AGENDA

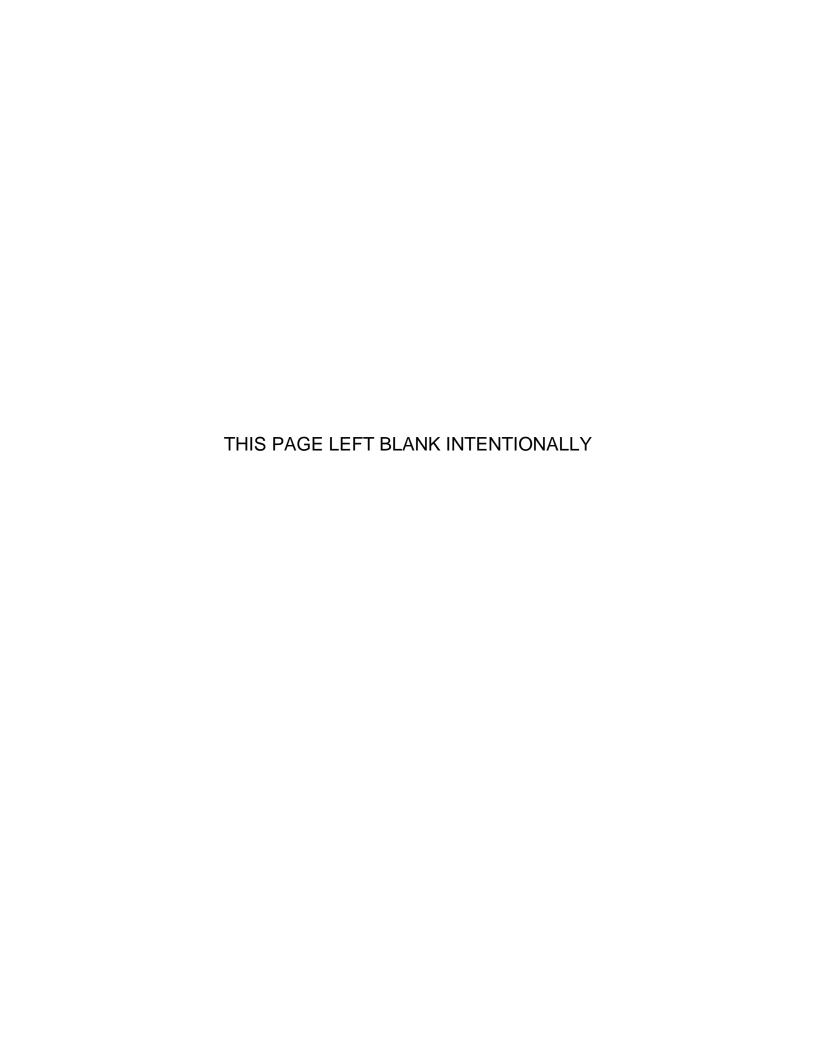
COUNCIL WORKSHOP

Monday, November 6, 2017 5:00 p.m. Committee Room, Municipal Hall 355 West Queens Road, North Vancouver, BC

Council Members:

Mayor Richard Walton
Councillor Roger Bassam
Councillor Mathew Bond
Councillor Jim Hanson
Councillor Robin Hicks
Councillor Doug MacKay-Dunn
Councillor Lisa Muri





District of North Vancouver

NORTH VANCOUVER

355 West Queens Road, North Vancouver, BC, Canada V7N 4N5 604-990-2311

www.dnv.org

COUNCIL WORKSHOP

5:00 p.m. Monday, November 6, 2017 Committee Room, Municipal Hall, 355 West Queens Road, North Vancouver

AGENDA

1. ADOPTION OF THE AGENDA

1.1. November 6, 2017 Council Workshop Agenda

Recommendation:

THAT the agenda for the November 6, 2017 Council Workshop is adopted as circulated, including the addition of any items listed in the agenda addendum.

2. **ADOPTION OF MINUTES**

2.1. October 17, 2017 Council Workshop

p. 7-9

Recommendation:

THAT the minutes of the October 17, 2017 Council Workshop are adopted.

2.2. October 23, 2017 Council Workshop

p. 11-13

Recommendation:

THAT the minutes of the October 23, 2017 Council Workshop are adopted.

3. REPORTS FROM COUNCIL OR STAFF

3.1. **Annual Transportation Update**

p. 17-45

File No. 16.8620.01/000.000

Recommendation:

THAT the October 19, 2017 report of the Transportation Planner entitled Annual Transportation Update is received for information.

4. **PUBLIC INPUT**

(maximum of ten minutes total)

5. **ADJOURNMENT**

Recommendation:

THAT the November 6, 2017 Council Workshop is adjourned.

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MINUTES

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DISTRICT OF NORTH VANCOUVER COUNCIL WORKSHOP

Minutes of the Council Workshop for the District of North Vancouver held at 5:30 p.m. on Tuesday, October 17, 2017 in the Committee Room of the District Hall, 355 West Queens Road, North Vancouver, British Columbia.

Present: Mayor R. Walton

Councillor R. Bassam (5:36 pm)

Councillor M. Bond Councillor J. Hanson Councillor R. Hicks

Councillor D. MacKay-Dunn

Absent: Councillor L. Muri

Staff: Mr. D. Stuart, Chief Administrative Officer

Mr. D. Milburn, General Manager – Planning, Properties & Permits

Mr. J. Gordon, Manager - Administrative Services

Ms. S. Dale, Confidential Council Clerk

Also in

Attendance: Mr. Bal Brach, Operations Support Officer - Inspector, North Vancouver RCMP

ADOPTION OF THE AGENDA 1.

1.1. October 17, 2017 Council Workshop Agenda

MOVED by Councillor MACKAY-DUNN SECONDED by Councillor BOND

THAT the agenda for the October 17, 2017 Council Workshop is adopted as circulated.

CARRIED

Absent for Vote: Councillor BASSAM

2. **ADOPTION OF MINUTES**

2.1. September 18, 2017 Council Workshop

> **MOVED by Councillor MACKAY-DUNN SECONDED by Councillor BOND**

THAT the minutes of the September 18, 2017 Council Workshop are adopted.

CARRIED

Absent for Vote: Councillor BASSAM

2.2. October 2, 2017 Council Workshop

> **MOVED by Councillor MACKAY-DUNN SECONDED by Councillor BOND**

THAT the minutes of the October 2, 2017 Council Workshop are adopted.

CARRIED

Absent for Vote: Councillor BASSAM

2.3. October 3, 2017 Council Workshop

MOVED by Councillor MACKAY-DUNN SECONDED by Councillor BOND

THAT the minutes of the October 3, 2017 Council Workshop are adopted.

