Flourishing Natural Environment

Healthy Built Environment

Vibrant Economy

Authentic Public Participation

Creating Connections

Healthy Community

Innovation

Charming • Safe • Beautiful

btw
BIKING • TRANSIT • WALKING

CITY OF MUKILTEO

By The Way Plan

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Acknowledgments:

Special thanks to all those who have helped and participated in the 2016 By The Way Plan.

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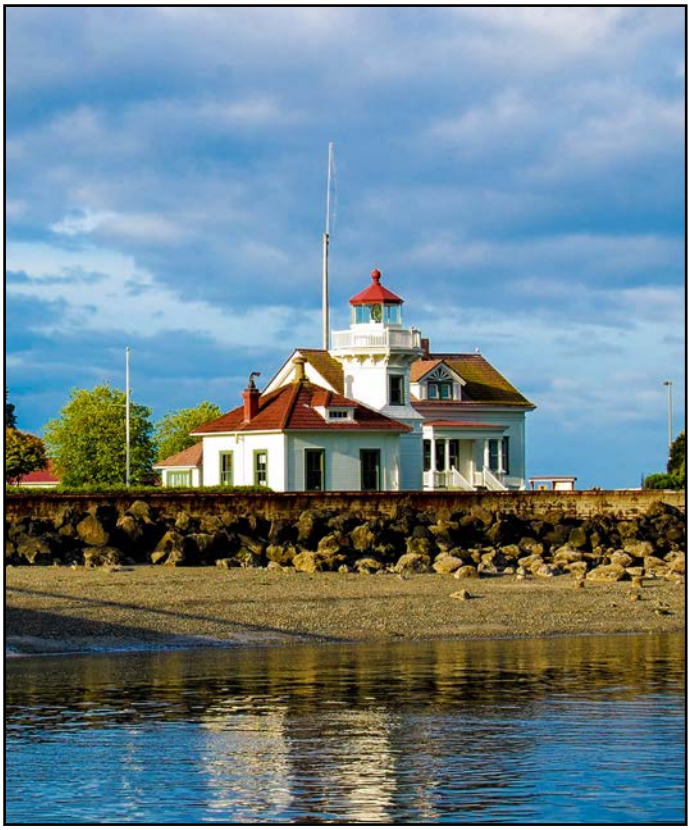
Preface: Moving Mukilteo Forward

"Moving Mukilteo Forward" provided the motto in the recently adopted Comprehensive Plan. Notably, this Comprehensive Plan introduced a story of Mukilteo that differed from previous plans. While previous plans focused on the future development of Mukilteo, Moving Mukilteo Forward engaged decision makers in the story of Mukilteo. This story introduced the vision and goals of enhancing the livability of the community.



To reach higher levels of livability and improved quality of life, *residents must have the choice* of how they want to move about the community. Parents should feel safe as their children walk to school; and anyone should not have to wear a safety vest just to go for a walk. Cyclists should feel safe within our roadways; and transit riders should find easy and convenient access to transit.

Moving Mukilteo Forward identified specific policies for implementation that would be identified through a functional plan. This plan, the Bike - Transit - Walk (BTW) Plan, is that document to implement the identified policies of the Comprehensive Plan. Some of these policies included adopting street standards to include pedestrian-oriented streetscape elements and bicycle facilities (TR6) as well as ensuring that street standards provide bike lanes, convenient bus stops, discourage high travel speeds, minimize significant environmental impacts and maintain character of existing residential neighborhoods (TR6a). Not only does the Comprehensive Plan require standards that include bike, pedestrian, and bus facilities; the Comprehensive Plan also identified destinations or 'points of interest' that these facilities must provide connectivity between parks, retail centers, schools, and regional transportation nodes (TR9).

By identifying selected alternatives and a priority criteria, these projects will be funded in the Capital Facilities Plan (CFP) and the Transportation Improvement Plan (TIP) as updated annually. While the total cost of the project list within this plan is quite large, this plan presents projects to be completed over a 30-year horizon in a prioritized piece mealed fashion. Through this approach, additional opportunities for external funding sources may become more readily available as well as project pairing with adjacent infrastructure improvements including surface water, roadway resurfacing, water and sewer improvements, and private development along primary street frontage.

The realization of Moving Mukilteo Forward is based on the success of enhancing Mukilteo's healthy and livable community for future generations of residents. Through the implementation of the BTW Plan, the ability to move about the community regardless of mode will provide residents a deeper connection to the community while encouraging a healthier and safe environment for all ages and abilities.

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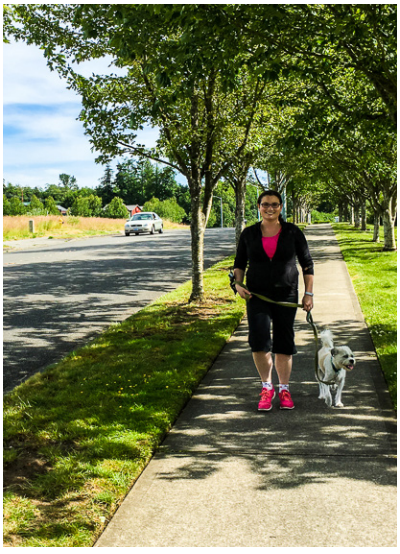

Executive Summary

The Bike - Transit - Walk Plan is a functional document as an extension of the Mukilteo Comprehensive Plan. The BTW Plan has identified a list of projects to improve connectivity between origins and destinations to provide a higher level of mobility and enhanced livability within Mukilteo. In order to identify these projects, a **data inventory** was conducted to identify existing facilities for pedestrian and bicycles, transit facilities, barriers, and safe routes to school. This inventory led to a **data analysis** to determine the existing gaps between places people want to go (destinations) and where people are (origins). This analysis included community outreach. These primary components led to the **selected alternatives**. These projects are explored within this plan in individual sections based on the scale of project and grouped between:

- City-Wide Connections
- Local Connections
- Regional Facilities

By grouping these projects into these sections based on scale, future decision makers are able to better identify projects for funding and implementation. To present conceptual project alternatives and begin to move towards **project implementation** through the Capital Facilities Plan and Capital Improvements Plan, this plan provides additional information including project cost, project priority score, and the timeline category. The priority scoring criteria was determined by the Planning Commission to consider different characteristics of each project such as proximity to schools and sense of safety. The BTW Plan then determines whether projects should be completed within the 'Near-Term' (less than 7-years), 'Mid-Term' (between 8-20 years), and 'Far-Term' (more than 20 years). To reach a level of preferred funding per year, the 'Near-Term' projects were plotted into cost-priority quadrants to determine which projects offer a high priority score and a low cost. Ultimately, these projects were chosen first for funding preference while additional projects followed based on score and connectivity.

Two limitations of the BTW Plan include the unknown cost differences that extend from the new requirements of stormwater facilities and City Staffing levels. These new stormwater requirements and standards may require deviations from the proposed project designs to better on-site treatment when feasible. The other disclaimer is that under current revenue generation by the City of Mukilteo, project implementation will require external funding. In order to have adequate staff time to seek external funding, the City Staffing levels may need to be reviewed to ensure there is adequate capacity.

*Bold Text Denotes Sections of the BTW Plan

Map 1:

