BELLEVUE
PEDESTRIAN
& BICYCLE
IMPLEMENTATION INITIATIVE

Bellevue Pedestrian & Bicycle Implementation Initiative

Transportation Commission
December 10, 2015

Franz Loewenherz, Senior Planner
Andreas Piller, Assistant Planner
Transportation Department
City of Bellevue

1) PBII Overview
2) PBII Task 2
3) Public Feedback
4) “CPR” Emphasis
5) “RIP” Deliverable/Timeline
6) Next Steps

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Agenda

Transportation Commission Invited to review & discuss the:

- **Draft Map of RIP Candidate Projects and the**
- **Draft Description of RIP Candidate Project Categories**

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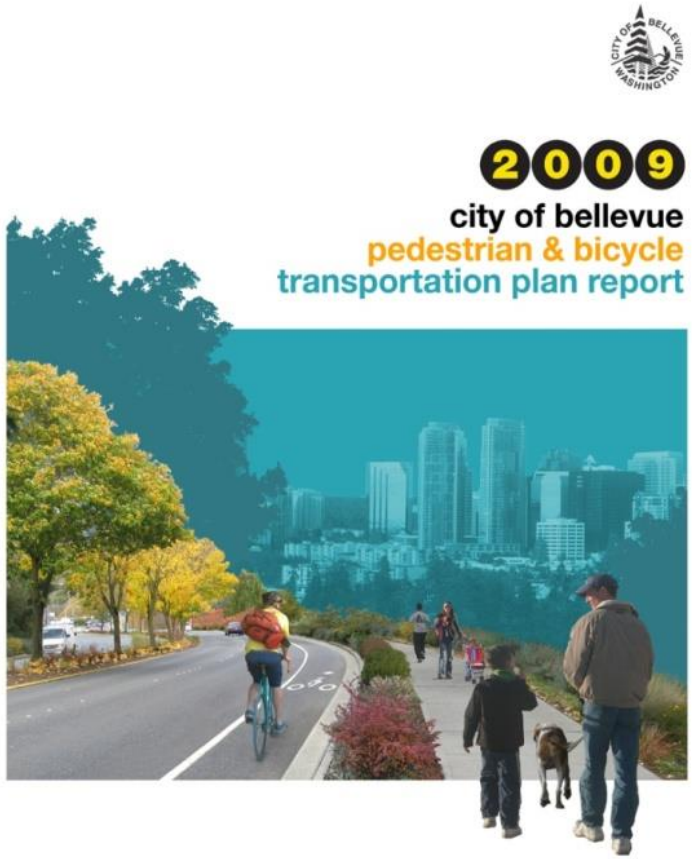
Tonight's Discussion



Ordinance No. 5861 (2/17/2009)

- **Formulated vision, goals, objectives.**
- **Assessed gaps in the non-motorized network.**
- **Established performance targets.**

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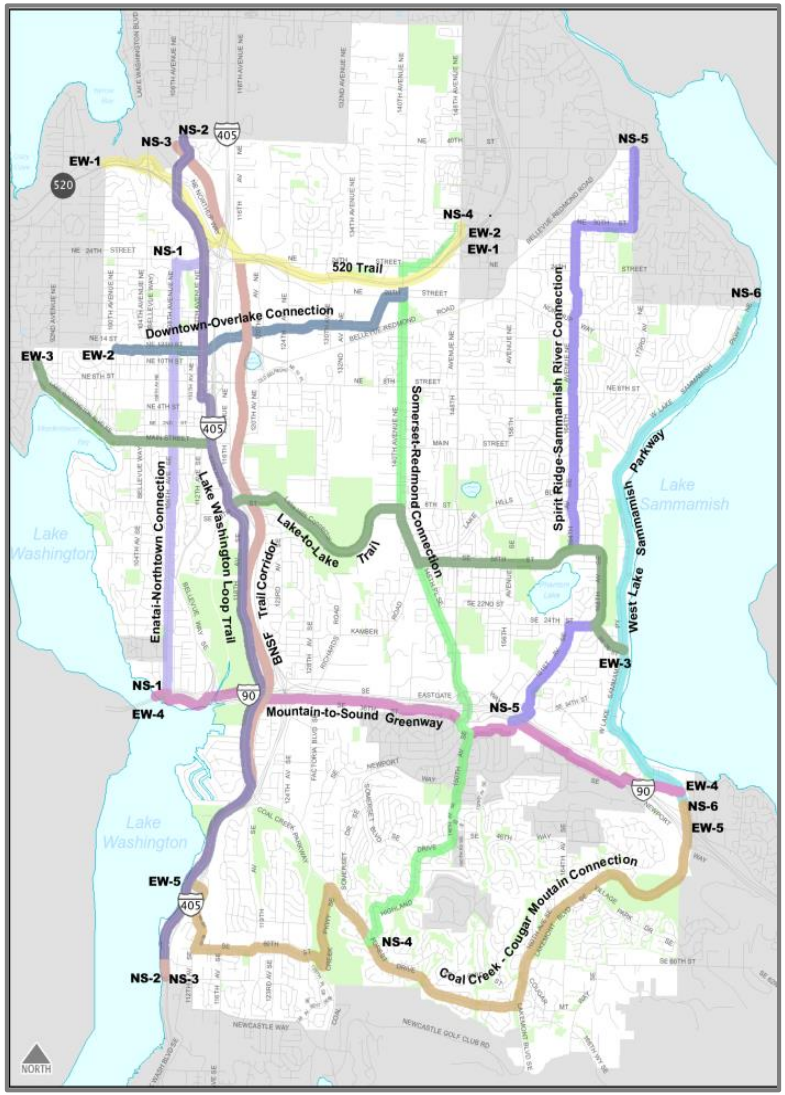
2009 Pedestrian & Bicycle Plan



2014 Performance Target:

"Within 5 years, implement at least one completed and connected east-west and north-south bicycle route through Downtown Bellevue."

- 2009 Pedestrian & Bicycle Transportation Plan

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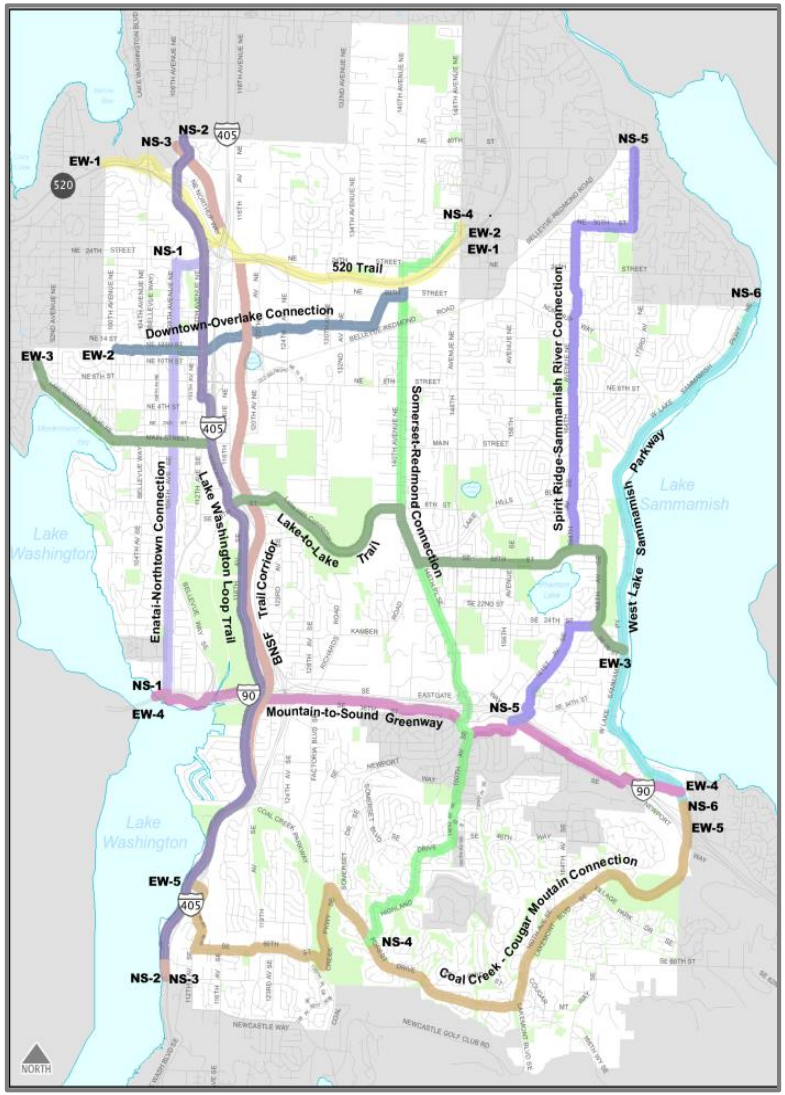
Priority Bicycle Corridors



2019 Performance Target:

"Within 10 years, implement at least two completed, connected, and integrated north-south and at least two east-west bicycle routes that connects the boundaries of the city limits, and connects to the broader regional bicycle system."

- 2009 Pedestrian & Bicycle Transportation Plan

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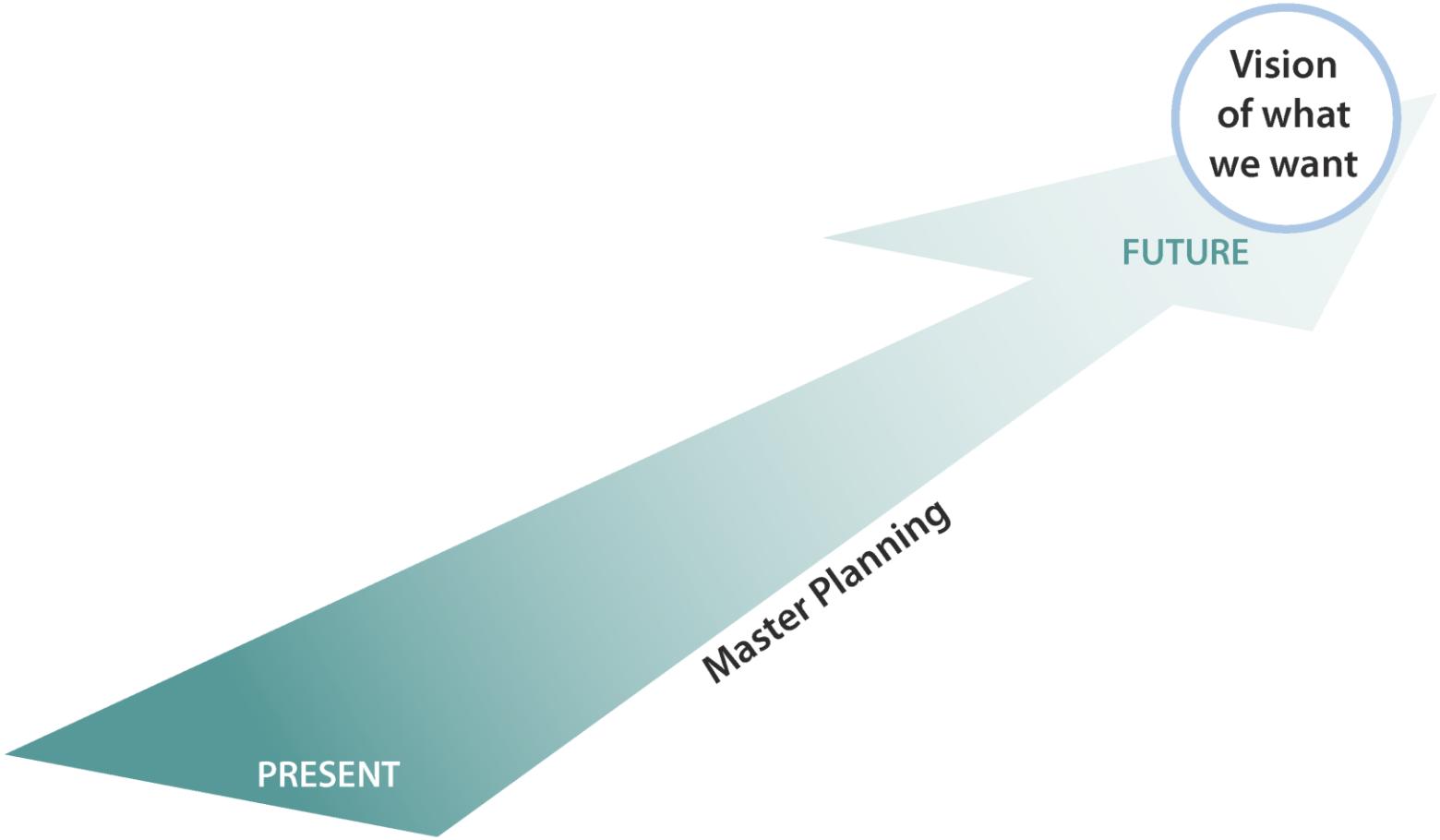
Priority Bicycle Corridors



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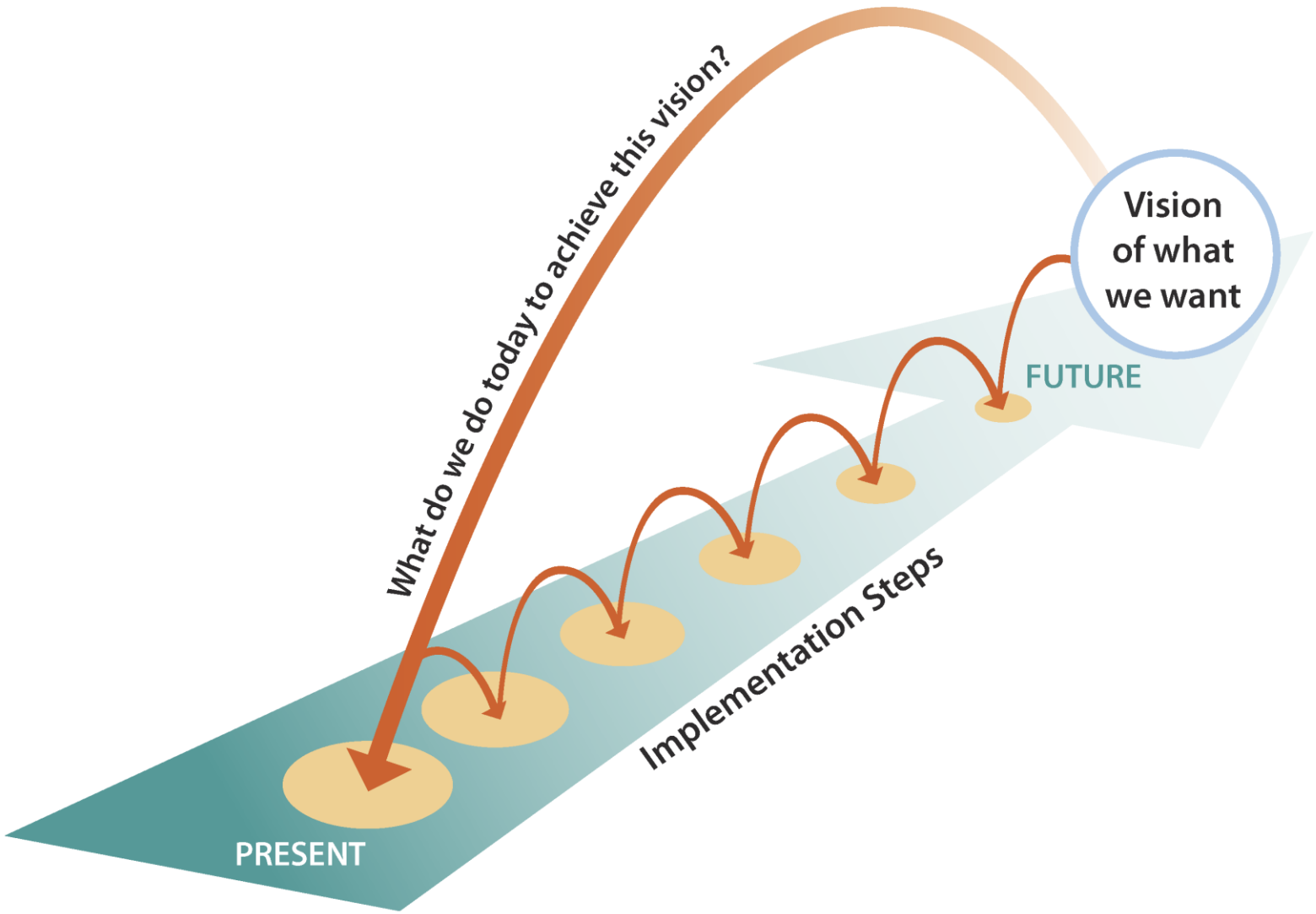
2009 Pedestrian & Bicycle Plan



