



City of Bellevue

Main Street Bike Lane Project

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Bellevue Downtown Association

Transportation Committee

June 5, 2019



Feedback Requested

Staff and Commission seek BDA comment on a Main Street bike lane project through Downtown Bellevue.

AGENDA



May 13 Council Direction



May 23 Transportation Commission Request



Main Street – Policy Context



Main Street – Project Alternatives



City Council (5/13)

108th Avenue NE Bike Lane (5/13)



“I appreciate the work that was done and I call this project a complete success.”

*Mayor John Chelminiak
City of Bellevue*

Main Street Bike Lane (5/13)



- “I think implementing the project on Main Street in a reasonable manner makes sense.”
- “We’ve included Main Street in the Grand Connection and in the Bike Plan.”
- “I think this would be a good opportunity.”

*Mayor John Chelminiak
City of Bellevue*



City Council Direction (5/13)

Council directed the Transportation Commission to evaluate a potential Main Street bike lane project; followed by an update to Council.



Transportation Commission (5/23)

Commission Meeting Topics (5/23)

1. Main Street & 108th Avenue NE alternatives.
2. Main Street & Bellevue Way operations.
3. NE 2nd Street as an alternative east-west bicycle connection.
4. WSDOT's I-405 Bellevue to Renton project.
5. Main Street bike lane project assessment.
6. Lane repurposing for bicycle mobility.
7. New vulnerable user/safe passing law.



Commission Request (5/23)

Transportation Commission requested staff seek feedback from the Bellevue Downtown Association on the Main Street bike lane project.

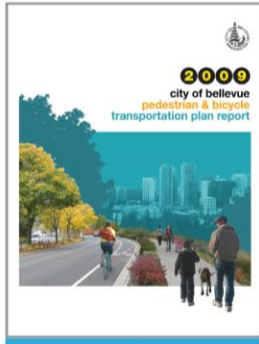


Main Street - Policy Context

Timeline

PLANNING

2/17/2009



2/9/2015



4/28/2016



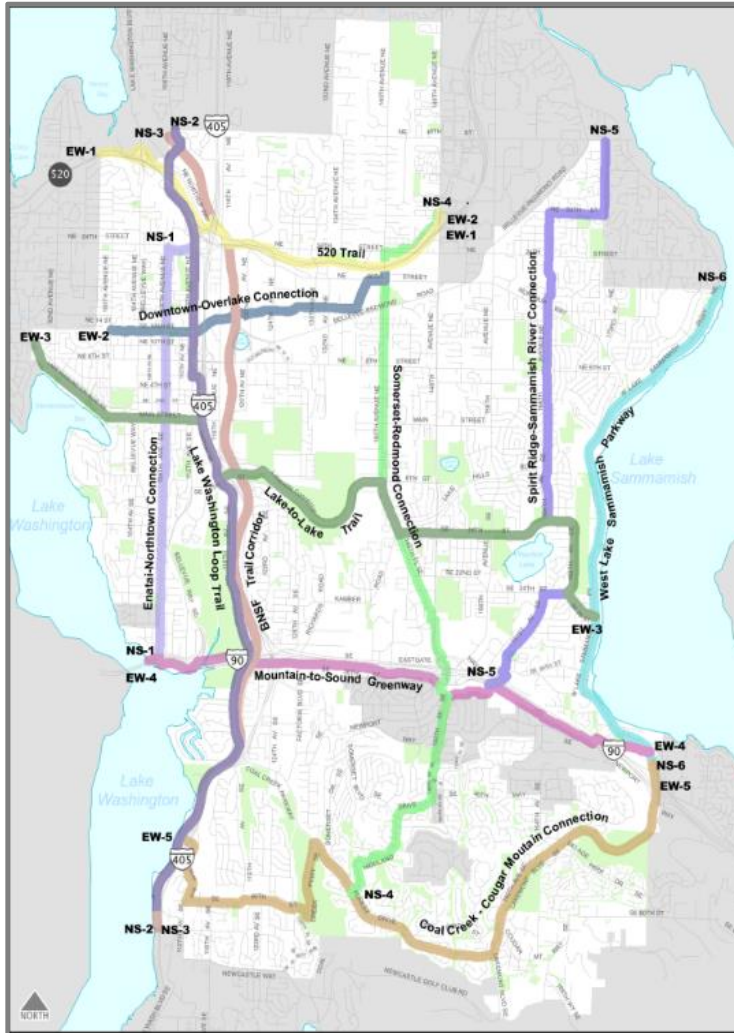
11/8/2016



IMPLEMENTATION

- **During 2017 and early 2018** – Staff worked with the Transportation Commission, BDA, and broader community in a discussion about how to make downtown a comfortable, safe, attractive place for people to bike.
- **January 11, 2018** – The Transportation Commission voted to proceed with implementing a demonstration bikeway project on 108th Avenue NE.
- **February 5, 2018** – The City Council voiced support for implementing the downtown demonstration bikeway project on 108th Avenue NE and conducting a study to assess outcomes.
- **April 12, 2018** – The Transportation Commission endorsed an assessment framework.
- **July 31, 2018** – A celebration marked the opening of the 108th Avenue NE bikeway.
- **March 28, 2019** – The Transportation Commission voted to retain the 108th Avenue NE bikeway with refinements to the design per community feedback. Received a briefing on Main Street bike lane alternatives.
- **May 10, 2019** – BDA letter/position re: 108th Avenue NE Demonstration Bikeway.
- **May 13, 2019** – The City Council directed the Transportation Commission to evaluate alternatives to fill the gap in the existing bike lanes on Main Street between Bellevue Way and 108th Avenue NE.

2009 Pedestrian & Bicycle Plan



- **2014 Target:** “Within 5 years, implement at least one completed and connected east-west and north-south bicycle route through Downtown Bellevue.” – Policy PB-2
- **Main Street:** Component of the Lake-to-Lake Trail, a bicycle priority corridor.

2015 Implementation Principles

Bellevue City Council

Claudia Balducci
Mayor

Kevin Wallace
Deputy Mayor

John Chelminiak
Councilmember

Conrad Lee
Councilmember

Jennifer Robertson
Councilmember

Lynne Robinson
Councilmember

John Stokes
Councilmember

PBII Program Principles

To guide the Transportation Commission in its oversight of the PBII, the Bellevue City Council approved the following set of **Program Principles**:

The City Council envisions an accessible, well-connected network of pedestrian and bicycle facilities for Bellevue that (i) enhances livability, (ii) supports economic vitality, and (iii) serves the mobility needs of people of all ages and abilities. The Council developed the following set of Program Principles to direct the Pedestrian & Bicycle Implementation Initiative, a complement of action-oriented efforts that advance non-motorized facility designs and programs identified by the 2009 Pedestrian and Bicycle Transportation Plan to meet or exceed the City's 2019 targets and position the City to realize its long-term vision for a walkable and bikeable Bellevue.

1. Continue to aspire to the vision established by the 2009 Pedestrian and Bicycle Transportation Plan, pursue its goals, which should not be diluted, and monitor its established measures of effectiveness.
2. Undertake an action-oriented initiative that advances projects and programs to help realize the City's vision.
3. Provide a safe pedestrian and bicycle environment, which is a prerequisite to making non-motorized travel a viable, attractive option in Bellevue.
4. Advance the implementation of Bellevue's planned Bicycle Priority Corridors to facilitate continuous bicycle travel along a connected grid of safe facilities throughout the city and the region.
5. Research pedestrian and bicycle count technologies to improve the City's data driven decision-making.
6. Determine where pedestrian and bicycle investments can improve the connectivity of the multi-modal transportation system.
7. Coordinate with other efforts underway in Bellevue related to pedestrian and bicycle issues.
8. Identify partnership opportunities to advance the implementation of non-motorized projects and programs.
9. Engage community stakeholders in setting the priorities for investment in non-motorized facilities.
10. Refine existing metrics to track plan progress and engage other departments as needed to foster a One City commitment to active transportation.

