

## Attachment # 3

### **Uptown Multiple Account Evaluation Memo**

DATE: November 4, 2021  
TO: Michael Leong  
CC: Brent McMurtry, Barry Fan, Mike Anderson  
FROM: Brian Patterson, Sarah Tremblay  
FILE: 1274.0047.01  
SUBJECT: City of New Westminster – Uptown Multiple Account Evaluation

## 1.0 INTRODUCTION

The City of New Westminster has launched the design process for the Uptown Active Transportation Improvements. This includes two projects that together will reimagine some of the City's streets to enable people of all ages and abilities to move comfortably and safely on foot, bicycle, and other non-motorized wheels in Uptown.

- The **Rotary Crosstown Greenway (RCG) Upgrades** will improve safety, comfort, and accessibility on the section of the existing Rotary Crosstown Greenway along Seventh Avenue, between Eighth Street and Fifth Street. These upgrades will replace the interim bike lanes installed on Seventh Avenue in 2017.
- The **New Westminster Secondary School (NWSS) Cycling Connector** project will link the Rotary Crosstown Greenway on Seventh Avenue to the east entrance of the new school on Sixth Street, enabling students, staff and visitors to conveniently and safely cycle, wheel or walk to the school from the east and south.

The City recently completed the first round of engagement for both of these projects, which focused on presenting three *design* options for the RCG Upgrades and three *routing* options for the NWSS Cycling Connector, as summarized below.

### RCG Upgrades Project Design Options

#### Option 1

Protected bicycle lanes with parking on both sides of the street.



#### Option 2

Protected bicycle lanes with parking on one side of the street and additional street enhancements such as street trees, landscaping, and pedestrian amenities.

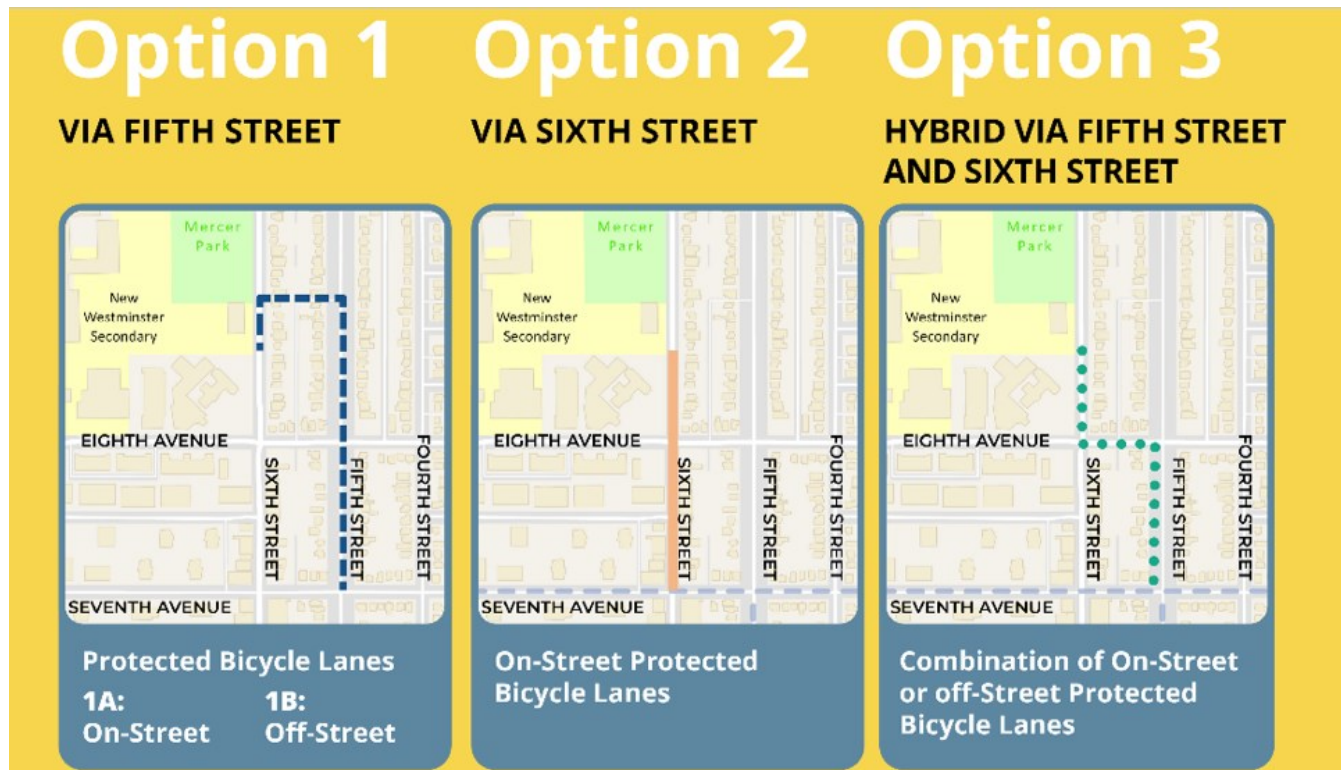


#### Option 3

Shared local street bikeway with street closure at Seventh Avenue and Sixth Street to reduce traffic volumes and speeds, plus protected bicycle lanes from Sixth Street to Fifth Street.