BTW Plan Selected Alternatives

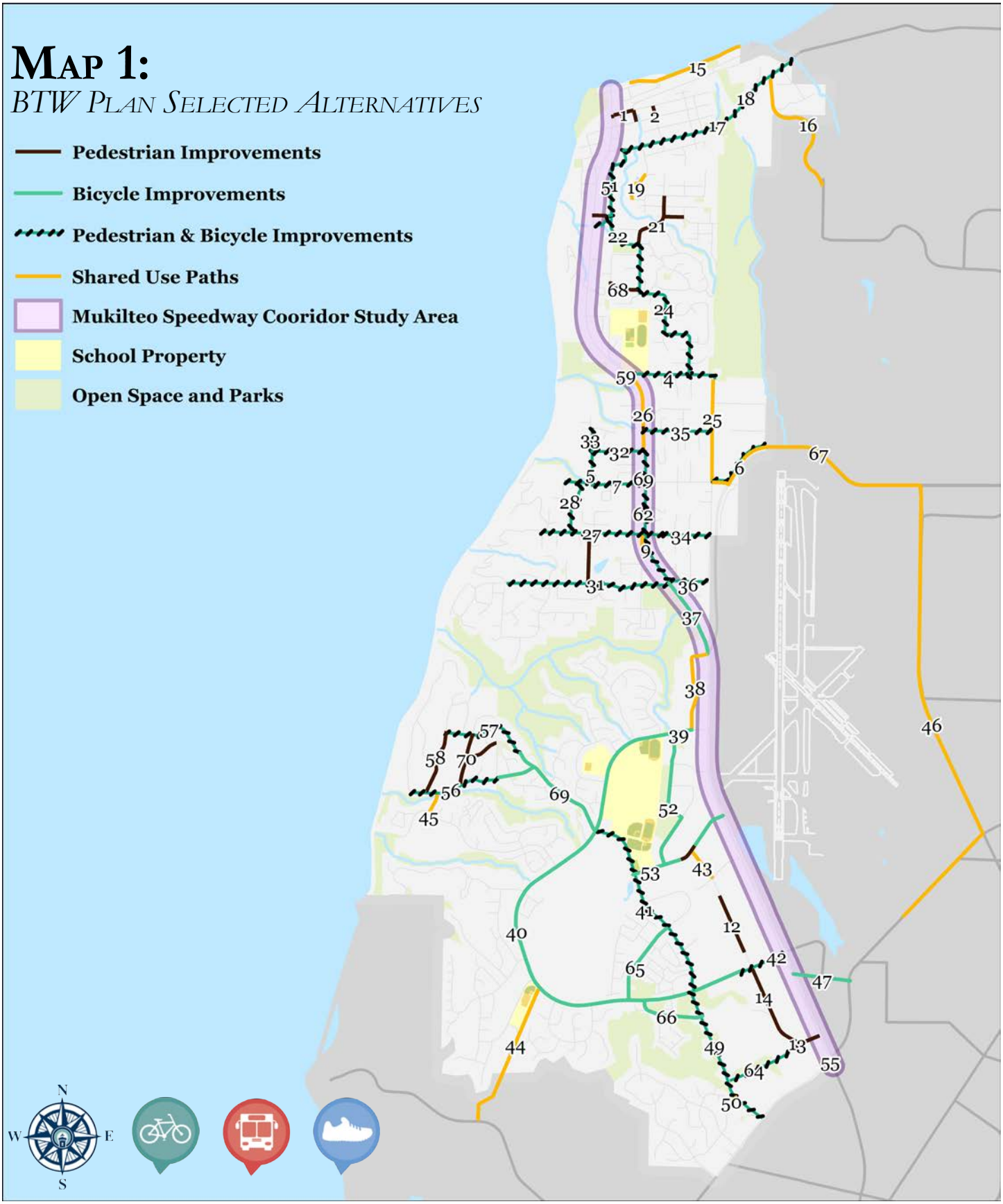

Table 1: BTW Plan Selected Alternatives List			
Project Number	**Project Name**	**Project Number**	**Project Name**
1	2nd Street Sidewalks	36	92nd Street Sidewalk & Bike Markings
2	Loveland Avenue Sidewalks	37	SR 525 Bike Lane
3	Park Ave Sidewalks	38	Harbour Place Shared Use Path
4	76th Street Sidewalks & Bike Markings	39	Harbour Pointe Blvd. North Cycle Track
5	53rd Avenue Sidewalks & Bike Markings	40	Harbour Pointe Blvd. Bike Markings
6	SR 526 Sidewalks	41	Harbour Reach Corridor Retrofit
7	84th Street Sidewalks	42	Harbour Pt. Blvd. S. Sidewalk & Bike Markings
8	88th Street Sidewalks & Bike Markings	43	Cyrus Way Road Extension
9	SR 525 Sidewalks & Bike Markings	44	Endeavor Elementary Shared Use Path
10	53rd Avenue Sidewalks & Bike Markings	45	South Gulch Shared Use Path
11	Chennault Beach Road Sidewalks	46	Airport Heritage Bike Loop
12	Cyrus Way Sidewalks	47	121st Street Bike Connection
13	Cyrus Way Sidewalks	48	Mid-Town Mukilteo Sidewalk & Bike Markings
14	Cyrus Way Sidewalks	49	Harbour Reach Corridor
15	Waterfront promenade Shared-use path	50	Harbour Reach Drive Connection
16	Share Use Path from Mukilteo Blvd to Boeing Recreation Center	51	Washington Ave Sidewalks
17	5th Street Bike & Ped Improvements	52	47th Ave Pedestrian & Bike Improvements
19	Shared Use Path to Old Town	53	Chennault Beach Road Bike Markings
20	11th Street Sidewalk	54	Mid-Town Mukilteo Sidewalk & Bike Markings
21	Sky Hila Pathway SRTS	55	Beverly Park Intersection Improvements
22	Goat Trail Path & Bike Markings	56	Chennault Beach Dr. Sidewalk & Bike Markings
23	Mukilteo Speedway Corriror Study	57	Central Drive Sidewalk & Bike Markings
24	Stairstep Path & Bike Markings	58	64th Place West
25	44th Ave Shared-Use Path	59	76th Street Crosswalk
26	SR 525 Sidewalks - SRTS	60	Goat Trail Pedestrian Bridge
27	88th Street Sidewalks & Bike Markings	61	80th/81st Crosswalk
28	53rd Ave. Sidewalks & Bike Markings	62	86th Crosswalk
29	84th Street Sidewalks	63	2nd Street Crosswalk
30	49th Place Transit Connection	64	South Road Markings
31	92nd Street Sidewalk & Bike Markings	65	Possession Way Bike Markings
32	81st Place SW SRTS	66	Blue Heron Drive Bike Markings
33	53rd Ave Sidewalks & Bike Markings	67	SR 526 Shared Use Path
34	88th Street Sidewalks & Bike Lanes	68	Possession View Lane Sidewalks
35	80th Street Sidewalks & Sharrows	69	Chennault Beach Road Bike Markings
		70	62nd Street & Canyon Road Sidewalks

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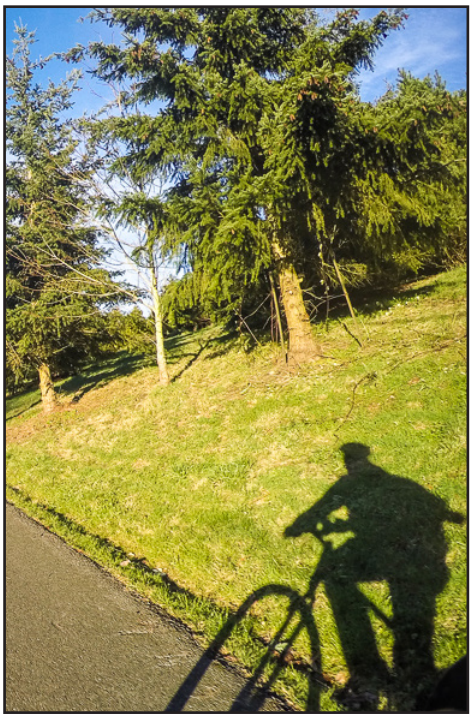
By The Way Plan:
Bike - Transit - Walk

Mukilteo's history of development has created a pedestrian and bicycle network that lacks a north-south cooridor from the Waterfront to the City Limits. The purpose of this plan is to identify projects that promote the availability of options to residents to have more control of the travel choices.



While a corridor spine exists as the Mukilteo Speedway, this roadway is currently inadequate for safe usage by most pedestrians and bicycles. The By The Way Plan recognizes that the Mukilteo Speedway is a state route roadway with the primary focus on providing vehicle access to and from the Mukilteo Ferry. Even though the facility requires certain key pedestrian and bicycle improvements within destinations, such as Midtown, long-term solutions can be paired to complement the Mukilteo Speedway for a safe pedestrian and bicycle corridor.

Not only has Mukilteo's development lacked a central pedestrian spine, many neighborhoods lack a sense of safety to and from the neighborhood. Areas such as Sky-Hi-La are dependent on 8th Drive for a route to school, but many parents fear for the of security for their children walking to school. Some neighborhoods may be a mere few hundred feet from a destination, but barriers exist to reroute individuals over one half-mile out of the way, eliminating the reasonable choice of walking. Harbour Pointe, a master planned community, has the highest quantity of sidewalks in Mukilteo, but the neighborhood lacks bicycle facilities for the common user.

Goals:

The By The Way Plan, or BTW Plan, identifies future projects that will meet the following goals:

1. Projects will provide safe connection between neighborhoods, parks, commercial districts, transit stops, schools, and regional pedestrian and bicycle networks.
2. Routes located within one half-mile of schools will identify projects to meet the principles and policies of Safe Routes to School.
3. Project corridors will provide multi-modal facilities to promote the choice of travel mode within the community.
4. Mukilteo Greenway signage and wayfinding will provide residents a sense of location and connection to better identify safe routes to move about the community.

Existing Facilities Inventory:

In order to implement the goals of the BTW Plan, including connectivity between destinations, safe routes to school, multi-modal design, and future greenways, an inventory was conducted to identify existing facilities. One inventory included identifying existing sidewalks, shared use paths, bike lanes, buffered bike lanes, and bike sharrows. These five different facilities represent typical facilities that can be used to improve connectivity throughout a community. While other options, such as a cycle track, provide for a sixth facility, the application typically requires very specific conditions for implementation.

Sidewalk

Typical residential sidewalks range from 4-feet to 6-feet in width and commercial sidewalks can be much larger. These facilities are commonly made out of concrete. While sidewalks construction is costly, alternative facilities such as a widened shoulder or gravel paths provide little improvement to the pedestrian and even less service to those with disabilities.

Shared Use Path

A shared use path is a facility that is typically used as an 'urban-trail'. This facility is usually 6- feet to 15-feet in width and provides both a recreation and commuting purpose and is commonly made out of asphalt. The user groups of a shared use path is much more diverse than sidewalks and can provide adequate facilities within a common space with less footprint.

Bike Lanes & Buffered Bike Lanes

Bike lanes originated as a conversion of existing shoulders to provide a marked facility for cyclists within the roadway. Today bike lanes tend to be a minimum of 5-feet in width traveling with the flow of traffic. An improved alternative that requires additional pavement is the buffered bike lane that provides a form of additional buffer between cyclists and motorists.

Bike Sharrows

At times, roadways that are under utilized, cyclists can safely travel within the lane of travel. To notify motorists and establish a bicycle route, a 'sharrow' is used as a painted marking. The sharrow identifies the location of the cyclist and the direction of travel. Sharrows are common on roadways of 25 MPH or less in residential areas.

Map 2:

Existing Pedestrian & Bike Facilities

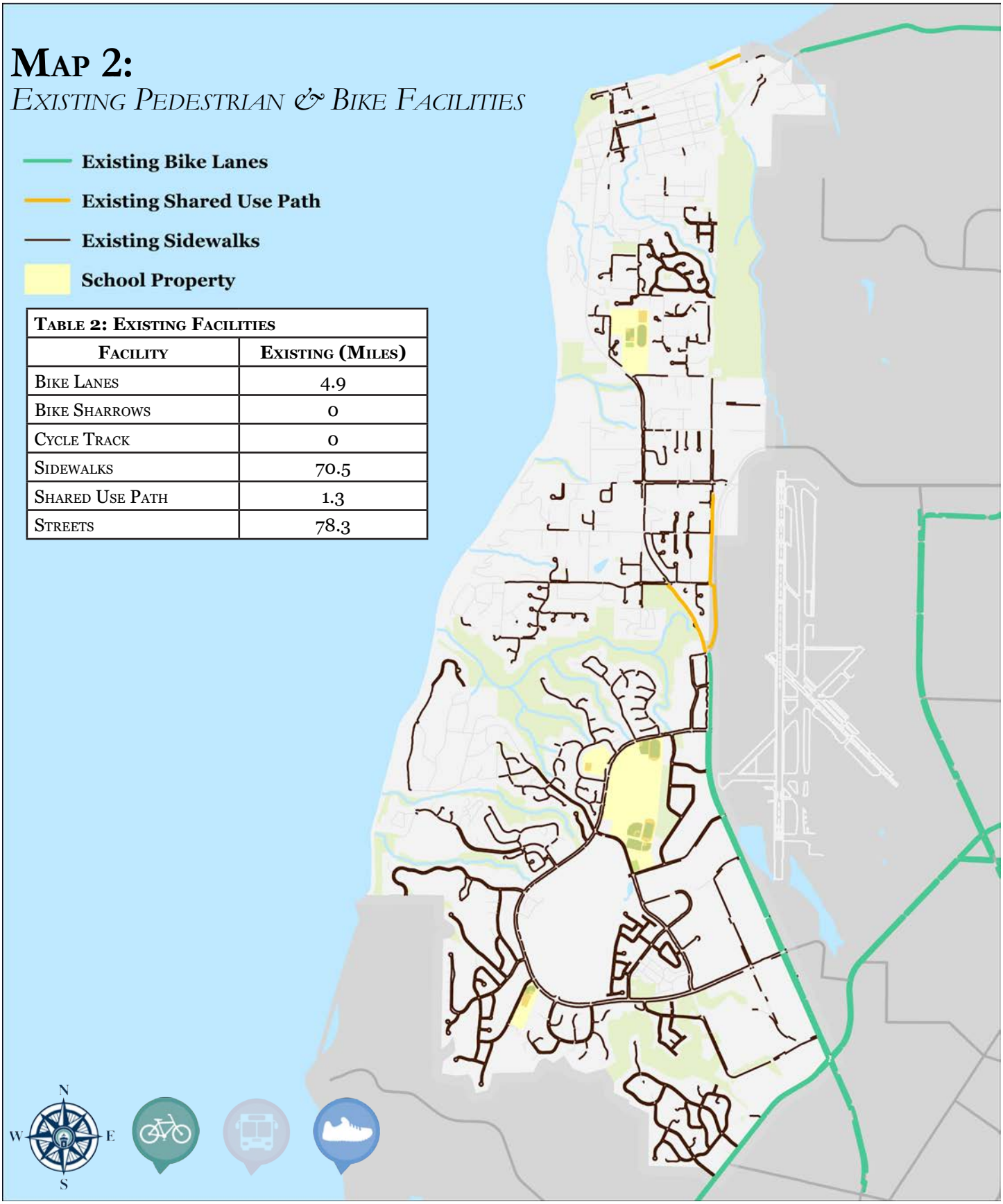


Table 2: Existing Facilities	
Facility	Existing (Miles)
Bike Lanes	4.9
Bike Sharrows	0
Cycle Track	0
Sidewalks	70.5
Shared Use Path	1.3
Streets	78.3