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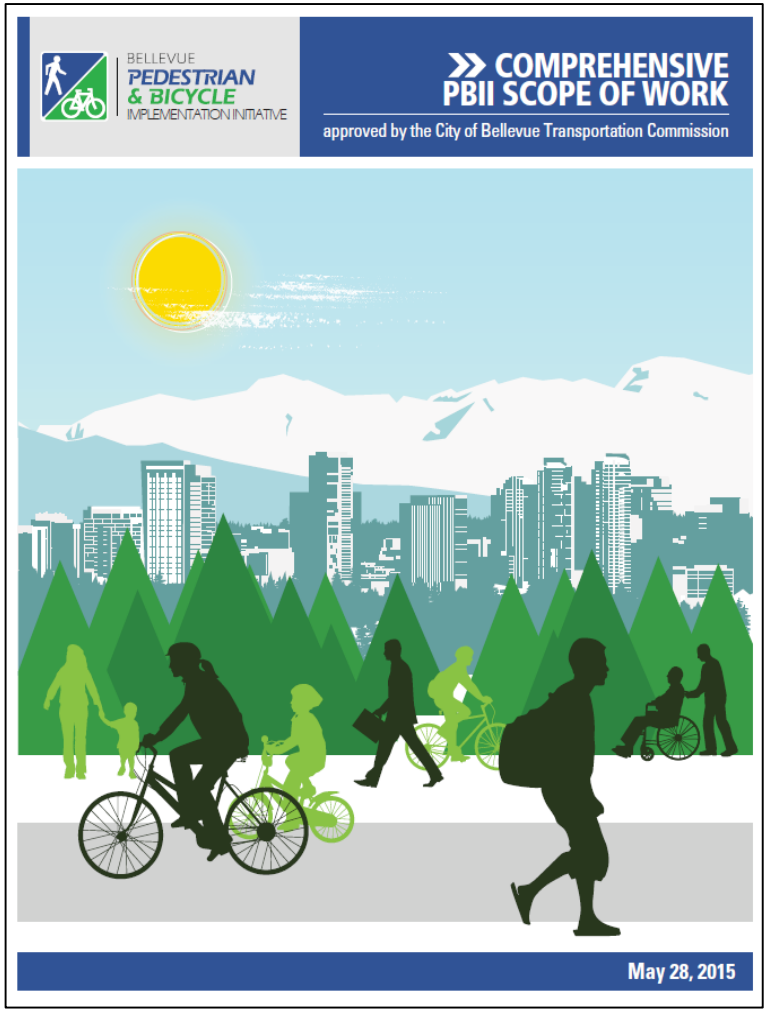
Ped-Bike Implementation Initiative

Council support for a unified and recognizable strategy that:



- Links planning with implementation
- Promotes coordinated solutions (5Es)
- Advances a "Complete Streets" philosophy
- Considers creative & affordable strategies
- Leverages best practices and innovative tools
- Investigates "Vision Zero" techniques
- Advances demonstration projects
- Identifies early-win opportunities
- Balances the needs of various roadway users
- Maximizes construction efficiencies
- Promotes physically separated facilities
- Prioritizes "filling the gaps"
- Engages stakeholders early

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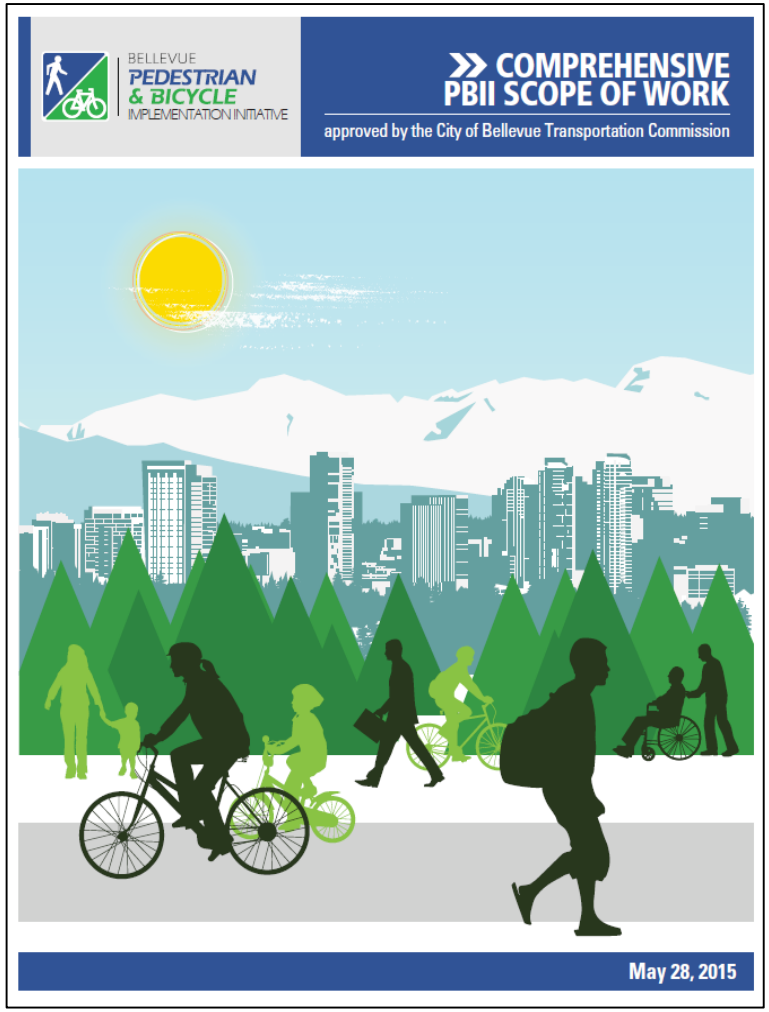
PBII Council Direction

Council support for a unified and recognizable strategy that:



- Links planning with implementation
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- Advances a "Complete Streets" philosophy
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- Investigates "Vision Zero" techniques
- Advances demonstration projects
- **Identifies early-win opportunities**
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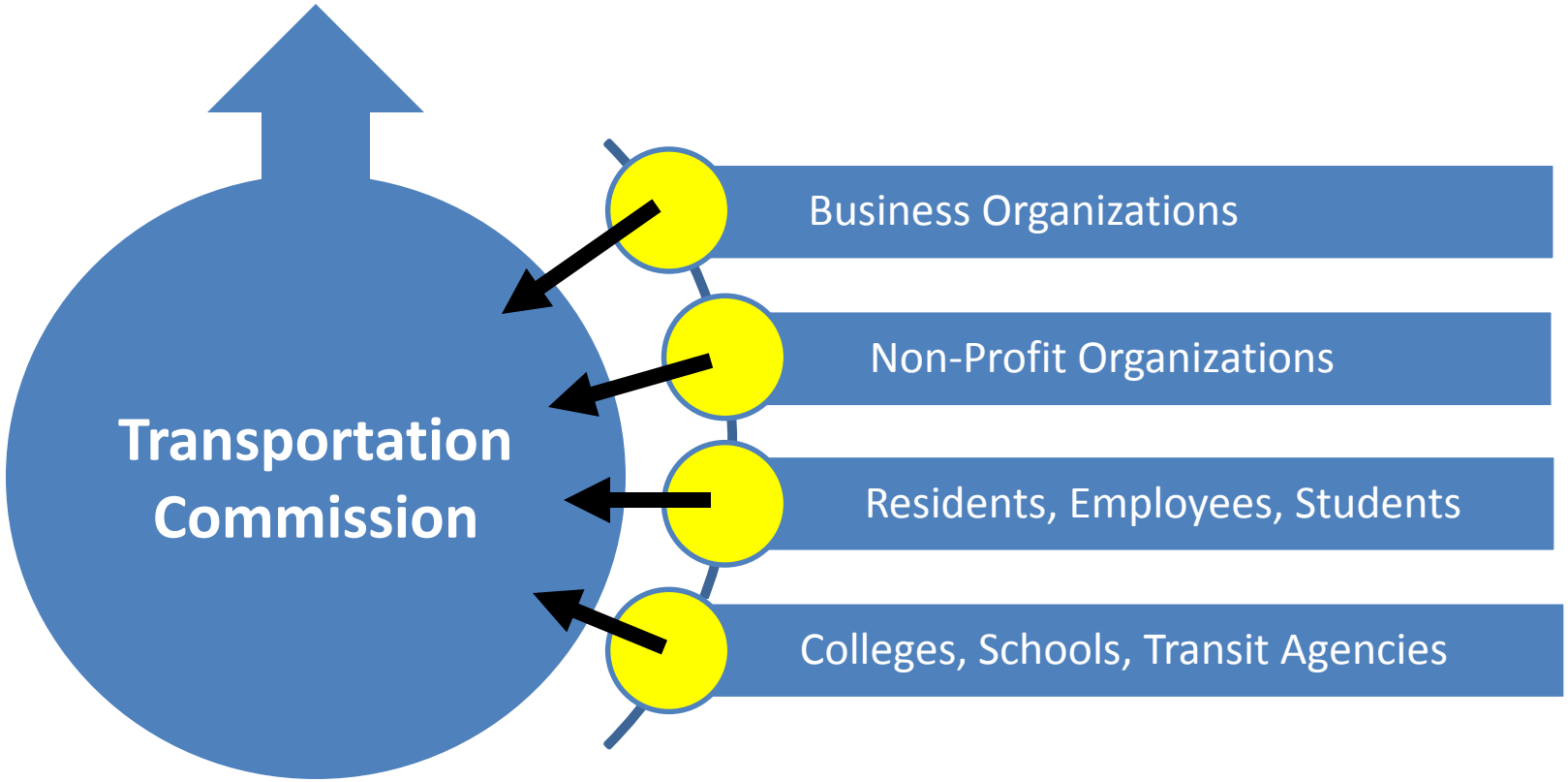
PBII Council Direction

Bellevue City Council



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PBII Oversight

1. Ped-Bike Safety Assessment Report
2. Bicycle Priority Corridor Design Report
3. Transit Master Plan Integration Report
4. Implementation/Funding Strategy Report
5. Count Technology Report
6. Bike-Share Implementation Report
7. Performance Management Report

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PBII Scope of Work

1. Ped-Bike Safety Assessment Report
2. **Bicycle Priority Corridor Design Report**
3. Transit Master Plan Integration Report
4. Implementation/Funding Strategy Report
5. Count Technology Report
6. Bike-Share Implementation Report
7. Performance Management Report

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PBII Scope of Work

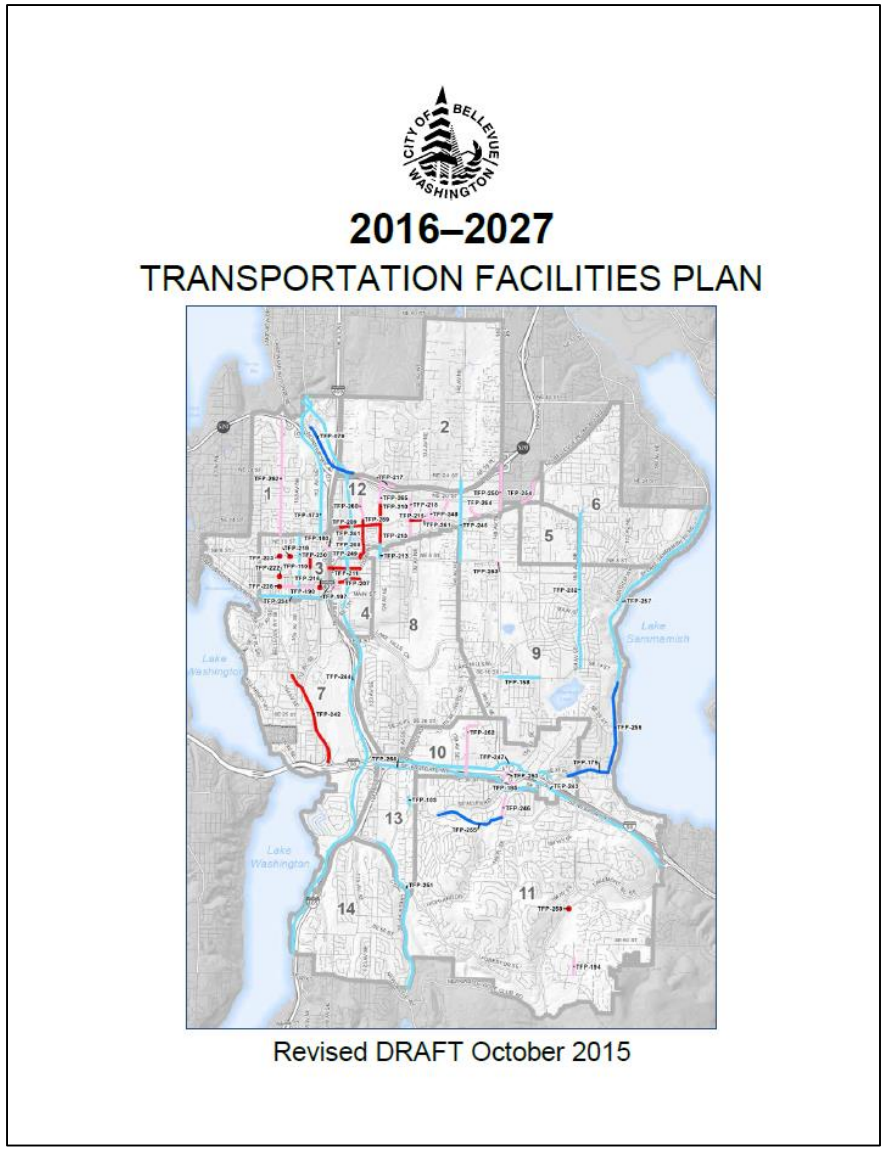
1. **Assess the remaining gaps in Bellevue's Bicycle Priority Corridor Network.**

2. **Assess range of bicycle facility types that could be applied along missing segments, including interim treatments as well as more permanent best practice facilities like protected bicycle lanes.**

3. **Consider the pros and cons and the associated maintenance needs of each alternative treatment.**

4. **Arrive at planning level cost estimates and priorities to inform the next round of updates to the City's Transportation Facilities Plan (TFP) and Capital Investment Program (CIP).**

Task 2 Scope



The proposed 2016-2027 TFP includes a Pedestrian-Bicycle Implementation (PBII) Reserve allocation of $22.5M, with indication that the allocation to particular projects (not necessarily limited to the 11 listed in the TFP) will be determined via the ongoing PBII process.

