Discovery Road Roadway Cross-section Alternatives Analysis

City of Port Townsend
Port Townsend, WA

Prepared For:
City of Port Townsend

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Project Information

Project:	Discovery Road Bikeway and Sidewalk Project
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Reviewing Agency

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Signature

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.

Prepared by Scott Sawyer, PE

Approved by Laura Parsons, PE

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Executive Summary

The purpose of this report is to present the approach to analyzing alternative roadway cross-sections for Discovery Road for the Discovery Road Bikeway and Sidewalk Project and to recommend a preferred alternative.

Goals and Objectives

When completed, this project will result in community supported bike and pedestrian improvements along Discovery Road. These improvements will support a wide range of people walking and bicycling.

Corridor Setting

The project limits along Discovery Road are bounded on the west by the Rainier Street roundabout and on the east by McClellan Street at the west edge of Salish Coast Elementary. The Discovery Road/19th Street/Blaine Street Corridor from Mill Road to Walker Street is an important east-west link and a top priority to fill a critical gap within the City's bicycle and pedestrian network. This portion of Discovery Road is a 20-foot wide two-lane road with no shoulder, providing no space for pedestrians and cyclists. There are seven intersections (including Rainier Street and McClellan Street) and most are T-intersections on one-block local access roads with stop signs on the side road only. There are only five driveways directly accessing Discovery Road. The posted speed limit is 25 mph but typical vehicle speeds trend closer to 35 mph. Current traffic volumes average about 5,200 vehicles per day.

There are no pedestrian/bicycle facilities along Discovery Road within the project limits due to the narrow roadway width; however, there are important connections to developed facilities, including:

Rainier Street Cycle Track – Two-way asphalt cycle track buffered by a planter strip on the east side of Rainier Street. There is a concrete sidewalk for pedestrians on the outside of the Cycle track.

Rainier Street Shared Use Path – An asphalt shared use path (pedestrians, bicycles, and other human-powered transport) built to the north of the Rainier roundabout connecting to 20th Street and the trail system to the north.

Salish Coast Elementary Cycle Track – Two-way asphalt cycle track built on the outside of a concrete sidewalk. The sidewalk is buffered from the roadway by a planter strip. At the school bus loading zone, the cycle track is separated from the sidewalk with a chain-link fence.

Project Objectives:

The following are the key objectives of the Discovery Road Bikeway and Sidewalk Project:

- Develop a Master Plan for pedestrian and bike facilities in the Discovery/19th/Blaine corridor.
- Using the framework of this Master Plan, construct bikeway and sidewalk facilities along one side of Discovery Road.
- Enhance pedestrian crossings and safety measures at intersections.
- Provide efficient and intuitive connections with existing bike and pedestrian facilities.
- Improve stormwater management along the length of the corridor.

Public Engagement and Stakeholder Advisory Group

The City published a StoryMap available for public on-line viewing via the city's project website and Engage PT – https://storymaps.arcgis.com/stories/fe9fe9024a2249119ebef011b536e84a.

Concurrent with public review of the Discovery Road StoryMap, the City solicited public feedback via an on-line opinion survey. The results of the survey clearly show strong support for construction of bikeways and sidewalks in the corridor. Nearly 90% of respondents said they will use Discovery Road for biking and nearly 60% said they will walk or run along the corridor.

The City also formed a Stakeholder Advisory Group comprised of ten diverse members of the community to provide feedback and advisory input over the course of four meetings on the (1) development of alternative roadway cross-sections for Discovery Road from Rainier Street to McClellan Street, (2) establishment of criteria to compare and score the performance of alternatives, (3) review of alternatives analysis results, and (4) design development of various focus areas throughout the corridor (i.e., crosswalks, transition/mixing zones, traffic calming features, etc.).

Alternatives Analysis

The Stakeholder Advisory Group brainstormed alternative roadway cross-sections for Discovery Road between Rainier Street and McClellan Street, identifying a total of seven alternatives.

Subsequently, the Project Team vetted the seven alternatives and screened out one alternative, resulting in a final list of six alternatives used in the analysis.

The Stakeholder Advisory Group also brainstormed a list of criteria that could be used to evaluate and compare roadway cross-section alternatives to identify the best performing alternative. Subsequently, the Project Team filtered the brainstorm list of criteria to make sure each criterion helps to create distinction between alternatives and there is a reasonable way to score the performance of each alternative for a criterion. After filtering, the Project Team identified the six criteria to use for the alternatives analysis.

Next, the Stakeholder Advisory Group was asked to opine on the relative importance of each criterion relative to the other criteria (criteria weighting). Using a pair-wise comparison table, the Stakeholder Advisory Group weighted the criteria and the Project Team distilled the Stakeholder input into two weighting schemes representative of the compiled input. Weighting Scheme 1 is more heavily weighted toward intuitive connections to existing bikeway facilities and minimizing street crossings and Weighting Scheme 2 is more heavily weighted toward maximizing separation and supporting passing/social cycling.

Lastly, the Project Team evaluated each of the six alternatives for performance by each of the six criteria. The scoring of alternatives is independent of the weighting of criteria; therefore, there is only one set of scores for alternatives by criteria.

Based on the scoring, the Project Team prepared two model – one for each weighting scheme – ranking the alternatives from highest to lowest performing.

Recommendation

The ranking of alternatives is consistent regardless of the weight scheme with the top two alternatives unchanged between Weighting Scheme 1 and Weighting Scheme 2.

The highest ranked alternatives are as follows:

- Alternative 2: 2-way Cycle-track South Side
- Alternative 7: Shared Use Path South Side

Based on the modeling, the Project Team recommends the adoption of Alternative 2 – 2-way Cycle-track South Side – as the preferred alternative.

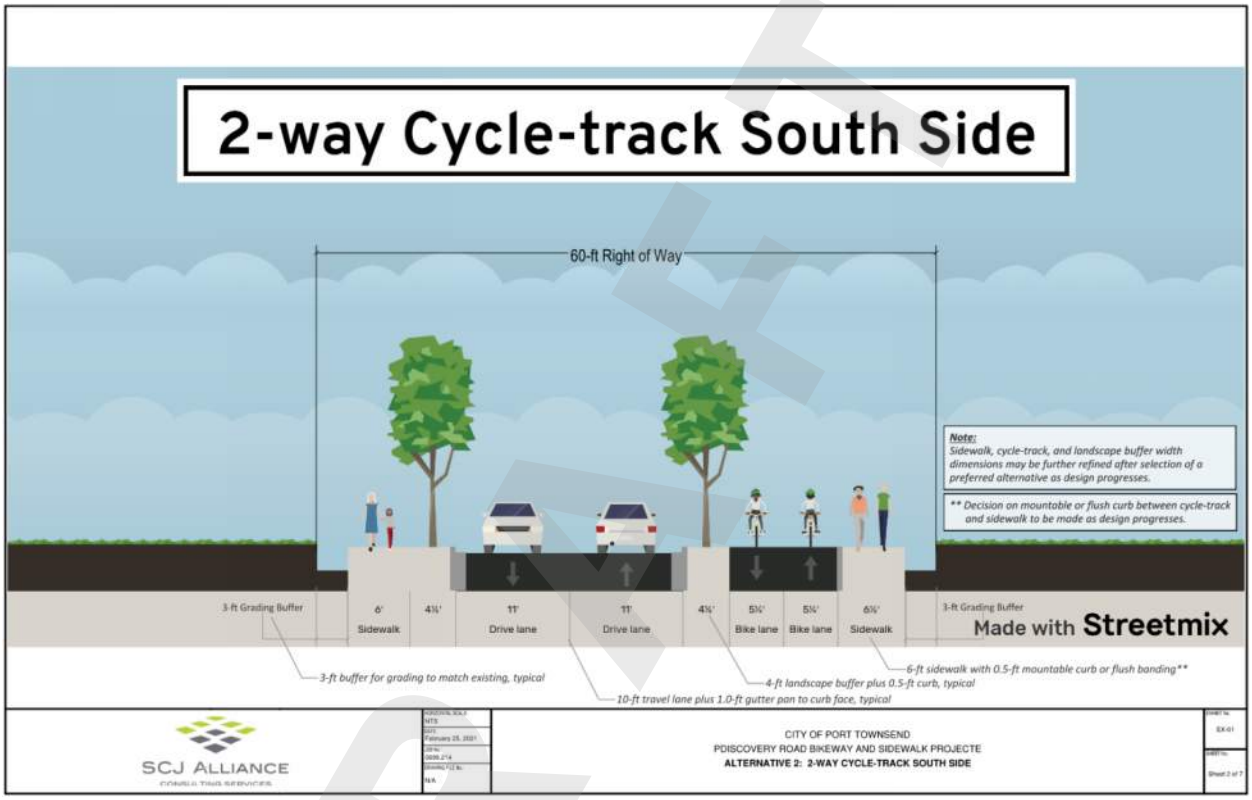


Figure 1 – Recommended Alternative
(Alternative 2 – 2-way Cycle-track South Side of Discovery Road

1 Purpose

The purpose of this report is to present the approach to analyzing alternative roadway cross-sections for Discovery Road for the Discovery Road Bikeway and Sidewalk Project and to recommend a preferred alternative.

The Project Team (City of Port Townsend Public Works staff and the Consultant Team) will use the preferred alternative as the basic roadway cross-section for the corridor while making refinements (i.e., small width adjustments for cross-section elements) and location-specific changes (i.e., adjustments to minimize wetland impacts) as design progresses during Preliminary and Final Design.

2 Background

2.1 Walking & Biking in Port Townsend

Over the last twenty years, the City of Port Townsend has added many miles of sidewalks and bike lanes to its existing streets network. Port Townsend is considered a highly walkable city and has been previously recognized by the League of American Bicyclists as a Bicycle Friendly Community (Silver Level). Pedestrian and bicycle mobility must be considered for all street projects as part of the City's Complete Streets Program.

While efforts are ongoing, many gaps remain within this network. These gaps limit the viability of active transportation and the daily mobility of pedestrians and cyclists across the City. The Discovery Road Bikeway and Sidewalk Project will eliminate an important gap and continue the city's commitment to walking and biking in Port Townsend.

2.2 Project Background

2.2.1 Goals and Objectives

When completed, this project will result in community supported bike and pedestrian improvements along Discovery Road. These improvements will support a wide range of people walking and bicycling.

2.2.2 Corridor Setting

The Discovery Road/19th Street/Blaine Street Corridor from Mill Road to Walker Street is an important east-west link and a top priority to fill a critical gap within the City's bicycle and pedestrian network.

While it is a popular travel corridor for residents and visitors alike, the narrow shoulders along Discovery Road offer little to no space for pedestrians and cyclists. Upgrade of Discovery Road is listed as the number one project within the City's Transportation Improvement Program.

The project limits along Discovery Road are bounded on the west by the Rainier Street roundabout and on the east by McClellan Street at the west edge of Salish Coast Elementary.

This portion of Discovery Road is a 20-foot wide two-lane road with no shoulder. The right-of-way is generally 60-feet wide and is mostly abutted by single-family homes. There are seven intersections (including Rainier Street and McClellan Street) and most are T-intersections on one-block local access roads with stop signs on the side road only.

There are only five driveways directly accessing Discovery Road. The relatively limited number of intersections and driveways paired with banked roadway curves promote higher vehicle speeds.

Except for McPherson Street and 14th Street, each access road is about one block long with very light traffic.

The posted speed limit is 25 mph but typical vehicle speeds trend closer to 35 mph. Current traffic volumes average about 5,200 vehicles per day. This volume will likely grow closer to 10,000 vehicles per day in the next couple of decades with potential developments surrounding the corridor.

2.2.3 Land Use & Development

The western edge of the project limits is an area of high development potential. The Makers/Artisan District starts at the roundabout and runs southerly along Rainier Street. Development along Rainier Street north of Discovery could add nearly 500 dwelling units.

Existing development is mostly single-family homes, including the Towne Point subdivision with 165 homes. There are several multi-family and apartment sites proximate to the corridor. Salish Coast Elementary sits at the east edge of the project limits, serving about 500 children from Kindergarten through 5th grade.

2.2.4 Sidewalk and Bikeway Network Connections

There are no pedestrian/bicycle facilities along Discovery Road within the project limits due to the narrow roadway width; however, there are important connections to developed facilities, including:

Rainier Street Cycle Track – Two-way asphalt cycle track buffered by a planter strip on the east side of Rainier Street. It ends at the roundabout on the south side of Discovery Road.

Figure 2 – Discovery Road project limits showing existing street, sidewalk, and bikeway network

There is a concrete sidewalk for pedestrians on the outside of the Cycle track. The cycle track runs southerly along Rainier Street to connect to sidewalks and on-street bike lanes along Sims Way.

Rainier Street Shared Use Path – An asphalt shared use path (pedestrians, bicycles, and other human-powered transport) built to the north of the Rainier roundabout within the undeveloped street right-of-way. This path connects to 20th Street and the trail system to the north.

Salish Coast Elementary Cycle Track – Two-way asphalt cycle track built on the outside of a concrete sidewalk. The sidewalk is buffered from the roadway by a planter strip. At the school bus loading zone, the cycle track is separated from the sidewalk with a chain-link fence, which deters children from entering the cycle track as they unload from buses. The cycle track connects to sidewalks and on-street bike lanes along Sheridan Street and 19th Street.

2.2.5 Project Objectives:

The following are the key objectives of the Discovery Road Bikeway and Sidewalk Project:

- Develop a Master Plan for pedestrian and bike facilities in the Discovery/19th/Blaine corridor.
- Using the framework of this Master Plan, construct bikeway and sidewalk facilities along one side of Discovery Road.
- Enhance pedestrian crossings and safety measures at intersections.
- Provide efficient and intuitive connections with existing bike and pedestrian facilities.
- Improve stormwater management along the length of the corridor.

Design Considerations and Principles

The following are three key considerations for the design of bikeways and sidewalks:

Safety – Minimize the frequency and severity of crashes by limiting conflicts with vehicles.

Comfort – Encourage use by significantly reducing stress, anxiety, or concerns over safety.

Intuitive Flow – Intuitively and efficiently connect different facilities within the bicycle/pedestrian network while reducing stops and conflicts.

The following are guiding principles in achieving the key design considerations:

- Design facilities that are safe and comfortable using the best available science and design information.
- Consider a facility's location and context when making design decisions.
- Encourage low traffic speeds and local needs first within an urban context.
- Build facilities that encourage active transportation (i.e., walking, cycling, etc.).
- Seek flexible and innovative solutions.
- Identify and work within a project's physical boundaries and budget limitations.
- Promote transparency and open mindedness throughout the public process.

2.2.6 Funding

In recognition of the importance of meeting pedestrian and cycling needs in the corridor, the City of Port Townsend has been awarded three separate grants to improve pedestrian and cyclist safety along Discovery Road from the roundabout at Rainier Street to Salish Coast Elementary at McClellan Street.

With these grants, Port Townsend has the funds to rebuild Discovery Road and add bicycle and pedestrian facilities along both sides of Discovery Road. These improvements will improve safety along Discovery Road while offering residents active transportation alternatives to driving.

The following is a list of grant project descriptions and/or program requirements:

Project Funding

Grants:

- *TIB UAP (state funds):* *$2.63 million*
- *WSDOT Ped Bike (state funds):* *$1.44 million*
- *STP (federal funds):* *$0.43 million*

City Funds:

- *Street Fund:* *$0.25 million*
- *Utility Funds:* *$0.60 million*

TOTAL FUNDING: ***$5.36 million***

- Surface Transportation Program (STP) Regional Funds (federal funding) – funds to build sidewalk and cycle-track on the south side of Discovery Road from Rainier Street to Sheridan Street
  - Project limits from Rainier Street to Sheridan Street (superseded by the WSDOT Pedestrian and Bicycle grant given the newly constructed cycle-track at Salish Coast Elementary)
  - Construction sidewalk and 2-way cycle track on the south side of Discovery Road
  - Construct sidewalk on the north side of Discovery Road from Town Pointe Avenue to Rosecrans Street
  - Construct actuated pedestrian crossings (i.e., rapid-rectangular flashing beacons) at five crosswalk locations
  - Construction stormwater improvements
- WSDOT Pedestrian and Bicycle Program (state funds) – funds to build sidewalk and cycle-track on the south side of Discovery Road from Rainier Street to McClellan Street
  - Project limits from Rainier Street to McClellan Street (updated from the STP grant given the newly constructed cycle-track at Salish Coast Elementary)
  - Same as the STP grant
- Transportation Improvement Board (TIB) Urban Arterial Program (UAP) (state funding) – funds to reconstruct Discovery Road, sidewalks, and cycle-tracks (protected bikeways)
  - Project limits from Rainier Street to McClellan Street (consistent with the WSDOT Pedestrian and Bicycle grant)
  - Construct two travel lanes (22 feet curb face to curb face)
  - Construct 6-ft sidewalks both sides (TIB policy requires 5-ft minimum sidewalks on both sides of the road)
  - Construct two 5-ft cycle tracks (side or sides to be determined)
  - Construct stormwater improvements

- Realign the McPherson Street intersection to address the intersection skew angle
- Construct pedestrian lighting at crosswalks
- Close the 14th Street intersection to Discovery Road (replace with a cul-de-sac for 14th Street)
- Construct native and drought-tolerant plantings to separate bikeways/sidewalks from the travel lanes

2.2.7 Constraints

2.2.7.1 Space Constraints

The Discovery Road right of way is generally 60 feet wide with 20 feet of pavement centered in the right of way. Acquiring additional right of way width is cost prohibitive; therefore, the pedestrian and bicycle facilities will be built within existing right-of-way.

The improvements will be kept about 3 feet from the right of way lines to allow for construction without impact to abutting properties. This reduces the total available space within the right of way limits by about 10% as shown by the red hatched area in the cross section.

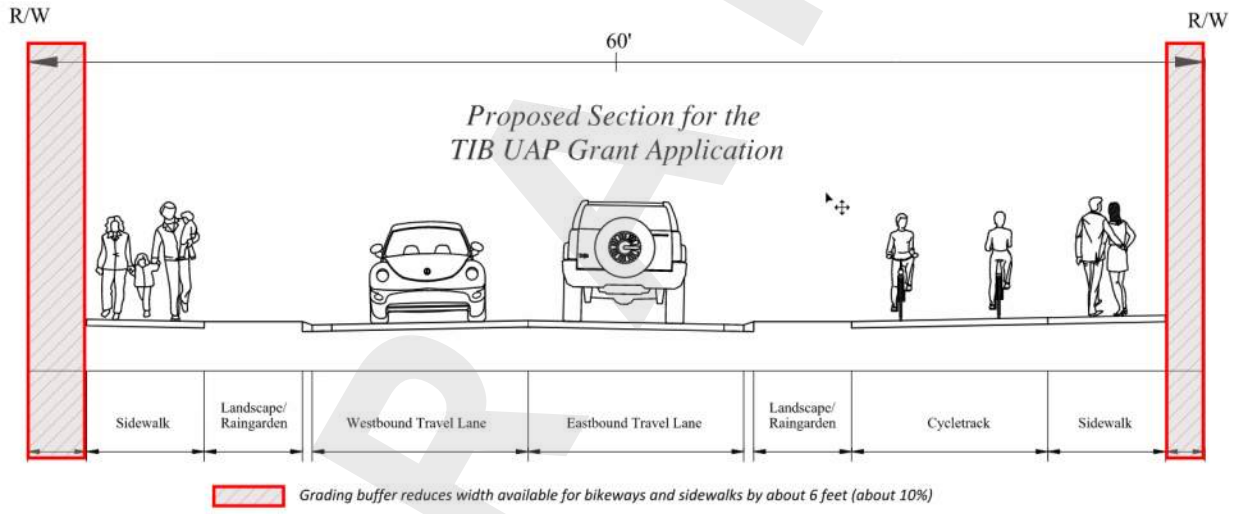


Figure 3 – Space constraint due to grading buffer within existing right of way

2.2.7.2 Budget and Grant Constraints

The City has secured grant funding to complement City funds for a total project budget of about $5.36 million.

The three grants were awarded for improvements along Discovery Road between Rainier Street McClellan Street. These grant funds cannot be used for improvements beyond these project limits.

2.2.8 Design Users – Pedestrians and Bicyclists

2.2.8.1 Types of Bicyclists

Like many other communities, Port Townsend has a wide range of cyclists with different skills, abilities, and comfort levels, including:

- Commuters
- Recreational riders
- Utility cyclists
- Families and children
- Retirees
- Tourists

In addition, many people who do not currently bicycle but are interested, might consider riding a bike if they felt they could do so safely.

2.2.8.2 Low Stress Bikeways

Low stress bikeways are known to encourage more people to ride bikes both recreationally and as an alternative form of transportation. On streets with higher vehicle traffic volumes and speeds, bikeways that are separated from traffic enable people of all ages and abilities to ride bicycles comfortably and confidently. On smaller, narrower streets with very low traffic volumes and speeds, less confident bicyclists can still safely and comfortably share the roadway.

2.2.8.3 Target Users

Port Townsend is committed to reducing these barriers and working with developers to create a more inclusive roadway system. This is reflected in the City's Complete Streets Policy. In practice, this means designing streets to accommodate a wide range of users and abilities.

- School Children
- Families
- Recreational Users
- Commuters
- Utility Cyclists
- Inexperienced as well as experienced cyclists

2.2.9 Types of Bikeways

2.2.10 Types of Bikeways

Bikeways that provide separation from motor vehicle traffic support bicyclists of all ages and abilities, increase the number of people bicycling, reduce stress, and improve safety for all people using the roadway.

On streets with higher vehicle traffic volumes and speeds, bikeways that are separated from traffic enable people of all ages and abilities to comfortably and confidently bicycle. On smaller, narrower streets with very low traffic volumes and speeds, unconfident bicyclists can safely and comfortably share the roadway with vehicles.

The projected volume and speed of vehicular traffic on a road, along with the overall width of the public right of way, generally dictate what type of bicycle facility can best accommodate bicyclists of all ages and abilities.

2.2.10.1 Bikeway and Sidewalk Options

Appendix A illustrates several bikeway and sidewalk options that could fit within the Discovery Road right-of-way. The desired result of community engagement and collaboration with the Stakeholder Advisory Group is selection of the best bikeway and sidewalk combination that encourages use by a wide majority of bicyclists and pedestrians, while considering project context and project constraints.

3 Public Engagement Prior to the Alternatives Analysis

3.1 StoryMap

The City published a StoryMap available for public on-line viewing via the city's project website and Engage PT.

- **Project website:** https://cityofpt.us/publicworks/project/discovery-road-bikeway-and-sidewalks-project
- **Engage PT website:** https://cityofpt.us/engagept/page/discovery-road-bikeway-and-sidewalks-project
- **Discovery Road StoryMap:** https://storymaps.arcgis.com/stories/fe9fe9024a2249119ebef011b536e84a

3.2 Public Opinion Survey

Concurrent with public review of the Discovery Road StoryMap, the City solicited public feedback via an on-line opinion survey.

The results clearly show strong support for construction of bikeways and sidewalks in the corridor. Nearly 90% of respondents said they will use Discovery Road for biking and nearly 60% said they will walk or run along the corridor.

The results also show a slight preference for 1-way cycle-tracks over 2-way cycle-tracks and buffered on-street bike lanes.

A complete summary of the survey results is provided in Appendix B.

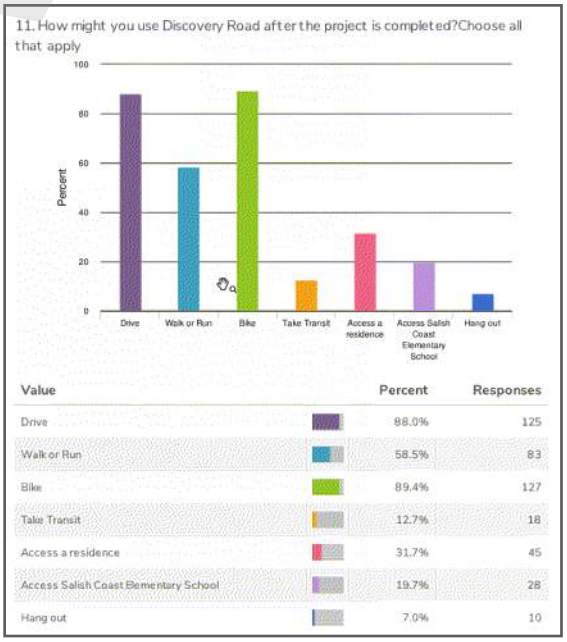


Figure 4 – How respondents will use Discovery Road after the project

4 Stakeholder Advisory Group

The City formed a Stakeholder Advisory Group to provide feedback and advisory input during the (1) development of alternative roadway cross-sections for Discovery Road from Rainier Street to McClellan Street, (2) establishment of criteria to compare and score the performance of alternatives, (3) review of alternatives analysis results, and (4) design development of various focus areas throughout the corridor (i.e., crosswalks, transition/mixing zones, traffic calming features, etc.).

The Stakeholder Advisory Group is also collaborating with the Project Team during development of concepts for future improvements along Discovery Road between McClellan Street and Sheridan Street, including (1) potential modifications to the Salish Coast cycle-track to better operations and safety for users (students, parents, pedestrians, bicyclists, buses, and vehicles), and (2) improvements to the Discovery Road/Sheridan Street intersection to make street crossings by pedestrians and bicyclists more intuitive and more predictable.

4.1 Members of the Stakeholder Advisory Group

The Stakeholder Advisory Group is comprised of the following members to create a diverse group of interests and perspectives.

Stakeholder Advisory Group

- Chris Overman, Adjacent resident – Towne Point
- Ed Stegall, neighbor, ATAB member
- Joe Finn, pedestrian advocate
- Lisa Condran, Principal of Salish Coast Elementary School
- Owen Rowe, City Council Member - Transportation Committee
- Pat Teal, DASH president, ATAB member
- Pete Sexton, bike shop owner – Broken Spoke
- Sam Feinson, ATAB chair
- Samantha Lorenz (Thomas), national mobility expert
- Scott Walker, City Manager appointee

The Project Team working with the Stakeholder Advisory Group is comprised of City staff and members of the Consultant Team.

City Team

- City Engineer, Dave Peterson, PE
- Director of Public Works, Steve King, PE
- Discovery Road Project Manager, Laura Parsons, PE,

Consultant Team

- SCJ Alliance, Scott Sawyer, PE
- MacLeod Reckord, David Saxen, PLA
- MacLeod Reckord, Terry Reckord, ASLA

4.2 Meetings of the Stakeholder Advisory Group

The Stakeholder Advisory Group met four times between January and March 2021. The first two meetings were focused on providing members with project context and background information. The third meeting was focused on brainstorming alternative roadway cross-sections and identify criteria to use to compare and evaluate alternatives. The fourth meeting was focused on review of the results of the alternatives analysis and review of design focus areas throughout the corridor.

Meeting agendas, notes, and materials are provided in Appendix C.

5 Alternatives Analysis

5.1 Alternatives

During Meeting 3, the Stakeholder Advisory Group brainstormed alternative roadway cross-sections for Discovery Road between Rainier Street and McClellan Street. The Group identified a total of seven alternatives.

- Alternative 1: 1-way Cycle-track Both Sides
- Alternative 2: 2-way Cycle-track South Side
- Alternative 3: 2-way Cycle-track South Side w/ On-street Bike Lane North Side
- Alternative 4: 2-way Cycle-track South Side w/ Sharrow North Side
- Alternative 5: Buffered On-street Bike Lane Both Sides
- Alternative 6: Shared Use Path North Side w/ Sharrow South Side
- Alternative 7: Shared Use Path South Side

Between Meeting 3 and Meeting 4, the Project Team vetted the seven alternatives and screened out Alternative 3 – 2-way Cycle-track South Side w/ On-Street Bike Lane North Side. This alternative does not fit within the available roadway right of way using reasonably minimal dimensions for each cross-section elements. There is only 15 inches left for grading buffer between back of walk and the right of way line on each side, which is not viewed as sufficient to avoid cost-prohibitive temporary construction easements. The Project Team also made minor adjustments to width dimensions to create better consistency between alternatives and changed the use of sharrows for Alternatives 4 and 6 to the use of a wider travel lane (12-ft travel lane plus 1-ft gutter pan instead of 10-ft lane with 1-ft gutter pan) without sharrow markings. It is the judgment of the Project Team that the traffic volumes (~5,000 ADT) and speeds (posted 25 mph) are not appropriate for the use of sharrows; however, more confident cyclists may choose to stay on-street using a wider lane. The final list of six alternatives used in the analysis is listed below.

- Alternative 1: 1-way Cycle-track Both Sides
- Alternative 2: 2-way Cycle-track South Side
- Alternative 4: 2-way Cycle-track South Side w/ Wider Lane North Side
- Alternative 5: Buffered On-street Bike Lane Both Sides
- Alternative 6: Shared Use Path North Side w/ Wider Lane South Side
- Alternative 7: Shared Use Path South Side

Illustrations of the original alternative roadway cross-sections from the Meeting 3 brainstorming and the alternatives screened and adjusted by the Project Team between Meetings 3 and 4 are provided in Appendix D. Illustrations of the final alternative roadway cross-sections s are provided in Appendix E.

5.2 Criteria and Weighting

5.2.1 Criteria

During Meeting 3, the Stakeholder Advisory Group brainstormed a list of criteria that could be used to evaluate and compare roadway cross-section alternatives to identify the best performing alternative.

The Group started with a draft list provided by the Project Team in advance of the meeting. The Group added several criteria during the discussion.

Draft Criteria Provided Prior to Stakeholder Meeting 3

- Safety, as determined by:
  - Separation from drivers
  - Separation from people walking
  - Number of street crossings
  - *Type of street crossings (i.e. contraflow)*
  - Number of driveway crossings
- Connections to the immediate existing bikeways
- Suitability for related routes in the bike network (e.g. Discovery Road between Rainier Street and Mill Road, 19th Street and Blaine Street between Sheridan Street and Walker Street)
- Directness
- Intuitiveness
- Ease of access (i.e. How often and by whom will Discovery Road need to be crossed to access the bikeway?)
- Access to important destinations
- Width (for passing and social cycling)
- Efficient use of right of way
- Ease of transit stop integration
- Critical area (wetlands) impacts
- Ease of maintenance (e.g. sweeping)

Draft Criteria Added During Stakeholder Meeting 3

- Provide space for landscaping/greenery
- Consider the typical driver for vehicles on Discovery Road
- Calm traffic/reduce vehicle speeds
- Increase bike/ped comfort
- Create human-scale sense of place/place-making
- Meet grant requirements (i.e., minimize impervious surfaces)
- Be authentic to Port Townsend and project context

Between Meetings 3 and 4, the Project Team filtered these criteria to make sure each criterion helps to create distinction between alternatives and there is a reasonable way to score the performance of each alternative for a criterion.

Criteria Filter

- Does a criterion help us distinguish between alternatives?
- Is scoring a criterion for each alternative measurable and/or defensible?

After filtering, the Project Team identified the following six criteria to use for the alternatives analysis. The proposed method for measuring performance for each alternative is shown in brackets.

Final Criteria Used in the Alternatives Analysis

- Maximize separation from vehicles [width in feet]

- Separate pedestrians and bicyclists [qualitative judgment]
- Minimize the number of street crossings – side streets and driveways [count]
- Minimize the number of street crossings – Discovery Road [count]
- Connect to Rainier Street and Salish Coast Elementary bikeways in a manner that is intuitive and clearly understood [qualitative judgment]
- Supports passing and social cycling [qualitative judgment]

Although several criteria from the original list were filtered from this final list, there are still criteria that are important considerations as the project design progresses. The Project Team will use the following items to guide the development of details during preliminary and final design.

Filtered Criteria to be Used as Design Considerations

Original Criteria that Doesn't Help Create Distinction Between Alternatives

- Suitability for related routes in the bike network (e.g. Discovery Road between Rainier Street and Mill Road, 19th Street and Blaine Street between Sheridan Street and Walker Street)
- Ease of access (i.e. How often and by whom will Discovery Road need to be crossed to access the bikeway?)
- Critical area (wetlands) impacts
- Ease of maintenance (e.g. sweeping)
- Provide space for landscaping/greenery
- Meet grant requirements (i.e., minimize impervious surfaces)

Original Criteria Covered by Other Criterion or Combined with Other Criterion

- Type of street crossing (i.e., contra-flow)
- Number of driveway crossings
- Directness
- Intuitiveness
- Access to important destinations
- Efficient use of right of way
- Ease of transit stop integration
- Increase bike/ped comfort
- Create human-scale sense of place/place-making

Original Criteria to be Used as Design Considerations as Design Progresses

- Consider the typical driver for vehicles on Discovery Road
- Calm traffic/reduce vehicle speeds
- Be authentic to Port Townsend and project context

5.2.2 Weighting of Criteria

Between Meetings 3 and 4, the Project Team provided the Stakeholder Advisory Group with the final list of six criteria for their use to opine on the importance of each criterion relative to the other criteria. This relative importance is termed *criteria weighting.*

Each Stakeholder Advisory Group member was provided with a table to readily make pair-wise comparisons between each criterion to decide which one is more important (or decide both are equally important.

Prior to Meeting 4, the Project Team compiled the pair-wise comparisons from nine of the ten Stakeholder Advisory Group members. Based on the comparisons provided by the Group, the Project Team judged there to be two separate criteria weightings that generally reflected the opinions of the Group as a whole.

		A	B	C	D	E	F		
	Performance Attributes	Max Sep from Vehicles	Min # of St Xings (side st)	Min # of St Xings (Discovery)	Connect to Rainer and Salish	Support Passing & Social	Separate Peds & Bikes	TOTAL COUNT	PRIORITIES
A	Max Sep from Vehicles	A	A	A	A	A	A	6.0	**28.6%**
B	Min # of St Xings (side st)		B	B	B/D	B/E	B	4.0	**19.0%**
C	Min # of St Xings (Discovery)			C	D	E	F	1.0	**4.8%**
D	Connect to Rainer and Salish				D	E	F	2.5	**11.9%**
E	Support Passing & Social					E	E	4.5	**21.4%**
F	Separate Peds & Bikes						F	3.0	**14.3%**
	SUB-TOTALS							21.0	**100.0%**

Figure 5 – Sample pair-wise comparison table

A summary of criteria pair-wise comparisons from the Stakeholder Advisory Group is provided in Appendix F.

5.2.2.1 Weighting Scheme 1

The top three most important criteria for Weighting Scheme 1 are as follows:

- Connect to Rainier Street and Salish Coast Elementary bikeways in a manner that is intuitive and clearly understood [qualitative judgment]
- Minimize the number of street crossings – side streets and driveways [count]
- Minimize the number of street crossings – Discovery Road [count]

5.2.2.2 Weighting Scheme 2

The top three most important criteria for Weighting Scheme 2 are as follows:

- Maximize separation from vehicles [width in feet]
- Separate pedestrians and bicyclists [qualitative judgment]
- Supports passing and social cycling [qualitative judgment]

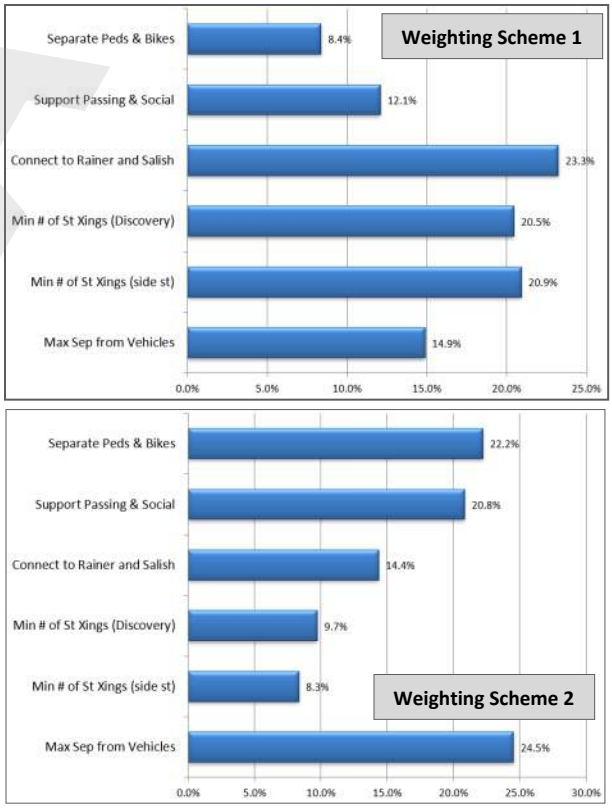


Figure 6 – Weighting Schemes 1 and 2 (relative importance of criteria by percentages)

These two weighting schemes were used by the Project Team to model the ranking of alternatives as discussed in Section 5.4.

5.3 Scoring of Alternatives by Criteria

Between Meetings 3 and 4, concurrent with the Stakeholder Advisory Group members preparing pair-wise comparisons of criterion, the Project Team evaluated each of the six alternatives listed in Section 5.1 for performance by each of the six criteria listed in Section 5.2.

A summary of the scoring of alternatives by criteria is shown in Figure 7. A full pie-shape indicates a score of 4 and an empty pie-shape indicates a score of zero.

Note, the scoring of alternatives is independent of the weighting of criteria; therefore, there is only one set of scores for alternatives by criteria.

Details for the scoring of alternatives is provided in Appendix G.