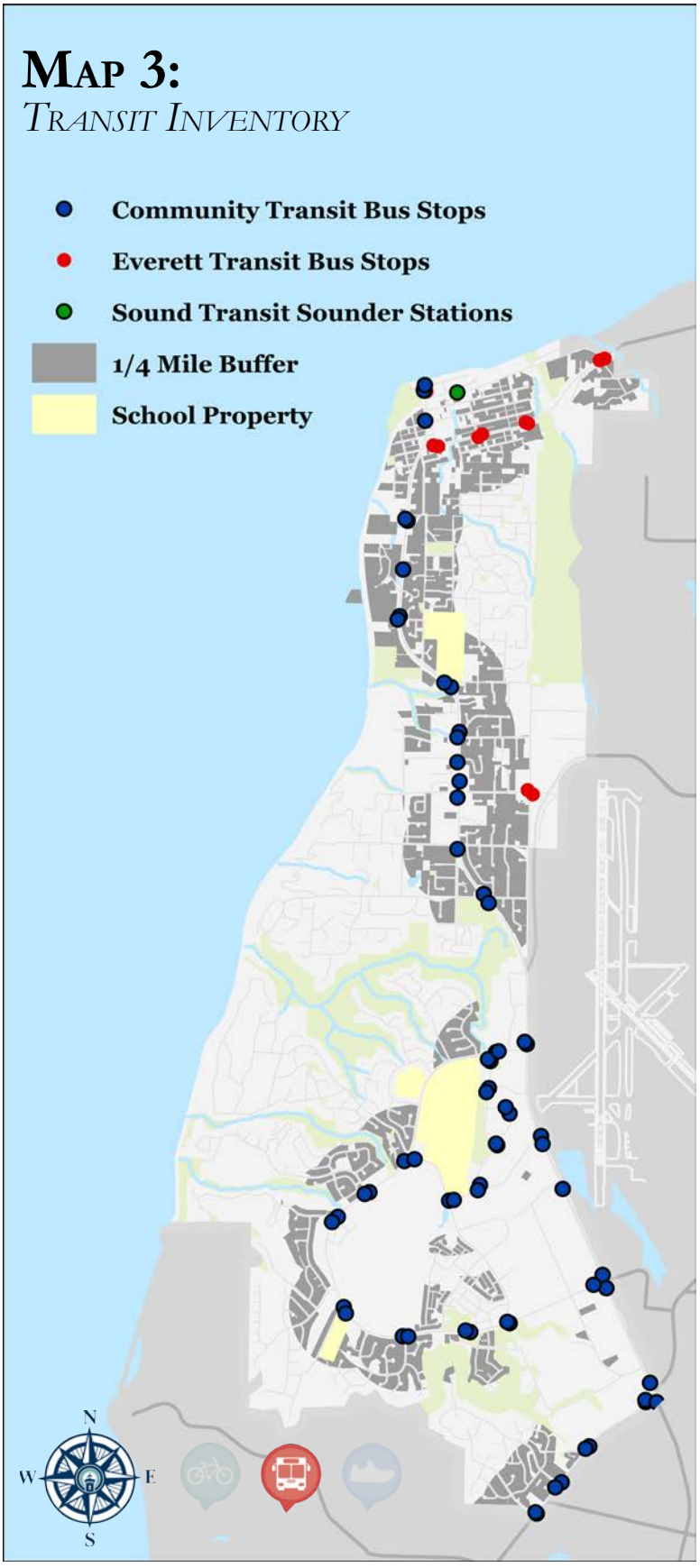
Transit Inventory:

In addition to the different facilities for walking and bicycling, an inventory was conducted to identify how many transit facilities exist within Mukilteo including routes, bus stops, and number of properties within quarter mile radius of bus facilities. The quarter-mile radius represents the most reasonable distance an individual may be willing to walk in order to reach transit facilities. While the 'reasonable walking distance' can vary based on hills, the distance provides a metric for potential transit users.

One challenge that faces transit users is ensuring that routes are not only between primary destinations, but also provide convenient route frequency, known as headways. Many routes along major corridors feature approximately 10-15 minute headways whereas routes in less dense service areas may feature 30 minute or greater headways. As frequency of transit increases, so does the convenience for transit users. Unfortunately, greater frequency incurs greater costs. To offset the costs, the ridership of the route must also increase.

Table 3: Existing Transit Facilities

Facility:	Notes:
Routes:	6
CT-113	30 Min Monday-Friday 60 Min Saturday-Sunday
CT-417	30 Min Monday-Friday - *5 Services to/From Downtown - Seattle*
CT-880	30 Min Monday-Friday - *4 Services to/From University District - Seattle*
ET-18	30 Min Monday-Friday
ET-70	45 Min Monday-Friday - *4 Services to/From Boeing*
Sounder	30 Min Monday-Friday - *4 Services to/From Seattle*
Transit Stops	120
Single-Family Residences within 1/4 Mile Buffer: 2,703	

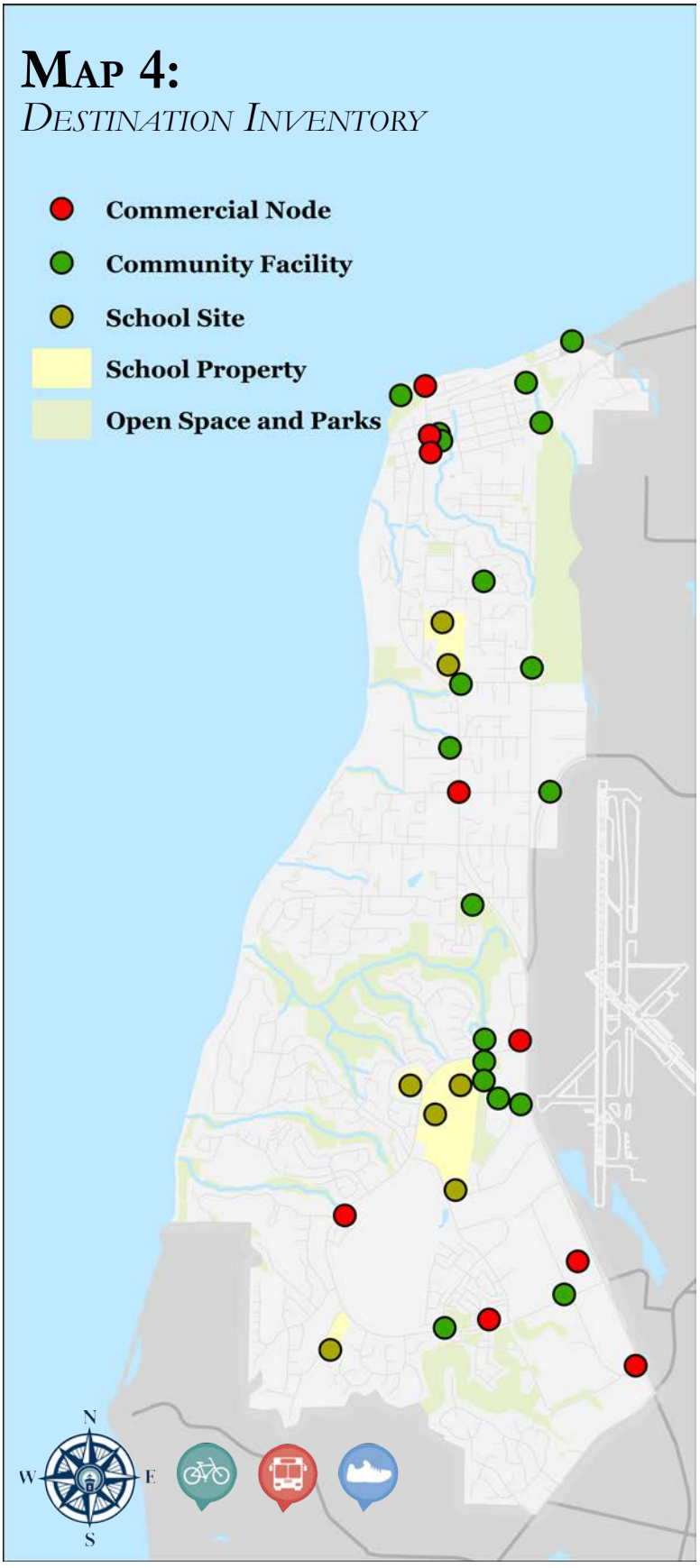


Destinations Inventory:

The data inventory has reviewed the available facilities for different modes available for bike, transit, and walking. The next critical element of pedestrian planning is the human choice aspect, 'Where Do People Want To Go?'.

Map 4 provides an inventory of the different activity areas including schools, commercial nodes, and external network connections. Map 4 also identifies the Open Space and Parks within Mukilteo that have a variety of activities. One aspect to consider is that neighborhoods are not identified as destinations, but are considered origins. The intent of the BTW Plan is not to connect neighborhoods to neighborhoods, but to connect neighborhoods to specific destinations. By focusing on origin-destination planning, additional opportunities for neighborhood-neighborhood connections will occur subsequently.

Map 4:
Destination Inventory

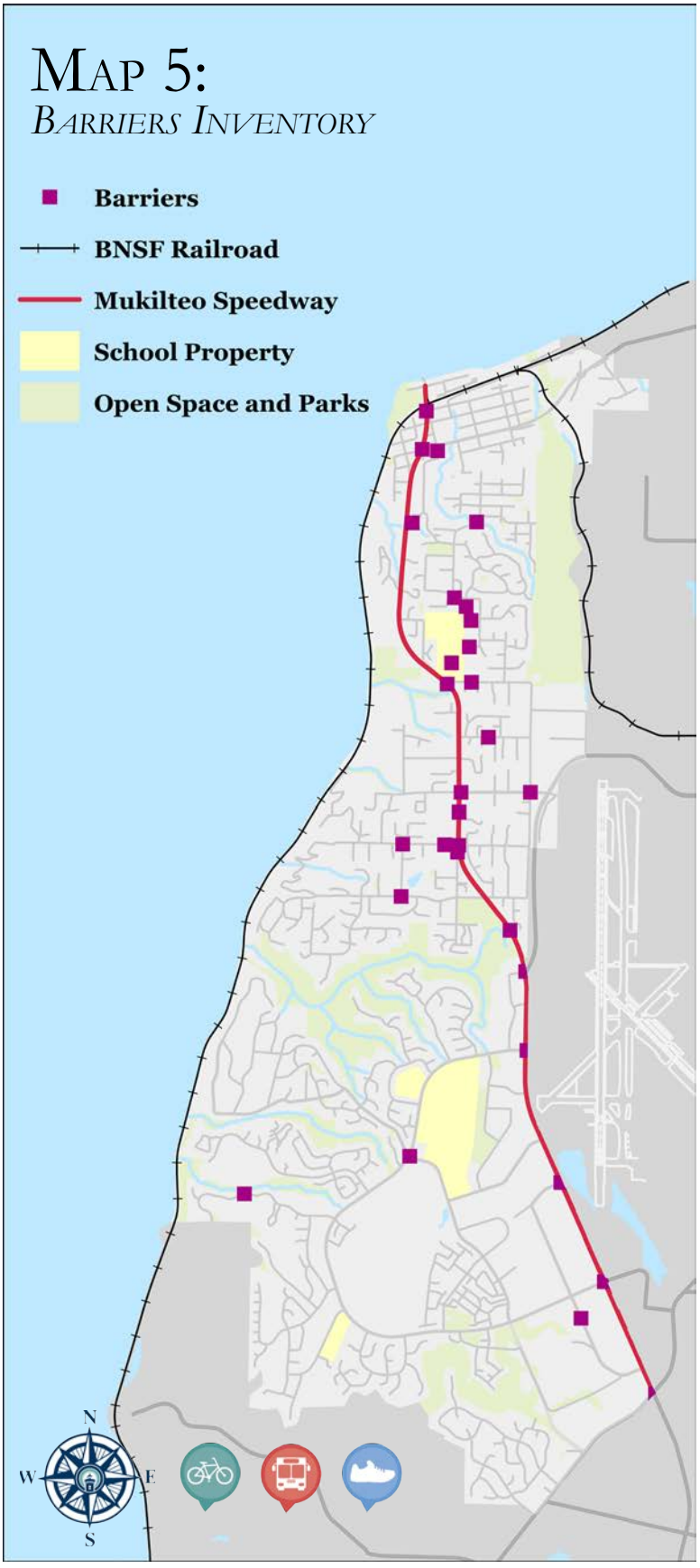


Barriers Inventory:

Barriers are physical obstructions or certain conditions that discourage individuals from the choice to bike, use transit, or walk. Certain barriers may include fences preventing connectivity or users lacking the sense of safety. For example, a sidewalk facility may be located on the correct route, with the correct width, but without the correct lighting the facility's use drops significantly during the evening and early morning.

Map 5 is an inventory of barriers and hazardous intersections that discourage individuals from alternative forms of commuting. These barriers include:

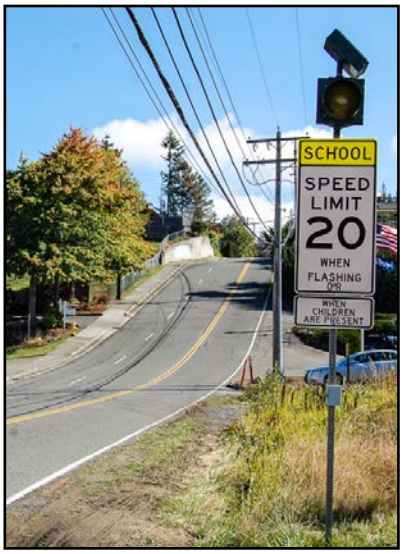
- Steep Grade Hills
- Areas of Low Lighting
- Hazardous Intersections
- Missing Connections
- Traffic Speed



Walking Audits:

"In 2012, the District's Public Health Advisory Council evaluated more than 80 health indicators for Snohomish County. The 27 indicators with the worst risk scores were then evaluated in terms of their size, seriousness, the existence of evidence-based practices/community interventions, and whether there are community values attached to the issue. Using these criteria, the members of the Council chose priority health issues in need of community action. One of these priority issues was obesity prevention. Obesity affects 27% of adults and 11% of children in Snohomish County, double the 1994 obesity rates. It is a contributing factor to heart disease, certain cancers, and diabetes. There is a need for coordinated efforts that will increase physical activity and improve nutritional quality in Snohomish County. The Health District embarked on a collaborative effort with community partners and key stakeholders to develop community health improvement plans (CHIPs) for priority areas. In an effort to meet the obesity prevention objective of "Increasing school-based best-practice policies that promote physical activity for children and families in a minimum of three Snohomish County school districts" the collaborative identified the need to conduct a county-wide assessment of current physical activity practice and policies in elementary schools in order to identify districts or schools with the greatest need. A walking audit of all elementary schools in Snohomish County is one element of this assessment" (Snohomish Health District - Walking Audit, 2015).

The Snohomish Health District did a significant amount of leg work and research regarding the connectivity to and from Mukilteo's Elementary Schools. On the following page are the top observations of the conclusions for Mukilteo Elementary, Columbia Elementary, and Endeavour Elementary. These reports can be found in the Appendix for additional information.



Mukilteo Elementary:
Top Observations:
1. The crossing over Mukilteo Speedway was one of the most hazardous that we have observed in the county. Visibility of crossing and guard are very poor even on a clear day (no rain, no fog). Traffic was heavy and fast. Crosswalk signs are difficult to see and invisible for cars traveling behind larger vehicles.

2. Cars illegally park on the curb north of the school exit on to Washington Avenue. This creates a substantially hazard as cars and buses exiting right of the school have to turn wide to avoid parked cars in to the oncoming lane which comes blindly around the bend. Illegal parking around the Washington Avenue exit also restricts visibility of the crosswalk just south of the turnout.

Columbia Elementary:
Top Observations:
1. Columbia Elementary has ideal walking and biking conditions and excellent sidewalk access/trail access, safe crossings,and is well manned by both staff and student crossing guard at start and dismissal times. Though there were many students observed taking advantage of walkability, an above-average volume of parent drop off/pick up traffic was also observed resulting in congestion on school grounds and Harbour Pointe Blvd.

Endeavour Elementary:
Top Observations:
1. The parking lot and drop off/pick up area of this school are confusing, but make the most of the space available. Congestion from parent traffic is substantial.

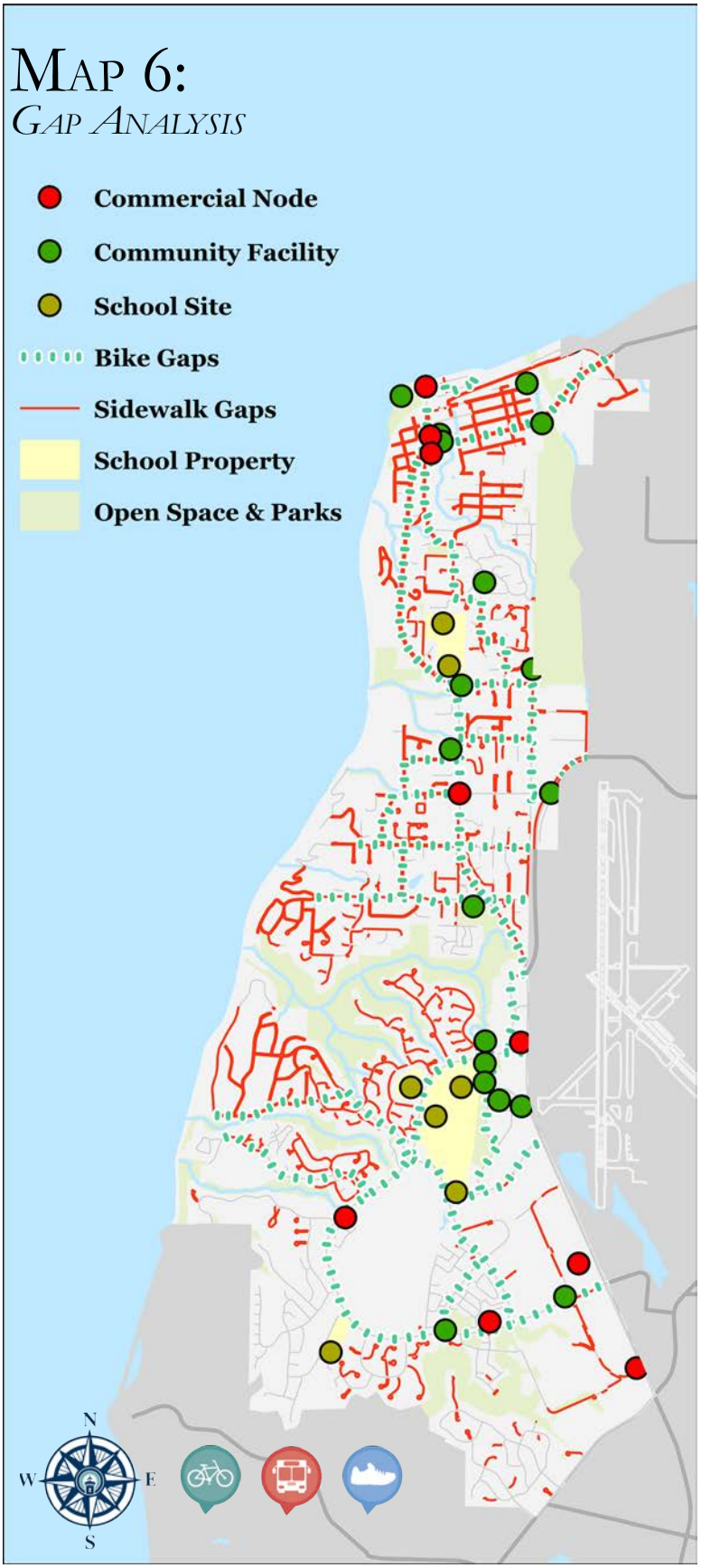
2. Walking conditions around this school are excellent, with good sidewalks on all surrounding major and secondary/residential streets.

Gap Analysis:

A gap analysis is the process of reviewing existing facilities to identify unserviced areas. Another way to consider a gap analysis is the inverse of an inventory. This process can identify gaps that may be short or long in terms of scope and investment. Short gaps may be cheaper projects that are prioritized in order to create consistent corridors, whereas gaps that cover a large distance may require larger financial support. This gap analysis is for bikes and sidewalks and does not include a gap analysis for shared-use paths as shared-use paths are site specific design solutions for both pedestrian and cyclists. This gap analysis also does not include transit gaps, because the focus of the improvements is to increase connectivity to existing facilities. This will allow the increased ridership developed through connectivity to create the demand for more facilities.

Map 6 represents the areas of facility gaps and is tallied in Table 4. Some of these gaps include areas without sidewalks along major corridors or known preferred bike routes that lack facilities. While these areas are identified as 'gaps' some locations may not require a facility. Such locations include areas where the street serves both pedestrians and motorists safely without the requirement of a sidewalk. These areas tend to have a travel speed of less than 25 MPH with very low average daily trips.

Table 4: Gap Analysis	
Facility	**Mileage**
Sidewalks - Existing	70.49
Sidewalks - Gaps	61.12
Bike Facilities - Existing	4.86
Bike Facilities - Gaps	18.37
*Gap Mileage does not equate to Projects Size or Scope.	



