

## 1 STREET S.E. CYCLE TRACK

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### EXECUTIVE SUMMARY

Administration is seeking support to proceed with the second cycle track element of the downtown cycling network. A two-way cycle track on 1 Street S.E. will increase mobility through the downtown core by opening up a north-south route for two-way bicycle access to offices, homes, shops, cultural destinations and parks with long-term benefits for people walking, taking transit or driving.

### ADMINISTRATION RECOMMENDATIONS

That the SPC on Transportation and Transit recommend that Council:

1. Direct Administration to incorporate the 1 Street S.E. cycle track into the Centre City Cycle Track Network plan.
2. Direct Administration to finalize work on the Centre City Cycle Route Network and report back to the SPC on Transportation and Transit at the meeting of 2014 April 16.

### PREVIOUS COUNCIL DIRECTION / POLICY

At the 2011 July 4 meeting of Council, a Motion Arising was made: "Moved by Alderman G-C. Carra, Seconded by Alderman A. Chabot, that with respect to Report LPT2011-63, while broadly supportive of the Cycling Strategy, that Council direct the Administration to review Appendix A of Attachment 7 to determine, through engaging with the Cycle Community, an updated and East-West-North-South separated Cycle Route Network through the Centre City, as part of the implementation plan for the Bike Strategy."

At the 2014 January 13 meeting of Council, Mayor Nenshi requested an opportunity for Council to review and approve the 2014 Cycle Track Construction Plan. Administration agreed to bring details about the proposed 1 Street SE cycle track to SPC on Transportation and Transit for a detailed conversation before construction begins.

The Cycling Strategy (LPT2011-63) sets a target of 30km of cycle tracks by 2020. Today the 7 St SW cycle track, the first in the Centre City, contributes about 800m toward the 30km target.

The Calgary Transportation Plan (2009) places priority on transportation choice, with direction to "make walking and cycling more convenient through the provision of additional or enhanced infrastructure..."

The Bicycle Policy and Needs Report (LPT2008-36) has a goal "to design and operate a city in which cycling is a meaningful transportation choice for social and economic interaction. The goal can be achieved by providing well-designed and operated, direct, convenient, safe and comfortable bicycle routes and facilities."

The Centre City Plan (2007) directs the provision of "a safe, convenient and well-connected bicycle network within the Centre City."

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### BACKGROUND

A cycle track is a bike lane protected from moving cars by a physical barrier. It minimizes potential conflicts between people who walk, bicycle, and drive. In some cases, cycle tracks can be bike lanes that are raised from the roadway. Cycle tracks are effective because:

- They make it safer to travel by bike and thus more attractive to those who might not otherwise ride a bike.
- Cycling provides another transportation choice in Calgary's busiest area, which has already seen strong demand for transportation options.
- Newer office buildings have bike facilities such as secure parking and shower/locker rooms to serve thousands of employees arriving by bicycle.
- Roads become safer for everyone when there's dedicated space for people who walk, ride a bicycle, take transit, or drive.

Further information can be found in Attachment 1, Why Cycle Tracks in the Centre City?

An east-west/north-south network of cycle tracks in the Centre City will connect the highly used Elbow River and Bow River pathways to and through the Centre City to the many destinations not directly accessible by the pathways, including office buildings, commercial districts, arts and recreation facilities, and residential communities. The cycle track network will improve transportation choices for Calgarians and make roadways safer for people who walk, bike, take transit or drive in the Centre City. Attachment 2, Centre City Cycle Track Network, provides more background on the network.

The Centre City Cycle Track Network will be presented to the SPC on Transportation and Transit at the 2014 April 16 meeting. The 1 Street S.E. cycle track will form part of the recommended network, providing a key north-south route through the east part of downtown and connectivity across the CP tracks. If approved as part of the network in April, construction can begin on the 1 Street S.E. cycle track and it can open for use from the Bow River pathway to the Elbow River pathway in spring 2015.