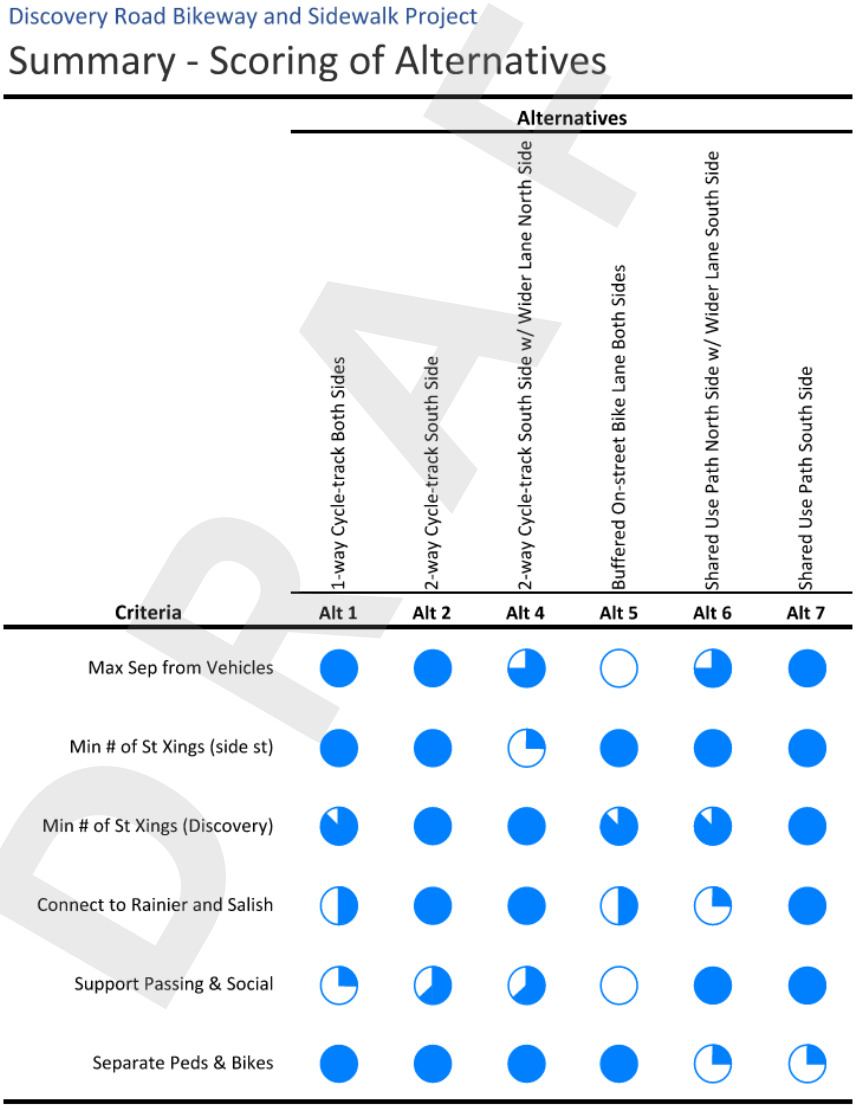


Figure 7 – Summary of scoring of alternatives by criteria

5.4 Ranking of Alternatives

Based on the scoring of alternatives, the Project Team prepared two models to rank the alternatives from highest to lowest performing alternatives, one model of each weighting scheme discussed in Section 5.2.

The ranking value for each alternative is based on the sum of the score for each criterion multiplied by that criterion's weight (relative importance).

The methodology to rank alternatives is shown schematically in Figure 8.

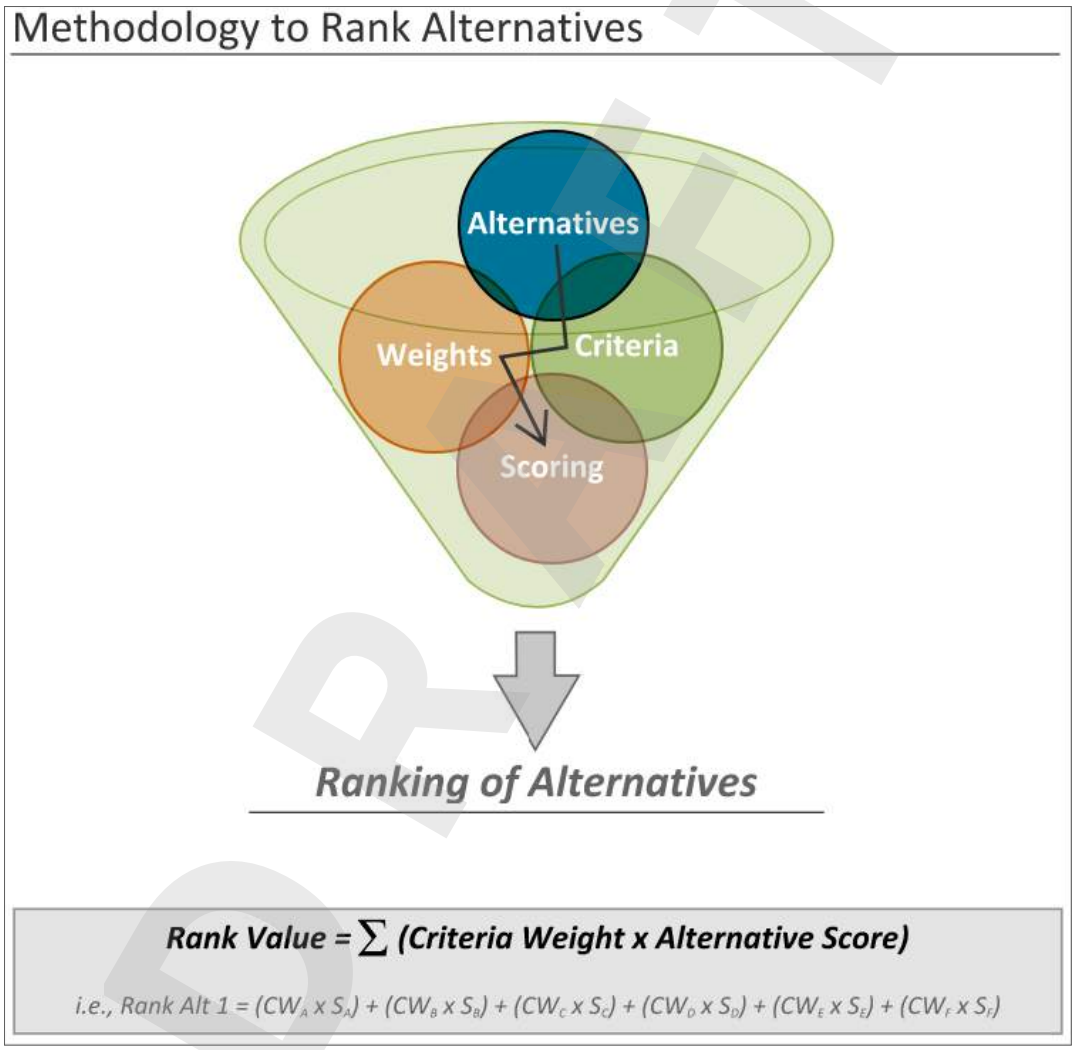


Figure 8 – Methodology to rank alternatives by criteria weight and score

5.4.1 Ranking of Alternatives – Weighting Scheme 1

Based on the methodology shown in Figure 8, the ranking of alternatives for Weighting Scheme 1 resulted in the following top three alternatives (listed from highest to lowest ranked):

- Alternative 2: 2-way Cycle-track South Side
- Alternative 7: Shared Use Path South Side
- Alternative 1: 1-way Cycle-track Both Sides

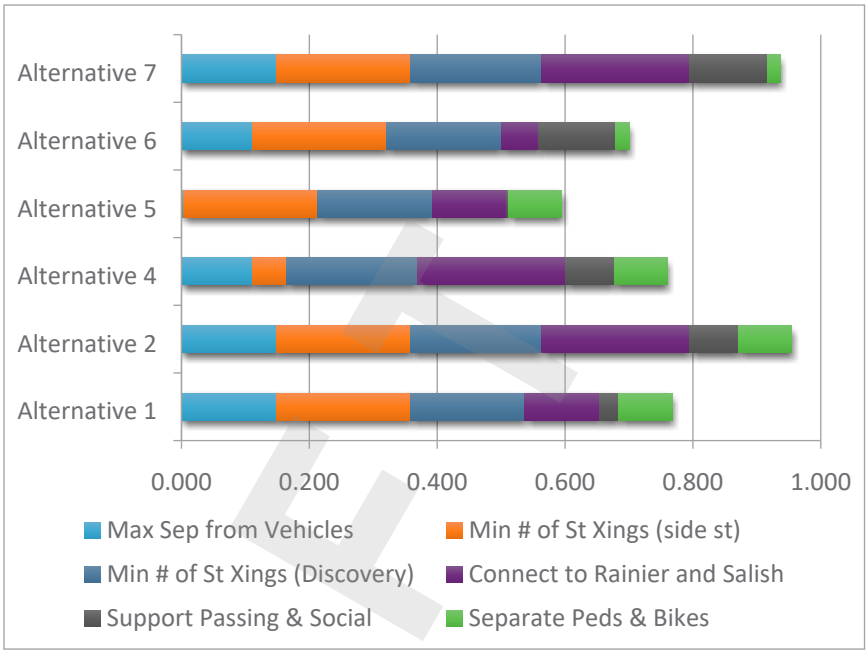


Figure 9 – Ranking of alternatives by stacked-bar chart for Weighting Scheme 1

5.4.2 Ranking of Alternatives – Weighting Scheme 2

Based on the methodology shown in Figure 8, the ranking of alternatives for Weighting Scheme 1 resulted in the following top three alternatives (listed from highest to lowest ranked):

- Alternative 2: 2-way Cycle-track South Side
- Alternative 7: Shared Use Path South Side
- Alternative 4: 2-way Cycle-track South Side w/ Wider Lane North Side

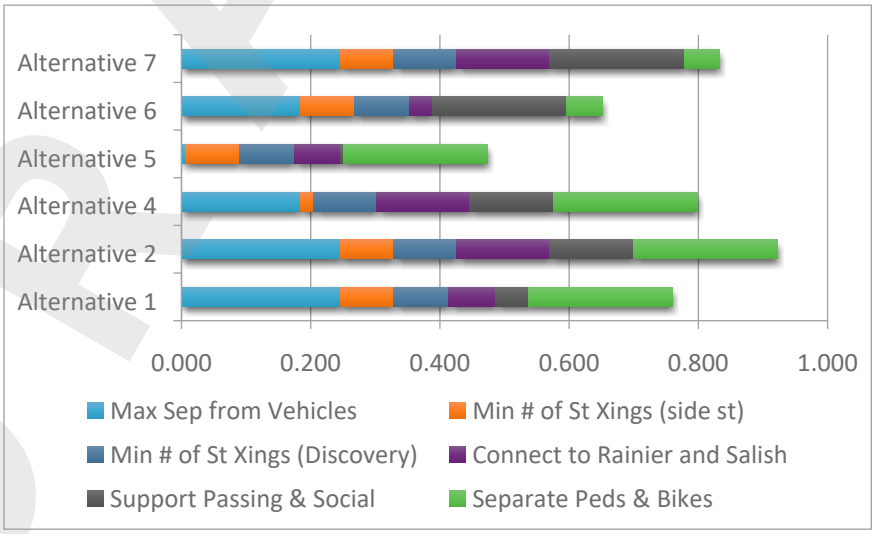


Figure 10 – Ranking of alternatives by stacked-bar chart for Weighting Scheme 2

5.4.3 Stacked Bar-charts for Ranking of Alternatives

The modeling prepared by the Project Team also shows the ranking of alternatives in a stacked-bar chart format that visually displays (1) relative overall performance of each alternative, and (2) the contribution of each criterion for the overall ranking score for each alternative.

The contribution of each criterion (illustrated by the six different colors comprising each horizontally stacked bar) is readily apparent by use of this visual display of the modeling results.

Stacked-bar charts showing the ranking of alternatives for Weighting Scheme 1 and Weighting Scheme 2 are shown in Figures 9 and 10, respectively.

6 Recommendation

The modeling to rank alternatives by overall performance under both weighting schemes yielded similar results with the top two alternatives unchanged between Weighting Scheme 1 and Weighting Scheme 2.

The Project Team further assessed the sensitivity of the model by equally weighting all criteria. This neutral weighting scheme also resulted in the same top two alternatives with Alternative 2 – 2-way Cycle-track South Side – as the highest ranked alternative.

Based on the modeling, the Project Team recommends the adoption of Alternative 2 – 2-way Cycle-track South Side – as the preferred alternative.

Note, during design progression through preliminary and final design, specific width dimensions may be slightly refined overall to improve performance and/or refined at site-specific locations based on localized constraints (i.e., wetlands).

The Project Team will also continue to consider the filtered criteria described in Section 5.2.1 and continue to develop design details, such as the following, based on the adoption of Alternative 2 – 2-way Cycle-track South Side – as the preferred alternative:

- Raise intersection at Discovery/McClellan
- Intersection crosswalks
- Transition/mixing area to connect to the Salish cycle-track
- Traffic calming ideas/features

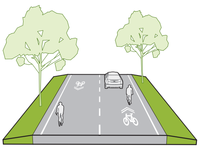
Appendix A

Types of Bikeways and Sidewalks

TYPES OF BIKEWAYS

Shared Lane

- Bicycles share the travel lane with vehicles
- Includes "Bicycle Boulevards" or "Greenways"
- With or without pavement markings or signs
- Only appropriate where vehicle volumes and speeds are low

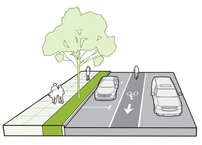


Neighborhood Greenway/Bicycle Boulevard

- Residential streets where bicycle are given priority
- Route usually parallels an arterial route providing a lower stress option
- Only appropriate with low vehicle volumes and speeds
- Traffic calming treatment
- Safe and convenient crossings of arterial streets
- Signs and pavement markings

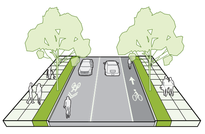
Bike Lane

- Exclusive lane for bicyclists
- Only low stress where vehicle volumes and speeds are low to moderate
- Risk of dooring if bike lane is too close to parked cars



Bike Climbing Lane/Shared Lane

- Exclusive lane for bicyclists on the uphill side of the street
- Shared lane marking on the downhill side of the street
- Provides more separation for climbing cyclists, which are slower and less stable than downhill cyclists
- Appropriate where the width of the right of way is limited

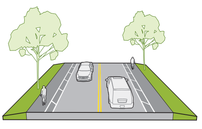


Advisory Bike Lane

- Priority lane for bicyclists, but vehicles may encroach when passing other vehicles
- Appropriate where the width of the right of way is limited
- Only appropriate where vehicle speeds are low

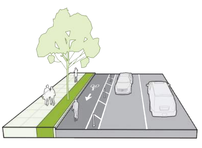
Buffered Bike Lane

- Exclusive lane for bicyclists
- Provides additional separation from vehicles



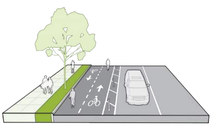
One-Way Cycle Track at Street Level

- Exclusive lane located within or adjacent to the roadway
- Can be separated from vehicle traffic with a vertical element
- Accommodates most ages and abilities



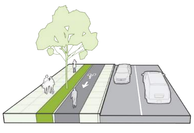
Two-Way Cycle Track at Street Level

- Exclusive lanes located within or adjacent to the roadway
- Can be separated from vehicle traffic with a vertical element
- Accommodates most ages and abilities
- Uses less space than one-way cycle track
- Best in locations with fewer street crossings
- Intesection design for safety is critical
- Connection to one-way facilities can be inefficient



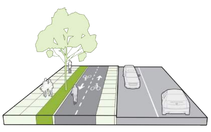
One-Way Cycle Track at Sidewalk Level

- Exclusive lane located between the roadway and sidewalk
- Provides additional spearation from vehicle traffic
- Accommodates all ages and abilities



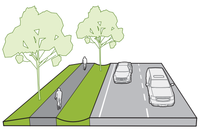
Two-Cycle Track at Sidewalk Level

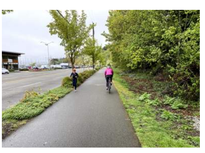
- Exclusive lanes located between the roadway and sidewalk
- Provides additional spearation from vehicle traffic
- Uses less space than one-way cycle track
- Best in locations with fewer street crossings
- Intesection design for safety is critical
- Connection to one-way facilities can be inefficient
- Accommodates all ages and abilities



Sidepath

- Paved shared use path adjacent to the roadway
- Narrower standard than a shared-use path (10')
- Can include a gravel shoulder for equestrian use
- Potential conflicts between modes
- Physically separated from vehicle traffic
- Minimum 5-foot setback from roadway





Shared Use Path

- Physically separated from vehicle traffic
- Shared by pedestrians, bicyclists and joggers
- Typically paved but can be gravel
- 12-foot wide minimum width
- Can include a gravel shoulder for equestrians
- Potential conflicts between modes
- Accommodates all ages and abilities

Shared Use Path with Separated Modes

- Pedestrians and joggers separated from bicyclists
- Physically separated from vehicle traffic
- Low stress for bicycles
- Accommodates all ages and abilities

Soft Surface Trail

- Physically separated from the paved road and trail network
- Can be shared by hikers, runners, mountain bikers, equestrians or be exclusive to some modes
- Potential conflicts between modes
- Ranges from ADA accessible to narrow wildland trail
- Accommodates all ages and abilities

Low

Separation from Traffic

High

Appendix B

On-line Public Survey – Summary of Results

Report for Discovery Road

Response Counts

Completion Rate:	**74.5%**		
	Complete		155
	Partial		53

Totals: 208

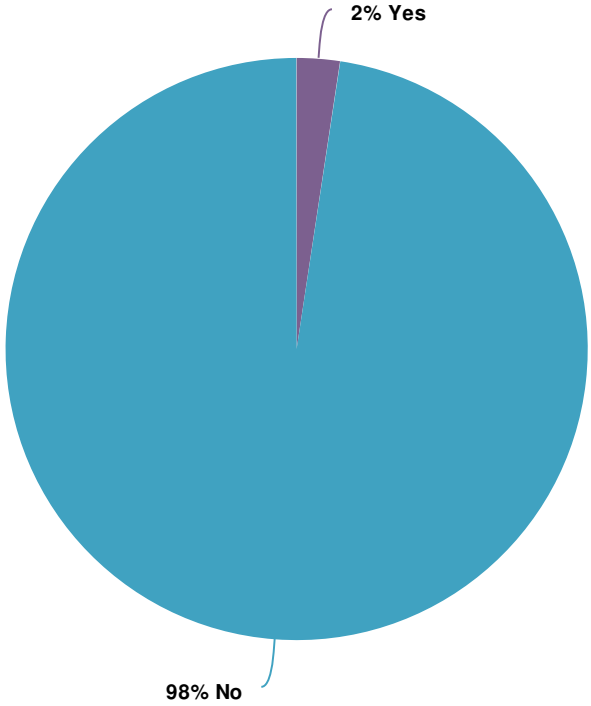
1. How frequently do you use Discovery Road?

	Never	1-2 times per month	1 time per week	2-3 times per week	More than 3 times per week	Responses
Drive Count Row %	2 1.2%	18 10.8%	32 19.2%	47 28.1%	68 40.7%	167
Walk or Run Count Row %	68 51.5%	27 20.5%	11 8.3%	11 8.3%	15 11.4%	132
Bike Count Row %	47 32.4%	45 31.0%	16 11.0%	24 16.6%	13 9.0%	145
Take Transit Count Row %	115 94.3%	7 5.7%	0 0.0%	0 0.0%	0 0.0%	122
Access a residence Count Row %	60 45.8%	21 16.0%	12 9.2%	9 6.9%	29 22.1%	131
Access Salish Coast Elementary School Count Row %	97 77.6%	6 4.8%	2 1.6%	3 2.4%	17 13.6%	125
Hang out Count Row %	111 92.5%	4 3.3%	2 1.7%	0 0.0%	3 2.5%	120
Access Work Address Count Row %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1
Access a business Count Row %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1
Access businesses on Upper Sims Count Row %	0 0.0%	1 50.0%	0 0.0%	1 50.0%	0 0.0%	2

	Never	1-2 times per month	1 time per week	2-3 times per week	More than 3 times per week	Responses
Avoid traffic on Sims Way/Hwy 20 Count Row %	0 0.0%	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1
Commute Count Row %	0 0.0%	0 0.0%	0 0.0%	1 50.0%	1 50.0%	2
Cross on trails Count Row %	0 0.0%	0 0.0%	1 100.0%	0 0.0%	0 0.0%	1
Exercise Count Row %	0 0.0%	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1
It's too unsafe to bike Discovery Rd Count Row %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1
It's too unsafe to walk Discovery Rd Count Row %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1
My limited use is directly related to poor safety of the area; i choose routes based on safety Count Row %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1
Route to Highschool Count Row %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1
Travel to County library or other in Chimacum Count Row %	0 0.0%	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1

	Never	1-2 times per month	1 time per week	2-3 times per week	More than 3 times per week	Responses
Void Count Row %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1
Walk my dog Count Row %	0 0.0%	1 100.0%	0 0.0%	0 0.0%	0 0.0%	1
access businessed in the business park Count Row %	0 0.0%	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1
bike in nicer weather to Larry Scott Trail Count Row %	0 0.0%	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1
car & RV exite/enter town Count Row %	0 0.0%	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1
drive Count Row %	0 0.0%	1 100.0%	0 0.0%	0 0.0%	0 0.0%	1
leave the City on a less-traveled route Count Row %	0 0.0%	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1
leave town Count Row %	0 0.0%	0 0.0%	0 0.0%	1 100.0%	0 0.0%	1
visit an elderly parent Count Row %	0 0.0%	0 0.0%	0 0.0%	0 0.0%	1 100.0%	1
Totals Total Responses						167

2. Do you have limited mobility, or use a wheelchair or other mobility device?



Value	Percent	Responses
Yes	2.4%	4
No	97.6%	165

Totals: 169

3. How can Discovery Road better accommodate people with mobility challenges?

ResponseID	Response
92	Please do not allow any A-frame signs or signs that block being able to get out of the way of people moving faster. If there are any dips in the sidewalk, make sure they are designed for icy wet weather.
134	Sidewalks or a walk/bike trail that is wide enough to feel safe from cars.
220	Make sure that Bikes and foot walkers have space to go to and from. Walking is out of the question for me to get in and out of Port Townsend.

4. To what extent are the following items problems on Discovery Road:Please answer all questions

	Extreme Problem	Moderate Problem	Minor Problem	Not a Problem	Responses
Volume of traffic Count Row %	29 18.7%	53 34.2%	39 25.2%	34 21.9%	155
Vehicle speed Count Row %	37 23.7%	66 42.3%	33 21.2%	20 12.8%	156
Number of large trucks Count Row %	15 9.9%	46 30.5%	46 30.5%	44 29.1%	151
Not safe to bike Count Row %	115 71.4%	34 21.1%	7 4.3%	5 3.1%	161
No place to park Count Row %	25 16.7%	17 11.3%	33 22.0%	75 50.0%	150
Crossing the street is difficult or dangerous Count Row %	37 23.9%	46 29.7%	48 31.0%	24 15.5%	155
No sidewalks Count Row %	100 63.7%	35 22.3%	13 8.3%	9 5.7%	157
Pavement condition, such as cracks and potholes Count Row %	61 39.6%	54 35.1%	25 16.2%	14 9.1%	154
I am worried about my personal security Count Row %	24 15.7%	27 17.6%	33 21.6%	69 45.1%	153
Too dark at night Count Row %	24 15.7%	43 28.1%	43 28.1%	43 28.1%	153

	Extreme Problem	Moderate Problem	Minor Problem	Not a Problem	Responses
Appearance					
Count	11	23	50	67	151
Row %	7.3%	15.2%	33.1%	44.4%	
Character not consistent with Port Townsend					
Count	9	20	29	91	149
Row %	6.0%	13.4%	19.5%	61.1%	
Totals					
Total Responses					161

5. Any other problems?

ResponseID	Response
41	On that last one, sadly, the character of many of Port Townsends major streets have many of these problems, which is why I said it is "not a problem" in terms of consistency.
47	Need safe access for school and adult pedestrians to go home/work. Pavement conditions are very poor just before Salish.
53	My major problem is bicycle safety, given that the neglible shoulder has NEGATIVE WIDTH in many places due to the cracked and muddy road conditions, especially in wet weather.
61	My answers are based on my use. Things like sidewalks are likely more important for those living closer to the project area.
76	Overgrown brush at certain times of year can make walking on the shoulder difficult and even dangerous, as it's hard to tell where the terrain is uneven.
79	Lack of bike lane!
84	Frequent strong odor from Mill. Always drive with windows closed and filters on. Frequently not enough to make a difference. Gives me headaches and nausea. I would not bike or walk until that is addressed. And the transit schedule is too infrequent and hard to read.
85	Large trucks hitting potholes is very loud for Towne Point residents. New pavement along with the bike path would be great!
88	Damage to road at boy scout cabin and entering boy scout cabin.

ResponseID	Response
89	no shoulder. Unsafe for cyclists. Bad intersection @ Mill Road. stretch from roundabout @ Rainier to Mill Road is also awful and should be addressed, as is primary route into town for residents of Cape George. Intersection with Jacob Miller is also hazardous.
91	Rarely do drivers stop for pedestrians legally crossing with the right of way at intersections.
92	There is no speed enforcement, and drivers seem to act like people using the road who aren't in cars are the enemy. Please don't put a lot of landscaping that makes it hard for drivers to see what's going on like what's on upper Sims way. Concrete sidewalks are a nightmare. Make the sidewalks out of asphalt. Concrete is one of the worst things sidewalks can be made of, for the health of peoples' joints and bones.Please don't waste a lot of money on facetious landscaping. We don't want it, and we don't need it.
94	Poor visibility of oncoming traffic when turning on to Discovery from side streets
102	I would bike the road if it was safer!! Too scary and dangerous now!!
104	Biking and staying to the right both directions is very difficult because edge of road where I ride is in terrible shape and very bouncy!
105	Ground stability--even repairs are failing
107	Vehicle speed. People drive too fast, not enough speed signage.
110	Shoulders are too narrow for safe biking.
127	Salish Coast Elementary bus load and unload on Discovery is EXTREMELY DANGEROUS and will end in a catastrophic accident... The load/unload area MUST be moved back to Grant Street Street!
133	I find that the current character is very fitting of Port Townsend. If it is to be gentrified it needs to be done with taste not making our little city look like every other place in America which has been the problem of late with all our little road projects.
135	Too dark at night? No, Maybe too bright at night. Do you ever want to be able to see the stars at night? Who uses these streets with bright lights at night. Kids are not in school at night.
136	The bus loading zone on Discovery is dangerous and seems likely for a collision with traffic, esp bikes and pedestrians. The load/unload area should be moved back to Grant Street to increase safety and traffic flow.
138	Intersection at Discovery, Mill road and HW20 are a Hugh problem.

ResponseID	Response
139	Noise; as a resident whose property borders Discovery Rd it can be extremely noisy due to the increased traffic over the past six years and people going well over the speed limit.
143	The steepness of the hill from Mill Street to Rainier and curves make for difficult interaction with vehicles
146	Badly eroded edges for biking due to lack of drainage maintenance. Lack of pavement width for safe uphill bicycling.
149	Safety of pedestrians and bicyclists are the main issues as well as sight lines for some intersections
154	This question is a "leading question." The volume of traffic, or the size of trucks will never be a problem as long as there is best practice bicycle infrastructure in place. The question assumes the that motor vehicles are at the center of everything. Sadly, this is the unspoken, sub conscious assumption that most everyone has regarding transportation. Currently, riding a bicycle on Discovery is nerve racking. The problem is that the roadway is designed for cars, not cyclists or pedestrians. That is the problem. Also, I might point out that if you are planning on adding "appearance" and "character" into the mix of factors that will determine the final design, then cyclist infrastructure will be compromised. Case in point: when those of us on the nonmotorized board tried to put in bicycle racks downtown, we had to get approval from the Historical Preservation Society. When was the last time that the HPC had to weigh in on vehicle parking? The optimum bicycle infrastructure has nothing to do with the character of Port TOwnsend. ANd, it should have nothing to do with appearances. It should based on safety, efficiency, and predictability.
155	Ditches are close to the road. There is no shoulder for pedestrians and in fact I have not encountered a pedestrian in all the years I have used this road. The curves restrict vision and people consistently drive too fast to avoid an accident if they were to come upon a bike or pedestrian. Safety is a big problem.
157	No pedestrian connection for students (who live in towne point and other neighborhoods) and their school. the small path on the side of the road feels unsafe due to traffic volume, speed and no separation between cars and people.
161	too narrow
164	No sidewalks and volume/speed/sound of traffic are the issues that prevent me from completing the loop back to my home via Discovery Rd.
178	volume has been since the Rainer Roundabout was installed, speed has always been a problem and now larger trucks/trailers cause of the roundabout. otherwise has been NOT nice to ride a bike

ResponseID	Response
181	I recently had the opportunity to walk along Discovery Road, coming back to town from the roundabout near Goodwill. There is virtually no shoulder or sidewalk for either pedestrians or cyclists. I will avoid this area, other than in my car, in the future. Ideally it would have a bike path/sidewalk on each side of the street. Having a single path on only one side where cyclists are going against traffic is extremely dangerous. Car entering the road are not looking to their right, only to the left. This is very dangerous for cyclists.
184	What took the city so long to do this?
188	since the roundabout on discovery rd, traffic on discovery rd has increased, use to ride my bike on this road to leave town for a bike ride, NO MORE! if walking/biking lights would for a better place and having the sidewalks would help alot
190	No or limited shoulders.
192	Very few stops to moderate speeds. Terrible intersection at Jacob Miller Rd. No bike lanes/trails, shoulders, or separate walkways.
196	Condition of the road from Mill to Rainier is horrible, has been for decades. Traffic speed from Mill to Rainier is not enforced adequately.
198	The S Jacob Miller Rd intersection is not safe. Cars have to pull out into the on coming traffic lanes to be able to see if they can enter the intersection. And Not Safe to Bike means no bike lanes. Bike lanes should go the FULL LENGHT of the road.
210	Specifically during school times, meeting bus coming at me and a bike going with flow towards school.
213	I would us Discovery much more if I felt safe riding my bike on the street. I often ride with my 8 y/o child and we will take all kinds of strange routes to avoid the road. I feel like a bike land, shoulder, or sidewalk would make a tremendous difference and I'm excited about the possibility. I'm not as worried about the condition of the road as I feel it causes vehicles to actually travel closer to the speed limit and it's repaving feels lower on the city priority list than say, parks, housing, and public services.
217	narrow lanes with speeding traffic
219	Lack of safe bike lanes forces me to use other routes
220	Once you get west of round about there is no edge that foot traffic or bikes to go either way. Thats very dangerous for drivers too. Discovery Rd used to be 50mph and is now 25mph which people ignore.
228	Unsafe biking and rough pavement for biking. Added danger when cars try to pass
230	not safe for pedestrians

ResponseID	Response
235	The road is a tacky eyesore and is totally unsafe for any traffic.
238	This part of the road is "rough" to say the least. I do believe that, coupled with the narrow lanes, helps to keep vehicle speeds low.
241	Why is this project taking so long? It is in the city limits so should be a priority. It is VERY dangerous to walk there and it is the only way to the elementary school. I guess our kids and citizens aren't so important. Shame on you! Make this happen now!
243	Road is curvy, very poor sight ahead or behind when bicycling

6. How important are the following improvements for Discovery Road?Please answer all questions

	Essential	Very Important	Somewhat Important	Not Important	Responses
Sidewalks Count Row %	85 54.8%	39 25.2%	26 16.8%	5 3.2%	155
Better crosswalks Count Row %	50 32.7%	44 28.8%	52 34.0%	7 4.6%	153
Slower traffic speeds Count Row %	35 23.0%	33 21.7%	49 32.2%	35 23.0%	152
Safer intersections Count Row %	44 28.9%	40 26.3%	47 30.9%	21 13.8%	152
Better bus stops Count Row %	16 10.7%	37 24.8%	66 44.3%	30 20.1%	149
Bike facilities (e.g. bike lanes or cycle tracks) Count Row %	98 62.4%	39 24.8%	13 8.3%	7 4.5%	157
More landscaping Count Row %	6 3.9%	16 10.5%	57 37.3%	74 48.4%	153
Lighting Count Row %	14 9.2%	37 24.3%	65 42.8%	36 23.7%	152
Furnishings, such as benches and bike racks Count Row %	5 3.3%	12 8.0%	64 42.7%	69 46.0%	150
Small parks or gathering spaces Count Row %	10 6.6%	20 13.2%	49 32.5%	72 47.7%	151

	Essential	Very Important	Somewhat Important	Not Important	Responses
Drainage improvements					
Count	24	33	54	38	149
Row %	16.1%	22.1%	36.2%	25.5%	
Totals					
Total Responses					157

7. Any other thoughts on potential improvements?

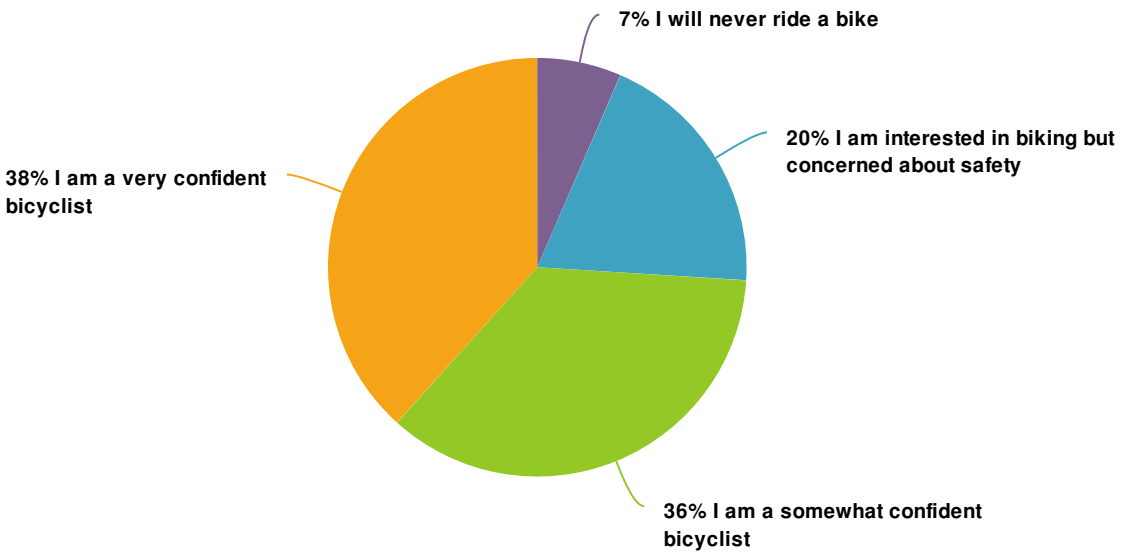
ResponseID	Response
41	Better signage and lighting for the Boy Scout cabin driveway.
47	need safe bike/walk lanes so people are more likely to access trail network and town
52	Sufficient landscaping would become important if the surrounding areas become more developed, right now it's pretty green. Lighting levels should be appropriate for neighborhoods, not light polluting.
53	I don't know that glorified bike lanes are needed (as were done along Howard Street) or would fit in Discovery Road, nor sidewalks, dividers, landscaping, etc. I'm concerned all this would take too much space and would serve little purpose (again see Howard St. improvements). All that's critically needed are wider shoulders, fixed from cracks and pools of mud when wet.
56	new pavement, please!
70	1) Not sure where you guys are having drainage issues. 2) Doesn't matter how you improve the road, 75% of the traffic speeds anyway. Even seen cars pass other cars that are doing the speed limit.
84	Address the mill odor.
88	Need speed calming.
89	Safe bike lanes designed for commuters. This means put them on BOTH sides of the street (not like by Salish Coast, that assumes that all bike traffic is going to the elementary school.)

ResponseID	Response
92	Please for once make a thorough fare that actually works instead of wasting money on a bunch of plants and fancy stuff that nobody needs. No more public gathering spaces so homeless people hang out and put people out walking and exercising, in danger. Stop putting a lot of icing on cow pies. Just give us a good solid no-frills thoroughfare.
93	Pump Track, and develope more dirt bike trails
98	Improvements is a euphemism with an inherent bias. Looking at the costly overbuild of Rainier Street, I shudder to think of the beauty and intimacy of Discovery, be erased by an overbuild.
104	Because of limited way I like the idea of a separate all use trail along one side or the other
105	Concern for the roadway width and visibility restrictions where and when the school buses park.
115	Regarding lights, I understand the need for safety, however, I am also a Dark Sky advocate and would like to see street lights directed downward only, using the most energy efficient models possible.
118	existing round about is over lit and over signed with over 20 posts and poles intruding on the view. ask about trail type passage instead of paved sidewalks which cause runoff problems
121	Speed humps on traffic lanes
127	Salish Coast Elementary bus load and unload on Discovery is EXTREMELY DANGEROUS and will end in a catastrophic accident... The load/unload area MUST be moved back to Grant Street Street!
135	I am not really sure why the city is worried so much about this one small part of a one certain street. Yes I agree Discovery is awful to bike on, but really how many people are actually biking to get anywhere on Discovery? Why don't we focus on Hastings. Many more people bike on Hastings. If someone is biking on Discovery it means they are leaving town, how many people actually bike out of town. People bike around town. Let's focus on a different area other than Discovery. How about Sheridan, North of 19th. I use that road a lot more for biking than Discovery.
136	I don't have an informed opinion with regards to drainage issues
138	All of the above should be extendEd from Rainier street to mill road (city limit).
146	Need consistency in bike facility style throughout town
148	Better paving maintenance...