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2016-2017 TFP

PEDESTRIAN - BICYCLE IMPLEMENTATION INITIATIVE (PBII) RESERVE PROJECTS									
N/A	Ped/Bike Implementation Reserve			This line does not represent a facility project. It represents a recommended funding "reserve" for the implementation of priority pedestrian and bicycle projects to be determined by the City's ongoing *Pedestrian & Bicycle Implementation Initiative* . Candidate projects for the allocation of a portion of this reserve include the Ped/Bike TFP projects listed below and notated with "**PBII**" in the "Total TFP Funding Allocation" column.			22,500		

1. TFP-158: SE 16th Street/148th Avenue SE to 156th Avenue SE
2. TFP-173: 108th/112th Avenue NE/ north city limit to NE 12th Street
3. TFP-230: 108th Avenue NE/NE 12th Street to Main Street
4. TFP-232: 164th Avenue NE/SE-NE 18th Street to SE 14th Street
5. TFP-234: Main Street/100th Avenue to 116th Avenue
6. TFP-243: Mountains to Sound Greenway/ Factoria Boulevard to Lakemont Boulevard
7. TFP-244: Eastside Rail Corridor multi-use path/southern city limits to northern city limits
8. TFP-245:140th Avenue NE/NE 24th Street to NE 8th Street
9. TFP-247: Eastgate Way/Richards Road to SE 35th Place
10. TFP-249: Hospital/NE 8th Street Station Access Improvements
11. TFP-251: Coal Creek Parkway/124th Avenue SE to the southern city limits

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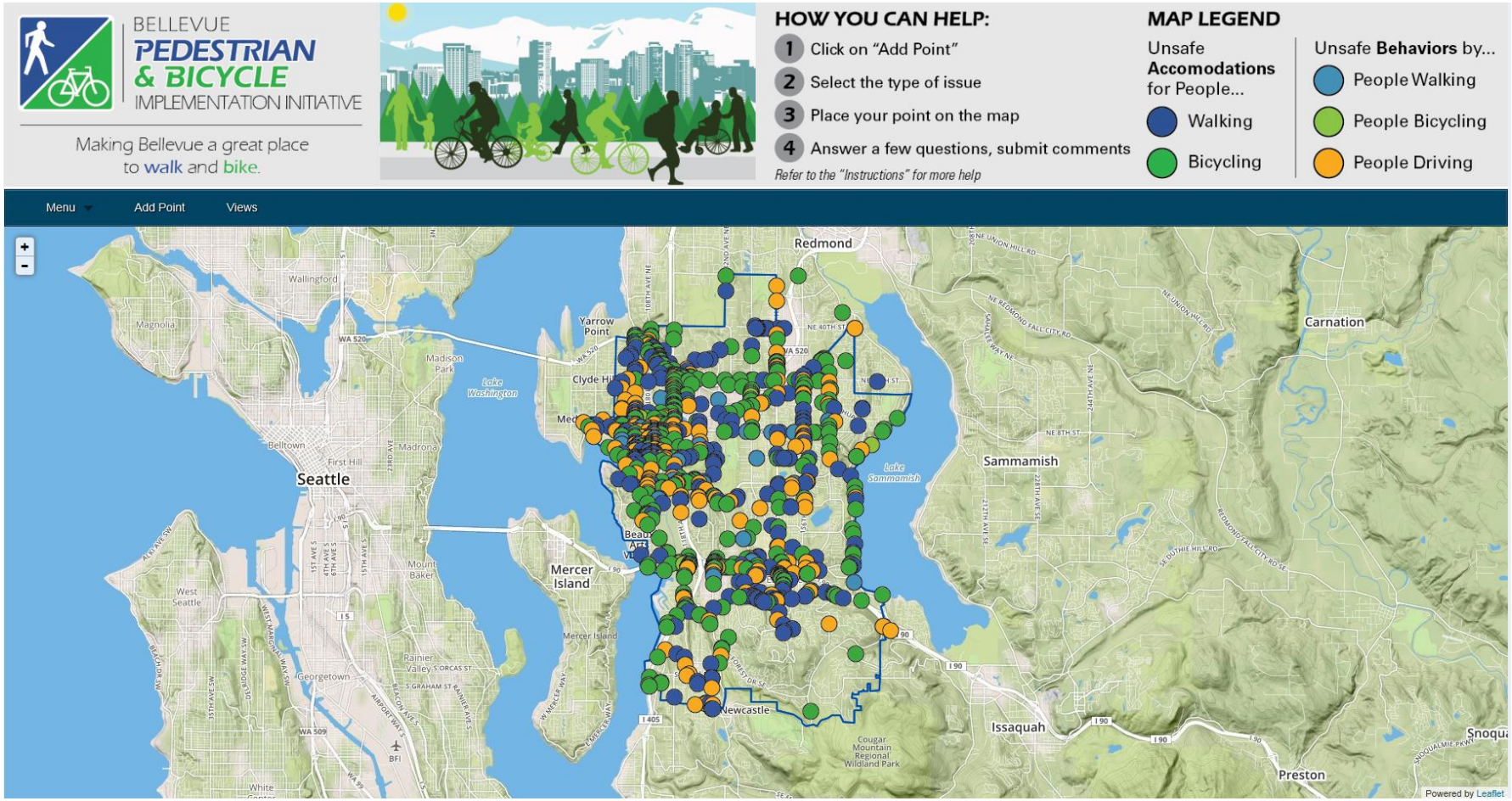
TFP Candidate Reserve Projects



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Public Feedback

"Downtown Bellevue is not an area where the faint of heart would choose to ride; that said, it is prime for investment to attract additional riders. What's needed are safe and inviting bicycle facilities that are separated from the auto."

- Karen Doherty, Vice President, Puget Sound Area Manager of HDR

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Business Community Feedback

"The separated lane is very attractive for safety reasons. My greatest concern is the taking of scarce roadway space for a limited user base." – Lampe

"Separating the biker from traffic is a given…. We provide it for cars to prevent accidents. We should provide it for bikers given the imbalance in protection." – Barksdale

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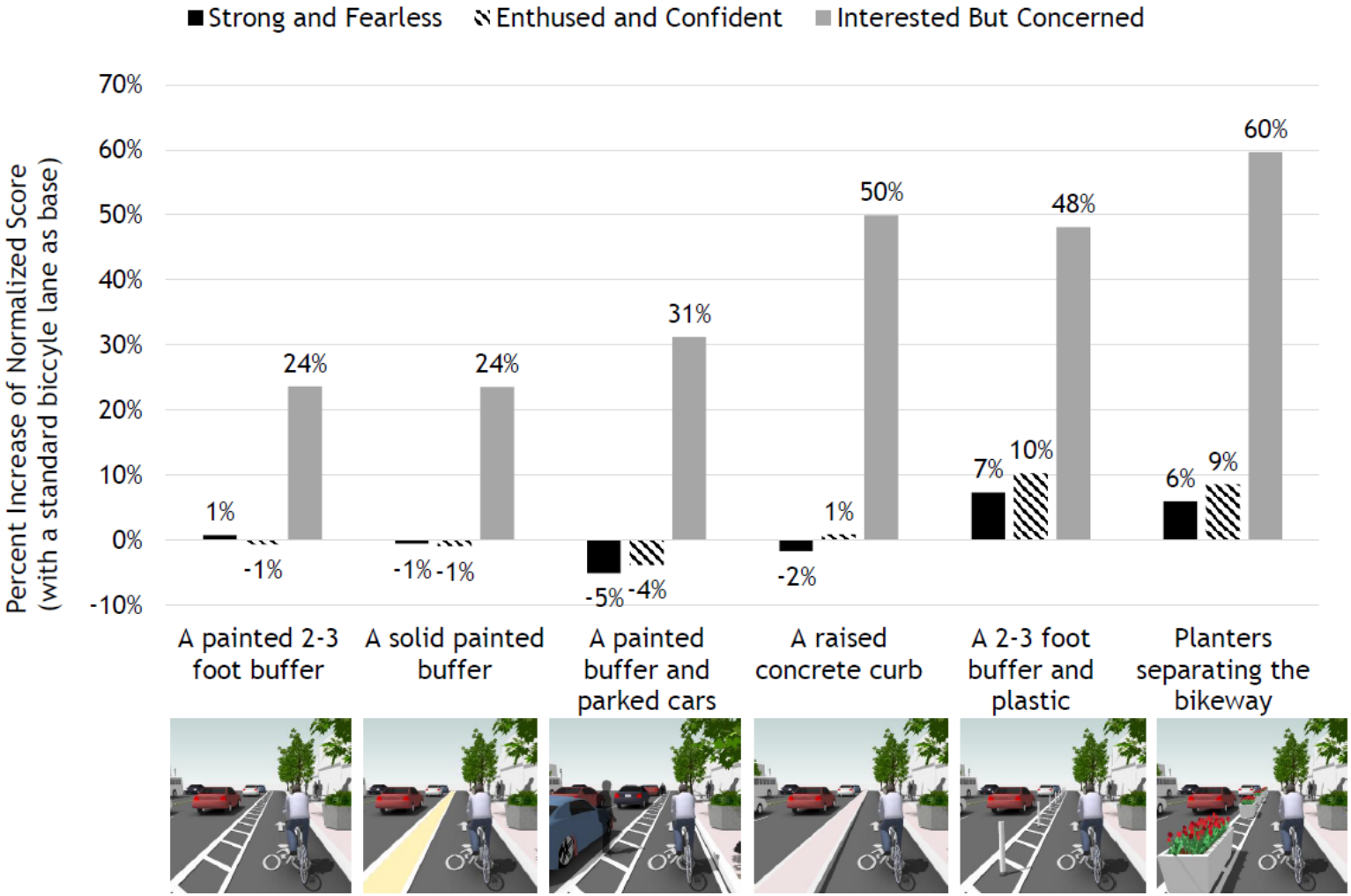
Board & Commission Feedback

Change in Stated Comfort (from a bike lane), by bicyclist type



Source: Portland State University, Lessons from the Green Lanes: Evaluating Protected Bike Lanes, 2014.

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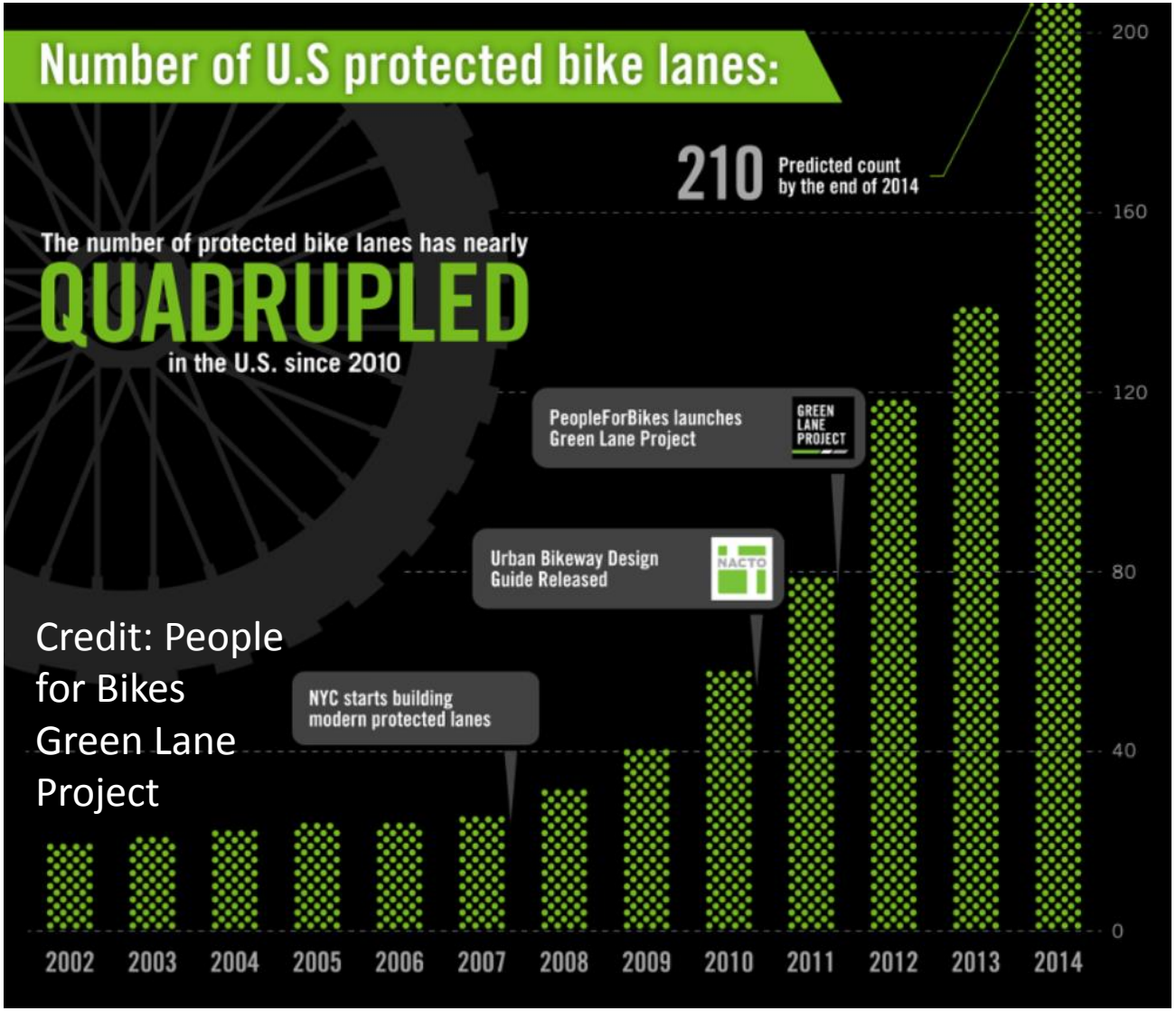
Buffer Types and Perceived Comfort



Credit: People for Bikes Green Lane Project

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Protected Bicycle Lanes in USA

DENVER'S TWO NEWEST PROTECTED BIKE LANES: FROM ZERO TO FINISHED IN ONE YEAR

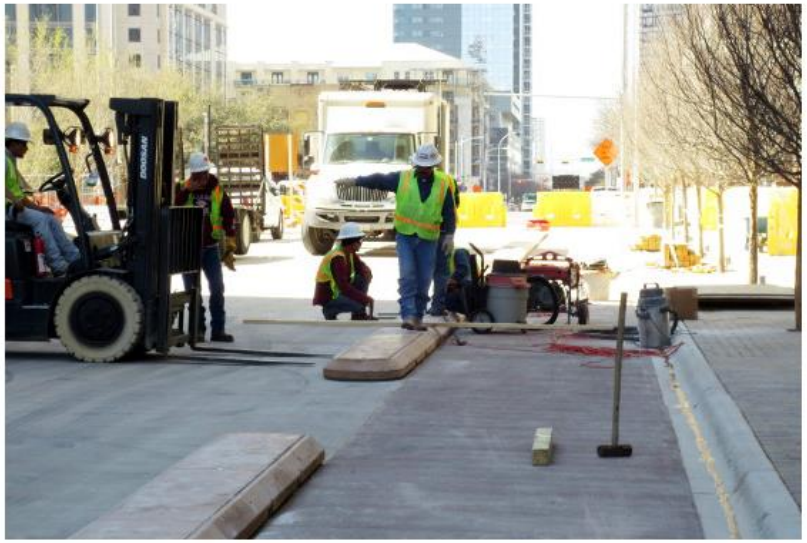
December 04, 2015

Michael Andersen, Green Lane Project staff writer

THE RISE OF CURBS: PROTECTED BIKING'S SECOND ACT BEGINS

January 03, 2014

Michael Andersen, Green Lane Project staff writer



Austin workers set modular precast curbs in place on Third Street downtown.

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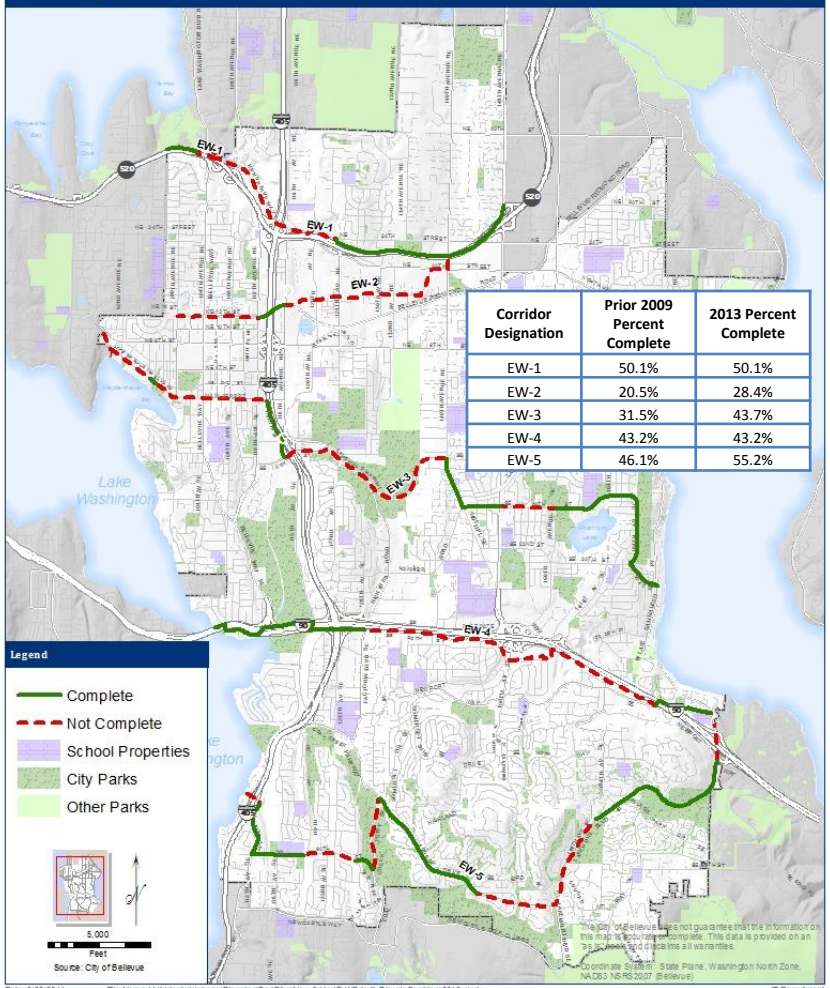
Case Studies

"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."

