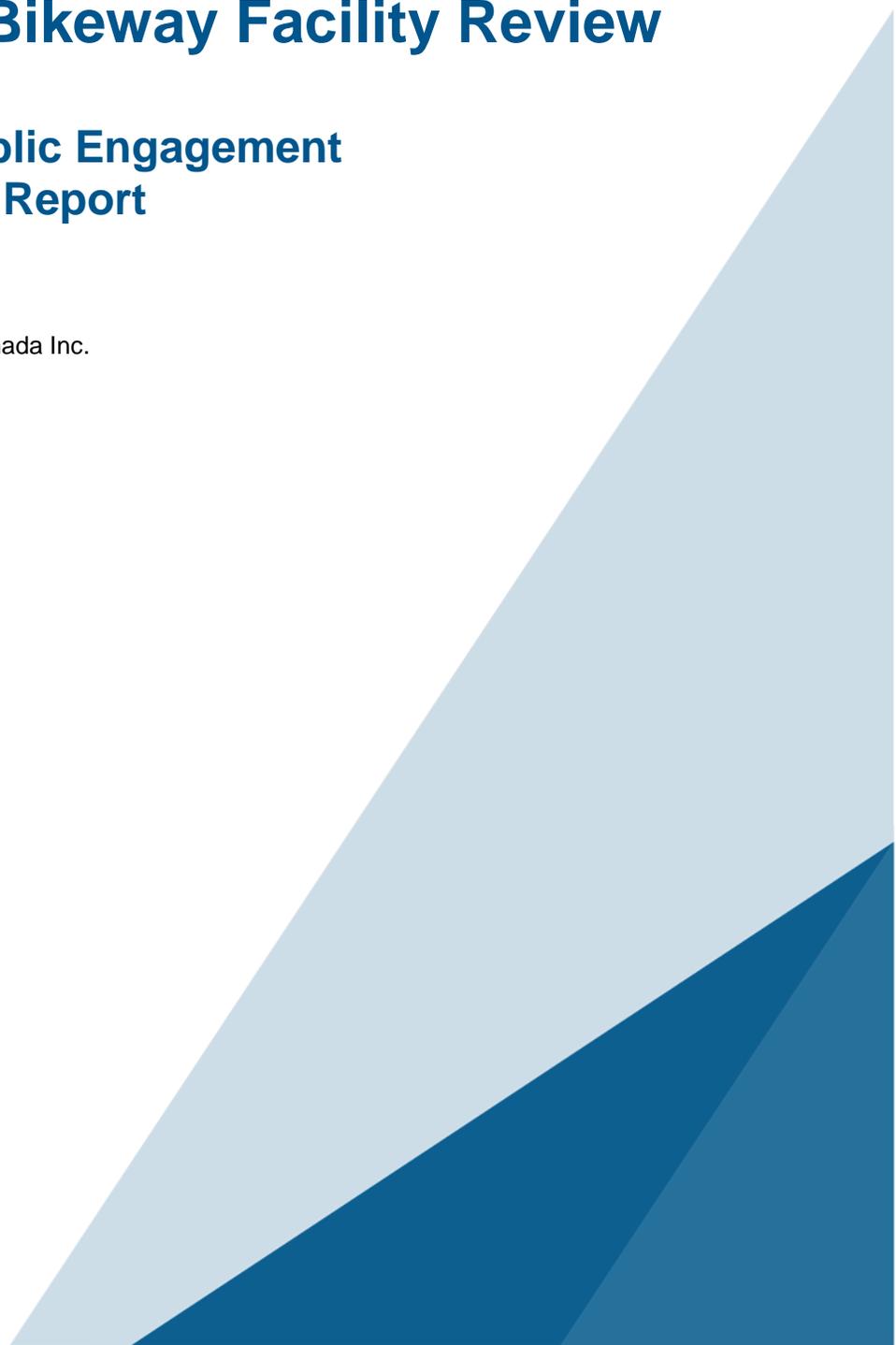


Downtown Bikeway Facility Review

Spring 2018 Public Engagement What We Heard Report

Report Prepared by: WSP Canada Inc.

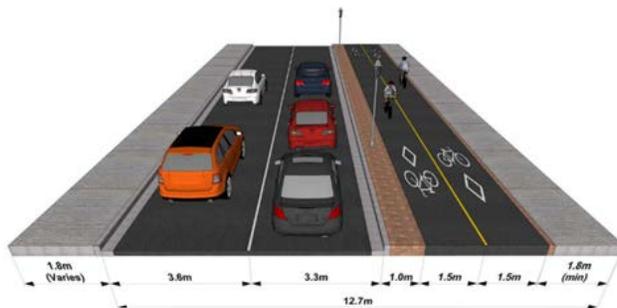


Introduction

Project Overview

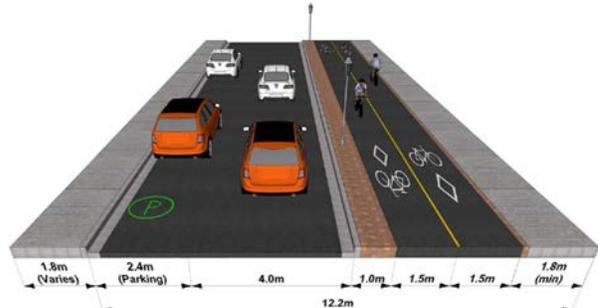
Halifax Regional Municipality (HRM) Staff are currently planning for improvements to the existing active transportation (AT) network that runs to and through the downtown core. To do this, HRM has explored four routing options for a protected bicycle facility through the downtown utilizing Hollis Street, George Street, Terminal Road, and Lower Water Street. These new bicycle facilities are intended for users of all ages and abilities (AAA) and will be tied into existing and future AT network projects, including the bicycle facilities planned for the redevelopment of the Cogswell interchange lands. The four functional design options are summarized below, with additional information about each option available at: www.shapeyourcityhalifax.ca/downtownbikeways.

OPTION A: Raised Bi-Directional Bike Lanes on Hollis Street (West Side)



Hollis Street looking southbound

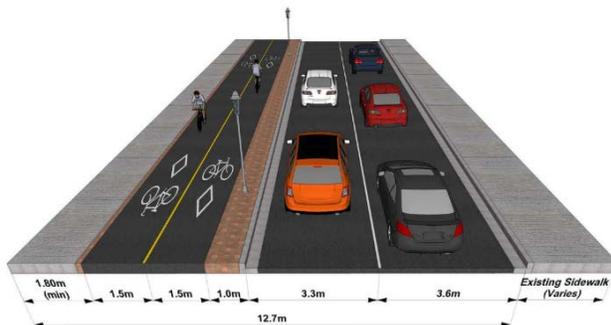
Duke Street to Sackville Street



Hollis Street looking southbound

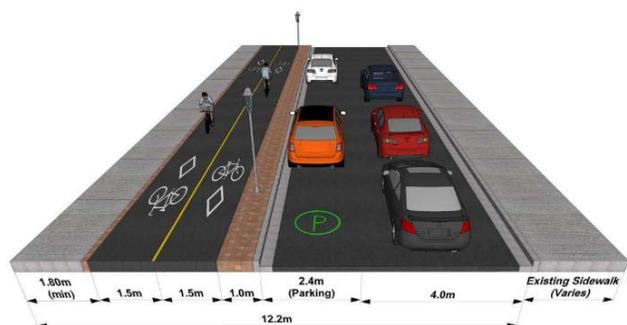
Sackville Street to Terminal Road

OPTION B: Raised Bi-Directional Bike Lanes on Hollis Street (East Side)