CARRIED

Absent for Vote: Councillor BASSAM

3. REPORTS FROM COUNCIL OR STAFF

3.1. Cannabis Legalization and Regulation

File No. 13.6410.01/000.000

Mr. Dan Milburn, General Manager – Planning, Properties & Permits, provided an overview regarding cannabis legalization and regulations. Mr. Milburn noted that the Federal Government intends to assume responsibility for licensing cannabis producers and regulating production standards, however, provinces and territories will be responsible for many of the decisions about how non-medical cannabis is regulated in their jurisdiction. These include, but are not limited to: distribution and retail systems; compliance and enforcement regimes; age limits; restrictions on possession, public consumption and personal cultivation and amendments to safety laws. Mr. Milburn advised that the Province is seeking input from local governments in advance of preparing cannabis regulations when the non-medical use of cannabis becomes legal in July 2018.

Councillor BASSAM arrived at this point in the proceedings.

Council discussion ensued and the following comments and concerns were noted:

- Set the minimum age to buy, grow, and publicly possess up to 30 grams of non-medical cannabis at 19 years;
- Persons under 19 should be prohibited from possessing any amount of cannabis, but they should not be criminally convicted; however a law enforcement officer should be able to confiscate it and issues fine/ticket;
- Extend existing restrictions on tobacco smoking and vaping to cannabis;
- Launch a public education and awareness campaign about the risks and potential consequence of cannabis-impaired driving;
- Set a zero-tolerance standard in respect of blood THC content for drivers in the Graduated Licensing Program (drivers with an "L" or "N" designation);
- Invest in Standard Field Sobriety Test and Drug Recognition Expert training for more police officers;
- Expand the Immediate Roadside Prohibition and Administrative Driving Prohibition programs to include drug-impaired driving;
- Support four plants per household;
- No restrictions with plants being grown on District owned land which is rented;

- Supports the government distribution model being responsible for warehousing and distribution of cannabis;
- Cannabis sold should be controlled by zoning; and,
- The retail model for the sale of cannabis be a mix of both public and private as currently exists for alcohol.

Public Input:

Mr. Corrie Kost:

- Expressed concern regarding the risks and potential consequences of cannabis-impaired driving; and,
- Opined that on-line distribution is the way of the future.

Ms. Betty Forbes:

- Emphasized the importance of educating the public about the risks and potential consequences of cannabis; and,
- Suggested that the sale of cannabis be dedicated to storefronts which may reduce the cost of enforcement.

Staff advised that a letter will be submitted to the Provincial Government respecting Council's feedback to the matters described in the *Cannabis Legalization and Regulation in British Columbia Discussion Paper*.

CADDIED

4. ADJOURNMENT

MOVED by Councillor MACKAY-DUNN SECONDED by Councillor BASSAM

THAT the October 17, 2017 Council Workshop is adjourned.

		(6:48 pm)
Mayor	Municipal Clerk	

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DISTRICT OF NORTH VANCOUVER COUNCIL WORKSHOP

Minutes of the Council Workshop for the District of North Vancouver held at 5:02 p.m. on Monday, October 23, 2017 in the Council Chamber of the District Hall, 355 West Queens Road, North Vancouver, British Columbia.

Present: Acting Mayor R. Hicks

Councillor R. Bassam Councillor M. Bond Councillor J. Hanson

Councillor D. MacKay-Dunn

Councillor L. Muri

Absent: Mayor R. Walton

Staff: Mr. D. Stuart, Chief Administrative Officer

Ms. C. Grant, General Manager - Corporate Services

Mr. G. Joyce, General Manager – Engineering, Parks & Facilities Mr. D. Milburn, General Manager – Planning, Properties & Permits Mr. A. Wardell, Acting General Manager – Finance & Technology

Mr. J. Gordon, Manager – Administrative Services Mr. T. Lancaster, Manager – Community Planning

Ms. S. Dale, Confidential Council Clerk

Ms. K. Rendek, Planner

Mr. B. Susak, Senior Project Engineer

1. ADOPTION OF THE AGENDA

1.1. October 23, 2017 Council Workshop Agenda

MOVED by Councillor MURI SECONDED by Councillor MACKAY-DUNN

THAT the agenda for the October 23, 2017 Council Workshop is adopted as circulated.

CARRIED

2. ADOPTION OF MINUTES

Nil

3. REPORTS FROM COUNCIL OR STAFF

3.1. Draft Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines and Phase 3 Community Engagement Results File No. 13.6480.30/000.003

Ms. Karen Rendek, Planner, and Mr. Tom Lancaster, Manager – Community Planning, provided an overview on the results of the public engagement process as part of Phase 3 of the Maplewood Village Centre implementation planning

process, outlined key components of the draft plan and illustrated how the draft plan has responded to the feedback generated through the public process.

Ms. Rendek noted that the proposed draft plan and key policy directions have received significant support from the community and based on feedback generated through the public process in Phase 3 staff have further revised the draft plan. Key strategies in the draft Maplewood Village Centre and Innovation District Plan & Design Guidelines include:

- Land use, building height and a village heart;
- Housing diversity;
- Innovative industry focussed on local needs;
- Ecology and conservation;
- Parks and recreation;
- Transportation network;
- Community amenities; and,
- Utilities and infrastructure.

Ms. Rendek advised that the final draft plan is anticipated to be brought forward to Council for their consideration in November 2017.

Councillor MACKAY-DUNN left the meeting at 5:19 pm and returned at 5:25 pm.

Council discussion ensued and the following comments and concerns were noted:

- Expressed concern that increased density of new construction will impact traffic congestion on the Ironworkers Memorial Bridge;
- Questioned how and when the proposed B-line service will be extended to Maplewood Village;
- Felt that community consultation should be broader;
- Requested the number of affordable units being built in the Maplewood Village Town Centre;
- Spoke to the importance of the Maplewood area being used for economic development as there is a need for well-paying jobs in the District;
- Expressed concern regarding encroaching onto existing green space;
- Noted resident concerns about the height and density of housing;
- Identified the potential relocation of the overhead hydro transmission system on Old Dollarton Road to overhead on Dollarton Highway and questioned if a levy should be implemented;
- Spoke to the economic opportunities;
- Questioned if there were any concerns regarding the potential for release of noxious fumes from the proposed fire training facility;
- Expressed concern that the proposed B-line is not guaranteed;
- Spoke to the issue of affordability;
- Expressed concern with regards to the potential displacement of existing small businesses as a result of redevelopment;
- Felt that phased development will be critical to the success of the Maplewood area.
- Commented on the need for a traffic management plan;
- Commented on the relationship between public transportation and the supply of housing;

- Requested staff report back on parking requirements in town centres;
- Questioned how new, innovative businesses and industrial businesses will be integrated in this community;
- Expressed concern regarding the potential risk to waterfront areas;
- Commented that providing employee housing will help reduce traffic; and,
- Expressed support for a wide range of affordable housing options.