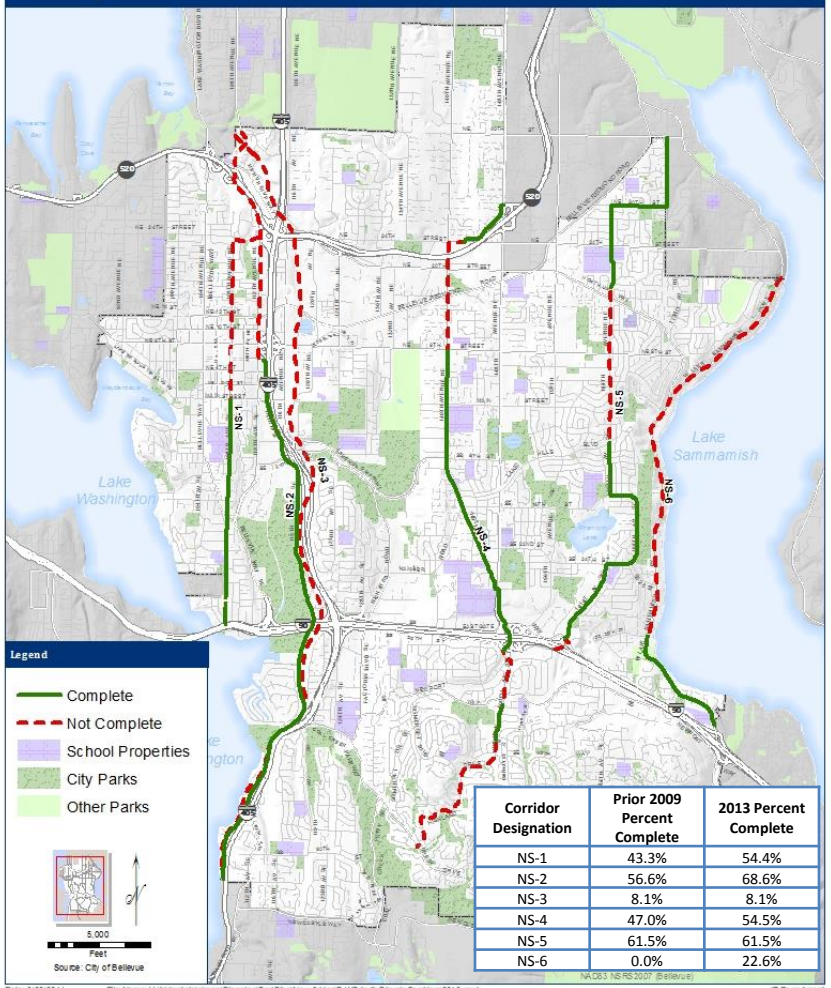
- PBII Program Principles (2/17/15)

E-W Priority Bicycle Corridors Completion Status 2013



Corridor Designation	Prior 2009 Percent Complete	2013 Percent Complete
EW-1	50.1%	50.1%
EW-2	20.5%	28.4%
EW-3	31.5%	43.7%
EW-4	43.2%	43.2%
EW-5	46.1%	55.2%

N-S Priority Bicycle Corridors Completion Status 2013



Corridor Designation	Prior 2009 Percent Complete	2013 Percent Complete
NS-1	43.3%	54.4%
NS-2	56.6%	68.6%
NS-3	8.1%	8.1%
NS-4	47.0%	54.5%
NS-5	61.5%	61.5%
NS-6	0.0%	22.6%

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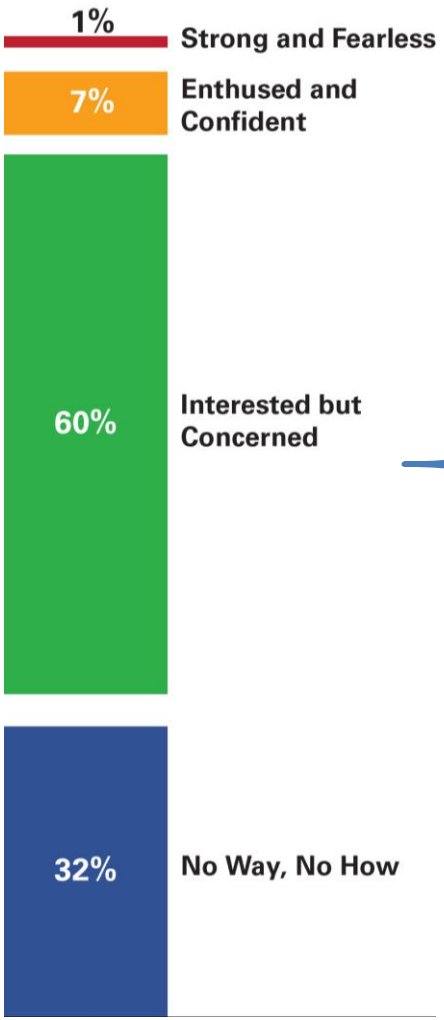
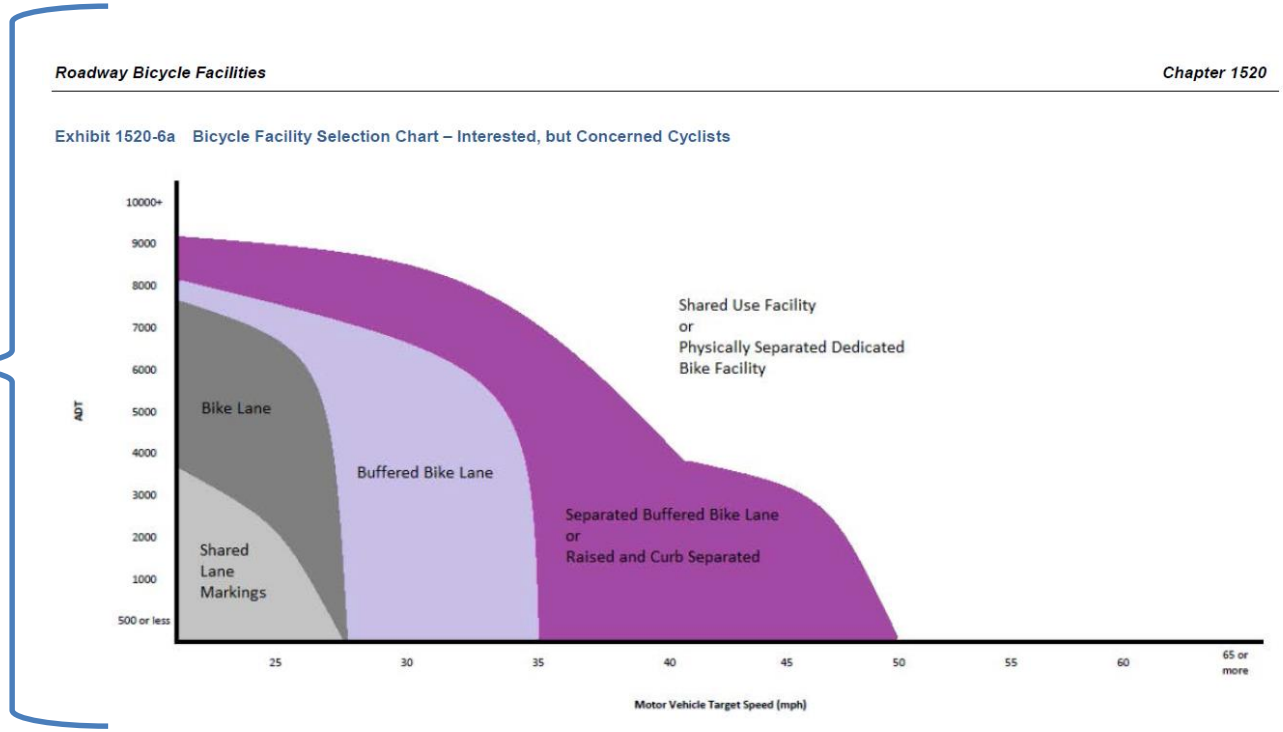
Connected Solutions





Source: WSDOT Design Manual M 22-01.12 (November 2015)

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Protected Solutions

2013 Conditions

2013 PARK(ing) Day

2014 Demonstration Project

2016 Upgrades

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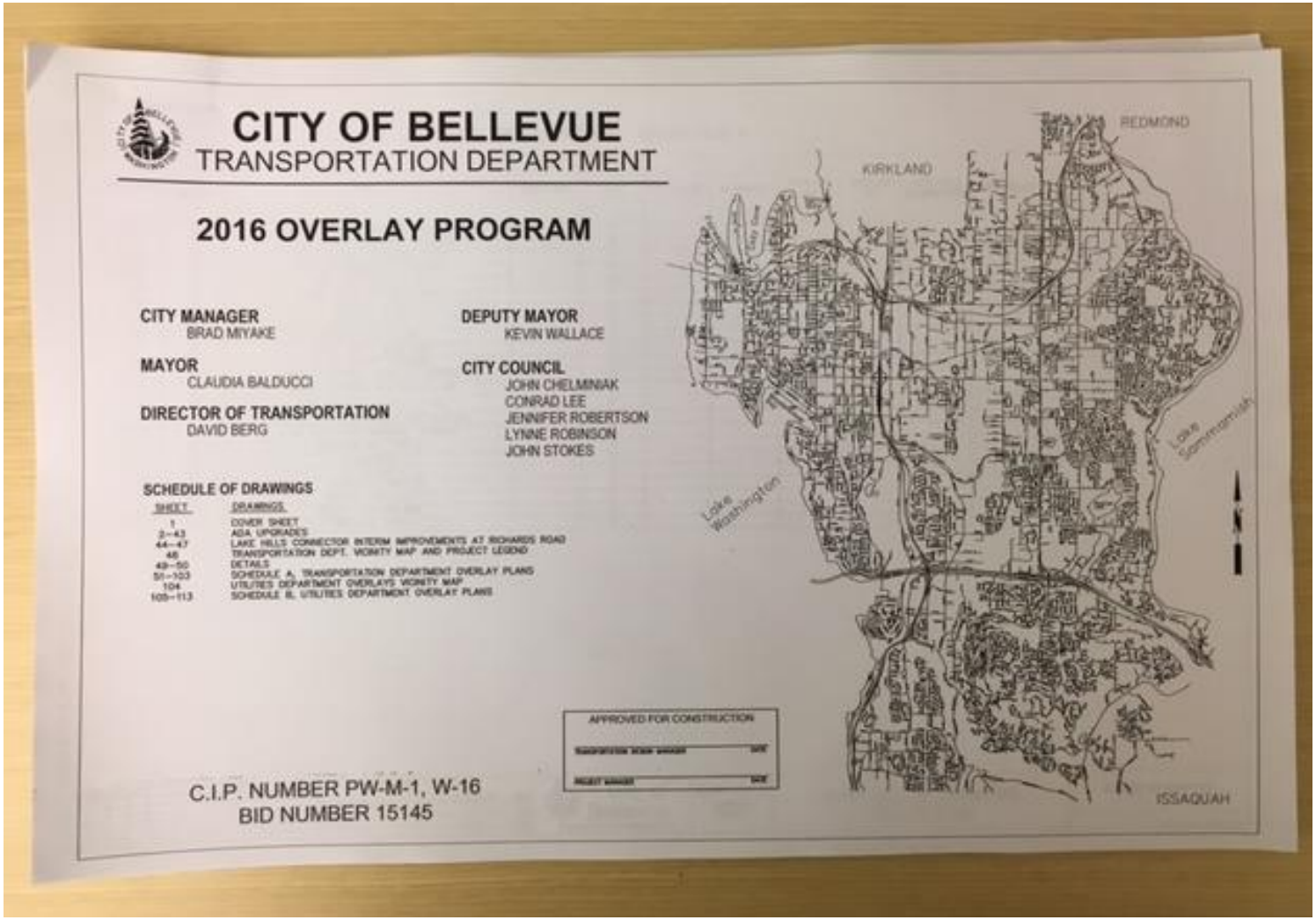
Rapid Solutions



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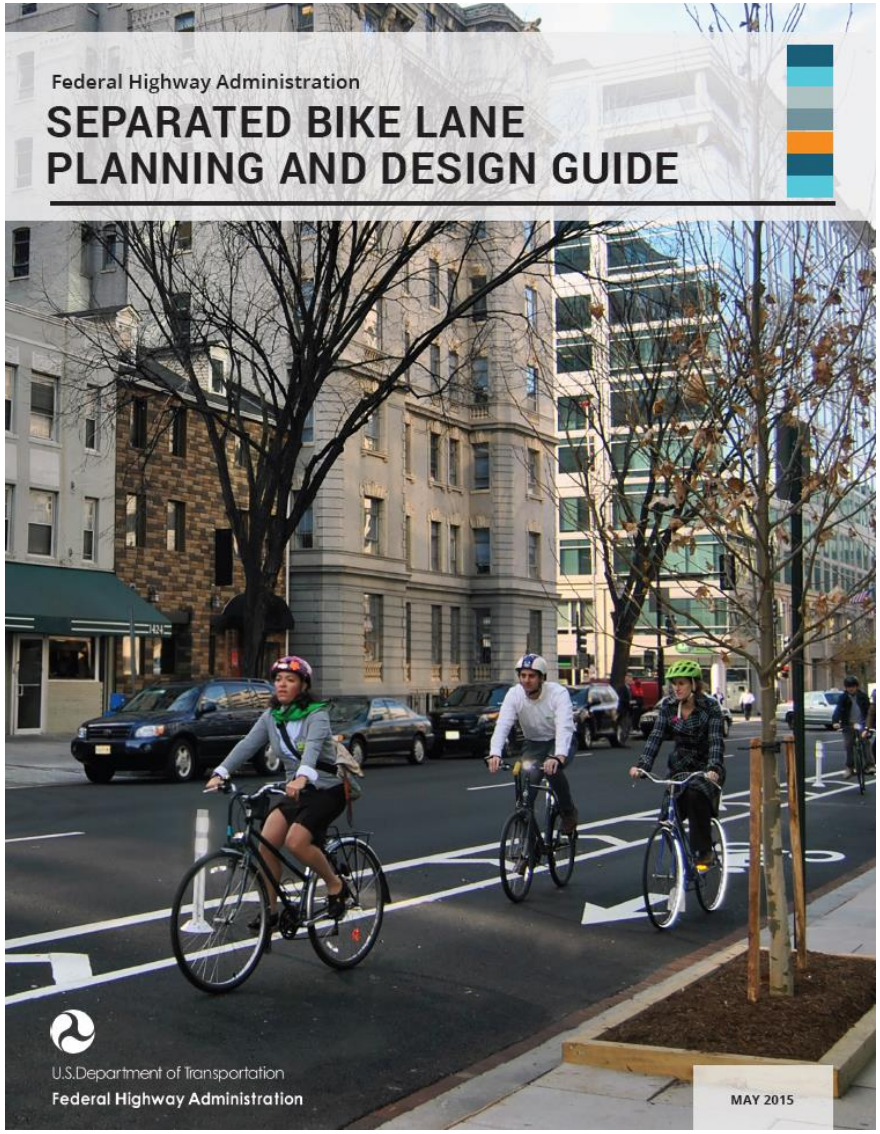
Overlay = Connected + Rapid



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National Guidance

Striped Buffer & Delineator Post

Paint & Delineator Posts

Turtle Bumps

Large Bumps

Oblong Low Bumps

Linear Barrier

Precast Barrier Curb

Parked Cars

Jersey Barriers

Planters

Rigid Bollards

Cast in Place Barrier Curb

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"Paint/Post Ready" Projects

Indianapolis, IN

Seattle, WA

Temple City, CA

Cambridge, MA

San Francisco, CA

New York, NY

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"Construction" Projects

The Rapid Implementation Program (RIP) strives to fill gaps **[Connected]** along the Priority Bicycle Corridor (PBC) network, and planned bicycle network, with facilities that appeal to "interested but concerned" bicyclists **[Protected]**. The RIP approach emphasizes implementation of low cost/ short timeframe **[Rapid]** projects.