Hollis Street looking southbound

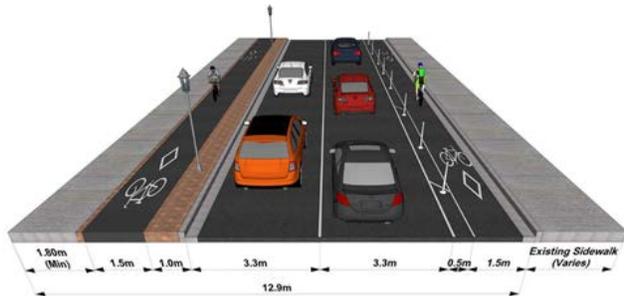
Duke Street to Sackville Street



Hollis Street looking southbound

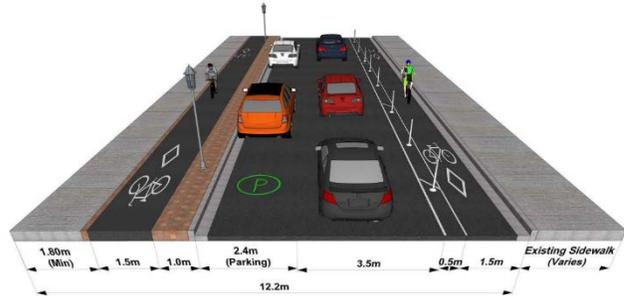
Sackville Street to Terminal Road

OPTION C: Hollis Street Southbound Bike Lane (West Side) with Raised Northbound Bike Lane on East Side



Hollis Street looking southbound

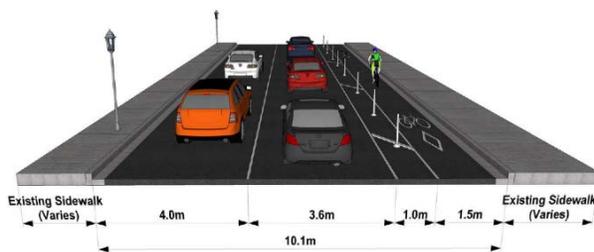
Duke Street to Sackville Street



Hollis Street looking southbound

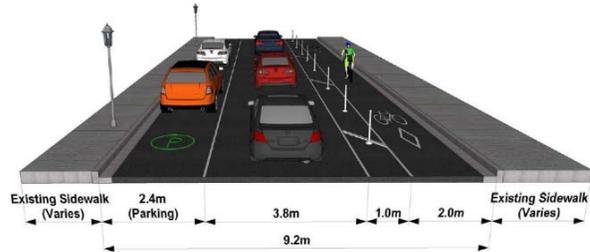
Sackville Street to Terminal Road

OPTION D: Uni-Directional Bike Lanes on Hollis Street and Lower Water Street



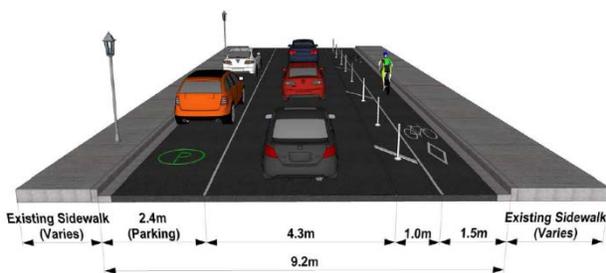
Hollis Street looking southbound

Duke Street to Sackville Street (Southbound)



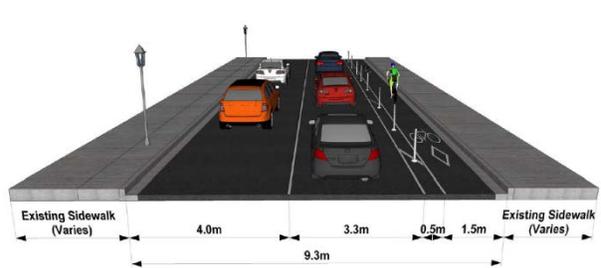
Hollis Street looking southbound

Sackville Street to Terminal Road (Southbound)



Lower Water St. looking northbound

Duke Street to Sackville Street (Northbound)



Lower Water St. looking northbound

Duke Street to Sackville Street (Northbound)

The four functional design options were presented to stakeholder groups via meetings and workshops. Members of the public had opportunities to review the functional designs on HRM's Shape Your City website, as well as through two public Open House sessions. This report provides a summary of what was heard during the consultation phases of the project.

PUBLIC ENGAGEMENT OVERVIEW

Two separate public open houses were held in downtown's Historic Properties on March 21, 2018 from 12:00 pm – 2:00 pm, and 6:00 pm – 8:00 pm. Information on the project and an online survey were also provided on the Shape Your City website from March 17 to April 15, 2018. Comments were also received by HRM staff through email. Overall, input was submitted by approximately 400 participants and representatives of organizations, including 341 people who responded to the online survey.

Overall, response to the project was positive. A high-level summary of what was heard at the public open houses has been presented below:

- *Safety for cyclists and pedestrians was highlighted as a priority.*
- *Although most participants who attended the open houses preferred Option B, (raised bi-directional bike lanes on the east side of Hollis Street), the preferred option from the online survey was Option D (uni-directional bike lanes on Hollis Street and Lower Water Street).*
- *The least preferred option for both open house attendees and online survey participants was Option C, (two uni-directional bike lanes on the east and west side of Hollis Street).*

Most of the comments received from the online survey were also positive and in support of the project. According to the online survey, 80% of participants were in support of the downtown bikeway project, 13% were not in support, and 7% indicated they were unsure. Positive comments related to the project included:

- *The presented designs significantly improve the safety for cyclists riding in the downtown core.*
- *This is a good project. It improves the street and the city.*
- *This project makes HRM more bike/pedestrian/transit friendly.*
- *This project makes for a healthier population.*

Top concerns of those not in support of the project included:

- *There are not enough cyclists in the city to justify paying for this infrastructure.*
- *Cyclists should be required to pay for licenses/ registration fees/ tolls to help pay for this project.*
- *Halifax's streets are too narrow for bikeways.*
- *This infrastructure should not be built at the sake of losing on-street parking and making deliveries more difficult.*

Separate meetings were also held with specific stakeholder groups and nearby residents and businesses. Frequently identified general comments from these groups included:

- *In the design, HRM needs to ensure conflicts between road users (cyclists, pedestrians, traffic, transit, deliveries) are minimized and that the street remains safe for everyone.*
- *The bikeway must be designed to protect cyclists, and to not allow cars/delivery trucks to block the bikeway.*
- *Improvements to the pedestrian realm must be made. Implementing these facilities should not be done to the detriment of the pedestrian.*
- *Proper education and signage will be needed for all road users (cyclists, pedestrians, drivers, transit drivers, delivery drivers), so that all user groups understand the function of the street's components.*

SHAPE YOUR CITY SURVEY

SURVEY SNAPSHOT

The online survey consisted of 11 questions with multiple opportunities for participants to add comments and explain their selected answers. There were over 770 visitors to the survey with 341 participating resulting in a response rate of 44%.

The design option most preferred by participants was Option D, uni-directional protected bike lanes on Hollis and Lower Water Streets. Option A was the second most preferred design option (a raised bi-directional bike lane on the *west side* of Hollis Street). The least preferred option was Option C, two uni-directional bike lanes on the east and west side of Hollis Street.

The top three most important considerations when selecting a design option as identified by participants are:

- *Safety and comfort for cyclists,*
- *Easy transition and connectivity between adjacent bicycle facilities within the network*
- *Convenient bicycle access to the destinations downtown*

When asked what the preferred solution for accommodating deliveries and loading along the corridor would be, 40% of participants would prefer that loading/unloading happen across the bikeway, with delivery vehicles stopping next to the bikeway.

To accommodate both transit users and cyclists on the same side of the street, participants were asked how they felt about a shared bus stop-raised bike lane treatment where transit passengers would have to cross the bikeway to embark/disembark from the bus. Participants were shown examples from other jurisdictions. The majority were in support of implementing the design on Hollis Street. Top concerns associated with the design feature included:

- *The perceived increase of risk of collisions between pedestrians and cyclists.*
- *That this concept just “wouldn’t work” in downtown Halifax.*
- *That there is a lack of enforcement toward cyclists who do not obey the rules of the road.*

Eighty percent of participants were generally in support of the overall project. Thirteen percent indicated they were not in support of the project, and 7% were unsure.