## NWSS Cycling Connector Project Routing Options



Based on input from the first round of public engagement and a technical assessment of each option, a comprehensive evaluation framework was developed to identify the benefits and impacts of each option as it relates to a wide range of criteria. The intent of the evaluation framework is to assist the decision-making process by identifying the relative trade-offs between each option, and select the option that meets the most project objectives and provides the greatest benefit to the City of New Westminster’s residents.

Based on this evaluation, a preferred option for each project has been identified and will be recommended to New Westminster staff and Sustainable Transportation Task Force for endorsement. Following the confirmation of a preferred option for each project, the project team will advance a preferred conceptual design for each project.

## 2.0 EVALUATION FRAMEWORK

A comprehensive Multiple Account Evaluation (MAE) was developed for each option for each project. Criteria were developed based on the project goals and objectives outlined in the Project Charter, as well as additional criteria that were thought to be relevant. Each of the criteria in the evaluation framework were assessed on a scale of 1 to 5 both quantitatively and qualitatively, with the intent to highlight key trade-offs, benefits and impacts, relative to the other options. The scoring mechanism used was a range of colours that denote an outcome (very good, good, neutral / satisfactory, poor or worst) as shown in the image below. This assessment is not intended to quantify the results of the evaluation, but is instead intended to allow decision-makers to visually reach an understanding of the key trade-offs to inform a decision. The options were not assigned a score so as to avoid any aggregation of criteria and maintain key nuances.

## Evaluation Framework Legend

Very Good
Good
Neutral / Satisfactory
Poor
Worst

## 2.1 EVALUATION CRITERIA

The evaluation criteria were selected based on the project's goals, as well as the City's Seven Bold Steps and broader societal objectives. The evaluation criteria for the framework are presented below.

- **Objective 1: Crosstown Cycling Route for All Ages and Abilities**
  - **Cycling Network Connectivity:** Establishes continuous connections to key destinations and for longer commutes for cyclists. Provides connection and accessibility to existing facilities and network.
  - **Cycling Safety and Comfort:** Extent of separation between people riding bicycles and motor vehicle traffic, based on facility type and buffer space. For lower speed and lower volume roadways, comfort may not require separation but measures to ensure lower traffic speed and volume is maintained.
- **Objective 2: Improved Walking Experience and Accessibility**
  - **Pedestrian Safety and Comfort:** Impact on pedestrian environment, including crossings, sidewalk conditions/width, buffer space, and conflict zones.
  - **Accessibility:** Impact on mobility and ease of use for those with mobility impairments.
- **Objective 3: Enhanced Public Realm and Tree Canopy Cover**
  - **Public Realm and Streetscape:** Impact on the overall streetscape and urban realm through the implementation of street furniture, lighting and interesting places, as well as integration with other land use planning initiatives.
  - **Tree Canopy Cover:** Implementation of new street trees to enhance the tree canopy cover
- **Objective 4: Maintain Transit Service and Operations**
  - **Impacts to Transit Operations:** Impact on reliable transit operations for buses and comfortable access opportunities for transit customers.
- **Objective 5: Accommodated Emergency Access**
  - **Impacts to Emergency Access:** Impact to emergency services vehicles resulting from roadway or traffic operation changes.

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- **Objective 6: Reduce Impact of Motor Vehicles and Through Traffic in Neighbourhoods**
  - **Impacts to Motor Vehicles:** Impact on traffic operations relative to the intended road network classification and function of the street, including congestion/delays and greenhouse gas emissions from such delays or rerouting.
  - **Neighbourhood Transportation Impacts:** Impacts to neighbouring streets from increased traffic volumes and/or parking due to rerouting and neighbourhood circulation.
- **Objective 7: Limit Impacts to People Who Rely on On-Street Parking and Loading**
  - **On-street Parking and Loading:** Impact to on-street parking and loading.
- **Objective 8: Seek Opportunities to Incorporate Green Infrastructure**
  - **Green Infrastructure Opportunities:** Opportunities to implement green infrastructure such as stormwater infiltration trenches, soil cells, structural soil, and rain gardens in curb extensions.
- **Objective 9: Minimize Risk and Consider Implementation and Maintenance**
  - **Ease of Implementation:** Extent of implementation challenges, such as property impacts, utility impacts, legislative changes, curb work, etc.
  - **Utility Conflicts:** Impact to existing shallow and deep utilities, and associated accessories.
  - **Maintenance and Operations:** Potential maintenance challenges related to street sweeping and snow removal.
  - **Ability to Deliver Within Budget:** The ability to provide all desired elements within the available capital budget.
- **Objective 10: Consider Results of Public and Stakeholder Engagement**
  - **Survey Results:** Overall acceptability and support based on public and stakeholder engagement based on survey results as well as public and stakeholder input. It should be noted that the results are not considered statistically significant or representative and only represent the feedback received by those who participated in the engagement process.
- **Objective 11: Consider Other Outcomes and Alignment with the City's Seven Bold Steps**
  - **Equity:** Changes which benefit one group at the expense of another.
  - **Public Health:** Ability to promote active transportation mode share and reduce the potential for collisions.
  - **Climate Emergency:** Ability to address the City of New Westminster's Seven Bold Steps.

