



CITY OF VANCOUVER

ADMINISTRATIVE REPORT

Date: September 23, 2003
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Phone No.: 604.871.6279
RTS No.: 1929
CC File No.: 5553
Meeting Date: October 7, 2003

TO: Standing Committee on Transportation and Traffic
FROM: General Manager of Engineering Services
SUBJECT: 10th Avenue Bike Route

RECOMMENDATION

- A. THAT the 10th Avenue Bike Route be constructed as detailed in this report at a total cost of \$1,100,000, with \$900,000 funding to be provided from the Streets Basic Capital Unappropriated Account Group for the Bicycle Network (SCA2E-UNAP) and the remaining \$200,000 to be provided by re-allocation of funds from the Inverness Bikeway Project (CA2EA2E).
- B. THAT, commencing in 2005, the following budgets be increased, without offset, subject to the 2005 Budget Review:
- \$4500 - Streets Operating Budget for Traffic Circle Maintenance
 - \$4000 - Traffic Operating Budget for Sign Maintenance
 - \$16,000 - Traffic Signal Maintenance Budget

COUNCIL POLICY

Council approved the recommendations of the 1992 Bicycle Network Study in which the major recommendation was the priority to integrate bicycles on local streets through the construction of locally integrated bikeways.

Council approved the Vancouver Transportation Plan that emphasizes the need for developing more bikeways and ranks cyclists second priority after pedestrians.

Council approved the 1999 Bicycle Plan which outlines the goal to develop the bicycle network to ensure a grid of bikeways approximately 1km apart.

PURPOSE

The purpose of this report is to seek Council's approval to implement the 10th Avenue Bikeway.

BACKGROUND

The City of Vancouver Neighbourhood Transportation Branch develops cycling routes in the City in order to encourage cycling as a preferred mode of transportation. Since 1990, Vancouver has built 23 bike routes (142 km) that connect to form a network of integrated routes. The 1999 City of Vancouver Bicycle Plan identifies 10th Ave as a proposed future cycling route.

ROUTE DESIGN

The proposed route, shown on the following diagram, was selected for development due to its proximity to the Broadway corridor, its level grade and existing popularity. Route selection and design involves balancing a number of factors including variety, directness, and ease of use, character, uniqueness and proximity to amenities. The 10th Avenue bikeway will provide a comfortable and direct route from Victoria Dr. in the east, to Trafalgar St. at Kitsilano Secondary School/Community Centre in the west. As part of this development a Trafalgar Street link is proposed to connect 10th Ave. to the Off-Broadway bike route and the Seaside Bike Route. The 10th Ave portion will connect 7 of our existing cycling routes; Central Valley Greenway/Bikeway, Mosaic, BC Parkway, Windsor, Ontario, Heather, and Cypress.

The 10th Ave. Bikeway proposal was developed in consultation with the Bicycle Network Subcommittee of the Bicycle Advisory Committee to Council. Recommendations and comments provided by the Vancouver Area Cycling Coalition for route design and traffic calming measures were also considered. (See Appendix E). At present, a large number of cyclists use 10th Avenue as a defacto bikeway. Current estimates indicate that 600+ cyclist will be riding the route on a daily basis once it is fully developed. As part of the development, it is proposed that some intersections be modified and signals installed for additional comfort and safety. Traffic calming measures such as traffic circles, corner bulges and diverters are recommended to discourage vehicle shortcutting and speeding. Information on the proposed measures is contained in Appendix A (survey forms for sections of the route) and summarized in Table 1.

ROUTE SIGNAGE

The signage will be similar to what has been successful on other bike routes throughout the city. All are based on the use of clear internationally recognised standard symbols with minimum wording. The route markers will be placed approximately two blocks apart with signs and stencils placed near the intersection with arterial streets. As well, replacement street name signs that include a bicycle logo and new bicycle pavement markings will be installed along the length of the new route.

TABLE 1.

Street Intersection on 10 th Ave	Bike Signals	Traffic Circles	Curb Buiges	Right-In/Right-Out Diverter
Vine		Yes		
Yew		Yes		
Arbutus	Yes			Yes
Cypress		Yes	Yes	
Burrard	Yes			All-In/Right-Out
Pine		Yes		
Fir	Yes			
Hemlock	Yes			
Birch		Yes		
Oak	Yes		Yes	Yes
Willow			Yes	
Laurel			Yes	
Heather			Yes	
Prince Albert		Yes		
Clark	Yes			
Commercial	Yes			
Traffic Signal Intersection		Traffic Circles	Push Button on Existing Pole	
Eighth Ave.		Yes		
Sixth Ave.		Yes		
Fourth Ave.			Yes	
Second Ave.		Yes		
China Creek Park Amenities				
Bike Path between Keith and Clark				
Water Fountain				

NEIGHBOURHOOD CONSULTATION

Input from affected residents, schools and businesses was gathered through a survey, letters, phone calls, e-mails, and two public open houses. In March of 2003, 4800 surveys were distributed to residents along 10th Ave. between Trafalgar St. and Victoria St. The overall average response rate for the nine areas surveyed is 20%. Comments by the residents surveyed are presented on Appendix B. In all cases except for the Cambie to Ontario section the majority of respondents accepted the proposed changes to the bikeway.

Due to the length and its proximity of the bikeway to Broadway it was easier to break up the survey along the route into specific sections between arterial streets (Trafalgar to Arbutus; Arbutus to Burrard; Burrard to Granville; Granville to Oak; Oak to Cambie; Cambie to Ontario; Ontario to Fraser; Fraser to Clarke; Clarke to Victoria). Each of the nine survey areas had its own unique survey questionnaires (Appendix A) with regard to the implementation of traffic calming and control devices that are proposed for the area. A summary of the survey responses is provided in Appendix B and a summary of the comments is provided in Appendix C.

Originally the traffic circles at Pine St. and Vine St., and on Trafalgar St. at Eighth Ave., Sixth Ave. and Second Ave. were not included on the survey. Residents near Pine and 10th expressed concerns about vehicle speeds, shortcutting and noise. Thus, a traffic circle is proposed for Vine and 10th. It was expected that, due to the positive response by residents to other proposed traffic circles along the route, these circles would also be accepted by residents. To verify this, a notice was delivered to all residents on the streets adjoining the proposed traffic circle locations(Appendix D). Residents' response to the traffic circles on Trafalgar north of 10th Avenue was positive. The majority of the responses were in favour of the proposed traffic circle at Pine/10th Ave.

Survey results show that 59% accepted the proposed Right In-Right Out diverter at Burrard and 10th Ave. Subsequently many residents living on the south side of 10th Ave (east of Burrard) have complained that it will be very difficult for them to park if a diverter is installed at this location. This type of diverter was seen as causing bottlenecks by forcing residents to perform U-turns mid block in order to park their vehicles. Staff have recently revised the diverter design to an All-In/Right-Out diverter to allow vehicles heading south to turn left onto 10th Avenue. The new diverter design will facilitate south side parking and still keep the preferred level of service for cyclists.

Of the 428 surveys delivered to the residents in the Mount Pleasant area between Cambie and Ontario, a majority of respondents rejected the measures presented. The traffic circle is felt to detract from the historical, granite street treatment. The existing stop signs are felt to be integral to the Mount Pleasant traffic calming plan. To support the resident's views, these two proposals will not be pursued.

As with all bikeways, the route and its traffic calming measures will continued to be monitored. As per Council Policy the three "diversionary" traffic calming measures (Two Right-In/Right-Out diverters, and one All-In/Right-Out diverter) will be installed for a trial period of six months. After the trial period residents will again be surveyed as to the effectiveness of the measures and their impact on the neighbourhood.

FINANCIAL IMPLICATIONS

The total cost of the 10th Ave. Bike Route will be \$1,100,000 for route signage, signals and construction of traffic calming measures along the route. \$900,000 funding will be provided from the Streets Basic Capital Unappropriated Account Group for bicycle networks (SCA2E-UNAP). The remaining \$200,000 will be provided by re-allocation of funds from the Inverness Bikeway Project (CA2EA2E), which has unexpended funds available due to cost-sharing revenues from Translink and construction savings.

Elements of the proposed 10th Avenue Bikeway will require ongoing maintenance. Each of the new cyclist activated signals will incur an additional annual maintenance cost of \$2,000; therefore, an increase of \$16,000 is recommended to the annual signal maintenance budget. Similarly, each of the nine new traffic circles will incur an additional annual maintenance cost of \$500 and a corresponding increase of \$4,500 is recommended to the annual streets maintenance budget. In addition, the bicycle route signs, stencils and traffic circle signage require a \$4000 increase to the annual sign maintenance budget. All the preceding annual maintenance costs are without offset, starting in 2005 and subject to the 2005 Budget Review.

CONCLUSION

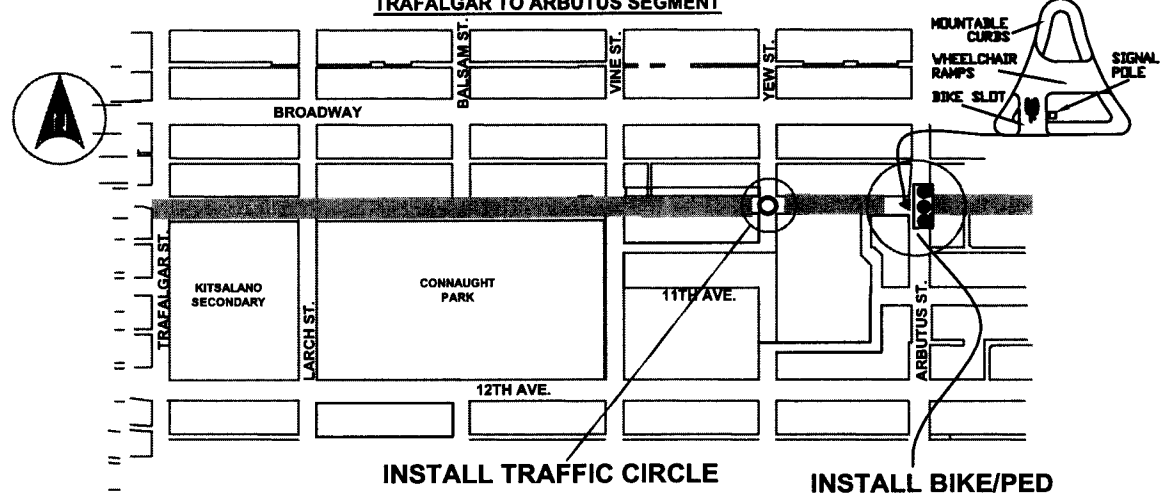
10th Ave currently is a very popular cycling route. The neighbourhood supports the measures proposed to increase the comfort and safety along the route, except for the previously traffic calmed area between Cambie and Ontario where proposed measures will not be pursued.