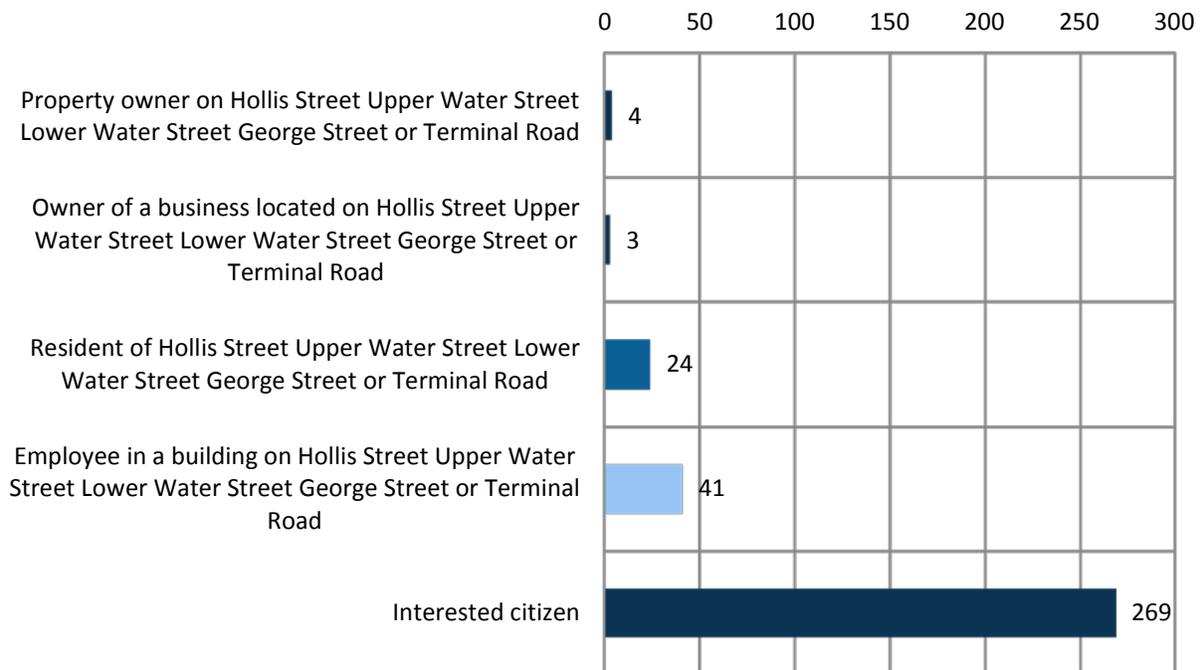
Additional improvements for the bikeway were suggested by participants and included further benefits for cyclists, pedestrians, drivers, and transit riders. Top comments included:

- *Improve visibility at crosswalks,*
- *Include curb bump outs and to slow traffic,*
- *Widen sidewalks,*
- *Include more bicycle racks on the street,*
- *Include advanced signals for pedestrians, cyclists, and transit,*
- *Implement clear pavement markings for travel lanes,*
- *Keep as much on-street parking as possible,*
- *Do not impede loading/unloading activity.*

SURVEY PARTICIPANT OVERVIEW

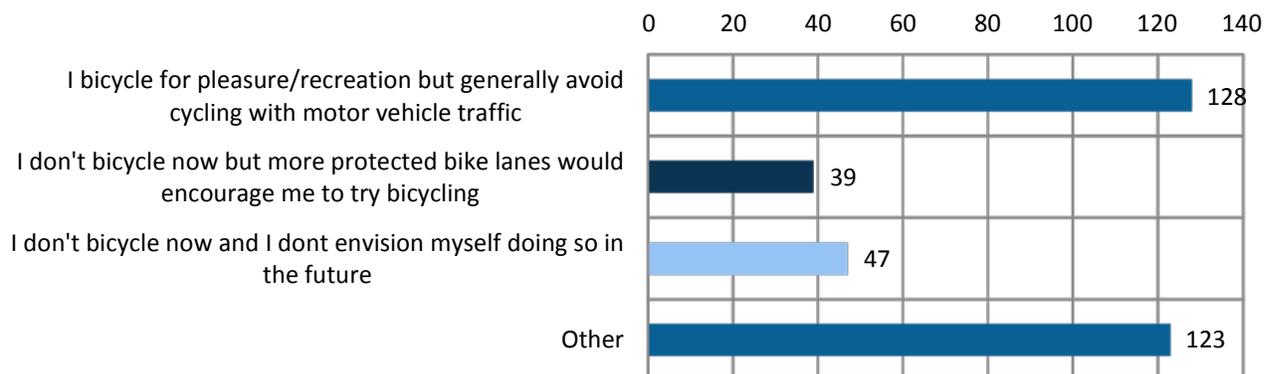
The online survey was available to residents on the Shape Your City website from March 17 to April 15, 2018. During this time, 771 visited the project page and 341 participated in the survey. Qualifying questions were asked to better understand who was taking part in the survey and what their interests may be.

I am a...



Of the 341 participants, nearly 80% of respondents qualified themselves as an “Interested Citizen”. Twelve percent identified themselves as an employee in a building on one of the four streets being considered for a cycling facility, 7% live on the one of the streets, and less than 2% identified as either property owners or business owners on one of the four streets.

Please choose the answer below that best describes you:



A second qualifying question was asked to gauge the level of cycling among participants. Nearly 40% of survey participants indicated they bicycle for pleasure/recreation but generally avoid cycling with motor vehicle traffic. Another 36% indicated they were best described in the “Other” category, which included the following responses:

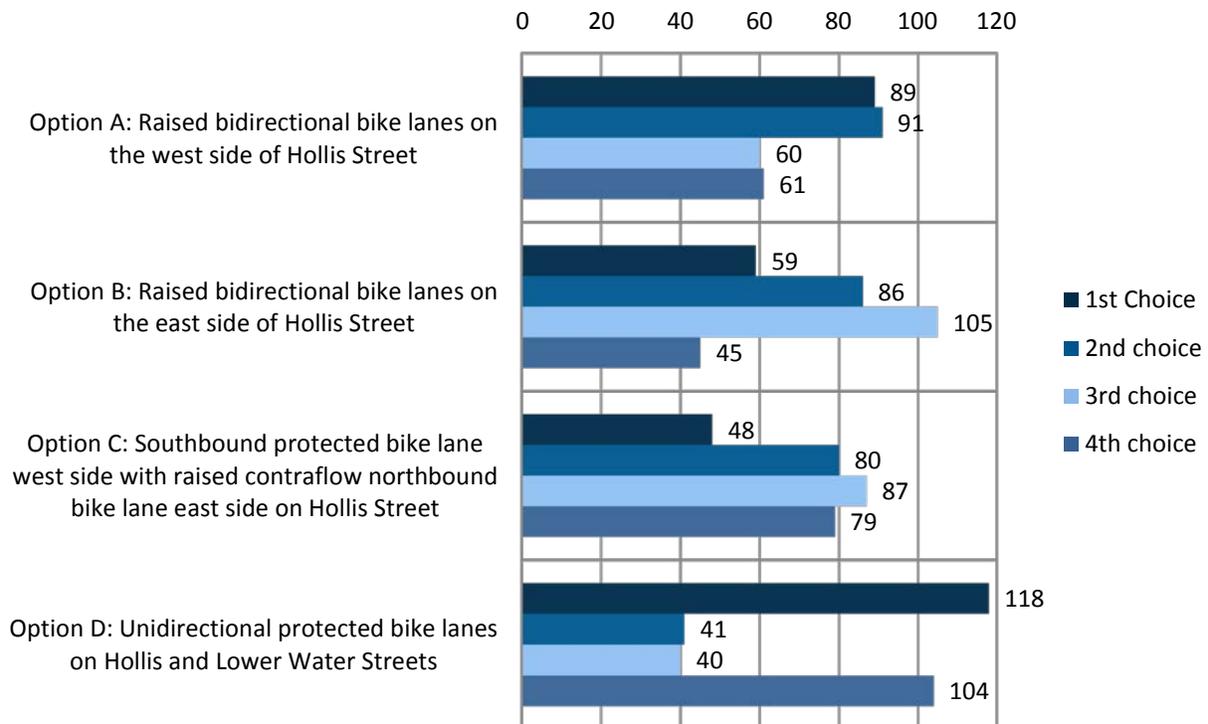
- *Regular cyclist: Use bicycle for commuting, recreation, and general transportation as much as possible (109)*
- *I bicycle for pleasure/recreation and would feel safer with more protected bike lanes (3)*
- *I use my bicycle infrequently and on trails without motor vehicles (1)*

SURVEY QUESTIONS

A total of 11 questions were asked as part of the online survey. The following section is a summary of responses received from participants for each question.