## 3.0 EVALUATION RESULTS

The results of the MAE are provided below for each project.



3.1

ROTARY CROSSTOWN GREENWAY MULTIPLE ACCOUNT EVALUATION

CRITERIA	OPTION 1	OPTION 2	OPTION 3
OBJECTIVE 1: CROSSTOWN CYCLING ROUTE FOR ALL AGES AND ABILITIES			
Cycling Network Connectivity	+ Direct connection to/from existing cycling facilities in Moody Park and eastern continuation of the Rotary Crosstown Greenway.	+ Direct connection to/from existing cycling facilities in Moody Park and eastern continuation of the Rotary Crosstown Greenway.	+ Direct connection to/from existing cycling facilities in Moody Park and eastern continuation of the Rotary Crosstown Greenway.
Cycling Safety and Comfort	<ul style="list-style-type: none"> <li>+ Protected bicycle lanes provide physical separation between all users, and uni-directional facilities improve safety by following motor vehicle traffic operations.</li> <li>- Cyclists will travel more comfortably than the current configuration with physical separation between parked vehicles and traffic; however, the bicycle facility is at a constrained width that does not allow passing or side-by-side operations.</li> <li>- Visibility is limited due to on-street parking on both sides of the street.</li> <li>- Parking conflicts with cyclists on both sides of the street.</li> </ul>	<ul style="list-style-type: none"> <li>+ Protected bicycle lanes provide physical separation between all users, and uni-directional facilities improve safety by following motor vehicle traffic operations.</li> <li>+ Cyclists will travel more comfortably than the current configuration or Option 1 with physical separation between parked vehicles and traffic and wider cycling facilities than Option 1, thereby allowing passing and more comfortable cycling.</li> <li>- Visibility is somewhat limited due to on-street parking on one side of the street.</li> <li>+ Parking conflicts with cyclists only on one side of the street.</li> </ul>	<ul style="list-style-type: none"> <li>+ The street closure at Seventh Avenue and Sixth Street would reduce traffic volumes somewhat by restricting through traffic; however, traffic volumes may still be higher than desired thresholds for a AAA facility due to traffic volumes from high density along the corridor.</li> <li>- Cyclists must share the road with vehicles, which still creates potential for conflict and a less comfortable environment for both.</li> <li>- Visibility is limited due to on-street parking on both sides of the street.</li> </ul>
OBJECTIVE 2: IMPROVED WALKING EXPERIENCE AND ACCESSIBILITY			
Pedestrian Safety and Comfort	<ul style="list-style-type: none"> <li>+ Improved pedestrian crossings.</li> <li>+ Additional physical separation between pedestrians and vehicle + traffic.</li> <li>- No opportunities for widened sidewalks.</li> <li>- Visibility is limited due to on-street parking on both sides of the street.</li> </ul>	<ul style="list-style-type: none"> <li>+ Improved pedestrian crossings.</li> <li>+ Additional physical separation and buffer space between pedestrians and vehicle traffic.</li> <li>+ Opportunity to widen sidewalks where feasible.</li> <li>- Visibility is somewhat limited due to on-street parking on one side of the street.</li> </ul>	<ul style="list-style-type: none"> <li>+ Improved pedestrian crossings, including significant improvements at the Seventh Avenue and Sixth Street intersection with the closure of the west leg of the intersection.</li> <li>+ Additional physical separation and buffer space between pedestrians and vehicle traffic may be possible, but is highly dependent on budget.</li> <li>+ Opportunity to widen sidewalks where feasible.</li> <li>- Visibility is limited due to on-street parking on both sides of the street.</li> </ul>
Accessibility	<ul style="list-style-type: none"> <li>+ Improved pedestrian crossings and additional buffer space between pedestrians and vehicle traffic.</li> <li>■ Parking accessibility from sidewalk can be challenging when bicycle lane is not at sidewalk grade. Sidewalk level bicycle lane may be more accessible for people with mobility devices, but may not be detectable for people with vision loss. This impact can be further addressed through subsequent phases of design.</li> <li>+ Parking on both sides of the street improves accessibility, including vehicle drivers and occupants who require accessible parking.</li> </ul>	<ul style="list-style-type: none"> <li>+ Improved pedestrian crossings and additional buffer space between pedestrians and vehicle traffic.</li> <li>■ Parking accessibility from sidewalk can be challenging when bicycle lane is not at sidewalk grade. Sidewalk level bicycle lane may be more accessible for people with mobility devices, but may not be detectable for people with vision loss. This impact can be further addressed through subsequent phases of design.</li> <li>- Parking only on one side of the street addresses accessibility, including vehicle drivers and occupants who require accessible parking.</li> </ul>	<ul style="list-style-type: none"> <li>+ Improved pedestrian crossings and additional buffer space with landscaping and street trees between pedestrians and vehicle traffic may be possible, but is highly dependent on budget</li> <li>+ Improved pedestrian crossing at Seventh Avenue and Sixth Street significantly improves accessibility.</li> <li>+ Depending on landscape treatment, parking accessibility to the sidewalk can be maintained</li> <li>+ Parking on both sides of the street improves accessibility, including vehicle drivers and occupants who require accessible parking.</li> </ul>
OBJECTIVE 3: ENHANCED PUBLIC REALM AND TREE CANOPY COVER			
Public Realm and Streetscape	<ul style="list-style-type: none"> <li>- Minimal opportunity to provide minimal new landscaping through potential curb extensions.</li> </ul>	<ul style="list-style-type: none"> <li>+ New landscaping provided on both sides of the street, acting as a buffer between pedestrians and cyclists from parked and moving vehicles.</li> <li>+ New landscaping provides opportunity for shrub and flower plantings that provide habitat for pollinator species.</li> </ul>	<ul style="list-style-type: none"> <li>+ New landscaping provided on both sides of the street, acting as a buffer between pedestrians and cyclists from parked and moving vehicles may be possible, but is highly dependent on budget</li> <li>+ A wider boulevard adjacent to the sidewalk (and without a bisecting bicycle lane) allows for more opportunities for parklets and boulevard rooms, especially if curb bump outs into parking are used</li> </ul>
Tree Canopy Cover	<ul style="list-style-type: none"> <li>- There would not be enough space to include additional street trees.</li> </ul>	<ul style="list-style-type: none"> <li>+ 1.4 m wide north boulevard may provide enough soil volume to plant small street trees that do not grow to conflicting heights with overhead utilities.</li> <li>+ 2.0 m wide south boulevard could support small street trees without additional soil volume or medium to large street trees with the addition of soil cells to achieve required minimum soil volumes.</li> </ul>	<ul style="list-style-type: none"> <li>+ 2.2 m wide north boulevard may provide enough soil volume to plant small street trees that do not grow to conflicting heights with overhead utilities.</li> <li>+ 2.1 m wide south boulevard could support small street trees without additional soil volume or medium to large street trees with the addition of soil cells to achieve required minimum soil volumes.</li> <li>+ 2.1 m wide south boulevard could support medium to large street trees without the addition of soil cells if bump outs into parking spaces are used.</li> </ul>