“Advance the implementation of Bellevue’s planned Bicycle Priority Corridors to facilitate continuous bicycle travel along a connected grid of safe facilities throughout the city and the region.”

- City Council (February 2015)

2016 Rapid Implementation Program

- **Connected**, prioritizing a network that “fills the gaps” in lieu of piece-meal implementation
- **Protected**, promoting physically separated facilities to minimize conflicts between roadway users where possible
- **Rapid**, leveraging early-win opportunities that can quickly advance project delivery

Vision Zero

- “The life, safety and health of residents, employees and visitors to Bellevue is the City Council’s highest priority.” – Res. 9035 (2015)
- “Strive to provide separation between motorized vehicles, pedestrians, and bicyclists, as feasible, reasonable and appropriate to the context, while maintaining adopted level-of-service standards for all modes.” – Comprehensive Plan (TR-116.1)

Complete Streets

“The City of Bellevue will, to the maximum extent practical, implement Complete Streets [which] provide appropriate facilities to meet the mobility needs of people of all ages and abilities who are walking, bicycling, riding transit, driving, and transporting goods.” (BCC 14.60.191)

Mode Share Targets – Comprehensive Plan

Figure TR-3. Commute Trip Non-Drive-Alone Mode Share Targets

Worker population	2012 Existing	2035 Target
Citywide Residents	35%	45%
Citywide Workers	26%	40%
Downtown** Workers	29%	65%

**Includes public transportation, private commuter buses, carpool, walk, bicycle, and work at home.*

***Downtown is Bellevue's Regional Growth Center and Mobility Management Area # 3.*

Environmental Stewardship Initiative

- Improve transportation access and the proportion of non-drive-alone travel in Downtown Bellevue.
- Explore alternatives to current concurrency methodology to include multimodal aspects of the transportation system.
- Increase accessibility of pedestrian and bike travel routes according to the City's Ped-Bike Plan.
- Market, recognize, and promote cycling to increase bicycle ridership and pedestrian travel in the community.

2014 Economic Development Plan

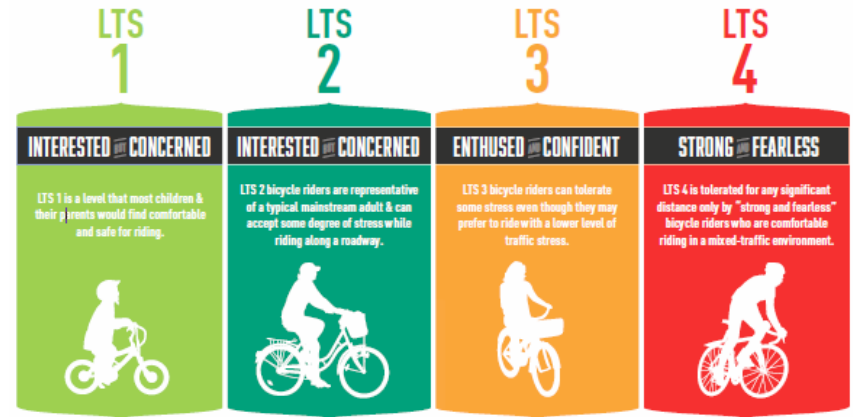
Foundational Strategies:

- A.3. Cultivate a multi-modal transportation system that will ease congestion by increasing capacity and enhancing connectivity (roads, transit, rail, biking, and pedestrian corridors)
- F.1. Complete Meydenbauer Bay Park with a strong linkage to Downtown and the Wilburton District, including the Eastside Rail Corridor

Bicycle Level of Service

“Recommended bicycle metrics and guidelines are based largely on the rider experience, not the number of riders who use a facility... The quality of the experience for a person riding a bicycle is largely determined by the speed and volume of traffic on the street, coupled with the type of bicycle facility.”

– MMLOS Report (2017)



Roadway Characteristics | Bicycle Facility Components: Guideline to Achieve Intended Level of Service/Level of Traffic Stress

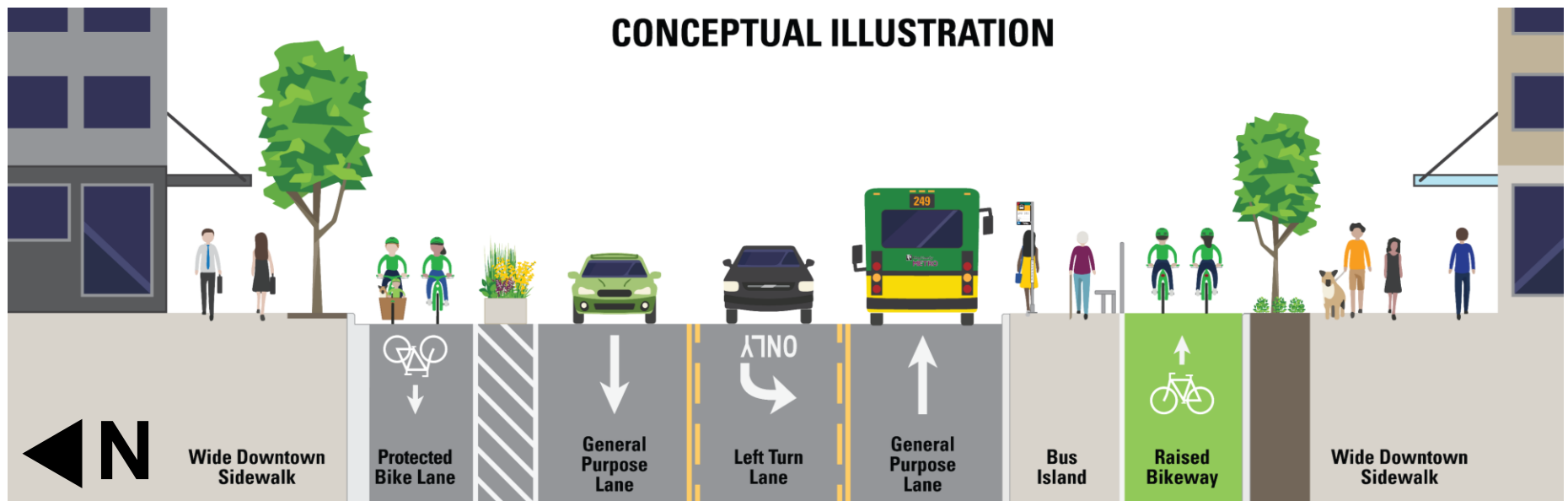
Speed Limit (MPH)	Arterial Traffic Volume	No Marking	Sharrow Lane Marking	Striped Bike Lane	Buffered Bike Lane (Horizontal)	Protected Bike Lane (Vertical)	Physically Separated Bikeway
</= 25	<3k	1	1	1	1	1	1
	3-7k	3	2	2	2	1	1
	>/=7k	3	3	2	2	1	1
30	<15k	3	3	2	2	1	1
	15-25k	4	4	3	3	3	1
	>/=25k	4	4	3	3	3	1
35	<25k	4	4	3	3	3	1
	>/=25k	4	4	4	3	3	1
>35	Any	4	4	4	4	3	1