* * * * *

10TH AVENUE BIKEWAY
TRAFALGAR TO ARBUTUS SEGMENT

APPENDIX A

RIGHT-IN/RIGHT-OUT
DIVERTER



INSTALL TRAFFIC CIRCLE

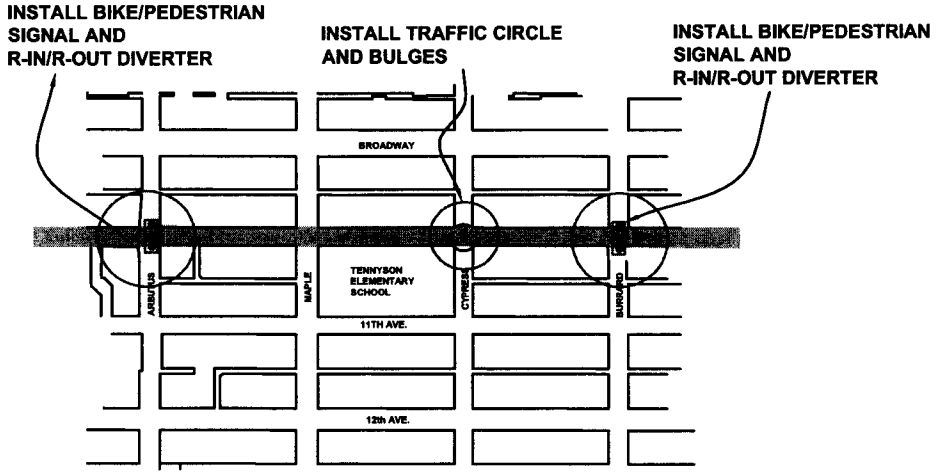
INSTALL BIKE/PED
SIGNAL AND
R-IN/R-OUT DIVERTER

SURVEY QUESTIONS

	IN FAVOUR	OPPOSED	NUETRAL
1. Do you support the installation of a bike/pedestrian signal at the intersection of Arbutus St. and 10th Ave.?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Do you support the installation of a right-in/right-out diverter at the intersection of Arbutus St. and 10th Avenue (west side)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Do you support the installation of a traffic circle at the intersection of Yew St. and 10th Avenue ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Would you like to be contacted when this issue is brought before Council? Yes ___ No ___			

Comments

ARBUTUS ST. TO BURRARD ST. SURVEY



SURVEY QUESTIONS

	IN FAVOUR	OPPOSED	NUETRAL
1. Do you support the installation of a bike/pedestrian signal at the intersection of Burrard St. on 10th Ave.?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Do you support the installation of a right-in/right-out diverter at the intersection of Burrard St. and 10th Ave. (East side)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Do you support the installation of a bicycle/pedestrian signal at the intersection of Arbutus St. and 10th Avenue.?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Do you support the installation of a right-in/right-out diverter at the intersection of Arbutus St. and 10th Ave.(west side)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Do you support the installation of a traffic circle and corner bulges at the intersection of Cypress St. and 10th Ave.?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Would you like to be contacted when this issue is brought before Council? Yes ___ No ___			

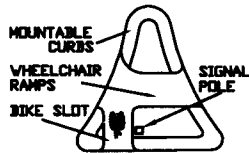
Comments

BURRARD ST. TO GRANVILLE ST. SURVEY

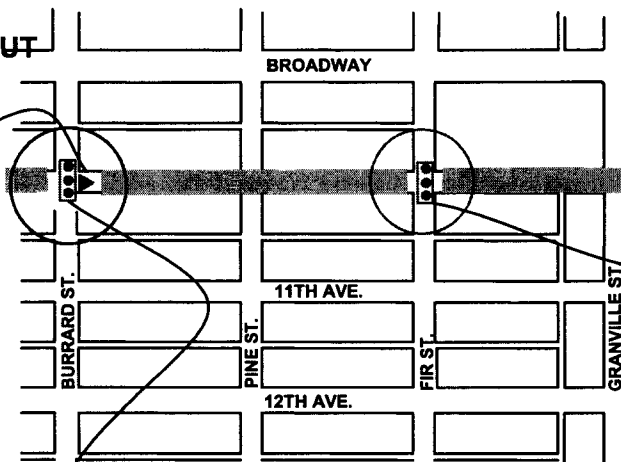


INSTALL
RIGHT-IN/RIGHT-OUT
DIVERTER

INSTALL BIKE/PED
SIGNALS



RIGHT-IN RIGHT-OUT
DIVERTER DIAGRAM



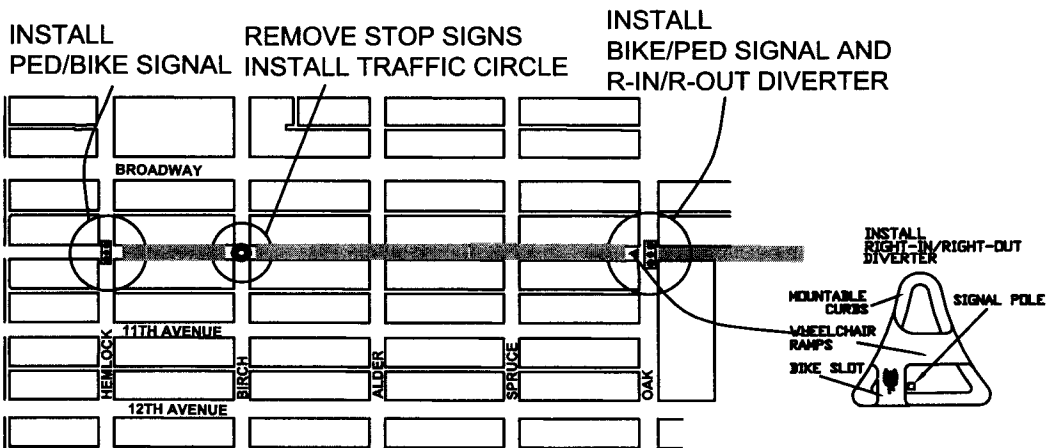
INSTALL BIKE/PEDESTRIAN SIGNALS

SURVEY QUESTIONS

- | | IN FAVOUR | OPPOSED | NUETRAL |
|--|-----------------------|-----------------------|-----------------------|
| 1. Do you support the installation of a bike/pedestrian signal at the intersection of Burrard St. and 10th Ave.? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Do you support the installation of a right-in/right-out diverter at the intersection of Burrard St. on 10th Ave. (east side)? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. Do you support the installation of a bicycle/pedestrian signal at the intersection of Fir St. and 10th Ave.? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. Would you like to be contacted when this issue is brought before Council? Yes ___ No ___ | | | |

Comments _____

GRANVILLE ST. to OAK ST. SURVEY



SURVEY QUESTIONS

- | | IN FAVOUR | OPPOSED | NUETRAL |
|--|--------------------------|-----------------------|-----------------------|
| 1. Do you support the installation of a bike/pedestrian signal at the intersection of Hemlock St. and 10th Ave.? | 1. <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Do you support the installation of a traffic circle at the intersection of Birch St. and 10th Avenue? | 2. <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

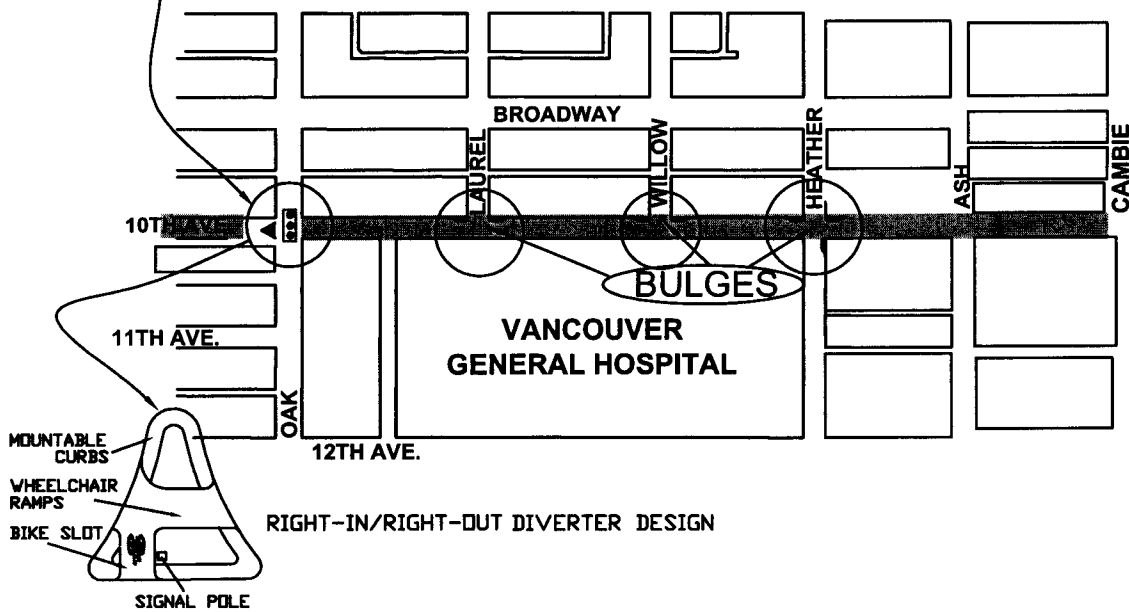
As part of the Vancouver General Hospital/Cancer Center Redevelopment Project, a new traffic signal will be installed at the intersection of Oak St. and 10th Avenue. To decrease potential shortcutting and increased vehicle traffic in adjacent neighbourhoods, the installation of a right-in/right-out traffic diverter (bike accessible) is proposed.

- | | IN FAVOUR | OPPOSED | NUETRAL |
|---|--------------------------|-----------------------|-----------------------|
| 3. Do you support the installation of a right-in/right-out diverter at the intersection of Oak St. on 10th Ave. (west side) ? | 3. <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

4. Would you like to be contacted when this issue is brought before Council? Yes ___ No ___

Comments _____

INSTALLATION OF BIKE/PED SIGNAL & R-IN/R-OUT DIVERTER OAK ST. TO CAMBIE ST. SURVEY



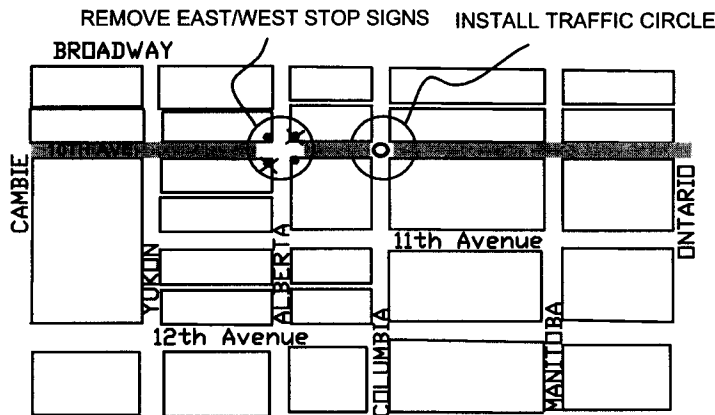
SURVEY QUESTIONS

As part of the Vancouver General Hospital/Cancer Center Redevelopment Project, a new traffic signal will be installed at the intersection of Oak St. and 10th Avenue. To decrease potential shortcutting and increased vehicle traffic in adjacent neighbourhoods, the installation of a right-in/right-out traffic diverter (bike accessible) is proposed.

- | | IN FAVOUR | OPOSED | NUETRAL |
|--|--------------------------|-----------------------|-----------------------|
| 1. Do you support the installation of a right-in/right-out diverter at the intersection of Oak St. on 10th Ave. (west side)? | 1. <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Do you support the installation of curb bulges on 10th Ave. at the intersections of Laurel, Willow and Heather St.? | 2. <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. Would you like to be contacted when this issue is brought before Council? Yes ___ No ___ | | | |

COMMENTS

CAMBIE ST. TO ONTARIO ST. SURVEY



SURVEY QUESTIONS (Return to: Geoff Rice, Neighbourhood Transportation Branch, 7th floor, Vancouver City Hall.)

- | | IN FAVOUR | OPOSED | NUETRAL |
|--|-----------------------|-----------------------|-----------------------|
| 1. Would you support the installation of a traffic circle at the intersection of Columbia St. and 10th Ave.? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Would you support the removal of east/west stop signs at the intersection of Alberta St. and 10th Avenue? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. Would you like to be contacted when this issue is brought before Council? Yes ___ No ___ | | | |

Comments



CITY OF VANCOUVER
10TH AVENUE BIKEWAY SURVEY
Ontario St. to Fraser St.



January 19, 2003

Dear Resident or Business Owner,

On May 14, 1992, Vancouver City Council endorsed a citywide bicycle route network with priority given to local street integration. Within this report and the following 1999 Bikeway Plan, 10th Avenue is designated as a preferred route. On May 27, 1997, City Council approved the Vancouver Transportation Plan that further emphasizes the need to provide more comfortable cycling and walking environments within the City.