OBJECTIVE 4: MAINTAIN TRANSIT SERVICE AND OPERATIONS			
Impacts to Transit Operations	There are no transit operations on this corridor.	There are no transit operations on this corridor.	There are no transit operations on this corridor.
OPJECTIVE 5: ACCOMMODATE EMERGENCY ACCESS			
Impacts to Emergency Access	<ul style="list-style-type: none"><li>+ There are no impacts to emergency access.</li><li>- 5.4 m drive aisle width is below desired width; however, this reflects existing conditions.</li></ul>	<ul style="list-style-type: none"><li>+ There are no impacts to emergency access.</li><li>+ Drive aisle width increased to 5.6 m.</li></ul>	<ul style="list-style-type: none"><li>- Significant traffic calming and diversion required which may impact emergency services. Design of street closure can ensure emergency vehicles can be accommodated.</li><li>+ Drive aisle width increased to 5.6 m.</li></ul>
OBJECTIVE 6: REDUCE IMPACT OF MOTOR VEHICLES AND THROUGH TRAFFIC IN NEIGHBOURHOOD			
Impacts to Motor Vehicles	<ul style="list-style-type: none"><li>+ There are no changes to motor vehicle access and circulation.</li><li>- 5.4 m drive aisle width is below desired width and may limit two-way circulation without one vehicle having to wait for the other; however, this reflects existing conditions.</li></ul>	<ul style="list-style-type: none"><li>+ There are no changes to motor vehicle access and circulation.</li><li>+ Drive aisle width increased to 5.6 m.</li></ul>	<ul style="list-style-type: none"><li>- Motor vehicle access is restricted with the street closure at Seventh Avenue and Sixth Street; while this may be a positive for residents along the corridor, it was noted as a significant concern for business access.</li><li>+ Drive aisle width increased to 5.6 m.</li></ul>
Neighbourhood Transportation Impacts	<ul style="list-style-type: none"><li>+ There are no impacts to neighbourhood transportation.</li></ul>	<ul style="list-style-type: none"><li>+ There are no impacts to neighbourhood transportation due to vehicle access.</li><li>- Reduction of on-street parking may result in additional parking demands on adjacent streets and increased circulation to find parking.</li></ul>	<ul style="list-style-type: none"><li>+ Street closure at Seventh Avenue and Sixth Street and potential street narrowing can reduce traffic volumes and speeds, which can improve safety and liveability for residents on Seventh Avenue.</li><li>- Due to traffic calming and diversion, there is likely more pressure and traffic directed to Hamilton Street and Princess Street, as well as more people using north-south laneway west of Sixth Street.</li></ul>
OBJECTIVE 7: LIMIT IMPACTS TO PEOPLE WHO RELY ON ON-STREET PARKING AND LOADING			
On-street Parking and Loading	<ul style="list-style-type: none"><li>+ There are limited impacts to on-street parking; although on-street parking is maintained on both side of the street, some parking may be impacted due to visibility.</li><li>+ There is no impact to loading zones.</li></ul>	<ul style="list-style-type: none"><li>- Parking removed on one side of the street.</li><li>- Loading zones removed on one side of the street.</li></ul>	<ul style="list-style-type: none"><li>+ There would be no impacts to on-street parking.</li><li>+ There is no impact to loading zones.</li></ul>
OBJECTIVE 8: SEEK OPPORTUNITIES TO INCORPORATE GREEN INFRASTRUCTURE			
Green Infrastructure Opportunities	<ul style="list-style-type: none"><li>- There is no space in median for subsurface GI facility. Subsurface facility likely constrained by adjacent sanitary sewer.</li></ul>	<ul style="list-style-type: none"><li>+ There is an opportunity for bioswale, raingarden, or tree well structures, with the wider eastbound median being more feasible.</li><li>+ GI on either side would be limited by depth of existing underground utilities within medians.</li></ul>	<ul style="list-style-type: none"><li>+ There is an opportunity for bioswale, raingarden, or tree well structures. Both sides present wide enough boulevard space for linear GI facility. If street is narrowed to provide landscaping opportunities, which is highly dependent on budget.</li><li>+ GI on either side would be limited by depth of existing underground utilities within medians.</li></ul>
OBJECTIVE 9: MINIMIZE RISK AND CONSIDER IMPLEMENTATION AND MAINTENANCE			
Ease of Implementation	<ul style="list-style-type: none"><li>+ Easiest facility to implement.</li><li>- If bicycle lanes are raised, new catch basins would be required.</li></ul>	<ul style="list-style-type: none"><li>- Full reconstruction required on the south side of the street.</li><li>- North side of the street limited to boulevard construction depending on whether bicycle lane is raised. .</li></ul>	<ul style="list-style-type: none"><li>- Most challenging facility to implement.</li><li>- Full reconstruction required on both sides of the street and on the west leg of the intersection at Sixth Street.</li></ul>
Utility Conflicts	<ul style="list-style-type: none"><li>- Existing hydro pole conflicts along north side, proposed buffer would be in close proximity to underground utilities (combined sewer, watermain, Telus) in 500 block.</li></ul>	<ul style="list-style-type: none"><li>- Existing hydro pole conflicts along north side, proposed landscaped buffer would be over top underground utilities (combined sewer, watermain, Telus) in 500 block.</li></ul>	<ul style="list-style-type: none"><li>- Proposed landscaped boulevard would be over top underground utilities (watermain, Telus) in 500 block.</li></ul>
Maintenance & Operations	<ul style="list-style-type: none"><li>- Protected bicycle lanes require additional snow removal and street sweeping.</li><li>- Narrow protected bike lanes may make maintenance more challenging, if facility is not raised to sidewalk level.</li></ul>	<ul style="list-style-type: none"><li>- Protected bicycle lanes require additional snow removal and street sweeping.</li><li>+ Wider bicycle lanes will accommodate maintenance equipment but may still be challenging if not raised to sidewalk level..</li></ul>	<ul style="list-style-type: none"><li>+ Easiest maintenance and operations without protected bicycle lanes.</li><li>- New plaza at street closure at Seventh Avenue and Sixth Street will require maintenance.</li></ul>
Ability to Deliver Within Budget	<ul style="list-style-type: none"><li>+ Easiest</li></ul>	<ul style="list-style-type: none"><li>- Some elements may be challenging to fit within budget.</li></ul>	<ul style="list-style-type: none"><li>- Many elements may be challenging to fit within budget.</li></ul>