Corridor Vision

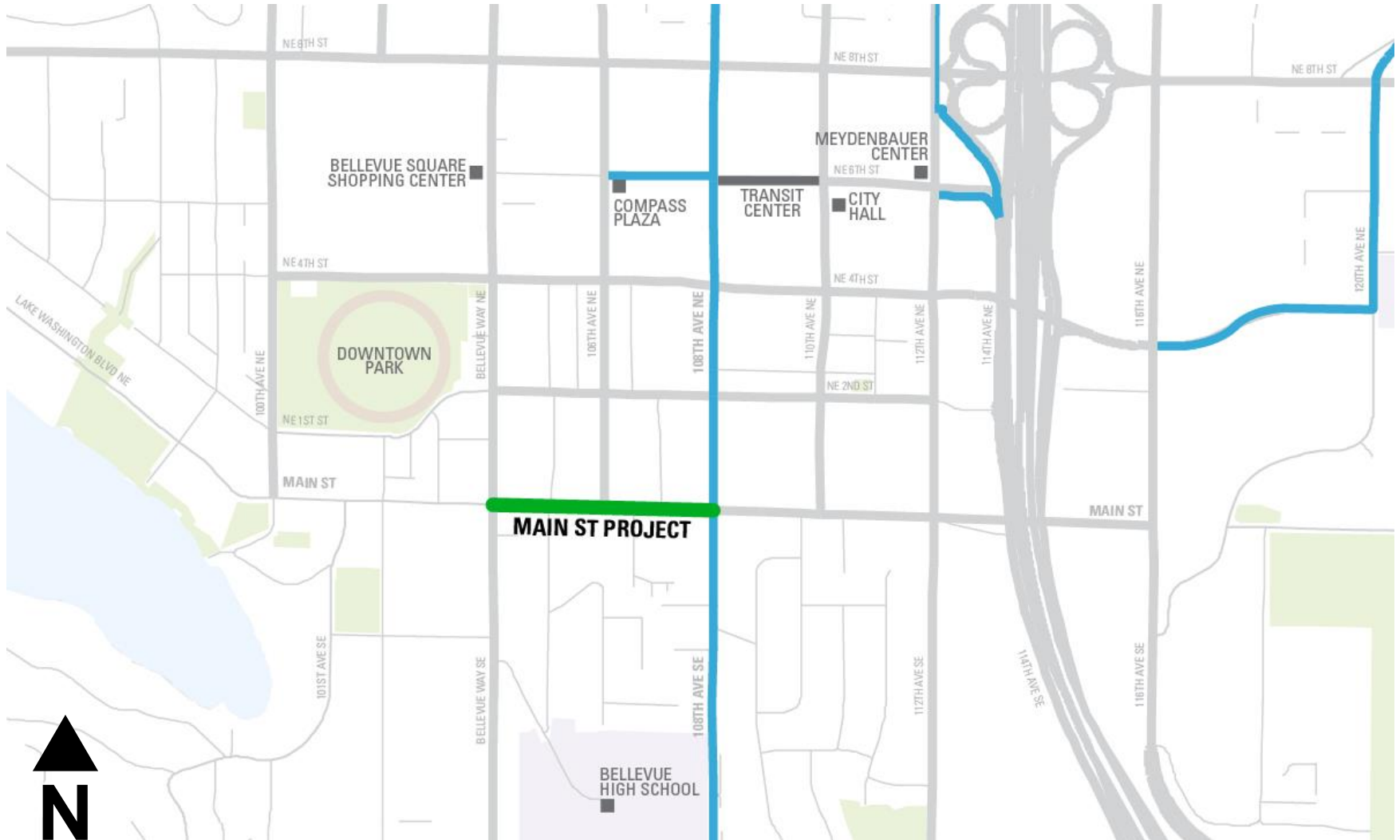
Target: LTS 1 – *Bicycle Priority Corridors in Downtown*

A high level of bicycle mobility for all ages and abilities is expected within areas where the City has the vision, intent and policy to promote a high-density, mixed use urban environment.