1. **Please rank from highest to lowest where 1 is your most preferred option and 4 is your least preferred option, the bikeway options for Hollis Street and Lower Water Street. Please consider which options best achieve the objective of providing safe, comfortable and connected bike route through the downtown.**

Rankings for Downtown Bikeway Options



Option D (uni-directional protected bike lanes on Hollis and Lower Water) is most preferred by respondents, but is also the option most frequently selected as their fourth choice. Of the 30 comments provided by respondents who chose Option D as their fourth choice, five mentioned a preference for raised bike lanes and five mentioned a preference for having both directions of travel for cyclists on the same street. Option D is the only option presented that did not include two-way travel on one street or raised bike lanes.

Option A was the second most preferred option, and Option B the third most preferred.

Below is a summary of explanations provided by some respondents:

Option A Preferred – Raised Bi-Directional Bike Lanes on the West Side of Hollis Street

- *Keeping cyclists on the driver's right-hand side is more intuitive for both drivers and cyclists (9)*
- *Not having to cross the street while going uphill is a benefit (2)*
- *Having the facility on the east side results in difficulties to merge and cross lanes. Therefore, Option A is preferred (2)*
- *Prefer the option that requires fewer left turns off Hollis Street. There are more destinations to the west of Hollis, than there are to the east*
- *Lowest costs*
- *Widest facility and most inviting for new cyclists to use*
- *Least disruptive to traffic*

Option B Preferred – Raised Bi-Directional Bike Lanes on the East Side of Hollis Street

- *Provides greatest level of connectivity (2)*
- *Minimizes loss of parking*
- *Reduces conflicts with busses*
- *Reduces conflicts with left-turning vehicles*
- *Most intuitive for everyone*
- *Widest facility and most inviting for new cyclists to use*
- *Contraflow option gives best visibility*
- *Reduces conflicts between busses and cyclists*

Option C Preferred – Southbound Protected Bike Lane West Side with Raised Contraflow Northbound Bike Lane East Side on Hollis Street

- *Having both directions on one street makes it easier for cyclists to plan their trips*
- *Lowest impact to other road users*
- *Provides highest level of visibility for cyclists*
- *Safer and less confusing for drivers and cyclists*

Option D Preferred – Uni-Directional Protected Bike Lanes on Hollis and Lower Water Streets

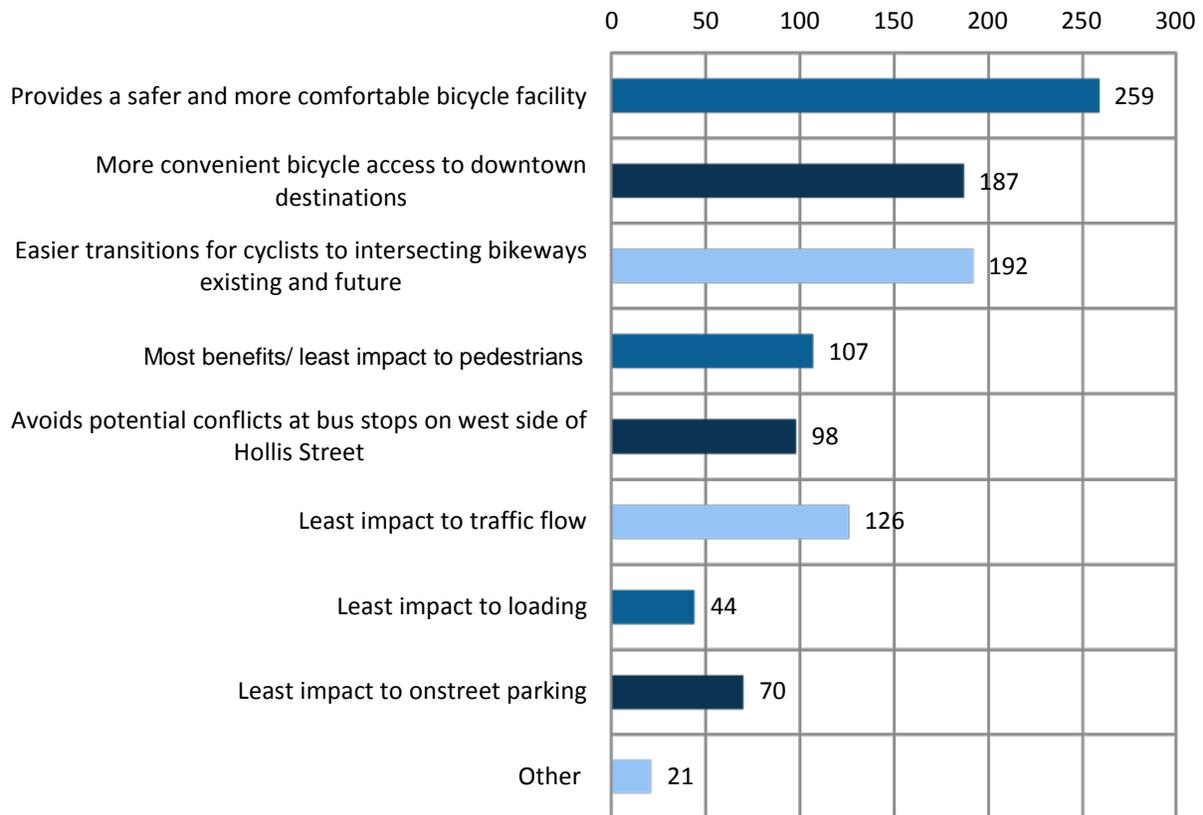
- *Goes with the flow of traffic (19)*
- *Option D is the cheapest option (4)*
- *Provides direct access to waterfront amenities and more destinations (3)*
- *Fewer conflicts with pedestrians and lower risks of being doored (2)*
- *Least amount of interference with traffic flow and function (2)*

- *Lower Water Street is a more pleasant street to bicycle on than Hollis Street (2)*
- *Bi-directional lanes can get crowded quickly.*
- *This option ensures the most connectivity with Hollis and Lower Water Streets.*
- *Fastest and easiest option for cyclists.*

General Feedback

- *Not enough people currently travel by bicycle. Why spend tax money on this infrastructure? (10)*
- *There should not be bicycle lanes in the downtown (7)*
- *Don't remove on-street parking/loading (7)*
- *Bicycle facilities should not be on either of these streets (5)*
- *Don't agree with any options (4)*
- *Cycling infrastructure is expensive and there are no ways to make cyclists pay for it (e.g. tolls, licenses, registration fees, etc.) (3)*
- *Negative experience and general concerns with bidirectional cycling lanes (3)*
- *Prefer bi-directional facility on Hollis Street and uni-directional facility on Lower Water Street.*
- *Bi-directional bike lanes take less space and are less disruptive to traffic (2).*
- *The information presented is overwhelming (2)*
- *Raised lanes can be uncomfortable with the "ups and downs" at intersections (2)*
- *Bi-directional lanes make it easier to plan a trip.*
- *Protected lanes are necessary to protect cyclists (and the lane itself) from delivery trucks.*
- *Keeping cyclists together (bi-directional) is easier for drivers to predict where they are.*
- *Critical to provide connectivity with other cycling infrastructure in the city.*
- *Option D is less clear for cyclists when planning a route. Also, may result in more conflicts with pedestrians/tourists.*
- *Keep parking on both sides of the street and have traffic reduced to one lane.*
- *Make sure safety is prioritized. This means protection.*
- *Have had negative experiences with raised bike lanes adjacent to a sidewalk which resulted in conflicts with pedestrians.*
- *A facility on Hollis Street is better because at the north end of Lower Water Street bicycles are forced to enter into Cogswell's overpass system.*
- *Concerns with interaction between cyclists and truck traffic.*
- *These will be not well used in the winter time.*
- *Don't reduce sidewalk widths.*
- *Use green paint to delineate cycling paths*