### INVESTIGATION: ALTERNATIVES AND ANALYSIS

#### From corridors to cycle track route alignments

The goal of the cycle network is to provide a safe and convenient network of cycling route into and around the downtown core to enable riders to get within 2 blocks of any destination. Like many drivers or transit riders, the final portion of a cycling trip may be completed as a pedestrian.

A number of corridors, or groups of two or three streets, were identified for the Centre City study area based on the idea that a single cycle track within the corridor would be able to appropriately serve the demand for that specific area. The network planning process then identified a number of potential cycle track alignments that would be appropriate. These alignments were based on current best practices in North American bicycle planning and design, understanding of the local context, and feedback received during the ongoing engagement. Examples of alignments include: a two-way cycle track on one side of a one-way

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road, two one-way cycle tracks on a two-way road (one cycle track on either side), a cycle track in the same direction of travel as traffic on a one-way road, and a cycle track in the opposite direction of travel as a one-way road.

Various cycle track alignments (up to five for some corridors) were then evaluated based on a number of technical criteria including connectivity to destinations within the study area and to the external bicycle network, existing and future bicycle demand, impact on other modes, impacts to on-street parking, conflicts with driveways and transit, and cost and constructability. Using this analysis, further observations of the area were conducted and a final alignment was chosen for each corridor.

In the eastern part of downtown, 1,170 bicycles per day travel the 1 Street S.W. / Macleod Trail / 1 Street S. E. corridor. Each street was evaluated as a potential cycle track alignment. While the 1 Street S.W. alignment is centrally located, cycle tracks on this street would require the removal of parking space and a challenging design in a constrained area between 12 Avenue and 14 Avenue. The Macleod Trail alignment has fewer driveways, fewer destinations and a larger impact on traffic flow north of 12 Avenue. The 1 Street S.E. alignment connects through the core to the Bow River and Elbow River pathways, serves an area of many destinations, and results in less impact to traffic and on-street parking, 1 Street S.E. transitions to three lanes south of the Elbow River. The repurposing of a travel lane to a cycle track on 1 Street S.E. from the Bow River to the Elbow River will result in three travel lanes, which will match southbound Macleod Trail.

### About the 1 Street S.E. cycle track

The cycle track would be created by repurposing one of the four lanes of 1 Street S.E. for exclusive use by bicycles. Bicycle riders would travel on a two-way cycle track on the east side of 1 Street S.E., separated from moving or parked vehicles by a concrete median. The east or left side from a driver's perspective is preferred because:

- It results in minimum interaction with buses and transit stops on the right side
- It allows northbound bicycling to the right of southbound vehicles and bicycles, where southbound traffic is most likely to expect northbound movement
- Motorists are more likely to comply with left-turn signals. This will reduce conflicts with pedestrians and bicycles.

Details about the design can be found in Attachment 3, 1 Street S.E. Concept Design.

The following changes are planned as part of the 1 Street S.E. cycle track:

- New traffic signal at Riverfront Avenue
- New bicycle traffic signals for northbound and southbound travel at 14 intersections
- Left-turn arrows for 1 Street S.E. traffic at 5 Avenue, 9 Avenue and 12 Avenue
- Slight adjustments to traffic signal timing to benefit general traffic and bicycle traffic on 1 Street S.E. while minimizing the impact on busy east-west avenues

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- An estimated 10% reduction of on-street parking spaces (at the detailed design stage, efforts will be made to add more parking spaces in the area).

According to computer traffic simulations calibrated by field observations, the travel time for vehicular traffic on 1 Street St S.E. with the proposed cycle track will be slightly longer. Forecast weekday driving travel time changes between 4 Avenue and 18 Avenue are:

- Morning peak period - from 4 minutes today to 30 to 60 seconds shorter
- Noon peak period - from 3.5 minutes today to about the same travel time
- Afternoon peak period - from 4.5 minutes today to 30 to 60 seconds longer

For further details, refer to Attachment 4, 1 Street S.E. Background Information.