OBJECTIVE 10: CONSIDER RESULTS OF PUBLIC AND STAKEHOLDER ENGAGEMENT			
Survey Results	+ 49% in support + 31% selected as preferred design option	+ 55% in support + 46% selected as preferred design option	- 32% in support - 23% selected as preferred design option
OBJECTIVE 11: CONSIDER OTHER OUTCOMES AND ALIGNMENT WITH THE CITY’S SEVEN BOLD STEPS			
Equity	+ There are no changes at the expense of another group.	- Loss of parking/loading may affect seniors or persons with disabilities, although this is the most comfortable option for cycling, which provides equity for cyclists .	+ There are no changes at the expense of another group.
Public Health	+ Promotes a comfortable walking and cycling environment.	+ Minimizes potential for conflict with reduced parking + Promotes a comfortable walking and cycling environment + Increased street trees	+ Promotes a comfortable walking and cycling environment . + Increased street trees.
Climate Emergency	+ Car light community. + People-centred public realm.	+ Car light community. + Robust urban forest. + People-centred public realm.	+ Car light community. + Robust urban forest. + People-centred public realm.



### 3.2 NEW WESTMINSTER SECONDARY SCHOOL CYCLING CONNECTOR MULTIPLE ACCOUNT EVALUATION

CRITERIA	OPTION 1A	OPTION 1B	OPTION 2	OPTION 3
<b>OBJECTIVE 1: CROSSTOWN CYCLING ROUTE FOR ALL AGES AND ABILITIES</b>				
<b>Cycling Network Connectivity</b>	<ul style="list-style-type: none"> <li>- Least direct connection to New Westminster Secondary School from existing cycling facilities on Rotary Crosstown Greenway, as cyclists coming from the west will need to travel 'backwards.'</li> <li>- It is likely that many cyclists will not follow this alignment and will still take the most direct route.</li> </ul>	<ul style="list-style-type: none"> <li>- Least direct connection to New Westminster Secondary School from existing cycling facilities on Rotary Crosstown Greenway, as cyclists coming from the west will need to travel 'backwards.'</li> <li>- It is likely that many cyclists will not follow this alignment and will still take the most direct route.</li> </ul>	<ul style="list-style-type: none"> <li>+ Most direct connection to New Westminster Secondary School from existing cycling facilities on Rotary Crosstown Greenway.</li> </ul>	<ul style="list-style-type: none"> <li>- Less direct connection to New Westminster Secondary School from existing cycling facilities on Rotary Crosstown Greenway.</li> </ul>
<b>Cycling Safety and Comfort</b>	<ul style="list-style-type: none"> <li>+ Protected bicycle lanes provide physical separation between all users, and uni-directional facilities improve safety by following motor vehicle traffic operations.</li> <li>- The lane connection is very narrow, poorly light and is shared with motor vehicles and may not be comfortable for cyclists.</li> </ul>	<ul style="list-style-type: none"> <li>+ Protected bicycle lanes provide physical separation between all users, and uni-directional facilities improve safety by following motor vehicle traffic operations</li> <li>- The lane connection is very narrow, poorly light and is shared with motor vehicles and may not be comfortable for cyclists.</li> <li>- Bicycle facilities set back from roadway behind street trees may limit visibility and safety at intersections</li> </ul>	<ul style="list-style-type: none"> <li>+ Protected bicycle lanes provide physical separation between all users, and uni-directional facilities improve safety by following motor vehicle traffic operations</li> <li>- More noise and emissions due to traffic may make this less comfortable for cyclists.</li> </ul>	<ul style="list-style-type: none"> <li>+ Protected bicycle lanes provide physical separation between all users, and uni-directional facilities improve safety by following motor vehicle traffic operations</li> <li>- If bicycle facilities on Fifth Street are provided off-street, bicycle facilities set back from roadway behind street trees may limit visibility and safety at intersections</li> </ul>