Effectiveness: 2009 Plan targets

- Connected-Protected-Rapid (CPR) Emphasis
- Bicycle Friendly Community "Silver Level"
- Practical Design: "Right Project, Right Time for the Right Cost, in the Right Way"

TFP Allocation: $22M

- Engineering - "Paint/Post Ready" emphasis
- Education, Encouragement, Enforcement, Evaluation

Timeframe: Years 1-3

- Start with quickest and most inexpensive improvements (low cost/high impact)

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Rapid Implementation Program

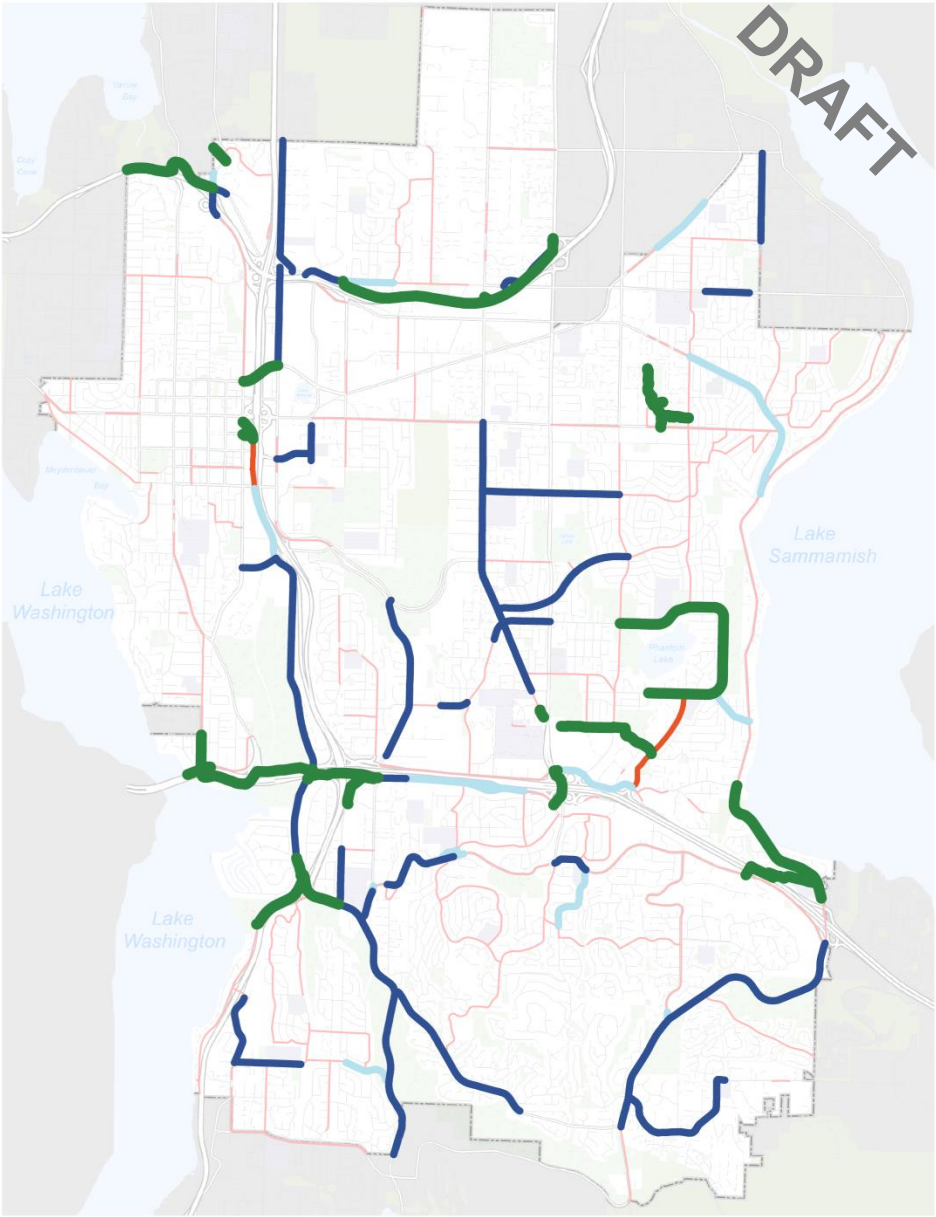
Offstreet Paths

Conventional Bike Lanes, Both Sides

Conventional Bike Lane, One Side

Conventional Sharrows, Both Sides

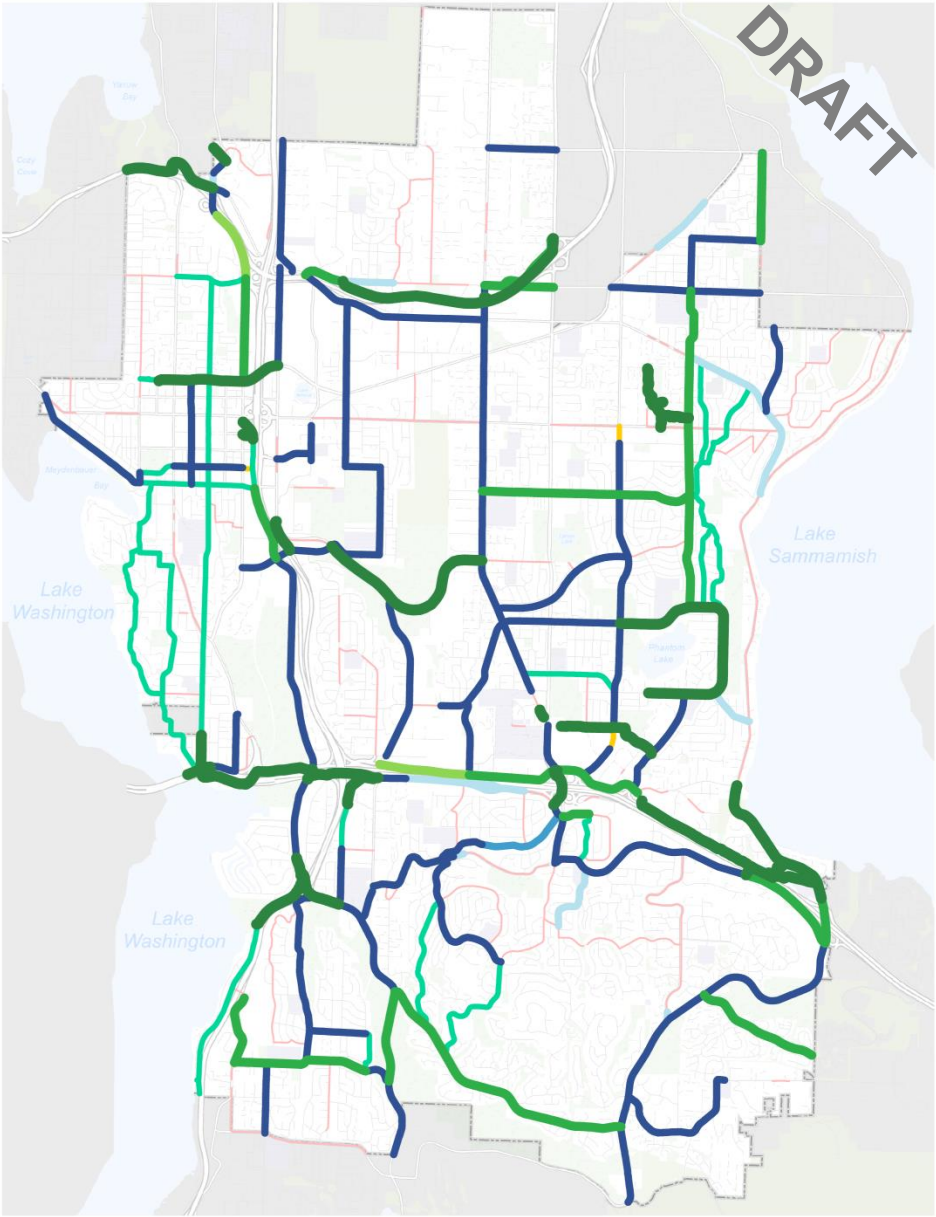
Wide Shoulders/Shared Lanes, One or Both Sides



BELLEVUE PEDESTRIAN & BICYCLE IMPLEMENTATION INITIATIVE

Existing Bicycle Facilities

- **Offstreet Paths**
- **Protected Bike Lanes,** Both Sides;
- **Protected Bike Lanes,** Both Sides; **Ped Path,** One Side
- **Conventional Bike Lanes,** Both Sides
- **Conventional Bike Lane,** One Side; **Ped Path,** One Side
- **Conventional Bike Lane,** One Side
- **Neighborhood Greenway**
- **Green-Backed Sharrows,** Both Sides
- **Wide Shoulders/Shared Lanes,** One or Both Sides



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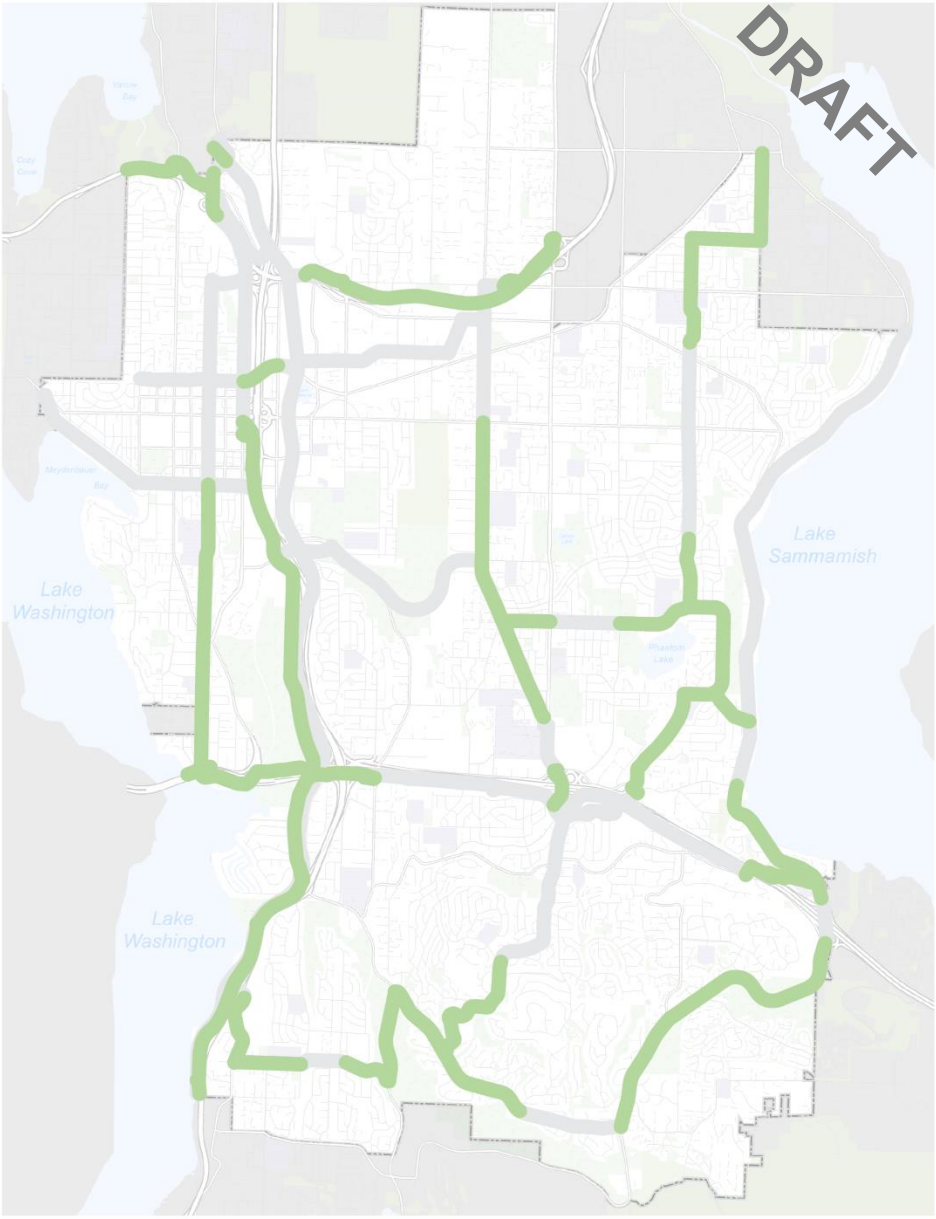
Rapid Implementation Program

Existing Facilities,
Priority Bicycle Corridors

No Facilities,
Priority Bicycle Corridors



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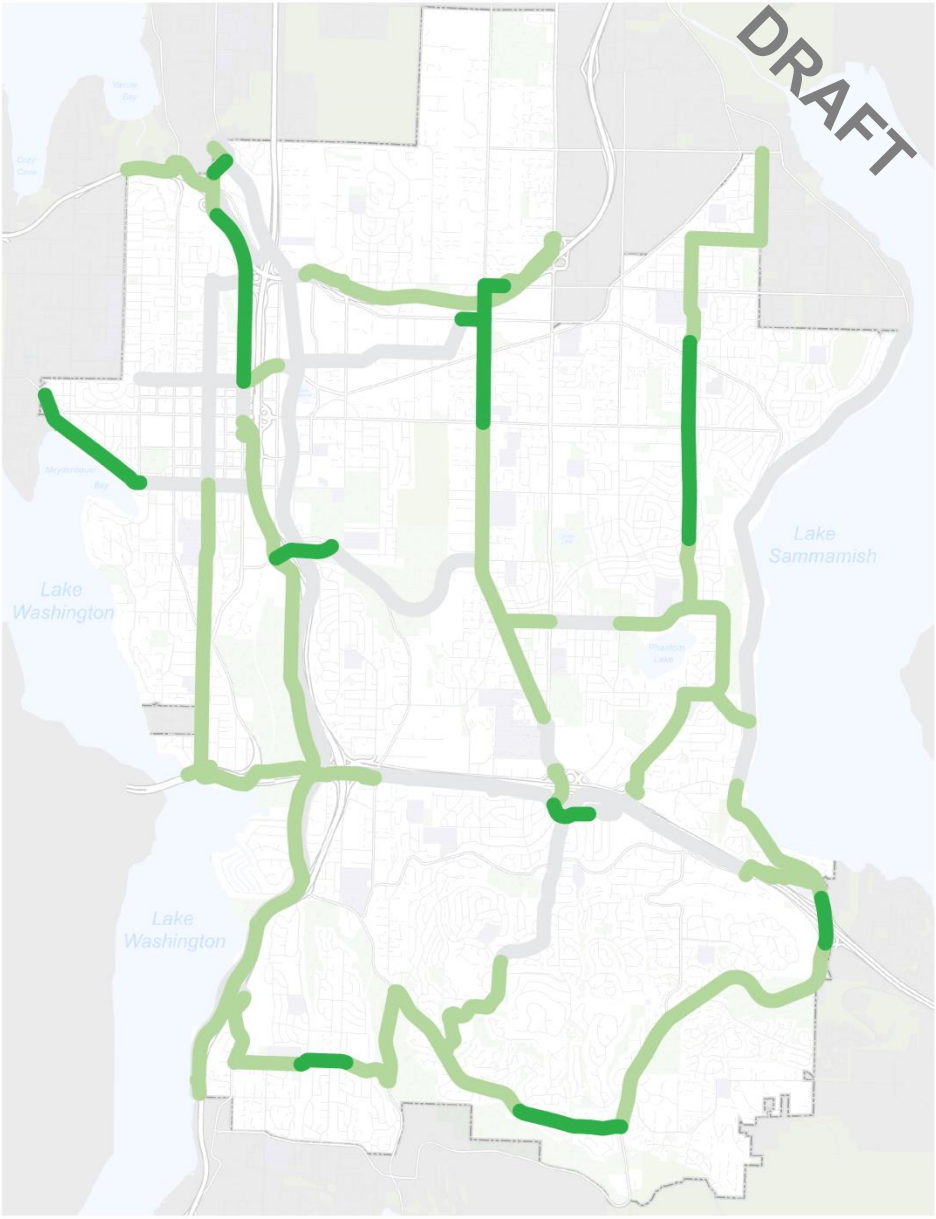
Rapid Implementation Program