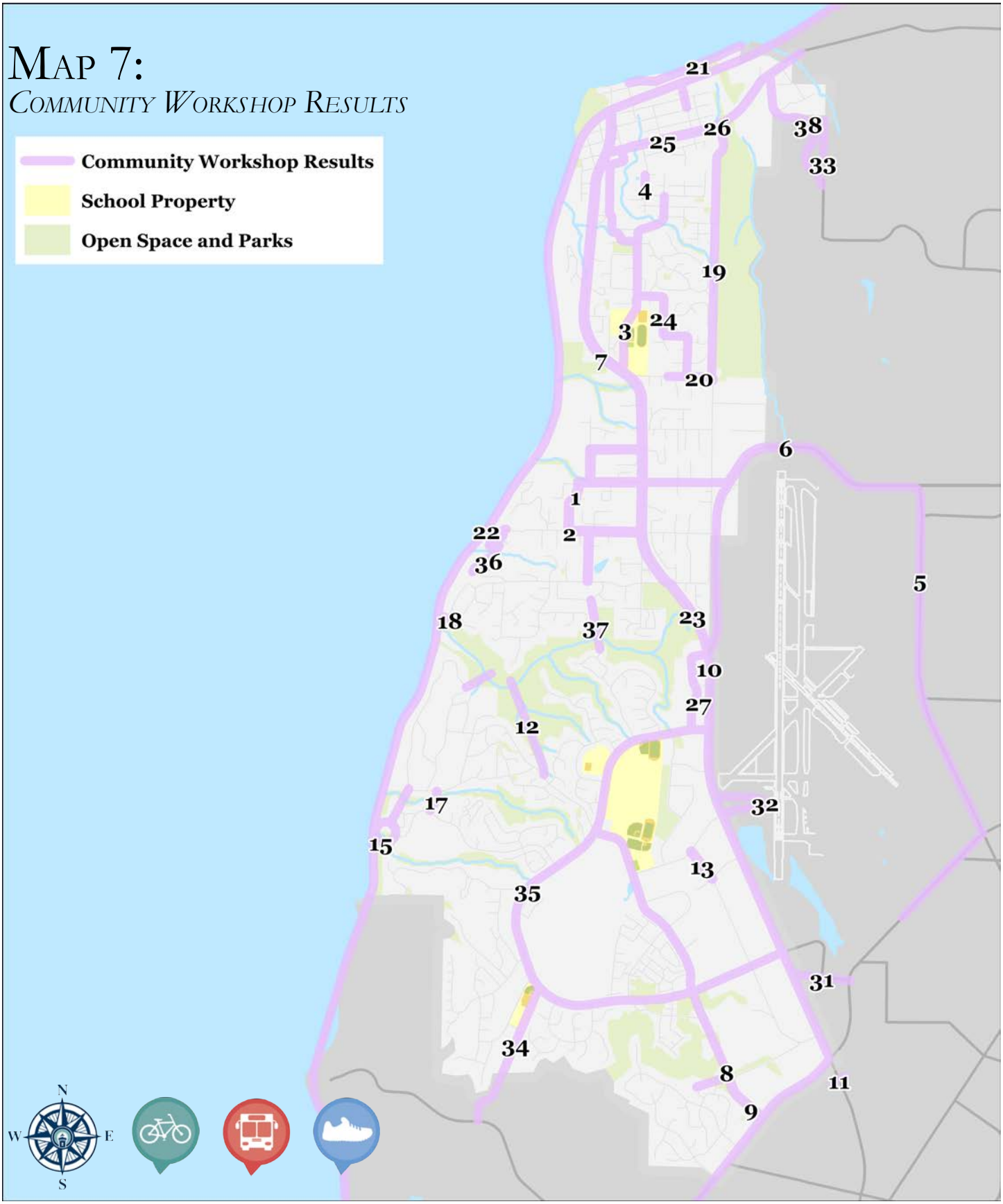
Community Workshop:

Public outreach is critical to the success of any long range planning project. So critical that the Comprehensive Plan's 'Goals to Achieve a Livable Mukilteo' identified that Authentic Participation leads to transparency, collaborative planning, an engaged public, and responsive leadership. Following the data inventory, an Open House was held in October, 2015 to assist staff in further identifying routes and project ideas that would improve their ability to move about the community. Following the Open House, the exercise was repeated with the Planning Commission and Wise Investment in Transportation Taskforce (WITT). In total, approximately 50 residents participated in the workshop exercise to help shape the preferred routes of the BTW Plan. Map 7 and Table 5 is a summary of the results identified through the workshop.

Table 5: Community Workshop Projects

Project Number	Description	Project Number	Description
1	Bike connection through Mid-town	21	Waterfront promenade multi-use path
2	Pedestrian connection through Mid-town	22	Rails to Trails multi-use path
3	Public school pedestrian path	23	Pedestrian connection on east side of SR525 between 92nd St and SR526 spur
4	Pedestrian connection to Old Town	24	Pedestrian path along stairsteps and between Goat Trail Road and 9th St
5	Bike lanes from SR526 to Boeing looping to the Heritage Flight Museum, Beverly Park Rd, back to SR525	25	Pedestrian connection along 5th Street
6	Transit routes from SR526 to Everett	26	Bike connection along 5th Street
7	Multi-use path from 92nd Street to Ferry/Old Town	27	Multi-use path along Harbour Pl between SR525 and Harbour Pointe Blvd.
8	Bike path along Harbour Reach Corridor	28	Multi-use connection between Harbour Reach Drive and 130th Pl SW
9	Pedestrian path along Harbour Reach Corridor	29	Pedestrian path between Mukilteo Lane and 3rd Street along Cornelia Avenue
10	Transit route along SR525 & Beverly Park Road	30	Road noise
11	Pedestrian bridge across SR525	31	Bike connection between Beverly Park Road and SR525 along 121st St.
12	Trail through Big Gulch connecting to Chennault Beach Road	32	Transit loop around Park & Ride at Bernie Webber Drive with bike storage lockers
13	Bike connection from Cyrus Way to Chennault Beach Rd	33	Multi-use path connection to Seaway Blvd.
14	Pedestrian connection from Cyrus Way to Chennault Beach Road	34	Endeavour Elementary pedestrian path
15	Pedestrian path connection from Marine View Drive to Waterton Circle	35	Protected bike lanes along Harbour Pointe Blvd. and Chennault Beach Road
16	Bike connection from Chennault Beach Drive to Harbour Heights Pkwy	36	Change from private road to public access road
17	Pedestrian connection from Chennault Beach Drive to Harbour Heights Pkwy	37	Pedestrian bridge across Big Gulch connecting 52nd Ave. W to 52nd Ave. W
18	Pedestrian trail between West end of Big Gulch Trail and waterfront access	38	Multi-use path from Mukilteo Blvd to Boeing Recreation Center
19	Multi-use path connecting through Japanese Gulch	39	Park and ride at Harbour Pointe Shopping Centre
20	Pedestrian improvements to 76th Street		

Map 7:
Community Workshop Results



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Selected Alternatives:

The Gap Analysis and the Public Workshop provided two sets of data for the BTW Plan. One set identified where there were no facilities, and the second set identified where the public wanted facilities. In order to incorporate these two sets of data into a functioning project list, the alternatives are reviewed for:

- Areas that provide connections to schools,
- Dynamic projects that serve multiple purposes,
- Projects that are reasonable to complete within 20 years,
- Project location alternatives that provide higher implementation feasibility, and
- Project gap locations that are created with the implementation of other projects.

These five different metrics provide a methodology to review and identify preferred design projects. Certain projects, such as park trails, are great concepts and important for the City of Mukilteo to pursue; however these types of projects will be assessed in the upcoming Park Master Plan Update. Additional projects were added that provided a possible solutions to challenges that was were identified by the Community Workshop.

While not all the projects identified in the Community Workshop were incorporated into the preferred project list, the various project provided a wide array of ideas that contributed to identifying solutions to meet the needs of Mukilteo Residents to move about the community. The selected alternatives illustrate a comprehensive list of projects to promote mobility and connectivity throughout Mukilteo. This list is long. There are projects that seem infeasible, expensive, or extravagant, but each one of these projects was selected based on the ability to implement the four goals of the BTW Plan while providing some reasonable options for project pairing and project implementation.

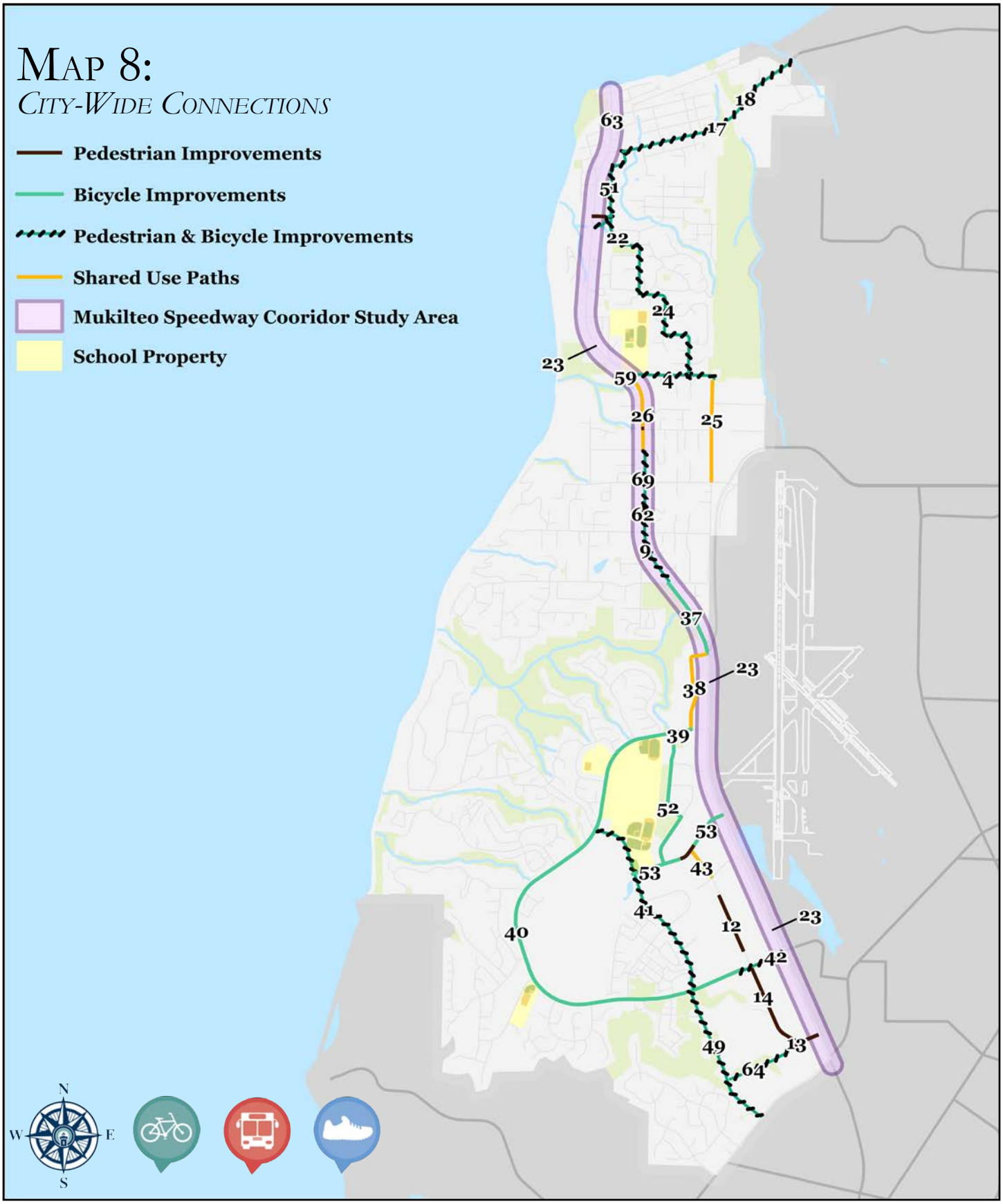
These projects are organized based on the level of connectivity to certain destinations and origins. Routes that connect destinations to destinations, such as Lighthouse Park to Kamiak High School, have a higher level of connectivity than routes that connect neighborhoods. This organization identifies the selected alternatives into four groups:

- **City-Wide Connections -** Projects that provide high connectivity throughout Mukilteo and to the region.
- **Local Connections** - Projects that provide connectivity to the City-Wide/Regional Projects.
- **Regional Facilities**- Projects that exist primarily outside the City of Mukilteo boundaries.