<b>OBJECTIVE 2: IMPROVED WALKING EXPERIENCE AND ACCESSIBILITY</b>				
<b>Pedestrian Safety and Comfort</b>	<ul style="list-style-type: none"> <li>+ Improved pedestrian safety, crossings and additional buffer space between pedestrians and vehicle traffic.</li> <li>+ New traffic signal at Eighth Avenue and Fifth Street will improve pedestrian safety.</li> </ul>	<ul style="list-style-type: none"> <li>+ Improved pedestrian safety, crossings and additional buffer space between pedestrians and vehicle traffic.</li> <li>+ New traffic signal at Eighth Avenue and Fifth Street will improve pedestrian safety.</li> </ul>	<ul style="list-style-type: none"> <li>+ Improved pedestrian safety, crossings and additional buffer space between pedestrians and vehicle traffic.</li> <li>+ Intersection improvements at Eighth Avenue and Sixth Street will improve pedestrian safety.</li> </ul>	<ul style="list-style-type: none"> <li>+ Improved pedestrian safety, crossings and additional buffer space between pedestrians and vehicle traffic.</li> <li>+ New traffic signal at Eighth Avenue and Fifth Street will improve pedestrian safety.</li> </ul>
<b>Accessibility</b>	<ul style="list-style-type: none"> <li>+ Improved pedestrian crossings and additional buffer space between pedestrians and vehicle traffic.</li> </ul>	<ul style="list-style-type: none"> <li>+ Improved pedestrian crossings.</li> </ul>	<ul style="list-style-type: none"> <li>+ Improved pedestrian crossings and additional buffer space between pedestrians and vehicle traffic.</li> </ul>	<ul style="list-style-type: none"> <li>+ Improved pedestrian crossings and additional buffer space between pedestrians and vehicle traffic.</li> </ul>
<b>OBJECTIVE 3: ENHANCED PUBLIC REALM AND TREE CANOPY COVER</b>				
<b>Public Realm and Streetscape</b>	<ul style="list-style-type: none"> <li>+ There are no impacts to the public realm.</li> </ul>	<ul style="list-style-type: none"> <li>- Less green space available in landscaped boulevards.</li> </ul>	<ul style="list-style-type: none"> <li>+ There are no impacts to the public realm.</li> </ul>	<ul style="list-style-type: none"> <li>- Less green space available in landscaped boulevards if off-street bicycle lanes are selected on Fifth Street.</li> </ul>
<b>Tree Canopy Cover</b>	<ul style="list-style-type: none"> <li>+ There are no impacts to street trees.</li> <li>+ Additional street trees may be accommodated in the wide boulevard.</li> </ul>	<ul style="list-style-type: none"> <li>- Landscaping and street trees may be impacted</li> </ul>	<ul style="list-style-type: none"> <li>+ There are no impacts to street trees.</li> </ul>	<ul style="list-style-type: none"> <li>- Landscaping and street trees may be impacted.</li> </ul>
<b>OBJECTIVE 4: MAINTAIN TRANSIT SERVICE AND OPERATIONS</b>				
<b>Impacts to Transit Operations</b>	<ul style="list-style-type: none"> <li>+ There are no transit operations on this corridor.</li> <li>- New traffic control at Eighth Avenue and Fifth Street may have some</li> </ul>	<ul style="list-style-type: none"> <li>+ There are no transit operations on this corridor.</li> </ul>	<ul style="list-style-type: none"> <li>- Buses will have to stop in-lane and may have moderate impacts on transit speed and reliability.</li> </ul>	<ul style="list-style-type: none"> <li>- Buses will have to stop in-lane and may have significant impacts on transit speed and reliability.</li> <li>- TransLink and CMBC may be supportive of relocating eastbound bus stop on Eighth Avenue slightly further east to</li> </ul>