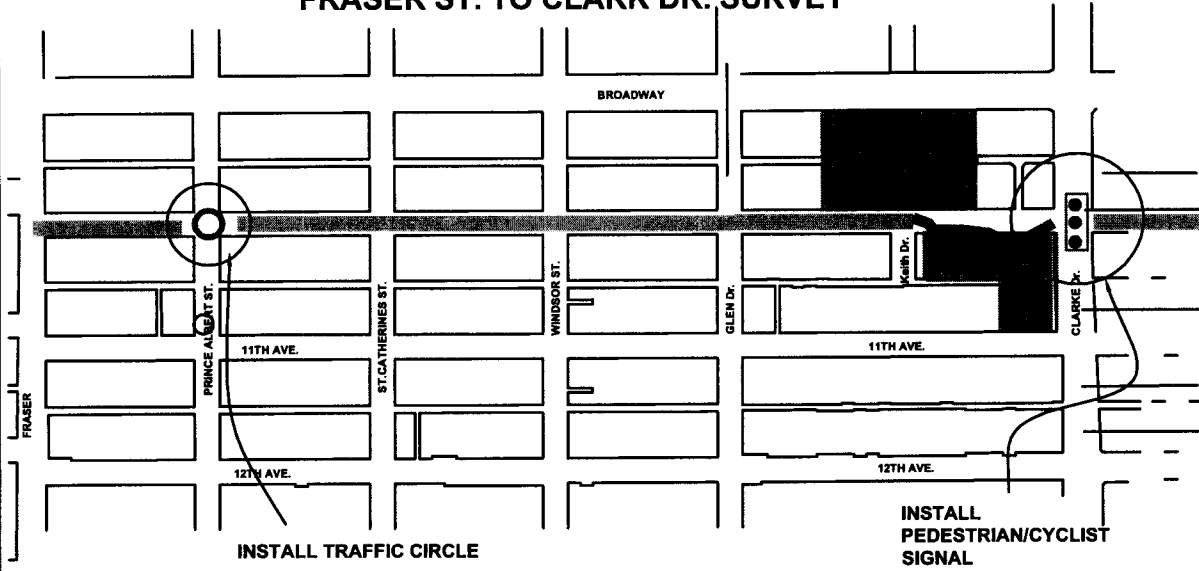
In response to; City Councils decisions, survey responses by cyclists, the Bicycle Advisory Committee and Bicycle Network Subcommittee, The City of Vancouver Neighborhood Transportation Branch is proposing the development of a new bikeway along 10th Avenue.

This new 7km bikeway will provide a comfortable and direct route from Victoria Dr. in the east, to Trafalgar St. in the west. It will connect 5 of our existing cycling routes, Ontario, Heather, Windsor, BC Parkway, and Mosaic. The 10th Avenue Bikeway will also provide a connection for cyclists to Burnaby via the new Central Valley Greenway now under construction.

At present, a large number of cyclists already use 10th Avenue as a cycling route. Current estimates indicate that 800+ cyclist will be riding the route on a daily basis once it is fully developed. As part of the 10th Ave. route development, the City is proposing to install traffic calming measures at specific locations on the route.

Street Intersection	Bike Signals	Traffic Circles	Curb Bulges	RI/RO Diverter
YEW		☒		
ARBUTUS	☒			☒
CYPRESS		☒	☒	
BURRARD	☒			☒
FIR	☒			
HEMLOCK	☒			
BIRCH		☒		
OAK	☒			☒
LAUREL			☒	
WILLOW			☒	
HEATHER			☒	
COLUMBIA		☒		
PRINCE ALBERT		☒		
CLARKE	☒			
COMMERCIAL	☒			

FRASER ST. TO CLARK DR. SURVEY

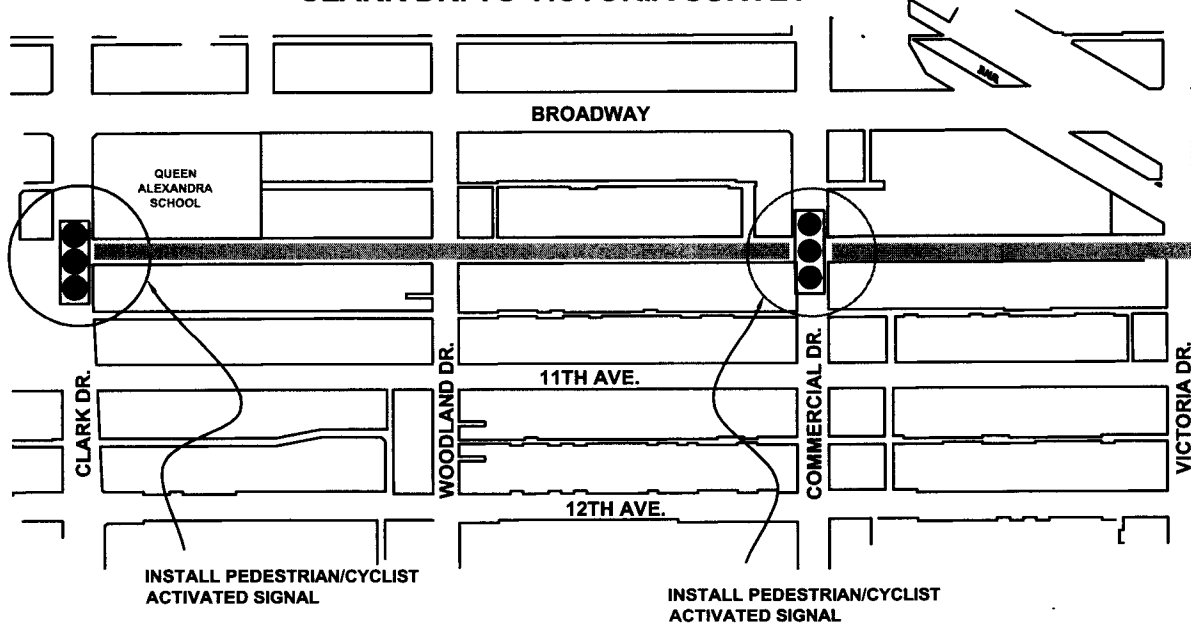


SURVEY QUESTIONS

- | | IN FAVOUR | OPPOSED | NUETRAL |
|--|-----------------------|-----------------------|-----------------------|
| 1. Do you support the installation of a traffic circle at the intersection of 10th Ave. and Prince Albert St? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Do you support the installation of a bike/pedestrian signal at the intersection of Clark Dr. and 10th Ave.? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. Would you like to be contacted when this issue is brought before Council? Yes ___ No ___ | | | |

Comments _____

CLARK DR. TO VICTORIA SURVEY



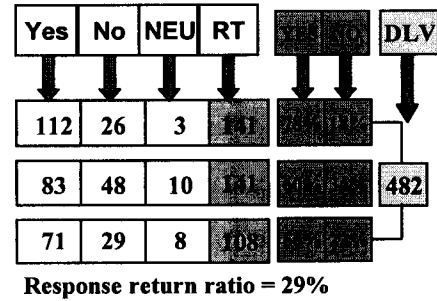
SURVEY QUESTIONS (Return to: Geoff Rice, Neighbourhood Transportation Branch, 7th floor, Vancouver City Hall.)

- | | IN FAVOUR | OPPOSED | NUETRAL |
|--|-----------------------|-----------------------|-----------------------|
| 1. Do you support the installation of a bike/pedestrian signal at the intersection of Commercial Dr. at 10th Ave.? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Do you support the installation of a bike/pedestrian signal at the intersection of Clark Dr. at 10th Ave.? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. Would you like to be contacted when this issue is brought before Council? Yes ___ No ___ | | | |

Comments _____

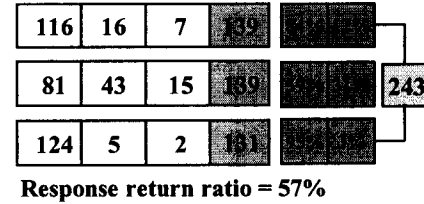
TRAFALGAR TO ARBUTUS

1. Do you support the installation of a bike/pedestrian signal at the intersection of Arbutus St. and 10th Ave.? ➤
2. Do you support the installation of a right-in/right-out diverter at the intersection of Arbutus St. and 10th Avenue (west side)? ➤
3. Do you support the installation of a traffic circle at the intersection of Yew St. and 10th Avenue ?



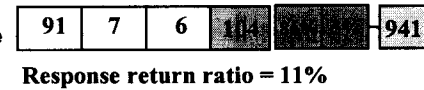
ARBUTUS TO BURRARD

1. Do you support the installation of a bike/pedestrian signal at the intersection of Burrard St. on 10th Ave.? ★
2. Do you support the installation of a right-in/right-out diverter at the intersection of Burrard St. and 10th Ave. (East side)? ★
3. Do you support the installation of a traffic circle and corner bulges at the intersection of Cypress St. and 10th Ave.?



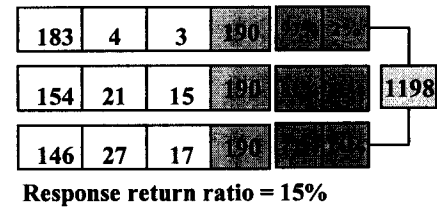
BURRARD TO GRANVILLE

3. Do you support the installation of a bicycle/pedestrian signal at the intersection of Fir St. and 10th Ave.?



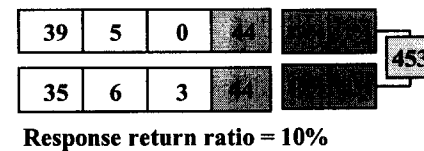
GRANVILLE TO OAK

1. Do you support the installation of a bike/pedestrian signal at the intersection of Hemlock St. and 10th Ave.?
2. Do you support the installation of a traffic circle at the intersection of Birch St. and 10th Avenue?
3. Do you support the installation of a right-in/right-out diverter at the intersection of Oak St. on 10th Ave.(west side)?



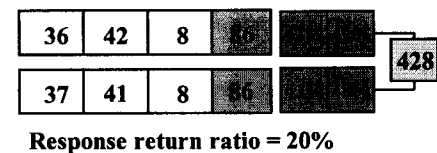
OAK TO CAMBIE

1. Do you support the installation of a right-in/right-out diverter at the intersection of Oak St. on 10th Ave.(west side)?
2. Do you support the installation of curb bulges on 10th Ave. at the intersections of Laurel, Willow and Heather St.?



CAMBIE TO ONTARIO

1. Would you support the installation of a traffic circle at the intersection of Columbia St. and 10th Ave.?
2. Would you support the removal of east/west stop signs at the intersection of Alberta St. and 10th Avenue?



ONTARIO TO FRASER

No questionnaires dropped off – residents submitted comments only.

Yes	Agree		% who agree
No	Disagree		% who disagree
NEU	Neutral		# Delivered
RT	# Returned		

★ Includes same question from Burrard to Granville
 ➤ Includes same question from Trafalgar to Burrard

FRASER TO CLARKE

1. Do you support the installation of a traffic circle at the intersection of 10th Ave. and Prince Albert St?

Yes	No	NEU	RT		DLV
-----	----	-----	----	--	-----

34	4	3			342
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2. Do you support the installation of a bike/pedestrian signal at the intersection of Clark Dr. and 10th Ave.?

35	1	5			
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Response return ratio = 12%

CLARKE TO VICTORIA

1. Do you support the installation of a bike/pedestrian signal at the intersection of Commercial Dr. at 10th Ave.?

51	5	5			250
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2. Do you support the installation of a bike/pedestrian signal at the intersection of Clark Dr. at 10th Ave.?

45	8	3			
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Response return ratio = 237%

Yes	Agree		% who agree
No	Disagree		% who disagree
NEU	Neutral	DLV	# Delivered
RT	# Returned		

COMMENTS

TRAFALGAR TO ARBUTUS

I ride down 10th between MacDonald & Arbutus and traffic is too close to my bike. The road needs to be widened. Traffic circles are a good idea.

Great Idea. Will save lives.

Why not put small speed humps on main roads? Not as large as the ones near schools but small enough not to harm vehicles and slow traffic.

The right in right out will cause a hassle heading east from our park

Opposed to diverters and traffic circles, since we don't think they help as much as a stop sign.

Installation of traffic circle will confuse the order of who enters the circle first and as a result there will be unnecessary traffic jams.

Bikeway increases traffic. Traffic during school hours and evenings is a safety concern. Why not put bikeway on 16th Ave instead.

Yew St. is a dead end at 11th so would only cause more inconvenience. Traffic is at a standstill at rush hour.

Far less traffic crossing 10th/Yew than at Vine St. Traffic circle would be better at 10th & Vine.

A pedestrian signal at 10th/Arbutus would be helpful as this area has very heavy traffic. In favor of traffic circles and diverters if they slow down traffic.

Great! Traffic on 10th is too fast - not safe for school students/residents. Would like to see ped controlled light at Broadway & Yew.