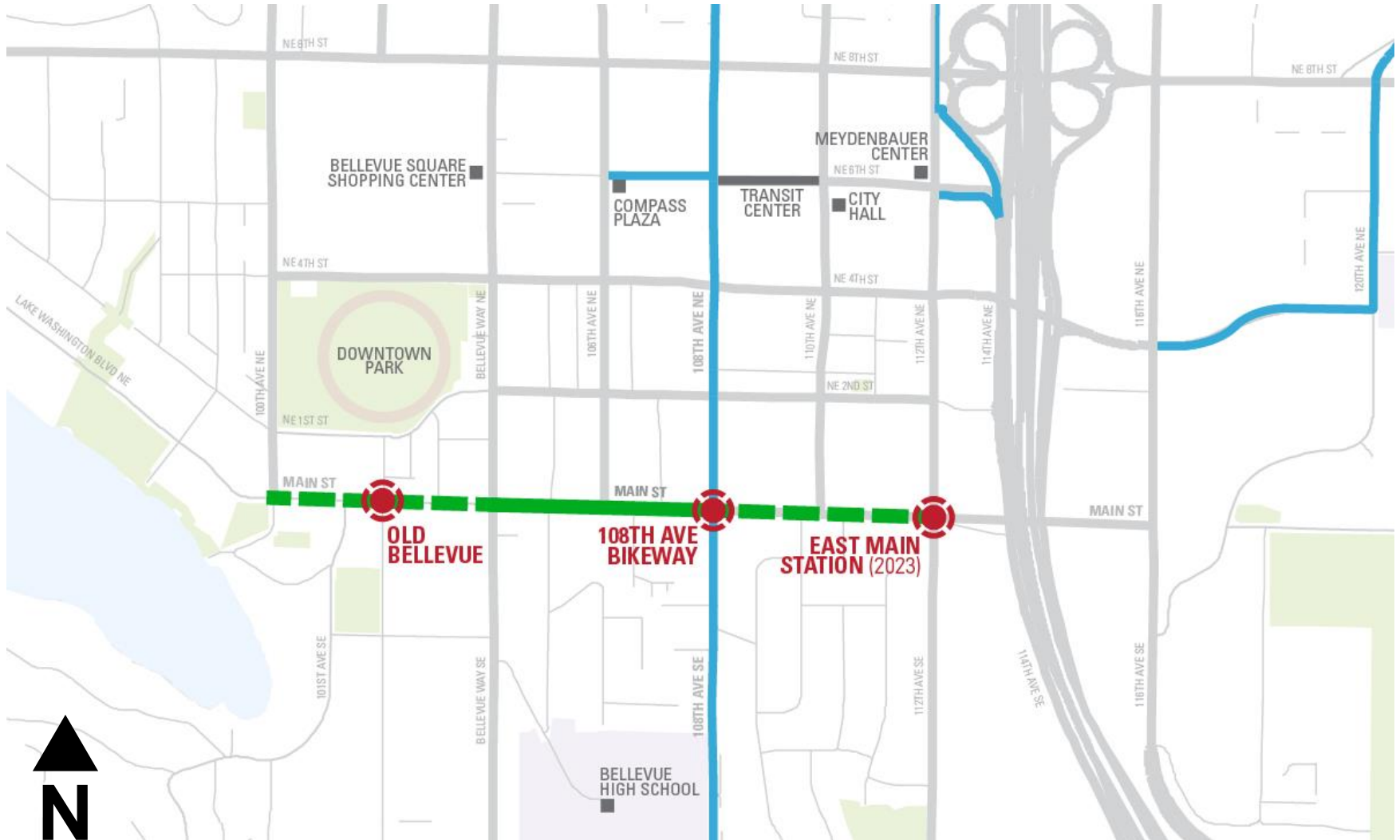
CONCEPTUAL ILLUSTRATION



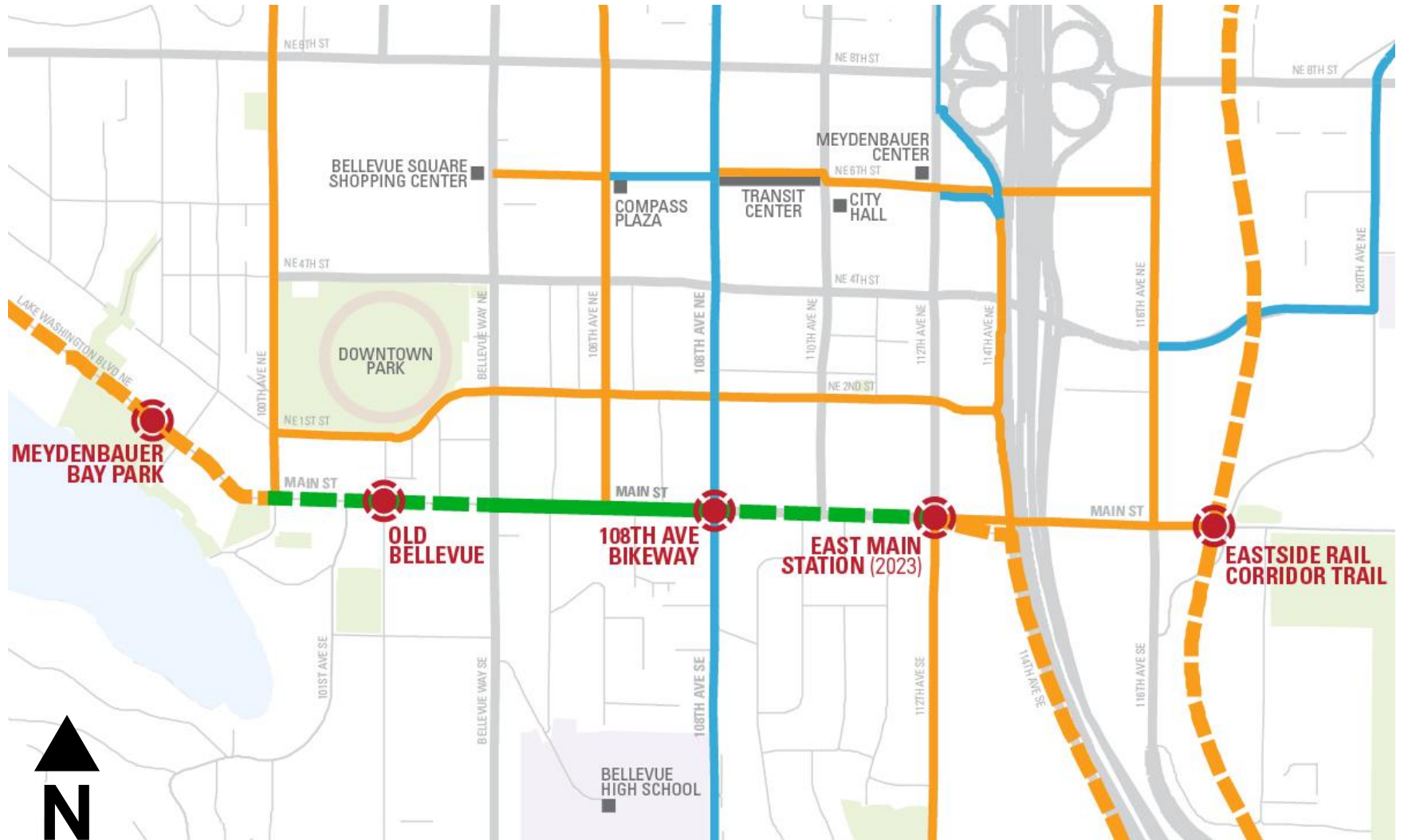
Corridor Context



Corridor Context



Corridor Context



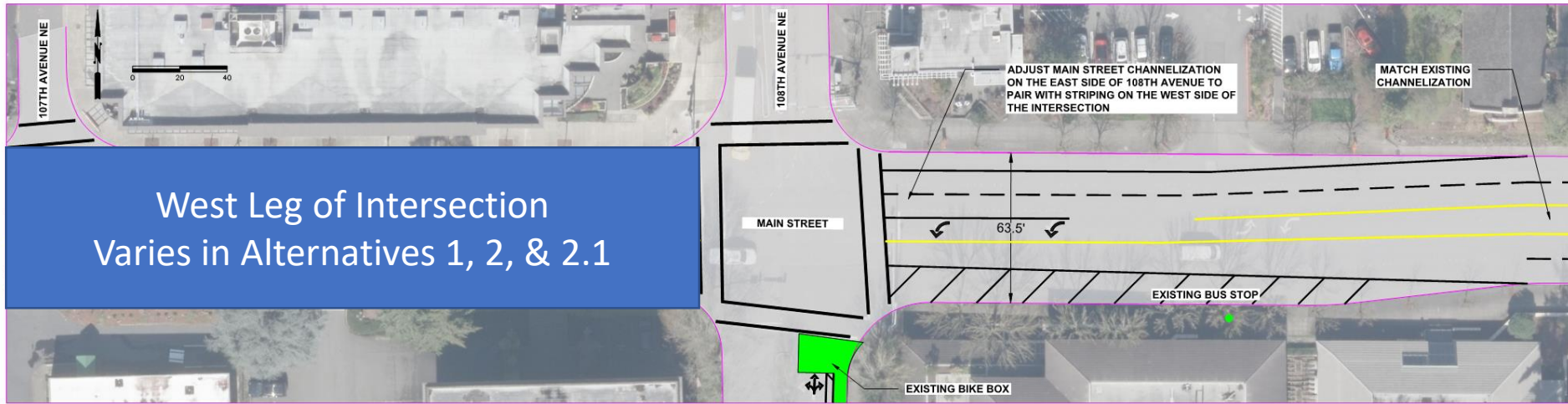
Our Mission – Transportation Dept

“To provide a safe and efficient transportation system that supports livable neighborhoods and a vital economy in partnership with our diverse community.”