ResponseID	Response
151	Already did the survey, but I just looked at the map and saw that 14th Street will be closed off! That will add more traffic to McPherson which by the way is not of little use!
155	I have no idea if drainage is a problem. Maybe? You can set the speed limit lower but people will not obey. Is there a big enough right of way to put a bike/pedestrian path on the other side of the ditches? Landscaping is important to the degree that it not be close to the road and block vision or access for a pedestrian to get off the roadway in a hurry.
157	I think that the speed limit is 25, but it doesn't seem like a 25 mph zone. so using street design to slow traffic to residential speed is important
160	Road Resurfacing & Repair for Vehicle Traffic.
161	I think 25 is a good speed as it is in the rest of town, but people drive faster than 25
175	The speed limit of 25 mph is fine. Many people don't observe it.
176	Improvements to this road like wider breakdown lanes are important for bike and pedestrian safety. I would like to see the 'country road' feeling maintained. Breakdown lanes would do this while sidewalks would be an expensive addition to this rural road.
178	with more housing in the area, more pedistrians are walking, light would help make safer for waling/riding a bike. there is currently NO room for bus stops without interfering with traffic.
181	My main concerns again are making it safe for cyclists and pedestrians. I do not anticipate sitting on a bench in this area as there are so many other places to do that that are much more pleasant. Keeping the speed limit where it is at is find in my mind.
182	A bike trail along all of Discovery Rd. from Salish Elementary to the Larry Scott bike trail near Discovery Golf Course.
190	sidewalks are not necessary on both sides of Discovery Road as long as there are frequent crosswalks.
194	Bicycle lanes only, not that dangerous thing that is by Goodwill. That needs to be torn out.
196	The speed limit is fine, enforcement is lacking.
198	signage about bikes on road
203	Rode my bike along this section of Discovery Road about 4 years ago and swore I would never ride a bike on this road again. So dangerous and nerve wracking.

ResponseID	Response
205	Couldn't really rate several of the options, like drainage & lighting, as I don't really know the issues. Traffic speed is posted low enough, however not all drivers follow that low speed.
217	traffic calming designs
219	Creation of a two lane bike lane on east side of road increases risk of motor vehicle versus pedestrian incidents
223	Just fix the potholes and otherwise leave it alone.
231	Survey does not show all options on small scree!!! Not wasting any more time on this!
239	Mainly really treacherous while riding a bike especially from Mill Rd toward Rainer uphill with no shoulders and a curves. Honestly most drivers are pretty courteous but straight up bike lanes would be an improvement.
241	Make it happen now.
243	Bike lane is critical all the way to Mill Road.
247	Improve, smooth the pavement

8. What type of bicyclist do you consider yourself?



Value	Percent	Responses
I will never ride a bike	6.5%	10
I am interested in biking but concerned about safety	19.5%	30
I am a somewhat confident bicyclist	35.7%	55
I am a very confident bicyclist	38.3%	59

Totals: 154

9. How would you rate your own comfort and safety for each type of bikeway for Discovery Road?

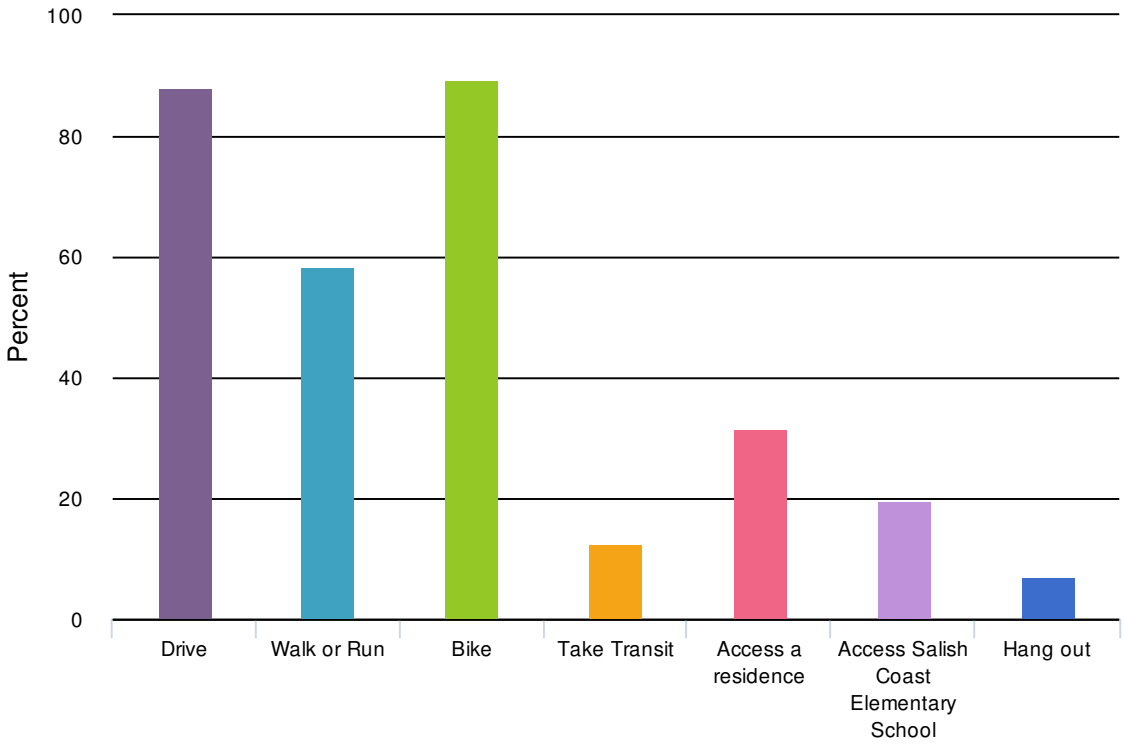
	Very Good	Good	Acceptable	Poor	Responses
Bike Lanes					
Count	47	35	40	16	138
Row %	34.1%	25.4%	29.0%	11.6%	
Buffered Bike Lanes					
Count	59	42	27	9	137
Row %	43.1%	30.7%	19.7%	6.6%	
One-Way Cycle Tracks					
Count	88	21	16	10	135
Row %	65.2%	15.6%	11.9%	7.4%	
Two-Way Cycle Track					
Count	56	31	30	20	137
Row %	40.9%	22.6%	21.9%	14.6%	
Shared Use Path					
Count	51	19	37	30	137
Row %	37.2%	13.9%	27.0%	21.9%	
Totals					
Total Responses					138

10. Related to each type of bikeway, which sidewalk layout do you think would provide the most comfort and safety?Rank in order of best to worst with 1 being best and 4 being worst

Item	Overall Rank	Rank Distribution	Score	No. of Rankings
One-way cycle tracks	1		380	125
Two-way cycle track	2		335	129
Bike lanes or buffered bike lanes	3		328	127
Shared use path	4		267	134

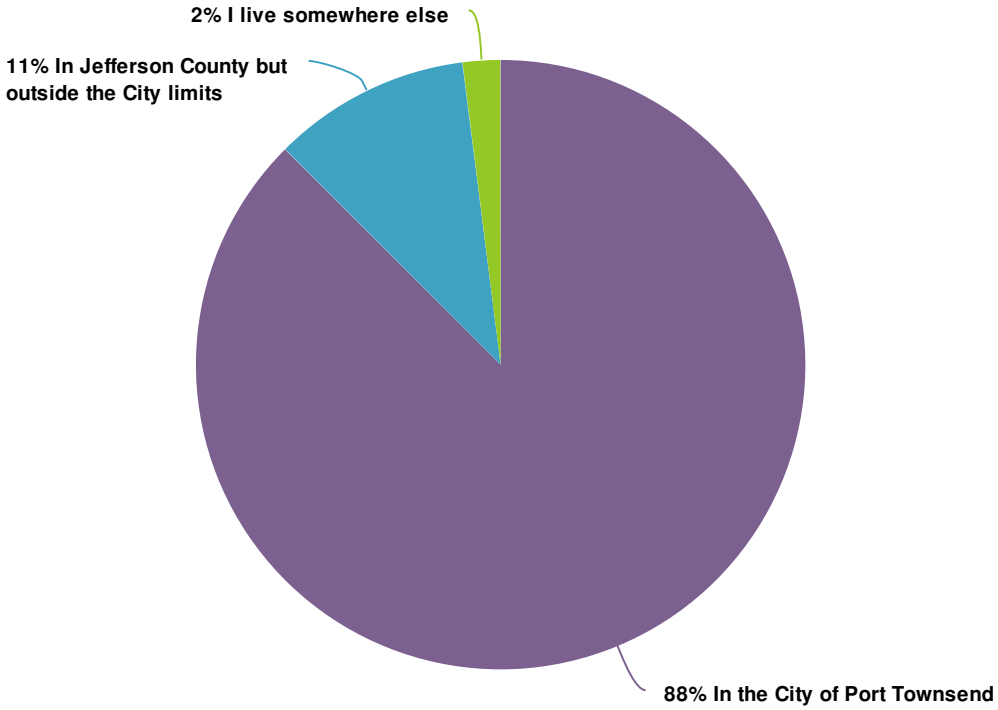
Lowest Rank Highest Rank

11. How might you use Discovery Road after the project is completed?Choose all that apply



Value	Percent	Responses
Drive	88.0%	125
Walk or Run	58.5%	83
Bike	89.4%	127
Take Transit	12.7%	18
Access a residence	31.7%	45
Access Salish Coast Elementary School	19.7%	28
Hang out	7.0%	10

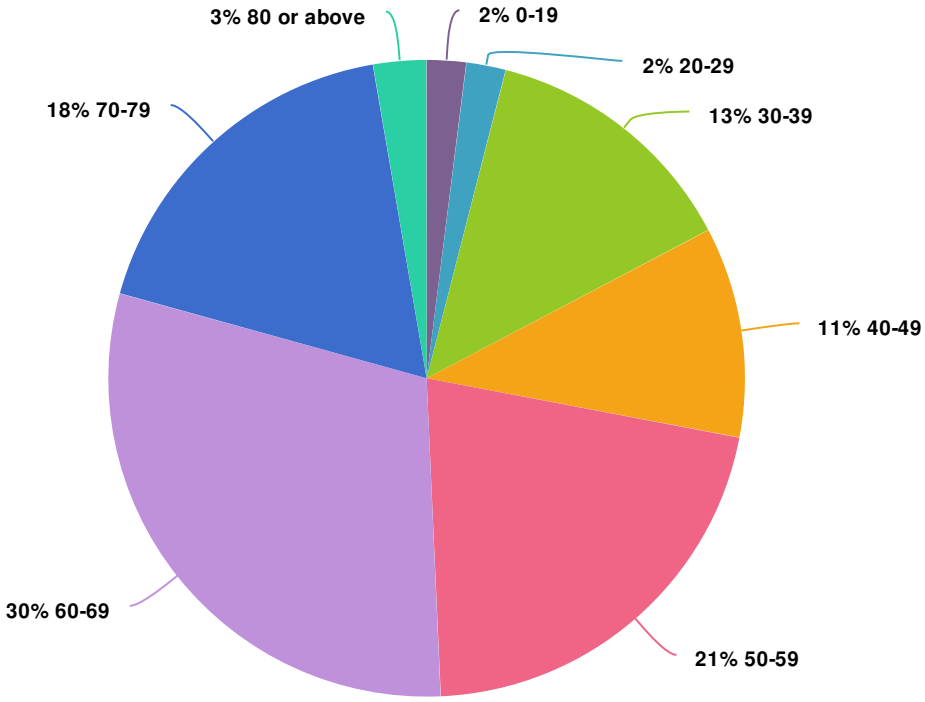
12. Where do you live?



Value	Percent	Responses
In the City of Port Townsend	87.5%	133
In Jefferson County but outside the City limits	10.5%	16
I live somewhere else	2.0%	3

Totals: 152

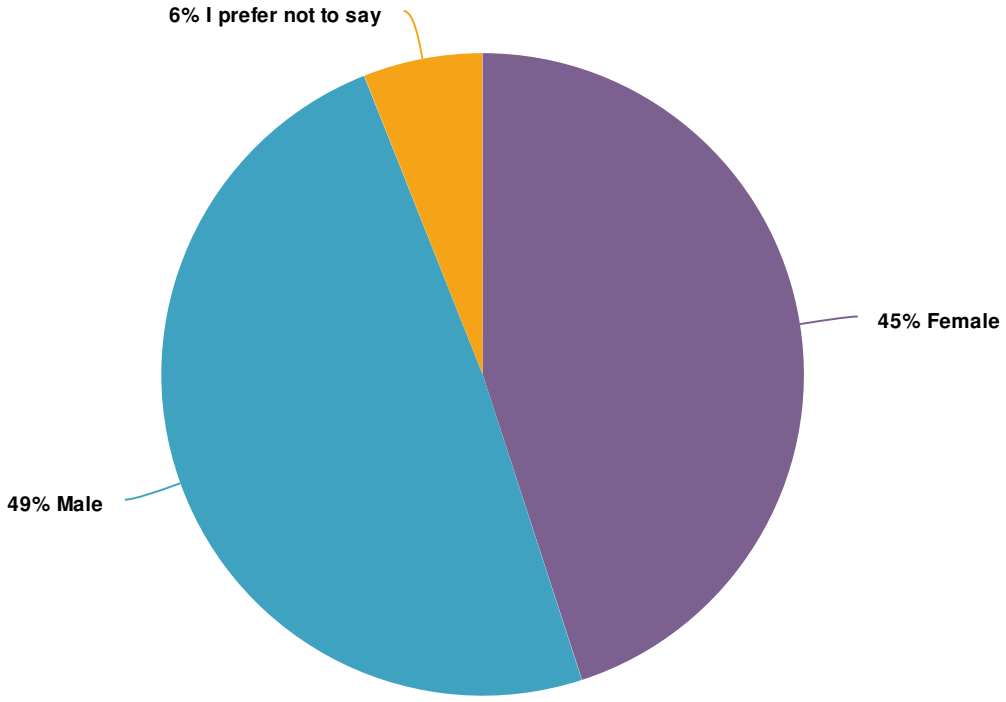
13. What is your age?



Value	Percent	Responses
0-19	2.0%	3
20-29	2.0%	3
30-39	13.3%	20
40-49	10.7%	16
50-59	21.3%	32
60-69	30.0%	45
70-79	18.0%	27
80 or above	2.7%	4

Totals: 150

14. I identify as:



Value	Percent	Responses
Female	45.0%	67
Male	49.0%	73
I prefer not to say	6.0%	9

Totals: 149

15. Please provide any other comments you have on the Discovery Road Bikeway and Sidewalk Project.

ResponseID	Response
40	Biggest issues to me - speed limit not obeyed, by trucks, cars and motorcycles - and lack of lightening. I am concerned that I could lose beautiful trees and wild life habitat that line my front yard on Discovery Road (across from Towne Pt entrance.
41	I'm really glad this plan is underway. I really hope that the city and county are discussing similar plans for Hastings Road, which is also a huge mess for pedestrians and bikers as well as drivers.
42	This should be a high priority - installing a safe bike route along this road will go a long way to making accessing these neighborhoods and getting to the Larry Scott trail safer.
47	Your question to rank the types of bike paths from least to greatest lacked sufficient information for me to make a comment because I did not know what was best or least - was it based on "placing" where a 1 was highest or was it based on numerical order where a "4" was highest. Unfortunately, I was not able to answer. Also, I feel it is a waste of time to ask people what type of bike lane they want without knowing how much available space you have. I think it would have been far better had you given choices based on the available land and funding so the choices are viable. It is like handing me a menu of fancy dinner options and asking what I would like to eat knowing that the only thing left in the kitchen is rice and beans. Also, two lane bike lanes are different from the other bike lanes around discovery and would cause some confusion as one enters that section of street prompting more street crossings which, in my opinion, are the most dangerous part of biking/walking.

ResponseID	Response
48	A mixed use path is a bad idea. Bikes and pedestrians should not mix. The bikers would be safer on the road, for both their sake and the pedestrians sake. I don't think any experienced biker would recommend this. When it's something like the larry scott trail people are a bit more aware there are bikers. I find on paths that just look like sidewalks, people are not expecting bikes. One of the worse accidents I got into was riding on a sidewalk. The pedestrians did not see me, I did not have time to unclip and I feel off the sidewalk and into a busy road. It would have been safer for everyone if I'd been on the road- but even better if there had been a bike lane! PLEASE talk to local leaders that know about best practices in these areas. Sam Thomas and Dan Burden are both livable, walkable (and bikable) community experts and know lots about best practices in bike lanes. More than my and other random Oort Townsend residents' relatively uneducated opinions.
50	Even though I'm a fairly confident cyclist, the combination of rough road surface, no shoulders, and relatively high traffic make me more likely to seek alternatives to riding my bicycle on Discovery Road. My main concern is having to hit a pot hole head on because a car is currently passing me and I can't swerve around it. Any of the bike lane options would be a huge improvement as would improving the road surface and/or adding a small shoulder. I would not feel comfortable riding on discovery with young kids, because the margin of safety is too small.
52	Looking forward to utilizing improvements!
53	I'm concerned there is not enough space to widen Discover Road much without cutting down trees, which I'm not in favor of doing! As someone who commutes to work by bicycle, but avoids bicycling on Discovery Road due to safety issues, all I need is fixed cracks/drainage and a wide one-way bike lane, shoulder, or bike-able sidewalk to feel safe. Better lighting would be a plus, but not necessary. Most anything else (such as landscaping, buffers, segregated two-way bike lane, etc.) would be an unnecessary frill for me, and probably take up and waste too much space.
56	Whatever the scope of the project, would you at least repave the entire driving surface? Please?
62	I run on Discovery all of the time and welcome any improvements on the horizon. Any sidewalk is better than what we currently have, but it is difficult to predict the volume of potential foot traffic we'll have on Discovery once Rainier St is further developed.
65	I'm a third grader at Salish Coast. I sometimes bike.
67	I'm a 5th grader at Salish Coast. And I bike a lot.
70	If it were to be constructed, the path should be on the northern side of the road as there is only one residence on that side with an access on Discovery. There is also 2 blocks that already have sidewalks on that side. That is also the access side to some of the trails between Discovery and Hastings.
77	Finally! I'm glad this is being considered. Now we need more sidewalks in the older part of town where folks are growing vegetation where sidewalks should be.

ResponseID	Response
78	Bike lanes or buffered bike lanes are the best alternative. Cycle tracks like the present Rainier St. cycle track are by far the least safe and convenient alternative. Furthermore the design of the present roundabouts presents confusion and danger to cyclists.
82	I live at 20th and Grant Street Trail and know exactly all the roads and bike lanes and other bike facilities that you are talking about here. In my somewhat younger days, I was a very confident cyclist in Seattle, including commuting to work in downtown Seattle for many years. I have lived in Port Townsend now for about 3 years and in general am quite confident cycling here, BUT after cycling on Discovery Road from Sheriden to Mill Road one time in both directions after moving here, I concluded that it was one of the most dangerous places I have ever ridden in my life and would not do it again! I often cycle on the OTHER part of Discovery Road from where it veers off 19th St. to San Juan. I love the uphill bike lanes there that connect with bike lanes on San Juan and F. Street and I am comfortable riding downhill without a bike lane most of the way, although cars are often very impatient and pass me in an unsafe manner (unsafe to the cars in the other lane that is) there instead of slowing down for 30 seconds or so. They tend to give me plenty of space when passing, but don't seem concerned about risking a head-on collision with another car! Since this survey asks many questions about "Discovery Road", I think it is important to be aware of these two quite different parts of Discovery Road and be sure you are making a distinction and be sure survey participants are making a distinction. For me, I really like riding on one part of Discovery Road and absolutely will not ride on the other part of Discovery Road. I am looking forward to the pedestrian and bicycle improvements in the future!!!
84	Until the mill odor is addressed I would likely use Discovery as little as possible and always with windows up and filters on. I would love to see a separate bike trail for recreational use, but for those who need to use Discovery for transportation, it definitely needs improvements—a bike lane at the very least. The current hodge podge of bike lanes sometime inside parked cars, sometimes outside, makes me Concerned as a driver. I am always afraid of hitting a cyclist. There are so many cars now in the road and speed so little enforced, that I would not consider biking.
85	We love to bike around this beautiful city & the more Bike lanes the better!!
88	Looks good but priority should be extended to mill road.
89	thank you for FINALLY addressing this.
91	I used to live a block from this portion of Discovery Road. PLEASE make it safe to walk and bike there. Improved road surface for cars would be good too.
92	Deep buffered system is by far the most safe and usable way to get people out exercising without putting their lives in danger. But please do not landscape the buffers with plants that make it impossible for drivers to see us. Just stop with the dangerous landscaping already. In fact, while you're at it, get rid of the dangerous and ridiculous landscaping on upper Sims way.

ResponseID	Response
93	Velo Ashpalt pump tracklike Leavenworth, Bend, Hood River (replace dog parks with pump track). https://velosolutions.com/en/ More dirt trails across town...the more the better. multi use. bike. create a Bend Oregon environment to generate revenue. Protected bike paths, or shared use with walkers is the safest option...least risk the further away you put pedestrians and bicyclists away from cars (drunk driver/texting driver/screaming parent/tourist/tourist watching deer that can kill a person walking or riding)
94	Continuing the two-lane bike track from the elementary school to the traffic circle makes the most sense, both in function and aesthetics. It would be good to have sidewalks on both sides of the road, but there should be a pedestrian sidewalk on *at least one* side of the road.
97	Past road repair work has not been very done well and makes for rough and noisy truck and trailer traffic.
98	That stretch of Discovery is one of the last of its kind in this town--tree-shaded by native forest with a healthy understory of native shrubs--a place where one can walk on actual soil instead of pavement or cinder. Again, Rainier serves now as a negative example of overbuild and underuse, different from Discovery in that there was no native forest on Rainier to impact by overbuild. Let's lower our overbuild tendencies and put the savings into street repair so urgently needed all around town on residential streets.
99	Anything to widen the paved travel surface will be a welcome improvement to this vital corridor into & out of the city. Although a separate multi-use trail (MUT) will provide the safest option to keep motor vehicles away from human powered /active transportation, it can create confusion for those users, mixing with uneducated users. Make sure project includes signs that tell which side of MUT to travel, and who yields to who (biker, walker, equestrian, ADA...). Kudos for finally making safety improvements to accommodate active transportation!!!
100	Thank you for adding bikeways/sidewalks in town. Can we do Hastings next??
103	Connectivity with existing trails and transit (at the intersection with Eddy street) would be desirable, and a small pocket park for those waiting for the bus to spread out. If there's only one side getting a cycle track (if it's combined) the south side would be much more convenient for bike connectivity with the existing lanes.
104	Again, existing situation is very difficult along road edges with a bicycle, esp. with a trailer I often attach taking my dog out to Dog Townsend. I like the idea of a shared path because I think cost is cheaper and for the amount of ped and bike traffic that seems to work. That said, if the proposed 740 housing units comes in near Rainer Street, that might change the situation such that separated bike/ped two way will be needed.
105	I support the effort to make this project come to fruition.
107	Speed is the main problem. As a resident of Discovery Rd the bike path will be right out the front door so privacy is a huge issue

ResponseID	Response
110	I like the new round-about on Discovery Road, but bike exits were not well thought out. It's very easy to get onto bike path from the road but difficult to get back off the path and onto the street. It should not have been difficult to do it right.
114	As a 72 year old life long cyclist, I consider myself a professional, Riding in the presence of vehicles does not intimidate me. I've ridden Discovery hundreds of times in my 22 years in PT. My preference would be, improve and repair the current roadway, and widen it enough to add designated one way un-buffered cycle/ pedestrian paths on the shoulders
115	As a very confident cyclist I prefer either the traditional bike lanes in the streets or the shared use paths. Buffered bike lanes I feel take up more of the street with the extra striping that would be better used to just widen the bike lanes. Two way cycle tracks, two way any type of track (just look at the one way arrows that are ignored in the grocery store aisles) is just an opportunity for cyclists to go the wrong way thus frustrating other cyclists who follow the directionals. Also I have noticed the two way tracks are often ignored if more than one cyclist is in a group, the group will tend to use the whole track. My favorite is the shared use path as it is plenty wide for a cyclist to go around pedestrians or dog walkers, is away from traffic and has a green and "natural" feel. The Larry Scott trail is excellent. Pedestrians, however, may be startled by cyclists approaching from behind on a shared use path.
116	A dedicated bike lane is superior to a shared use path. Shared use paths are always a mess when non-confrontational Northwesterners don't want to burden anyone else with their presence by asking them to move to the side. And kids and dogs are always the worst to try and bike around.
117	It is important to maintain consistent and predictable bicycle infrastructure. Currently there are several different types of bike/car interactions introduced by planners over the past several years. Confusion is the enemy here. As a cyclist with over 70k mile under my belt and having lived in Madison Wi, San Francisco CA, and Portland OR I feel I am qualified to comment on the design. Please do not make bicycle traffic cross the street to a dedicated path to leave town (head uphill from Salish) on Discovery. The section from Mill Road to the new round about needs to be addressed as well.

ResponseID	Response
118	-It would be helpful to me if there were not so many endearing adjectives in the narrative i.e. "exciting", "comfort", etc. Descriptions without embellishments is more helpful, business like. - The single most urgent safety need on Discovery Bay Road is a bike path along the shoulder to the Mill Rd. stop sign. - Port Townsend's current engineering standards on their new projects are way over the top in the name of "Safety": - Lighting could be accomplished with lower poles and much less intrusion and intensity. - Current signage, particularly at the Disco Bay Rd. round about, is over the top, repetitious and distracting - and ugly. -The survey does not offer ideas like " non-paved" or "pervious" lanes and walkways, which are much less impacting visually, with stormwater runoff and the concomitant infrastructure needs. - Maintaining as much of the native/wild landscape along the road would be a plus: natural storm water infiltration; changing seasonal beauty; air filtration; visual screening; cheaper than investing in landscaping with its watering and maintenance needs; better habitat; more visually familiar and desirable. -A walkway on one side of Discovery Bay Road would be quite adequate for the currently very sparse foot traffic and any increases over the next many years. It is to be expected that skateboarders, bikes, strollers, roller skaters, etc. will use the pathway/sidewalk. This will not be a safety issue until Port Townsend and surrounds becomes a metropolis of multiple thousands of people. - Salish Sea school surrounds are overbuilt, over paved, aesthetically unimpressive and out of sync with -Port Townsend architectural and cultural vernacular and do not appear to function well. Such infrastructure , deforesting and landscaping style should not be repeated.
121	Strongly recommend that the initial budget accommodate a bike lane on both sides of the road. Bikes follow traffic rules, which is best achieved if they always go with the direction of flow. A single sidewalk on one side is probably adequate for the likely pedestrian traffic volume. Money can be saved by initially using a crushed rock bike lane surface, at least on one side of the road prior to additional funds being obtained. Strongly recommend eliminating street trees when space is limited - they take up room, shed leaves in the fall making for slippery conditions, create root damage to the surfacing, and can be a danger to cyclists with low or dropped branches - see the trees by the golf course on San Juan Ave for good examples.
126	I just wish it would happen sooner.
127	The Salish Coast Elementary bus load and unload area on Discovery is EXTREMELY DANGEROUS and will end in a catastrophic accident... Not if but when. The load/unload area MUST be moved back to Grant Street Street far away from arterial traffic!
133	It gets super dicey on discovery as soon as you get near the school on bike. There's no lane to turn from at the 4 way and you have kids getting off the bus in the middle of the street. Only a matter of time before one gets hit by either a car or a bike.
134	Any of the options would be a huge improvement over the current state of Discovery Road.

ResponseID	Response
135	I think it is great the city is considering bike lanes, but I am really confused as to why we are focusing on such a small area and why this area in particular. It doesn't really make any sense. How are people going to get to and from Discovery road? They are going to bike from somewhere else that doesn't have bike lanes, and then all the sudden there is going to be one small section of their trip that has a fancy bike lane. I think this project is way off course. Why don't you focus on some other parts of town that actually are used more for biking. I bike around town, but I don't bike out of town therefore I will not use this Discovery road bikeway very often. Have you thought about the lack of bike lanes on Sheridan north of 19th? How about Hastings? Hastings is a death trap on a bike. I encourage some of the people making these decisions to get on a bike every once and a while. Also why weren't bike lanes put in when the roundabouts were put in?
136	I am glad the city is looking to make this type of improvement and that it is looking to its citizenry to provide answers as to how this will best be done. Thanks for seeking my input.
138	Extend this project to Mill road and HW20 or city limits and at the same time fix that same intersection it's a disaster.

ResponseID	Response
139	As a resident whose property borders Discovery Road I am very interested in and excited about the potential to link the existing bike lanes near Salish Coast Elementary and the new round-a-bout, however I have some serious concerns about aspects of the proposed designs. Over the past six years since buying our home on Discovery, we have seen traffic increase and have experienced a substantial increase in noise due to the high volume and speed of commuters on our road. While in the big picture this is a small concern, having lived in much larger cities, I am concerned with how versions of the proposed plan will do more harm than good. Specifically, the idea of building the bike path on the same side of the street as Salish Elementary, as opposed to building it on the Towne Point side of Discovery, raises concerns both personal and safety related. This plan would include making 14th Street into a dead end, which would result in additional traffic being diverted to McPherson Street; I can attest that McPherson St not only has seen a significant increase in traffic over the years, but as someone who walks it daily, it is already very limited in safe shoulder areas to walk on and is in need of overall repair due to potholes. While personally I would be very disappointed to have such a wide design backed right up to my yard, which is already lacking in privacy and an adequate sound barrier, I feel that the safety concerns of this plan are more important. If you were to build the path on this side of Discovery you would inevitably have residents who MUST back out onto Discovery as the only egress from their homes; this plan would put bicyclists at extreme risk with the limited visibility of both the drivers and the cyclists. I walk this road very regularly and ALWAYS choose to walk on the other side for safety and convenience. The other side of the street has very limited egress points, two of which are protected by existing stop signs and fairly substantial sidewalk crossings, it has a wider shoulder for the entirety of the stretch between Towne Point and the new round-a-bout, it would allow cyclists and walkers/joggers alike to share a safe stretch of pathway that would intersect not only with the beautiful and recently constructed trail at the round-a-bout, but with numerous forested trails and housing communities (Towne Point, Hamilton Heights, Laurel Heights... to name a few). I am a proponent of creating safer walking/jogging/biking paths in our town, however I am deeply opposed to closing off 14th street and building a grossly inappropriately sized (two way bike path and sidewalks on BOTH sides of Discovery) project in our small town; this seems to me to be unnecessary use of funds and to far exceed the very distant capacity that our small town could possibly need. I am VERY excited about and in approval of creating either a shared path concept OR two lane shared use path on the Towne Point side of Discovery Street for bicyclists, walkers, and joggers to use together to bridge the gap between the two existing paths on what is definitely not the safest stretch of roadway for pedestrians in our community. I understand that the grant funds have been secured to build on ONE SIDE of the street; I implore you to consider building an appropriately sized (for our community) path on the Towne Point side of Discovery and to aim your focus for future funding on other areas within our beautiful city that could use these types of improvements (thinking safe pathways near Fort Worden and North Beach for example). Thank you for reaching out to community members for input on this project.
141	Usually quite a bit of traffic on Discovery and adequate paths/sidewalks/bike path in our future is very important. If the pandemic ever abates it will certainly be used by many more. Get those grants and go for it!

ResponseID	Response
143	This project might scavenge some of the traffic from the Larry Scott trail, particularly during wetter weather. Currently the trail is the best option out of town for most but it's a MUP, which has its problems, and it gets muddy/slipper with leaves in the autumn and winter. A better connection to Umatilla would help take some pressure off the section between Sheridan and Rainier. Even just signage would help there - most people wouldn't have a clue that the option is available.
144	thanks for helping to keep bikers safe on our streets. dl
146	The city has adopted street standards that provide clear direction on acceptable bike facilities. Let's adopt their use based on a prioritizing of where which types should be employed. We currently have a jumble of styles, some not approved. It would be best for all road users to have a preferred and expected style.
147	I would like to see consistency in design. It is disconcerting to take the roundabout on Discovery and when you exit towards SR 20, realize that you are somehow supposed to be on a cycle track on the other side of the road. Please keep the bikes traveling like cars.
148	I am delighted to see this project moving forward. While I rarely use a bicycle these days, I have in the past, and see safe bike lanes as an urgent need on Discovery. It is an important/ necessary transportation route. As a driver, I am stressed by bikes using this road with the current lack of shoulder, and I avoid walking on the sections without sidewalks due to traffic, lack of visibility, etc.
151	Already stated that it would be ridiculous to close off 14th at Discovery! McPherson has more traffic then you guys stated on here and if 14th is closed off, that will only grow. Keep the path on the north side and you would not need to close off 14th.
152	What would be more helpful would be to finish bike lanes and sidewalks down Hastings to the city limits.

ResponseID	Response
154	The question on what kind of rider I am is also a leading question. You are going to use it falsely aggegate responses to this survey. In the act of asking these questions, you are assuming that somehow each of these groups needs different infrastructure. And there is simply no research that says a confident rider is safer with certains kinds of infrastructure, and that a very inexperienced, or timid cyclists is safer in different infrastructure. Let's design infrastructure that is safe for everyone. Virtually everyone can be safe, efficient and predictable in the same infrastructure. The exception would be small children (due to attention spans, motor control, and bike size/speed). This emphasis on "feelings" and "comfort levels" should be diminished. The emphasis on safety should be augmented. I viewed the Transportation Committee meeting when these ideas were presented. It was clear from several comments made by the consultant that the concept of safety was separate from comfort. And David Peterson's comment that no matter what we choose, it will be better than what we have now is baloney. Let's go for safety, period. Also, David Peterson made the comment that "we need to remember that everyone has their own perspective and it does not mean that there aren't other perspectives." That is a Trumpian statement. Safey is safety. He is correct that everyone may have opinions on what they like or prefer. But his job should be to determine the safest infrastructure, and sell that to the public.
155	I don't think it matters if the pedestrian way is next to the roadway. Farther away would be safer and more pleasant if that is an option. I do think it critical that there be at least one sidewalk. I am familiar with the shared bike/walking path around Greenlake in Seattle, which worked well for decades until it got too crowded. It would be a long time until a path that wide got too crowded for us along Discovery Way, and that might be the best option, if there is good signage to direct one side for walking and the other for wheels. ...like skaters and bikes share a lane. I kind of like the current rural look of this road. The problem is just that it curves and there is no shoulder to walk on, plus it's totally too dark for pedestrians at night. If you plant landscaping like we have along Sims, please consider maintenance. A rustic look like we have now along Discovery is charming. The untended planting strip along Sims Way is just embarrassing. Half assed gardening is much worse than no attempt at all. Thanks for putting safety first. Please spend your money on saving a life, not on planting mono-culture beds that cannot maintain themselves.
157	I appreciate that the city of PT is moving toward this project to further improve walkability/bikability, especially in this area that connects students with their school. I appreciate the opportunity for public comment. Keep up the good work!
165	Silly too long survey especially first half.
167	I walk or bike almost daily on Rainier Street and normally reverse course to Howard/Hastings because there's nowhere safe for non-motorized transit along Discovery. I am thrilled to see the City will be doing something to address this, but caution the city NOT TO OVER DO IT. i.e. we need safer bike and walking lanes, but the idea of "little parks" is totally out of keeping with the speed to the street and I think incompatible with Salish Coast Elementary nearby. I think small "pocket parks" might invite drug dealers.

ResponseID	Response
175	I sometimes bicycle west on Discovery as far as Sherman but won't go any farther. I have no trouble bicycling on Hastings or Cape George Rd (from the Wye to Cape George Colony). Even though they are fast, they are wide enough and generally have good shoulders. But Discovery west of Sherman just seems too chancy: sometimes heavy traffic, speeders, narrow lanes, no shoulder to speak of, and a steep and ragged road edge.
176	My feeling is that a shared use path would be sufficient to address the needs of both bicycle riders and pedestrians. Wider breakdown lanes on both sides could also achieve this goal but may be less safe than a shared use path. I do not want Discovery Road to loose its rural feel or look like it is part of downtown as would be the case with the addition of side walks. I love the Larry Scott Trail and would consider this type of shared use path to be a great solution.
180	try to LIMIT the number of times you need to cross Discovery Rd while biking/walking. would be BETTER, depending on type of bike/walking path you come up with, that it would nicer for being able to RIDE out of town vice the coming into town. then you are limited with the area on the north side as it is a water protected area (wetlands). as of right now, you have to be careful crossing Disovery rd at the roundabout while riding a bike, as noted earlier SPEED of some other drivers is NOT the 25 mph and they (drivers) are not really looking for someone to come off the trail.
181	I look forward to these improvements! I think most cyclists will concur that two way cycle paths are unsafe and that it is much safer to have cyclists going the same direction as vehicular traffic.
182	It would be awesome to have a bike lane on Discovery from Salish Elementary. all the way to the Larry Scott Trail near Discovery Golf Course. I ride on Discovery 5 times a week and it is the most dangerous part of my bike ride. The sides of the road are in disrepair and the car lanes are narrow.
184	This project is long, long overdue and will improve the safety of both the bicyclists, foot traffic and motorists on Discovery Road. The safety of the young children who attend Salish Coast has been ignored for far too long. This should have been coupled in with the roundabout construction and construction and the school. It is another sign of the city failing to look forward in its thinking. Big suprise.
185	I frequently bike the Larry Scott Trail and like the shared use trail. I find walkers, joggers, and all types of bikers to be considerate of each other. The Discovery Road project definitely sounds worthwhile based on proposed future development off of Rainier Rd. The shared use trail is the safest because it removes bikers, joggers, walkers from the road. Too many drivers drive over the speed limit, get distracted, are texting!!! while driving. Bicycle lanes don't provide enough separation from distracted drivers. To make bike lanes safe for children who sometimes waver back and forth on bikes, the bikers need to be separated from car traffic.
187	The 'I identify as' choice is insulting.