Below is a table of the existing facilities, proposed facilities, and new total of facilities that will be available.

Table 6: Existing & Proposed Facilities

Facility	Existing (Miles)	Proposed New (miles)	Total Upon Implementation	Difference
Bike Lanes	4.9	11.6	16.5	240%
Bike Sharrows	0	10.61	10.61	-%
Cycle Track	0	.23	0.23	-%
Sidewalks	70.5	4.2	74.7	6%
Shared Use Path	1.3	3.9	5.2	304%
Streets	78.3	1.3	79.6	1.6%
* Does not include Airport Heritage Bike Path, Boeing Recreation Path				


Map 8:
City-Wide Connections
Pedestrian Improvements
Bicycle Improvements
Pedestrian & Bicycle Improvements
Shared Use Paths
Mukilteo Speedway Cooridor Study Area
School Property
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18
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51
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24
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City-Wide/Regional Projects

The identified projects that fall under 'City-Wide/Regional Projects' are projects that provide high levels of connectivity throughout the city, and typically follow urban collectors or arterials. These projects are high visibility, high opportunity, high service, and include some high project costs. As a high service project, the primary user groups vary from nearby residents to cyclists trekking in and out of Mukilteo, to people wanting to visit the post office. These projects will be partially dependent on external funding such as grants, but given the high level of services and connectivity, external funding should be feasible.

Mukilteo Speedway - SR 525

The Mukilteo Speedway is both Mukilteo's largest weakness and largest opportunity to provide facilities for a large variety of user groups. The Mukilteo Speedway has had some significant improvements in the last 15 years and possesses the only existing bike lanes within the City, however other areas of the Mukilteo Speedway require improvements to provide adequate levels of service. In addition to the projects listed below, the Bike-Transit-Walk Plan calls for a Corridor Study to better understand the long term potential of the roadway. While the identified projects provide a stop-gap between the existing conditions and desired conditions, the changing conditions of the ferry-holding lane on SR 525 provide a significant opportunity for Mukilteo that may significantly change the design approach for biking, walking, and transit usage. This study will require the participation of Washington Department of Transportation, Community Transit, Everett Transit, Mukilteo School District, adjacent property owners, commercial businesses, residents, and special interest stakeholders.

Project 23 - Mukilteo Speedway - SR 525 Corridor Study - Estimated Cost $150,000

The purpose of the Mukilteo Speedway - SR 525 Corridor Study is to better identify the 20 year vision for the primary route north and south within Mukilteo. This study extends well beyond the depth of the BTW Plan. The Corridor Study will provide more detailed design and transportation engineering regarding traffic engineering whereas the BTW Plan focuses on identification of routes and connections in Mukilteo. There are three primary drivers for the use of a corridor plan:

1. The construction of the new Multimodal Ferry Terminal has a very high likelihood of reducing the required length of ferry holding lanes located on SR 525. With the reduction in this demand, a roadway reconfiguration project has merit where the vehicle holding lane could potentially serve as a pedestrian facility during non-peak ferry demand (under 85th percentile). This potential means that additional pedestrian facilities could be added to the Mukilteo Speedway without the requirement of expanding the footprint of the roadway.
2. Mid-Mukilteo is quickly becoming a prime location for redevelopment. This area from 76th Street SW to 88th Street SW has the opportunity to become a true neighborhood center for the Mid-Mukilteo neighborhood with opportunity for mixed-use development and revitalized commercial opportunities. Here the Mukilteo Speedway divides the subarea into an east and west portion and challenges the design efforts for a pedestrian oriented development as envisioned by the Comprehensive Plan. The Corridor Study will have the opportunity to review this vision with connection to the ferry holding lane segment.
3. The changes identified in the two reasons stated above provide the opportunity to reconsider bike, transit, and walking movement throughout the entire corridor. While a significant portion of SR 525 has been improved, alternatives for a single shared use path may be feasible whereas the BTW Plan identifies projects below as 'stop-gap' options in response to existing conditions.

SR 525 Mid-Block Crossings - Projects 59, 61, 62, 63 -

One of the challenges identified during the public outreach was the inability to safely and efficiently cross SR 525. This type of mobility challenge is known as a barrier as identified on page 16. These barriers have the ability to restrict individuals not from just crossing the street, but from using the existing facilities all together. Each of these facilities will require approval from WSDOT and will contribute into the corridor plan. If the opportunity to establish a mid-block crossing prior to the approval of the corridor plan, the City should pursue the opportunity for implementation.

One option to implement a higher safety factor is the development of a pedestrian refuge island as pictured below. In the diagonal refuge island below, the user is forced to change body direction. By forcing the pedestrian to change directions by a few degrees, the user will visually engage oncoming traffic. This small environmental shift promotes higher communication between motorists and pedestrians while also providing a safe crossing location.

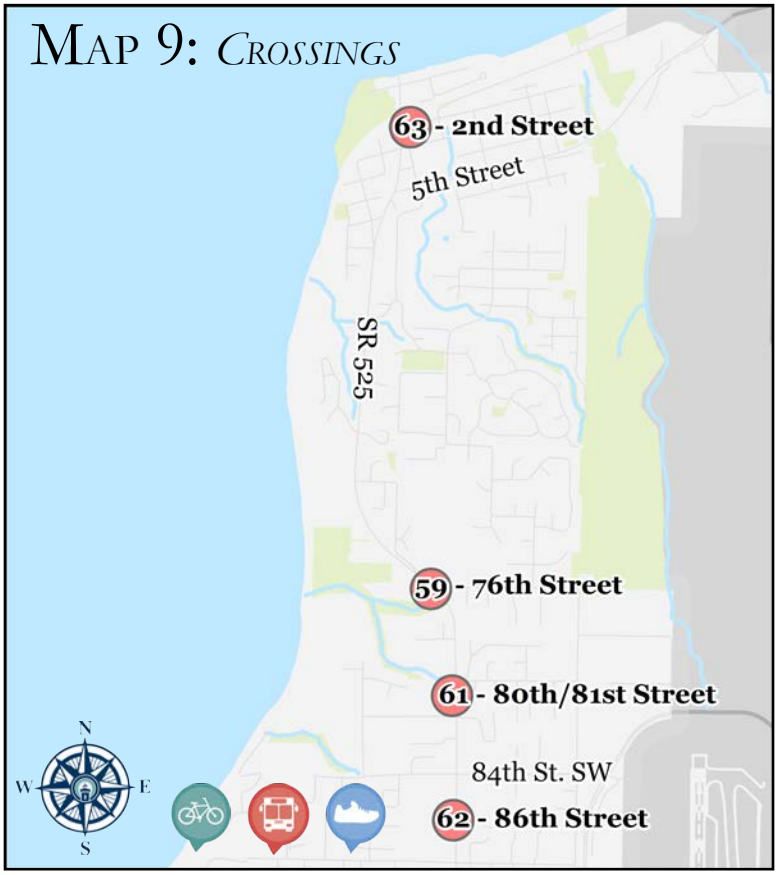


Table 7: Mid-Block Crossing Cost Each	
Total Work Done by Contractor	$67,200
Design, Sales Tax, Contingency, Permits	$53,745
Estimated Total	**$120,945**
Inflation to 2021 Dollars at 3% Annual	**$140,200**

Diagonal Pedestrian Refuge
Photo Credit: www.pedbikeimages.org - Dan Burden
City of Bellevue, WA

Diagonal Pedestrian Refuge
Photo Credit: www.pedbikeimages.org - Dan Burden
City of Bellevue, WA

Additional Mukilteo Speedway Projects

While the Mukilteo Speedway will be studied in a much larger corridor analysis, during the public outreach for the BTW Plan several projects were identified as important to many residents. To ensure that these projects are further researched in the Corridor Study, they are identified below:

SR 525 Safe Route to School - Project 26

The existing sidewalk on the Mukilteo Speedway between 76th Street SW and 81st Place SW is inadequate for a safe route to school. While the facility exists, there lies the opportunity to increase the size of the sidewalk as a shared use path facility. This size of facility will provide the opportunity for students to walk or ride safely along the Mukilteo Speedway.

Table 8: SR 525 SRTS	
Total Work Done by Contractor	$698,131
Design, Sales Tax, an d Permits	$346,273
Estimated Total	**$1,044,404**
2021 Dollars at 3% Annual	**$1,210,674**

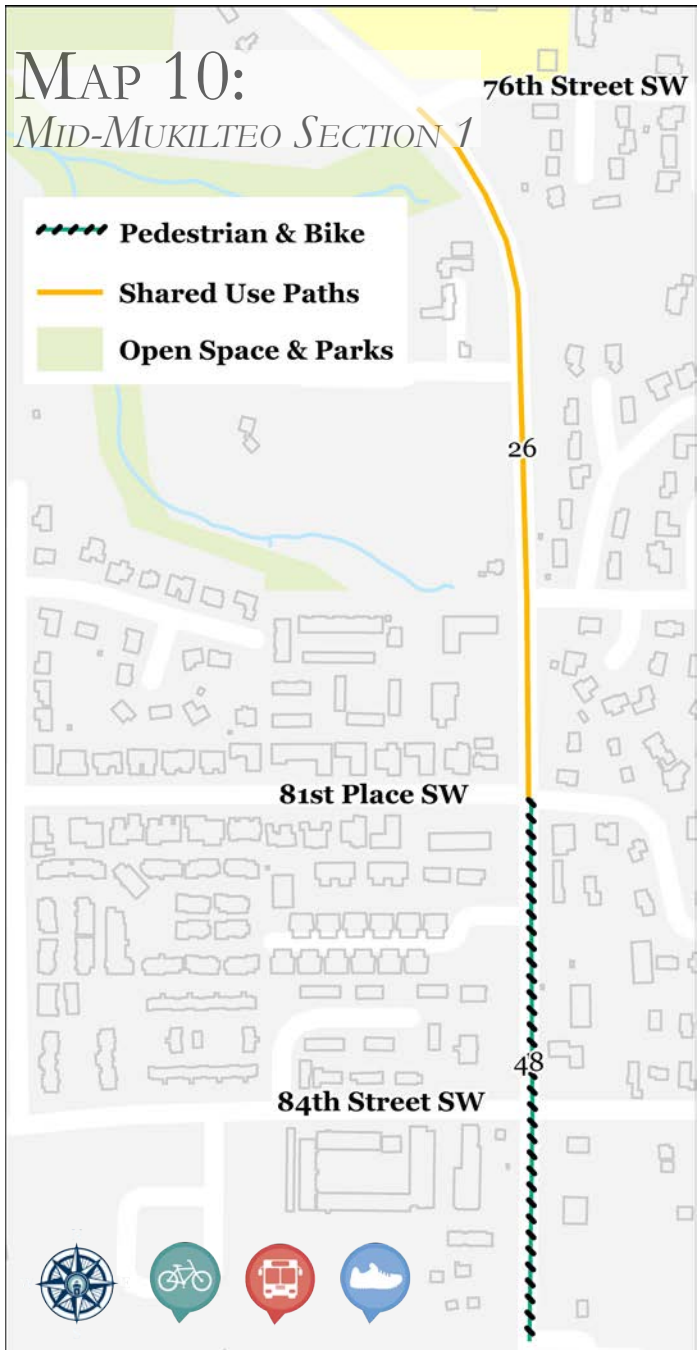
Midtown Sidewalks & Bike Lanes Section 1 - Project 48

The Mid-Mukilteo Commercial Corridor currently lacks adequate facilities to fully support commerce by feet and pedal, not by car. As the City has identified the need for the Midtown Mukilteo to be studied further in LU6 of the Comprehensive Plan, the identified costs represent a sample cost of potential improvements.