Would also like to see Signal at Yew/Broadway - many cyclist and peds there.

I heartily support any extension of bikeway system. Makes life safer for cyclists and motorist alike.

There should be no parking of ether side of Arbutus between 8th & 12th Ave.

Only dedicated bike lanes are safe. Until we have areas where no cars share out space will I feel safe on my bike (I ride on the sidewalk)

Signal is a good idea.. Cars drive pretty fast once they have gone thru the Arbutus/Broadway intersection. 10th Ave bike corridor has a lot of stop which need to be minimized.

Lights at 10th & Burrard and Fir & 10th would be very helpful to me as a pedestrian.

Good Idea. Long overdue

Light could slow traffic across Broadway from North or turning off Broadway from the East onto Arbutus. Bikeway better placed away from such a major intersection. Cranberry and 11th are very narrow with parked cars. There will be added traffic from the building planned for 2137 W. 10th.

With the new development on Arbutus & 10th the proposed traffic calming ideas are good.

With 3 schools on 10th plus the only access to the ice rink, adding a bike route is madness. W. 8th is safer esp. in comparison to 10th.

Proposal is not a fair decision as another building is being developed on 10th. This will create more traffic congestion along this already congested St. You have already cut off several ways for the residents to Redbud Lane. With the schools there and children being picked up. Leave our area alone. Arbutus would be more than difficult to access on or off.

10th is rarely used compared to Arbutus - traffic is usually stopped and backed up from Broadway anyway. Yew & 10: the 4 way stop helps reduce speed in front of the school and park surrounding it.

It works pretty well with existing 4 way stop signals.

Crossing at Arbutus/10th is dangerous for school children so a bike/pedestrian signal would also assist them. The car traffic attempting a quick route via 10th Ave would return to the main roads - reduce noise and potential for accidents for residents.

I'm sure this makes no difference, and you'll do whatever you want anyway. I don't understand why you don't just make it illegal to own and operate a car in Vancouver and get it over with. Why waste taxpayers money on all of these measures making it impossible to drive anyway. I can easily understand road rage when there are so many obstacles to impede driving.

Due to increased density in the Arbutus walk area the above proposals will help to reduce traffic problems on Arbutus and will be welcome addition for cyclists.

I am strongly in favor of a bike/ped signal at 10th & Arbutus. In fact, I have written to the City in the past requesting one. There are many schools along 10th Ave and many children cross Arbutus at 10th. My son was once hit by a car there.

I think that the diverter would restrict my options as to what route I can take coming back home from work and from what I can see I would have to make a detour via Broadway or wait a long time to make a left turn on W. 10th Ave. PS Great Idea!

An RI/RO diverter will cause huge back log at 11th Ave. Right now there is room to go around those turning left from Arbutus onto 10th and with a light it will make more sense to keep the ability to turn left and cross Arbutus on 10th to keep traffic flow.

Good idea.

Anything that slows traffic in the neighbourhood is good.

Re # 3 - Traffic circle not required. I walk past that intersection 3/4 times a day and there is never a problem as there is a 4 way stop sign on that corner. Traffic circles are a nuisance and a place for garbage collection by private and public schools nearby

I find it usually impossible to cross at Arbutus & 10th. Drivers aren't very generous or respectful nowadays. I think the pedestrian/bike light is a great idea!

The bike route idea is great. There is limited need for traffic circle at 10th & Yew b/c unlike your map Yew St doesn't go through to 12th. There is a roundabout just north of 10th @ Yew so there is really only traffic from 3 directions. Don't support the R-In and R-out, at 10th and Arbutus because it is already a horror show for traffic on Arbutus between Broadway and 16th.

As a general comment any measure that helps to calm present day traffic frenzy must be a good thing. This means pedestrians as well as vehicular traffic, and I am definitely for it.

There is a real need for speed bumps on W. 10th between Yew and Vine. This particular stretch of 10th has schools on either side. The cars don't respect the speed limit for the school zone.

Great ideas!

Also has there been any thought as to resident parking only along this section of 10th Ave from Arbutus to Vine as it is along 10th Ave at Trafalgar heading west.

My observation of all cyclists is that they are very clueless of rules of the road. Can't even read stop signs. Have no consideration of pedestrians. Kits area already has enough cyclist.

Yes, I'm so happy to hear that there may be an installation of bike/pedestrian signal at Arbutus St. and 10th Ave. This is a well used route for people, many of which are children, to go to Lord Tennyson School, PLC, St. Johns, & Fraser Academy. Many cars do not want to stop and I've almost been hit many times. In regard to traffic circle at Yew & 10th many people don't understand the correct way to use them and I think they're more dangerous than helpful. Then best bet is a 4-way stop which is already present there.

I find with traffic circles no one slows and cyclist take their chances when they enter. This would also be a bad place to put a circle because of the amount of traffic at 10th & Yew. In the mornings the intersection is congested with parents dropping their kids off. At least now, cars have to stop at the intersection before proceeding.

Restrict west bound turns into alley between 10th & Broadway. Rush hour parking restrictions are required on Arbutus between Broadway & 16th north & southbound.

As a resident in the area I am finding way too many cars driving fast between Arbutus & Vine and have witnessed a number of cars ignoring the stop sign at 10 & Yew. I suggest putting speed bump in between those streets.

I support diverters if there is a divider between the 4 lanes of traffic on Arbutus so that the cyclist isn't forced to dash across all the traffic at once. This a I great idea. I wholly support make the 10th Ave bike route. I used 10th as a route already but was nervous about crossing the larger intersections during busy times of the day.

Yes this is a necessary change. Many drivers speed through this area and use it as a shortcut. I support this change as soon as possible.

In conjunction with the bike route the city must consider the congestion on Arbutus between 12 and Arbutus. Suggestions are: a) left hand turn lanes at Arbutus & Broadway in all directions, b) parking restrictions on Arbutus - esp. on weekends. Traffic at corner of Yew & 10th is already horrible due to parents dropping kids off at St. John's school - a circle would make it worse.

ARBUTUS TO BURRARD

I'm not in favor of right-in/right-out diverter because the area is already difficult for cars to access. As a biker/pedestrian I feel the lights & circle would be sufficient

I really didn't understand why we need a bikeway on both 7th and 10th. Shouldn't it be on the other side of 16th, i.e.. closer to the one on 37th?

Arbutus has too many cars on it! It will make matters worse if we slow down traffic. Don't do it!

Re: Cypress & 10th: It is chaotic at the school at pick up drop off times which won't help traffic problems. With cars on the north side it's tight getting by, especially when parents line up to pick up kids on south side.

I use this bike route daily - a light at Oak is definitely needed.

Install a crosswalk at Fir & 10th, Fir is a very busy street.

We have a bike route on Cypress now. The only time I see bikes are on the weekend. Why are we making it so difficult for cars to get where they are going? It only impedes traffic

In my experience as a cyclist & driver I think people don't even slow down at traffic circles. More lights would be useful.

Major problems are crossing Kingsway and Main Streets

Currently the parking situation is difficult with our area. I would like this address first instead of bikeways.

If #3 goes forward you must not allow afternoon curb lane parking on Arbutus east side between Broadway & 12th Ave. The congestion now is very bad and having another traffic light before Broadway will increase congestion and pollution. Cars idling all day long in front of residential apts. Afternoon traffic will grind to a halt.

Arbutus is narrow and with bus parking lanes people are safe to cross. Burrard is NOT: street racing, speed, no courtesy on 10th from Burrard to Cypress because of school. No circles - they are too dangerous, especially by a school.

I am concerned for the residents of Blair Court. We have many wheelchair residents.

As a regular commuter I strongly agree with creating these bike routes. They encourage people to exercise and promote a more beautiful BC.

I can't turn left on Broadway from Cypress. I have to shortcut down Pine to drive home on 10th. Whats wrong with bike route on 8th. There are too many bikes on main streets as is. If bikes paid for these routes then ok.

If you put these things in (R1/RO) then those of us that live in the neighbourhood can't get around. With no left turns at Burrard on Broadway going west, I then use 10th, turn right on Burrard and left into the lane. The other alternative is to go blocks out the way wasting gas.

Thank you for taking care of this matter. These traffic claming measures are long due. I bike along that route almost daily 9 months of the year. These traffic improvements will improve communications among commuters greatly and encourage more people to bike and perhaps leave the car at home.

Yes, finally!

Repair of sidewalks and curbs need big help in this neighbourhood. A wheelchair driver myself just one of 18, we do need to look out for traffic on 4 wheels. The sidewalks are bad for old folks also.

This is also a school zone and anything to slow down traffic will be helpful and safer for the children. Cars travel at incredible speeds down this street 10th Ave.

Will the traffic circle or the bike route stop me from parking in front of my house? There is no other place to park.

I bike and walk to the hospital for school 3-5 x per week and the other days I bike to UBC. The proposed changes would make me more comfortable especially when biking, using 10th as a route to the hospital.

I am very pleased to see that this is happening. These improvements will increase pedestrian and cyclist safety.

BURRARD TO GRANVILLE

I would like to see a bike/pedestrian signal at the intersection of Broadway & Pine. It very dangerous to cross.

I think the installation of bike/ped signals is a great idea however I feel that it is important that the signal lights be in sync with those at Broadway/Fir & Broadway/Burrard so that vehicular traffic flow is not impeded.

Hesitate to agree with light at Fir/10. Granville St. is one of the main southbound streets and one of only two coming from downtown yet traffic is stopped at almost every block by ped lights. I don't want Fir to become a gridlock too. The 10th Ave Bikeway is an excellent street for cycling.

Anything to cut down traffic in this area is appreciated. I would really like to see a right in/right out diverter at Pine & Broadway south side.

In favor of all efforts made to slow and reduce vehicular traffic.

The problem I see with RI-RO diverter on eastside Burrard St. on 10th Ave, those residents living 1500 & 1600 blocks 10th Ave, traveling south on Burrard will either have to turn left on Broadway, 11th Ave or either of the 2 alleyways and travel around to get home and park their cars.

Very much in favor of bike/pedestrian signals at 10 & Burrard and 10th Pine. Increased traffic is making street crossing difficult for people with mobility and vision problems.

10th Ave bikeway is necessary link to the eastside without having to drop down to 7th Ave. It's a great plan.

The only way in to parking on 10th Ave off Burrard from Broadway is to make a left turn onto 10th Ave.

A light at 10th Ave and Fir should also be considered for cars.

I think that this is a real great idea because I cross Fir St. at 10th Ave all the time to go to work and there has been lots of car accident there. I also think that it's a real great idea for us pedestrians so that we can cross at fir and 10th safer.

I have concerns that right now W10th Ave is being used as a speedway between Fir & Burrard and cars speed along with no concern for cyclist or pedestrians.

What a fantastic idea! This will make a well-used bicycle. Burrard is dangerous to cross at 10th Ave because its so busy, that doesn't seem to stop pedestrian from making dangerous dashes so my partner and I support crossing there.

I hope that this would decrease the auto noise level which has increased significantly over the past 18 yrs of living here. I would also hope that auto noise would not be replaced with cyclist babble.

Would like to see the No Parking extended to 7 pm on Fir St. to ease congestion.

Fir & Burrard are busy road, would the addition of signals affect the south bound traffic? Which would most likely affect W. Broadway traffic as well.

It's about time! We need way more bike-friendly routes in our city. I always use 10th Ave as a bike route already - it'll be nice if there are some signals along the way.

1.. All traffic calming measures are welcome. 2. I cross 10th & Fir at least 3 times per working day. The drivers consistently fail to respond to the law: pedestrians have right of way at all uncontrolled intersections

The more bikeway the better.

I think it would cause too many traffic problems if a pedestrian light was put at Burrard & 10th. I see no benefit to a R1-RO as there is parking only on one side of the street, it would make it even more difficult for residents to park. I am completely opposed to curb bulges. This will eliminate parking when the city is already strapped.

We are in favor of the bikeway, but are curious why another one is needed when the off Broadway route runs parallel and is only 2-3 blocks away. Please no beeping sonic indicators.

As both a biker, motorist and pedestrian I think both the signals and diverters will alleviate long waits in crossing Burrard and Fir St and reduce potential accidents

Ensure pedestrian lights are in sync with traffic lights at Broadway intersections to eliminate backup.