2. In choosing a preferred design what considerations are most important to you? Please select all that apply.

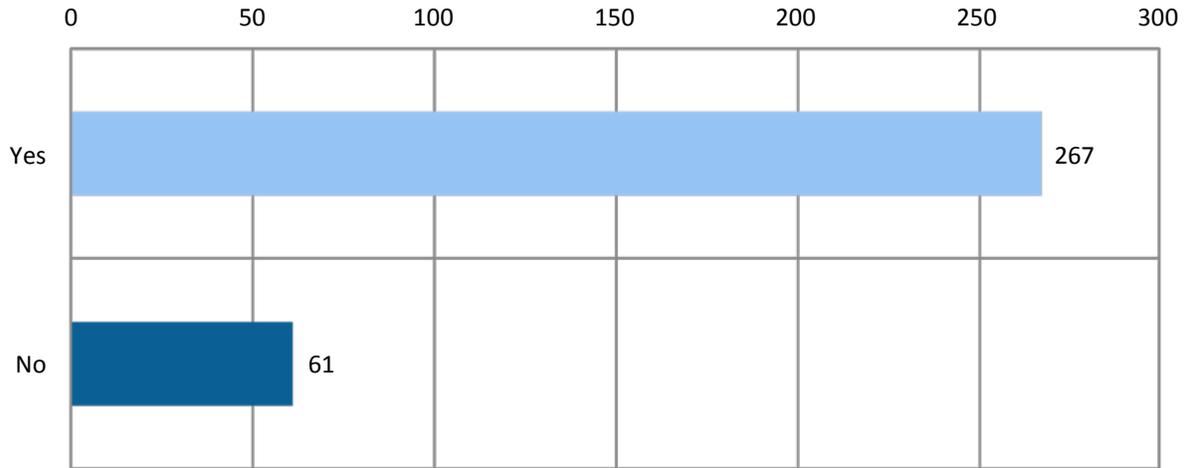


Safety and comfort was the most important design consideration identified by survey participants with 75% of the responses selecting this option. Bikeway connectivity to existing and future bicycle lanes was the second most important feature (identified by 56% of responses), closely followed by providing more convenient bicycle access to downtown destinations (55% of responses). Mitigating the impacts to loading (13% of responses) and on-street parking (20% of responses) were the design considerations that were least identified by participants.

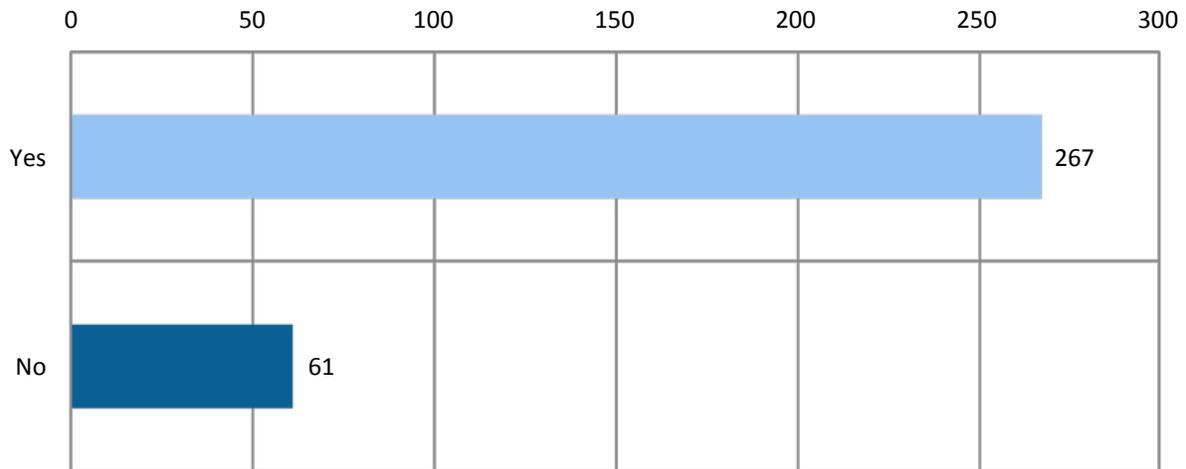
Responses submitted in the “Other” option were as follows:

- *No lanes at all (4)*
- *Keeping pedestrians safe (3)*
- *Cost (2)*
- *Reducing conflict with transit*
- *Visibility for all road users*

3. All the options include a bidirectional protected bikeway on the south side of George Street between the ferry terminal and Barrington Street. Do you support this design for George Street?



4. All the options include a bidirectional protected bikeway on the south side of Terminal Road between the Hollis Street and Lower Water Street. Do you support this design for Terminal Road?



Eighty one percent of respondents indicated that they support the proposed design options for both the George Street and Terminal Road facilities.

Some participants chose to explain their responses in support of, or not in support of the facilities. A summary of the explanations given is provided below:

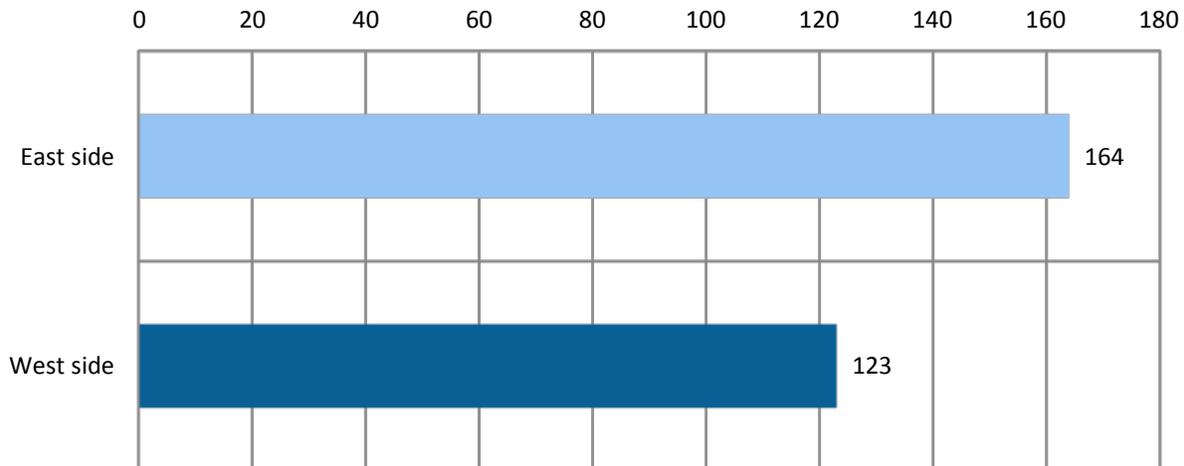
George Street

- *Don't spend tax dollars on this. Facilities should be paid for by cyclists via registration/licensing (9)*
- *There should be no facilities in downtown (4)*
- *Bike facility to the ferry is needed (4)*
- *Do not remove on-street parking (4)*
- *Grades are too steep for all ages and abilities. (3)*
- *Uni-directional might be better for weaving (3)*
- *This will negatively affect traffic flow (2)*
- *The bi-directional lane is reasonable since it is such a short distance.*
- *There should be no facilities in downtown.*
- *This option provides least interference with traffic.*
- *Clear and easy transition is needed*
- *Do not support bi-directional bike lanes*
- *No need for this facility*
- *Remove all parking and have two uni-directional bike facilities. Increase sidewalk width and landscaped area.*
- *Concerns about traffic congestion*
- *Bikes should go with the flow of traffic*
- *Bi-directional protected lanes take up less space than two uni-directional lanes*
- *Difficult for drivers to see both directions of cyclists.*

Terminal Road

- *Don't spend tax dollars on this. Facilities should be paid for by cyclists via registration/licensing (9)*
- *Concerned about the loss of parking here for the market, Discovery Centre, hotels and restaurants (7)*
- *There should be no facilities in downtown (4)*
- *Access to the market is needed (3)*
- *Needs more protection than flex-bollards (2)*
- *Protected facilities are needed here to protect from truck traffic.*
- *There is enough space on this road to accommodate this change.*
- *Raised bi-directional facility on the north side of street makes more sense.*
- *Why stop here? We need facilities to go to Point Pleasant Park.*
- *Clear and easy transition is needed.*
- *Might not need protection on this short route*
- *Would prefer a bi-directional facility on the south side of street.*
- *No need for this facility*
- *Concerns about traffic congestion.*
- *Connecting through Terminal Road is critical.*
- *This should be a protected bi-directional facility.*
- *This road is a transport/truck route. Consider alternate route for cyclists.*

5. All the options retain one side of off-peak parking including accessible parking on Hollis Street. Which side of Hollis Street should be prioritized for maintaining parking?