Paint & Post Projects,
Priority Bicycle Corridors

Existing Facilities,
Priority Bicycle Corridors

No Facilities,
Priority Bicycle Corridors



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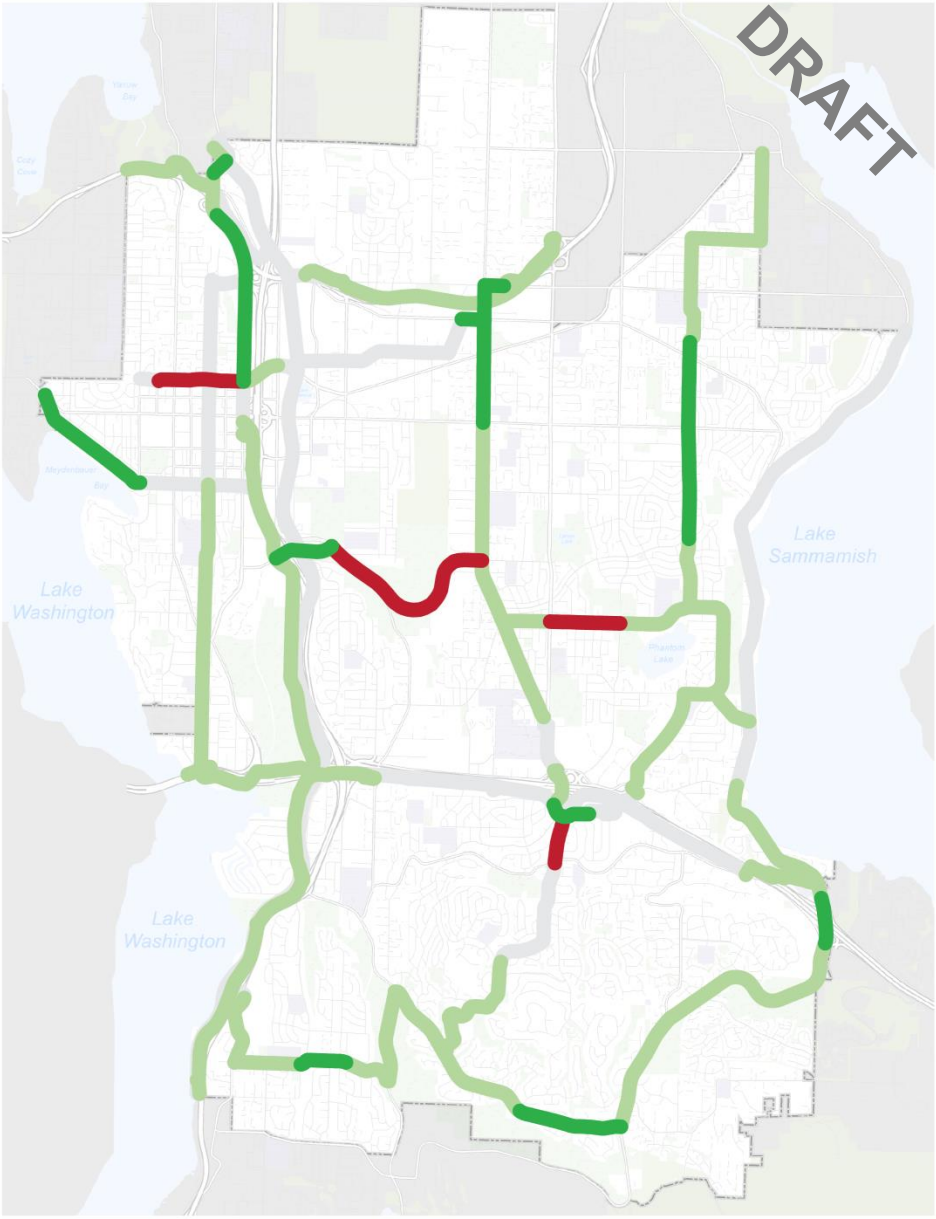
Rapid Implementation Program

Paint & Post Projects,
Priority Bicycle Corridors

Major Design/Construction,
Priority Bicycle Corridors

Existing Facilities,
Priority Bicycle Corridors

No Facilities,
Priority Bicycle Corridors



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Rapid Implementation Program

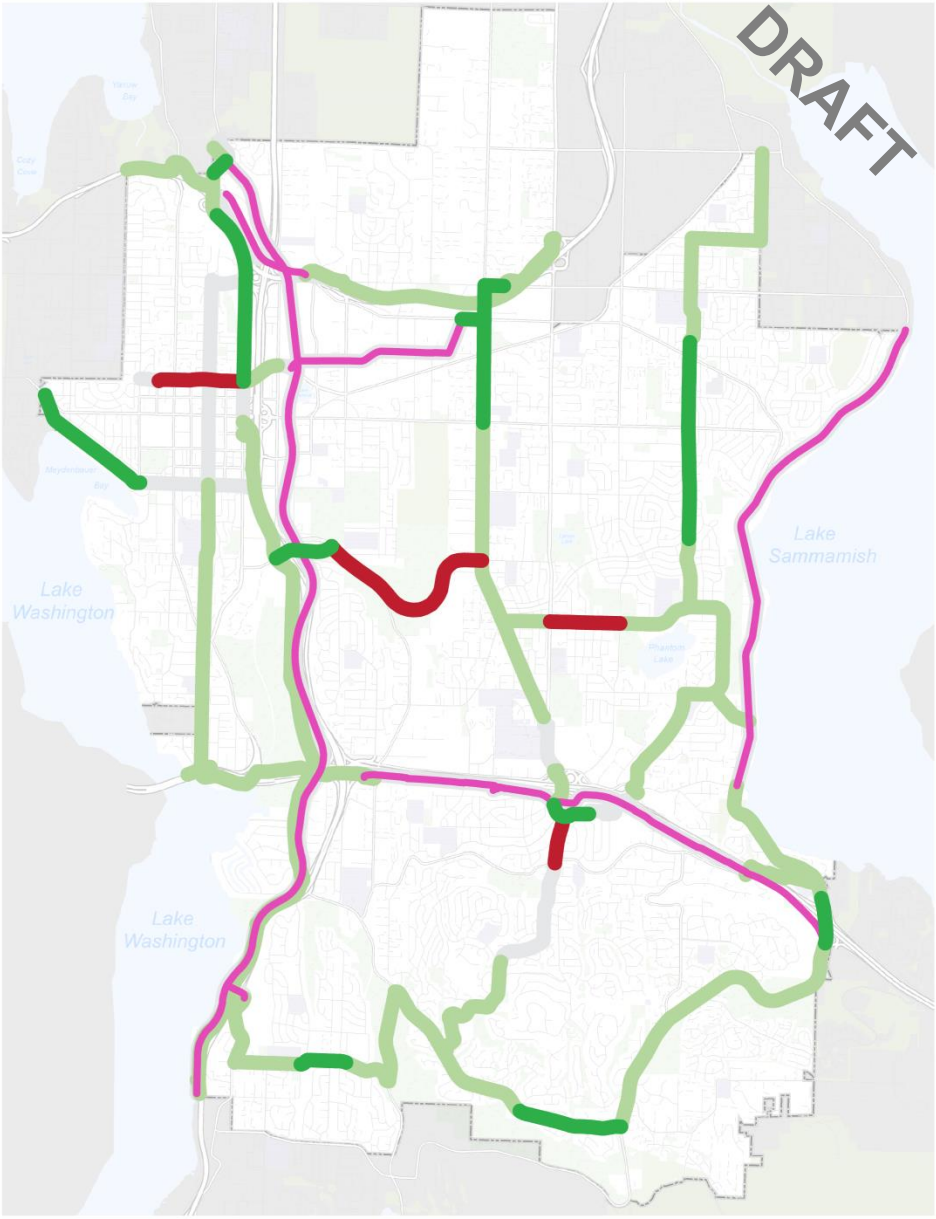
Paint & Post Projects,
Priority Bicycle Corridors

Major Design/Construction,
Priority Bicycle Corridors

Long-Term Design &
Funded Construction Projects

Existing Facilities,
Priority Bicycle Corridors

No Facilities,
Priority Bicycle Corridors



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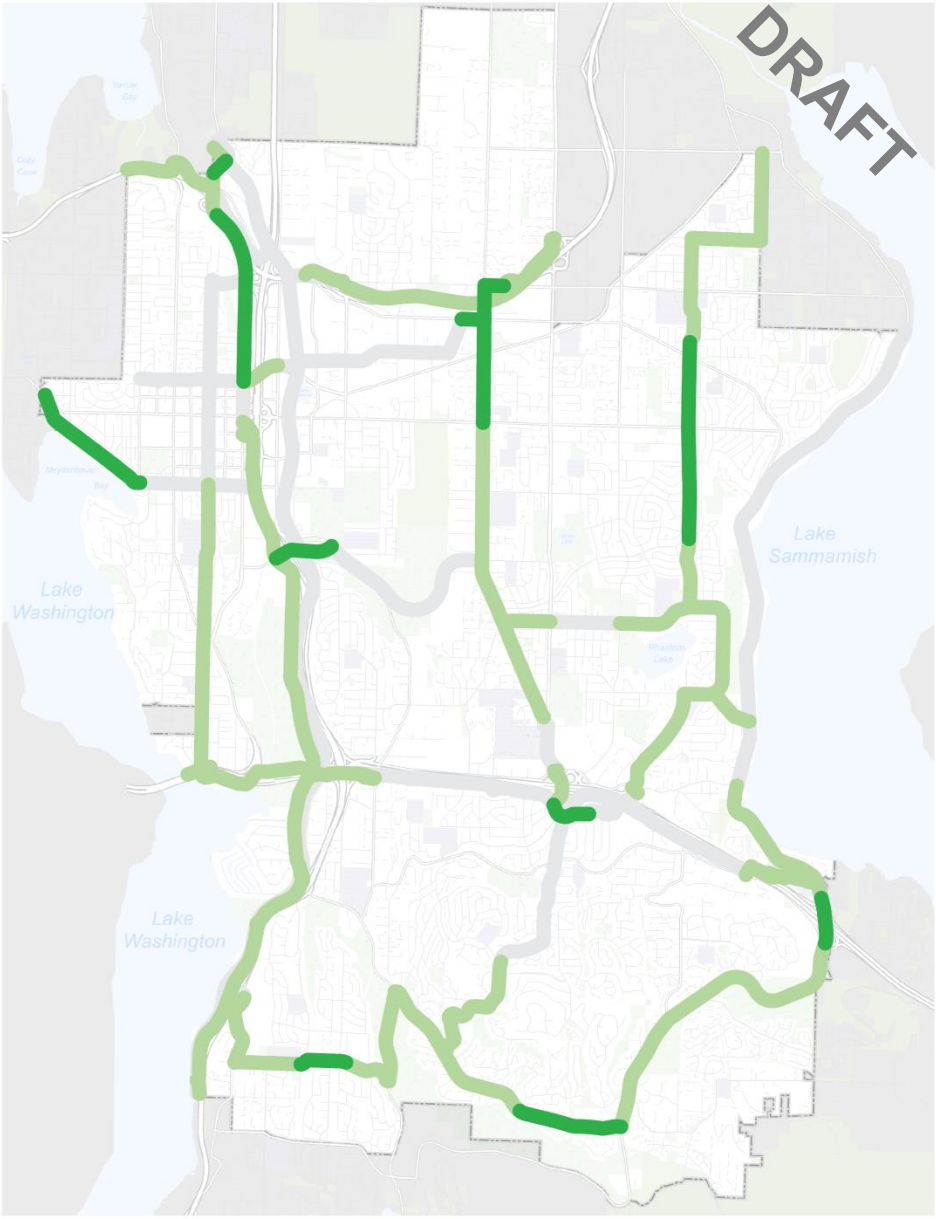
Rapid Implementation Program

Paint & Post Projects,
Priority Bicycle Corridors

Existing Facilities,
Priority Bicycle Corridors

No Facilities,
Priority Bicycle Corridors



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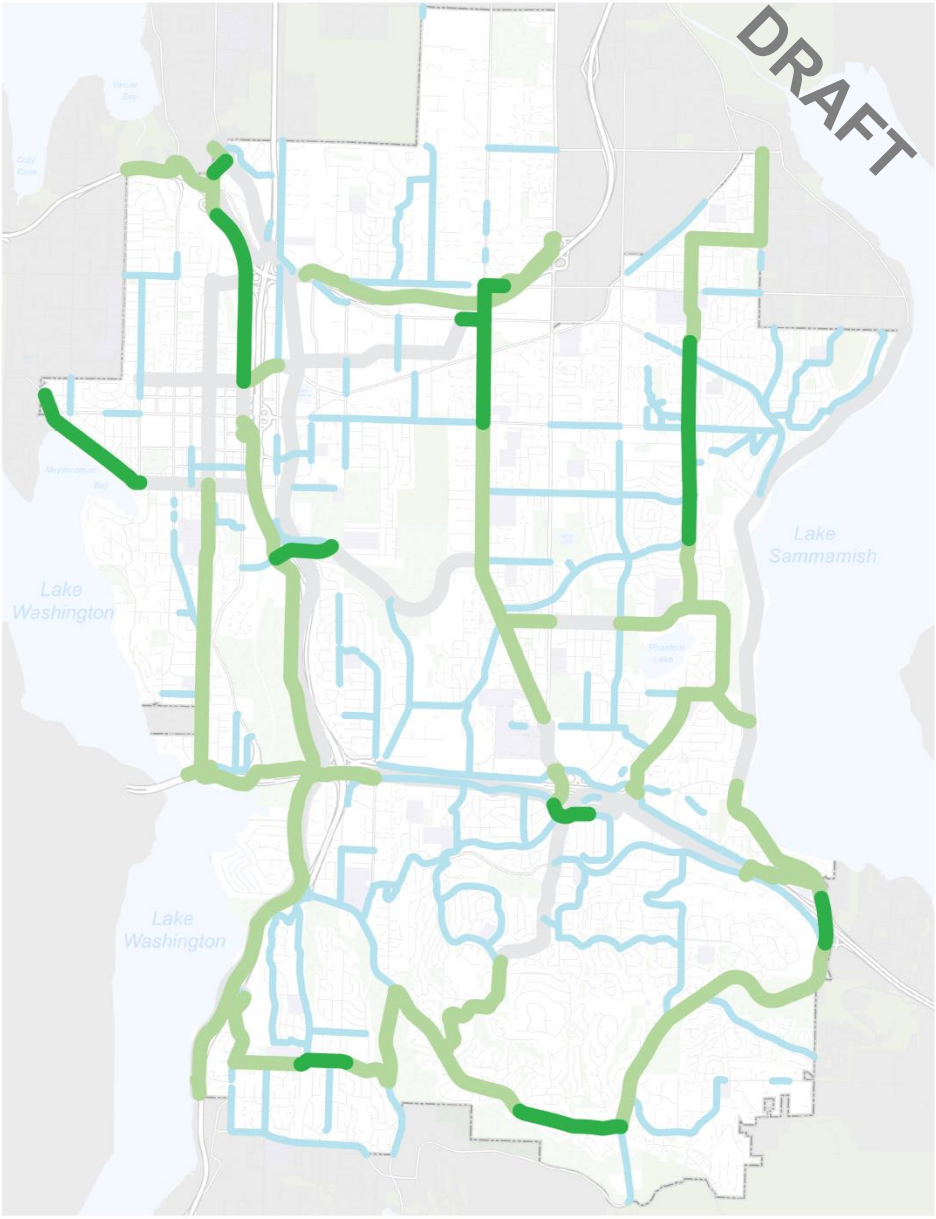
Rapid Implementation Program

Paint & Post Projects,
Priority Bicycle Corridors

Existing Facilities,
Bicycle Network

Existing Facilities,
Priority Bicycle Corridors

No Facilities,
Priority Bicycle Corridors



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Rapid Implementation Program

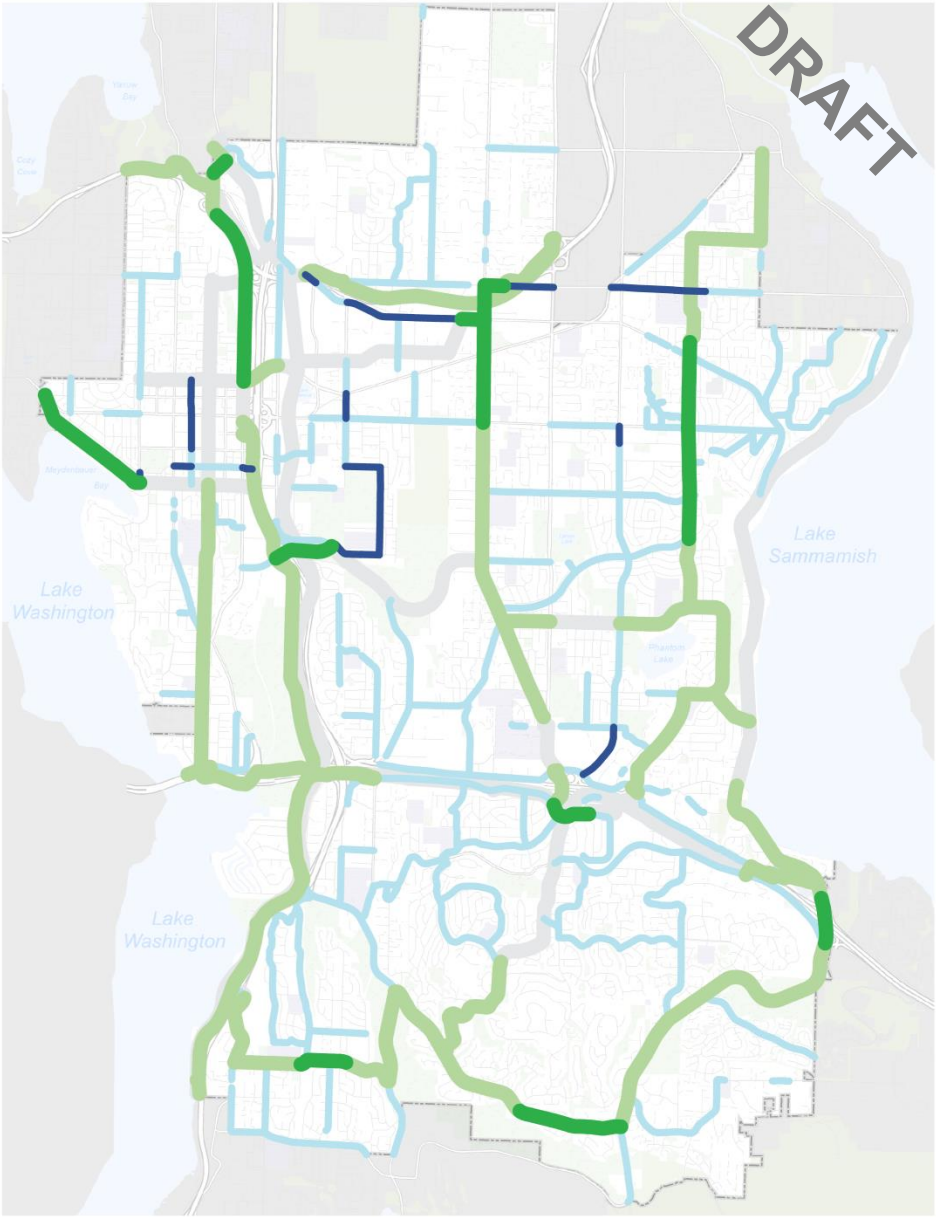
Paint & Post Projects,
Priority Bicycle Corridors