ResponseID	Response
188	right now, find it difficult to get on the 2 way bike by the Salish school at either end on Discovery Rd. have to be very careful on crossing Discovery rd coming from (water tank) trail to get to other side of Howard St. drivers are not very attentive to going slow so they can stop if need be for either biker/pedistrian wanting to cross the street. if you put lighting, the type you currently have on Howard/Rainer st are nice. try to limited the crossing of Discovery rd and you might be limited due to wetlands on the north(?) side of Discovery.
190	The survey did not include funding, eg. if budget is reduced, some of these should be prioritized. For example: do we need sidewalks on both sides?
192	I would love to have improvements to bike access link to the LST.
193	I feel unsafe biking on high speed roads like Rt 20. Any of the bike lane proposals are okay.
194	Please consider extending bike lanes down to where cyclists can safely connect to the Larry Scott trail for those of us not comfortable along highway 20 but live right by Discovery.
196	Long overdue. Make sure you spend the money on the priorities ... landscaping, mini-parks, benches, etc. are not what is needed first. Make it safe for biking and walking, Put the esthetics on the back burner unless you have surplus funds (not!)
198	I've been a serious cyclist for many years. When I moved to Port Townsend, a friend asked why I would move to a place where the cycling is terrible - i.e. not safe. I brushed that comment off but now after 3.5yrs of living here I understand what my friend meant. Since I have moved to PT I cycle MUCH less. I barely use my road bike because of the lack of bike lines around Quimper Peninsula. I bought a gravel bike so at least I could ride the Larry Scott trail but that gets boring. It's hard to do a loop ride back to town because when I reach the end of the Larry Scott trail at Milo Curry I have to ride narrow roads [either Discovery or Cape George] w/o bike lanes. Now I have an indoor trainer for my road bike which I enjoy riding much more than being out on PT Roads. Sad. Sadder for kids who would like to be out riding their bikes for fun and sport.
199	I am so pleased that the city is engaging in this project..... It encourages biking, walking, and it is a major improvement for the safety of the school kids.....
202	Regardless of what plan you come up with, any improvement will be an asset to walkers and bikers as well as those persons using public transportation. My wife and I try to bike everywhere we go in the city, but we never, never bike on Discovery Road due to our perceived worry about safety.
203	Anything you do would be an improvement! Adding a shoulder with enough space to ride a bike or walk would improve the safety of riders/walkers/runners.
204	Thank you for starting this project! I've been really worried about my kids walking the two blocks to the school on the road with no sidewalks.

ResponseID	Response
211	Yeah for alternative transportation! It shouldn't be "alternative". Cars should be the "alternative". Yeah bikes!
216	I'm a seventh grader.
219	I have found the new two lane cycle track to be hazardous. Motor vehicle drivers easily mistake it for a lane they can drive into endangering bike riders and pedestrians
220	Since the city has limited funds to do this project they should consider safety of school children and people in general. Since Discovery road is one of two roads to get in and out of the City, highway needs/ safety are important. At this time nothing is addressed.
223	Please just do the first option, regular bike lanes, if you have to do this. Please DO NOT do the two-lane dedicated bike lanes as had already been done in front of the elementary school and on Rainier Street, it is a waste of space and looks awful!
226	I use Discovery Road, side roads, and trails when I walk or bike to work, which is likely to be peak travel times. As the area around Discovery Road develops in the future, the ability to safely cross Discovery Road as a pedestrian or using non-motorized transportation will be essential. For safety, bike lanes and sidewalks on each side of the road would be best.
227	The separated bike tracks on Ranier do not feel safe at intersections. The kinda suck actually. Drivers are not looking for bikes coming on the wrong side of the street! And the intersections are do deep a driver must park in the cycle track to see to turn. Lame designing, don't do it again.
228	I would like to see the project happen to improve bike safety. The bike crossing at the roundabout and two way track on Howard street are confusing fir cars. I usually need to stop and walk my bike to safely cross the street there. Not ideal as I am a bike commuter.
231	can't see all optrions on this sidebar survey! Wasted time

ResponseID	Response
236	The separated bike lanes are more hazardous at access points like driveways and intersections for the bikes. For example the separated bike lane is hazardous on Howard heading north at the Goodwill driveway and the first street intersection. Vehicles are looking for other cars aned often miss me as a cyclist. At their stops, they often pull ahead to the auto lane so they can get the best view to look for oncoming traffic, and this cuts off the bike lane at times. There have also been numerous "right hook" events where cars travelling parallel to me as a cyclist have not seen me, despite blinking red tail light and bright clothing. I think this is because the bike lane is too far from the auto lane. As a result, I ride in the auto lane as I believe it is safer, however drivers don't understand that, and a few have made their thoughts clear that they feel it is rude of cyclists to be inn auto lane when there is a bike lane. If the traffic speed is low (ie 25 or 30 mph), cars should be used to bikes close to or in the auto lane of travel, and bikes have the best visibility this way. A simple bike lane created with a solid white line,a nd sufficient space for both bike and auto travel, is the least expensive and safest arrangement on our residential streets. Likewise, the roundabouts. A separated bike lane creates a hazard at every potential crossing of paths for cars and bikes. As a result, I feel it is safest to take the lane. The way the Howard St and Thomas St roundabouts are set up assume bikes become pedestrians for navigating the roundabout. Also of note, we have three roundabouts and three different approaches for bikes. Pleople have enough trouble with this "new" traffic device, consistency will help as we create new traffic circles and bike lanes.
238	I don't see any way that bike lanes and/or sidewalks can be added to this section of Discovery Road and not strongly impact adjoining properties. I'm not saying I'm against that, just that it is a very narrow road. And continuing on - biking down Discovery Road from Mill Road is also very narrow and potentially hazardous. But that's another section and situation. Thanks for allowing resident input.
239	I use the two way bike track on Rainer between Discovery and Sims way and I really like it. But.... I have concerns over safety in intersections- particularly the one by the Goodwill. The intersections end up being so wide that i get really concerned that people in cars won't see me if I am approaching the counter direction as traffic. Also they pretty much need to get into the bikeway in order to check that there is not cross traffic on Rainer. Not a huge issue now with low traffic volume but could be in the future. I also use the multimodal pathway between 20th and Discovery and love it- don't see many user conflicts. It would be great to make a connection between Sims and the Larry Scott Trail (I see that its in the works if the little orange line is to be believed). In fact this is probably a higher priority than section of Discovery between Mill Rd and Rainer. The primary reason I ride this section of Discovery is to connect the existing Rainer trail with the Larry Scott. Thanks!
243	This Project must continue on to Mill Road. Discovery is highly dangerous to bicyclists not only because of poor visibility, no bike lane, and unsafe drivers, but also due to the fact that all online maps and GPS directions coming in to PT direct traffic on to Discovery Rd. to enter the city NOT down Sims Way. So Discovery becomes more dangerous to walkers and bicyclists. I just do not bicycle down it anymore unless absolutely necessary and then, pray til I get to Mill Road.

ResponseID	Response
244	I do not favor a 2-way cycle track along Discovery Road in this section or anywhere further down the hill, especially one that is as narrow as the one in place along Rainier Street. The gradient both up or down hill is an impediment to 2-way riding comfortably in a confined space. There are also points of potential conflict at every intersection and driveway. 2-way cycle tracks should be placed where there are no intersections and very few driveways for a long distance, and they should be at least 12-feet wide (which still feels narrow, especially on downhill runs). Also, the pavement markings along Rainier St may be state-of-the-art, but they are confusing to many people.
246	Shoulder bie lanes would provide the best bang for the buck. Trail connection for both bikes and pedestrians would be more beneficial than sidewalks along Discovery.

Appendix C

Stakeholder Advisory Group Meeting Agendas, Notes, and Materials

Discovery Road Bikeway and Sidewalks Project
Stakeholders Meeting – Online
Tuesday January 26, 2021 5:00 – 7:00 PM

https://scj.zoom.us/j/95148503697?pwd=cTlBV3F2dk9nN2NEZENUMWE3L3RjQT09#success
+1 346-248-7799 (passcode: 608817)

AGENDA

I. **WELCOME** (10 minutes; 5:00 – 5:10)
- Objective
- Meeting open to the public / recorded
- Virtual meeting guidelines
- Introductions – Name and association

II. **STAKEHOLDERS MEETINGS OVERVIEW** (10 minutes; 5:10 – 5:20)
- Meeting dates
- Goals of each stakeholder meeting
- Timeline
- List of participants
- Agenda review

III. **PARTICIPANTS & BACKGROUND** (30 minutes – approx. 2 minutes per person; 5:20 – 5:50)
- Why are you interested in this project?
- Share your experience walking
- Share your experience biking

IV. **PROJECT OVERVIEW/ STORY MAP** (60 minutes; 5:50-6:50)
- Project background
- Design principles
- Boundaries and constraints
- Types of cyclists/bikeways
- Local examples/history
- Public survey – Summary of feedback

V. **WRAP UP/ NEXT STEPS** (10 minutes; 6:50 – 7:00)
- Initial thoughts on alternatives and criteria
- Meeting summary
- Preparation for next meeting:
  - ☐ Reading materials
  - ☐ Think about alternatives and criteria
  - ☐ Instruction sheet
  - ☐ Link for next meeting – February 16, 2021, 5 -7 pm

Adjourn

PARTICIPANT LIST

Stakeholders:

1. Chris Overman, Adjacent resident – Towne Point
2. Ed Stegall, neighbor, ATAB member
3. Joe Finn, pedestrian advocate
4. Lisa Condran, Principal of Salish Coast Elementary School
5. Owen Rowe, City Council Member - Transportation Committee
6. Pat Teal, DASH president, ATAB member
7. Pete Sexton, Bike shop owner – Broken Spoke
8. Sam Feinson, ATAB chair
9. Samantha Lorenz (Thomas), national mobility expert
10. Scott Walker, City Manager appointee

Consultant Team:

1. SCJ Alliance, Scott Sawyer, PE
2. MacLeod Reckord, David Saxen, PLA
3. MacLeod Reckord, Terry Reckord, PLA, FASLA

City Team:

1. City Engineer, Dave Peterson, PE
2. Director of Public Works, Steve King, PE
3. Discovery Road Project Manager, Laura Parsons, PE
   lparsons@cityofpt.us 360-379-4432

Discovery Road Bikeway and Sidewalks Project
Stakeholders Meeting 1 - Online
Tuesday, January 26, 2021 | 5:00 – 7:00 PM

Meeting Link: Join Zoom Meeting

https://scj.zoom.us/j/98018160994?pwd=L1k4SFFxR1phQVZxaFd2Tzg0MVFZZz09#success

Phone Only: 1-312-626-6799
Passcode: 422753

MEETING NOTES

- February 16th is a City Council meeting date. We will change the date for Meeting 2 to February 9th.

Stakeholders Interests and Backgrounds

- Lisa Condran
  - Project is close to her school
  - Uses the Larry Scott Trail
  - Doesn't like the bike commute from Boathaven to the school – the Boathaven gravel; Safeway; Landes Street
  - Concerned about current operations with kids crossing the trail to reach the bus stops – downhill section of the cycle track has higher speeds
- Joe Finn
  - Moved here in 1997
  - Daily walks to the Post Office to collect mail from a PO Box
  - Non-motorized awareness grew from his involvement in the Alternative Transportation Advisory Board (ATAB)
  - Has opinions about design and pedestrian safety
- Scott Walker
  - Ped/bike activist since he moved to Port Townsend
  - Wants to see the project designed "as safe as we can"
  - Not happy with cycle-tracks at the ends – Rainier Street and Salish Coast School
  - Wants to build good community through transportation design, not transportation design running through the community (detrimentally)
- Ed Stegall
  - Make lemonade out of Covid – capitalize on higher public participation in walking/biking
- Samantha Thomas
  - WSDOT Active Transportation is seeing big jumps in ped/bikes trips across the state. Biggest bike day was Nov 1st – weather not deterring people
  - Advocate for good design for all modes – especially walking and biking
  - Doesn't like the cycle-track design at Rainier Street and Salish Coast School
  - Wants special attention given to design of intersections
  - Identifies as a very confident cyclist

    - Advocates for "majority of cyclists" not just confident cyclists
- Sam Feinson
    - Discovery is part of his favorite weekend bike ride route
    - Climbs 19th by bike (westbound) and he's observed it is not intuitive how to get to the 2-way cycle track at Salish Coast School
    - Usually prefers bike riding on roads over trails
    - Would love to see the project done in a "great way" for both pedestrians and bicyclists
- Pat Teal
    - Disability Awareness Starts Here (DASH)
    - Huge advocate for curb cuts
    - Recently met with wheel-chair user near Rainier Street roundabout that likes the roundabout, but can't use Discovery – no space for pedestrians
- Chris Overman
    - Advocate for "resting places" and "public spaces" and opportunities for art
- Owen Rowe
    - Fan of urban environments
    - Likes to walks
    - Not a comfortable cyclist – roads feel too constricted!
    - Lives by Fort Worden
    - Used to live by 9th and Hancock. Tried to walk to commercial properties in the business park, but there is lousy connectivity for pedestrians
    - Wants more connections between residential and commercial places to promote walkability
    - Climate change is a crisis now. Needs to be considered as part of the design.
- Peter Sexton
    - Observing significant increased bike use in Port Townsend
    - Curb cuts and access to trails is important for functionality
    - Likes to see diversity in who rides bikes.
    - Sees the elder demographic as the fastest growing – consistency/predictability is important for this demographic

Project Overview/Story Map

- Laura - overview
    - Grants/funding
- Steve - Design Principles
    - Safety and comfort
    - Location and context
    - Low traffic speeds and local needs
    - Encourage active transportation
    - Innovative solutions
    - Physical boundaries and budget limitations
    - Transparency and open mindedness
- Scott - Constraints and Context
    - Scott W asked about minimum lane width (10 feet to edge of gutter, 11 feet to face of curb)
    - Scott W asked about City match amount (to be presented in Meeting 2)

    - Samantha asked about transit stopping in lane
- David - Sidewalks, Bike and User Types
    - Showed sidewalk PDF
    - Showed Bike User Types - capture the biggest swatch of users we can practically get
    - Showed bike facility types
- Dave P - Local Examples
    - Terry added that consistency is important

Actions:

☐ Provide details on City funds relative to grant funds
☐ Confirm JTA Transit will stop buses in lane along Discovery Road
☒ Share public survey summary with the Stakeholders
☒ Meeting 2 - discuss the benefits of corridor consistency for pedestrians and bicycles, especially considering concerns about the cycle-tracks at Rainier Street and Salish Coast School

Stakeholders:

1. Chris Overman, Adjacent resident – Towne Point
2. Ed Stegall, neighbor, ATAB member
3. Joe Finn, pedestrian advocate
4. Lisa Condran, Principal of Salish Coast Elementary School
5. Owen Rowe, City Council Member - Transportation Committee
6. Pat Teal, DASH president, ATAB member
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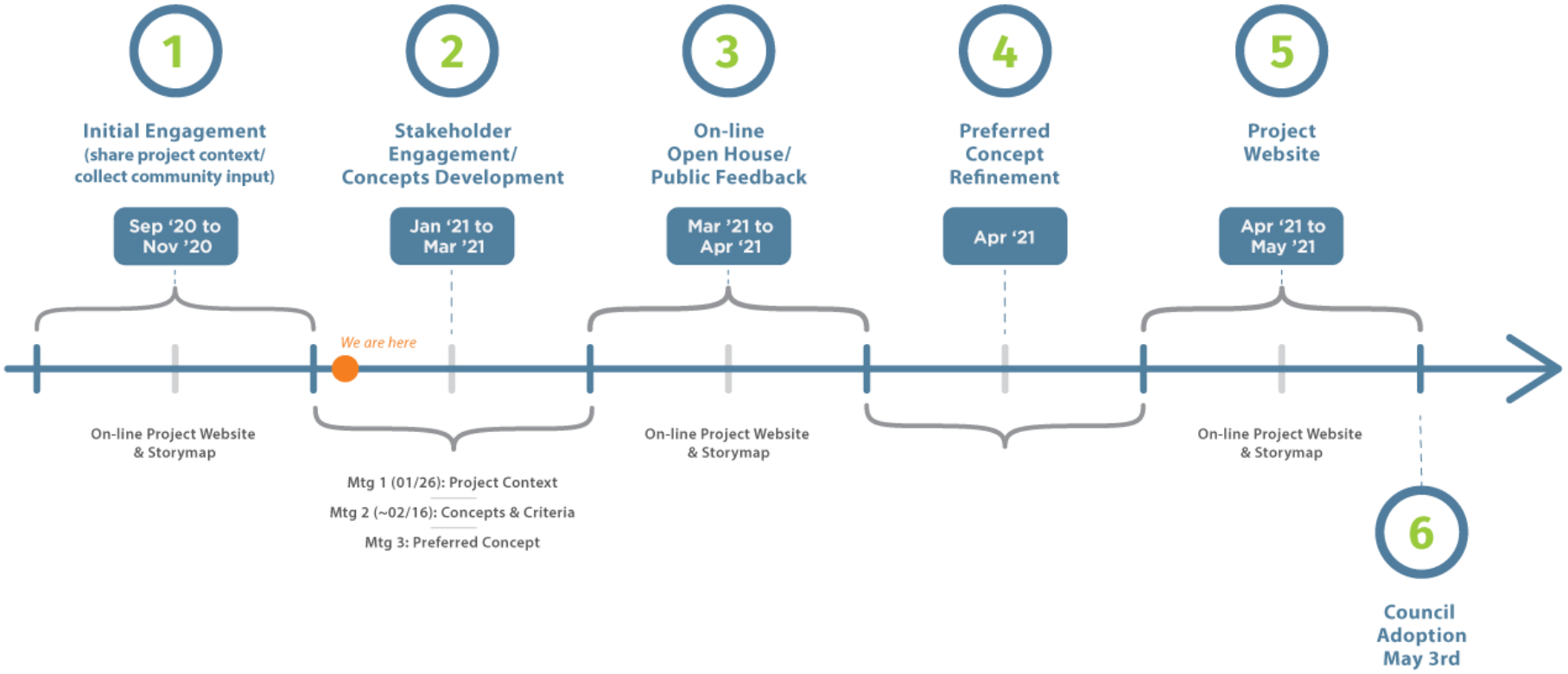
Community Engagement and Concept Adoption



Discovery Road Bikeway and Sidewalks Project
Stakeholders Meeting 2 - Online
Tuesday, February 9, 2021 | 5:00 – 7:00 PM

Meeting Link: Join Zoom Meeting

https://scj.zoom.us/j/98018160994?pwd=L1k4SFFxR1phQVZxaFd2Tzg0MVFZZz09#success

Phone Only: 1-312-626-6799
Passcode: 422753

AGENDA

I. WELCOME/INTRODUCTIONS (Laura Parsons) 5:00p

II. VIRTUAL MEETING BEST PRACTICES (Laura Parsons) 5:05p

III. STAKEHOLDERS MEETINGS OVERVIEW (Scott Sawyer) 5:10p
- Recap Meeting 1
- Timeline Update
- Goals for Meeting 2
- Goals for Meetings 3 and 4
- Agenda Review

IV. COLLABORATION TOOLS (Scott Sawyer) 5:25p
- Virtual Parking Lot – Google Drive/Google Doc
- Opentext **Hightail**
  - Access to Project Materials
  - Providing Comments on Materials

V. ADDITIONAL BACKGROUND & CONTEXTUAL INFORMATION (Steve King) 5:45p
- Background Information (Dave Peterson)
- Cycle Tracks – pro's and con's (David Saxen)
- Anything else you like/dislike about the corridor? (David/Stakeholders)

VI. BRAINSTORM ALTERNATIVES (Scott Sawyer) 6:30p
- General Cross-Section (*Project Limits*) – recap constraints
  - Two 10-ft travel lanes (measured to edge of gutter)
  - Sidewalk(s) – two sides
  - Bikeway(s) – one side (2-way) or two sides (1-way)?
  - Shared path(s)?
  - Planter Strips – one side or two sides?

VII. WRAP UP SUMMARY & NEXT STEPS (Scott Sawyer) 6:55p

- Recap decisions, actions, and open items
- Next steps and Meeting 3 goals
    - Homework – think about criteria to compare concepts (share ideas on the Virtual Parking Lot)
- Confirm Meeting 3 date and time

VIII. ADJOURN 7:00p

Stakeholders:

1. Chris Overman, Adjacent resident – Towne Point
2. Ed Stegall, neighbor, ATAB member
3. Joe Finn, pedestrian advocate
4. Lisa Condran, Principal of Salish Coast Elementary School
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MEETING NOTES

MEETING 2 OVERVIEW (Scott Sawyer)

- Timeline Update: Scott presenting an updated timeline (posted to **Hightail**)
  - Adds a fourth Stakeholder meeting
  - Includes a Council Transportation Committee (target April 21st)
  - Moves the City Council adoption date to May 17th
- Goals for Meeting 2
  - Share additional project background and context
- Goals for Meetings 3 and 4
  - Create a short list of alternative concepts
  - Develop a list of criteria for comparing alternatives
  - Select a preferred alternative
  - Discuss design for focus areas through the corridor
    - Transitions to existing cycle tracks
    - Blending/mixing zones
    - Intersection crossings
- Stakeholder Feedback from Meeting 1
  - Scott Walker and Pat Teal read through all of the public survey comments. Both noted clear support for the project in the comments.

COLLABORATION TOOLS (Scott Sawyer)

- Scott asked about the use of the following collaboration tools. There was consensus for continuing with these tools.
  - Virtual Parking Lot – Google Drive/Google Doc
    - Sharing feedback and general comments
    - Sharing ideas for alternative cross-sections
    - Sharing ideas for criteria for comparing alternatives
  - Opentext Hightail
    - Provides access to project materials
    - Providing Comments on Materials

ADDITIONAL BACKGROUND & CONTEXTUAL INFORMATION (Steve King)

- Background Information (Dave Peterson)
    - (Dave P) One major consideration in the decision to mov school bus loading/unloading to Discovery was the large footprint needed (from a limited site) to accommodate on-site operations.
    - (Dave P) The opening in the fence at Sherman was intended to let bikes crossing Discovery Road (north to south) a way to reach the cycle-track, but now walking kids use the opening and end up walking down the track.
    - (Lisa) Greater numbers of pedestrians seems safer. When there are just a few peds, it is more dangerous.
    - (Pete) There is a lot of bike traffic coming south on the path in the Rainier corridor (from Hastings) originating from neighborhoods north of Discovery and east of Rainier. Consider this when deciding if bike facilities are on one or both sides of Discovery.
    - (Dave P) A design goal is to include visual cues that give peds priority in ped/bike mixing zones.
    - (Pete) Scotland has a lot of way-finding marking on sidewalks to guide bikes and peds within mixing zones.
    - (Pete) Kids on bikes using the school cycle-track travel eastbound at high speeds downhill to get to bike racks off Grant Street. Maybe move bike rakes to a pavilion located further west off Discovery Road so these bikes leave Discovery Road before mixing with peds.
- Cycle Tracks – pro's and con's (David Saxen)
    - (David S) Consider removing the fence east of Sherman and making Sherman to Grant a general mixing zone between peds and bikes.
    - (Samantha) Make sure we consider ultimate goals/fixes at Salish Coast when designing the project so that any future retrofit to the school cycle-track works well with the project improvements.
- Anything else you like/dislike about the corridor? (David/Stakeholders)
    - (Joe) Wants to see more effort/discussion on cross-walks and pedestrians
    - (Lisa) The flashing school zone sign (about 19th/Discovery) is too far away, and vehicles act like they forget they are in a school zone by the time they get to the stretch between Sheridan and Grant. It would help to have a reminder between Sheridan and Grant
    - (Scott W) would like examples of 1-way cycle-track solutions and how they would transition to existing 2-way cycle-track sections at the Rainier roundabout and the school.
    - (Owen) There is a general sense of confusion for cars between Sheridan and Sherman. Either drivers are focused on school and going slow, or focused on getting out of town for regional trips and traveling at high speeds.
    - (Owen) Is Discovery a "road" (move cars) or a "street" (multiple modes) with reference to (Chuck Marohn, stroads)? Owen (and consensus) is to move Discovery toward becoming a street.
    - (Samantha) Wants to see more examples of how we could landscape the Discovery corridor to improve the aesthetic.

BRAINSTORM ALTERNATIVES (Scott Sawyer)

- Deferred to Meeting 3

WRAP UP SUMMARY & NEXT STEPS (Scott Sawyer)

- Actions:
    - Request the Heffron traffic study from Lisa to see if we can get a bike/ped count on the cycle-track from McClellan to Grant?
- Next steps and Meeting 3 goals
    - Identify alternatives
    - Agree to criteria and weighting of criteria
- Homework – think about criteria to compare concepts (share ideas on the Virtual Parking Lot)
- Meeting 3 date: February 24, 5:00 to 7:00 pm.

ADJOURN

Stakeholders:

1. Chris Overman, Adjacent resident – Towne Point
2. Ed Stegall, neighbor, ATAB member
3. Joe Finn, pedestrian advocate
4. Lisa Condran, Principal of Salish Coast Elementary School
5. Owen Rowe, City Council Member - Transportation Committee
6. Pat Teal, DASH president, ATAB member
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8. Sam Feinson, ATAB chair
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3. Discovery Road Project Manager, Laura Parsons, PE
   lparsons@cityofpt.us 360-379-4432

Attachment C

Discovery Road Bike/Ped Project Background Info

February 9, 2021

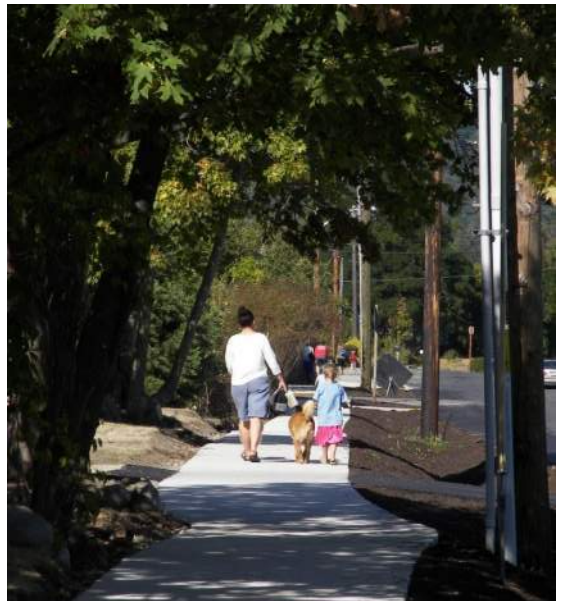
City of Port Townsend

GOAL

The first rule of neighborhood planning:

"to foster lively and interesting Streets."

Jane Jacobs



City of Port Townsend

Attachment C

City Complete Streets Policy

Transportation Projects must meet the needs of:

- All modes
- All users
- All abilities

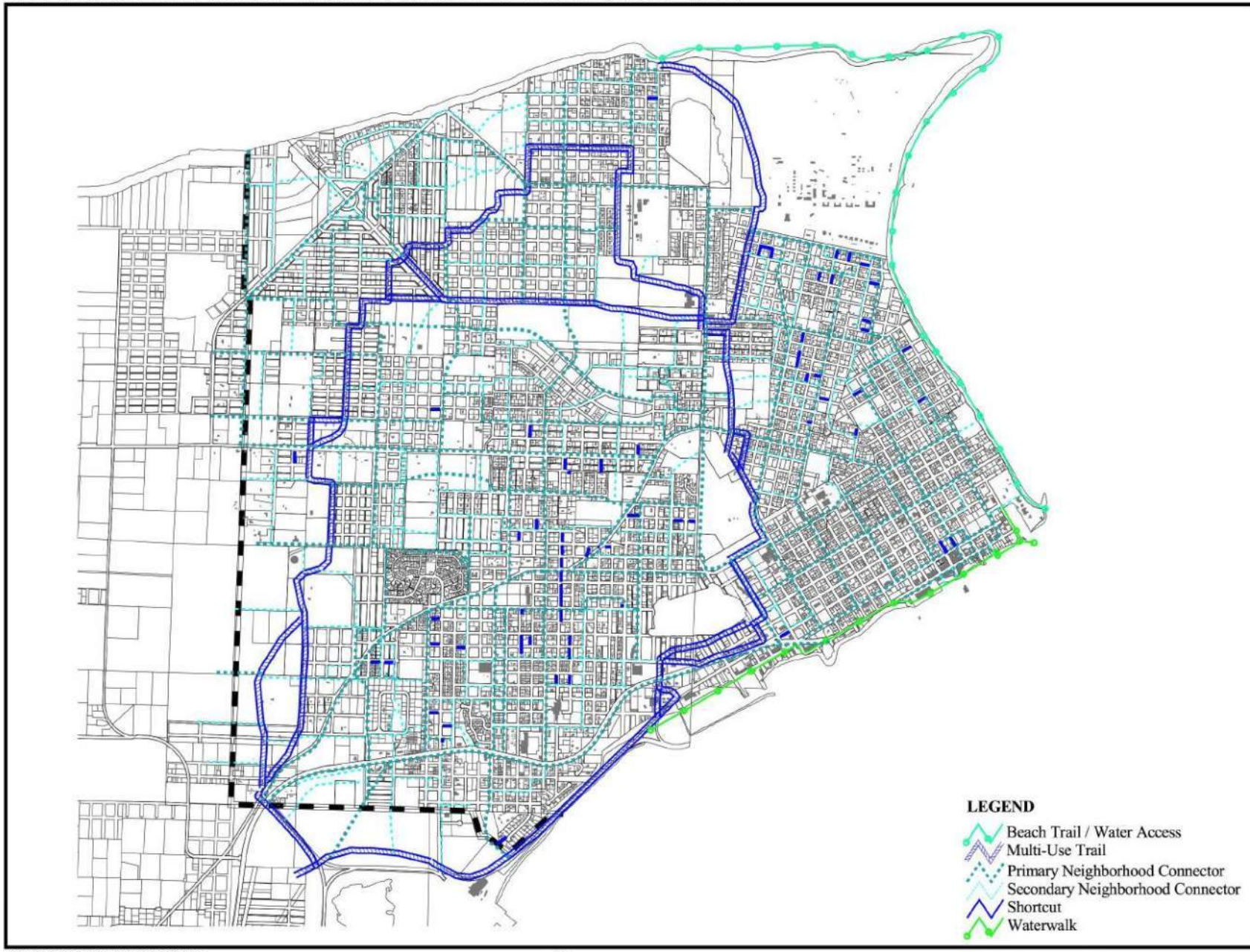
Projects must integrate accessibility improvements and ADA compliance

1998 Non-Motorized Plan

Vision:

An interconnected network of non-motorized facilities

FIGURE 3.2 THE WALKWAY SYSTEM PLAN



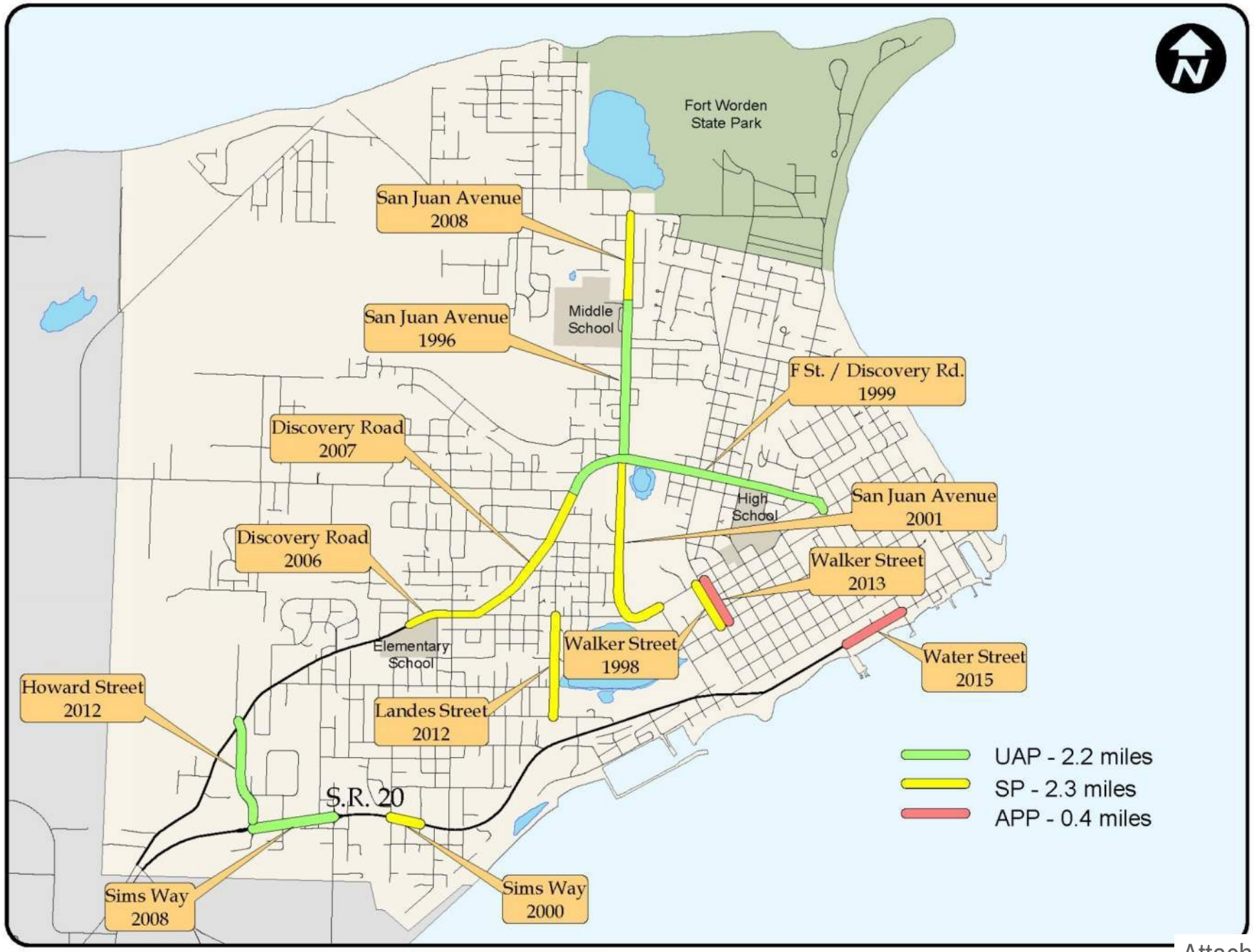
Most City projects are funded by grants

25 Grants in 20 years

$14M in 20 years

$700,000 per year

It takes years to obtain the funding to build the infrastructure



Attachment C

Bicycle Mode Goals

Improve Facilities and Extend the Network

Shared-Use Path

Parking!