Table 9: Midtown Mukilteo Section 1	
Total Work Done by Contractor	$2,962,241
Design, Sales Tax, Contingency, Permits	$2,355,575
Subtotal	**$4,512,086**
Additional Contingency(20%)	$805,730
Estimated Total	**$5,317,816**
2021 Dollars at 3% Annual	**$6,164,412**

- Easy Wins -

Update Design Standards to require development and redevelopment to build preferred facilities based on site specific desires, not roadway classification.



SR 525 Facing South

Midtown Sidewalks & Bike Lanes Section 2 - Project 9

The Midtown Phase 1 supported connectivity for commerce purposes, whereas Phase 2 supports the quality of life connectivity by providing a safe route to 92nd Street Park and the existing Mukilteo Speedway Shared Use Path to Harbour Pointe. Phase 2's project area is from the 8600 Block of SR 525 to 92nd Street SW.

Table 10: Midtown Mukilteo Section 2	
Total Work Done by Contractor	$1,284,466
Design, Sales Tax, Contingency, Permits	$637,095
Subtotal	**$1,921,561**
2021 Dollars at 3% Annual	**$2,227,474**

Midtown Bike Lanes Section 3 - Project 37

The existing Mukilteo Speedway Shared Use Path provides adequate pedestrian facilities into Midtown Mukilteo, however the existing bicycle facilities along this primary route are lacking. During the public outreach, it was expressed that using the shared use path for all cyclists in both directions was inadequate, and many cyclists will choose to still ride in the shoulder. To provide for an adequate bike facility for cyclists who are destination oriented and are traveling at speeds higher than appreciated by pedestrians, the creation of two bike lanes in both directions at this location will provide the necessary connectivity needed. This project should be further studied with the Mukilteo Speedway Corridor Plan.

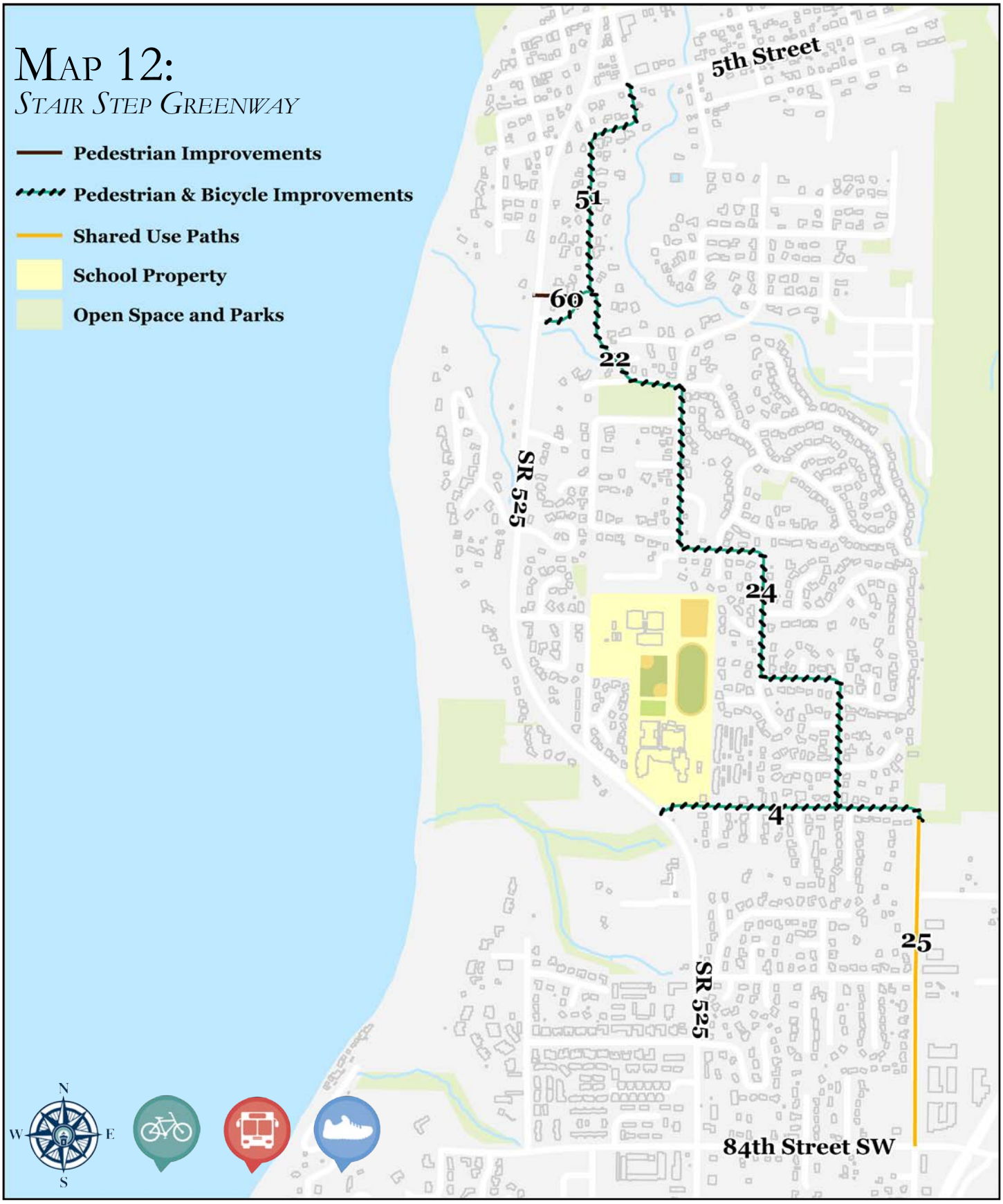
Table 11: Midtown Mukilteo Section 3	
Total Work Done by Contractor	$23,020
Design, Sales Tax, Contingency, Permits	$11,417
Estimated Total	**$34,437**
2021 Dollars at 3% Annual	**$39,920**

- Easy Wins -

- Implement Signage on SR 525 when shoulders either narrow/end as caution for both motorists and cyclists.
- Provide additional wayfinding to support slower cyclists on the existing shared use path.
- Transition existing shoulders to Bike Lanes.

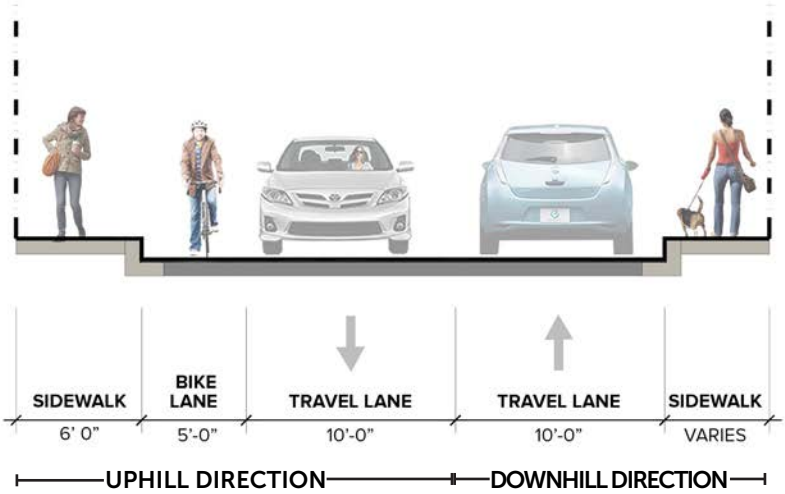
SR 525 Facing North Towards 88th Street SW

Map 12:
Stair Step Greenway



Mukilteo Stair-Step Greenway

The north-south alternative to the Mukilteo Speedway is a path starting at 5th Street and winding up through the Goat Trail Community and eventually to the Hilltop Community at 44th Ave West. This route is known as the stair steps because of the 90-degree turns on the corridor. Most of this route is on an Urban Collector with a speed limit of 25 MPH and is primarily residential in character with connection to industrial development on 44th Ave West. This Greenway Route also serves as a connector to the Olympic View Middle School and Mukilteo Elementary.



Washington Avenue Sidewalks & Bike Facilities - Project 51

The first section of the Stair-Step from 5th Street lies primarily on Washington Avenue. This section of hilly terrain includes an existing curbed section to provide refuge to pedestrians, but does not fully provide a path for both cyclists and pedestrians. The most preferred design option would include transitioning the existing curbed area into the bike facility, add sharrows in the downhill travel lane, and implement a new sidewalk portion as several properties have already. Due to the terrain of several properties, this option may not be feasible throughout the entire section of roadway and there may be some sections of landscaping that will be affected. The final design should replace damaged landscaping with height limited street trees to protect views of the Puget Sound.

Table 12: Washington Ave Project 51	
Total Work Done by Contractor	$2,445,666
Design, Sales Tax, Contingency, Permits	$1,213,050
Estimated Total	**$3,658,716**
2021 Dollars at 3% Annual	**$4,241,184**

- Easy Wins -

- Implement Greenway Signage
- Implement Downhill Sharrows
- Move the Mailboxes out of the Pedestrian Path

Goat Trail Road - Project 22

The second section of the Stair-Step Greenway is Goat Trail Road to 8th Drive. This section of roadway exists in a prescribed easement as the roadway does not solely exist within the dedicated right-of-way. This issue has faced Mukilteo for many years as the recognized property lines significantly differ from the surveyed property lines. Unfortunately, to implement a sidewalk or bike lane within the right-of-way, the City will have to commit to working with the property owners to reach an agreement to resolve the surveying issue. By solving this issue, not only will the City have the ability to implement additional pedestrian and bike facilities, the affected property owners will no longer be faced with lot boundary challenges.

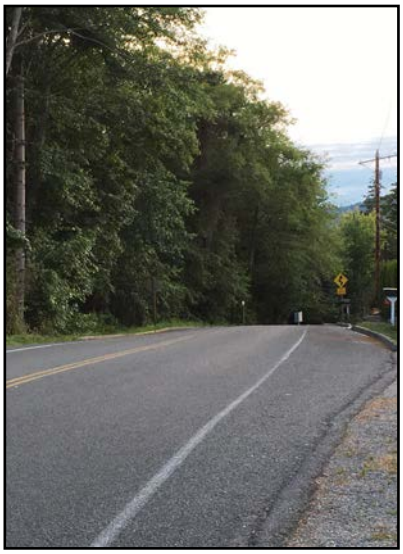


Table 13: Goat Trail Road Project 22	
Total Work Done by Contractor	$1,304,732
Design, Sales Tax, Contingency, Permits	$647,147
Subtotal	**$1,951,880**
Additional Contingency(20%)	$354,887
Estimated Total	**$2,306,767**
2021 Dollars at 3% Annual	**$2,674,005**

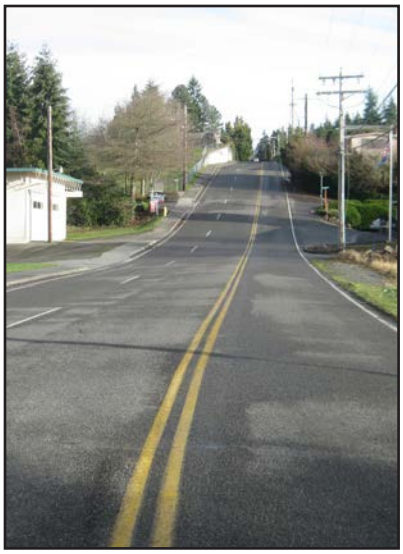
Goat Trail Road Bridge - Project 60

Goat Trail Road Bridge is a long-term concept to provide connectivity over SR 525 and connect to existing bus services through the use of 11th Street. Due to the long term vision of this project exceeding 25 years for implementation, this project has not be further vetted. Should an at grade crossing be implemented, Project 60 could be eliminated from consideration and 11th Street right-of-way should be considered for street vacation.