### Stakeholder Engagement, Research and Communication

Calgarians have had opportunities to learn about cycling in the Centre City and provide input through workshops, presentations, open houses public displays, and online feedback forms. The project team has hosted 54 open houses, information sessions and one-on-one meetings since spring 2013. Over 1,300 feedback forms have been collected in the same timeframe.

Of the 750 people who responded to feedback forms in spring and summer 2013, 87% support a cycle track network. Respondents identified cycle track connections, safety and comfort and access as the highest-priority needs.

Of the 560 people who responded to a feedback form in fall 2013, 67% support 1 Street S.E. as the next cycle track. More than half of those respondents do not primarily travel by bicycle. For respondents, top criteria for designing a route include bicycling safety, connections to other bicycle facilities, traffic movement, access to businesses, shops and restaurants, and pedestrian crossings.

Administration invited stakeholder groups with an interest in Centre City bicycling to the Centre City Bicycle Projects Committee in 2012. Business groups, community associations and bicycle advocacy groups on the committee contribute input to the Centre City bicycle plans, including 1 Street SE. Committee member input has been incorporated into the plans where possible. Meetings and communication with stakeholder groups are ongoing.

The project team has been in contact with property owners, managers and businesses along 1 Street S.E. by email, meeting one-on-one about the proposed cycle track design, and providing project information and open house notices by email and in person. Stakeholder feedback has been recorded and incorporated into the design where possible. Meetings are ongoing.

The key messages, engagement timeline, stakeholder list, and tactics can be found in Attachment 5, the 1 Street S.E. Engagement and Communication Summary.

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### Strategic Alignment

Council approved documents, including The Calgary Transportation Plan (2009). The Centre City Plan (2007) and the Cycling Strategy (2011) identify the importance of, and call for greater investment in cycling. Surveys of Calgarians show a majority (59%) want to cycle more, and a large majority (87%) support investing in more cycling facilities.

Today, 2.5% of weekday morning trips entering downtown are made by bicycle (equivalent to about 5,500 people riding bicycles), with just a few painted bike lanes and one cycle track on 7 Street S.W. All other modes of travel (walking, transit and auto) have significant dedicated space downtown. Cycle tracks provide the vital dedicated space that is needed to significantly increase the number of people riding bicycles downtown during peak periods and at all times of the day and week.

Within the Centre City, decisions have been made to limit the supply of parking in commercial, office and residential developments. This strategic direction assumes decreased auto ownership and usage. Travel by walk, public transit and cycling must be provided for. The cycling network to meet this growing need has yet to be provided.

The operating cost to taxpayers for cycle tracks is relatively low in comparison to public transit or roadways. Encouraging cycle commuting to and from the core has significant cost benefits to The City as well as lower noise and emissions impacts. It also supports a more compact downtown as bikes consume a fraction of the parking space that a car requires.

The Transportation Department has established that by 2020 a target of 4% of weekday morning trips to downtown will be made by bicycle. In 2013 2.5% of such trips were made by bicycle, 8.5% on foot, 50.1% by transit and 32.1% by car.

The completion of the 1 Street SE cycle track and the cycle track network is the critical infrastructure needed to increase the comfort level for more people to try cycling and achieve the 4% target by 2020.

### Social, Environmental, Economic (External)

#### Social

Cycling is a mode of transportation available to people between eight and 80 years old. The cost of cycling is low relative to auto and transit travel. Improved cycling infrastructure improves the mobility, education and employment opportunities for almost all Calgarians. People who ride a bicycle for everyday transportation enjoy better health, save money, support local businesses and interact socially with many people daily.

#### Environmental

When more people ride bicycles for transportation in lieu of auto or transit travel, greenhouse gas emissions are reduced, less energy is consumed, less traffic noise is generated, traffic impacts in residential communities are reduced and more land is retained.