MOVED by Councillor MURI SECONDED by Councillor BASSAM

THAT the October 12, 2017 report of the Senior Planner entitled Maplewood Village Centre and Innovation District Implementation Plan & Design Guidelines be received for information.

CARRIED

CARRIED

4. ADJOURNMENT

MOVED by Councillor MURI SECONDED by Councillor BASSAM

THAT the October 23, 2017 Council Workshop is adjourned.

		(6:45 pm)
Mayor	Municipal Clerk	

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REPORTS

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AGE	ENDA INFORMATION
Council Workshop	Date: November 6 2017
☐ Finance & Audit	Date:
☐ Advisory Oversight	Date:
Other:	Date:



The District of North Vancouver REPORT TO COMMITTEE

October 19, 2017

File: 16.8620.01/000.000

AUTHOR: Ingrid Weisenbach, Transportation Planning

SUBJECT: Annual Transportation Update

RECOMMENDATION:

THAT Staff recommend to Council:

THAT the October 19th Annual Transportation Update report is received for information.

REASON FOR REPORT:

This report provides context for the annual Council Transportation Workshop on November 6, 2017. The workshop provides an opportunity to discuss the Transportation Section's 2018 priorities as well as an opportunity to discuss 2018 proposed projects.

An update on the ongoing 2017 transportation projects is also provided in Appendix A of this report. The proposed 2018 transportation projects are described in Appendix B.

SUMMARY:

Dealing with traffic management and congestion was (and continues to be) a high priority for the District of North Vancouver (District) in 2017. Through recent transportation workshops, Council has provided direction in response to this priority:

1. Transportation Investment Program - In 2016 Council approved allocation of one-half percent of the annual tax levy to fund investments in transportation infrastructure on an ongoing basis, known as Minor Projects Outside Centres (MPOC) program. The intent is to focus on active transportation (walking, cycling and transit) by providing infrastructure outside of the town centres that would likely remain unfunded otherwise. The program would also include improvements to safety around schools, within neighbourhoods, and at railway crossings.

October 19, 2017

2. Short Term Transportation Actions - At the October 18, 2016 transportation workshop, Council expressed the desire to move forward with tangible transportation actions that would be relatively quick to enact. Although infrastructure projects are part of the District's transportation strategy plans, shorter term actions can be considered to demonstrate effectiveness of new ideas and/or influence transportation choices.

This report provides an update of the Transportation Investment Program proceeding using 2016 and 2017 funding, presents a suite of possible short term action ideas compiled by staff and the five priority actions that are being actively pursued.

BACKGROUND:

Transportation remains a top issue in the District. To address this issue, the District has added transportation resources in recent years by the creation of the Construction Traffic Management team, the Major Projects Delivery team and the Development Engineering team. The District continued to see change in 2017 with a new Transportation Section manager in September.

The Transportation Section's priority remains the same: to improve transportation safety and mobility within the District. In 2017, staff delivered a range of projects, from small to large, to try to improve mobility around the District.

ANALYSIS:

Transportation Investment Program (MPOC Program)

The transportation program funding was \$515,000 in 2017 (\$425,000 new funds and \$90,000 carried over from 2016). Earlier this year, Council was provided a list of projects proposed for the MPOC program. Many of the projects are all completed or under way. Some projects were swapped for other high priority projects due to opportunity or grant availability, such as inclusion of Highland Boulevard and E. Braemar Road crossing improvements instead of Indian River Drive crossing improvements.

For example, staff leveraged District funds for the project at Mountain Highway at E. 15th Street to receive an additional \$120,000 from TransLink and \$10,000 from the Insurance Corporation of British Columbia (ICBC). The special crossing on Mountain Highway at 15th was expanded to include a segment of sidewalk on E. 16th Street between City of North Vancouver border and Mountain Highway.

Projects in Figure 1 show the complete list of 2017 MPOC projects.

Figure 1: 2017 Minor Projects Outside Centres (MPOC) Program*

Project	DNV Funds**
Mountain Hwy Special Crossing @ E. 15th Street	\$50,000
E. 16th Street Sidewalk: CNV boundary – Mountain Highway (NEW)	\$70,000
E. 29th Street Sidewalk: William Avenue – St. Christophers Road (Phase	\$137,000
Ross Road Sidewalk: Allan Road – Hoskins Road (Phase I)	\$142,000
E. Braemar Road Crossing Improvements (2 sites)	\$40,000
Highland Boulevard & W. Queens Road Bike Lane Trials	\$5,000
Uninterrupted Power Supply for Traffic Signals	\$ 15,000
Transit Road-Related Improvements	\$36,000
Railway Crossing Signs and Markings (Seymour Industrial Line)	\$20,000
Total	\$515,000

^{*} Descriptions and status information can be found in Appendix A of this report.

In 2018 new transportation investments can be funded from the new 2018 transportation investment allocation. The intent is to focus on active transportation by providing infrastructure outside of the town centres that would likely remain unfunded otherwise. The program would also include improvements to safety around schools, within neighbourhoods, and at railway crossings. Based on a one-half percent allocation of funds, priority I projects would include a mix of walking, cycling and transit improvements as shown in Figure 2.

Figure 2: 2018 Program – Priority I*

Projects**	1233	DNV Funds***
Ross Road Sidewalk: Allan Road - Hoskins Road (Phase II)	ķ	\$350,000
Transit Related Infrastructure	<u>*</u>	\$40,000
Traffic Signal Corridor Reviews		\$40,000
Total		\$430,000

^{*}List of projects is not intended to be final, but rather provide clarity on the types of projects that could be covered by the program. Program focus may not be altered but projects may be changed depending on Council and District priorities.

^{**} Funds identified are approximate and rounded.

^{**} Descriptions can be found in Appendix B of this report.

^{***} Funds identified are approximate and rounded.

If an additional one-half percent is allocated for this program, priority II as shown in Figure 3 may be considered for implementation.

Figure 3: 2018 Program – Priority II

Projects*	100,000	DNV Funds**
Pedestrian Crossing Improvement Program	☆	\$50,000
Infill Sidewalks	, K	\$275,000
Intersection Analysis (Mountain Highway/Lynn Valley Road)	大日	\$15,000
Traffic Signal Corridor Reviews		\$20,000
Bus Benches		\$25,000
Traffic Signal Upgrades (Accessible Pedestrian System)	8 9	\$60,000
Bicycle Safety Improvements	OF.	\$60,000
Connected Bike Network of AAA Priority Routes	∞	\$40,000
Local Road Safety Improvement	太	\$25,000
Total		\$570,000

^{*} Descriptions can be found in Appendix B of this report.

Sidewalk priorities are selected from a ranked list based on a combination of the existing risk, likely usage, and public requests. The Pedestrian Master Plan provides the scoring system – higher scores mean a new sidewalk is more likely to be used and more likely to address a safety issue.