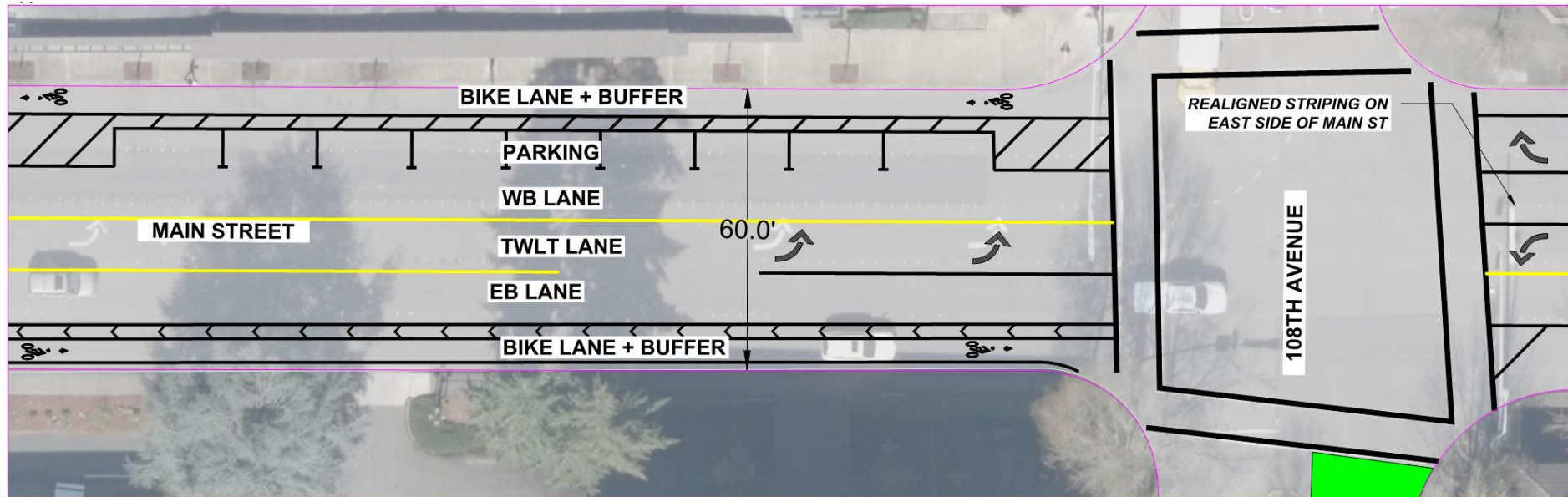


Main Street – Project Alternatives

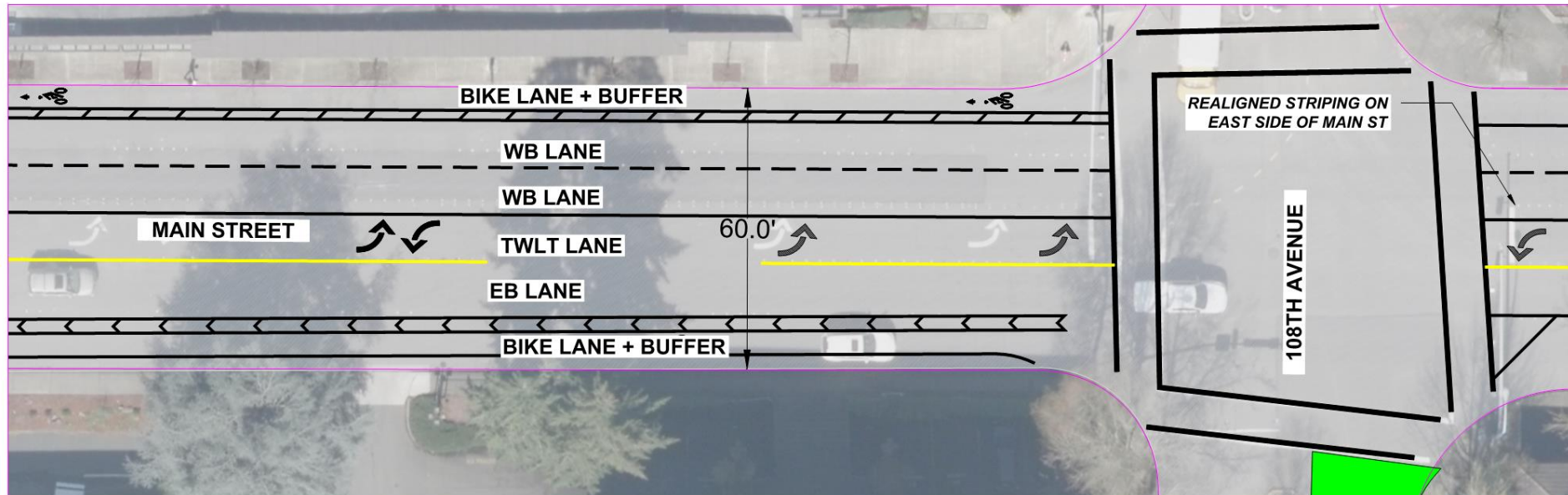
Alternatives Development



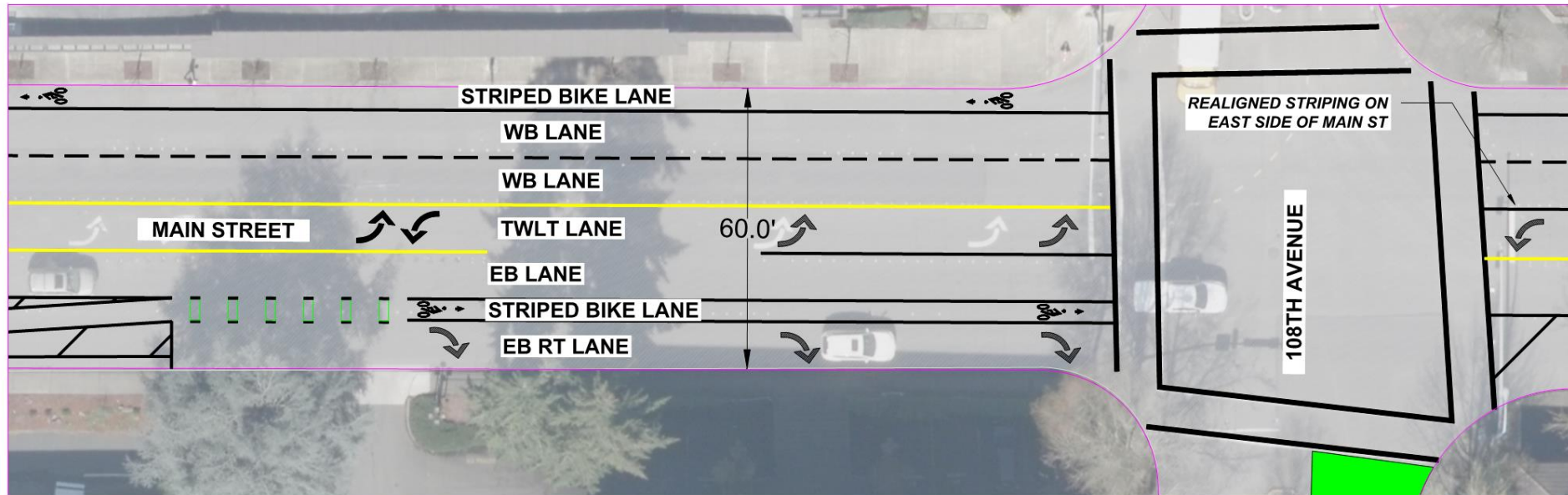
Alt 1 – Buffered Both



Alt 2 – Buffered EB



Alt 2.1 – Buffered EB, with RT Pocket



STAFF RECOMMENDED ALTERNATIVE

Travel Time Changes (PM Peak)

Direction	Existing	Alternative 1	Alternative 2	Alternative 2.1
Eastbound (Bellevue Way to 108th)	<i>2.3 mins</i>	+0.1 mins	No change	-0.1 mins
Westbound (108th to Bellevue Way)	<i>1.7 mins</i>	+0.9 mins	No change	No change

1. Cycle length and signal timing splits were kept the same across alternatives.
2. Existing conditions include EB bike lane from Bellevue Way to 105th Ave NE.

Travel Time Changes (AM Peak)

Direction	Existing	Alternative 1	Alternative 2	Alternative 2.1
Eastbound (Bellevue Way to 108th)	<i>1.6 mins</i>	+0.2 mins	+0.2 mins	+0.1 mins
Westbound (108th to Bellevue Way)	<i>1.4 mins</i>	No change	No change	No change

1. Cycle length and signal timing splits were kept the same across alternatives.
2. Existing conditions include EB bike lane from Bellevue Way to 105th Ave NE.

Level of Service Changes (PM Peak)

Intersection	Existing		Alt 1		Alt 2		Alt 2.1	
Bellevue Way/ Main St	54.6 secs	D	+0.4 secs	D	-2.8 secs	D	-2.8 secs	D
106th/Main St	21.7 secs	C	+18 secs	D	-0.7 secs	C	-2 secs	B
108th/Main St	17.6 secs	B	+17.9 secs	D	+6.9 secs	C	+4.9 secs	C

1. Cycle length and signal timing splits were kept the same across alternatives.
2. Existing conditions include EB bike lane from Bellevue Way to 105th Ave NE.