Paint & Post Projects,
Bicycle Network

Existing Facilities,
Bicycle Network

Existing Facilities,
Priority Bicycle Corridors

No Facilities,
Priority Bicycle Corridors



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Rapid Implementation Program

Paint & Post Projects,
Priority Bicycle Corridors

Paint & Post Projects,
Bicycle Network

Greenway Projects,
Priority Bicycle Corridors

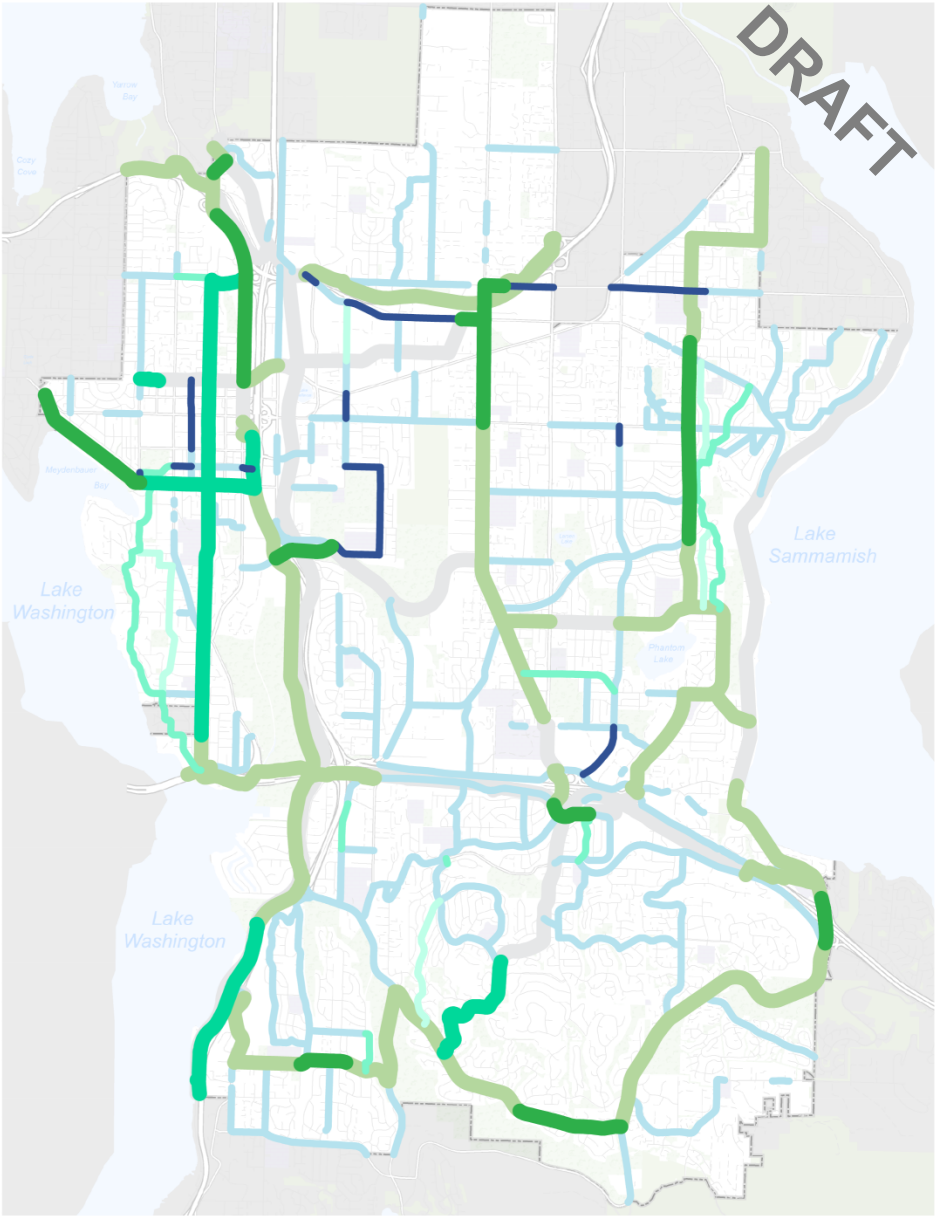
Greenway Projects,
Bicycle Network

Greenway Projects,
Alternative Routes

Existing Facilities,
Bicycle Network

Existing Facilities,
Priority Bicycle Corridors

No Facilities,
Priority Bicycle Corridors



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Rapid Implementation Program

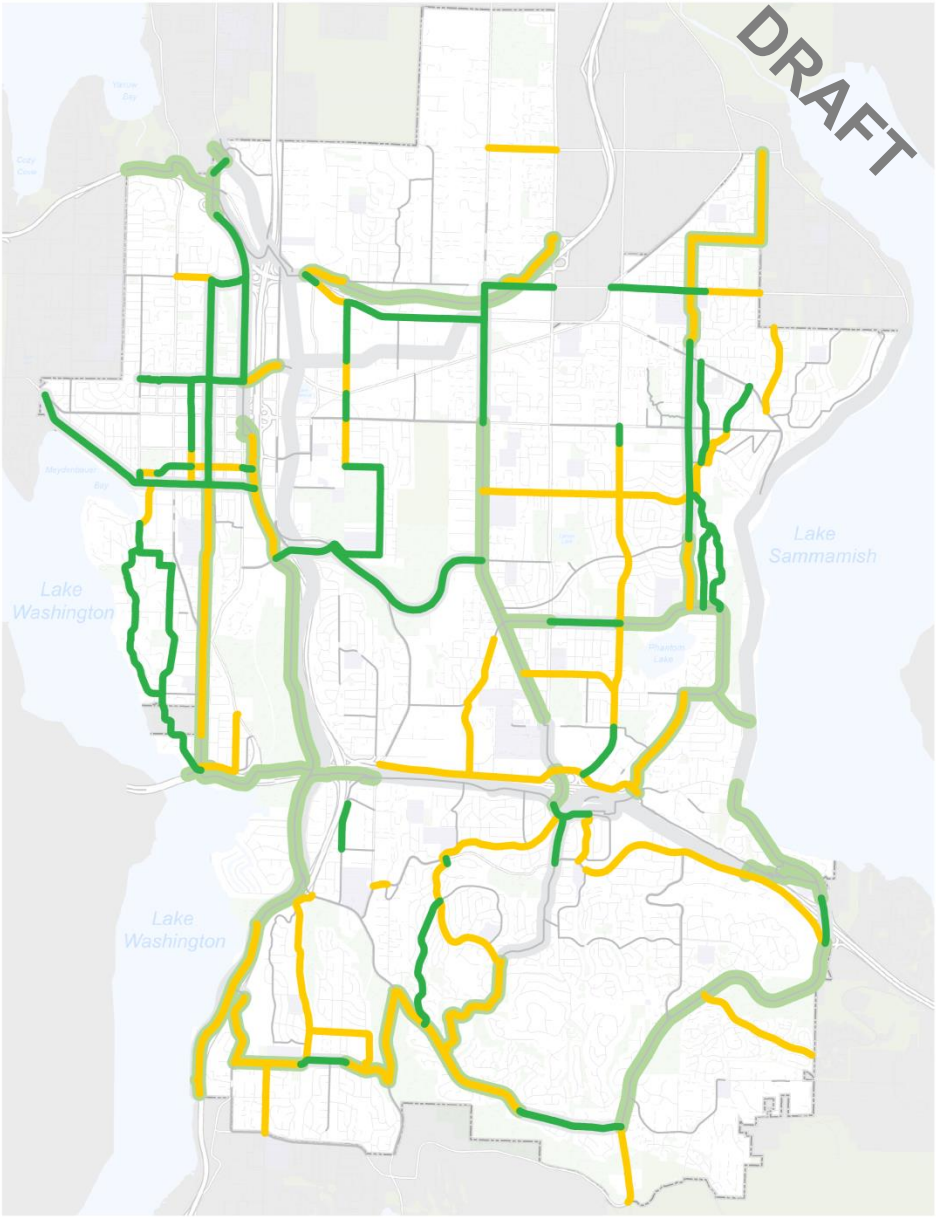
"CPR" Projects,
New Facilities along Network Gaps

"CPR" Projects,
Upgrades to Existing Facilities

Existing Facilities,
No Changes to Bicycle Network

Existing Facilities,
Priority Bicycle Corridors

No Facilities,
Priority Bicycle Corridors



BELLEVUE PEDESTRIAN & BICYCLE IMPLEMENTATION INITIATIVE

Rapid Implementation Program

New Paint & Post Projects,
Priority Bicycle Corridors

Paint & Post Upgrades,
Priority Bicycle Corridors

New Paint & Post Projects,
Bicycle Network

Paint & Post Upgrades,
Bicycle Network

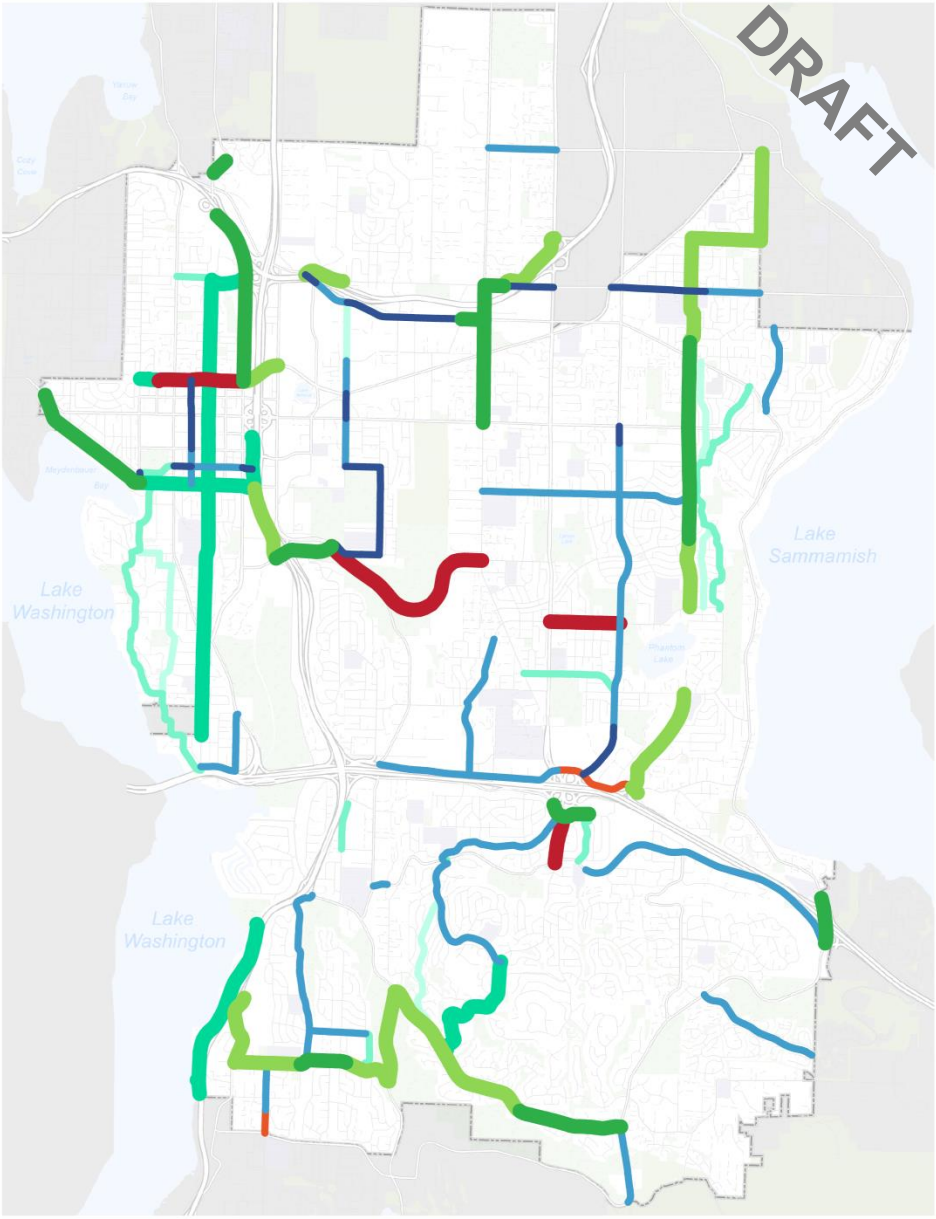
Greenway Projects,
Priority Bicycle Corridors