For maintaining off-peak and accessible parking spaces, 57% of respondents indicated it should be provided on the east side of Hollis Street, while 43% felt it should be provided on the west side of Hollis Street.

Some participants chose to explain their responses. A summary of the explanations given is provided below:

East Side Benefits

- *Bikeway should be on the right side of traffic, therefore parking should be on the left side (24)*
- *More residential on the east side. Makes sense to keep it here (2)*
- *Would result in fewer car doors opening into the street (2)*

West Side Benefits

- *More consistent with traffic flow and easier to Parallel Park on the west side (12)*
- *Busses use this side of the street. It makes sense to put parking on this side as well (2)*
- *Looking over your shoulder to pull out is safer than looking across the car*
- *Should keep parking on the same side as bus stops*
- *More businesses on the west side of the street*
- *Closer to more destinations in the downtown (e.g. Barrington Street)*
- *Most drivers drive up east lane the whole way down Hollis. Putting parking on this side wouldn't impact behaviour*

General Feedback

- *Doesn't matter/ no preference (17)*
- *Whatever side the bikeway is not on (12)*
- *Whatever side offers the most potential parking spaces available (4)*
- *On-street parking should not be sacrificed (4)*
- *No parking should be provided on Hollis Street (3)*

- Need to enforce those who park on-street during peak periods
- Put parking and bikeway on the same side to provide cyclists with extra protection (3)
- Suggest no parking during the day to allow for better flow of traffic
- Is there room to put parking on both sides of the street with one lane for moving traffic?
- Taxi stands also needed
- Municipality should consult those who require accessible parking spaces

6. What is your preferred solution for accommodating the need for loading when it is adjacent to a protected bikeway?



Forty percent of respondents indicated that the preferred solution for accommodating loading next to a bicycle lane would be to have the vehicles park next to the facility and load deliveries across the bikeway. Nearly equal numbers of participants would rather see loading accommodated on the opposite side of the street (24.4%) or on a nearby side street (25.0%).

Those who identified one of the first three loading alternatives were given the opportunity to explain their response. The following is a summary of what was recorded:

Moving Loading to Opposite Side of the Street

- Too often trucks block the cycling lane. Best to have loading on the other side of the street to avoid this obstruction (5)
- Prevents inattentive people blocking the cycling lane with boxes/open doors, etc. (3)
- Opposite side of the street as well as to move delivery side streets.
- Would prevent dooring from delivery trucks

Parking Next to Bikeway and Load Across

Loading across the bikeway is reasonable. Still quick for businesses and cyclists should be reasonable with cross-bikeway deliveries (7)

- Deliveries should be quick and efficient. They should not have to cross traffic (7)
- Needs a physical barrier to keep trucks out of the cycling lane (3)
- Bikeways should not be to the detriment of other road users (3)

- Loading zones/times need to be enforced better
- Don't have loading times during peak cycling times.

Moving Loading to Side Street

- Best option to make sure the trucks don't actually park on the bikeway (3)
- Loading on Hollis Street will obstruct through traffic. Move it to the side streets (2)
- Restrict loading to off-peak times, and enforce these times (e.g. ticketing)
- For businesses close to an intersection, move loading to a side street. For businesses mid-block, consider loading next to the bike lane.
- Delivery trucks come equipped with dollies that make it easier to walk further when delivering.

Thirty-five respondents indicated an alternative option in the "Other" category. A summary of their responses is below:

- Do any of the above options as long as it does not block/impede cyclists (4)
- Don't impact ability to load/ deliver – commerce is more important than bikeways (4)
- Allow trucks to load next to the curb and have cyclists go around the truck (4)
- Load during late-night hours or on a side street (2)
- Whatever is safest and easiest for delivery drivers

7. Do you have any particular loading requirements along any of the streets being considered for bikeways? (e.g., guest drop-off at hotels, taxi pick-up/drop-off, deliveries, etc.). Please describe (i.e., location, type of vehicle, time of day, frequency of use).

An open-ended question was put to participants to understand specific loading requirements along the four streets being considered for bikeways. A summary of responses collected is provided below:

- What can be done to fully protect the bikeway and allow easy delivery options (6)
- Restrict deliveries to off-peak hours (5)
- Deliveries should be a priority (4)
- Quick pick up and drop off can be done next to bikeways (3)
- Taxi stands should also be planned for (2)
- Deliveries should be handled through parking garages or side streets (2)
- Often load/unload musical equipment in a personal motor vehicle. Places to pull over will be necessary
- Move hotel drop offs to the side streets
- Traffic flow should take priority
- Loading should be done on the opposite side of the street
- Require loading at the Art Gallery, Sheraton, Maritime Museum, and near the intersection of Morris St. and Hollis St.
- Hotel drop offs for those with accessibility needs.
- Commercial Art Gallery has only one accessible door which fronts on to Hollis Street. To stay in business, loading/unloading artwork needs to be easy
- Delivering on Hollis Street now is difficult given construction. Further restrictions will result in more time and cost to my business

- *Hotels need taxi pick-up service*
- *Service vehicles need more parking*
- *Residential guest drop-off and pick-up are needed*
- *Pick up and Drop off zones for those with accessibility issues are needed*
- *Pick up and drop off zones that are on the other side of the street can be dangerous, especially for vulnerable users*
- *Currently use loading on Bedford Row*

8. What do you think of using a shared bus stop-raised bike lane treatment with options A, C or D? With this treatment, transit passengers would access the bus by crossing over a raised section of bike lane and bikes would be required to yield to pedestrians (see examples below). This treatment is used in Toronto and Ottawa and was recently approved by Regional Council for implementation with the South Park Street bike lanes. Do you have any comments or concerns about this treatment?



Figures 2.1 – 2.3: Examples of a shared bus stop-raised bike lane treatment from Sherbourne Street (Toronto), Roncesvalles (Toronto), and an example of signage produced by Transportation Association of Canada.

Participants were asked specifically what they thought of using a shared bus stop-raised bike lane treatment where transit passengers would access the bus by crossing the bikeway. The following is a summary of their responses:

Supportive

- *I support it (113)*
- *If designed correctly, this would work. All users should be aware of each other (11)*
- *I support it. Bikes should be expected to be aware of traffic flow and to yield to pedestrians (7)*
- *This is a good compromise for all road users (7)*

- *This seems to reduce potential conflict of road users.*
- *Bikes and pedestrians should be sharing more of the road.*

Not Supportive

- *Too dangerous for pedestrians/cyclists. (24)*
- *I don't support. I don't believe it will work (9)*
- *I don't support. Bike lanes shouldn't be in the downtown. (4)*
- *I don't support. Cycling infrastructure is expensive and there are no ways to make cyclists pay for it (e.g. tolls, licenses, registration fees, etc.)(4)*
- *This project is too expensive (3)*
- *It is more intuitive for the bus to pull over all the way and have the cyclist merge into traffic to go around the bus.*