Level of Service Changes (AM Peak)

Intersection	Existing		Alt 1		Alt 2		Alt 2.1	
Bellevue Way/ Main St	37.7 secs	D	+0.3 secs	D	-0.2 secs	D	+0.3 secs	D
106th/Main St	8.8 secs	A	+2.1 secs	B	+1.2 secs	A/B	+1.1 secs	A
108th/Main St	20 secs	B	+4.8 secs	C	+3.8 secs	C	+1.1 secs	C

1. Cycle length and signal timing splits were kept the same across alternatives.
2. Existing conditions include EB bike lane from Bellevue Way to 105th Ave NE.

Timeline Considerations

- June 5 – BDA Transportation Committee
- June 18 – BDA Board
- June 27 – Transportation Commission
- July 8 – City Council



Feedback Requested

Staff and Commission seek BDA comment on a Main Street bike lane project through Downtown Bellevue.



Additional Topics



Discussion Topic: Bellevue Way

Provide additional details on the existing Main Street bike lane and explain whether the decision to incorporate these bike lanes resulted in an adverse impact to traffic operations at the Bellevue Way intersection.

Channelization Projects (2016-17)



Redevelopment in Old Bellevue; converted 2 EB thru lanes to 1 rt and 1 thru lane.



Pedestrian and bicycle improvements on east side of Bellevue Way.

Level of Service (2016-18)

Concurrency Report Year	Count Year	Level of Service (V/C)	Letter Grade
2016	2015	0.74	C
2017	2016	0.74	C
2018	2017	0.96	E+

Source: Bellevue Concurrency Update Report

Updated Level of Service Tool

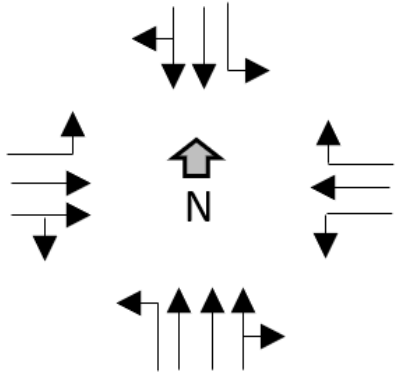
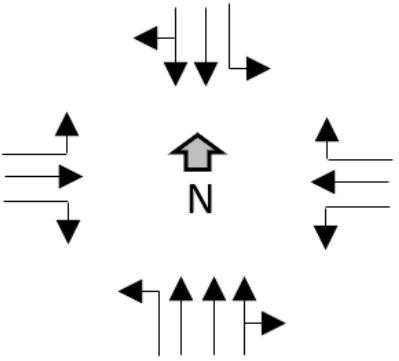
In 2018, based on feedback from the Transportation Commission, staff updated the LOS analysis tool to more closely reflect observed “real world” conditions.

Pedestrian Volume/Hour of all Crosswalks Combined	% Reduction of the Intersection Capacity
0 - 50	0.5
51 - 100	1
101 - 200	2
201 - 300	4
301 - 400	6
401+	8

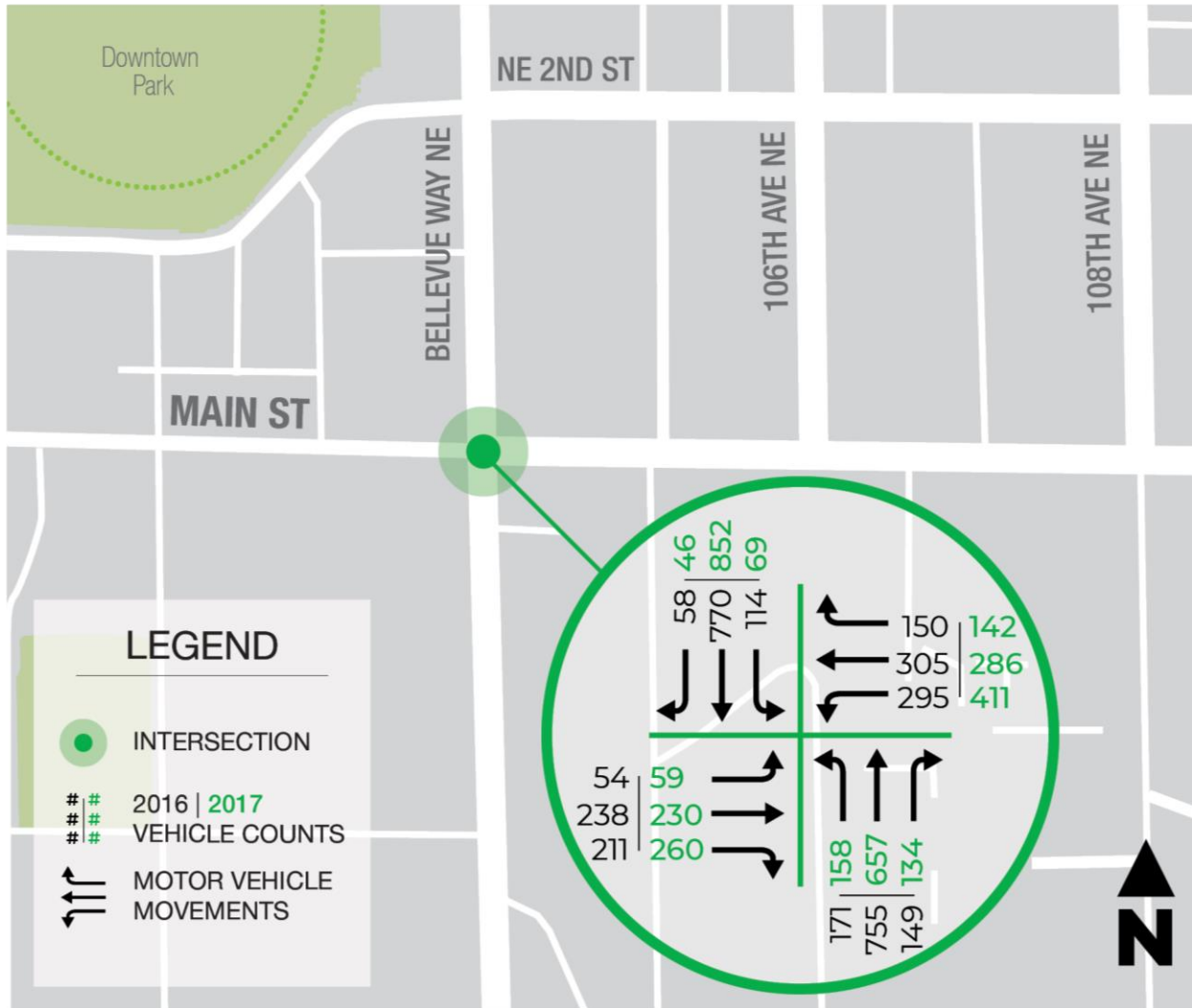
Note: At the intersection of Bellevue Way and Main Street there were 242 pedestrians crossing per hour recorded in 2017 counts. So the percent reduction of the intersection capacity would be 4%. That is equivalent to 56 veh/hr reduction for the 1,410 veh/hr capacity.

Updated V/C Ratios

To isolate the V/C change caused by the redesign of the Bellevue Way intersection, staff reanalyzed V/C for before-and-after channelization using the updated tool.