Greenway Projects,
Bicycle Network

Greenway Projects,
Alternative Routes

Major Design/Construction Projects,
Priority Bicycle Corridors

Construction Projects,
Bicycle Network



BELLEVUE
PEDESTRIAN
& BICYCLE
IMPLEMENTATION INITIATIVE

Rapid Implementation Program

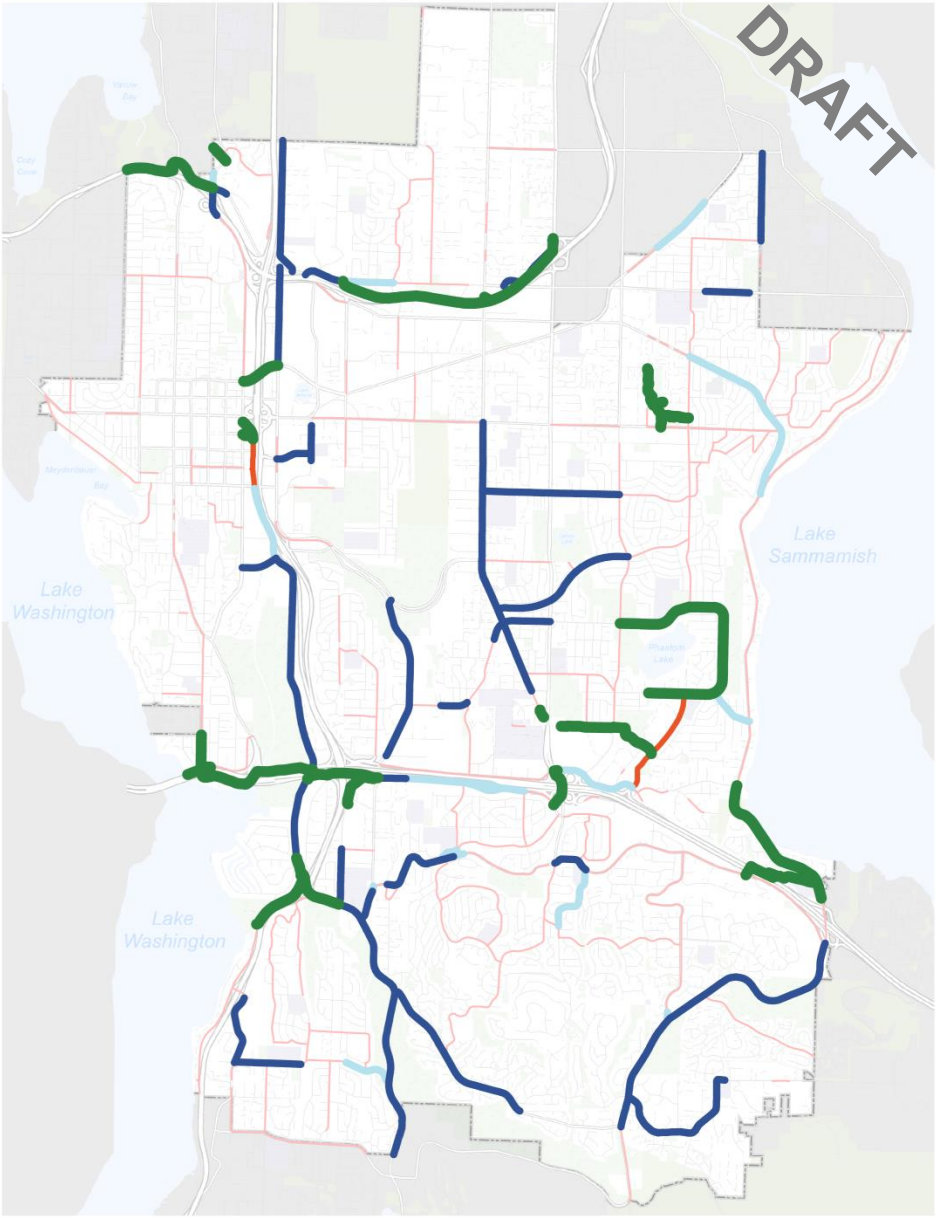
Offstreet Paths

Conventional Bike Lanes, Both Sides

Conventional Bike Lane, One Side

Conventional Sharrows, Both Sides

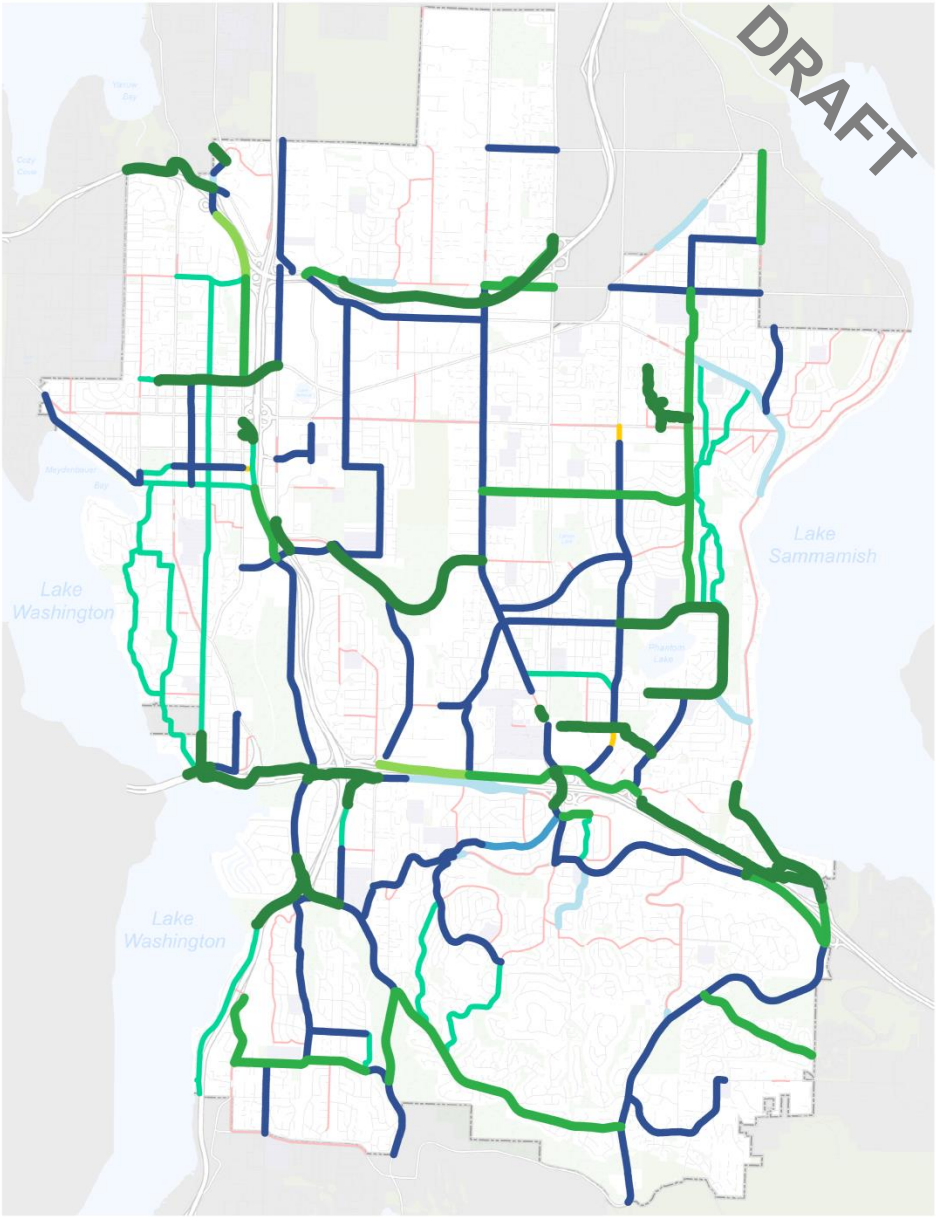
Wide Shoulders/Shared Lanes, One or Both Sides



BELLEVUE PEDESTRIAN & BICYCLE IMPLEMENTATION INITIATIVE

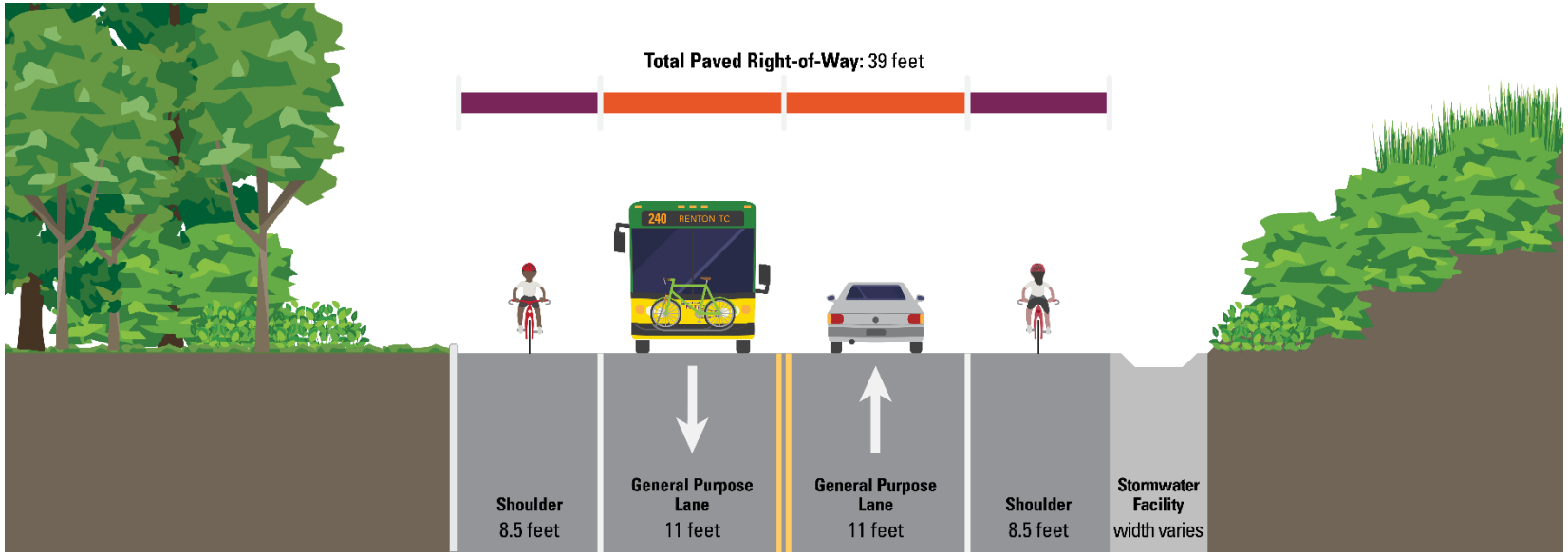
Existing Bicycle Facilities

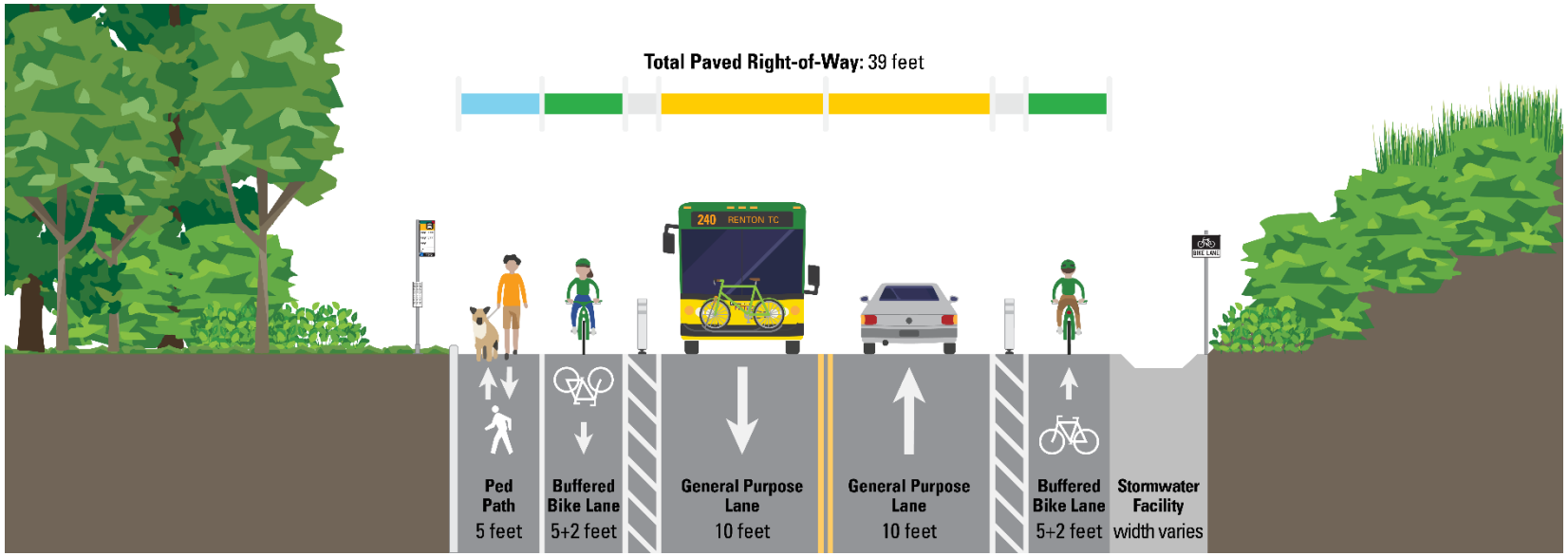
- **Offstreet Paths**
- **Protected Bike Lanes,** Both Sides;
- **Protected Bike Lanes,** Both Sides; **Ped Path,** One Side
- **Conventional Bike Lanes,** Both Sides
- **Conventional Bike Lane,** One Side; **Ped Path,** One Side
- **Conventional Bike Lane,** One Side
- **Neighborhood Greenway**
- **Green-Backed Sharrows,** Both Sides
- **Wide Shoulders/Shared Lanes,** One or Both Sides



BELLEVUE PEDESTRIAN & BICYCLE IMPLEMENTATION INITIATIVE

Rapid Implementation Program





BELLEVUE PEDESTRIAN & BICYCLE IMPLEMENTATION INITIATIVE

Representative CPR Project

Design Details & Cost Estimates

Maintenance Requirements & Cost Estimates

BELLEVUE PEDESTRIAN & BICYCLE IMPLEMENTATION INITIATIVE

Next Steps: Cost Estimates

BELLEVUE, WA

BICYCLE FRIENDLY COMMUNITY
Spring 2015
BRONZE
THE LEAGUE OF AMERICAN BICYCLISTS

TOTAL POPULATION
134,400

POPULATION DENSITY
4,010

TOTAL AREA (sq. miles)
33.3

OF LOCAL BICYCLE FRIENDLY BUSINESSES 0

OF LOCAL BICYCLE FRIENDLY UNIVERSITIES 0

10 BUILDING BLOCKS OF A BICYCLE FRIENDLY COMMUNITY

	Average Silver	Bellevue
Arterial Streets with Bike Lanes	45%	34
Total Bicycle Network Mileage to Total Road Network Mileage	30%	16
Public Education Outreach	GOOD	SOME
% of Schools Offering Bicycling Education	43%	0
Bike Month and Bike to Work Events	GOOD	GOOD
Active Bicycle Advocacy Group	YES	YES
Active Bicycle Advisory Committee	YES	VERY
Bicycle-Friendly Laws & Ordinances	SOME	GOOD
Bike Plan is Current and is Being Implemented	YES	YES
Bike Program Staff to Population	PER 70K	33,600

CATEGORY SCORES

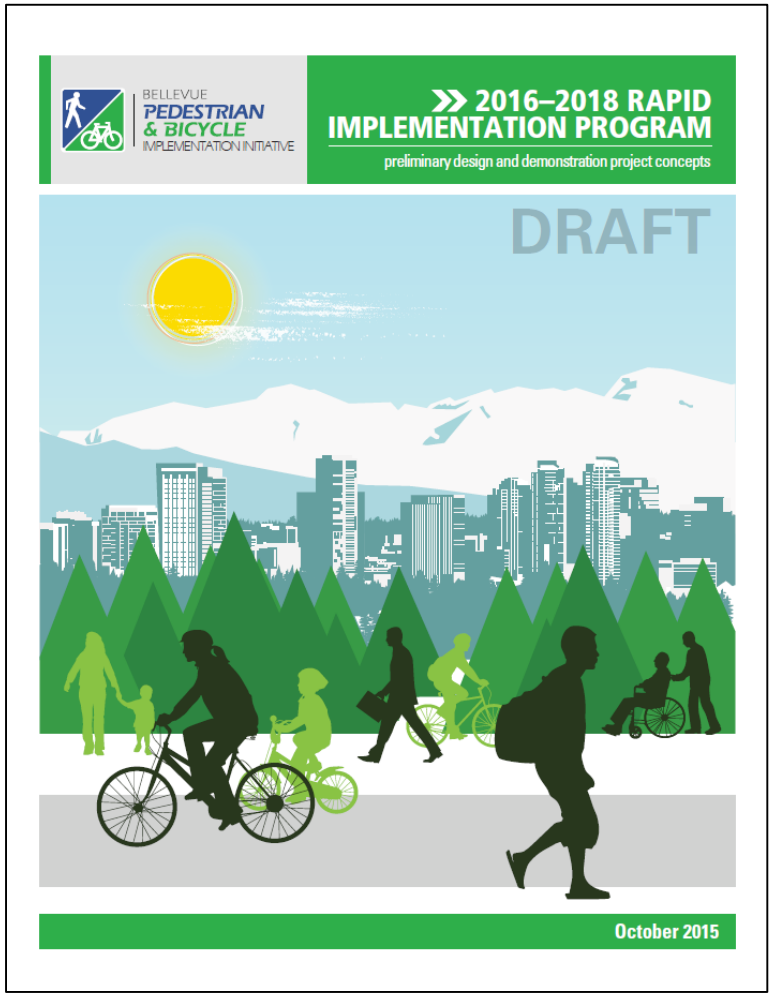
ENGINEERING *Bicycle network and connectivity*	5/10
EDUCATION *Motorist awareness and bicycling skills*	1/10
ENCOURAGEMENT *Mainstreaming bicycling culture*	4/10
ENFORCEMENT *Promoting safety and protecting bicyclists' rights*	2/10
EVALUATION & PLANNING *Setting targets and having a plan*	4/10

KEY OUTCOMES

	Average Silver	Bellevue
RIDERSHIP *Percentage of daily bicyclists*	3.5%	0.50
SAFETY MEASURES **CRASHES** *Crashes per 10k daily bicyclists*	180	438
SAFETY MEASURES **FATALITIES** *Fatalities per 10k daily bicyclists*	1.4	0

BELLEVUE PEDESTRIAN & BICYCLE IMPLEMENTATION INITIATIVE

Benchmarking



- **December 10, 2015:** TC Meeting
- **March 2016:** Budget Proposal
  - Engineering
  - Education
  - Encouragement
  - Enforcement
  - Evaluation
- **May 2016:** Draft Report

BELLEVUE
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Deliverables/Timeline

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For Additional Information