Specific public requests have been received for new sidewalks in four locations as noted in Figure 4. If priority II projects are funded, William Avenue sidewalk is proposed for 2018 based on the score as well as the potential to receive 50% in grants (requiring only \$165K of DNV funds to deliver). The remaining sidewalks can be funded in future years, or Council could direct staff to proceed with one or more of the recently-requested sidewalks, in lieu of the William Avenue segment.

^{**} Funds identified are approximate and rounded.

October 19, 2017

Figure 4: Sidewalk Segment Considered for 2018 Work Plan

Sidewalk Segment	Master Plan Score	Priority	10 13	Cost Stimate	Proposed Action Plan
William Ave. Sidewalk (east): E. 29th - Link Rd./Lynn Valley Rd.	31	Highest	\$	330,000	2018
Mt. Seymour Rd. Sidewalk: Indian River Dr Anne MacDonald Wy.	31	Medium	\$	225,000	Optional
Berkley Rd. Sidewalk (west): 999 driveway - Mt. Seymour Pkwy	29	Medium	\$	185,000	Optional
Grantham Pl. Sidewalk: Seymour Blvd Riverside Dr.	20	Low	\$	100,000	Not Recommended

Aside from the MPOC program, in 2017 staff worked to implement segments of the priority routes that connect town centres with all-ages-and-abilities (AAA) bicycle facilities. Per Council's direction: three connections were prioritized for District town and village centres: Lynn Creek to Maplewood, Lynn Creek to Lions Gate, and Lynn Valley to Lynn Creek.

Lynn Creek – Maplewood connection: A key pinch point was addressed with construction of an improved multiuse path along the Spirit Trail segment on Mount Seymour Parkway. Work continues planning the AAA link from Mount Seymour Parkway into Maplewood as part of the Maplewood Community Plan & Design Guidelines.

Lynn Creek – Lions Gate connection: The design phase for the central section of the Spirit Trail, including the Lynn Creek bike and pedestrian bridge (at Hunter Street) is proposed for 2018.

Lynn Valley – Lynn Creek connection: The new Mountain Highway pedestrian underpass and urban trail segment are under design and construction as part of phases I and II of the Lower Lynn Interchange Improvements project.

For 2018, staff will continue to work with the City of North Vancouver (CNV) on connections through their jurisdiction and ensure route connection opportunities in Lynn Valley are captured during redevelopment. Also, preparation of a conceptual AAA route design through the Keith Lynn neighbourhood is proposed. This would supplement a Bicycle Master Plan update in partnership with the CNV, proposed for 2018.

Short Term Transportation Actions

In 2016, a long list of potential Short Term Transportation Action ideas was solicited from staff and the Transportation Consultation Committee, with over 150 suggestions collected. The ideas were filtered to look for those that were:

Low cost (up to \$100,000) or medium cost (up to \$500,000),

- Able to be implemented within a one-year time frame,
- Covering a cross-section of transportation modes, and
- Including more than just infrastructure projects.

The ideas brought forward fell into one of the following categories:

- Infrastructure projects installed for a short time ('pop-up' projects or trials) to test an idea or to demonstrate a possible change,
- Small infrastructure projects to show priority for walking, cycling or transit,
- Temporary parking lots to encourage transit and/or trial shuttle buses,
- Promotions or awards to encourage people to try new options,
- District of North Vancouver employer initiatives showing leadership,
- Outreach to explain or educate the public about new transportation options, and
- Increased staff time spent in collaboration with other transportation agencies and companies to better achieve results.

Narrowing down the items, a shorter priority list was developed. This list in Figure 5 was presented to Council in May 2017.

Figure 5: Priority List of Short Term Actions

Why This? Pop-up additional Charlotte If made permanent, creates more parking in Lynn Creek Road parking (centre of the Town Centre. May cater to seasonal visitors in Deep Cove and encourage Pop-up Bike Corral - Gallant

Status Design in progress bicycle use, relieving parking pressure. A local merchant is Not started Avenue supportive. SRA and some residents interested and supportive of traffic calming along Highland Boulevard but some other residents Pop-up Bike Route are not. Pop-up provides opportunity to demonstrate bike Underway Highland Boulevard lane and test performance (inc. W. Queens Road bike lane trial following the successful pop-up in July 2017). Both sites are part of the District's Bicycle Master Plan. Reduces car trips and need for more parking, while showing **DNV (Operations Centre)** leadership to other employers. Helps to reduce parking Not started Carpool Parking Spots pressures in Lynn Creek Town Centre. On-going, Increased coordination with May have more direct impact on reducing Highway 1 Submitted proposal to MOTI - Incident Clearing congestion. **UBCM**

To date, staff have been working on the Charlotte Road parking, the Highland Boulevard and W. Queens Road bike lane trials, as well as working with agencies to address incident clearing on Highway 1. Staff will continue working on the short term actions identified in the priority list in 2018.

Timing/Approval Process:

The MPOC program and the short term transportation action items will be pursued within available financial and staff resources in 2018.

Financial Impacts:

The MPOC program can be adjusted based on allocated funding.

Liability/Risk:

Each project or initiative will be delivered with due diligence in mind. Many of the projects directly improve transportation safety which remains a prominent evaluation criteria.

Social Policy Implications:

Many of the projects improve accessibility to transportation services and promote active transportation which supports wellness.

Environmental Impact:

Transportation initiatives that support active modes, transit or transportation demand management is beneficial to the environment.

Conclusion:

The MPOC program and the short term transportation action Items will continue to be implemented in 2018 within the limits of available budgets and resources.

Respectfully submitted,

Ingrid Weisenbach Transportation Planner

	REVIEWED WITH:	
☐ Sustainable Community Dev.	☐ Clerk's Office	External Agencies:
☐ Development Services	☐ Communications	☐ Library Board
Utilities	☐ Finance	■ NS Health
☐ Engineering Operations	☐ Fire Services	☐ RCMP
☐ Parks	☐ ITS	☐ NVRC
☐ Environment	☐ Solicitor	☐ Museum & Arch.
☐ Facilities	☐ GIS	Other:
☐ Human Resources	Real Estate	

Appendix A

2017 Transportation Projects







- 1. Montroyal Bridge
- 2. Phibbs Exchange
- 3. Lower Lynn Interchanges
- 4. Mount Seymour Parkway Multiuse Pathway
- 5. Lynn Valley Road Bike Lane
- 6. Lynn Valley Road Underpass
- 7. Lynn Headwaters Intake Road Repair
- 8. Transportation System Optimization
- 9. LED Street Lighting Program
- 10. Sustainment Program
- 11. North Shore Subarea Transportation Model
- 12. Safe Routes to School
- 13. Walking Infrastructure
- 14. Transit Infrastructure
- 15. Cycling Infrastructure
- 16. Transportation Planning

1. Montroyal Bridge



Description:

Montroyal Bridge was identified for replacement in bridge asset management plans. The existing bridge is at the end of its serviceable life, and carries loading restrictions. The new bridge will be a single span bridge that supports two vehicle lanes, two bike lanes and sidewalks on both sides. Bridge approaches will be widened to tie into the wider Montroyal Boulevard away from the bridge.