VISION: PLACEMAKING

Principles for fostering Streets as places (pps.org)

1. Great Activities & Destinations
2. Safe
3. Inviting and Rich in Detail
4. Designed for Lingering
5. Interactive and Social
6. Unique
7. Accessible
8. Flexible

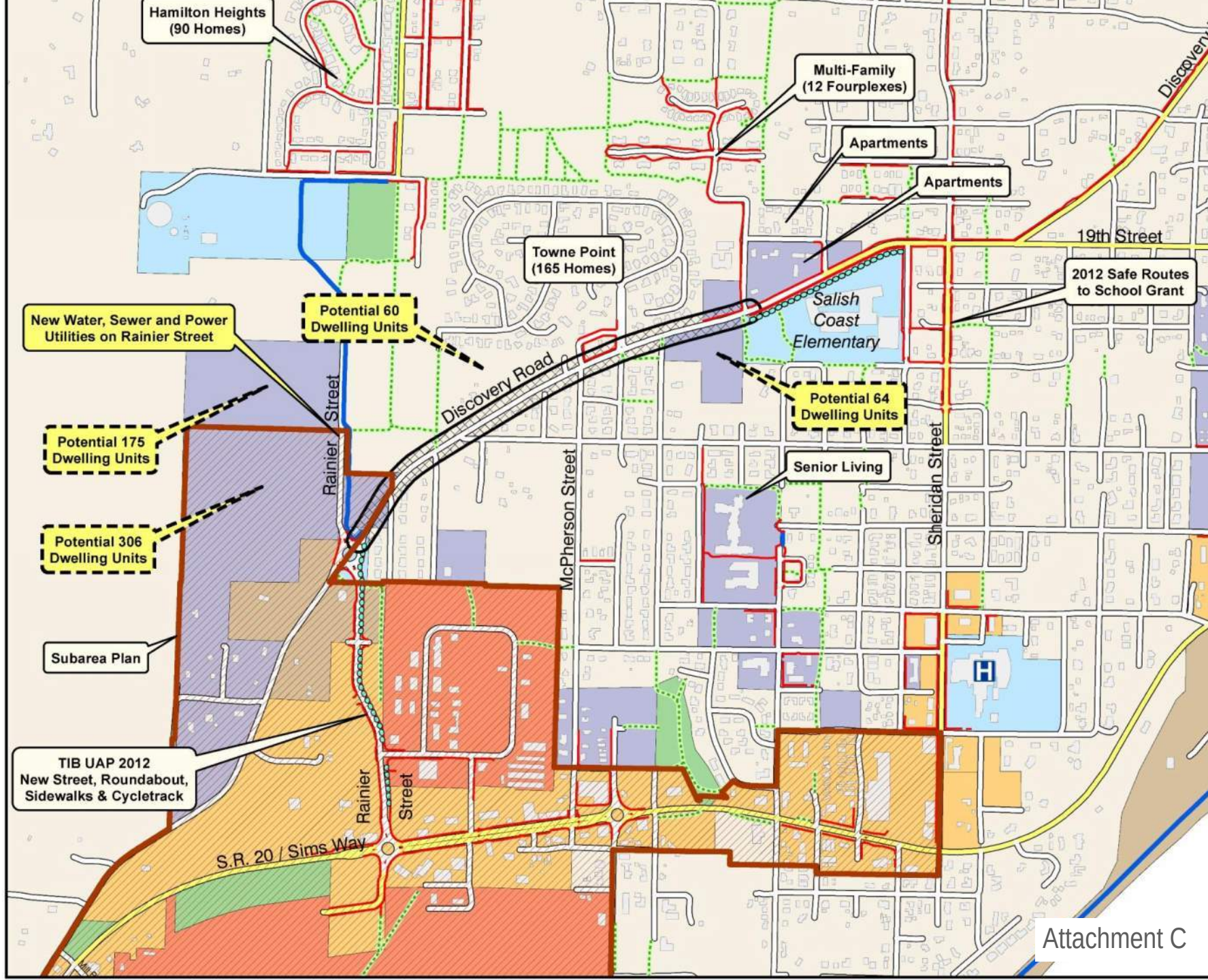
Attachment C

Project Goal: Incorporate Your Ideas

Attachment C

Discovery Road Connections

N,S,E,W



Attachment C

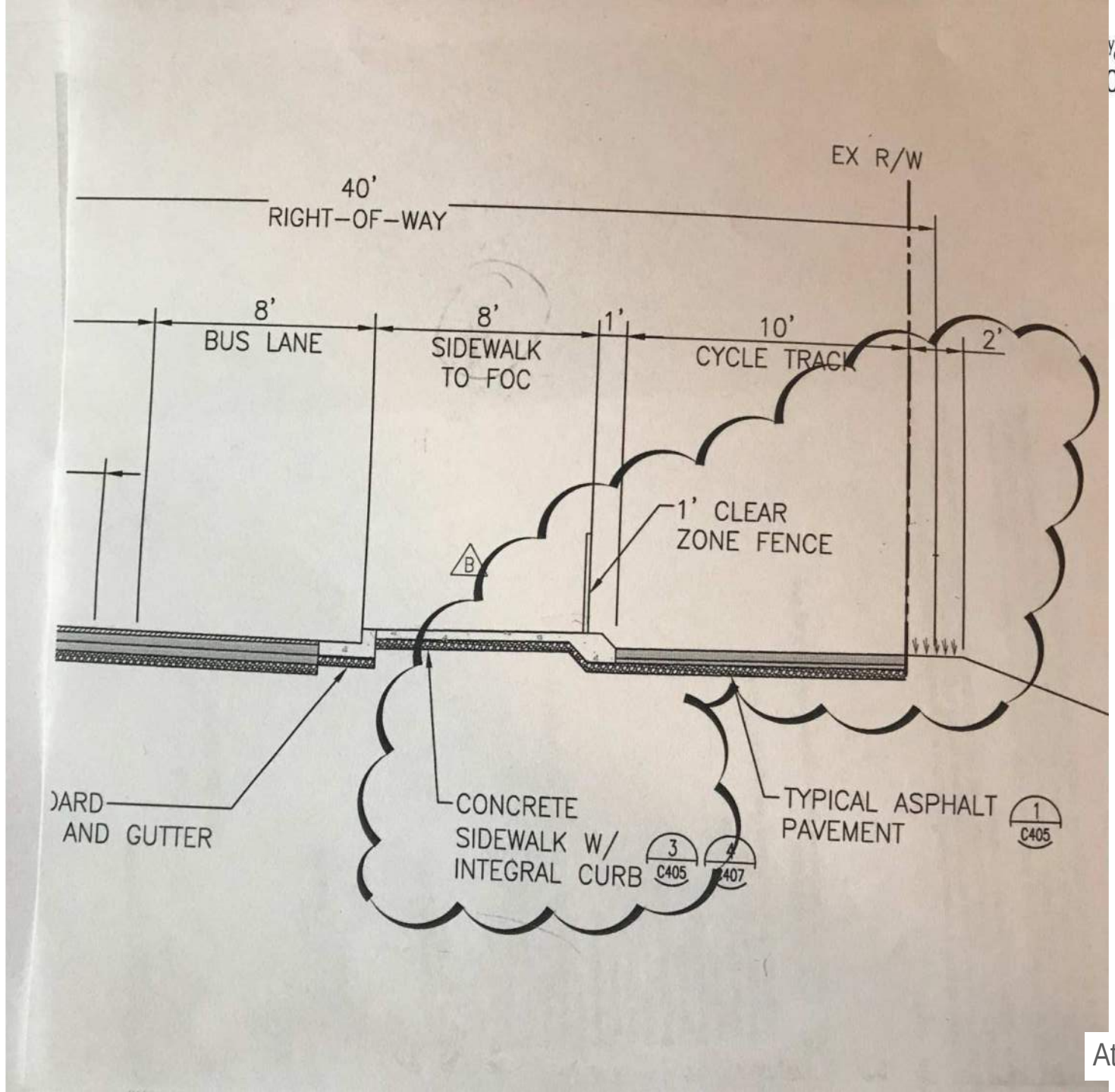
Background on Salish School Design

Attachment C

City of Port Townsend

Attachment C

School Frontage Design Section



Attachment C

Salish School Bus zone

Attachment C

City of Port Townsend

Attachment C

Attachment C

City of Port Townsend

Project Funding (per agenda bill

TIB UAP (State Funds) Grant	$2,629,618
WSDOT Bike/Ped (State Funds) Grant	$1,442,082
STP (Federal Funds)	$434,674
Street fund match	$250,000
Water Utility funds Sewer Utility funds Stormwater Utility funds	$250,000 $100,000 $250,000
TOTAL	$5,356,374

Attachment C

Parking lot – from past presentations

Attachment C

Attachment C

Stakeholder Meeting #2

Discovery Road Bikeway & Sidewalks Project

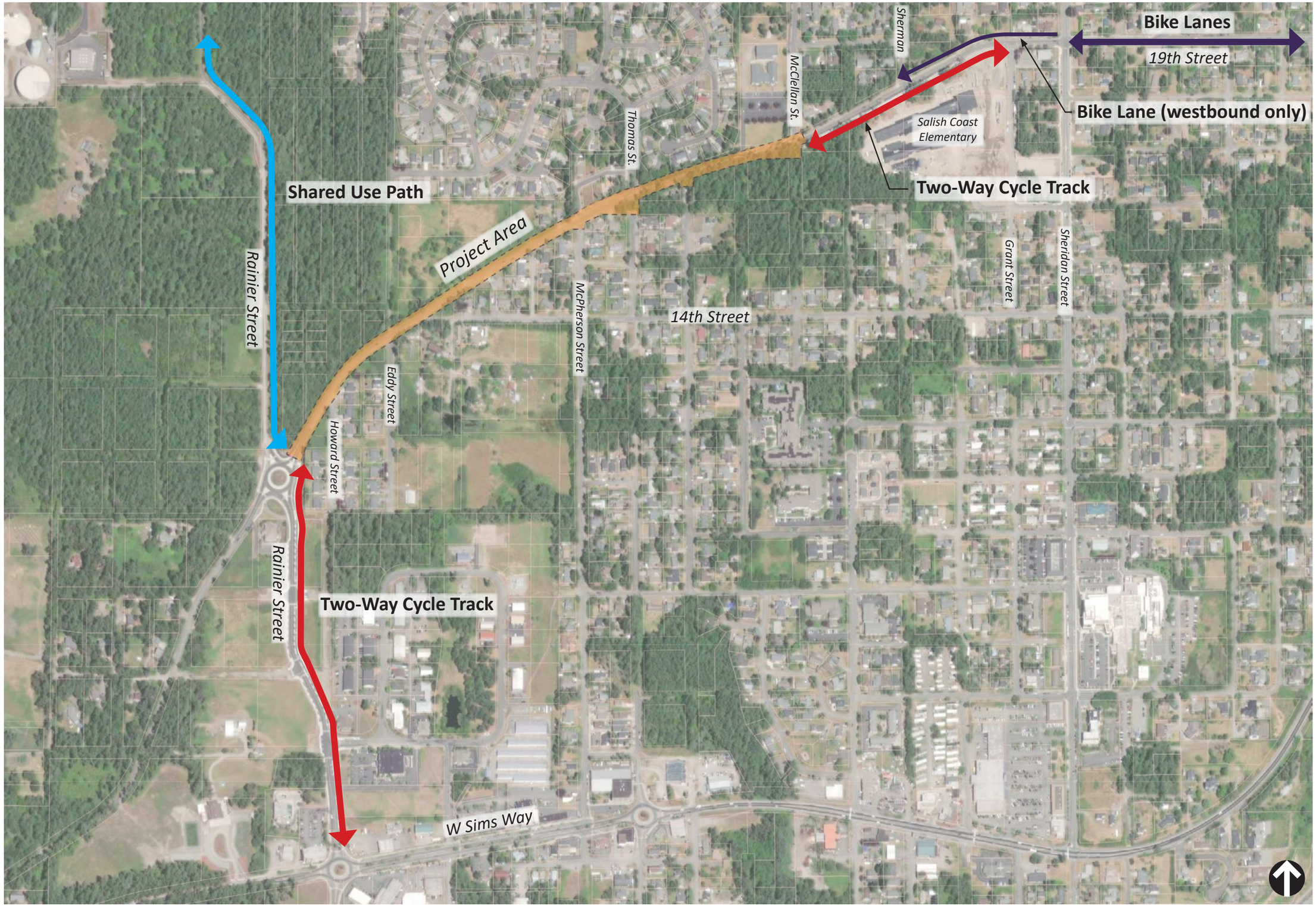
2/9/2021

Attachment C

Topics

1. *Summary of existing bike network around project.*
2. *Cycle track benefits and concerns.*
3. *Review of Rainier Street cycle track.*
4. *Review of Salish Coast Elementary cycle track.*

Existing Bike Network around the Project


Bike Lanes
19th Street
Bike Lane (westbound only)
Two-Way Cycle Track
Shared Use Path
Project Area
Two-Way Cycle Track
Sherman
McClellan St.
Thomas St.
Salish Coast Elementary
Grant Street
Sheridan Street
McPherson Street
14th Street
Eddy Street
Howard Street
Rainier Street
Rainier Street
W Sims Way

Attachment C

Rainier Street Two-Way Cycle Track

Attachment C

Rainier Street Shared Use Path

Discovery Road Two-Way Cycle Track

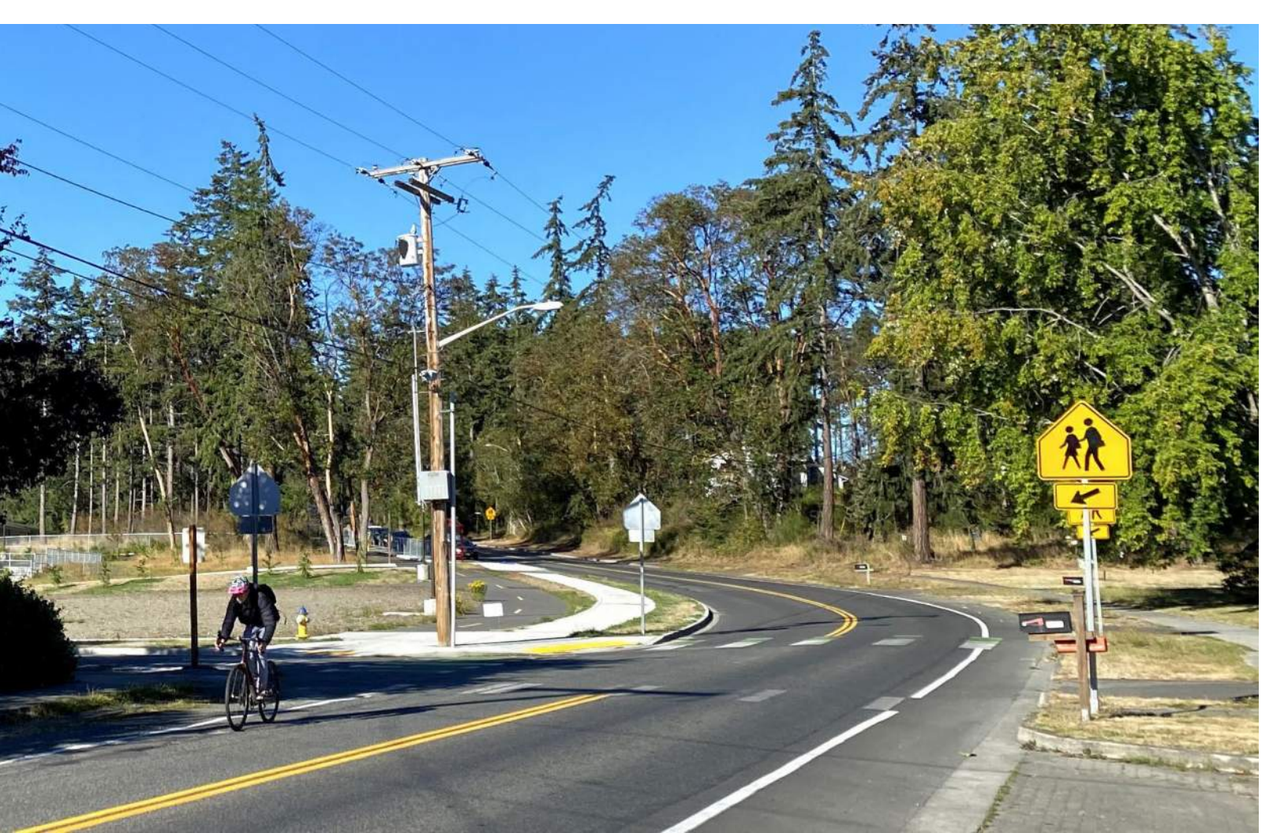
Attachment C

Discovery Road Bike Lane (westbound only to Sherman)

Attachment C

19th/Blaine Street Bike Lanes (to Walker Street)

Questions or Comments?



Cycle Track Benefits and Concerns

Key Benefits of Cycle Tracks:

- Provide increased comfort and safety through **separation** from cars.
- More comfortable and accessible for people of **all ages and abilities**. Attracts new riders who otherwise may not bicycle, therefore increase ridership more than bicycle lanes.
- Cycle tracks **reduce crashes, overall injury risk**, **and fear of collisions** with over-taking vehicles at mid-block.
- Providing a dedicated space for bicyclists improves clarity about expected behavior for people driving and walking, and **improves the safety for all users**.
- Intersection design can reduce or separate conflicts with motorists...**Intersection design is critical!**

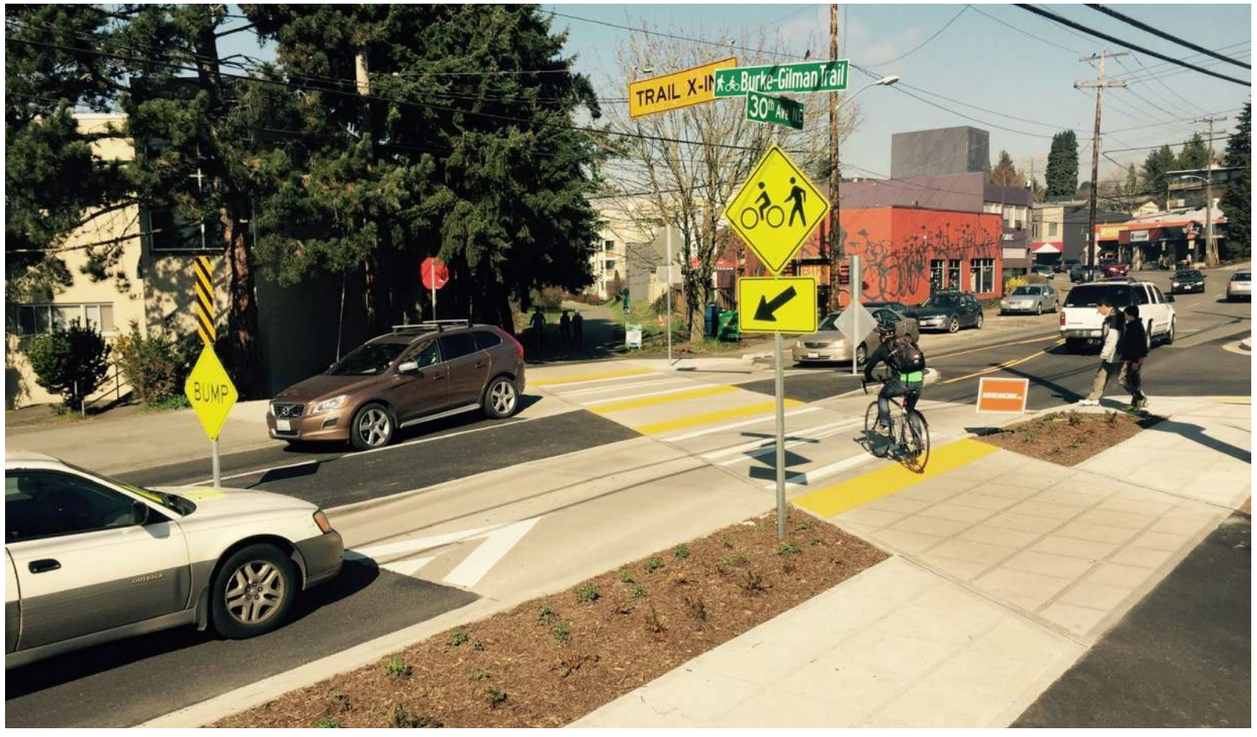
Benefits of Two-Way Cycle Tracks:

- Has a **“bike path” feel** that is more attractive to less experienced cyclists.
- Requires **less space** than two one-way cycle tracks on each side of the roadway (one buffer instead of two).
- If there are no oncoming cyclists, allows faster cyclists to pass slower cyclists or people to ride two abreast.

Photo by Fiets Beraad

Concerns about Two-Way Cycle Tracks:

- Contrary to standard roadway operating expectations, as cyclists approach motorists from the opposite direction of traffic flow.
- Like shared use paths, two-way cycle tracks have a positive association with bicycle crashes at intersections, if no countermeasures are taken.
- Intersection design can mitigate these safety issues.
- Effective intersection countermeasures include:
  - Tight road geometry
  - Clear sight lines
  - Raised crossings
  - Conspicuous pavement markings
  - Signage
  - Active warning signals
  - Lighting
  - Clear separation of pedestrians and cyclists
  - Dedicated bicycle signals (at signalized intersections)



Where are Two-Way Cycle Tracks Appropriate?

- On streets where bike lanes would cause many bicyclists to feel stress due to high traffic volumes and/or speeds.
- On streets with few conflicts, such as driveways or cross-streets, on one side of the street.
- On streets where more destinations are on one side thereby reducing the need to cross the street.
- On streets where there is not enough room for a one-way cycle track on both sides of the street.
- To connect with an existing bicycle facility, such as another two-way cycle track on one side of the street.

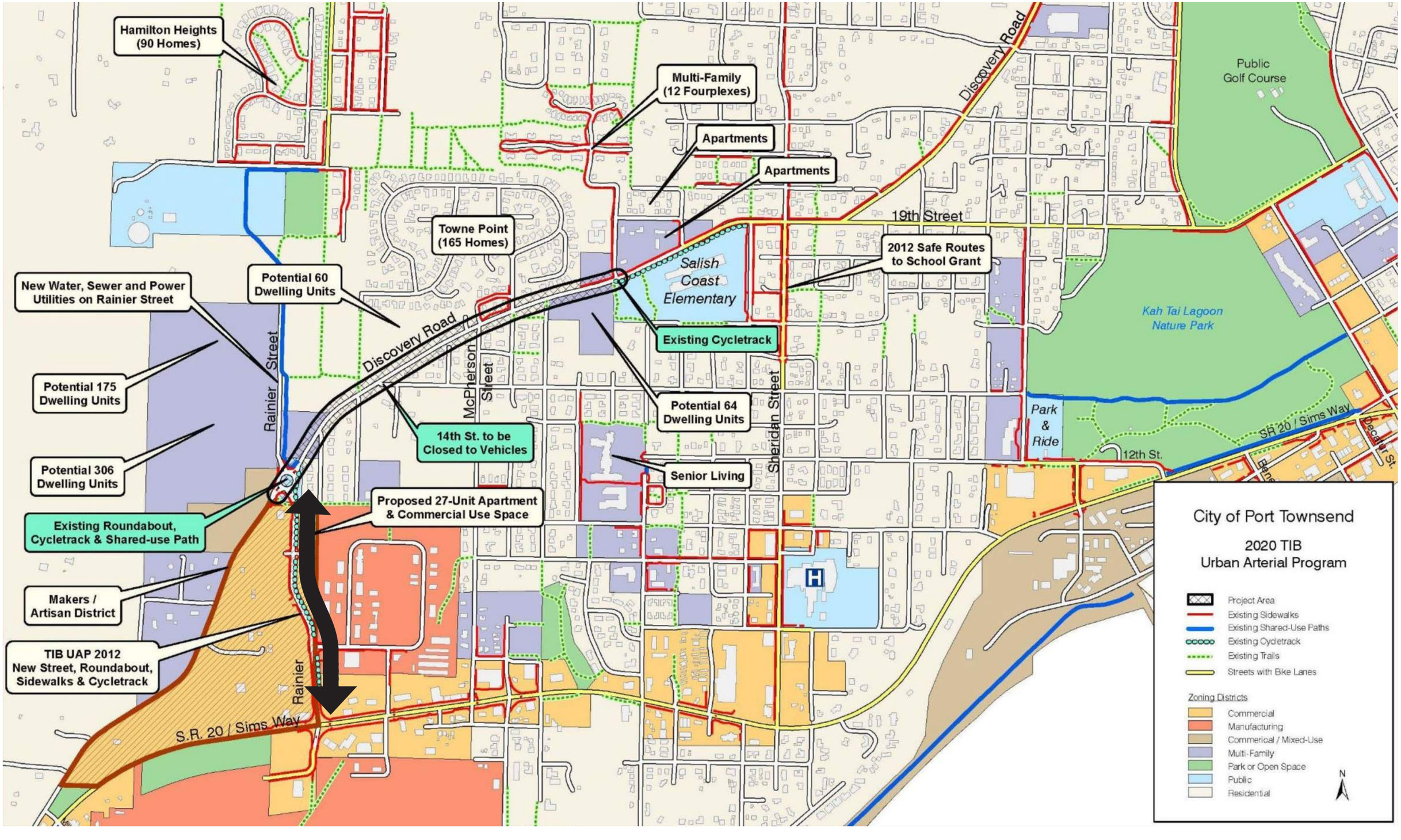
Questions or Comments?

Review of Rainier Street Cycle Track

Street and Driveway Crossings

- *Two intersections and four driveways over 1/3 mile.*
- *Makes sense on the east side of the street, since land use is and will be more intense.*

Land Use Context



Attachment C

*Relative City-Wide Bicycling Volumes**

** Strava Heatmap*

Cross Section

Street Intersections

Attachment C

Pavement Markings

Attachment C

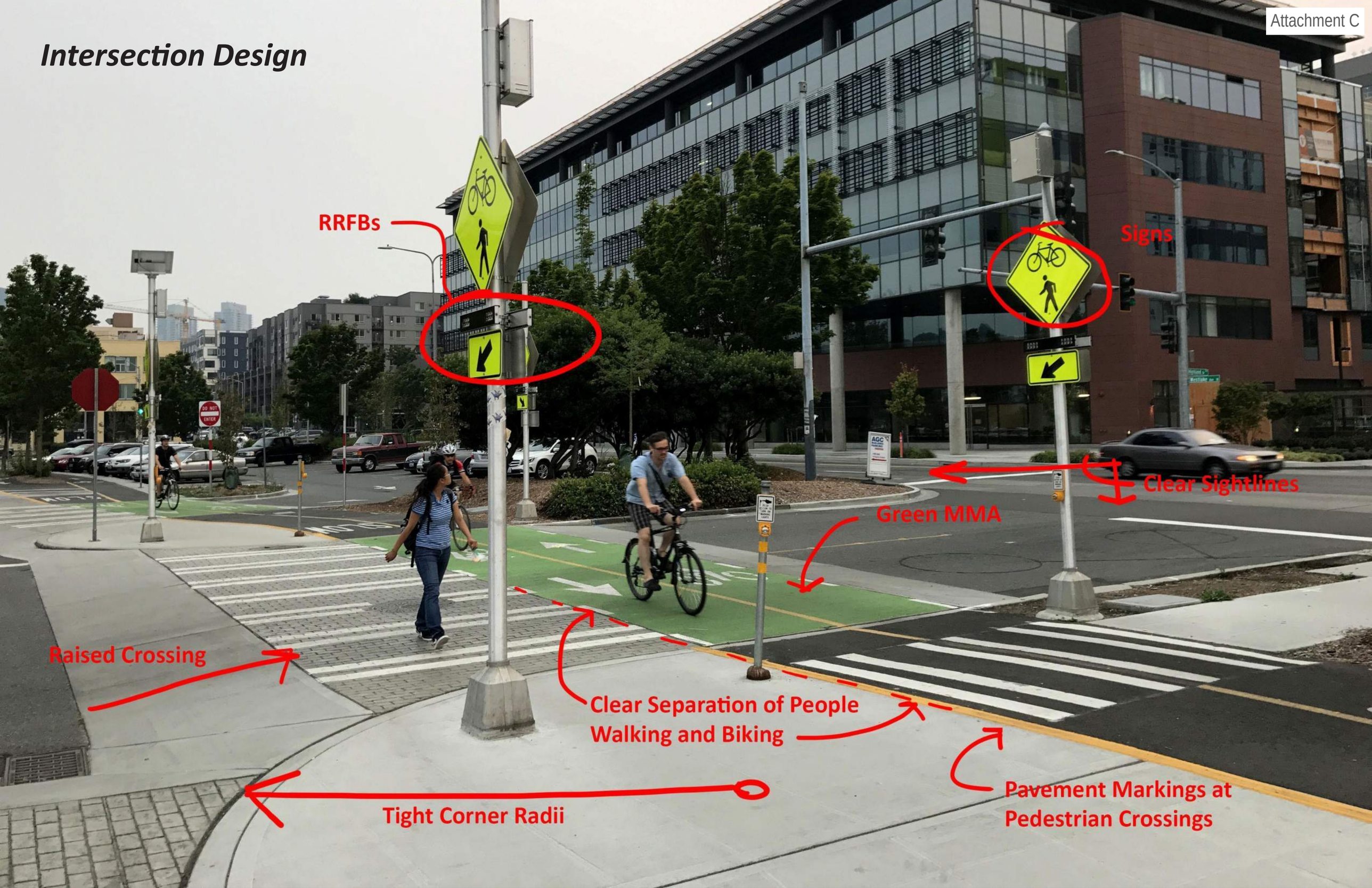
Pavement Markings

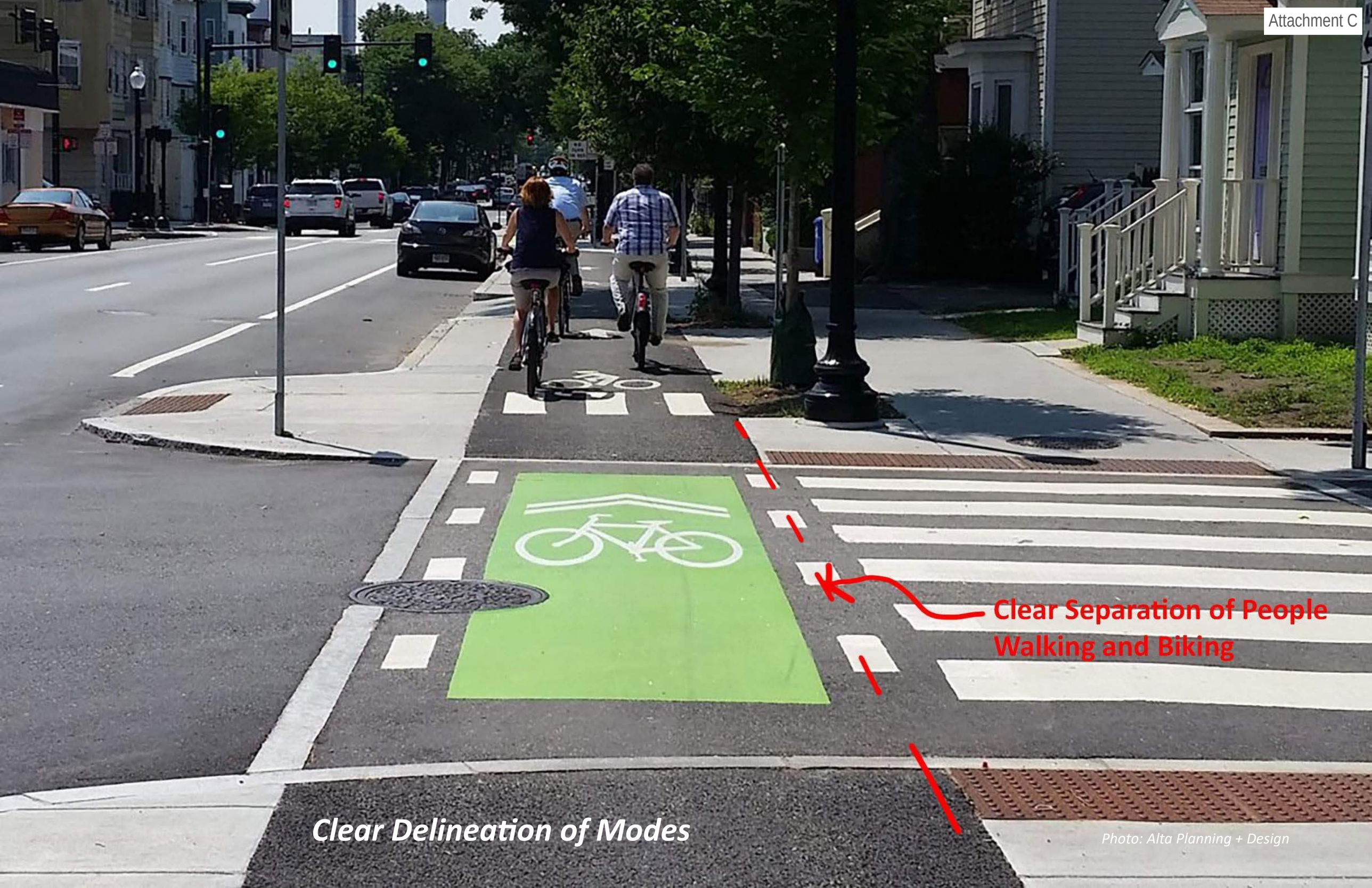
Methyl Methacrylate (MMA)

Attachment C

Driveways

Intersection Design





Clear Delineation of Modes

Photo: Alta Planning + Design

Pedestrian Crossings

Attachment C

People on foot should have priority

Pedestrian Safety

Attachment C

Pedestrian Safety

Attachment C

Connection at Sims Way

Wayfinding


HIGH TRAFFIC
BICYCLE
SLOW ZONE
PUSH BUTTON
FOR
NO DUMPING
STORM WATER
DRAINS TO RIVER

Wayfinding

Attachment C

Connection at Discovery Road

Attachment C

Connection at Discovery Road

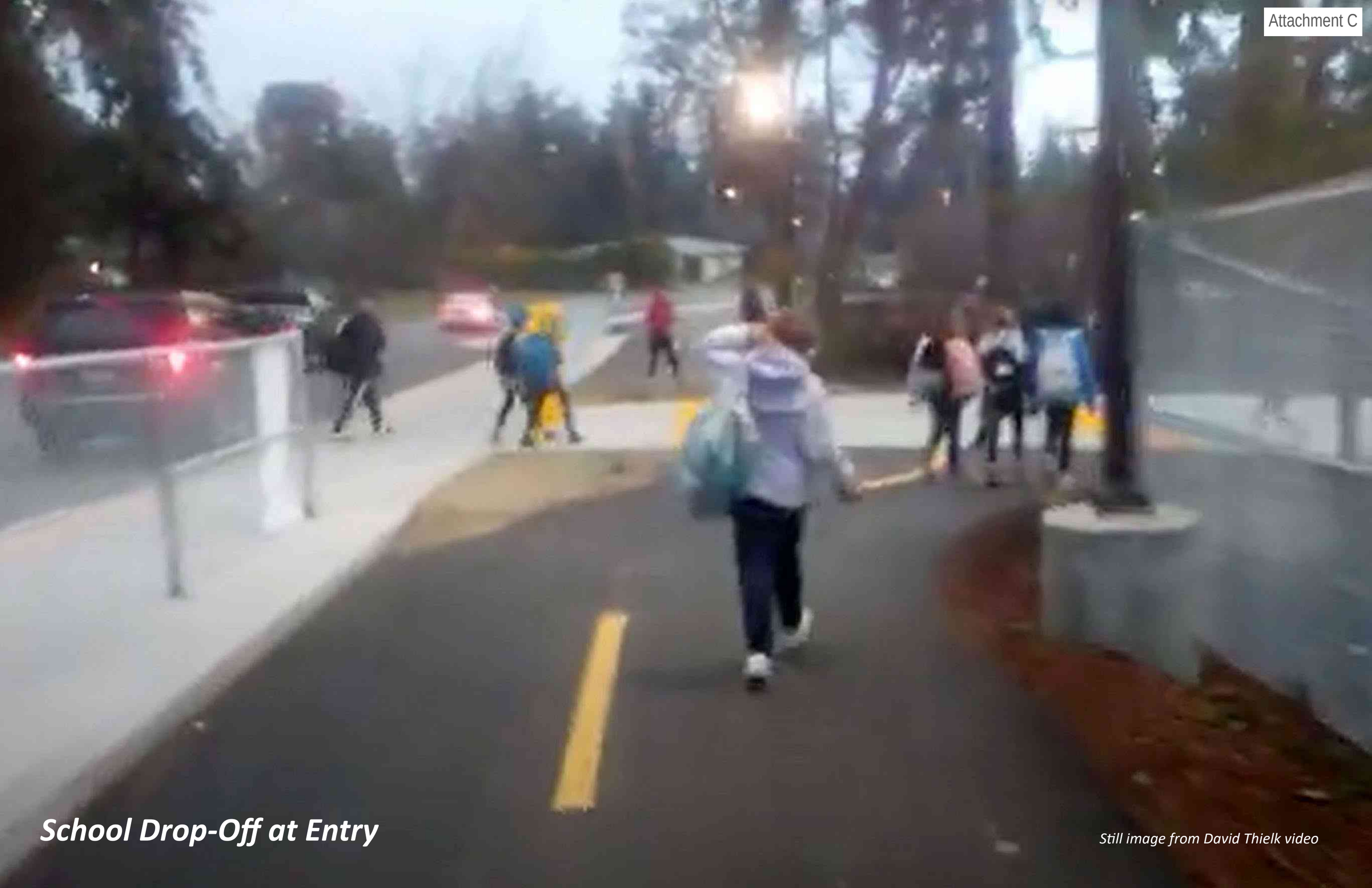
Attachment C

Questions or Comments?