I am a cyclist who currently uses 10th Ave extensively.

The lights at Fir/10th must be synchronized with the Fir/Broadway because south bound traffic on Fir is often backed up.

Please put lights at Broadway and Pine.

I am a big supporter of bike corridors.

The less we use our car the better.

I am strongly opposed to diverters. Bulges tend to create congestion where people are trying to turn left. You are proposing to put these in the busiest traffic area on W10th. Traffic circles are good but they lack yield signs. People tend not to know who has the right of way. There should be no trees or bushes in them to block vision. Diverters are not necessary because people don't use 10th as a throughway.

I see no need for a R1RO diverter as long as signals are installed. Residents should have consistent vehicle access to their homes.

Marked X-walk at fir and 10th would be useful. Many drivers fail to stop without it. Its hard to cross.

I am pleased to hear about the signal installation. I often witness near-misses between cars and bikes trying to cross. Traffic signals would help.

This is a great idea. I have almost been hit crossing Burrard and 10th and pine and 10th. My husband is in a wheel chair please consider new ramps.

This is a wonderful idea.

The diverter needlessly restricts the residents because the street parking is on the south side. Coming home would require me to drive around the block or use the alley. The lights on burrard are timed well so there is usually no problem crossing. The problem is at rush hour when traffic backs up and clogs the intersection. Fir badly needs a light, it is very hard to cross. i think a well marked x-walk would be a better idea at Burrard.

We would also like to see a traffic circle at 10th and Pine, or at least a 4way stop. 10th between Pine and Fir is a high speed shortcut. A RI-RO should also be considered. We also see a lot of commercial truck traffic, like empty tour busses. There has been a regular increase of traffic over the last few years. This will only become worse as Broadway becomes more congested. Any measure to restrict through and non local traffic would make the street calmer and safer .

More convenient to have a traffic signal at Fir and 10th

Good idea will make crossing safer.

10th Ave. is an excellent route. There is dangerous crossing westbound on Burrard.

As a resident of 10th Ave. at Burrard we find it very convenient to enter and exit left and straight through. We oppose the diverter. The signals are supported strongly. Its dangerous to cross fir and Burrard by foot and by bike.

A great idea thanks for the opportunity to respond.

for the past 5 years I have noticed a large number of cyclists and peds crossing 10th and Fir+ Burrard. A light would be appreciated. I've seen to many near misses. I hope your project is a success.

I support this initiative.

I am a cyclist and the more this city can do for me the better.

Good work! It's about time. Now, please get the Police to start ticketing speeders. Vancouver has some of the most reckless, dangerous drivers in Canada which doesn't bode well for building communities, with respect for the needs of shoppers, walkers, cyclist, etc.

This route would be an excellent addition to the City. I have wanted to ride my bike to work for some time but have been afraid to for the lack of a safe route. I would bike from Fraser to Burrard.

I am pleased to hear that finally something will be done. The traffic at Yew & 10th is horrible and many drivers run the stop signs at high speeds. Also many drivers use 10th & Arbutus as a short cut to get to Broadway.

GRANVILLE TO OAK

This is a Great idea! By adding more bike-friendly streets, we can reduce the pollution impact. We should take examples from cities like Copenhagen and Amsterdam to learn how they have introduced successfully bikes, to reduce cars & fumes.

It will be safer for the many pedestrians and cyclists that use 10th Ave.

I already use 10th as a bike route from Granville to Cypress as part of my daily commute and I'd be thrilled to see it extended.

Anything to save accidents is good.

I support cyclists but not at the expense of other transport. Until cyclists obey traffic laws i.e. stopping at stops signs, I cannot fully support them on any front. Get them to traffic bike signal school.

If RI/RO installed at 10th & Oak, resident traffic will be forced to move to Broadway or 12th when we travel to shopping/services. Area east of Oak, both Broadway & 12th are already overloaded with thru traffic, transit and bus. Traffic. 12th Particularly seems to be the choice of people traveling to UBC from east van and Burnaby.

Like the creation of this route but not sure about traffic circles. As a cyclist I don't always find the circles to be very bike friendly - not that I've had any problems with them though.

This neigh. is great for peds/cyclists and other users of environmentally friendly transport. Installing traffic signals where 10th Ave intersects with major arteries (i.e. Oak, Hemlock) will improve safety and convenience.

I don't believe traffic circles are traffic calming devices - more like traffic confusing devices. Would prefer 4 stops signs. Greatly support the signal at Hemlock.

Burrard & 10th is hard to cross by bike too. A ped/bike signal would help there as well.

Any movement to make the city more bike and pedestrian friendly is most welcome. Signal at 10th & Hemlock is desperately needed.

Any improvements to 10th as a bike route would be awesome.

Most definitely.

Good idea due to increase of bike population.

Would also like to see traffic circle at Spruce & 10th

Finally a good survey.

10th Ave lacks sufficient parking near Oak St. (between Spruce & Oak) With reduced vehicle traffic due to the bike route please consider increasing the parking by allowing cars on both sides of the street.

I am glad to see that this city is finally supporting alternative transportation methods - better last than never.

Great Idea, work on more resident parking too! Turn it into a bike/walk only area similar to the section near Bayshore Dr. downtown. Hard to turn onto Hemlock from 10th already.

My concern is a possible increase in skateboarders - they are very noisy going down the street.

I am very much for Q3. Too many trucks and tourist buses coming down 10th Ave. Increasing traffic by such large vehicles makes for more noise pollution and accidents.

I am all for safe bike lanes. Be sure to include intersection instructions for cyclists so over time they can be influenced to ride according to the rules of the road..

I use my bike more than my car so any improvements at all are welcome.

It is very difficult to cross Oak at 10th for pedestrians & cyclists. I feel this change would make it safer.

I am a bike rider and a racer throughout the city and I really enjoy bike riding and feel that we need more bike routes to protect cyclists from being hit by a cars.

How will this effect the exit route for the Fire station on 10th & Broadway?

It would be great to have a place to cross without having to walk up to Broadway. Pedestrians usually run across the street when there is a break in traffic, which is a hazard

Hemlock & 10th is the most disturbing intersection to cross; it is extremely difficult. Also, the traffic tends to race (especially at night) down 10th and I hope a traffic circle will put an end to this stupidity.

Good idea. We need more information on the central valley Greenway.

I would like to see a traffic signal at Oak & 10th but not restrict turns - I turn left onto 10th from Oak and would like to be able to turn left onto Oak from 10th which is almost impossible now.

I don't think a traffic circle at Birch is necessary as this crossway typically is not a high traffic zone.. I would rather see \$\$\$ go to a light/crossway along Hemlock; it is a difficult crossway during intense traffic.

Good for you!

I think it's necessary to install traffic lights at Oak/W. 10th for the safeness of pedestrians and drivers

I thought 7th was the bike route? What good will a traffic circle do pedestrians? May help traffic but it is more difficult to cross the road - at a traffic circle.

If a traffic signal will be installed at Oak St. and 10th Ave why would it be necessary to put in a right in/right out island? I don't feel this is necessary and it would also cause residents on 10th Ave on either side of Oak St frustration.

I cycle regularly and am in favor of these measures.

Traffic circles yes - they impose control but allow access. Curb bulges and diverter - no - as they paralyze motorists who live in the area.

#3: Having a R-In/R-out diverter would eliminate motor vehicle access from 10th Ave west of Oak to 10th Ave East of Oak, where the hospital emergency vehicle entrance is. Doing this would not only decrease potential shortcutting and vehicle traffic, it would also decrease the chances of getting to the emergency entrance quickly for local residents.

Introduction of 10th Ave as a bikeway seemed an excellent idea on paper. For instance, the University Blvd in UBC area has number of lanes reduce from two to one. A bike path is then created on the right lane of the road. It created major problem for buses picking up students on the bike lane. Also cars are lining up on the singular lane during rush hour. The bikeway was created two years ago; I saw very few riders using it, especially during wintertime and rainy days. Bikeways are not working in our city, it remains an concept, unfortunately.

They are great ideas, let's go for it.

10th Ave is a fire truck route since 1954 as I have lived here since then. This route is designed currently for the safety of the hospital and its residents. I feel the Fire Dept. should have a final say in this matter.

Great ideas. Birch & 10th is scary even in a car.

I fully support the implementation of proposed amenities along 10th Ave.

Great that there is movement toward developing the 10th Ave bikeway.

I strongly favor any and all steps the city makes to an alternative for many drivers frustrated by W. Broadway's increasing congestion.

I am strongly in favor of installing a traffic-calming devise at Birch and 10th Ave. Although I am not an engineer, a traffic circle seems to be the best option.

A traffic circle at Birch & 10th is a great idea. At times when I walk to Granville St it is very difficult to cross Hemlock.

I strongly support the installation of traffic light at the intersection of Oak St and 10th Ave.

I support the changes immensely. I use these intersections often and find them very dangerous. We have many seniors in this area; they need protection from traffic.

If the COV makes it easier for cyclists to ride in the city more people will ride. There should be a bylaw which gives cyclists right of way over all cars. As long as the cars are permitted to ignore bikes they will.

We live at 10th & Alder. Every time I walk down the street or go to my car someone is speeding. Cars frequently drive at 80 K. This is a great idea to change traffic on 10th. My concern is parking - putting in traffic signals or circles will limit parking in an already very parking-limited area.

Living on 11th I am one of the cyclists using 10th. It is not always convenient using 7th as an e/w route and it's quite a hill coming up to Broadway on Spruce or Alder.

Good idea.

I'm glad that something is being done to try and decrease the flow of non resident traffic along the street..

A signal at Hemlock will be most beneficial. It's very hard to cross as a pedestrian. We like to call it Hemlock Highway!

I ride to work along 10th, the proposed changes especially at Oak, will improve the commute significantly.

Traffic circles are a complete waste of money. A cheaper solution is 4-way stops.

Anything that will slow and control auto traffic is a welcome addition to this area.

Slowing traffic in this area and making a safe crossing at Hemlock will save my life.

A quick stop signal would be good at Oak. This signal may cause congestion being so close to Broadway.

I regularly ride on 10th between Knight to Victoria. During rush hour I can travel the same distance quicker than by car. I'm so happy this road will be made into a bike way.

Turning left onto 12th is hard and does not have a left turn signal and holds only 3 cars. Will this cause problems for the fire trucks? Overall this is a wonderful idea.

Anything you do to slow down traffic in our neighborhood is welcome. I look forward to the changes.

I support Cycling and non-polluting transportation

I would like to see these at King Edward and Heather; I've had close calls at this intersection.

I would consider a light if Parking regs were 7 days a week. North traffic is bad on weekends, another light would be disasterous.

The traffic circle will have a positive impact on late night traffic that goes down the street from various local bars.

This will slow the traffic on 10th and keep the racers from getting out of the bars from waking us up.

Bicycle routes are great ideas!

This is a great proposal. Hopefully cyclists will use this route rather than 12th.

Great, oak and Hemlock are troublesome to cross.. The circle will slow down all the drunk drivers who rip down 10th after Daddy-Os closes.

The sooner this is done the better

I hope this bikeway extends all the way to Alma

We should wait and see what effect the traffic lights have on 10th before we install a circle or diverter.

This is a great idea. I always ride my bike on 10th.

That would be great to have at Oak & 10th. As residents it would benefit us hugely! Cyclist/pedestrians would benefit and it would slow down through traffic/short cutters along 10th Ave.

I'm in favor of the bikeway development and improvements for pedestrians crossing streets.

OAK TO CAMBIE

Excellent ideas. Traffic calming is very helpful. However, access for ambulances must take priority.

I am delighted that the City is converting more roads into bikeways.

900 block of W. 10th is very busy. Fire engines race down at top speed. There permit parking zone in front of my home is always filled by cars without permits. While I support bike routes throughout the city I think that W. 10 is not a good idea.

As a regular cyclist to work from the West End I support this initiative.

No mention of crossing Kingsway at 10th. I have cycled this route for 15 years and appreciate the improvements that have been made. The extra signal will help a general problem of bike routes is that many cars also use them if barriers are not installed. Bad example = 8th & MacDonald.