Demolishing the old bridge



Status:

- Construction has begun and is scheduled to be completed in summer 2018.
- A temporary detour bridge is installed and operational
- Temporary utility work is nearing completion
- Demolition of the existing structure is set to begin this fall
- Pile driving for new bridge will begin after bridge demolition

Benefits:

This project provide the following improvements:

- Elimination of load restrictions.
- Significantly improved earthquake resiliency,
- Improved sightlines at Skyline Drive,
- Improved environmental performance with deletion of instream pier,
- Improved resiliency to flood and debris events due to higher span,
- Reduced debris impact within Mosquito Creek,
- Increased mobility for people walking, cycling and driving, and
- Improved storm water infrastructure with installation of a new oil/grease separator.



Artist's rendering of the completed Montroyal Bridge

Origin:

Bridge Asset Management Plans 2013 and 2014.

2. Phibbs Transit Exchange



Description:

The Phibbs Transit Exchange Improvement project is a partnership between the Federal Government, the Province, TransLink and the District. The project will benefit transit users by expanding bus capacity and by improving circulation, passenger safety, and bus access to Hwy. 1. The new facility is being designed to integrate better into the surrounding neighbourhood with an emphasis on high quality public realm that could include passenger amenities, shelters, bike storage, landscaping, wayfinding, lighting and public art.

The project is being closely coordinated with MoTl's Lower Lynn Improvements projects.



Status:

MoTI is the delivery agent, who is currently retaining a consultant engineer and design work will begin November 2017. Construction is expected to start in summer 2018 with completion estimated for spring 2019.

Benefits:

The project is expected to significantly benefit transit users by upgrading and expanding the transit facility with improved access, safety and road connections.

Origin:

The project is supported by the following plans:

- North Shore Area Transit Plan (2011),
- Lower Lynn Transportation Strategy (2011),
- Transportation Plan (2012), and
- Mayors' Council Vision for Transportation (2014).



Artist's rendering of the Phibbs Exchange concept

3. Lower Lynn Improvements

Description:

The Lower Lynn Improvments project is a partnership between the Province, the Government of Canada and the District. It includes upgrades to the three highway interchanges at the north end of the Iron Workers Memorial Bridge.



View looking east of the construction work



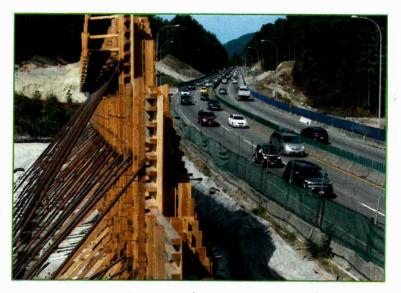
Status:

- Mountain Highway Interchange (Phase I) construction started spring 2017 and is expected be complete fall 2018,
- Keith Road/Mount Seymour Parkway Interchange (Phase II) and Lynn Creek Connectivity (Phase IV) functional design completed.
- Main Street/Dollarton Highway Interchange (Phase III) is in the planning phase.
- Anticipated completion of all phases is 2021.

Benefits:

Benefits of this project include:

- Improved traffic flow during peak times;
- Better east/west connectivity over the highway for municipal residents;
- Additional access to and off of Highway 1 at Mountain Highway;
- Improved safety and reduced traffic collisions by upgrading the design to current engineering standards.
- Improved cycling and walking facilities.



View looking west of the construction work

Origin:

• This project is supported by the following plan: BC on the Move: A 10 Year Transportation Plan (2014).

4. Mt. Seymour Parkway Multiuse Pathway

Description:

Mt. Seymour Parkway Multiuse Pathway project includes improvements to the pathway from Lillooet Road to Mt. Seymour Boulevard (on the north side of the road), installation of crosswalk, bike stencil/green pain in conflict zones, and wayfinding signage.

This project is part of the Spirit Trail's central section, fills a gap in the network, and connects Lynn Creek Town Centre to Maplewood Village.



New bike crossing



Status:

This project was completed in early 2017.

Benefits:

Benefits of this project include the following:

- Improved multiuse pathway for cyclists and pedestrians, with wider let-downs, newly install crossings and wayfinding signage,
- · Improved drainage, and
- Repaved asphalt in previously heaved/damaged areas.

Origin:

• Transportation Master Plan (2012).



Wayfinding Signage

5. Lynn Valley Road Bike Lane



Description:

The Lynn Valley Road bike lane project consists of separated bike lanes in both directions from Morgan Road to Mollie Nye Way. The project includes the following:

- Installation of delineators,
- · Wider sidewalks on the south side,
- LED lighting,
- Median landscaping and irrigation system updates,
- · Pedestrian crossing at Kirkstone Road,
- and wayfinding signage.

This bike lane, in conjunction with the adjacent Lynn Valley underpass project (when finished) will provide a link between Lynn Valley Town Centre and the City of North Vancouver.



New wider sidewalks



Status:

This project was completed in May 2017.

Benefits:

Benefits of this project include the following:

- Improved sidewalks for ease of walkability,
- Additional lighting for improved visibility, and improved sightlines via vegetation trimming and removals at corners, and
- Increased comfort and perception of safety for commuters, recreational bikers, and other cyclists.

Origin:

This project is supported by the Transportation Plan (2012) Road Network Policy: Reallocate road space to improve safety and accommodate transit vehicles, cyclists, pedestrians as well as private vehicles, where feasible.



New separated bike lanes

District of North Vancouver - Transportation Update 2017

6. Lynn Valley Road Underpass

Description:

While the project is officially part of Bosa's Community Amenity Contribution (CAC) to the District, benefiting residents and allowing greater reliability of access between Lynn Valley Town Centre and Highway 1, the construction itself largely occurs on City of North Vancouver and Provincial lands. The project is managed and built by a third-party. This project is located on Lynn Valley Road/Boulevard Crescent from Morgan Street to 21st Street. The project includes the following:

- Constructing a retaining wall, a new southbound vehicle lane and multiuse pathway under Highway 1,
- Street lighting and pedestrian crossings improvements,
- Utility upgrades including Hydro undergrounding, and
- Landscaping and restoration works.



Beginning of drilling the new retaining wall under the Highway 1 Overpass



Status:

- Original completion date was October 31, 2017 but approximately one month behind schedule due to unforeseen and difficult ground conditions encountered during construction of the retaining wall.
- The timing of the project is intentional, fitting in between other construction projects on Lynn Valley Road and Mountain Highway, to ensure that users have alternative routes for travel.