Review of Salish Coast Elementary Cycle Track

Cross Section

Attachment C



School Drop-Off at Entry

Still image from David Thielk video

School Drop-off at Sherman Street

Attachment C

Sherman Street Connection

School Drop-Off at Sherman Street

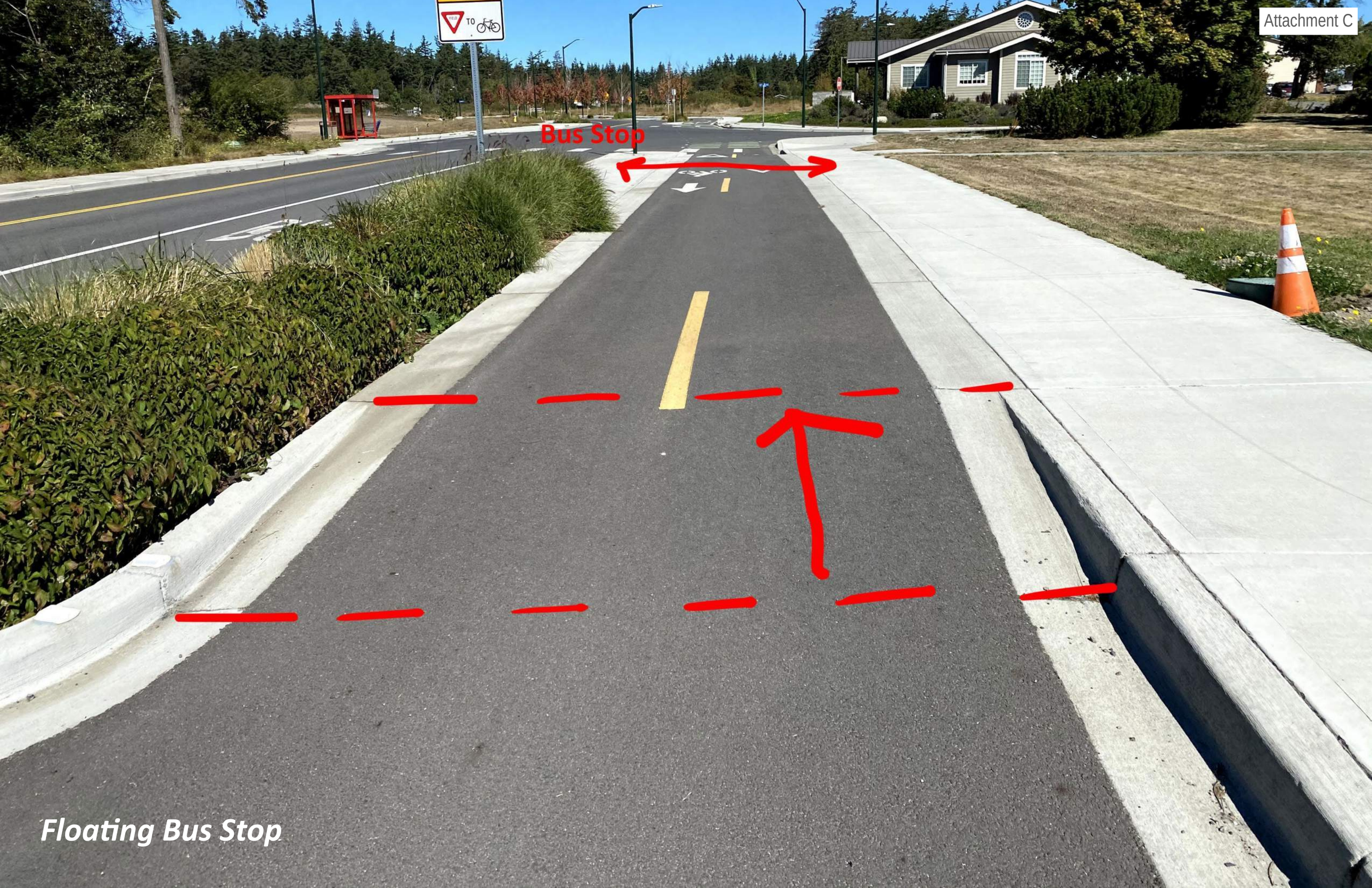
Still image from David Thielk video

Dismount Zones

Attachment C

Dismount Zones

Mixing Zones



Floating Bus Stop

Floating Bus Stop

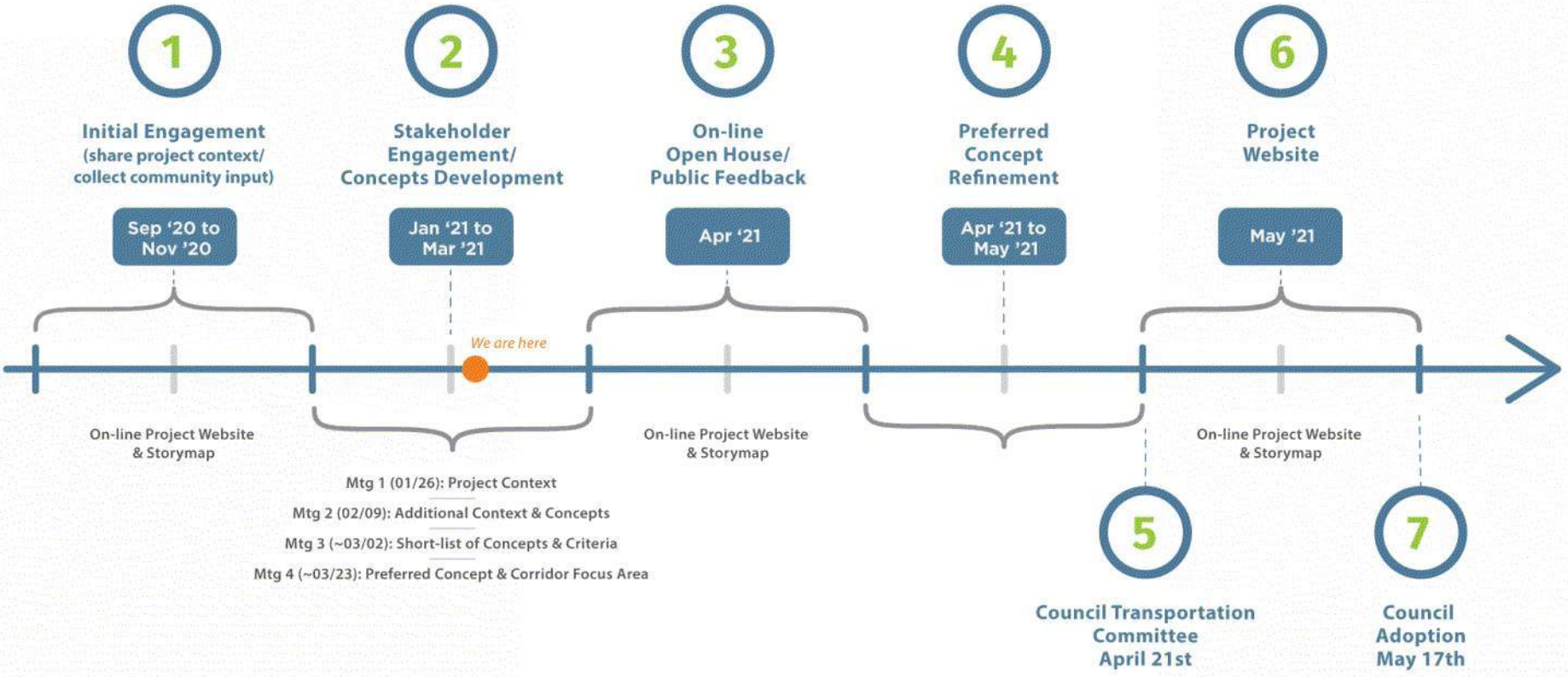
Attachment C

Floating Bus Stop

Transition at Grant

Comments?

Community Engagement and Concept Adoption



Discovery Road Bikeway and Sidewalks Project
Stakeholders Meeting 3 - Online
Wednesday, February 24, 2021 | 5:00 – 7:00 PM

Meeting Link: Join Zoom Meeting

https://scj.zoom.us/j/98018160994?pwd=L1k4SFFxR1phQVZxaFd2Tzg0MVFZZz09#success

Phone Only: 1-312-626-6799
Passcode: 422753

AGENDA

I. WELCOME (Laura) 5:00
- Meeting Objective
- Agenda Review
- Updates (Steve)

II. STAKEHOLDERS GO AROUND (2 minutes/person) 5:15
- If you were to pick one physical feature to include in the design, what would it be?
- Why is this an important feature to you?
- What personal value makes this feature of significance to you?

III. CRITERIA TO SELECT PREFERRED ALTERNATIVE 5:35
- Build criteria table: (Scott/Laura)
  - Stakeholder (+ design team) go around – 2 minutes/person
  - Draft criteria list / Google docs – whiteboard
  - Weighting of criteria (Scott)

IV. BRAINSTORM ALTERNATIVES 6:15
- Build alternatives using StreetMix (Scott/Laura)
  - StreetMix intro
  - Stakeholder go around – 2 minutes/person

V. WRAP UP SUMMARY & NEXT STEPS (Laura) 6:45
- Recap
- Next steps and Meeting 4 goals
- Confirm Meeting 4 date and time

VI. ADJOURN 7:00p

Stakeholders:

1. Chris Overman, Adjacent resident – Towne Point
2. Ed Stegall, neighbor, ATAB member
3. Joe Finn, pedestrian advocate
4. Lisa Condran, Principal of Salish Coast Elementary School
5. Owen Rowe, City Council Member - Transportation Committee
6. Pat Teal, DASH president, ATAB member
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Consultant Team:

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1. City Engineer, Dave Peterson, PE
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   lparsons@cityofpt.us 360-379-4432

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MEETING NOTES

STAKEHOLDERS GO AROUND

- If you were to pick one physical feature to include in the design, what would it be?
- Why is this an important feature to you?
- What personal value makes this feature of significance to you?

- (Joe) High visibility marked crosswalks with curb cuts.
- (Joe) Need traffic calming for eastbound traffic approaching from the west of the school.
- (Owen) Traffic calming measures (i.e, reduced sight lines) to reduce speeds to make things safer for bikes and peds. Drivers should not feel comfortable exceeding the speed limit. Create a walkable street.
- (Pat) Sidewalks on both sides of the street, especially for wheelchairs. Crosswalks. Traffic calming.
- (Pete) Crosswalks to connect north and south sides of Discovery. Intersection design to make things clear/safe for all users. Likes the speed table on F Street.
- (Ed) Good connections (to existing facilities) so it is easy for all users to move east-west and north-south.
- (Scott W) Physical separation between modes for safety/perceived comfort (horizontal and/or vertical, vertical may be preferable with limited right of way). Traffic calming with visual cues, not with signage – sign clutter doesn't work. Uniformity with bicycle network throughout the city so it is self-educating to users.
- (Samantha) Sustainability, equality, beauty are important values to her. She tends to take a holistic view, so a single feature is hard to pick. Uniformity in networks/systems. Separation of modes. How do we add trees and greenery? Make facilities intuitive and clear to all users on what to do (throughout the city).
- (Sam) Sidewalks on both sides with a bike lane on either side. He values access. Towne Pointe should have lots of bikes and peds. Narrow the road width to calm speeds, encourage bike/peds, and increase comfort. Discovery Road/14th Street has bad sight lines to see bikes/peds (on south side) for cars coming from the west.
- (Ed) Unimproved trail at (14th Avenue on the south side of Discovery Road) could be connected to provide a bypass if people don't want to mix with kids on the cycle-track at the school.

- (Ed) Think about future traffic growth in design.

CRITERIA TO SELECT PREFERRED ALTERNATIVE

- The Stakeholders provided feedback and input to a draft list of criteria (see Attachment A).
- The Project Team will use the feedback and input to create a proposed list of final criteria using the following filters:
    - All criteria are important, but does a particular criterion help create distinction between alternatives? If not, it is not useful for the alternative analysis.
    - Is a criterion measurable so performance scoring is defensible?
    - Can a criterion be combined with or represented by another criterion?
- Laura will email the proposed criteria list to the Stakeholders for review prior to Meeting 4.
- Scott S presented a tool (pair-wise comparison table) to establish weighting of the criteria (e.g., relative importance).
- Laura will email blank pair-wise comparison tables to the Stakeholders for each to complete and return to Laura.

BRAINSTORM ALTERNATIVES

- Using StreetMix, Scott S facilitated the development of alternatives by the Stakeholders. A total of seven alternatives were developed (see Attachment B).

WRAP UP SUMMARY & NEXT STEPS

- The Project Team will use the feedback and input to create a proposed list of final criteria using the following filters:
    - All criteria are important, but does a particular criterion help create distinction between alternatives? If not, it is not useful for the alternative analysis.
    - Is a criterion measurable so performance scoring is defensible?
    - Can a criterion be combined with or represented by another criterion?
- The Project Team will score the performance of alternatives by each criterion from the proposed list and factor by the weightings provided by the Stakeholders. If there are differences in weightings from the Stakeholders, the Project Team will develop two or more weighting schemes to reflect the different inputs from Stakeholders.
- The Project Team will vet the alternatives for fatal flaws relative to grant requirements.
- The Project Team will use the alternatives, proposed, pared-down criteria list, the criteria weighting, and performance scores (developed by the Project Team) to model the ranking of alternatives so the highest ranked alternatives can be presented during Meeting 4.
- Meeting 4 is scheduled for Tuesday, March 23, 2021 from 5:00 pm to 7:00 pm.

ADJOURN

Stakeholders:

1. Chris Overman, Adjacent resident – Towne Point
2. Ed Stegall, neighbor, ATAB member
3. Joe Finn, pedestrian advocate
4. Lisa Condran, Principal of Salish Coast Elementary School
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Bikeway Evaluation Matrix

Evaluation Criterion	Alternative A	Alternative B	Alternative C
Separation from drivers	●	◐	●
Separation from people walking	●	●	●
Number of street crossings	◐	●	◐
Type of street crossings	○	◐	●
Number of driveway crossings	●	◐	●
Connections to the immediate existing bikeways	●	●	◐
Suitability for related routes in the bike network	●	●	●
Directness and intuitiveness	◐	●	◐
Ease of access	◐	○	●
Access to important destinations	●	◐	●
Width	●	◐	○
Efficient use of right of way	●	●	◐
Ease of transit stop integration	○	●	◐
Critical area impacts	●	○	●
Ease of maintenance	○	◐	○

● **Good**

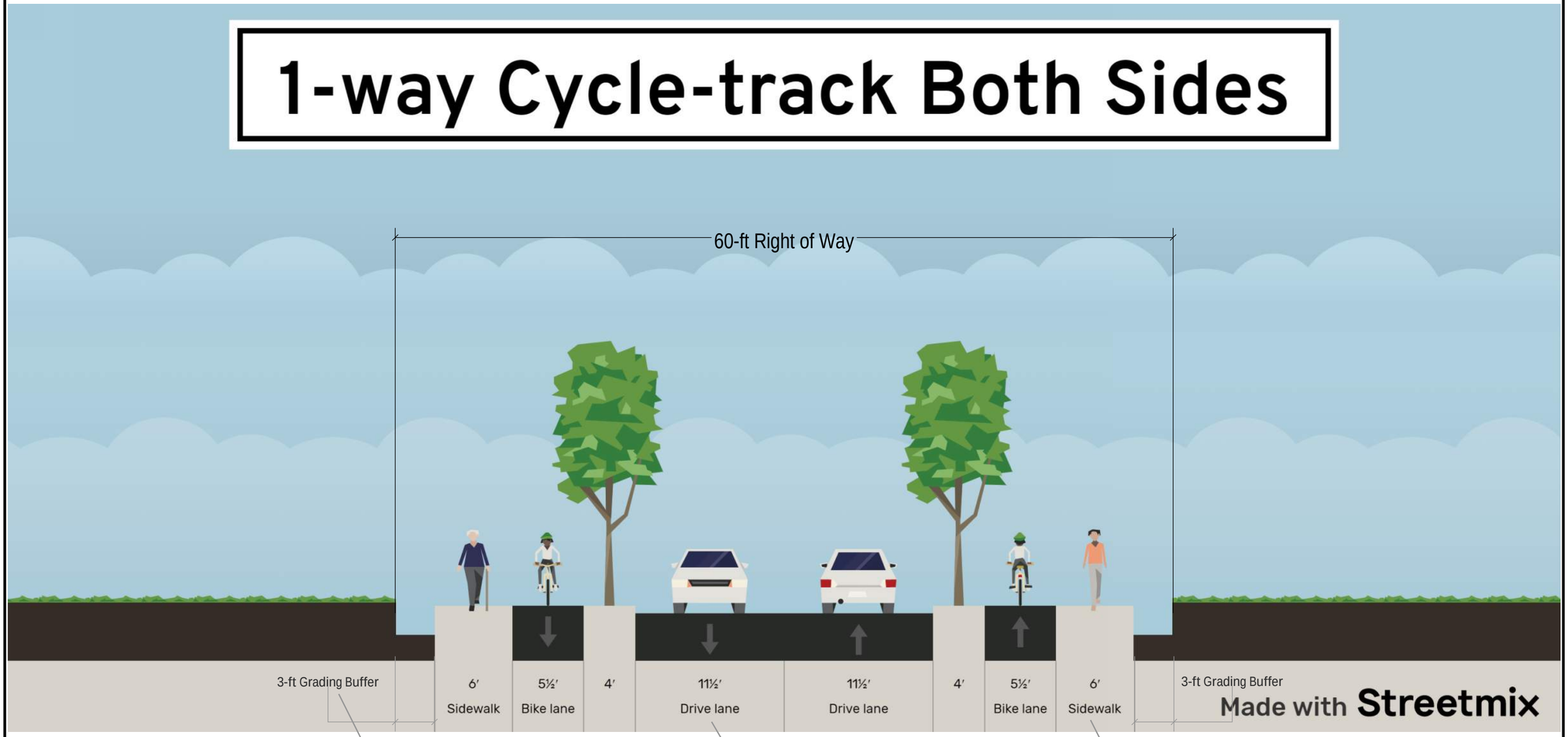
◐ **OK**

○ **Poor**

Appendix D

Original Roadway Cross-section Alternatives and Screened/Adjusted Alternatives

1-way Cycle-track Both Sides



3-ft buffer for grading to match existing, typical

10-ft travel lane with 1.5-ft curb & gutter, typical

5.5-ft sidewalk with 0.5-ft curb or flush banding, typical

SCJ ALLIANCE
CONSULTING SERVICES

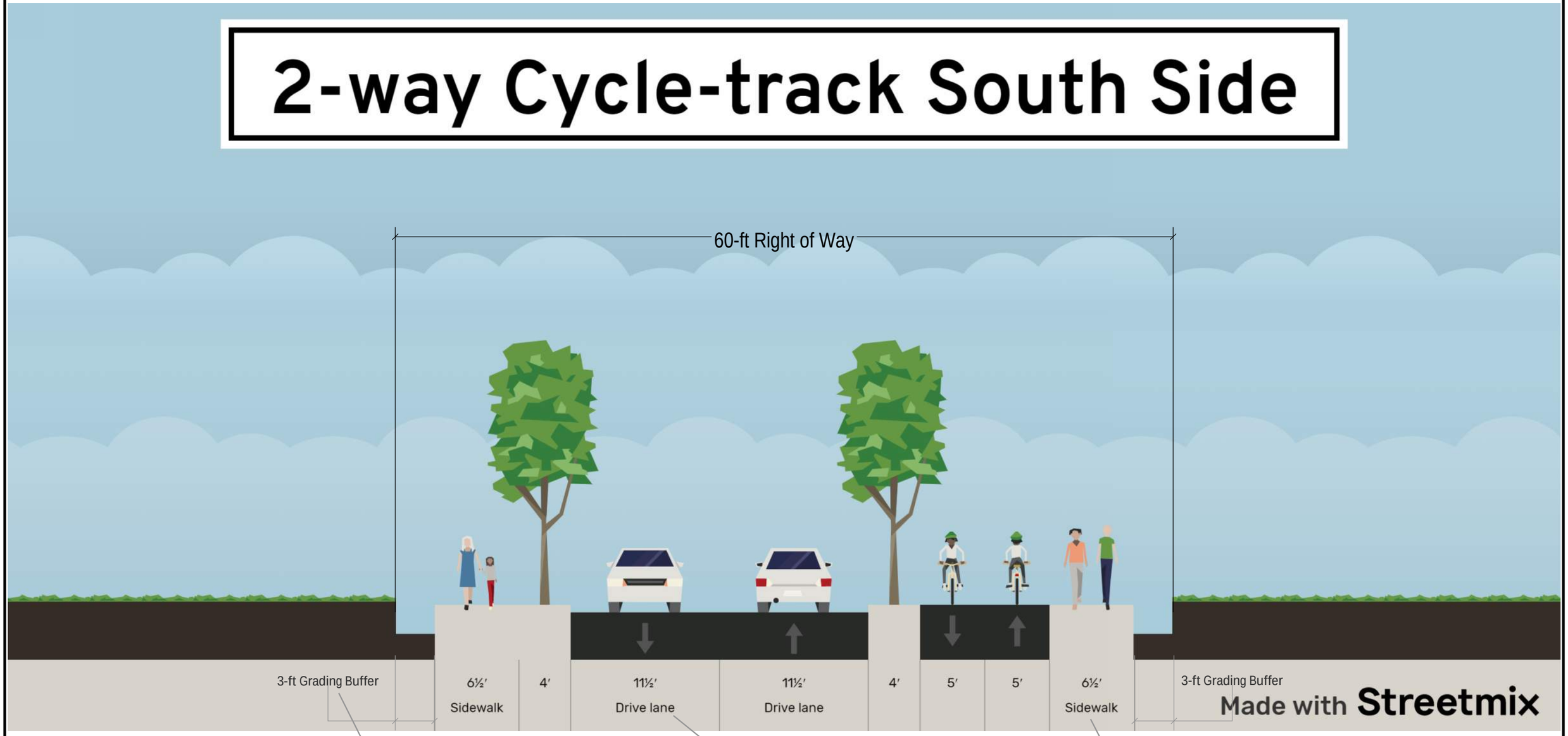
HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE A: 1-WAY CYCLE-TRACK BOTH SIDES

EXHIBIT No: EX-01

SHEET No: Sheet 1 of 7

2-way Cycle-track South Side



3-ft buffer for grading to match existing, typical

10-ft travel lane with 1.5-ft curb & gutter, typical

6.0-ft sidewalk with 0.5-ft curb or flush banding

SCJ ALLIANCE
CONSULTING SERVICES

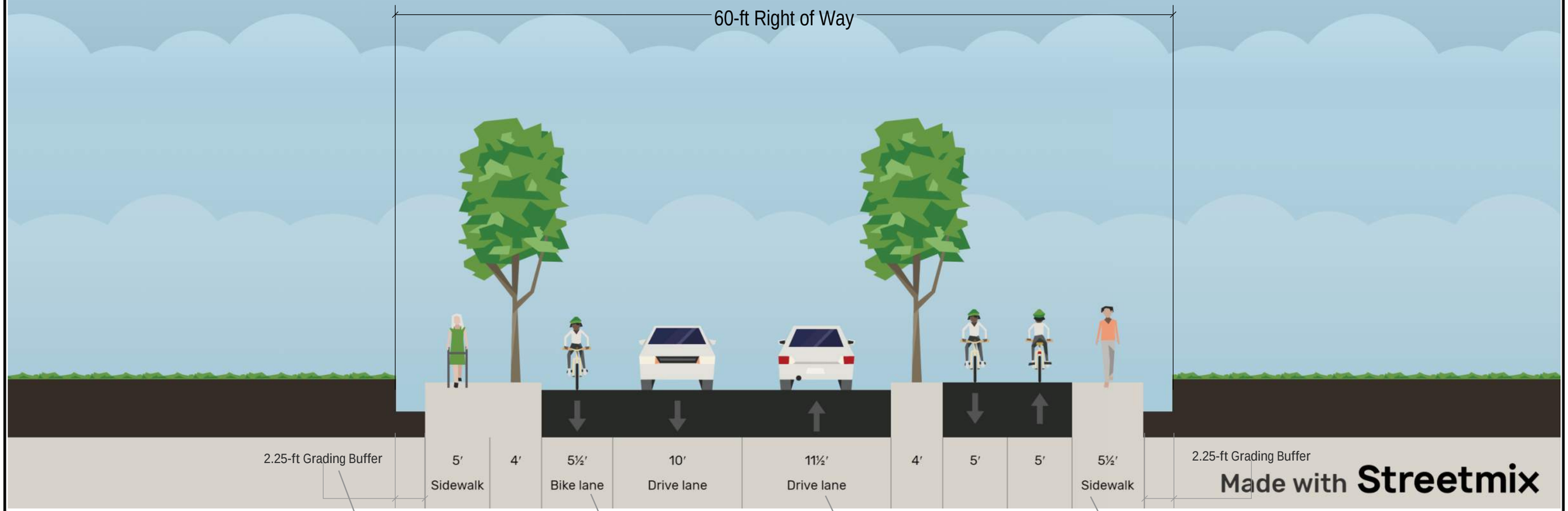
HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE B: 2-WAY CYCLE-TRACK SOUTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 2 of 7

2-way Cycle-track South w/ On-street...



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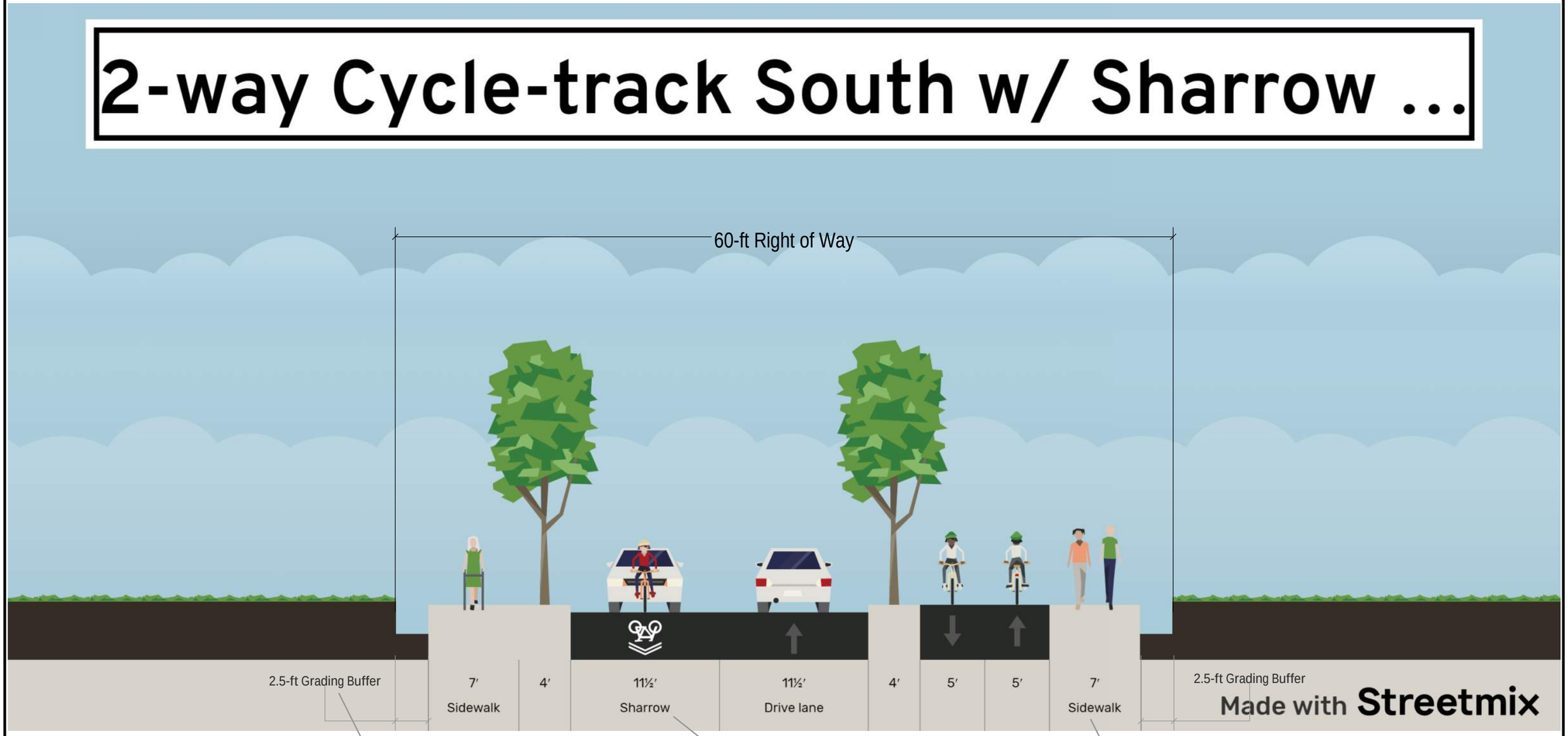
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE C: 2-WAY CYCLE-TRACK SOUTH SIDE W/ ON-STREET BIKE LANE NORTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 3 of 7

2-way Cycle-track South w/ Sharrow ...



2.5-ft buffer for grading to match existing, typical

10-ft travel lane with 1.5-ft curb & gutter, typical

6.5-ft sidewalk with 0.5-ft curb or flush banding

SCJ ALLIANCE
CONSULTING SERVICES

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DATE:	February 25, 2021
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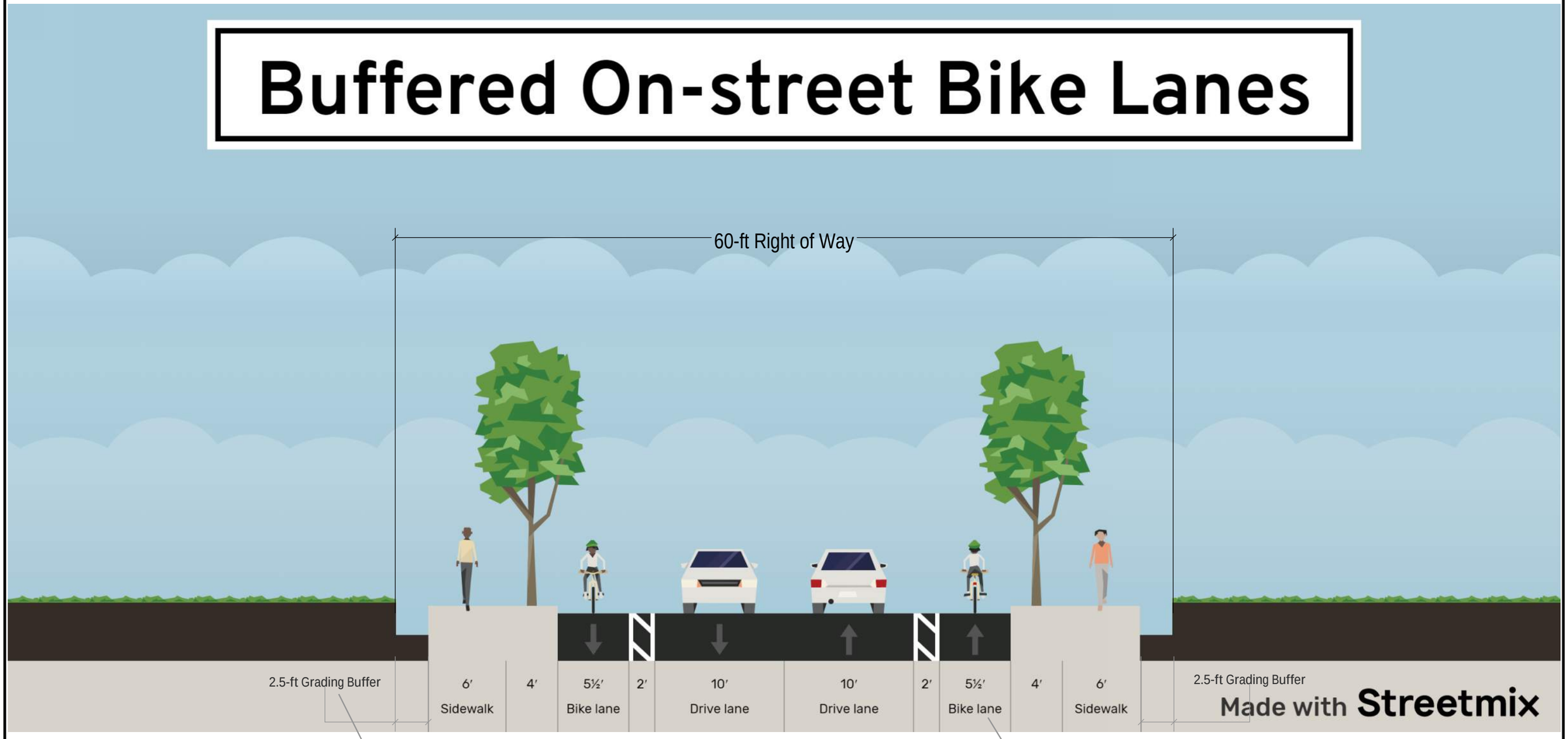
CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE D: 2-WAY CYCLE-TRACK SOUTH SIDE WITH SHARROW NORTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 4 of 7

Buffered On-street Bike Lanes



2.5-ft buffer for grading to match existing, typical

5.0-ft bike lane with 0.5-ft curb, typical

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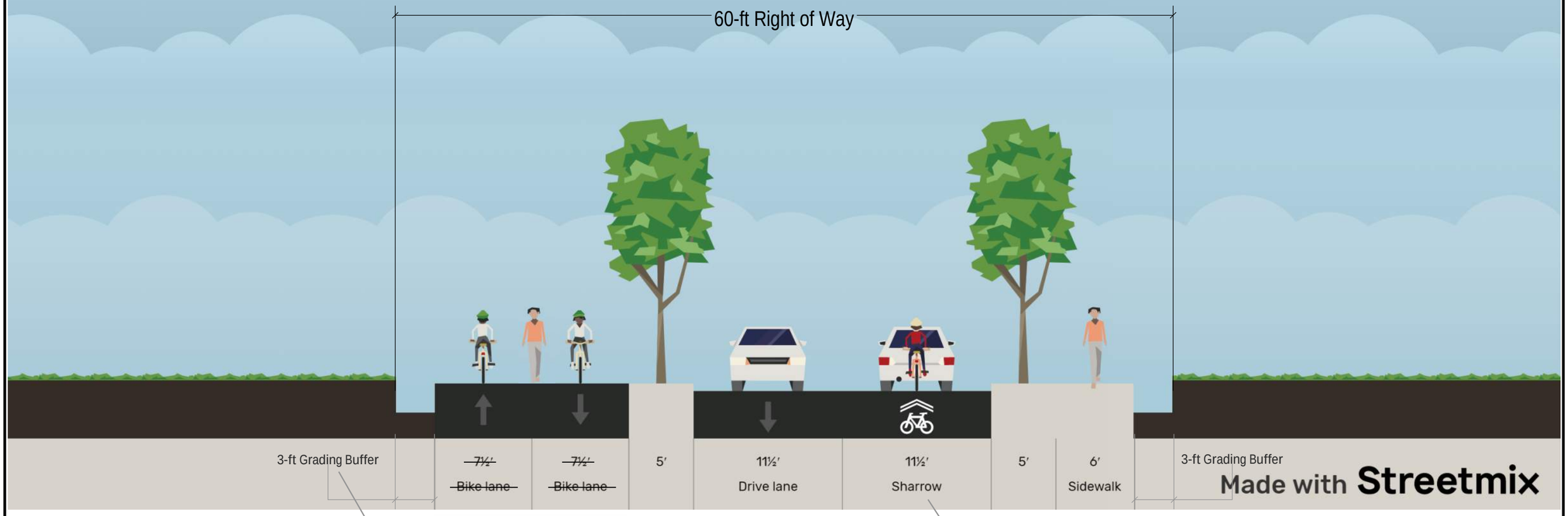
CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE E: BUFFERED ON-STREET BIKE LANES BOTH SIDES

EXHIBIT No: EX-01

SHEET No: Sheet 5 of 7

Shared Use Path North w/ Sharrow So...