10th Ave has already established itself as a bike route therefore this proposal is welcomed in its entirety. As more motorists use 10th Ave as a bypass to the congested major thru-fairs of 12 and Broadway, something needs to be done to discourage its use.

In my experience commuting on various cycle routes in this area the right-in/right-out diverters are essential to maintain such routes as favorable bike routes. The off-Broadway route does not have enough of these so has in areas where they are absent, become a thoroughfare for cars who count on bicycle riders to push the buttons!

Right now the most dangerous intersection is 10th and Kingsway. Motorists ignore cyclist/peds.

I would like the new light at 10th & Oak to be synchronized with the lights a Oak & Broadway just like the light at 10th & Cambie.

I bike along 7th or sometimes Broadway to and from VGH every day from the West. I'm unsure however about the wisdom in converting the portion of 10 Ave in front of VGH. Couldn't increased cycling traffic conflict somewhat with ambulance traffic?

Would like to see models of curb bulges & RI-RO diverters. Would the 7 KM bike route also include a ped walkway?

My wife and I bike to work every day along this corridor, so we would definitely use a bike route along 10th Ave.

The street along W. 10th is already very narrow. Adding these things will only make it more hectic therefore dangerous to bikers..

My main method of transportation is my bike and I live at 10th & Oak. I clearly endorse these proposals.

I use 10th Ave for cycling. I rarely cycle on W. 10th from Laurel because of the difficulty in crossing Oak - so the diverter and traffic signal changer will be a great improvement.

I would use my bike more for transportation if I were not as nervous riding in traffic. Any changes made to reduce the risk potential are good.

Major concerns: 1. The emergency entrance to the hospital is on 10 just east of Oak. How many people drive themselves to the emergency ward? 2. Both the emergency and ambulance station front onto 10th Ave in this area. Will increased bike traffic create a hazard for this section of 8th Ave.? 3. curb bulges - my personal experience with these in other areas has been that they create hazardous driving conditions, contrary to the intended effect. I prefer increasing restrictions on parking areas and towing violators with cars extending into intersections.. 4. I'm not sure how traffic circles reduce speed - personally they allow me to double my speed over what stop signs allow.

Traffic light at Oak & 10th controlled by pedestrians and vehicles on 10th Ave would be great.

There is a lot of excess traffic not related to the neighbourhood. There are a few owners that are also in agreement of making w. 10 Ave bike friendly.

Long overdue!

It sounds like a good plan. Go for it.

Its all ready hard to get in and out of may parking spot. It will reduce parking and put more pressure on available space. It takes to long for me to find parking.

CAMBIE TO ONTARIO

Removing the east/west stop signs at Alberta and 10th is a really bad idea. A significant # of drivers do not honor the "do not enter" restriction eastbound at 10th & Yukon. Removing the stop signs at Alberta would allow westbound vehicles to be traveling at full speed in the 300 block - too fast to react to oncoming traffic in time to avoid an accident.

Bike route alone 10th is a great idea because it will provide better safety for cyclists. Further, it will encourage more people to cycle instead do drive, as an easy path is available for commuting.

I have lived at above address for 10 years. Since MEC has moved in the traffic has become worse every year. The City has made Columbia south of the lane to 11th Ave one way. This is regularly ignored.

People still drive like maniacs around traffic circles. We have a lot of pedestrians and cats on our street; I would prefer that motorists & cyclists have to come to a complete stop. I think the 2 way stop at Alberta & 10th, however, would be sufficient enough.

Traffic circle - 10th/Columbia would cover large portion of beautiful, expensive "granitoid" paving. I am opposed! Stop signs - Alberta/10th - Integral to neighbourhood traffic plan. Do not remove!

Traffic circle would cover over precious heritage paving. This is a heritage area and circles are inappropriate. Removing stop signs would seriously weaken traffic plan.

1. Opposed because it would spoil the very expensive heritage paving. 2. Stop signs are an important part at the neighbourhood traffic.

#1 was tried once and failed miserably thus it was removed. The street is paved in stone with the heritage neighbourhood. #2 this removal would greatly decrease safety to pedestrians, cyclist and motorists. This is a heavy traffic area with visibility limited because of congested street parking and the slopes of the land.

Regarding the east/west stop signs, I believe the advantages of keeping the stop signs where there are. To slow down traffic, far outweigh the advantages of taking them out. Bikers need not be overly concerned with slowing down at this intersection. It is of minor consequence. As there are numerous traffic circles already in place throughout the neigh. it isn't necessary to build another one at 10th and Columbia.

#1 - I am opposed because a traffic circle would cover the beautiful old style granite paving that adds so much to the character and historic favor of the area. #2 - I also oppose removing these stop signs. They are very important in terms of the safety of that location and help to reduce dangerous speeders/speeding.

A traffic circle would be excellent, but removal of the e/w stop signs @ Alberta would still allow for speeding traffic.

All bikes should buy a license \$10.00 per year. Also should have insurance, all cars must have this item. Have seen many accidents, because they don't obey signs.

All bikes should have a license about \$20/per year. They don't obey the signs at 10th & Manitoba

As a cyclist I'm happy to see the proposed improvements to a route I use regularly, especially the signals at Clark, Oak, Burrard and Arbutus.

Traffic circle would be overkill. Its already difficult to access the area and there is only light traffic. It would also compromise brick paving of this heritage area.

You have not explained what benefit a traffic circle will bring. I can see that removing stop signs provides a smoother ride for cyclist.

1 - Installing traffic circle not a good idea because of granite paving that was installed to improve upon historic character of neighborhood. I believe this was an expensive undertaking. Removing east/west stop signs will jeopardize safety of pedestrians, cyclist and motorists. To create a safe bike route this makes no sense at all.

I do use that route on my way to work when I cycle 3 times a week. It is a good idea. Putting the light at Oak will help tremendously.

These changes will increase vehicle traffic on 10th Ave without significantly improving cyclist traffic flow.

Strongly in favor.

As a cyclist I support the bike route and any improvements.

Have been using this route for 2 year and I congratulate you on taking this initiative. This is really progressive.

Finally! I support all measures that limit 10th Ave motor traffic to local use and assist the pleasurable speedy transit of bicycles

Bikers never pays attention to any stop signs on 10th Ave anyway but we need cars to stop.

There may be a need for a left turn signal from west bound Broadway onto Ontario St. This is one of the routes into the neighbourhood and the difficulty of turning left at this intersection slows westbound Broadway traffic. Once the new bldg is finished on Broadway between Ontario and Manitoba there will be many more people trying to turn left off of westbound Broadway onto Ontario, heading south.

We need more bikeways and we need express bike paths to downtown

Also please consider other measures on 10th to make crossing Yukon easier.

Have often used 10th as cycling and walking route. I appreciate your efforts.

It sounds like a good idea, but I'd like to have more info on how traffic circles affect lifestyle/noise/crime in quiet communities.

10th Ave is very narrow which makes cycling more dangerous. Parking should be restricted to one side of the street only.

We have too many calming measures now in the area. Its traveling through a maze to get to your own home. Diverters should be removed to help get some traffic off Cambie which has become a real Bottleneck @ rush hour especially.

Downhill cyclists coming from the east on 10th Ave hardly ever stop at the stop sign at Manitoba. It might be actually safer to not have stop signs east and west on the intersection

I fully support changes to make the 10th Ave bikeway safer for cyclist.

3 cheers for more bike routes!!

As a bike commuter any improvements to bike routes sounds good to me.

I really wish the City would stop installing traffic circles. 4 way stops are a more effective method of traffic control.

I fully support any measures to make transportation safer and more efficient for bikes, walkers and transit users.

I live at 10th & Columbia and I have never seen a bike rider stop at any stop signs. Bike riders ignore stop signs. The traffic signs are helpful to stop cars, preventing them from hitting bike riders. Do not put a traffic circle at 10th & Columbia over the heritage street cobbles installed a few year ago at huge expense.

Since cyclists don't stop at Alberta we may as well acknowledge that! They do not stop on 11th at Columbia either. Maybe change the stop sign there to discourage short cuts. Can the roundabout be constructed to block the stream of cars going the wrong way on Columbia?

Opposed because traffic circle 10th/Columbia would cover the 1912 style paving. E/W stop signs at Alberta are a vital part of neighbourhood to prevent speeding

You need speed bumps with bike path cut outs.

Traffic circle would destroy unique cobblestone street. I have never seen a bike stop at any stop sign but car do. Taking out the stop signs will only speed up the auto traffic.

What about a bike signal at one of the most dangerous intersections on the route - Kingsway & 10th?

Since Alberta is the only St with unrestricted access, cars drive fast heading south past 10th. The 4way should remain.

People ignore the circle at Ontario and 10th. The speed has also increased on 10th.

Recommend bike signal to cross Yukon on 10th.

The traffic up Alberta is heavy. I see many commercial trucks coming up here. It would be hard for pedestrians to cross Alberta without the stop signs.

When the city builds traffic circles they tend to ignore pedestrian safety. The circles direct vehicles into the path of pedestrians as they cross the street. Vehicle volumes on 10th do not justify 4way stops. Cyclist and motorists just slow down at these stops anyway. I'm in favor of removing the east/west stops.

I support this bikeway 100%. As a pedestrian having cyclists on the roadway helps create a more acceptable scale between the road and the sidewalk. Cyclists increase the livability of all neighbourhoods and makes me feel safer.

Please also address the issue of NO X-walk/lights/signage at Heather & King Edward. This is designated as a bike route but there is no way to safely cross 25th!

I have observed that the majority of motorists going down 10 speed. Currently, the stop signs at Alberta do serve to slow people down. Removal will only allow drivers to maintain high speeds.

I would like to address some improvements that could create safer traffic in the residential area in question. A) Improvement of the street lights on 10th Ave between Yukon through Ontario. B) Parking access to 10th Ave/Yukon through Ontario and Ontario from 10th ave through 11th Ave. to be restricted to residents only e.g. with a parking permit.

Circles do not slow down traffic as stop signs do. Not many drivers know who has the right of way in a circle. Circles are dangerous for pedestrians as cars do not stop for them especially when the car makes a right turn, the driver looks on it left and not for pedestrians on the right. Not a good idea at all.

FRASER TO CLARK

As a cyclist myself, and a car owner too I should add, I am all for improved routes for cycling. I prefer to ride my bike to work and I rely on these routes to do so.

All ways of keeping the bike/pedestrian safety is in favor and should be done as soon as possible.

Instead of the stop sign at 10th Ave put the stop sign at Prince Albert. Put a sign to tell cyclist to slow down going east before the intersection.

We really need a pedestrian signal at the intersection at Clark & 10th because of the large number of school children who cross there. One of the main entrances to Queen Alexandra School is on 10th Ave and many parents walk to and from the school. I have also seen many children cross unaccompanied. Because of the volume of bike and pedestrian traffic the crossing really needs a signal.

Being a cyclist and living on 10th Ave I've never had any problem at 10th/Prince Albert. I would not put a light at the Clark/10th, maybe just a signal as to give priority to bike/pedestrians similar to 10th/Kingsway. I have a little more trouble/insecurity crossing Oak and Arbutus while riding on 10th.

It would seem more appropriate to have a traffic circle at St. Catherine or a pedestrian cyclist signal at Fraser & 10th. I live on the north/west corner of Windsor and 10th, ground floor so I have a perfect view of the intersection. Cyclists and skateboarders never stop at the sign going e/w. The cars going north/south do not have to stop at that corner. Although I've never seen any accidents it would seem safer if the n/s traffic had the stop sign.

I agree to these proposed changes. Anything which encourages safety and the use of bikes is good for the city of Vancouver.

I would support #2 if the signal was timed so as not to interfere with the North/South flow of traffic along Clark

Great idea to install the traffic circle at 10th & Prince Albert. As a cyclist and a new mom, I feel that traffic circles are good means of slowing down vehicles with an urge to speed down side streets.

Great idea

Both members of our household commute by bike daily. A couple of general observations: regularly cars ignore RI - RO diversions, car traffic on bikeways is getting worse, often there is a line up of cars waiting for pedestrian/cyclist signals and a bike can't even get to the button to activate it.

Both these measures would be excellent for bikes and pedestrians in the area.