Benefits:

Benefits of this project include the following:

- Improve southbound mobility for people walking, cycling and driving to westbound Highway 1 and Grand Boulevard,
- Tie in to the new separated bike lanes on Lynn Valley Road and to the recently completed City of North Vancouver bike lanes south of Highway 1 on Grand Boulevard, and
- Improve transit reliability and emergency response through this important corridor.



View Looking North of the construction works

Origin:

· Community amenity contribution project from development in the Lynn Valley Town Centre.

7. Lynn Headwaters Intake Road Repair



Description:

The Intake Road, providing access into Lynn Headwaters Regional Park, was closed to vehicular traffic in December 2016 because of an identified risk to public safety due to slope instability. This road provides access to the heavily frequented Lynn Headwaters Regional Park and 175 parking stalls. The project included stabilization works, drainage improvements and intermittent resurfacing.

This project is related to the Lynn Headwaters Parking and Access Plan (noted under Transportation Planning) and new time restricted resident exempt parking near the park entrance.



Excavator mounted drill rig for soil nailing



Status:

• This project was completed and the road reopened to traffic on October 6, 2017.

Benefits:

The project benefits are the re-establishment of access to parking stalls in Lynn Headwaters Regional Park, greatly alleviating parking pressures on adjacent residential streets.

Origin:

This project is supported by geotechnical reports regarding the road's stability.



Road reopened to vehicle traffic

8. Transportation System Optimization

Description:

Staff is developing District's capabilities to measure, forecast and manage its transportation system for optimum efficiency. This work is focused on making the best use of roadways and traffic signals to avoid the need to build more roads and/or widen existing roads.

Staff is exploring traffic control technologies to use the traffic signal system as a key component in this effort. Staff continue to collect data mechanically (through the use of tube counters and/or people) on an as-needed basis to understand existing conditions. Vehicular data collected can include speeds, volumes, and vehicle classification. Collision data also is used to identify high risk areas.



Benefits:

Data collected on a regular basis allows the District to better manage the system by understanding if and/ or where progress is being made, the impacts of implementation and the value of allocating resources to transportation initiatives.

Origin:

These efforts are supported by the Transportation Plan (2012) Road Network Objective: The District's objective is to manage road infrastructure in such a way that minimizes impacts on neighbourhoods, improves road safety, and enables the efficient movement of goods and people.



Technology to manage the traffic signal system

9. LED Street Lighting Program



Description:

The District is one of many Lower Mainland municipalities implementing LED street lights in their jurisdiction. Street lighting is included in the District's Strategic Energy Management Plan (SEMP) as an area of opportunity to reduce electricity consumption and operating costs for the District. The District's street lighting inventory was evaluated and clusters of fixtures with the oldest lamps were selected.



Status:

- The 2016 pilot was a success, so the pilot is being expanded into a full project. Award of purchase and installation of 969 fixtures contracts expected in October 2017,
- District-owned streetlights on major arterial roads will be retrofit to LED by December 2017, and
- Expansion beyond major arterial roads dependent on capital request for 2018.

Benefits:

- The District's robust Energy Management program is demonstrating leadership in environmental sustainability and climate action.
- LED street light technology is known to offer potential energy and operating cost savings, reducing light trespass and light pollution (Dark Sky Compliant) while improving lighting quality.
- The LED fixtures are expected to have a life of 20 years.

Origin:

- The "Streetlights Across BC" Provincial Program; and
- District's Strategic Energy Management Plan (SEMP) (2016)





Mount Seymour Road - before and after LED upgrades

10. Sustainment Program



Description:

This program replaces a portion of the transportation infrastructure annually through an ongoing program that reduces maintenance costs and maintains a high quality aesthetic appearance on District streets.

The annual maintenance programs include:

- · Street light pole and luminaire renewal;
- Traffic signal infrastructure additions and replacement;
- Traffic signal pole painting; and
- · Signs and markings cleaning and renewal.



Benefits:

Ongoing replacement and maintenance programs help prevent failures that could increase the District's liability. In addition to the aesthetic benefits, ensuring that District signs and pavement markings do not fade and are highly visible provides safety benefits by helping road users to understand and follow the traffic control.

Origin:

- Public requests;
- Updated Asset management Plan (2014);
- Asset Management Program (2009); and
- Capital Infrastructure Program (2007).



Old traffic signal pole

11. North Shore Subarea Transportation Model

Description:

In support of ongoing and future transportation and land use planning initiatives, the North Shore municipalities updated the North Shore Subarea Transportation Model (NSSTM), adding additional refinement to TransLink's Regional Transportation Model. NSSTM can be used to determine trends and travel patterns due to demographic growth, transportation network changes (road and transit) and changes to transportation pricing (parking fees, mobility pricing, etc.). The District is working with a consultant to start running scenarios and using outputs from the model.



Status:

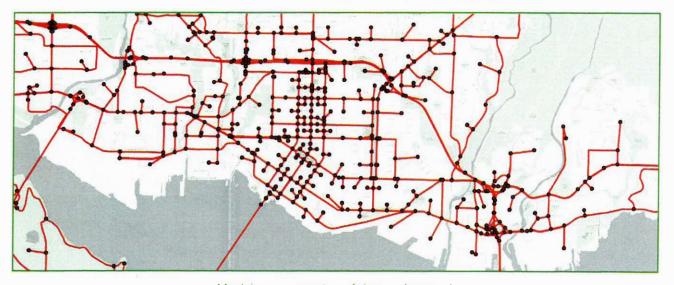
- Data collection, model inputs verification and model updates completed.
- Consultants are being engaged to provide specific model runs for the District.

Benefits:

- · Provides a relevant and current database to analyze transportation for the North Shore;
- Provides data that allows the District to respond to current issues and needs.

Origin:

These efforts are supported by the Transportation Plan (2012) Road Network Objective: The District's objective is to manage road infrastructure in such a way that minimizes impacts on neighbourhoods, improves road safety, and enables the efficient movement of goods and people.



Model representation of the road network

12. Safe Routes to School



Description:

The District partnered with the North Vancouver School District to complete transportation studies for three schools in 2016. District continues to implement school safety recommendations from the prioritized list of actions. Projects includes sidewalks, curb extensions, signage, crossing upgrades, traffic calming, and parking layout.



Highland Boulevard curb extensions newly installed



Status:

Crossing improvements and speed humps are being constructed at Capilano Elementary during October & November 2017 to enhance safety.

Benefits:

These projects provide the following improvements:

- Increasing safety and the perception of safety for pedestrians and bicyclists;
- · Increasing access for all modes of transportation; and
- Reducing collision frequency and severity.