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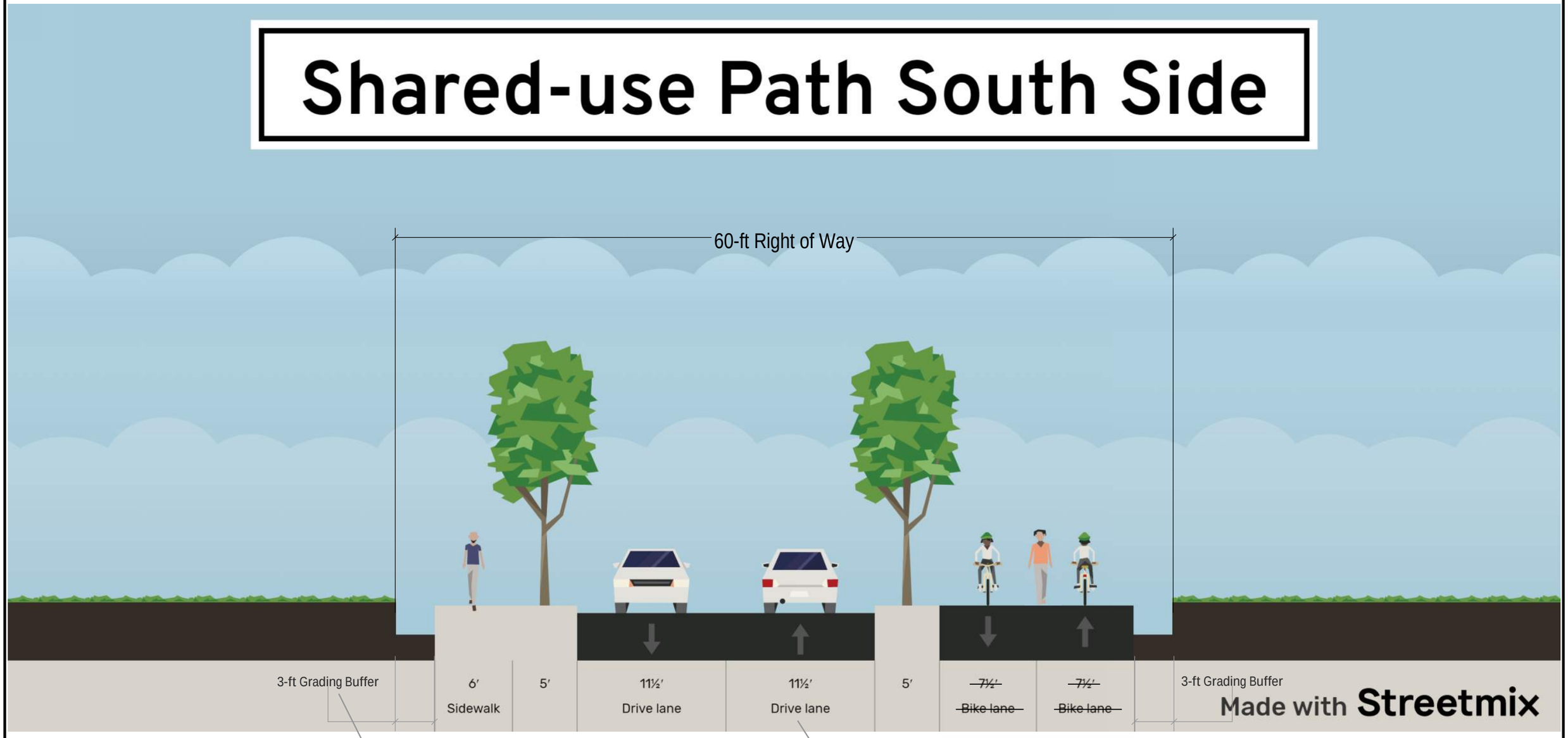
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE F: SHARED USE PATH NORTH SIDE WITH SHARROW SOUTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 6 of 7

Shared-use Path South Side



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CONSULTING SERVICES

HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE G: SHARED USE PATH SOUTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 7 of 7

March 2, 2021

Discovery Road Bikeway and Sidewalk Project

Alternatives Analysis – Alternatives

Screened Alternatives from Meeting 3

- Alternative 1: 1-way Cycle-track Both Sides
- Alternative 2: 2-way Cycle-track South Side
- ~~Alternative 3: 2-way Cycle-track South Side w/ On-street Bike Lane North Side~~
- Alternative 4: 2-way Cycle-track South Side w/ Wider Lane North Side
- Alternative 5: Buffered On-street Bike Lane Both Sides
- Alternative 6: Shared Use Path North Side w/ Wider Lane South Side
- Alternative 7: Shared Use Path South Side

Desired Outcomes

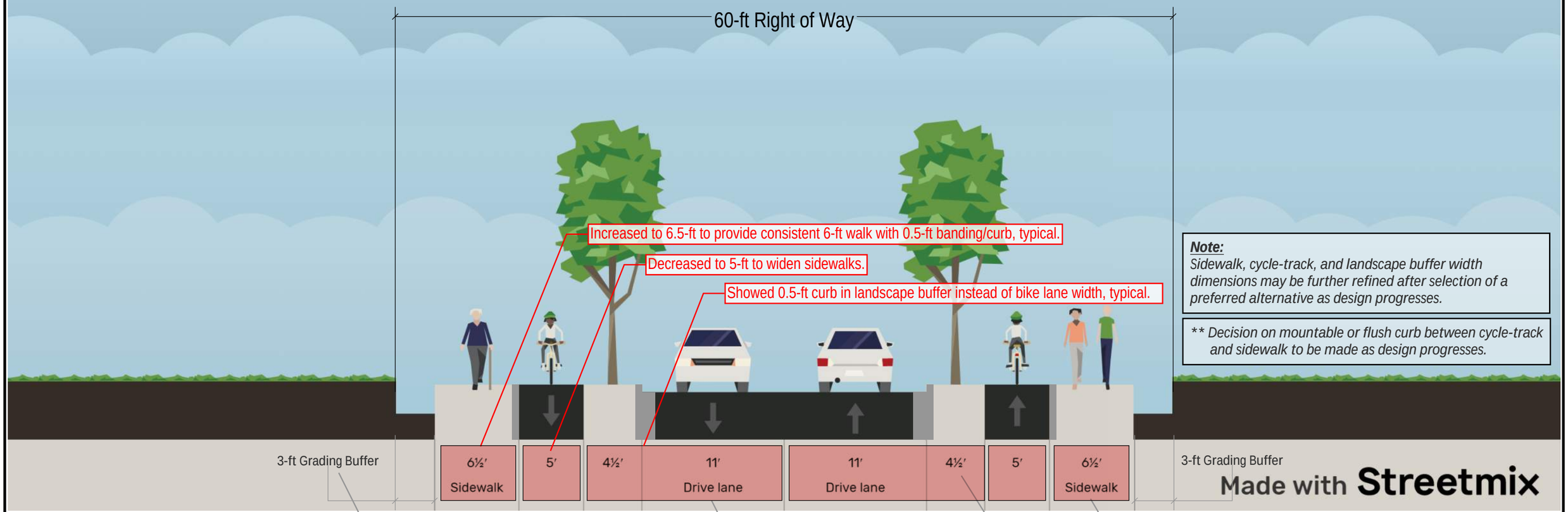
Safety: *Establish a lower-speed roadway with safety considered for all modes/users and prioritized for peds and bikes.*

Comfort: *Provide a user-experience for peds and bike that is perceived as comfortable for a wide-range of user skills and abilities.*

Appearance: *Create a human-scale sense of place that feels authentic to Port Townsend and strives for beauty.*

Commented [SS1]: There is not enough space to accommodate all elements with reasonably minimal dimensions. Using reasonably minimal dimensions ends up basically the same as Alternative D.

1-way Cycle-track Both Sides



Note:
Sidewalk, cycle-track, and landscape buffer width dimensions may be further refined after selection of a preferred alternative as design progresses.

*** Decision on mountable or flush curb between cycle-track and sidewalk to be made as design progresses.*

3-ft buffer for grading to match existing, typical

10-ft travel lane plus 1.0-ft gutter pan to curb face, typical

4-ft landscape buffer plus 0.5-ft curb, typical

*6-ft sidewalk with 0.5-ft mountable curb or flush banding, typical***

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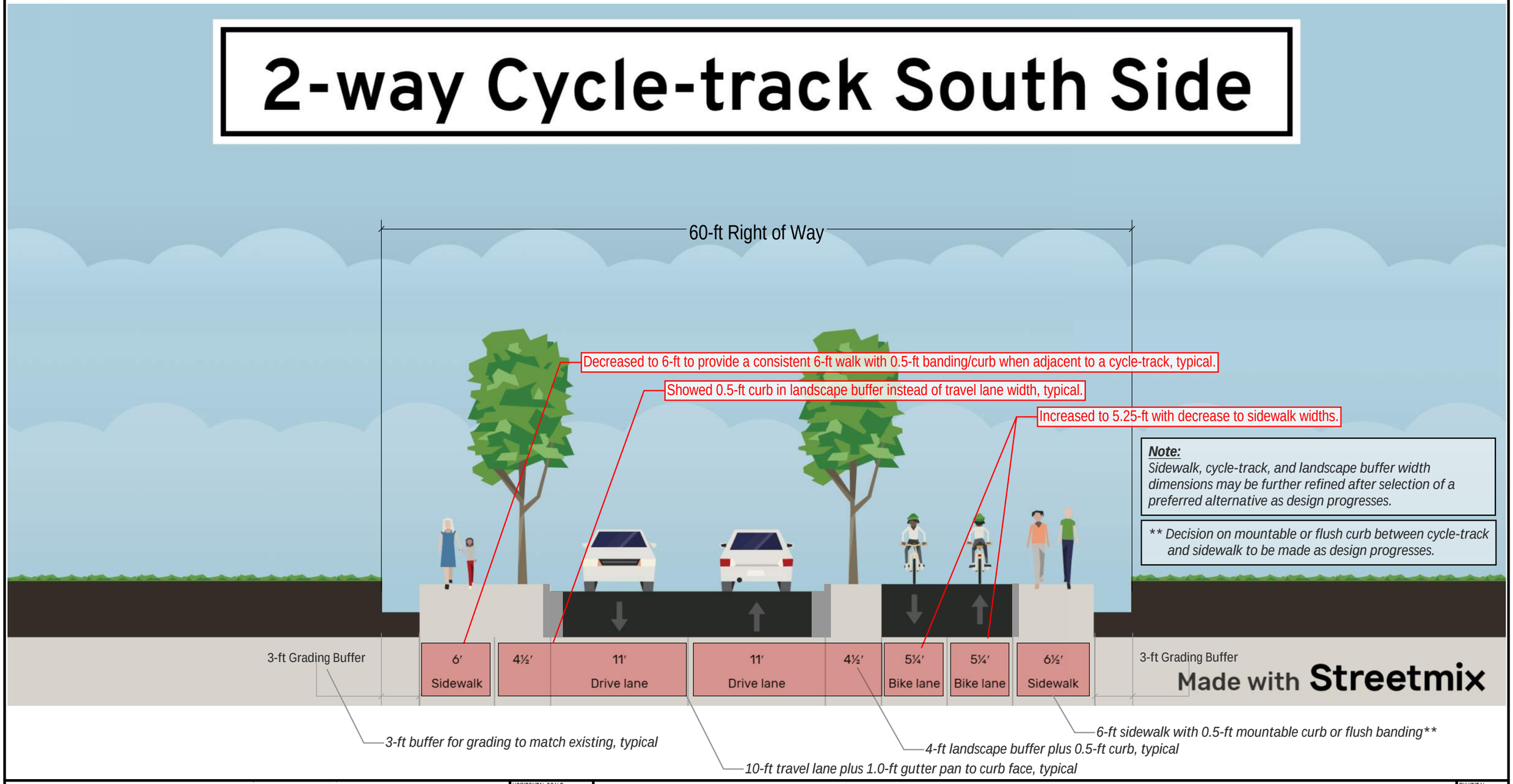
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 1: 1-WAY CYCLE-TRACK BOTH SIDES

EXHIBIT No: EX-01

SHEET No: Sheet 1 of 7

2-way Cycle-track South Side



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HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 2: 2-WAY CYCLE-TRACK SOUTH SIDE

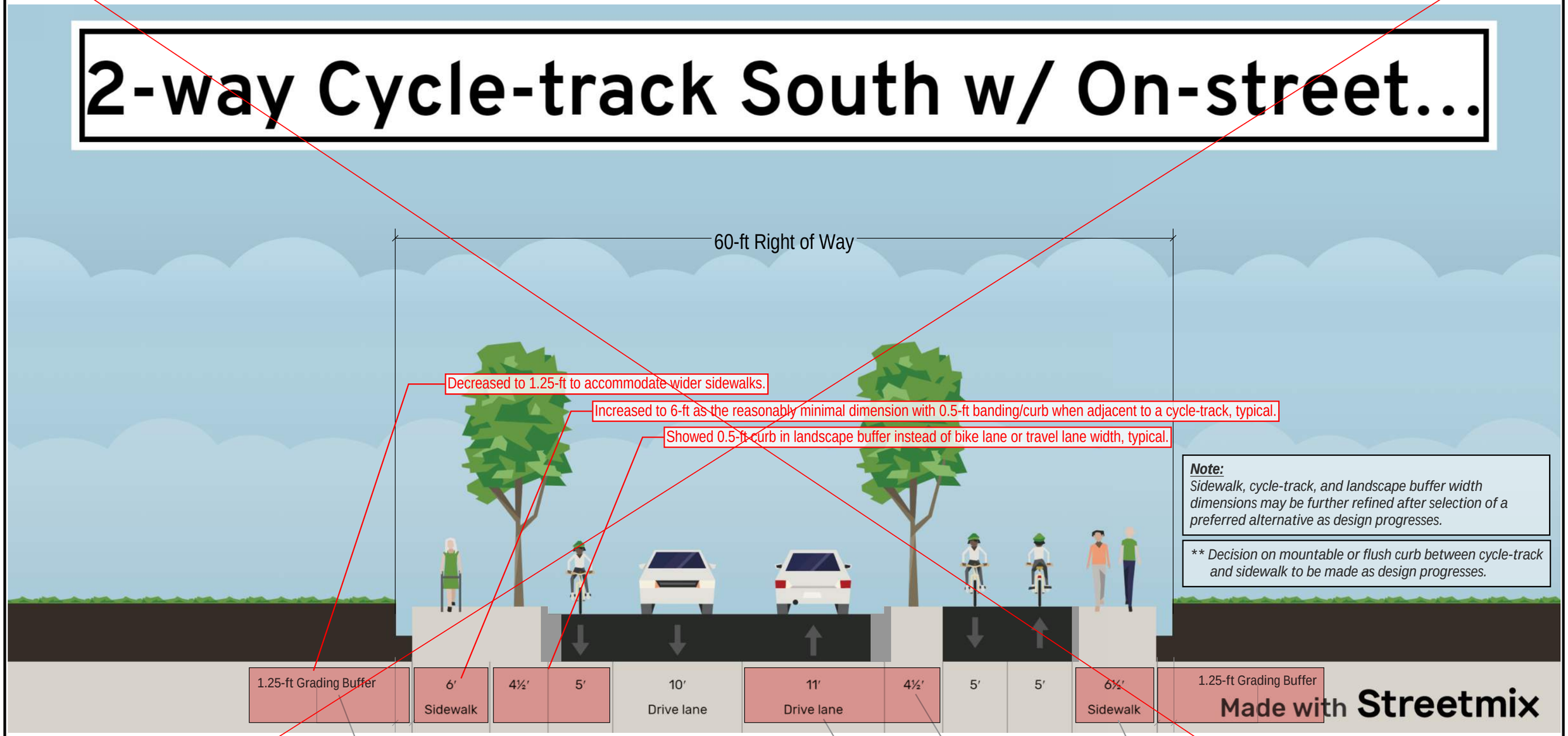
EXHIBIT No: EX-01

SHEET No: Sheet 2 of 7

Attachment D

There is not enough space to accommodate all elements with reasonably minimal dimensions. Using reasonably minimal dimensions ends up basically the same as Alternative D.

2-way Cycle-track South w/ On-street...



Note:
Sidewalk, cycle-track, and landscape buffer width dimensions may be further refined after selection of a preferred alternative as design progresses.

*** Decision on mountable or flush curb between cycle-track and sidewalk to be made as design progresses.*

*6-ft sidewalk with 0.5-ft mountable curb or flush banding***

4-ft landscape buffer plus 0.5-ft curb, typical

10-ft travel lane plus 1.0-ft gutter pan to curb face

1.25-ft buffer for grading to match existing, typical

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CONSULTING SERVICES

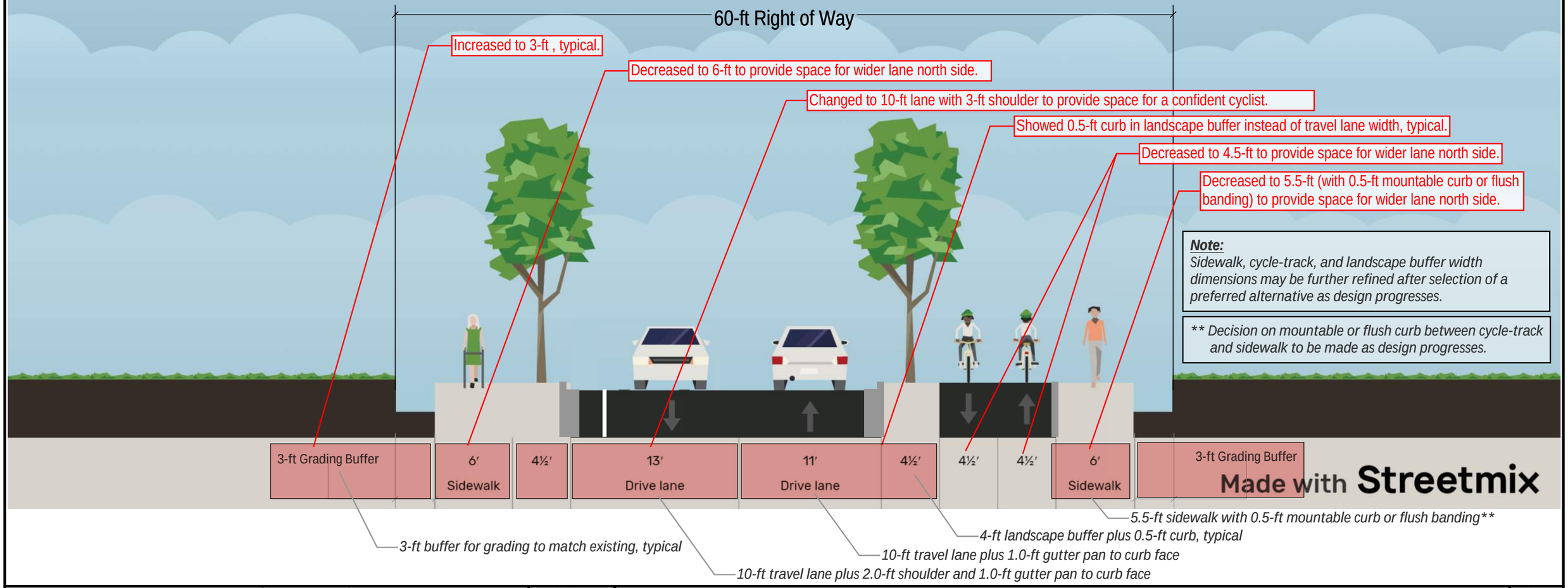
HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 3: 2-WAY CYCLE-TRACK SOUTH SIDE W/ ON-STREET BIKE LANE NORTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 3 of 7

2-way Cycle-track South w/ Wider La...



Note:
Sidewalk, cycle-track, and landscape buffer width dimensions may be further refined after selection of a preferred alternative as design progresses.

*** Decision on mountable or flush curb between cycle-track and sidewalk to be made as design progresses.*

SCJ ALLIANCE
CONSULTING SERVICES

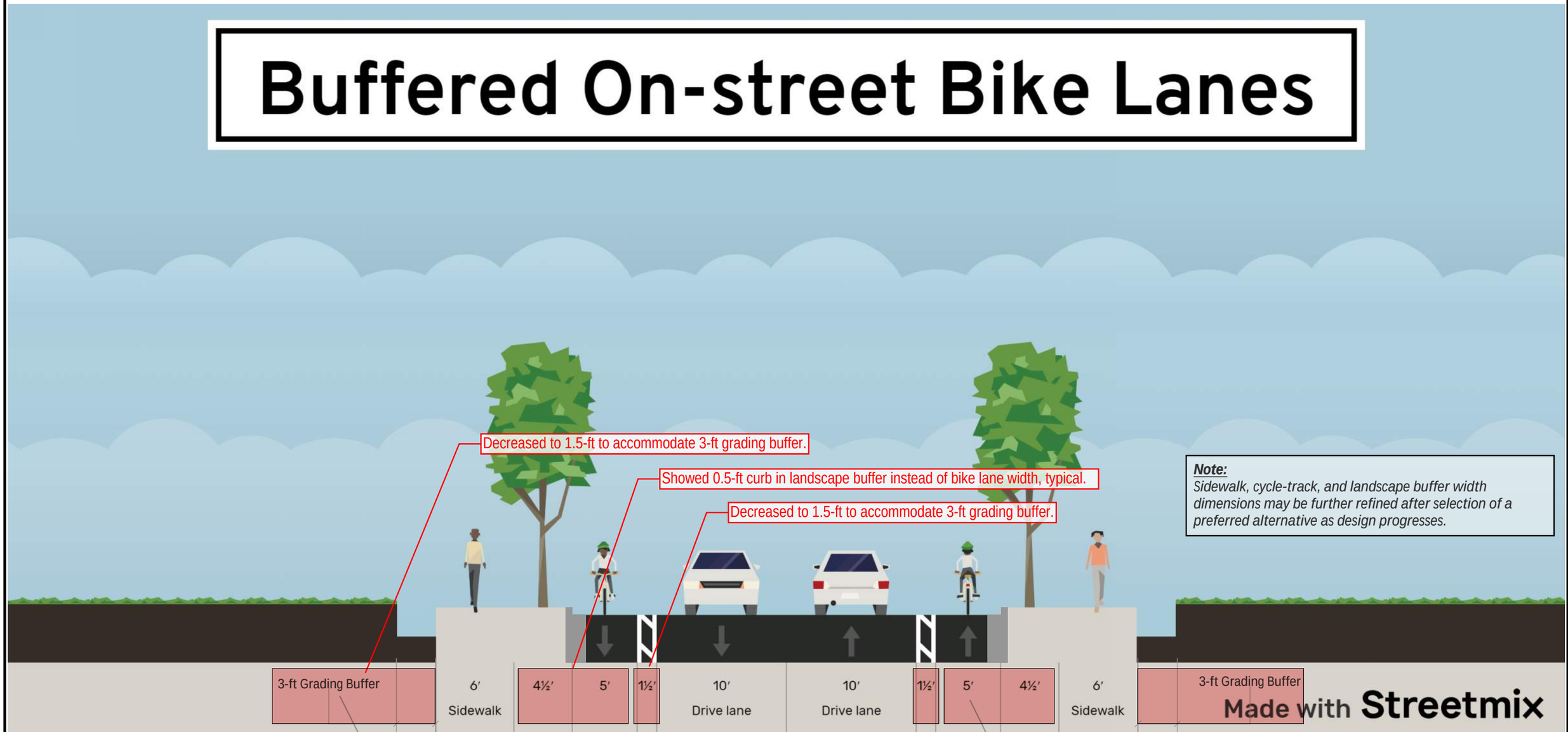
HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 4: 2-WAY CYCLE-TRACK SOUTH SIDE WITH WIDER LANE NORTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 4 of 7

Buffered On-street Bike Lanes



Note:
Sidewalk, cycle-track, and landscape buffer width dimensions may be further refined after selection of a preferred alternative as design progresses.

3-ft buffer for grading to match existing, typical

5.0-ft bike lane to curb face, typical

SCJ ALLIANCE
CONSULTING SERVICES

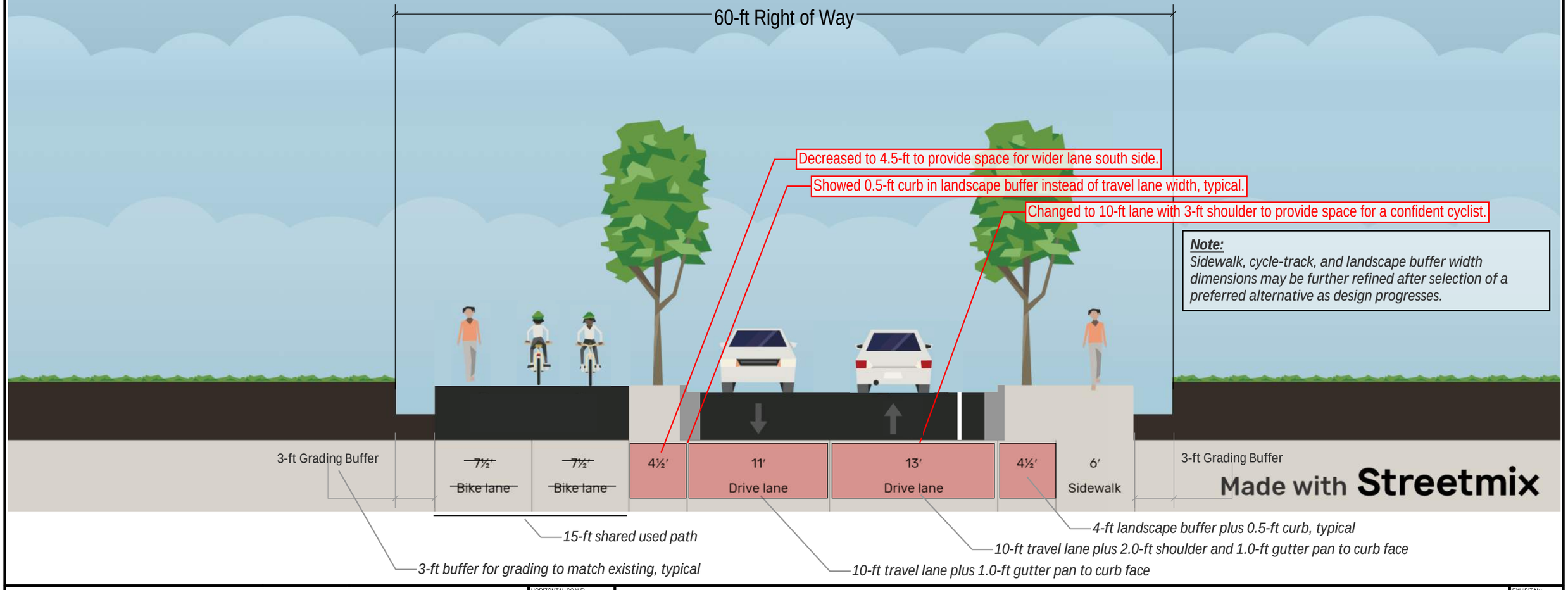
HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 5: BUFFERED ON-STREET BIKE LANES BOTH SIDES

EXHIBIT No: EX-01

SHEET No: Sheet 5 of 7

Shared Use Path North w/ Wider Lane ...



SCJ ALLIANCE
CONSULTING SERVICES

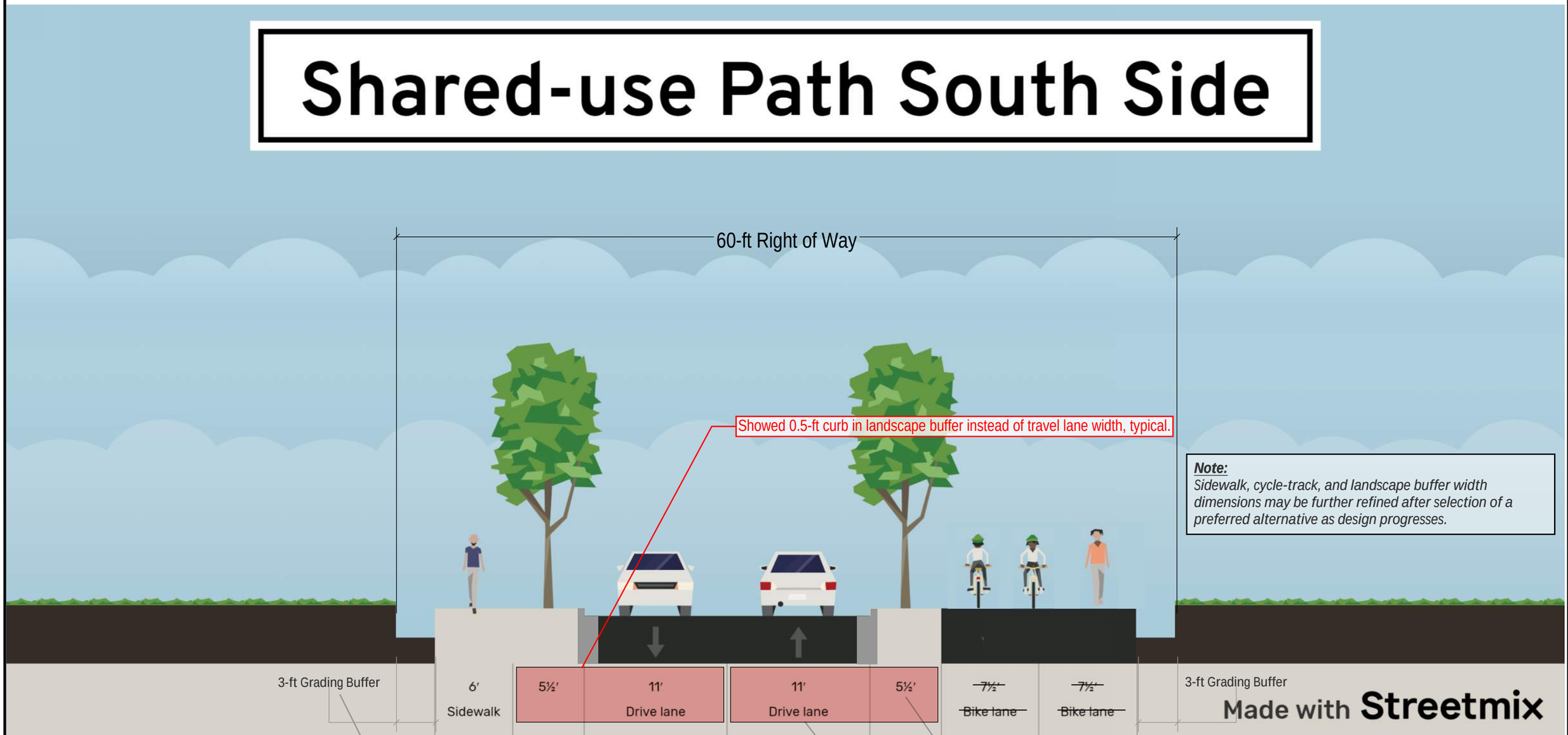
HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 6: SHARED USE PATH NORTH SIDE WITH WIDER LANE SOUTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 6 of 7

Shared-use Path South Side



Note:
Sidewalk, cycle-track, and landscape buffer width dimensions may be further refined after selection of a preferred alternative as design progresses.

SCJ ALLIANCE
CONSULTING SERVICES

HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 7: SHARED USE PATH SOUTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 7 of 7

Appendix E

Final Roadway Cross-section Alternatives

March 2, 2021

Discovery Road Bikeway and Sidewalk Project

Alternatives Analysis – Alternatives

Recommended Final Alternatives

- Alternative 1: 1-way Cycle-track Both Sides
- Alternative 2: 2-way Cycle-track South Side
- Alternative 4: 2-way Cycle-track South Side w/ Wider Lane North Side
- Alternative 5: Buffered On-street Bike Lane Both Sides
- Alternative 6: Shared Use Path North Side w/ Wider Lane South Side
- Alternative 7: Shared Use Path South Side

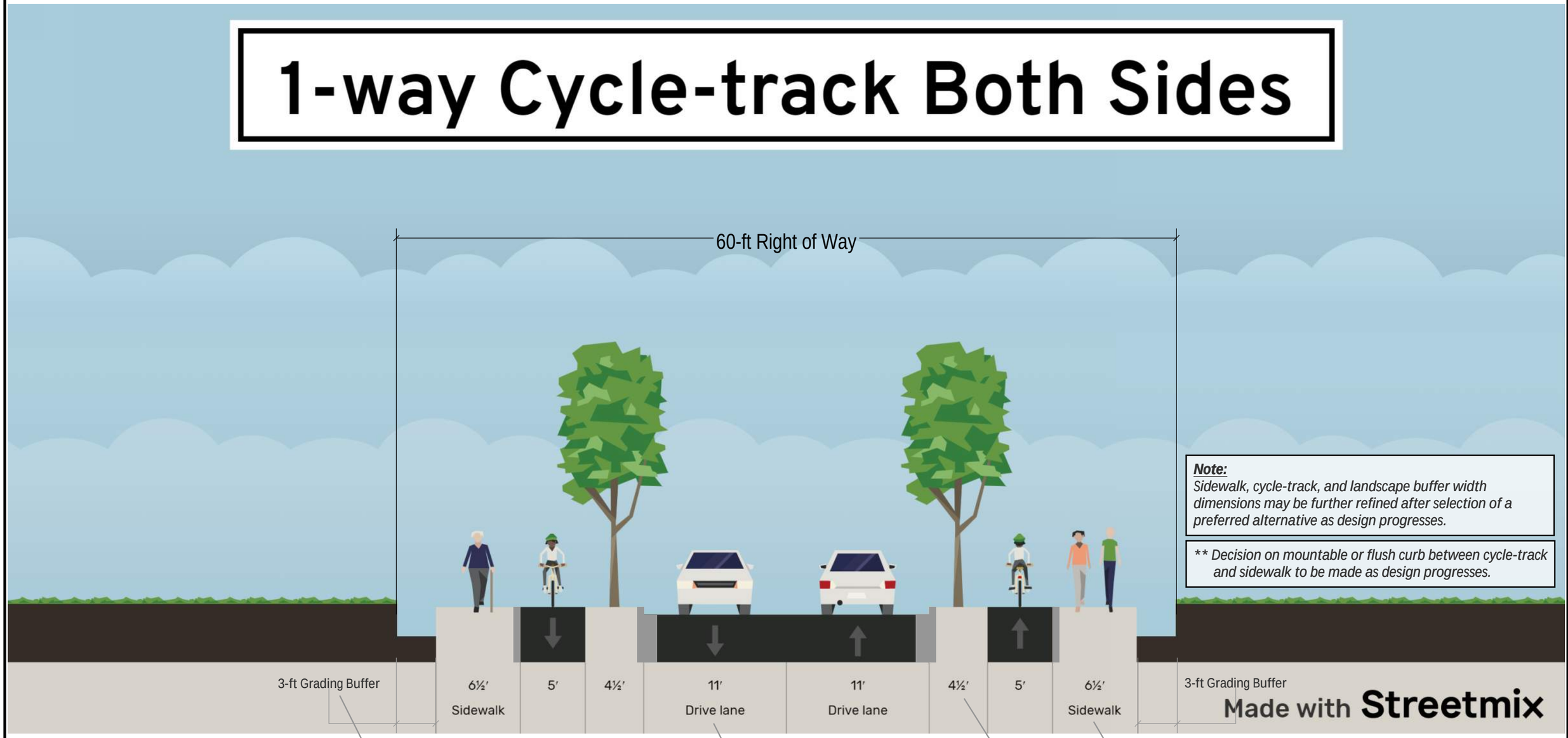
Desired Outcomes

Safety: *Establish a lower-speed roadway with safety considered for all modes/users and prioritized for peds and bikes.*

Comfort: *Provide a user-experience for peds and bike that is perceived as comfortable for a wide-range of user skills and abilities.*

Appearance: *Create a human-scale sense of place that feels authentic to Port Townsend and strives for beauty.*

1-way Cycle-track Both Sides



Note:
Sidewalk, cycle-track, and landscape buffer width dimensions may be further refined after selection of a preferred alternative as design progresses.

*** Decision on mountable or flush curb between cycle-track and sidewalk to be made as design progresses.*

SCJ ALLIANCE
CONSULTING SERVICES

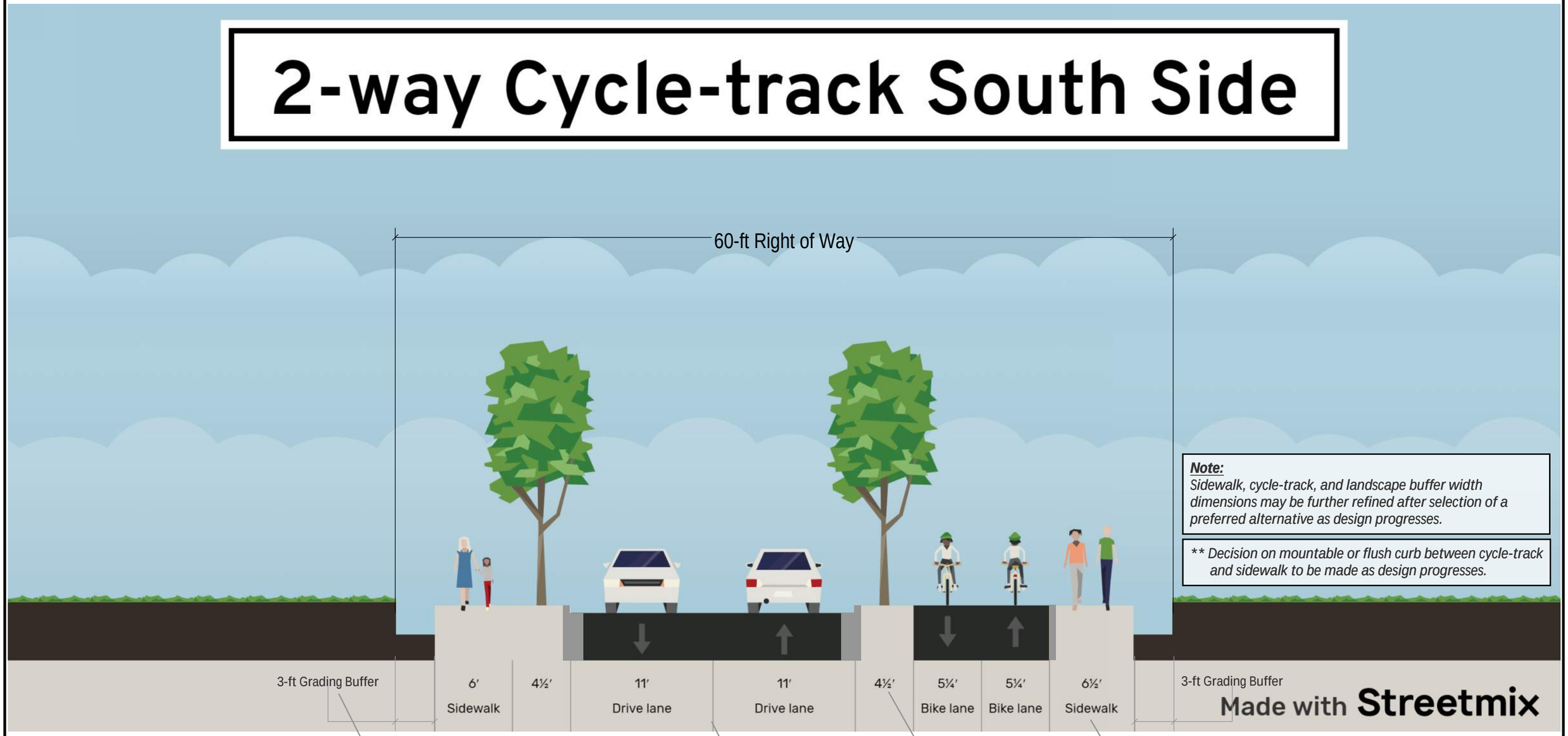
HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 1: 1-WAY CYCLE-TRACK BOTH SIDES

EXHIBIT No: EX-01

SHEET No: Sheet 1 of 7

2-way Cycle-track South Side



Note:
Sidewalk, cycle-track, and landscape buffer width dimensions may be further refined after selection of a preferred alternative as design progresses.