I bet many emergency vehicles and fire trucks find them annoying. My recommendation is that speed humps are more cost effective vs. circles which waste space and money

I favor the installation of traffic lights at 10th & Clark if: there is provision for an effective divergence and control of bicycle traffic through the part west of Clark.

These are good measures.

Traffic needs to be controlled at intersection of 10th & Kingsway. Drivers do not stop for pedestrians or cyclists on the crosswalk. Suggest station police there for a couple of months to hand out tickets/fines. Re traffic circles: these should be accompanied by speed humps since motorists get used to them and whip around them at high speeds.

Strongly in favor of these proposed changes.

Please also consider a traffic circle at Glen and 10th Ave..

I am a cyclist using 10th Ave regularly. I was surprised to find that no plans were included to facilitate crossing Kingsway @ 10th. I consider that intersection to be every bit as troubling as the one at Clark Dr., as traffic volumes are comparable and cars seldom stop despite the existence of a pedestrian crosswalk.

I fully support improvements to Vancouver's bike routes for safety and environmental reasons. In fact, I would love to see an e/w route through Vancouver that is strictly for bikes and pedestrians.

As one who uses 10th to go east/west, I feel that a light at Clark and 10 isn't as beneficial as one at Kingsway at 10th Ave. Clark at 10th already has a median which makes crossing Clark Dr. fairly easy, while Kingsway at 10th is very treacherous as very few drivers stop for 10th Ave traffic. If anything, vehicles going down Kingsway speed up at 10th so that they can make the light at Broadway.

Hopefully the traffic circle will reduce automobile speed between Pr. Albert & Fraser! Use as a detour to bypass lights at Broadway & Fraser

Put a traffic Circle at St. Catherine's between Broadway and 12th. The cars travel at high speeds through this area.

Please install a circle at 10th and Glen. There is one near miss a day at this intersection between bike and cars.

CLARK TO VICTORIA

Stop traffic from entering onto (one way) 10th at Commercial against traffic.

How can we stop people from entering the wrong way off Commercial onto 10th?

I appreciate the efforts to promote clean modes of transportation in our city. Looks good.

As an Engineer who specializes in environmental solutions, the fact that heavy truck traffic must idle at yet another light for cyclist and skateboarders and cause increased air pollution in my neighbourhood disturbs me. This area is already surrounded by 6 traffic lights. There are plenty of opportunities for pedestrians, cyclists and skateboarders to safely cross the two points in question. Light will be vitally important to the safety of our students.

The Commercial Dr. & 10th Ave is a very busy all day. Being a pedestrian is quite dangerous. To install two signs would not be very expensive and the peds will feel safe.

With the amount of cars and trucks that currently use 10th Ave - either as a short cut or to enter or exit the Safeway parking area, any increase in bike traffic will no doubt result in greatly increased risk of accidents and injury.

There is no need for lights at these intersections. Pedestrians can cross with ease during breaks in traffic. Vehicles on Commercial are very respectful of pedestrians. Don't waste your time putting lights here!!!

People and bikes can go to the next block at Broadway & Clark and cross there. Why should we have to pay more taxes for that?

I'm living in this neighbourhood for 14 years. I would like to have flashing light for crossing at 10th & Commercial because the traffic is very busy.

No to bike path.

A Bike route along 10th is an excellent idea. That's the way I go downtown. I think a signal would be very appropriate on commercial but in the case of Clark it is not that needed because of the divider. It is quite easy to cross Clark on 10th and 11th.

The median at Clark is very wide with nice plantings etc. There is more than enough room for bikers/peds to wait for gaps in traffic. An additional light would increase idling motors increasing already have exhaust fumes near the school and social housing for single mothers/children and park.

It would be good for everyone.

Thanks for making 10th an official bike route - it is already a de facto bike route. The path through China Creek can be improved so that it is more direct, faster and safer. The crossing at Clark is acceptable currently but a signal would help the school kids who cross there. Oak is the worst intersection on the route - good call for the traffic signal there and on Kingsway.

Great idea.

I support the 10th Ave bikeway from Victoria Dr. to Trafalgar.

I think a bike route along 10th Ave is an excellent idea. I have long felt that it is a much better e/w route than hilly 7 - 8th Ave.

I live 1/2 block from Commercial & 10th intersection and it is a very dangerous intersection. A pedestrian controlled signal is a necessity for safety reasons, not just bike traffic.

A lot of traffic heading north on Clark turns right onto E. 10th to avoid the congestion at Broadway & Clark. We would also be in favor of a RI/RO diverter at E. 10th & Clark. Too many cars are cutting the corner and speeding up E. 10th - right at the Queen Alexandria Elementary School.

White painted stripes would be sufficient at 10th & Commercial. This would save the City money and relieve locals of the inconvenience of installation.

I am very pleased to see that this is happening. These improvements will increase pedestrian and cyclist safety.

I don't think you need a signal on Clark, since southbound and northbound are divided by a wide median/island

Excellent idea. I already use 10th Ave for all my cross-town cycling. The route is flat, direct, and very efficient for cycling. Signals at Clark and Commercial will help.

I have witnessed many close calls particularly at the corner of 10th & Commercial. In the past I have screamed at an elderly woman to run as a car was speeding towards her even though she was in the middle of the crosswalk.

I think this is a great idea because I have personally seen someone get hit by a car at Commercial & 10th Ave.

I do not live in the area but enjoy cycling around the city and appreciate any changes which make cycling safer and more enjoyable.

CITY OF VANCOUVER



Pine St. and Vine St. Traffic Circles



Dear Resident or Business Owner,

August 12, 2003

As you are aware, the City of Vancouver is proposing the development of a new bikeway along 10th Avenue. In March of this year 4800 surveys were distributed to residents along 10th Ave. Of these, 482 survey were delivered to residents adjacent to the bikeway from Trafalgar St. to Arbutus St. 60% of the residents surveyed indicated they are in favor of the proposed traffic calming measures and 78% are in favor of a pedestrian and cyclist actuated signal at Arbutus&10th Ave. Similarly a 59% majority was also received for the right-in/right-out diverter at Arbutus(west side of intersection) by residence between Arbutus and Burrard on 10th Ave.

The original survey that was distributed to your neighbourhood did not include plans for traffic circles at the intersections of Vine St. and Pine St. on 10th Ave. Residents along these two blocks have expressed concerns about vehicle speeds, shortcutting and noise.

Traffic circles are often included as a design element of bikeways. They are intended to:

- Provide a visual cue to motorists that they are not on a "through" street.
- Provide intersection control in order to reduce the likelihood of collisions.
- Avoid stopping cyclists unnecessarily.
- Slow traffic down in the vicinity of an intersection.

At this time we would like to include traffic circles at the intersections of Vine St.&10th Ave. and at Pine St.&10th Ave. Due to the high acceptance levels of other nearby traffic circles city staff anticipate that these circles will also be accepted by area residence. In addition we are proposing the removal of the east and west facing stop signs at Yew St.&10th Ave. Our initial intention was to install a traffic circle at Yew and 10th Ave., however after reviewing the past history and current traffic data at this intersection a 4-way stop is not warranted.

The installation of the right-in/right-out diverter at Arbutus and the removal of the east/west stops do need council approval. Once approved these measures would be implemented on a 6-month trial basis prior to a permanent installation.

.....

A report commissioned by ICBC entitled Safety Benefits of Traffic Calming concluded that traffic circles yielded the greatest reduction in collision frequency of any of the traffic calming measures evaluated, outranking stop signs and speed humps.

Over the last three years there were a total of 443 police-attended collisions involving bicycles and motor vehicles in Vancouver. Only four of these occurred at intersections with traffic circles.

If you have any concerns please call Geoff Rice at 871-6279 or email at geoff_rice@city.vancouver.bc.ca by September 5th, 2003.

Sincerely,

Geoff Rice



CITY OF VANCOUVER

Trafalgar St. Bikeway Proposal



Dear Resident or Business Owner,

July 28, 2003

As you are aware, the City of Vancouver is proposing the development of a new bikeway along 10th Avenue. In March of this year 4800 surveys were distributed to residents along 10th Ave. Of these, 482 survey were delivered to residents adjacent to the bikeway from Trafalgar St to Arbutus St. 60% of the residents are in favor of the proposed traffic calming measures. These measures included a right-in/right-out diverter at Arbutus and a traffic circle at Yew St. Similarly a 59% majority was also received for the right-in/right-out diverter at Arbutus by residence living on 10th Ave. between Arbutus and Burrard.

At this time we would like to include a traffic circle at Vine St. and remove the East and west facing stop signs

Traffic circles are often included as a design element of bikeways. They are intended to:

- provide a visual cue to motorists that they are not on a "through" street
- provide intersection control in order to reduce the likelihood of collisions
- avoid stopping cyclists unnecessarily
- slow traffic down in the vicinity of an intersection

A report commissioned by ICBC entitled Safety Benefits of Traffic Calming concluded that traffic circles yielded the greatest reduction in collision frequency of any of the traffic calming measures evaluated, outranking stop signs and speed humps. Studies from Portland and Seattle, both of which have significant experience with traffic circles, showed similar results.

Over the last three years there were a total of 443 police-attended collisions involving bicycles and motor vehicles in Vancouver. Only four of these occurred at intersections with traffic circles.

Due to the high acceptance levels of other nearby traffic circles city staff anticipate that these circles will be accepted as well. The new traffic circles will be funded by the City of Vancouver bikeway program and will not cause an increase to your property taxes. ***If you have any concerns please call Geoff Rice at 871-6279 or email at geoff_rice@city.vancouver.bc.ca by July 25th, 2003.***

Sincerely,

Geoff Rice

10th Ave Bike Route Vancouver Area Cycling Coalition (VACC) Recommendations

The VACC sponsored a bike ride on Sunday, February 9th; the following are comments from the VACC and from cyclists who participated on the ride. A response by COV staff accompanies each recommendation.

Bike Routes, if well designed, are an effective way for efficient movement of cyclists from destination to destination on roads with low motorized vehicle traffic. They are also an effective way to encourage people who may be less skilled at cycling or who are not as comfortable cycling in active traffic to undertake more trips by bicycle.

We would encourage Council to set up design goals for all new bike routes. These goals should then be monitored after a few months of construction and a year later verifying the degree of success of the design. If some of the goals have not been realized, then street modifications should be undertaken to the original design. Some of the goals may include cycling traffic projections, motorized vehicle traffic projections, cyclists' comfort level index, desired motorized vehicle street speed, and neighbourhood attitude to the bike route.

For an effective bike route there are a number of important considerations. Cyclists need to feel that the route will take them to their destination quickly and efficiently. They need to feel safe while using the route. They need to be able to follow the route easily. Also, they need to feel that motorists are aware of their presence on the road and will be courteous to them.

There are a number of design measures that contribute to this sense of a friendly environment for cycling. Cyclist activated signals at all arterial and secondary roads greatly assist crossing busy streets in an efficient and safe manner, reducing cyclists' frustration and some tendencies to take risks.

Integrated Network

Bike Routes should be networked into other cycling facilities - Bike Lanes, Bike Routes, Bike Paths, etc. providing cyclists with options for contiguous cycling on roads designated for cycling.

Bike Route Comprehensive Signage

A new bike route should have a comprehensive program of bike route signage on the road shoulder, as well as, bike logos on pavement so that motorists and cyclists always have a bike route sign and bike logo in sight. At a minimum, there should be a visible, unobstructed bike route sign on the road shoulder right at the start of the exit side of every intersection and a bike logo on the road pavement. For longer blocks, additional signage will be required. Street name sign should also have a bicycle logo on the face and bike route name sign affixed on top of the street sign.

Motorist awareness of cyclists on a bike route goes a long way to providing the feeling that encourages people to cycling. All roads and lanes intersecting with a bike route road should have a warning sign at each corner - bicycle crossing with a bike route name sign and two-way arrows.

Cycling targeted signage provided on a new bike route should be comprehensive, including destination, direction, information, and warning signs.

Cycling targeted signs should be visible and readable under any weather and light conditions. These signs should be highly reflective with minimal light under night conditions.