Origin:

Continuing school studies series (Seymour Heights, Lynn Valley, and Upper Lynn Elementary Schools in 2010, Braemar, Cleveland, and Ross Rd. Elementary Schools in 2011, and Capilano, Canyon Heights, and Highlands Elementary Schools in 2016), Safe Route Advocates' January 2014 parent delegation to District Council.

These projects are supported by the Transportation Plan (2012) Walking Policy: Work with schools to provide safe and active routes to school.

13. Walking Infrastructure



Description:

This year saw several projects focused on improving the walking experience in the District. Projects include the following:

- · Mountain Highway Special Crossing @ E. 15th Street,
- E. 29th Street Sidewalk: William Avenue St. Christophers Road,
- E. 16th Street Sidewalk: CNV boundary Mountain Highway,
- Ross Road Sidewalk: Allan Road Hoskins Road (Phase I),
- E. Braemar Road Crossing Improvements (east of St. Andrews Avenue),
- Highland Boulevard Curb Extensions: (Belmont Avenue & Tudor Avenue), and
- Mosquito Creek pedestrian bridge.



Status:

Many of these projects have already been completed or are in the process of being completed, such as the E. 29th Street sidewalk project or the Mountain Highway special crossing. Due to timing, some projects have been designed and will be delivered during the next construction season, such as the E. 16th Street and Ross Road sidewalk projects. Staff have started the design for Mosquito Creek pedestrian bridge design and expect to complete design in 2018.

Benefits:

These projects are generally focused in areas outside of town centres as well as on making it easier and/or safer to move around the District by walking. By improving walking infrastructure, it allows people to engage in healthy and active transportation and can eliminate the need for some trips by car.



E. Braemar Road cross ng treatments

Origin:

These projects are also supported by the Pedestrian Master Plan (2009) and Priority of Study Locations – Crossing Facilities (2013), as well as the Asset Management Plan (e.g., Mosquito Creek Pedestrian Bridge).

14. Transit Infrastructure



Description:

Each year, the District partners with Coast Mountain Bus Company and Pattison Outdoor to improve transit infrastructure. Transit-related improvements in 2017 include:

- Minor geometric improvements on Marine Drive at Garden Avenue, E. Osborne Road and Panorama Drive.
- Transit shelters installed on Ridgewood Road at Sunset Boulevard, Lonsdale Avenue at W.
 Windsor Road, and Mountain Highway at E. 17th Street, and
- Concrete pads and associated works for wheelchair accessibility installed at 3800 block of Mount Seymour Parkway, Mount Seymour Parkway at Hamber Place, Indian River Drive at Lighthall Court, Deep Cove Road at Strathcona Road, Lonsdale Avenue at W. Windsor Road, and Ridgewood Drive at Sunset Boulevard.



Status:

Transit Related Road Infrastructure Program (TRRIP) will be substantially completed by October 2017 and installation of three transit shelters is scheduled to be completed by December 2017.

Benefits

These projects provide the following improvements:

- Accessibility of the transit system for people of all ages and abilities;
- Comfort and safety for transit passengers and pedestrians; and
- Streetscapes in the transit stop areas.

Origin

These projects are supported by the Transportation Plan (2012) Transit Policy: Support transit riders with infrastructure such as weather protection, wheelchair pads, sidewalks, and curb ramps around bus stops.



Newly installed concrete pad on Mount Seymour Parkway

15. Cycling Infrastructure



Description:

This year saw several project focused on improving cycling in the District, specifically on testing bike lanes along W. Queens Road and Highland Boulevard.

In response to a bike lane demonstration on W. Queens Road in conjunction with the new Delbrook Community Centre opening, the District is following up with a test. The start of the bike lane test starts at Woodbine Drive and ties into the bike lane near the community centre.

Similarly, the District is installing buffered bike lanes in the uphill direction on Highland Boulevard in advance of a paving project, currently scheduled for 2018. The initial test will run between Belmont Avenue and Wavertree Road. During the test phase, extending the bike lane to the north will be considered.



Status:

Trials are expected to be in place by the end of October 2017. Staff shall conduct before and after analysis of the facilities.

Benefits:

There have been considerable changes regarding design of bicycle facilities over the last few years. Testing designs allows the District the opportunity to learn more and adapt as necessary to District roads.

Origin:

Based on the transportation workshop in October 2016, Council expressed a desire to move forward with actions that would be relatively quick to enact, demonstrating effectiveness with new ideas and/or influence transportation choices. Additionally, Council expressed a desire to further develop bicycle connections in and between town centres and key destinations.

These projects are supported by the Transportation Plan (2012) Road Network Policy: Reallocate road space to improve safety and accommodate transit vehicles, cyclists, pedestrians as well as private vehicles, where feasible.



W. Queens Road bike lane pop-up

16. Transportation Planning



East 29th Street
& East Keith Road
Multimodal Technical
Analyses

Analysis conducted for E. 29th Street and E. Keith Road corridors. The City of North Vancouver, ICBC and the District managed this work through consultants, whom conducted a technical review of safety and mobility for all users of the corridor. The City and District are coordinating public outreach efforts.

Lynn Creek Parking Review

The District engaged a consultant to review parking for Lynn Creek Town Centre. This consultant will collect and analyze parking data for the town centre before providing recommendations. This work is being undertaken due to concerns of a lack of parking for residents and businesses.

Maplewood Village Transportation Study Update

In conjunction with the Maplewood planning effort, the 2014 transportation study was updated to reflect the changes proposed for Maplewood Village area.

Lynn Headwaters Parking and Access Plan

During winter 2017, the District's road leading to Metro Vancouver's Lynn Headwaters Park was closed due to concerns about the stability of the road. Parking, previously available, was no longer available to park users. Neighbouring businesses and residents felt the impacts. Metro Vancouver and the District have partnered to conduct a review of the short term and longer term parking needs for this regional park, as well as alternative access options.

Capilano Road Laning Plan Update

The District is investigating opportunities to provide bus priority for southbound buses in the Lions Gate Village on Capilano Road. The intersection at Marine Drive and Capilano Road frequently experience slow downs or back ups due to volumes leading onto the Lions Gate Bridge. This study supports efforts to create a more walkable, bikeable and transit oriented community in the village.

Marine-Main Corridor Technical Study/ Modelling

As a joint initiative between the City of North Vancouver, District of West Vancouver, Metro Vancouver and TransLink, the Frequent Transit Corridor Study identified opportunities to provide faster, more frequent transit between Dundarave in West Vancouver and Maplewood in the District of North Vancouver, serving key centres along the Marine/3rd/Main corridor.

Appendix B

Proposed 2018 Transportation Projects

The proposed projects below are prioritized for 2018 funding because of (a) available partner funding, (b) building the town and village centres, and (c) making progress on the transportation plans.

Several projects are multi-year projects. Approval and further project details, such as total costs to the District will be part of the budget deliberation process. The projects listed below are not ranked in any particular order.