	impact on transit service on Eighth Avenue.	- New traffic control at Eighth Avenue and Fifth Street may have some impact on transit service on Eighth Avenue.	- TransLink and CMBC may not be supportive of relocating bus stops on Sixth Street - Design will need to consider impacts of Human Rights Tribunal ruling if floating bus stops are required.	the far side of the lane to minimize impact of buses stopping in-lane. - Design will need to consider impacts of Human Rights Tribunal ruling if floating bus stops are required.
<b>OBJECTIVE 5: ACCOMMODATE EMERGENCY ACCESS</b>				
Impacts to Emergency Access	+ There are no impacts to emergency access.	+ There are no impacts to emergency access.	+ There are no impacts to emergency access. - Reduced street space may result in emergency vehicles blocking transit / traffic	+ There are no impacts to emergency access. - Reduced street space may result in emergency vehicles blocking transit / traffic
<b>OBJECTIVE 6: REDUCE IMPACT OF MOTOR VEHICLES AND THROUGH TRAFFIC IN NEIGHBOURHOOD</b>				
Impacts to Motor Vehicles	+ There are no changes to motor vehicle access and circulation.	+ There are no changes to motor vehicle access and circulation.	- Transit vehicles stopping in lane with traffic will cause moderate delays.	- Transit vehicles stopping in lane with traffic will cause significant delays which are likely unacceptable.
Neighbourhood Transportation Impacts	+ There are no impacts to neighbourhood transportation.	+ There are no impacts to neighbourhood transportation.	- Due to increased delays on Sixth Street, there is likely more pressure and traffic directed to Fifth Street.	- Due to increased delays on Sixth Street and Eighth Avenue, there is likely more pressure and traffic directed to Fifth Street and Seventh Avenue.
<b>OBJECTIVE 7: LIMIT IMPACTS TO PEOPLE WHO RELY ON ON-STREET PARKING AND LOADING</b>				
On-street Parking and Loading	- On street non-metered parking removed from both sides of the street.	- Small parking loss along Sixth Street.	- On street parking removed from both sides of the street north of Eighth Avenue and one side of the street south of Eighth Avenue.	- Sixth Street: On street non-metered parking removed on one side of the street. - Eighth Avenue: Minimal on-street non-metered parking removed on one side of the street. - Fifth Street: Same considerations as Option 1.
<b>OBJECTIVE 8: SEEK OPPORTUNITIES TO INCORPORATE GREEN INFRASTRUCTURE</b>				
Green Infrastructure Opportunities	+ Opportunity for rain garden in wide boulevard for water quantity capture facility, depending on local infiltration rates. - No GI facility is recommended for water quality treatment in absence of dedicated storm sewer to connect to.	+ Opportunity for rain garden in boulevard (area not converted to bike lane) for water quantity capture facility, depending on local infiltration rates. - No GI facility is recommended for water quality treatment in absence of dedicated storm sewer to connect to. - Potential impacts to CNW GI design at Eighth Avenue and Fifth Street intersection.	+ Opportunity for rain garden water quality at intersections of Sixth Street/Hamilton Street and Sixth Street/Seventh Avenue to connect with dedicated storm sewers on Hamilton Street and Seventh Avenue. + Limited space elsewhere on Sixth Street for water quantity capture facility.	+ Opportunity on Fifth Street section for rain garden water quantity capture facility depending on local infiltration rates. + No GI facility is recommended for water quality treatment in absence of dedicated storm sewer to connect to.
<b>OBJECTIVE 9: MINIMIZE RISK AND CONSIDER IMPLEMENTATION AND MAINTENANCE</b>				
Ease of Implementation	+ Sufficient existing pavement width. - Connection to NWSS reliant on timing of housing development.	- Boulevard construction adds some complexity to weave around obstructions. - Connection to NWSS reliant on timing of housing development. - Requires coordination due to CNW GI design at Eighth Avenue and Fifth Street intersection.	- Reconstruction of the east side of the street north of Eighth Avenue required. - Raised protected bike lanes on the west side between Eighth Avenue and Seventh Avenue require drainage new catch basins.	+ Sufficient existing pavement width available with parking removal. + Opportunity to use low-cost treatments. + Opportunities to relocate transit stop on Sixth Street north of Eighth Avenue to reduce conflicts between people biking and riding transit.
Utility Conflicts	+ No major conflicts, bike lane may be over top existing watermain in 800 block.	- More utility conflicts to consider, including hydro poles and several below ground utilities within boulevard. - Requires coordination due to CNW GI design at Eighth Avenue and Fifth Street intersection.	- Some utility conflicts to consider, including several below ground utilities (combined sewers) in 700 block.	- More utility conflicts to consider, including additional underground utilities along Eight Ave (water, combined sewer).