Concurrency Report Year	Count Year	V/C Ratio with Updated LOS Tool	
		Before (without bike lane)	After (with bike lane)
			
2017	2016	0.84	0.84
2018	2017	0.96	0.94

Turning Movement Counts (2016-17)



Takeaways

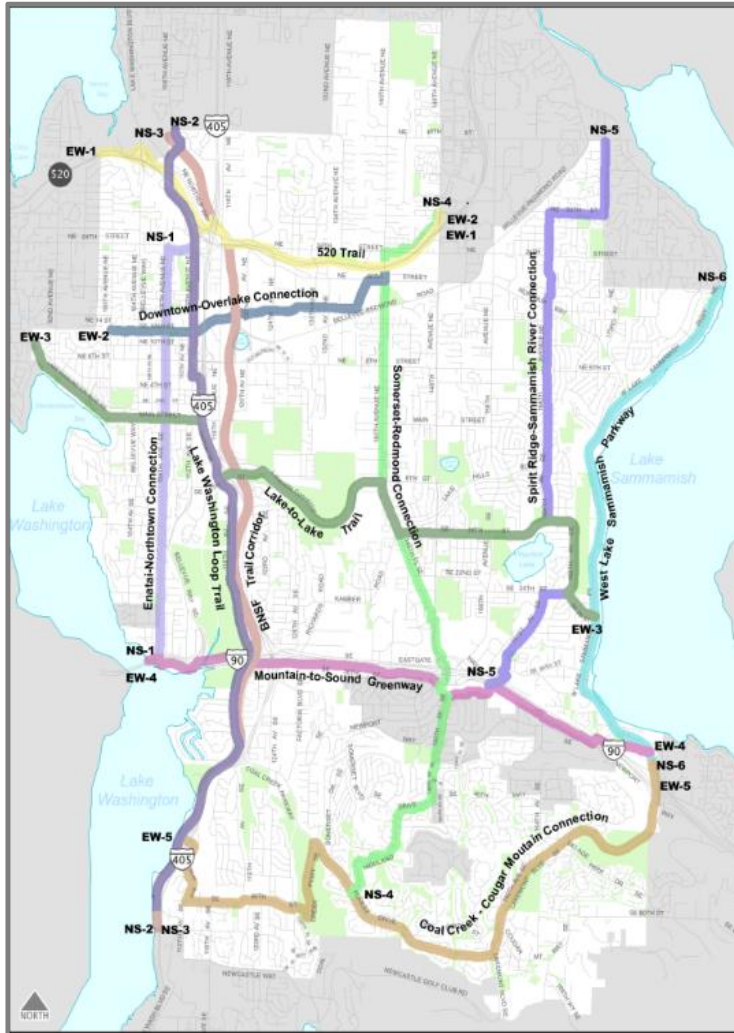
- The refinement to the intersection LOS analysis tool made in 2018 and an increase in the westbound left turn volume were the two causes of the V/C change.
- The introduction of the bike lane caused little or no change in V/C.



Discussion Topic: NE 2nd Street

Provide an assessment of NE 2nd Street as an alternative east-west bicycle connection through Downtown; as compared to Main Street.

Policy



- **Main Street:** Component of the Lake-to-Lake Trail, a bicycle priority corridor.
- **NE 2nd Street:** Part of the bike network; not a component of a bicycle priority corridor.

Bike Network Connectivity

- **Main Street:** Connects Meydenbauer Bay Park to the 108th Avenue bikeway and the Lake Washington Loop. Along Main St, this is a direct connection (2,700 feet) through Old Bellevue.
- **NE 2nd Street:** To provide a comparable connection on NE 2nd St would necessitate improvements to one block of 100th Avenue NE and to NE 1st Street from 100th to Bellevue Way NE, connecting to Downtown Park but skirting Old Bellevue. This indirect connection (3,800 feet) is about 40 percent longer.

Bike Facility Comfort

- **Main Street:** EB buffered bike lane and WB bike lane (Alternative 2) from Bellevue Way to 108th Ave NE + shared lane markings west to 100th Ave through Old Bellevue (LTS 3).
- **NE 2nd Street:** Bike lanes from Bellevue Way to 106th and buffered bike lanes from 106th to 108th Ave NE (LTS 2). Shared lane markings along NE 1st St and south along 100th Ave NE (LTS 3).

Bike Route Grade

- **Main Street:** Traveling west to east, Main Street climbs gradually from 88 feet to 144 feet, a 43-foot gain.
- **NE 2nd Street:** Traveling along 100th Ave NE (from 88 feet to 129 feet) and then between 106th Ave NE and 108th Ave NE (from 94 feet to 163 feet). A total gain of 84 feet over two steep climbs.

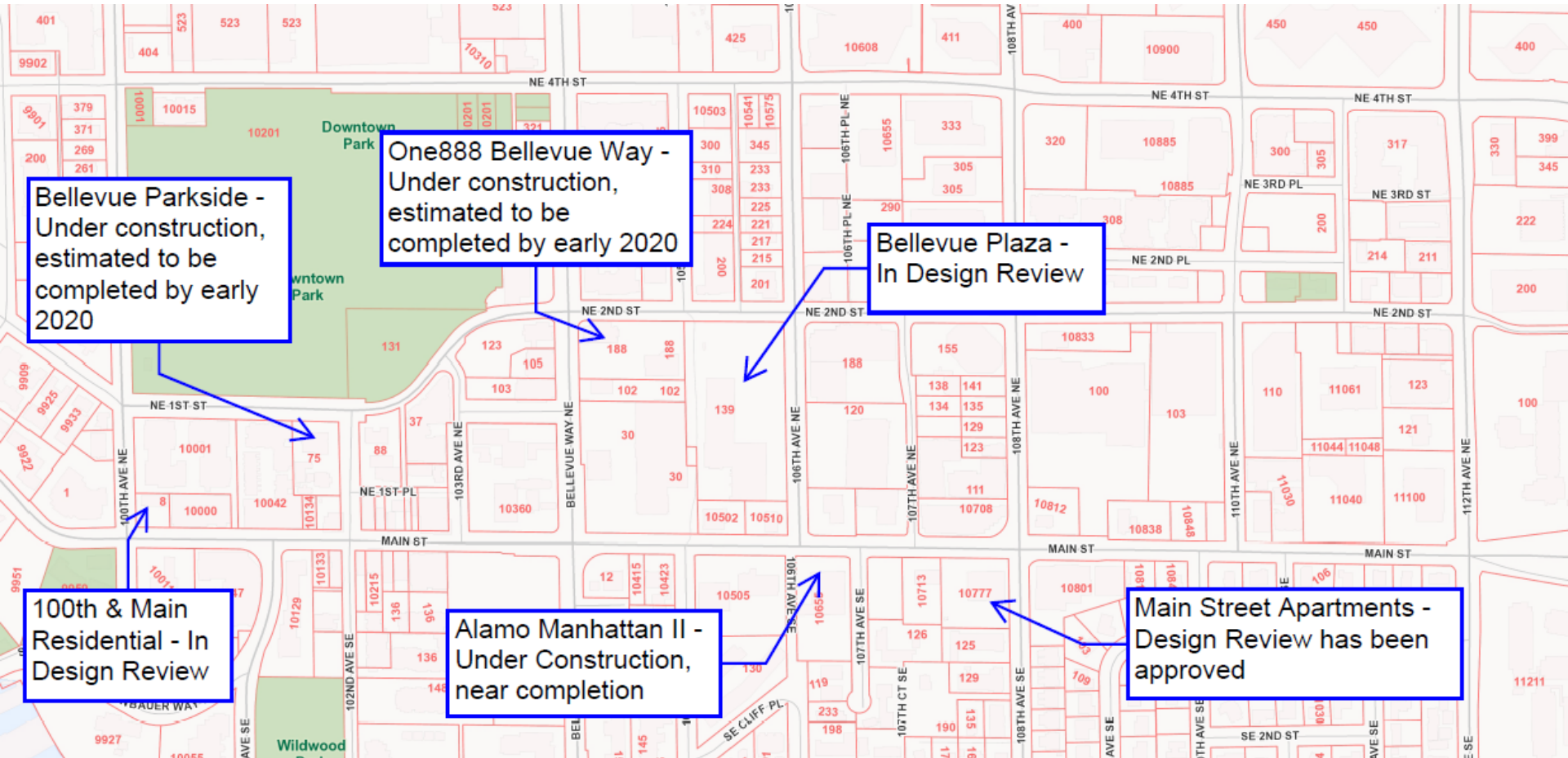
Travel Lanes Repurposed

- **Main Street:** One eastbound lane would be repurposed between 105th Ave NE and 108th Ave NE.
- **NE 2nd Street:** None of the lanes between Bellevue Way SE and 112th Ave NE would need to be repurposed; however, dedicate right turn lanes would be repurposed westbound at Bellevue Way NE and westbound at 106th Ave NE.