#### Economic

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Increasing bicycle access in Calgary, especially in our vibrant Centre City, has become an important feature that helps attract globally mobile and talented people to our city. More talented people result in a more competitive work force, and strengthen the local economy in general. The combination of a Centre City cycle track network and Calgary's world class river pathway system connecting the many Centre City businesses and tourist attractions, will encourage tourist to venture farther as they explore Calgary, resulting in an economic boost to more city businesses. More cycling increases student and employee overall wellness and productivity due to physical activity while lowering ever-increasing health care costs and personal transportation costs.

### **Financial Capacity**

#### **Current and Future Operating Budget:**

The Cycling Strategy and approved budget provide additional funding for maintenance of bikeways, including snow and ice control and line marking. The practice of removing snow from downtown streets will continue on 1 Street S.E. with the conversion of a lane of travel into two bike lanes.

In April, Administration will identify maintenance protocols and maintenance costs for the recommended cycle track network. An increase in Roads Operating Budget Program 132 will be brought forward as part of Action Plan 2015-2018.

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

The preliminary estimated cost for the 1 Street S.E. cycle track is \$2.8 million, which will be funded from the previously approved Cycling Strategy capital program. The 2015-2024 capital budget recommended by the Investing in Mobility plan (in development) would also be sufficient to complete the project.

### **Risk Assessment**

The Centre City has 295km of traffic lanes. The 1 Street S.E. cycle track, at 1.7km in length, would affect 0.6% of the traffic network in the Centre City. The proposed cycle track network, at 9.5km in length, would affect 3% of the traffic network and have a minimal impact on traffic circulation while creating a new network for low-impact transportation.

Thousands of Calgarians already choose to bicycle without dedicated routes in the Centre City. If cycle tracks are not installed, it will leave bicycle riders to ride in mixed traffic, ride in an ad-hoc manner amongst pedestrians on the sidewalk, take longer routes, or give up bicycling out of concern for comfort, safety and directness. Increasing the appeal of cycling for transportation can improve traffic safety, reduce obesity rates and decrease the burden on an already strained health care system.

Many more people who are interested but concerned about riding a bicycle with traffic, half of those surveyed in a 2011 random telephone survey, will most likely not try riding downtown at all because of its busy multi-lane roadways.

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Reduced parking supply in inner city residential development approvals will increase demand for walk, cycle and transit infrastructure. The cycle network is the least developed of these modes.

Cycle tracks are an effective way to reduce congestion by providing a travel option. If bicycle access to the core is not improved through the installation of cycle tracks, Calgarians will miss an opportunity to benefit from the efficient use of existing transportation infrastructure. Calgary will also miss an opportunity to increase its attractiveness as a place to locate a head office, set up a business, live, visit or invest.

Cycle tracks will have little effect on transit service as the 1 Street S.E. cycle track will be on the left side of the road from the motorist's perspective while transit vehicles will typically travel in the curb side right lane.

The number of curb side parking stalls along 1 Street S.E. may decrease by up to 10%, from 77 to approximately 72. However, opportunities to add additional stalls on intersecting streets will be explored.

Traffic will be more predictable because bicycles will have travel space separate from vehicles. The travel time from 4 Avenue to 18 Avenue during the afternoon peak period, which today takes about 4.5 minutes, will be 30 to 60 seconds longer.

### **REASONS FOR RECOMMENDATIONS:**

The recommended cycle track network will be presented to the SPC on Transportation and Transit at the April 19 meeting. The 1 Street S.E. cycle track will form part of the recommended network, providing a key north-south route through the east part of downtown and connectivity across the CP tracks. If approved as part of the network in April, construction can begin on the 1 Street S.E. cycle track and it can open for use from the Bow River pathway to the Elbow River pathway in spring 2015.

### **ATTACHMENTS:**

1. Why Cycle Tracks in the Centre City?
2. Centre City Cycle Track Network
3. 1 Street S.E. Concept Design
4. 1 Street S.E. Background Information
5. 1 Street S.E. Engagement and Communication Summary