General

- *This will require education and proper signage. Cyclists must be informed of how to use the facility and who to yield to, and pedestrians need to know where they can/cannot stand and gather. (19)*
- *Needs to be accessible for wheelchairs and strollers as well as the visually impaired (5)*
- *Transit drivers will need to be trained (4)*
- *Enforcement for cyclists not obeying the yield to pedestrians will be needed (4)*
- *A shared bus stop/raised bike lane treatment should be used. This makes cyclists and transit passengers aware of their environment. (3)*
- *Not enough protection for cyclists in this design. Cars will use the pavement like a roadway extension. (2)*
- *How will snow clearance work in this area? (2)*
- *Pedestrians tend to stand or walk in the bike lane when it is not grade-separated*
- *Use the alternating one-way streets in the downtown to designate one street for cyclists, and one street for pedestrians. This will reduce conflict and give more space for each user type*
- *There should be more sidewalk between the bike lane and the bus stop so that people waiting to board do not need to stand in the bike path*
- *This is a compromise. Ideally cyclists should have equal or better flow than traffic to encourage use.*
- *Fewer bus stops on Hollis Street are needed*
- *Motor vehicles should not be able to interfere with the bike lane.*
- *Need to be aware of cars going around the bus to turn right. Must be able to remove risk of collision with cyclists*
- *Bike lanes need to be fully protected*
- *Better to have the bike lane on the east side of the street to avoid this*

9. Are there any additional improvements for other users of the street (e.g., pedestrians, transit users, businesses, drivers, etc.) that should be considered as part of this project?

An open-ended question was put to participants to understand if they felt any additional improvements were needed for other users of the street as part of this design project. A summary of responses collected is provided below:

Improvements for Cyclists

- *More bike racks (3)*
- *Advanced signals (2)*
- *Better snow clearance on bikeway (2)*
- *Delineate bikeway with green paint*
- *Avoid the number of times cyclists have to start and stop*
- *Add a digital bicycle counter displayed on the street*
- *Better enforcement for delivery trucks who park in the bike lane*
- *Improve visibility*
- *Keep bikeways clear of debris and garbage*

Improvements for Pedestrians

- *Improve visibility at crosswalks (4)*
- *Curb bump outs, slow traffic (4)*
- *Widen sidewalks (2)*
- *Advanced signals (2)*
- *Widen sidewalks for pedestrians at the pinch points on Lower Water*
- *Reduce lane widths to NACTO standard to widen sidewalks*
- *Add bump outs on the side streets as well*
- *Ensure high visibility for pedestrians*
- *Make sure bikeways don't impede on pedestrian realm*
- *Align crosswalks to allow for easy crossing on Hollis Street and side streets. Shouldn't have to "cross the road in order to cross the road"*

Improvements for Transit

- *Advanced signals*
- *Add transit shelters*
- *Prioritize transit*

Improvements for Businesses

- *Loading is essential*

Improvements for Traffic

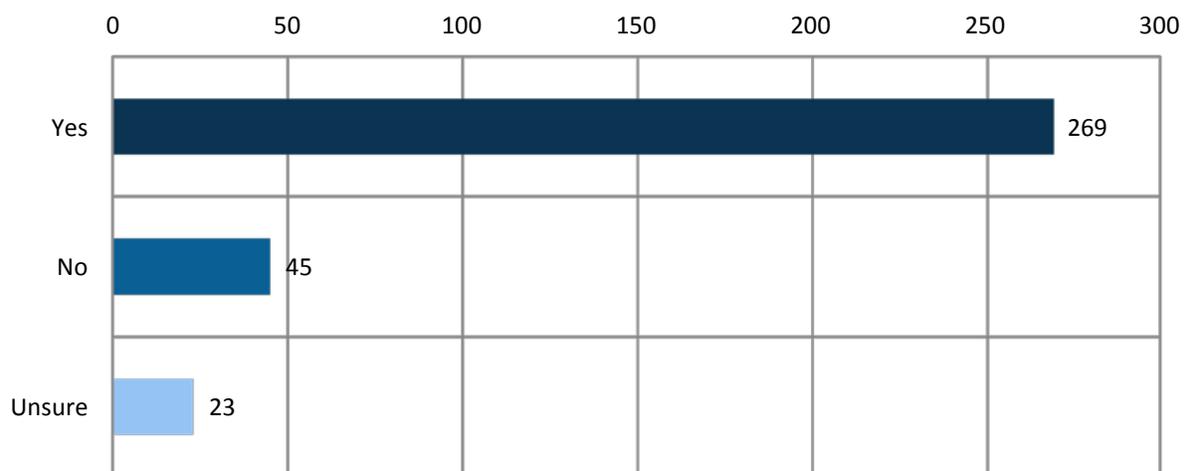
- *Minimize impacts to traffic. Keep as many lanes operating as possible (2)*
- *Don't prioritize bikeways over traffic flow (2)*
- *Clear and consistent lane markings to avoid sudden lane changes*
- *Don't remove on-street parking*

- Provide spaces for contractors to park on the street.
- Improve on maintenance (e.g. potholes)

General Feedback

- More street trees and greenery (7)
- Don't build the bikeway (3)
- Finding a balance between cycling benefits and benefits to other street users is important. It shouldn't just be all about cyclists (3)
- Bikers are a small minority. Accommodate other users first (2)
- Find a solution to the truck traffic downtown (2)
- Give and promote education on Share the Road practices (2)
- Must accommodate those with accessibility needs
- Tourists must understand the signage. Use pictures
- Implement a toll system so cyclists start to pay for the infrastructure
- Spend a little bit extra to make it look good
- Should be planning bike network with grades in mind
- Reduce speed limits for better safety
- Ensure coordination is done between this project and the Cogswell Project
- Build this as soon as Council approves – even if it's temporary to start
- Don't hinder cars, it is the only way we can get to this area of the downtown
- Bury powerlines and improve the public realm
- Keep the aesthetics of historic downtown
- Create a clear communication plan for all upcoming projects

10. Are you generally supportive of this project?



Eighty percent of survey participants are generally in support of this project. Thirteen percent indicated they were not in support of the project, and 7% were unsure.

Some participants chose to explain their responses. A summary of the explanations given is provided below:

Supportive

- *Currently don't feel safe riding a bicycling on the street. Physical separation is needed (10)*
- *In support, make the HRM more bike/pedestrian/transit friendly (10)*
- *Current Hollis Street bikeway is dangerous. Anything to improve it is supported (7)*
- *In support, these projects make for a healthier population (6)*
- *In support, HRM needs to change its car-dependent culture (5)*
- *In support, this infrastructure would encourage more people to bike (4)*
- *In support, but need to balance with other road users (3)*
- *Having a cycling route downtown is a benefit for local businesses (3)*
- *This project will make the city a more attractive place to work/live/visit (3)*

Not Supportive

- *Not enough cyclists in the city to pay for this infrastructure (8)*
- *Shouldn't use tax money to build this unless cyclists require licenses/ registration fees/ tolls (3)*
- *Halifax's streets are too narrow for bikeways (3)*
- *Hollis and Lower Water Streets should solve the truck traffic problem first (2)*
- *Bikeways should be separate from the streets (e.g. greenways)*
- *Painted bike lanes are sufficient and have less of an impact on traffic*
- *Cyclists are being too prioritized over pedestrians, cars, and businesses*
- *Cannot support removal of on-street parking*

Unsure

- *Cautiously optimistic that this will improve safety for cyclists*
- *Would be in support if all on-street parking was removed*
- *All other bike lanes implemented have had no significant uptick in cycling ridership. What makes this different?*
- *Support the idea of it, but wouldn't use it personally*
- *Concerned about congestion and impacts to traffic*
- *Investment to transit should a priority over cycling*
- *Facilities should go on a different street in the downtown*
- *Concerned about the removal of on-street parking*
- *How will winter climate impact the use of the bikeway?*
- *Concerned about the truck traffic going through the corridor. Will it be safe for cyclists?*

11. Do you have any other comments related to the project?

A final open-ended question provided an opportunity to share additional comments. The responses provided are as follows:

Positive Comments

- *This is a good project. It improves the street and our city (10)*
- *More people would bicycle if facilities were protected (8)*
- *Time to make Halifax a more pedestrian/cycling/transit friendly city (3)*
- *Bike lanes need to be protected to be safe (3)*
- *Implement this quickly*
- *These projects make for a healthier population*