Motorists' Speed Alley Syndrome

A straight section of road that is open and appears wide and unobstructed to a motorist will lead to speeding. There are a number of sections along this route that fits this speed alley syndrome. One possible solution for making the road friendlier to cyclists and making it appear less appealing for motorists speeding would be to have short sections of bike lanes on the curb side of blocks that have 24-hour no parking restrictions. As long as the street has sufficient width for 2 metres for parking and 6.2 metres for driving, then a white, solid line could be placed on the pavement on the non-parking side of the road. If the remaining pavement between the white line and the curb is 1.5 metres or more in width, then it could be marked as a bike lane. If the width is less than 1.5 metres, then it could be an unmarked, unofficial bike lane or cycling refuge. Works quite well on many streets and highways.

Traffic Circles

Control of motorized vehicle speed on the street is important to the success of a bike route in attracting and encouraging the public to cycle on it. At the same time, minimizing stop signs along the bike route especially at intersections on an upward grade is desirable to cyclists. A solution to reducing speed while minimizing stop signs would be by replacing stop signs with large traffic circles. Small circles are not a good substitute to large traffic circles as motorized vehicles are able to negotiate these circles without any significant adjustment in speed. However, large diameter traffic circles where motorized vehicles have to slow down to negotiate the intersection can be very effective.

For improving the effectiveness of currently installed small traffic circles, these should be retrofitted with corner bulges or cyclist corner bulges.

Most desirably, all traffic circles should have double corner bulges or cyclist corner bulges. Traffic circle curbs should be painted with yellow, reflective paint for greater safety and visibility under less than ideal lighting, inclement weather, and night conditions.

Corner Bulges

Effectively placed corner bulges and speed humps also assist in inducing slower speeds. In addition, corner bulges also assist in increasing the line of sight on to the intersection road at intersections for cyclists and motorists. Corner bulges should be approximately two car lengths long to provide the line of sight cyclists need for spotting vehicles entering intersections from the cyclist's right at any intersection with traffic circles or at any other intersection. Corner bulges should be painted with yellow, reflective paint for greater safety and visibility under less than ideal lighting, inclement weather, and night conditions.

Road Designed for Night and Inclement Weather Cycling

Consideration should be given to a road treatment for cycling in the night and in inclement weather. Visibility of bike route and other signs, traffic circle, corner bulges, and bus stop curbs, and pavement marking should be considered and improved for limited or restricted lighting and sight. Reflective paints and signs with limited lighting are needed to help make a safe and friendly cycling route.

Motorists Behaviours Needing Special Consideration

Cyclists have expressed concerns with motorists crossing the Bike Route without heeding stop signs. Motorists also have a tendency to bring their vehicle to a stop in the intersection rather than behind the white stop line. Restricted line of sight at intersections may be the cause of this behaviour.

Cyclists have expressed concerns with motorists' lack of practicing good driving behaviour while negotiating traffic circles. Signage, lack of education, lack of respect for other users of the road, and enforcement, may all contribute to this situation. Special considerations need to be brought to the design as an attempt to restrict such behaviour.

Staff Response

The 1999 Bicycle Plan developed a network of proposed cycling facilities. The recommended facilities are based on extensive input from the cycling community and endorsed by the City of Vancouver Bicycle Advisory Committee. Budgetary constraints limit our ability to design to satisfy everyone's requests. Thus, staff rely on good engineering judgement to safely accommodate the majority of user needs. Issues staff must decide upon include:

- Are there sufficient gaps in traffic to provide comfortable crossings or do we just put in signals at all crossings?
- Is stencilling every two blocks satisfactory instead of every block?
- Do we sign for every conceivable possibility or do we exercise judgement to only sign where there is a problem? (Sign Pollution)
- Should traffic circles replace all stop sign in-fills? There are significantly more accidents at intersections with stop signs than with traffic circles.

Vancouver's bikeway design has been effective in encouraging more people to cycle. The Translink 1999 Trip Diary Survey compares by trip mode between 1994 and 1998 the trips destined to Vancouver. Auto driver and passenger trips decreased while transit, walk and bike trips increased. Bike trips have more than doubled. The development of the bicycle network should be continued to reflect the high priority of cycling as a transportation mode.

Recommendations and Suggestions

Cross Roads	The VACC Recommendations	Cyclists Comments and Suggestions
Trafalgar St.	<ul style="list-style-type: none"> Trafalgar St. north from 10th Ave. to the Off-Broadway bike route and the Seaside Bypass on 3rd Ave. and south to 16th Ave. and the Midtown Bike Route should be considered for an extension of this bike route, as cyclists in the area frequently use it for this purpose 	Bike Route is not networked into adjacent West End Bike Routes.
Staff Response: Trafalgar Street is being recommended as the link to Seaside and the mid town route. It will eventually connect to 16th Avenue and a proposed Valley Drive Bikeway		
Trafalgar St.	Existing facility (stop sign on 10 th Ave)	
Vine St.	Large Traffic Circle with 4 double Corner Bulges	Large traffic circle with 4 double corner bulges
Staff Response: Traffic circle added at Vine St. Corner bulges not recommended as costs are increased due to drainage issues and the circle would have to be significantly smaller		
Yew St.	Large Traffic Circle	<ul style="list-style-type: none"> Large traffic circle
Staff Response: A traffic circle is recommended.		
Arbutus St.	Cyclist activated traffic signal with extended median on Arbutus and Traffic Diverters	<ul style="list-style-type: none"> Cyclist activated traffic signal Extend median island north past 10th Ave.
Staff Response: Staff have looked at the possibility of a median but decided against it. The median width would be undersized and too much parking would need to be removed. A ped/bike signal is proposed for this location along with a right-in, right-out diverter on the west side of Arbutus.		

Cross Roads	The VACC Recommendations	Cyclists Comments and Suggestions
Maple St.	Large Traffic Circle	<ul style="list-style-type: none"> Large traffic circle
<p>Staff Response: A traffic circle is being considered in the future. Currently many trucks must use this intersection to enter the IGA and liquor store. Staff would like to wait to see what type of re-development is proposed for the corner of Maple and Broadway and if construction levies can pay for the cost of any new traffic calming measures.</p>		
Cypress St.	Large Traffic Circle with 4 double Corner Bulges	<ul style="list-style-type: none"> Large traffic circle
<p>Staff Response: A traffic circle is proposed for this intersection</p>		
Burrard St.	Traffic Signals and Traffic Diverters	
<p>Staff Response: Traffic signals and an All-In/Right-out diverter are proposed. Staff were looking at a RI/RO diverter for this location (east side of Burrard). However many residents heading south turn left onto 10th. Parking is also located on the south side of the street. Staff did not want to cause a bottleneck by causing residents to perform U-turns mid block in order to park their vehicles.</p>		
Fir St.	Traffic Signals and Median Barrier	Median Barrier
<p>Staff Response: A traffic signal has been recommended. A median was considered but this would require the removal of the left turn bay which was recently installed a few years ago and additional parking servicing the east side of Fir.</p>		
Granville St.	<ul style="list-style-type: none"> Existing facilities (Cyclist activated traffic signal and Corner Bulges) 	
<p>Staff Response: Corner bulges were recently installed at the west end of 10th Ave at Granville. The street will be repaved in the near future.</p>		
Hemlock St.	<ul style="list-style-type: none"> Traffic Signals and Median Barrier, 	<ul style="list-style-type: none"> Instead of striped pavement, median islands on south side making intersection friendlier in addition to signals.
<p>Staff Response: Road is too narrow for a proper median to be installed. A Cyclist activated signal is proposed.</p>		
Birch St.	Large Traffic Circle	
<p>Staff Response: A traffic circle is proposed.</p>		

Alder St.	Large Traffic Circle	
Staff Response: A traffic circle is not required. Cyclists have the right of way through the intersection; speeding or accidents are not an issue.		
Oak St.	Traffic Signals and Traffic Diverters	
Staff Response: A cyclist activated traffic signal is proposed along with a Right-In Right-Out diverter on the west side of Oak.		
Laurel St. S	2 double Corner Bulges	
Laurel St. N	2 double Corner Bulges	
Willow St.	4 double Corner Bulges	
Heather St.	Existing facilities (Four Way Stop Signs and Four double Corner Bulges)	
Ash St.	Stop Sign - North / South only on Ash.	
Staff Response: Corner bulges are being proposed at the following intersections: Laurel, Willow and Heather. Corner bulges at Ash will be part of the VGH/BC Cancer Agency Traffic Calming Plan.		
Cambie St.	Existing facility (Cyclist Activated Traffic Signal) and Cambie to Yukon - Bike Lane in westbound	<ul style="list-style-type: none"> • Cambie to Yukon - Bike lane in westbound direction between the two blocks, reducing the wide road syndrome that leads to speeding.
Staff Response: This section of roadway is only seven metres wide and has metered parking on the north side of the street. The parking would have to be removed in order to accommodate a 1.5 m bike lane. No action is being taken at this time.		
Yukon St.	Existing Facilities - eastbound Corner Bulge) plus CATS	<ul style="list-style-type: none"> • Dangerous intersection with steep hill, low visibility, and speeding cars. Cyclist activated traffic light preferred but stop signs on Yukon required as a minimum.
Staff Response: A cross-walk exists at this intersection. Curb bulges and a crosswalk were recently installed. A one-way partial diverter is also present on the east side of the street. Cyclist crossing gap seems acceptable; will monitor for future signal.		
Columbia St.	Large Traffic Circle	
Staff Response: Extensive traffic calming already in-place as part of the Mount Pleasant Traffic Calming Plan. A traffic circle was proposed for this intersection. However a majority of respondents rejected it. The traffic circle is felt to detract from the historical, granite street treatment.		

Ontario St.	Large Traffic Circle with 4 double Corner Bulges	<ul style="list-style-type: none"> • Large traffic circle • Corner bulges or cyclist corner bulges on each corner of 10th Ave. and Ontario St. to improve line of sight through intersection. Visibility issue when entering traffic circle hindered by parked vans and cars.
Staff Response: A large traffic circle already exists at this intersection. Parking enforcement recommended to ensure vehicles not parked on corner clearances. Corner bulges are expensive (drainage).		
Main St.	Existing facilities (Cyclist Activated Traffic Signal) and Bike Lane - Main St. to Kingsway in westbound direction	<ul style="list-style-type: none"> • Main St. to the Kingsway - Bike lane in westbound direction between the two blocks, reducing the wide road syndrome that leads to speeding.
Staff Response: Short block-no documented speeding problem. Street too narrow for bike lane unless parking is removed.		
Fraser St.	Cyclist Activated Traffic Signal and Right-In, Right-Out Traffic Diverters on west side and possibly east side	<ul style="list-style-type: none"> • Cyclist activated traffic signals - Fraser is a four-lane road. • Alley syndrome from Fraser to Glen Dr and China Creek Park
Staff Response: A traffic signal was considered but the ease of crossing outweighs the need/cost for a signal. We will monitor for future signal.		
Prince Albert St.	Large Traffic Circle	
Staff Response: A traffic circle has been recommended.		
Windsor St.	Large Traffic Circle	
Staff Response: A traffic circle has been recommended.		
China Creek Park across 10 th Ave	Bike Path through park	
Staff Response: A bike path through China Creek Park is recommended.		
Clark St.	Traffic Signals, 'Except Bicycles' sign added, Existing facility (Median island)	<ul style="list-style-type: none"> • Cyclist activated traffic signals • Westbound - No Through Road sign should be modified with 'Except Bicycles'
Staff Response: A traffic signal has been recommended.		

Victoria Drive	Cyclist Activated Traffic Signal with Corner Bulge on north-west corner, Coloured pavement Bike Lanes through intersection, Direction signs on to Central Valley Greenway path	<ul style="list-style-type: none"> • Cyclist activated traffic signals. With the new Central Valley Greenway path volume should increase substantially on this cycling route. • Corner bulge on Victoria at the northwest corner to force traffic merge before 10th Ave. intersection. Currently traffic is merging into the 10th Ave. intersection. • Bike crossing through intersection both directions - coloured lanes on road. • Eastbound - Direction signage on to the Central Valley Greenway
<p><i>Staff Response: Staff Response: A traffic signal was considered but the ease of crossing outweighs the need/cost for a signal. We will monitor for a future signal. As part of the Central Valley Greenway, Victoria Drive has been re-striped which should deal with traffic merge issues. Cycling directional signs/stencilling are to be installed.</i></p>		