way
  - e) Delays the ability for the South Crosstown BRT to utilize the transitway infrastructure. Impacts Calgarians connecting between the Blue line LRT and the Red line LRT.

Based on an assessment of the above risks, Administration is recommending Option 1, for the following reasons:

- Reduced risk of construction cost inflation;
- Reduced capital construction cost;
- Matches the existing number of lanes on 14 Street SW north of 90 Avenue during construction, providing a 6 lane detour for 14 Street SW;
- Provides a critical connection in the BRT network at an earlier stage, benefiting not only the SW BRT but also the South Cross Town BRT.

### **REASONS FOR RECOMMENDATIONS:**

Administration recommends that Committee receive for information the original report TT2016-0335 on progress towards overall implementation of the Council approved BRT program.

#### Transportation Report to SPC on Transportation and Transit 2016 July 20

## ROUTEAHEAD RAPID TRANSIT CORRIDORS UPDATE AND RESPONSE TO PUBLIC QUESTIONS ON THE SW BRT

This report provides detailed responses to the 62 questions recorded during the 2016 April 20. The responses to the various issues have been thoughtfully published in a format that while robust in scale is easy to read and presents facts for the public to consider.

Issues raised by the public and key stakeholders have been incorporated into a revised design for the SW BRT, completed in order to respond to the issues recorded. These designs will continue to be refined as we progress towards construction.

The SW BRT continues to be aligned with The City's long range integrated land use and mobility plans. Completion of the plan at this time makes sense as it makes best use of the extensive public feedback received both for and against the project. The timing also aligns with the overall design work underway on the three other BRT corridors.

Administration recommends phasing construction of the SW BRT. Phase 1 will respond to the existing ridership and development activity. Phase 2 timing would be carefully considered and analyzed through close coordination with the ATCO work in the 14 Street SW corridor, evaluation of anticipated construction costs and opportunities to stage the construction in a manner to minimize the impact to the travelling public, and in consideration of the SW Ring Road timing. Based on the analysis to date, Administration is recommending that work on the SW BRT project proceed following ATCO's work. This does not preclude the option to delay the project start further into the future. However, further delay to the process at this time could result in lost opportunities to deliver the project in the most efficient manner possible, in coordination with other planned work in the 14 Street SW corridor.

Transportation continues to actively participate in the corporate initiative to update the process by which capital projects are planned, project costs are estimated and presented to City Council for approval.

#### **ATTACHMENTS**

- 1. RouteAhead Rapid Transit Corridor Update Presentation and Written Public Submissions
- 2. Southwest BRT Response to Public Questions
- 3. ATCO Gas Plan of Existing and Proposed Routing
- 4. SW BRT 14 Street SW Existing and Proposed Underground Utilities
- 5. Engage Online Portal Executive Summary
- 6. Public Engagement Summary for SW BRT since Project Initiation