Negative Comments

- *Money and resources should be spent on other projects (3)*
- *Bicycles should stay off main arterial roads (2)*
- *Not enough cyclists in the city to pay for this infrastructure (2)*
- *Shouldn't use tax money to build this unless cyclists require licenses/ registration fees/ tolls*
- *The city doesn't need more bike lanes*
- *This project overly favours cyclists*

Suggestions

- *Should be planning the bicycle network based on topography and grade change (2)*
- *Better enforcement for parking in the bikeway is needed (currently and into the future) (2)*
- *Continue to educate residents of efforts*
- *Would prefer alternative bike routes on other streets in the downtown (e.g. waterfront, Barrington Street)*
- *Do not prioritize cars and on-street parking over bicycles*
- *Don't go wider than 3.3 m for vehicle travel lanes*
- *Paint bike lanes green to better delineate the area*

Stakeholder Engagement

Separate meetings with stakeholders external to the Municipality were also held. Information sharing and consultation meetings were held with owners of property located immediately along each of the four candidate streets, the Downtown Halifax Business Commission (DHBC), as well as the following community groups and Provincial government agencies:

- Nova Scotia Transportation and Infrastructure Renewal
- Walk n' Roll Halifax
- Develop Nova Scotia
- Nova Scotia Health Authority
- Bicycle Nova Scotia
- Halifax Cycling Coalition
- Dalhousie University
- Nova Scotia Department of Energy

The following is a summary of feedback gathered at the external stakeholder meetings:

East-West Connectors

- Why is Terminal Road the end of the study area? There are more destinations just beyond Terminal Road (e.g. Seaport Farmers Market, Point Pleasant Park, Atlantic Superstore). There should be plans to connect into these destinations as well.
- HRM has been talking about George Street as a streetscape project for a long time, but not entirely sure where it fits in the priority list.
- Waterfront Development Corporation Ltd. wants George Street to be a major destination and connection to the harbour. Have George Street raised to the curbs and make it a truly pedestrian oriented experience. Integrate cycling infrastructure into the public realm to help build that sense of "place".
- Any infrastructure for George Street should be done in a less permanent manner, in anticipation of the streetscape changes anticipated for this street, as per the Public Lands plan (2006) and the direction of Action 61 (streetscaping) in the Economic Strategy.
- How does Morris Street fit into the Downtown network?
- There should be two stage turns at the Terminal Road and George Street intersections

Existing Conditions

- Baton Rouge is a hazardous point at Lower Water Street. Pedestrians always cross there, and the sight lines are poor. It would be good to remove a lane of moving traffic from here. It would improve safety and visibility.
- Conflict points on Lower Water Street include the pedestrian signal at Lower Water and Prince Streets. The constant flow of pedestrians often holds the flow of traffic up. This should be a signalized intersection to phase pedestrian crossings and traffic movement.
- A second conflict point on Lower Water Street is the access to the Law Courts' parking lot. Cars turning right into the parking lot often get backed up and block the flow of traffic.

Comments on Presented Designs:

- Having cycling infrastructure on both Hollis and Lower Water Streets creates a nice loop and integrates the waterfront into the downtown. It would also help create more destination points along the waterfront.
- External stakeholders questioned what would happen to the existing bike facility on Lower Water Street if a bi-directional facility was put on Hollis Street. It was clear that they didn't want to lose the infrastructure that is already there.
- Assuming only one corridor will get the bi-directional facility, Hollis Street seems to be

the natural selection. It is more centrally located in the downtown and has more destinations on it than Lower Water Street does.

- There are two pinch points along Lower Water Street where space is extremely limited. Trade-offs are required between users. There is not enough room at these pinch points for sidewalks on both sides of the street and a bi-directional bikeway.
- Solutions at these pinch points were presented to the group and included either not adding a sidewalk on the west side of the street, or implementing a section of the bikeway where southbound cyclists yield to northbound cyclists. Attendees were not in support of removing a sidewalk from one side of the street, nor were they in favour of the southbound yield to northbound segment.
- Options A, B, and C are the poorest options for connectivity.
- Placing the bikeway on the west side of Hollis Street may result in more conflicts with vehicles turning into and out of parking garages and driveways.
- Consider implementing a separated bike path on both Hollis Street (southbound, or potentially bidirectional), and a separated bike lane on Lower Water Street (northbound) – where possible (albeit there are a couple of pinch points)

Alternative Design Suggestions

- Narrow the car travel lanes to 3.5 m, or consider a shared multi-use trail where pedestrians and cyclists are mixed together (in these pinch point sections).
- Could having both corridors as bi-directional facilities be an option? A challenge providing AAA bicycle facilities on both corridors however, is the loss of on-street parking.
- Consider implementing a bi-directional facility on Hollis Street and a one-way facility on Lower Water Street.

- For Lower Water Street, consider narrowing the right-of-way and having the distance between curbs at 3.5 m. This would give tires of large vehicles enough clearance to move through. Any overhangs from side mirrors/lights would be buffered by bollards/barricades on the sidewalk to protect pedestrians.
- Design suggestion: for both streets (Hollis and Lower Water), plan for a 1-way cycling track that would accommodate two bicycles (e.g. 3.0 m width). By planning for this width now, each of the tracks could be converted into a two-way facility once the demand is there. This would take up more of the rights-of-way, but would still leave room for moving traffic, and parking/loading. By buffering the facility with retractable bollards, emergency vehicles could utilize the wide cycle track to by-pass other vehicles on the road. This suggested design would provide for a safer street for all users, particularly pedestrians. Sidewalks would be protected from moving traffic by parking on one side, and by the bicycle facility on the other side.
- Not planning for two-way facilities on both corridors, would be a real miss by HRM in creating a vibrant and accessible downtown.
- Include pedestrian bump outs where ever possible.
- Re-evaluate the need for the number of travel lanes that have been presented (especially on Lower Water Street). If two are not needed, consider adding more on-street parking instead.
- In front of the Maritime Museum of the Atlantic, reduce travel lane to 3.3 m and add the extra space into the bike lane or buffer area.
- A separated path should contain interspersed infrastructure to allow for east-west permeability midblock.
- Modified version of Option D: apply the principles of Option D and raise the cycletrack to sidewalk height (like all other options), widen the bicycle lanes, add streetscaping elements and additional egress markings on the route.

Overall Concerns

- Overall, the loss of on-street parking is a concern with business owners.
- Generally, stakeholder groups supported the idea of implementing high-quality bicycle facilities in the downtown, however whatever gets built needs to account for the loss of on-street parking, and businesses' abilities to load and unload.
- Facility type should be able to accommodate loading requirements.
- Concerned about the loss of parking on Terminal Road as well as on the north end of Hollis Street.
- Don't include parking on George Street.
- Bollards are not considered a form of "protection" for cyclists. They are easily removed/damaged.
- Location of the bike lane on Hollis should be determined in large part by the least amount of lost parking. The Downtown Halifax Business Commission would be happy to work with HRM Traffic to further identify other parking opportunities as part of this project.
- There is a great opportunity to think about these as streetscape projects, rather than just bike lanes. By elevating the bike lane, particularly on Hollis Street to be level with the sidewalk, and using high quality materials for separation, this would visually and functionally act as an expanded pedestrian realm.
- Loading times should be posted and should restrict loading during rush hours
- HRM should accept NACTO standards for this project, which are acceptable traffic standards, particularly in denser urban environments.

General

- On Hollis Street, the parkades often result in traffic queues waiting to enter the off-street parking facilities. These queues could impact the safety and travel of cyclists along the corridor.
- Lower Water Street and George Street are identified as major destination points in the entire downtown area.
- Develop Nova Scotia (formerly Waterfront Development Corporation) made a note that a loss of parking has never deterred visitors from coming to the downtown. During Tall Ships, many parking spaces were lost and they saw the highest number of visitors on the waterfront to date. People find a way to work around the lack of on-street parking in the downtown.
- Add a landmark in front of Province House to signify historic importance.
- Consider using on-street parking as a protective barrier for cyclists.