Parking Impacts

- **Main Street:** No on-street parking within the project limits.
- **NE 2nd Street:** An estimated 25 on-street parking spaces (460 feet of curb lane) would be repurposed between Bellevue Way NE and 108th Ave NE to provide bike lanes on both sides of the street. Represents 25% of existing on-street parking.

Construction Activity



Community Input

Among the four candidate corridors considered during the 2017-2018 Downtown Bicycle Rapid Implementation Program engagement process, Main Street stood out as the second highest ranked bike lane improvement after 108th Avenue NE.

Community input received at the bikeway open house, online questionnaire, and comment letters were shared with the Transportation Commission at its January 11, 2018 meeting.



Discussion Topic: I-405

Does WSDOT's I-405 Bellevue to Renton project impact the timing of implementing a rapid build bicycle lane on Main Street between Bellevue Way and 108th Avenue NE?

I-405 Renton to Bellevue Project



I-405 related projects are not impediments to moving forward with a low-cost (estimate: less than \$50K), rapid implementation (completion: Summer 2019) bicycle lane project on Main Street between Bellevue Way and 108th Avenue NE.



Discussion Topic: Assessment

Will Bellevue staff conduct a before-and-after assessment of the Main Street bike lane project?

Before-and-After Assessment

Bellevue staff does not intend on conducting an assessment equivalent to the Downtown Demonstration Bikeway Assessment Report. Staff does plan on monitoring operations, travel time, and collisions.



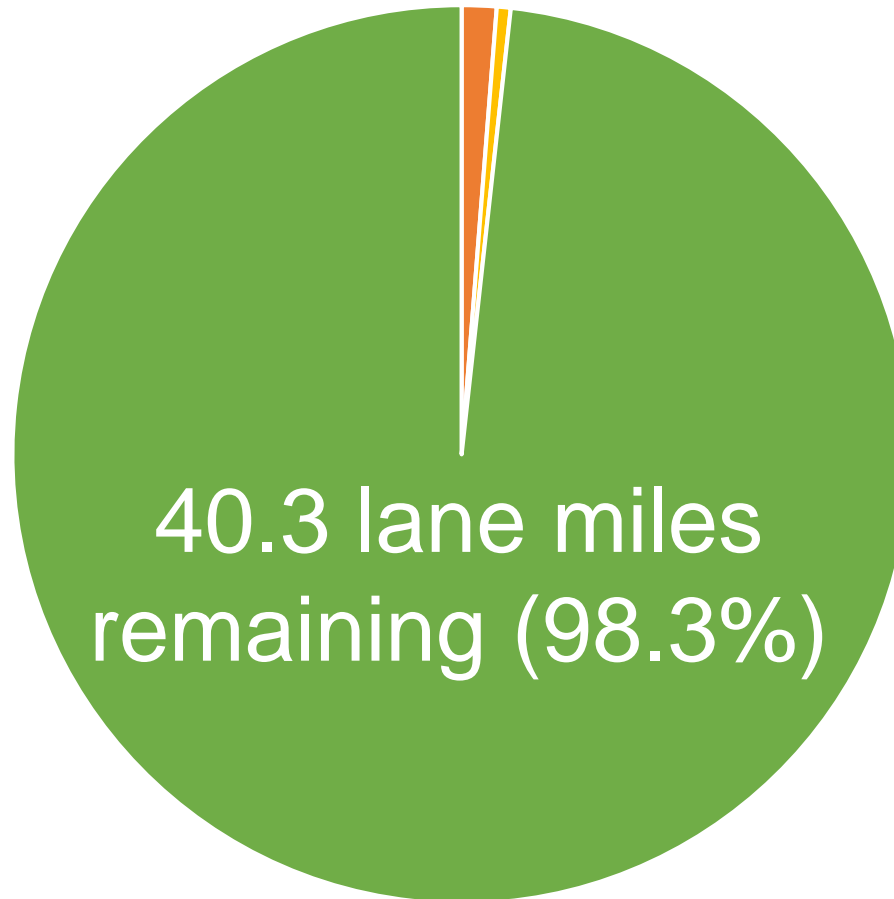
Bluetooth travel time collection hardware will be installed at four locations on Main Street.



Discussion Topic: Lane Miles

When 108th Avenue NE bike lanes and Main Street bike lanes (Alternative 2) are considered together; what is the total impact to travel lane mileage in Downtown Bellevue?

Lane Miles in Downtown = 41 miles



■ 108th Ave NE Bike Lane

■ Main Street Bike Lane



Discussion Topic: Legislation

What are the implications of the new Vulnerable user/Safe passing legislation on vehicle capacity?

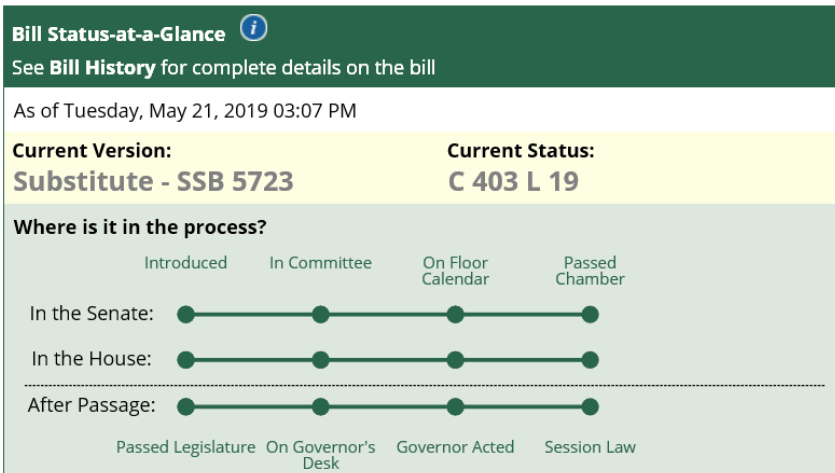
VRU & Safe Passing Law

SB 5723 - 2019-20

Increasing safety on roadways for pedestrians, bicyclists, and other roadway users.

Sponsors: **Randall, Saldaña, Liias, Rolfes, Billig, Nguyen**

Companion Bill: **HB 1966**



Our staff interpretation (*note: not a legal interpretation*) of the second component of the bill means that people driving on Main Street (were it not reconfigured with a buffered bike lane) would have to move over into the next lane for people bicycling as there are 2+ lanes traveling in a single direction.



Discussion Topic: Use of Funds

Were the City to repurpose travel lanes for bicycle lane purposes would it be required to reimburse Washington State for any constitutional trust funds it might have received when it originally constructed Main Street?

Use of road funds for bicycle lanes

RCW 35.75.060. Use of street and road funds for bicycle paths, lanes, routes and improvements authorized—Standards.

Any city or town may use any funds available for street or road construction, maintenance, or improvement for building, improving, and maintaining bicycle paths, lanes, roadways, and routes, and for improvements to make existing streets and roads more suitable and safe for bicycle traffic: PROVIDED, That any such paths, lanes, roadways, routes, or streets for which any such street or road funds are expended shall be suitable for bicycle transportation purposes and not solely for recreation purposes. Bicycle facilities constructed or modified after December 31, 2012, shall meet or exceed the standards adopted by the design standards committee under RCW **35.78.030**.