Marine - Main Corridor B-Line Preparation	This project includes modeling and design work in advance of the B-line implementation in 2019 (between Ambleside and Phibbs Exchange). Project includes coordination between City of North Vancouver, District of West Vancouver and TransLink.
Spirit Trail (Central): CNV Border to Keith Road	This project will connect the Spirit Trail at City of North Vancouver eastern border to Seylynn Park and includes a bridge over Lynn Creek. 2018 funds take this project through design.
Lower Lynn Interchange Improvements	This project is being delivered in four phases, and in partnership between the Province, the Federal Government and the District. Work will continue on all phases in 2018. (For more project details, refer to Appendix A.)
Phibbs Transit Exchange	The Federal Government, the Province, TransLink and the District are working closely to deliver the detailed design by spring 2018 in order to start construction in summer 2018. Project is expected to be completed in 2019. (For more project details, refer to Appendix A.)
Temporary Traffic Control Analysis	Temporary traffic control measures were installed as part of the Metro Vancouver water main project. The District needs to evaluate the measures after the water main project is completed to determine what, if any, of the temporary measures should be made permanent and which measures should be removed. Sites under investigation include the Capilano Road/Edgemont Boulevard intersection.

Transportation System Optimization	This project continues DNV's traffic signal system optimization process, allowing for automated data collection and remote signal timing plan updates.
Delbrook Lands Transportation Impact Analysis	District developed a land use plan for the previous Delbrook Community Centre site. District is expected to consider development proposal for non-market housing on this site in 2018. This project allows District to analyze the transportation impacts as part of a development proposal.
Special Crosswalk LED Retrofit	The District is one of many Lower Mainland municipalities implementing LED street lights. Street lighting is included in the District's Strategic Energy Management Plan (SEMP) as an area of opportunity to reduce electricity consumption and operating costs for the District. This project involves changing existing HPS lighting to LED technology at 9 locations to supplement 2017 upgrades to and is expected to reduce energy consumed per street light by approx. 40%.
Public Engagement	Public engagement is anticipated to include working with Council and Executive Team on high profile issues. This may also include trip surveys associated with pilot projects such as bike lanes, pedestrian safety improvements, safe routes to schools, and transit initiatives.
North Shore Municipal Transportation Committee	North Shore municipal staff meet on an on-going basis to work on issues important to the three communities, such as Burrard Inlet crossing, B-Line transit service, North Shore bus depot, expedited Highway 1 incident clearing and real time traffic management.
Safe Routes to Schools	Proposed safety projects around school include treatments such as crossing upgrades on Berkley Road at Carnation Street and E. Keith Road at Hendry Avenue.
Transportation Demand Management Pilot	The pilot project would allocate resources to working with schools and/or large employers to provide support and education to students, parents and workers for alternatives to the single occupancy vehicles (SOV) during peak hours. This could involve hiring HASTe or others to work with schools on our behalf on educational campaigns. This trial could involve also involve working with District's Operation Centre to develop strategies to address parking issues.

Bridge Structures

The 2018 bridge program consists of the following projects:

- Continued construction of Montroyal Bridge,
- Continued design for replacement of Ross Road Bridges over Hastings and Coleman Creeks,
- Initiate design for replacement of the Mackay Creek Bridges on Montroyal Boulevard and Canyon Boulevard, and
- Initiate design for walking and cycling access improvements including replacement of the pedestrian bridge over Mosquito Creek at Evergreen Basin.

Walking Infrastructure

Improvements to pedestrian projects are determined each year by their rank in the Pedestrian Master Plan (2009) and on the crosswalk priority list.

Proposed sidewalk projects may include, but are not limited to,:

- Ross Road Sidewalk: Allan Road Hoskins Road (cont.)
- William Avenue Sidewalk: E 29th Street Lynn Valley Road

Improvements to pedestrian crossings includes treatments such as rapid rectangular flashing beacons (RRFBs), pedestrian activated signals, and audible pedestrian systems. Proposed crossing upgrades may include, but are not limited to, the following:

- Delbrook Avenue at Evergreen Place
- Deep Cove Road at Badger Road
- 1300 block of Deep Cove Road
- Indian River Drive at Inlet Crescent
- Berkley Road at Carnation Street
- Allan Road at Ross Road
- Mountain Highway at Dempsey Road
- Capilano Road at Prospect Avenue
- Sunset Boulevard at Ridgewood Drive

Transit Infrastructure

In order to make transit a viable transportation alternative for District residents, staff works with transit partners to make upgrades to bus stops across the District. Projects proposed include a mix of transit benches, concrete pad for wheelchair accessibility, sidewalks and curb let-downs. Sites are identified through staff recommendations as well as requests from Coast Mountain Bus Company and residents. The number of installations depends on the complexity of each site.

Cycling Infrastructure

Cycling projects can be categorized in two groups: a) safety treatments and b) connecting routes. Safety treatments are smaller scale and include projects such as installing push buttons at signals. Connecting routes may be larger in scale and work to connect town centres and other key destinations. The goal of these projects is to knit together a network that serves a range of people riding bikes – from families with young children to experienced riders – such that it offers choices and is considered safe and comfortable for those of all ages, all skill levels and for all trip purposes. Projects may include buffered bike lanes, neighbourhood bikeways and urban trails that could be made to feel safe and comfortable for a wide range of users.

Listed below are planning efforts that are needed to prepare for future projects.

Burrard Inlet	
Multimodal Cross	ing
Review	

This work involves a high-level assessment of possible options to cross Burrard Inlet. The review would be done through the North Shore Municipal Transportation Committee and specifically look at multimodal needs and opportunities. Options to investigate could include, but are not limited to, a bridge/tunnel for general purpose traffic, a bridge/tunnel to support light rail transit, a bridge/tunnel for commercial goods traffic related to North Shore Ports.

North Shore Blueway Plan

This work would consider the feasibility of a passenger ferry service, linking Distric town centres, Lonsdale Quay and Waterfront Station. Analysis would consider potential ridership, potential North Shore ferry terminal sites, vessel requirements, and approximate capital and operating costs. The objective of the plan is to look at the overall feasibility of implementing a passenger ferry service to relieve pressure on the Lions Gate and Second Narrows bridge crossings and define options for advancement with TransLink and other partners. A passenger ferry service would add redundancy to the transportation network in the event of a seismic event where one or both bridges sustain structural damage.

Bicycle Master Plan Update

In the last 5 years, bicycle design has changed considerably. Council urged staff to develop and implement cycling facilities to serve all ages and abilities between town centres and key destinations. The City of North Vancouver and District would, if funded, update the Bicycle Master Plan.

Maplewood Transportation Study Update

This project continues to build off of the work done during the Maplewood planning process. There may be additional refinement required once development applications are submitted to the District.

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