Maintenance & Operations	<ul style="list-style-type: none"><li>- Protected bicycle lanes on street will require sweeping and snow removal.</li><li>- New signal at Fifth Street and Eighth Avenue will require ongoing maintenance.</li></ul>	<ul style="list-style-type: none"><li>- Off-street bicycle lanes will require sweeping and snow removal.</li><li>- New signal at Fifth Street and Eighth Avenue will require ongoing maintenance.</li></ul>	<ul style="list-style-type: none"><li>- Protected bicycle lanes on both sides of the street will require sweeping and snow removal.</li><li>- Bicycle lanes at road grade may be more challenging to maintain.</li></ul>	<ul style="list-style-type: none"><li>- Cycling facilities on Fifth Street, Sixth Street, and Eighth Avenue will require sweeping and snow removal.</li><li>- New signal at Fifth Street and Eighth Avenue will require ongoing maintenance.</li></ul>
Ability to Deliver Within Budget	<ul style="list-style-type: none"><li>+ Opportunity for low-cost treatments along the corridor.</li><li>- Significant cost for the new signal at Eighth Avenue</li></ul>	<ul style="list-style-type: none"><li>- Higher cost option as low-cost treatments are not possible with off-street pathway.</li><li>- Significant cost for the new signal at Eighth Avenue</li></ul>	<ul style="list-style-type: none"><li>+ Opportunity for low-cost treatments along the corridor.</li></ul>	<ul style="list-style-type: none"><li>+ Opportunity for low-cost treatments along the corridor.</li><li>- Significant cost for the new signal at Eighth Avenue</li></ul>
OBJECTIVE 10: CONSIDER RESULTS OF PUBLIC AND STAKEHOLDER ENGAGEMENT				
Survey Results	<ul style="list-style-type: none"><li>- 27% in support</li><li>- 12% selected as preferred design option</li></ul>	<ul style="list-style-type: none"><li>- 32% in support</li><li>- 24% selected as preferred design option</li></ul>	<ul style="list-style-type: none"><li>+ 51% in support</li><li>+ 47% selected as preferred design option</li></ul>	<ul style="list-style-type: none"><li>- 25% in support</li><li>- 16% selected as preferred design option</li></ul>
OBJECTIVE 11: CONSIDER OTHER OUTCOMES AND ALIGNMENT WITH THE CITY’S SEVEN BOLD STEPS				
Equity	<ul style="list-style-type: none"><li>- Residents on Fifth Street and the laneway between Fifth and Sixth Street are impacted the most.</li></ul>	<ul style="list-style-type: none"><li>- Residents on Fifth Street and the laneway between Fifth and Sixth Street are impacted the most.</li></ul>	<ul style="list-style-type: none"><li>- Businesses on Sixth Street are impacted the most.</li></ul>	<ul style="list-style-type: none"><li>- Residents on Fifth Street are impacted the most.</li></ul>
Public Health	<ul style="list-style-type: none"><li>+ Promotes a comfortable walking and cycling environment</li></ul>	<ul style="list-style-type: none"><li>+ Promotes a comfortable walking and cycling environment</li></ul>	<ul style="list-style-type: none"><li>+ Promotes a comfortable walking and cycling environment</li></ul>	<ul style="list-style-type: none"><li>+ Promotes a comfortable walking and cycling environment</li></ul>
Climate Emergency	<ul style="list-style-type: none"><li>+ Car-light community</li><li>+ People-centred public realm</li></ul>	<ul style="list-style-type: none"><li>+ Car-light community</li></ul>	<ul style="list-style-type: none"><li>+ Car-light community</li><li>+ People-centred public realm</li></ul>	<ul style="list-style-type: none"><li>+ Car-light community</li><li>+ People-centred public realm</li></ul>

## 4.0 RECOMMENDATIONS

### 4.1 ROTARY CROSSTOWN GREENWAY UPGRADES

Based on the MAE, the project team recommends **Option 2** as the preferred option to advance to conceptual design. While Options 2 and 3 have similar benefits in terms of improvements to the cycling experience, pedestrian experience, and public realm, Option 2 was preferred in particular because of significantly higher community support and significantly fewer implementation challenges. Option 1 was the least preferred as it had the fewest benefits relative to the existing bicycle facilities.

### 4.2 NEW WESTMINSTER SECONDARY SCHOOL CYCLING CONNECTOR

Based on the MAE, the project team recommends **Option 2 or Option 3** as the preferred options to advance to conceptual design. Option 1 was the least preferred and is not recommended to be advanced further, primarily due to poor cycling connectivity. Options 2 and 3 both have a number of benefits and impacts across several accounts, and these trade-offs need to be considered further. While Option 2 is the most direct route and has the greatest level of support, it has the most significant impacts on traffic and transit operations and may have the greatest impact to businesses. On the other hand, Option 3 is a less direct route and received the lowest level of community support, but would have fewer impacts on traffic operations and it is felt that the transit impacts could be mitigated by relocating the bus stop on Eighth Avenue further east.

Sincerely,

**URBAN SYSTEMS LTD.**

Brian Patterson, RPP, MCIP, PMP  
Senior Transportation Planner

Sarah Tremblay  
Transportation Planner

cc: Brent McMurtry, Barry Fan

/ST  
Enclosure

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