*** Decision on mountable or flush curb between cycle-track and sidewalk to be made as design progresses.*

SCJ ALLIANCE
CONSULTING SERVICES

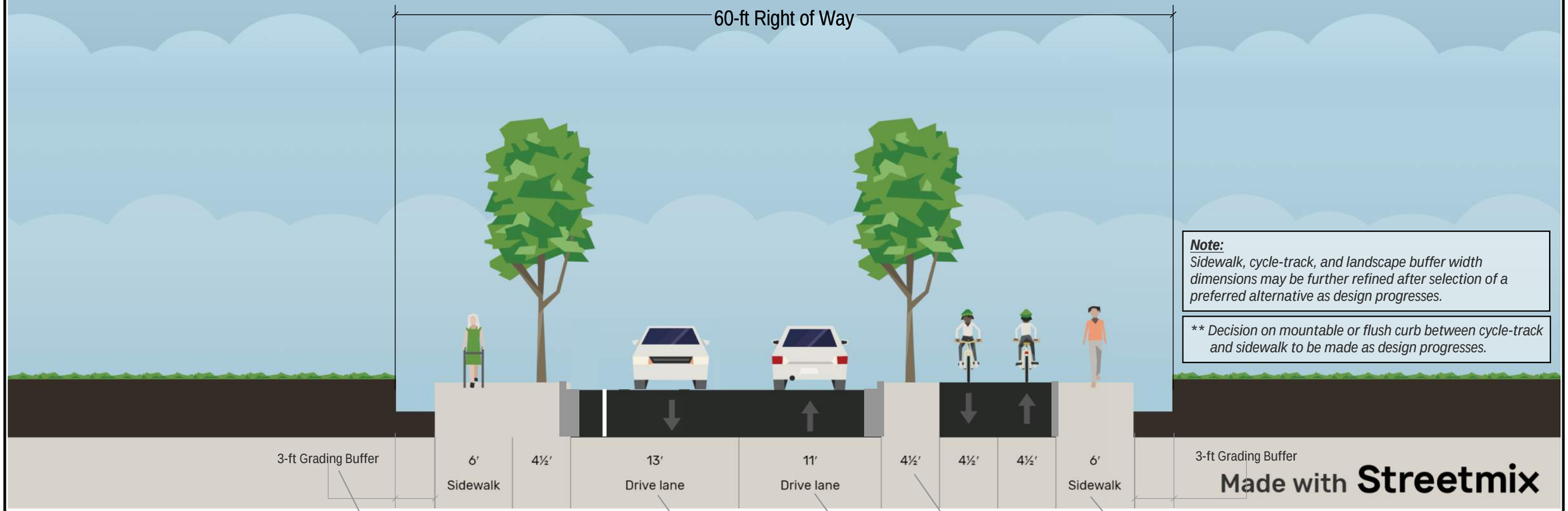
HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 2: 2-WAY CYCLE-TRACK SOUTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 2 of 7

2-way Cycle-track South w/ Wider La...



Note:
Sidewalk, cycle-track, and landscape buffer width dimensions may be further refined after selection of a preferred alternative as design progresses.

*** Decision on mountable or flush curb between cycle-track and sidewalk to be made as design progresses.*

SCJ ALLIANCE
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HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 4: 2-WAY CYCLE-TRACK SOUTH SIDE WITH WIDER LANE NORTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 4 of 7

Buffered On-street Bike Lanes

Note:
Sidewalk, cycle-track, and landscape buffer width dimensions may be further refined after selection of a preferred alternative as design progresses.

3-ft buffer for grading to match existing, typical

5.0-ft bike lane to curb face, typical

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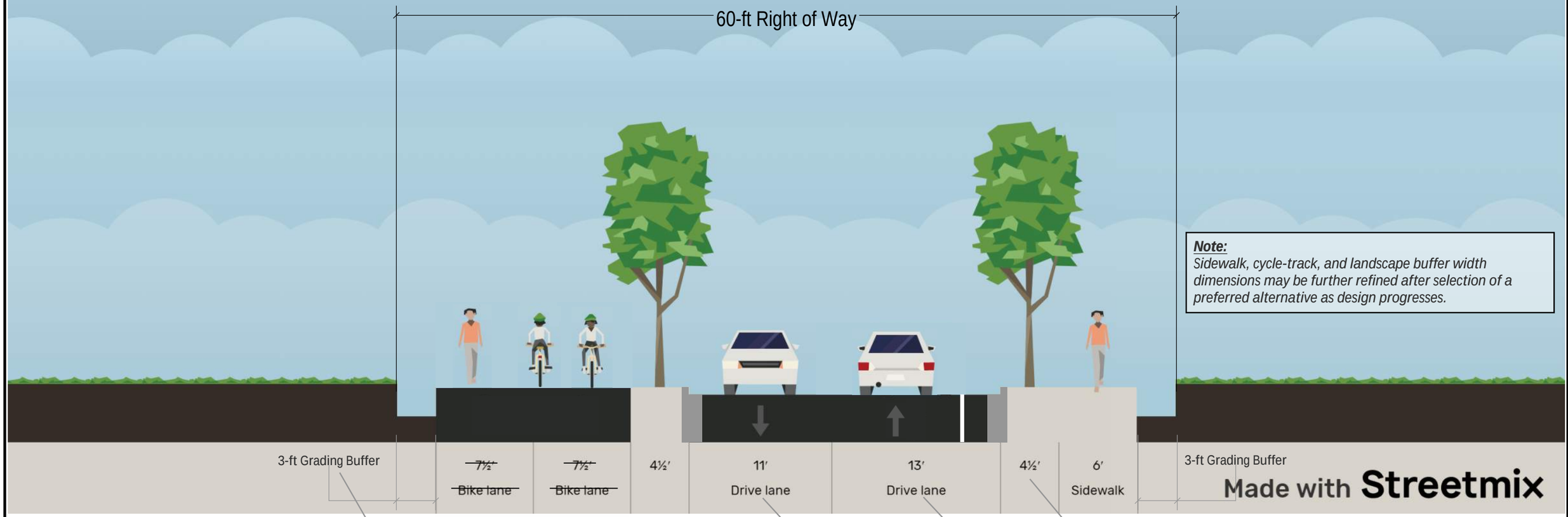
HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 5: BUFFERED ON-STREET BIKE LANES BOTH SIDES

EXHIBIT No: EX-01

SHEET No: Sheet 5 of 7

Shared Use Path North w/ Wider Lane ...



Note:
Sidewalk, cycle-track, and landscape buffer width dimensions may be further refined after selection of a preferred alternative as design progresses.

SCJ ALLIANCE
CONSULTING SERVICES

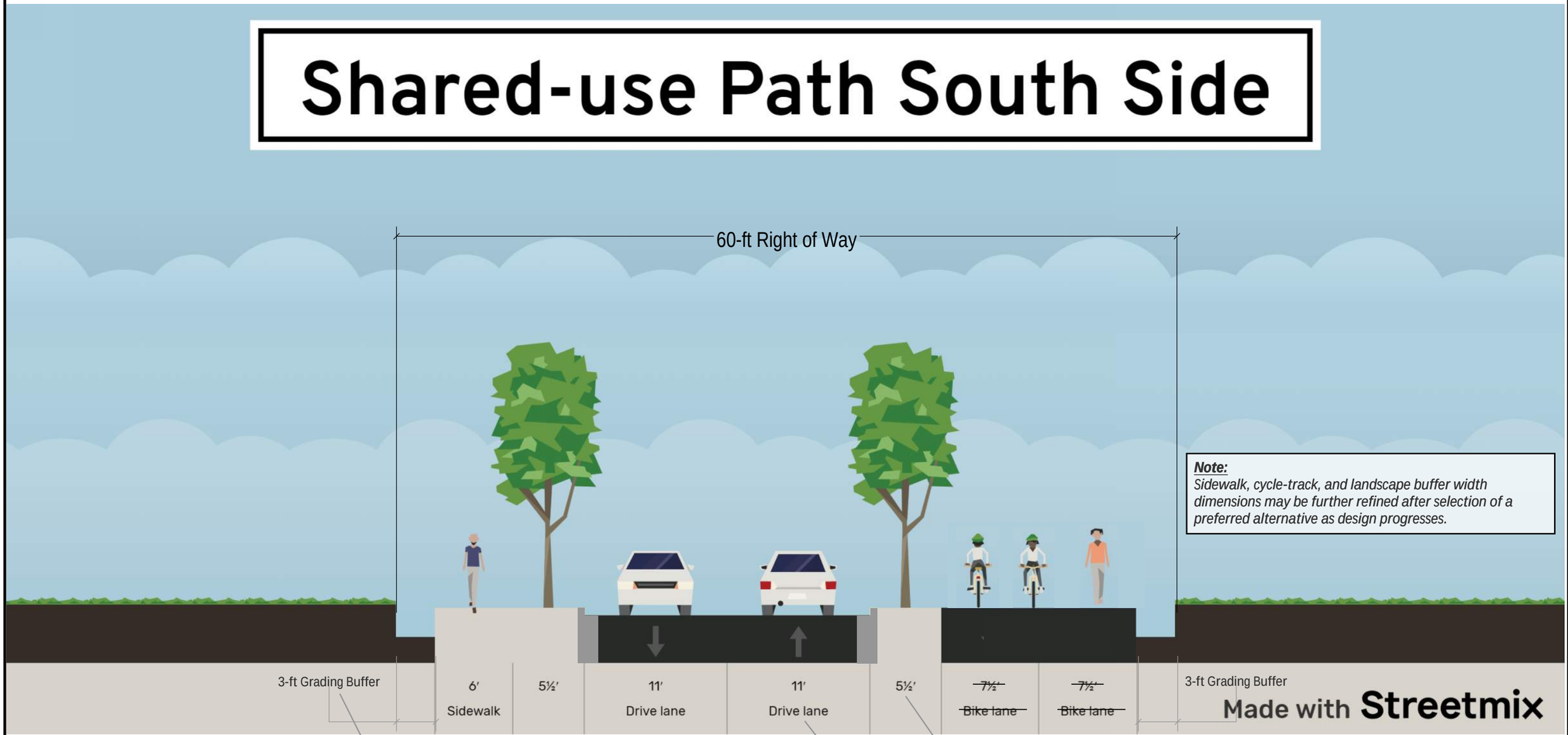
HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 6: SHARED USE PATH NORTH SIDE WITH WIDER LANE SOUTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 6 of 7

Shared-use Path South Side



Note:
Sidewalk, cycle-track, and landscape buffer width dimensions may be further refined after selection of a preferred alternative as design progresses.

3-ft buffer for grading to match existing, typical

10-ft travel lane plus 1.0-ft gutter pan to curb face, typical

5-ft landscape buffer plus 0.5-ft curb, typical

15-ft shared used path

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CONSULTING SERVICES

HORIZONTAL SCALE:	NTS
DATE:	February 25, 2021
JOB No.:	0699.214
DRAWING FILE No.:	N/A

CITY OF PORT TOWNSEND
PDISCOVERY ROAD BIKEWAY AND SIDEWALK PROJECTE
ALTERNATIVE 7: SHARED USE PATH SOUTH SIDE

EXHIBIT No: EX-01

SHEET No: Sheet 7 of 7

Appendix F

Summary of Criteria Pair-wise Comparisons

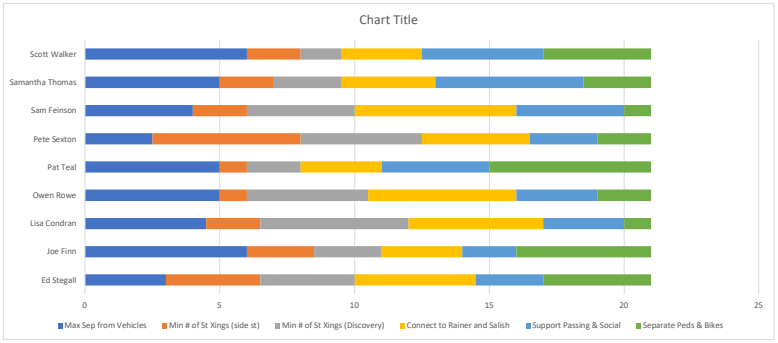
Compilation of Stakeholder Criteria Weighting

COMPILATION OF WEIGHTINGS

Discovery Road Bikeway and Sidewalk Project

Rate the relative importance of the attributes relative to the project's Need and Purpose.

	Performance Attributes	Ed Stegall (1)	Joe Finn (2)	Lisa Condran (3)	Owen Rowe (4)	Pat Teal (5)	Pete Sexton (6)	Sam Feinson (7)	Samantha Thomas (8)	Scott Walker (9)	TOTAL COUNT	AVERAGE 1	AVERAGE 2	SPREAD
A	Max Sep from Vehicles	3	6	4.5	5	5	2.5	4	5	6	41.0	3.2	5.3	2.1
B	Min # of St Xings (side st)	3.5	2.5	2	1	1	5.5	2	2	2	21.5	4.5	1.8	2.7
C	Min # of St Xings (Discovery)	3.5	2.5	5.5	4.5	2	4.5	4	2.5	1.5	30.5	2.1	4.4	2.3
D	Connect to Rainer and Salish	4.5	3	5	5.5	3	4	6	3.5	3	37.5	3.1	5.0	1.9
E	Support Passing & Social	2.5	2	3	3	4	2.5	4	5.5	4.5	31.0	2.6	4.5	1.9
F	Separate Peds & Bikes	4	5	1	2	6	2	1	2.5	4	27.5	1.7	4.8	3.1
	SUB-TOTALS	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	189.0	17.2	25.7	
											189	21	21	

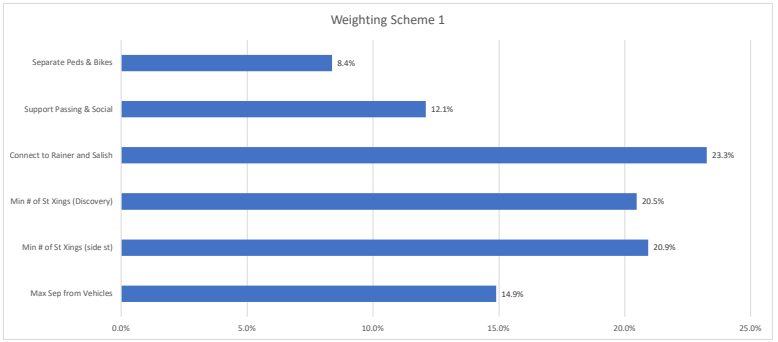


WEIGHTING SCHEME 1

Discovery Road Bikeway and Sidewalk Project

Rate the relative importance of the attributes relative to the project's Need and Purpose.

	Performance Attributes	TOTAL COUNT	AVERAGE USED FROM COMPILATION	PRIORITIES
A	Max Sep from Vehicles	3.2	1	14.9%
B	Min # of St Xings (side st)	4.5	1	20.9%
C	Min # of St Xings (Discovery)	4.4	2	20.5%
D	Connect to Rainer and Salish	5.0	2	23.3%
E	Support Passing & Social	2.6	1	12.1%
F	Separate Peds & Bikes	1.8	1	8.4%
	SUB-TOTALS	21.5		100.0%

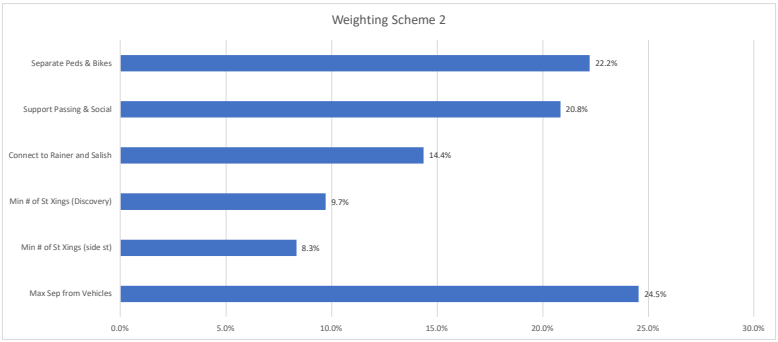


WEIGHTING SCHEME 2

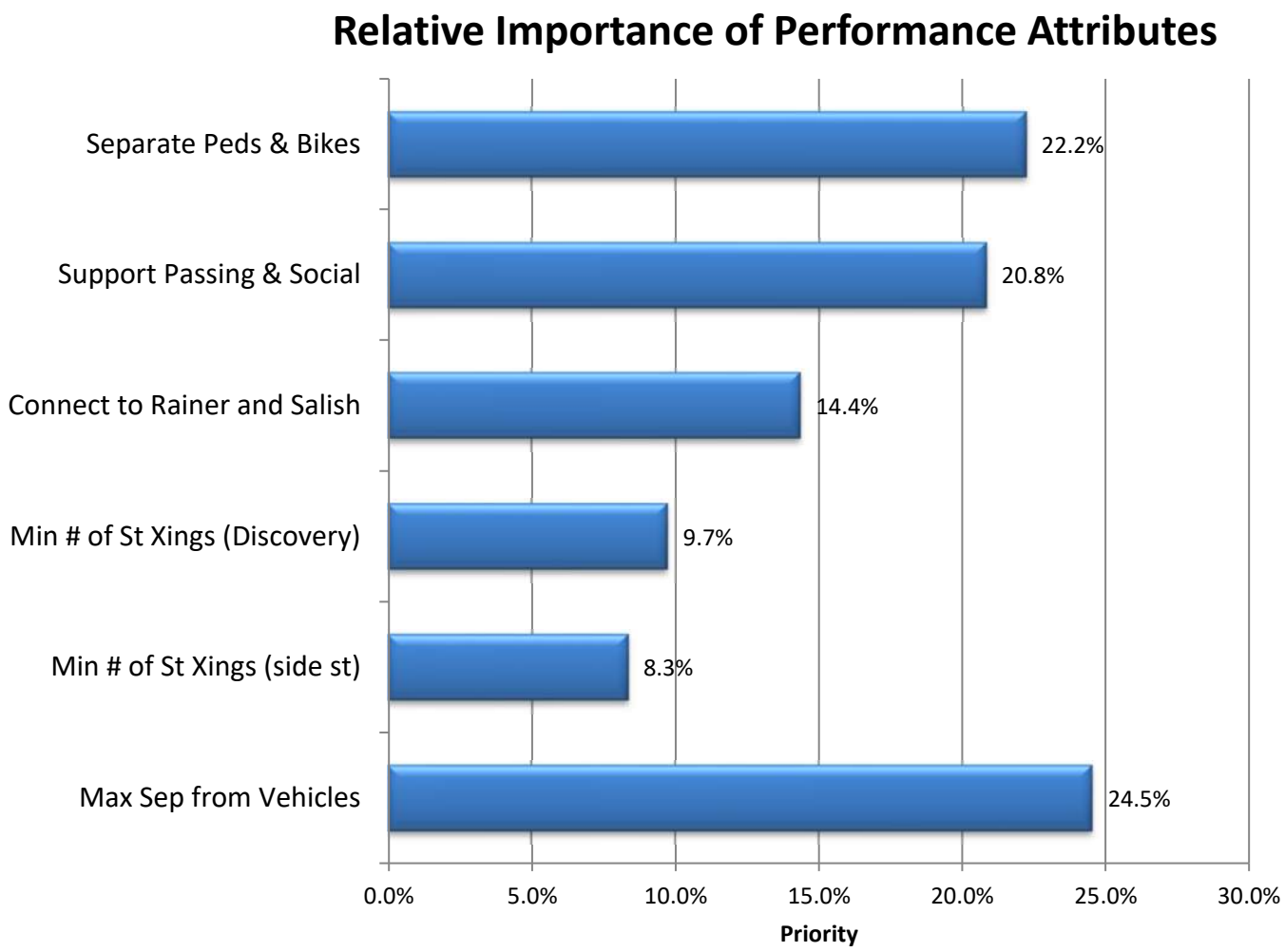
Discovery Road Bikeway and Sidewalk Project

Rate the relative importance of the attributes relative to the project's Need and Purpose.

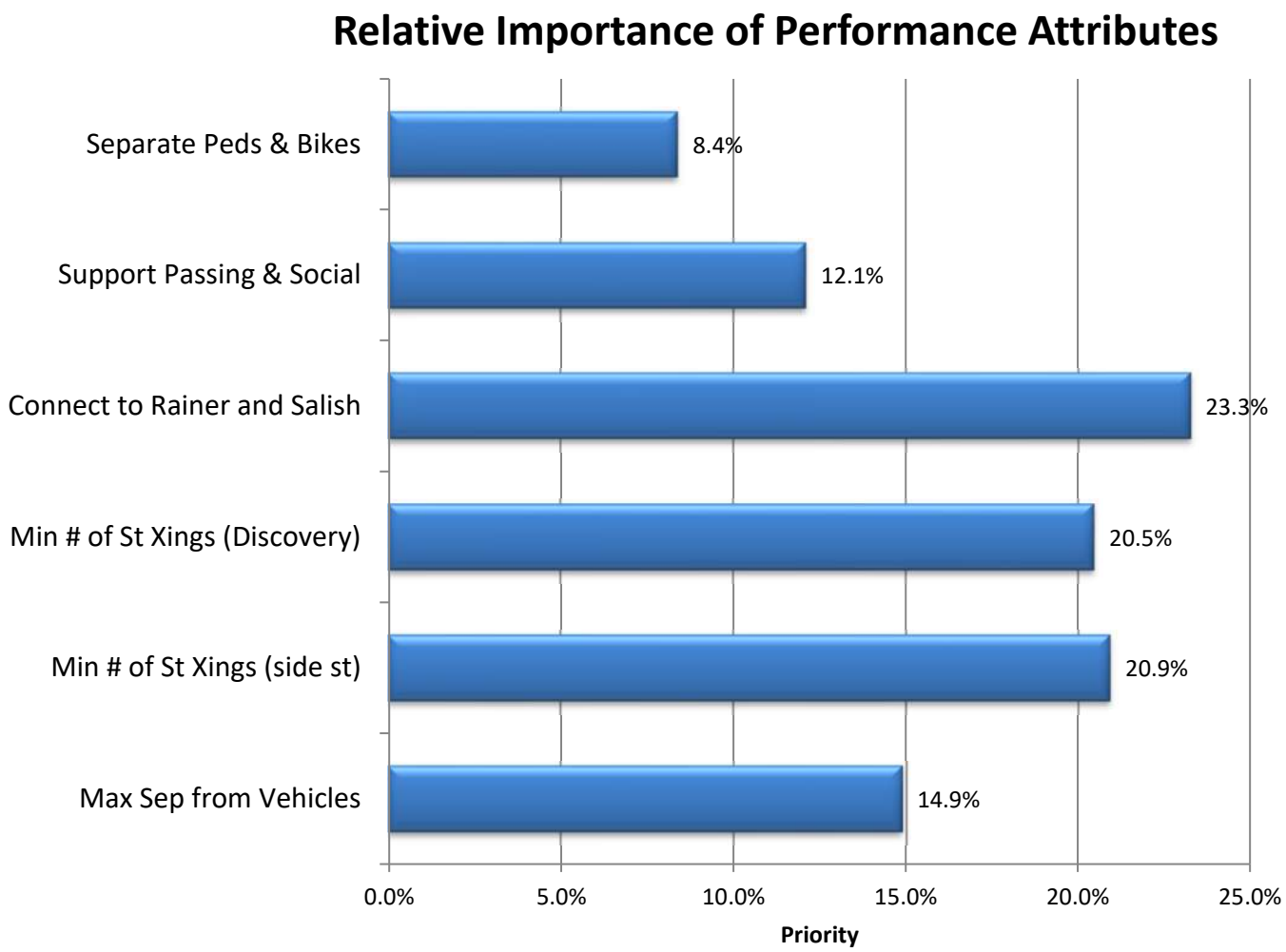
	Performance Attributes	TOTAL COUNT	AVERAGE USED FROM COMPILATION	PRIORITIES
A	Max Sep from Vehicles	5.3	2	24.5%
B	Min # of St Xings (side st)	1.8	2	8.3%
C	Min # of St Xings (Discovery)	2.1	1	9.7%
D	Connect to Rainer and Salish	3.1	1	14.4%
E	Support Passing & Social	4.5	2	20.8%
F	Separate Peds & Bikes	4.8	2	22.2%
	SUB-TOTALS	21.6		100.0%



Weighting Scheme 1



Weighting Scheme 2



Appendix G

Detailed Scoring of Alternatives by Criteria

Discovery Road Bikeway and Sidewalk Project

Summary - Scoring of Alternatives

Criteria	Alternatives					
	1-way Cycle-track Both Sides	2-way Cycle-track South Side	2-way Cycle-track South Side w/ Wider Lane North Side	Buffered On-street Bike Lane Both Sides	Shared Use Path North Side w/ Wider Lane South Side	Shared Use Path South Side
	Alt 1	Alt 2	Alt 4	Alt 5	Alt 6	Alt 7
Max Sep from Vehicles						
Min # of St Xings (side st)						
Min # of St Xings (Discovery)						
Connect to Rainier and Salish						
Support Passing & Social						
Separate Peds & Bikes						

Backup Detail - Scoring of Alternatives

PERFORMANCE ASSESSMENT MATRIX

Discovery Road Bikeway and Sidewalk Project

Alternative 1 1-way Cycle-track Both Sides

Performance Attributes	Rationale	Rating
Max Sep from Vehicles	Each alternative with landscape buffer = 4	4
Min # of St Xings (side st)	Side streets (bike = 11, ped = 11); residential driveways (bike = 10, ped = 10); commercial (bike = 2, ped = 2); 22 + 20(0.25) + 4(0.5) = **29.00**	4
Min # of St Xings (Discovery)	Bike = 9, ped = 10; **19**	3.5
Connect to Rainer and Salish	Requires transitions across Discovery at both existing 2-way cycle-tracks	2
Support Passing & Social	Tight fit for side-by-side bicycling	1
Separate Peds & Bikes	Provides bike and ped separation	4

Alternative 2 2-way Cycle-track South Side

Performance Attributes	Rationale	Rating
Max Sep from Vehicles	Each alternative with landscape buffer = 4	4
Min # of St Xings (side st)	Side streets (bike = 12, ped = 11); residential driveways (bike = 6, ped = 10); commercial (bike = 2, ped = 2); 23 + 16(0.25) + 4(0.5) = **29.00**	4
Min # of St Xings (Discovery)	Bike = 8, ped = 10; **18**	4
Connect to Rainer and Salish	Clear continuation of 2-way cycle-track between existing 2-way cycle-tracks	4
Support Passing & Social	Reasonable space for side-by-side bicycling - drop back to single-file with passing 2 or more peds in a grouping	2.5
Separate Peds & Bikes	Provides bike and ped separation	4

Alternative 4 2-way Cycle-track South Side w/ Wider Lane North Side

Performance Attributes	Rationale	Rating
Max Sep from Vehicles	Reduced to 3 because of on-street bike intention on the north side	3
Min # of St Xings (side st)	Side streets (bike = 16, ped = 11); residential driveways (bike = 14, ped = 10); commercial (bike = 2, ped = 2); 27 + 24(0.25) + 4(0.5) = **35.00**	1
Min # of St Xings (Discovery)	Bike = 8, ped = 10; **18**	4
Connect to Rainer and Salish	Clear continuation of 2-way cycle-track between existing 2-way cycle-tracks	4
Support Passing & Social	Reasonable space for side-by-side bicycling - drop back to single-file with passing 2 or more peds in a grouping	2.5
Separate Peds & Bikes	Provides bike and ped separation	4

Backup Detail - Scoring of Alternatives

Alternative 5 Buffered On-street Bike Lane Both Sides

Performance Attributes	Rationale	Rating
Max Sep from Vehicles	No separation provided	0
Min # of St Xings (side st)	Side streets (bike = 11, ped = 11); residential driveways (bike = 10, ped = 10); commercial (bike = 2, ped = 2); 22 + 20(0.25) + 4(0.5) = **29.00**	4
Min # of St Xings (Discovery)	Bike = 9, ped = 10; **19**	3.5
Connect to Rainer and Salish	Requires transitions across Discovery at both existing 2-way cycle-tracks	2
Support Passing & Social	No room for side-by-side bicycling	0
Separate Peds & Bikes	Provides bike and ped separation	4

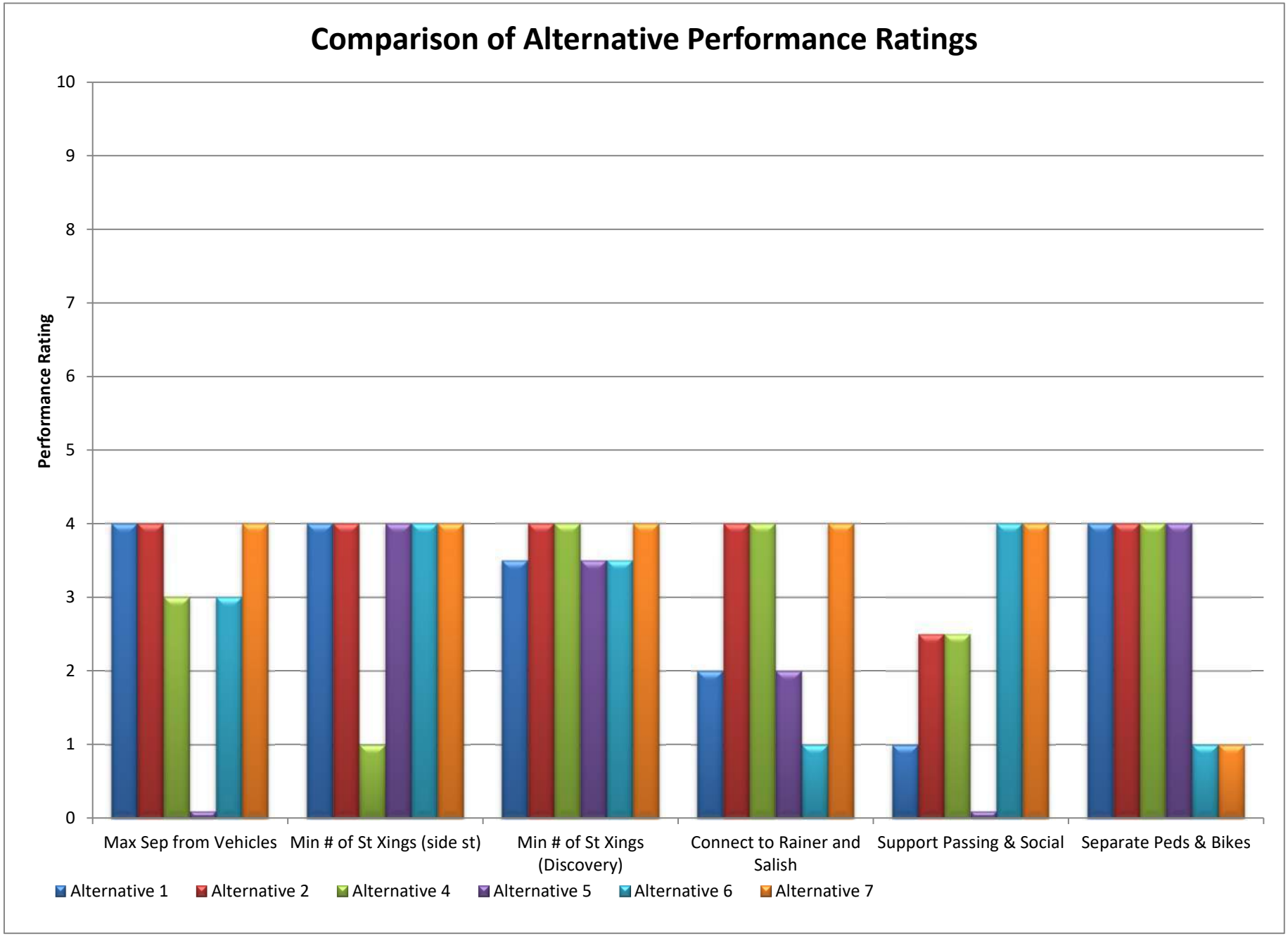
Alternative 6 Shared Use Path North Side w/ Wider Lane South Side

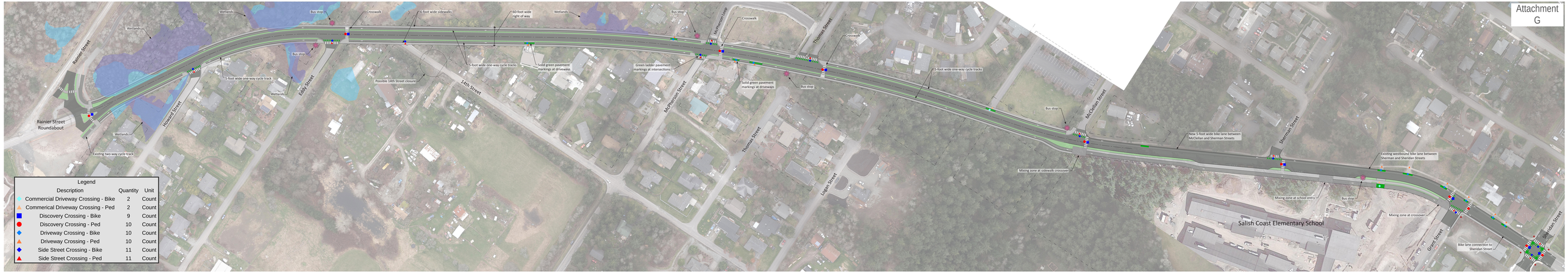
Performance Attributes	Rationale	Rating
Max Sep from Vehicles	Reduced to 3 because of on-street bike intention on the north side	3
Min # of St Xings (side st)	Side streets (bike = 15, ped = 7); residential driveways (bike = 17, ped = 7); commercial (bike = 3, ped = 1); 22 + 24(0.25) + 4(0.5) = **30.00**	4
Min # of St Xings (Discovery)	Bike = 9, ped = 10; **19**	3.5
Connect to Rainer and Salish	Requires transitions across Discovery at both existing 2-way cycle-tracks for the SUP. Added opportunity for confusion with room for on-street bike on the south side	1
Support Passing & Social	Most space for side-by-side bicycling	4
Separate Peds & Bikes	Does not distinctly provide bike and ped separation on the shared-use-path; score of 1 since there is space for self-separation	1

Alternative 7 Shared Use Path South Side

Performance Attributes	Rationale	Rating
Max Sep from Vehicles	Each alternative with landscape buffer = 4	4
Min # of St Xings (side st)	Side streets (bike = 12, ped = 11); residential driveways (bike = 6, ped = 10); commercial (bike = 2, ped = 2); 23 + 16(0.25) + 4(0.5) = **29.00**	4
Min # of St Xings (Discovery)	Bike = 8, ped = 10; **18**	4
Connect to Rainer and Salish	Clear continuation of 2-way cycle-track between existing 2-way cycle-tracks	4
Support Passing & Social	Most space for side-by-side bicycling	4
Separate Peds & Bikes	Does not distinctly provide bike and ped separation on the shared-use-path; score of 1 since there is space for self-separation	1

Backup Detail - Bar Chart of Alternatives Scores by Criteria





DISCOVERY ROAD BIKEWAY AND SIDEWALKS PROJECT

Counting of Crossings - Alternative 1 (1-way Cycle-track Both Sides) and Alternative 5 (Buffered On-street Bike Lane Both Sides)

SCJ ALLIANCE

Attachment G

Legend

Description	Quantity	Unit
Commercial Driveway Crossing - Bike	2	Count
Commerical Driveway Crossing - Ped	2	Count
Discovery Crossing - Bike	8	Count
Discovery Crossing - Ped	10	Count
Driveway Crossing - Bike	6	Count
Driveway Crossing - Ped	10	Count
Side Street Crossing - Bike	12	Count
Side Street Crossing - Ped	11	Count

DISCOVERY ROAD BIKEWAY AND SIDEWALKS PROJECT

Counting of Crossings - Alternative 2 (2-way Cycle-track South Side) and Alternative 7 (Shared-use-path South Side)

SCJ ALLIANCE

Legend

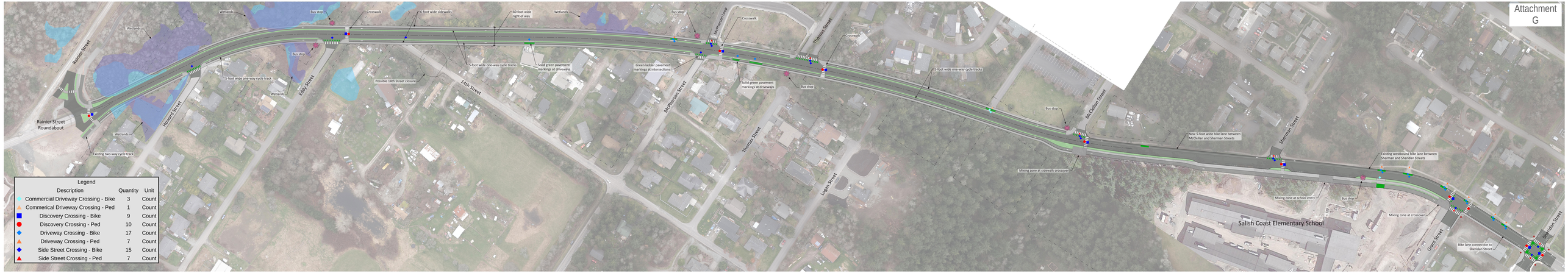
Description	Quantity	Unit
Commercial Driveway Crossing - Bike	2	Count
Commerical Driveway Crossing - Ped	2	Count
Discovery Crossing - Bike	8	Count
Discovery Crossing - Ped	10	Count
Driveway Crossing - Bike	14	Count
Driveway Crossing - Ped	10	Count
Side Street Crossing - Bike	16	Count
Side Street Crossing - Ped	11	Count

DISCOVERY ROAD BIKEWAY AND SIDEWALKS PROJECT

Counting of Crossings - Alternative 4 (2-way Cycle-track South Side plus Wider Lane North Side)

SCJ ALLIANCE

Attachment G



Legend		
Description	Quantity	Unit
Commercial Driveway Crossing - Bike	3	Count
Commerical Driveway Crossing - Ped	1	Count
Discovery Crossing - Bike	9	Count
Discovery Crossing - Ped	10	Count
Driveway Crossing - Bike	17	Count
Driveway Crossing - Ped	7	Count
Side Street Crossing - Bike	15	Count
Side Street Crossing - Ped	7	Count

DISCOVERY ROAD BIKEWAY AND SIDEWALKS PROJECT

Counting of Crossings - Alternative 6 (Shared-use-path North Side plus Wider Lane South Side)

SCJ ALLIANCE