Stair-Step Pathway and Bike Markings - Project 24

The third section and the largest is the section of the roadway that most resembles stairs. This section extends from 8th Drive up to 76th Street SW. Much of this area includes a widened shoulder that currently serves cyclists and pedestrians, but given the immediate connection to the schools this widened shoulder should be transformed to a sidewalk with a bike lane in the uphill route. This roadway will provide a facility for cyclists, pedestrians, and students to quickly reach their destination while also maintaining the character of the community.

Table 14: Stair-Step Pathway Project 24	
Total Work Done by Contractor	$3,224,371
Design, Sales Tax, Contingency, Permits	$1,686,991
Subtotal	**$4,911,362**
Additional Contingency(20%)	$877,029
Estimated Total	**$5,788,392**
2021 Dollars at 3% Annual	**$6,709,904**



76th Street SW - Project 4

76th Street SW is a destination connector, meaning at either end of the roadway are two primary destinations within the City. Olympic View Middle is at one end while the 76th Street Trailhead and access to Japanese Gulch Park is at the other end. The proposed project includes completing the sidewalk system and adding new bike facilities. More detailed information about the sidewalk estimating can be found under the Tuttle Sidewalk Report. The cost estimates below differ from those provided by the Tuttle Report, because the previous estimates did not include the costs of bike facilities which City Staff included at a rate $539 per 100 feet of construction costs. These costs may be lower depending on project pairing.

Table 15: 76th Street SW Project 4	
Total Work Done by Contractor	$893,539
Design, Sales Tax, Contingency, Permits	$443,195
Estimated Total	**$1,336,734**
2021 Dollars at 3% Annual	**$1,549,541**

44th Ave West Shared Use Path- Project 25

The City had previously completed a shared use project on 44th Ave West with the development of Paine Field Blvd. This project proposes to continue the existing path north to 76th Street SW. This 10'-15' shared use facility can have significant portions constructed with the development of vacant industrial land or the City could construct the frontage improvements as an economic development initiative to better market the development of these lots. This facility will finish the north-south connection from 5th Street to Paine Field Blvd & SR 525 at the 'Spur'.

Table 16: 44th Ave West - Project 25	
Total Work Done by Contractor	$1,083,750
Design, Sales Tax, Contingency, Permits	$567,018
Subtotal	**$1,650,768**
Additional Contingency(20%)	$294,780
Estimated Total	**$1,945,548**
2021 Dollars at 3% Annual	**$2,255,279**

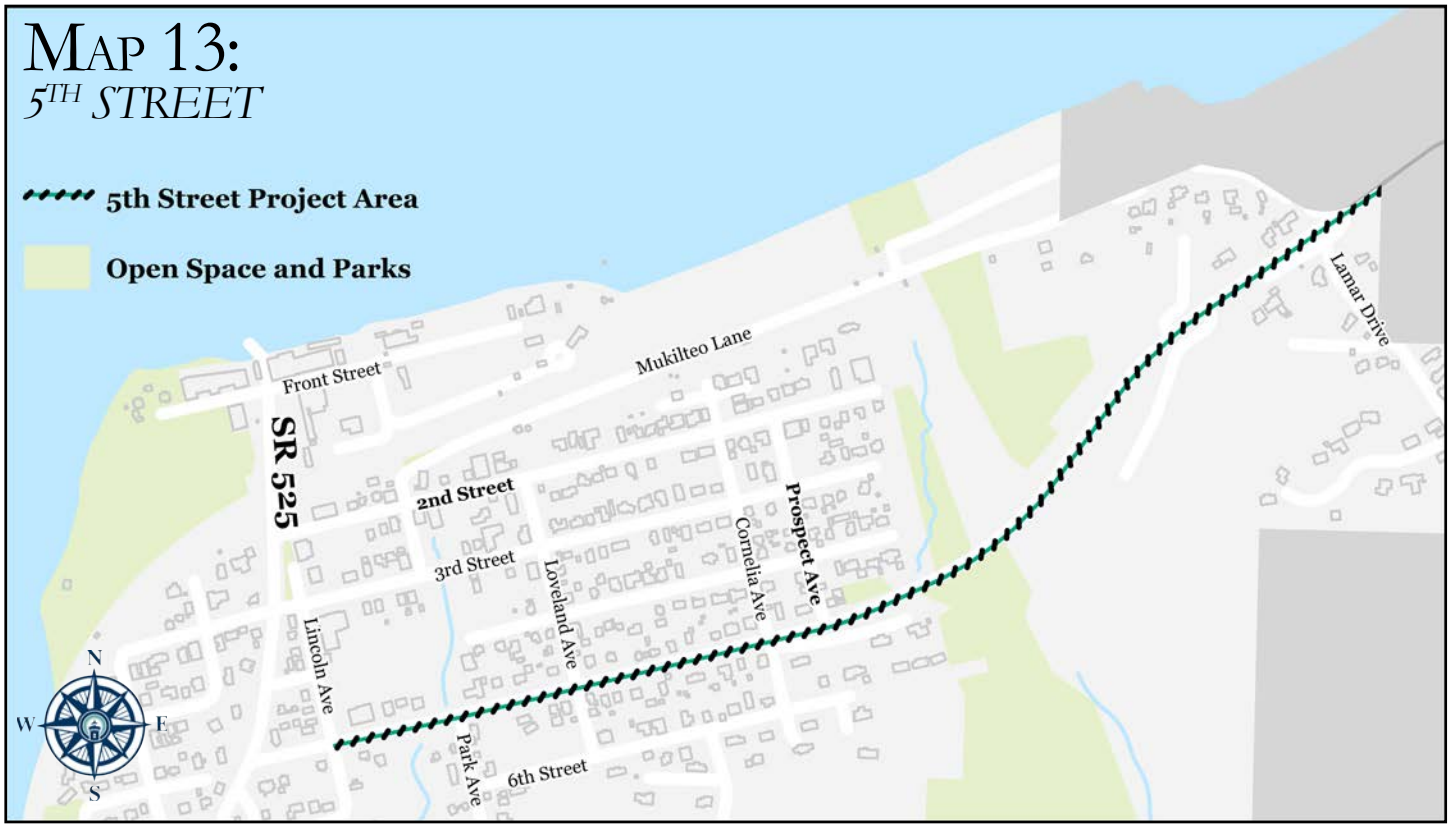
- Easy Wins -

- Change Engineering Standards to include 44th Avenue as a Shared Use Path Cross Section.
- Perform frontage improvements as an economic development initiative to develop the vacant industrial land.

5th Street -

5th Street serves Mukilteo as a principal arterial including connection to the Mukilteo Boulevard Community, Glenwood Ave, and 41st Street. Within the Everett jurisdiction, the Mukilteo Boulevard has been treated with bike lanes in a converted shoulder. In order to connect to this regional facility, the preferred alternative must balance the neighborhood character, meet on-street parking demand, and maintain reasonable project cost. Previously, the TIB (Transportation Improvement Board) approved a grant for the City of Mukilteo to make 5th Street into a boulevard roadway with a raised planter median. Following neighborhood backlash against the project, the TIB grant was given back. In order to prevent such occurrences in the future, public outreach must be conducted during conceptual design, preliminary design, and construction. This plan provides conceptual design following extensive outreach with the community.

To ensure that this plan meets the public opinion and is supported by the Community, City Staff held a *5th Street Neighborhood Meeting* on March 31, 2016 to discuss potential alternatives. During this discussion, it was identified that many residents supported the overall intent to limit the total amount of pavement, but many individuals would like to have some sort of bike facilities and pedestrian facilities. There were additional concerns expressed by a few that any change would negatively impact the community. To balance these opinions, the BTW Plan identifies an alternative that maintains the existing character of the roadway while providing necessary pedestrian amenities.

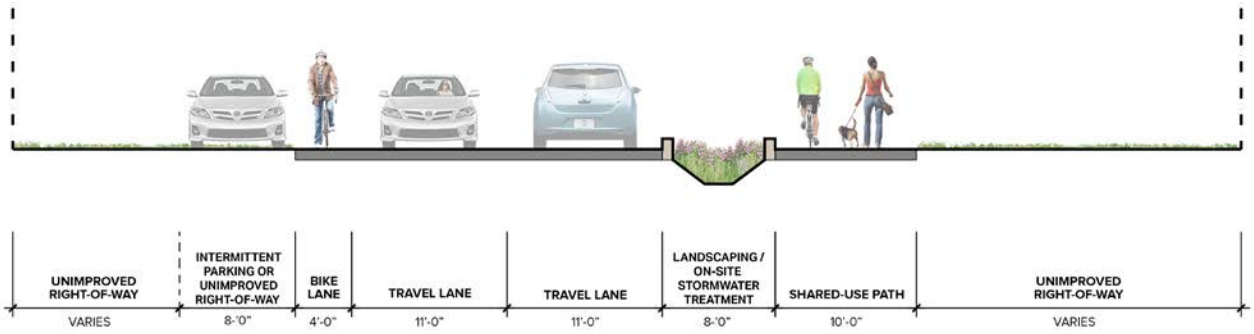


Project 17 - 5th Street

Throughout the BTW Plan Public Outreach, the consideration for implementation included an interim solution and a future final build solution. As Staff continued to whittle down design alternatives to minimize the amount of pavement the identified alternative merged the benefits of interim solutions and final build while controlling costs to create a feasible option. This alternative became known as 'Alternative 3'.

Alternative 3 identifies opportunity for parking, one bike lane, and shared use path. The principle with the alternative is to implement the desired facilities within the existing 'improved area' of approximately 44 feet. One the challenges to address is on-street parking, and this interim design proposes to transfer the use of existing on-street parking into intermittent parking as needed on both sides of the roadway. The intent of intermittent parking is to provide high flexibility to meet true parking demands while minimizing pavement. As the properties along the north side of 5th Street have access to either a garage or alley parking, the final design is expected to minimize on-street parking. With the proposed design, on-site stormwater management may be required and to meet this potential a flexible space for a bioswale is identified or could also be used as landscaping and parking.

This design provides a signature gateway into Mukilteo on a complete street built for individuals of all ages, abilities, and mode. While this design concept features some changes, Alternative 3 still provides flexibility to meet changing demands. This flexibility provides the opportunity for additional public input. This Alternative 3 design is anything but final. The City shall continue public outreach efforts with the residents on 5th Street to address any adverse impacts to landscaping.



- Easy Wins -

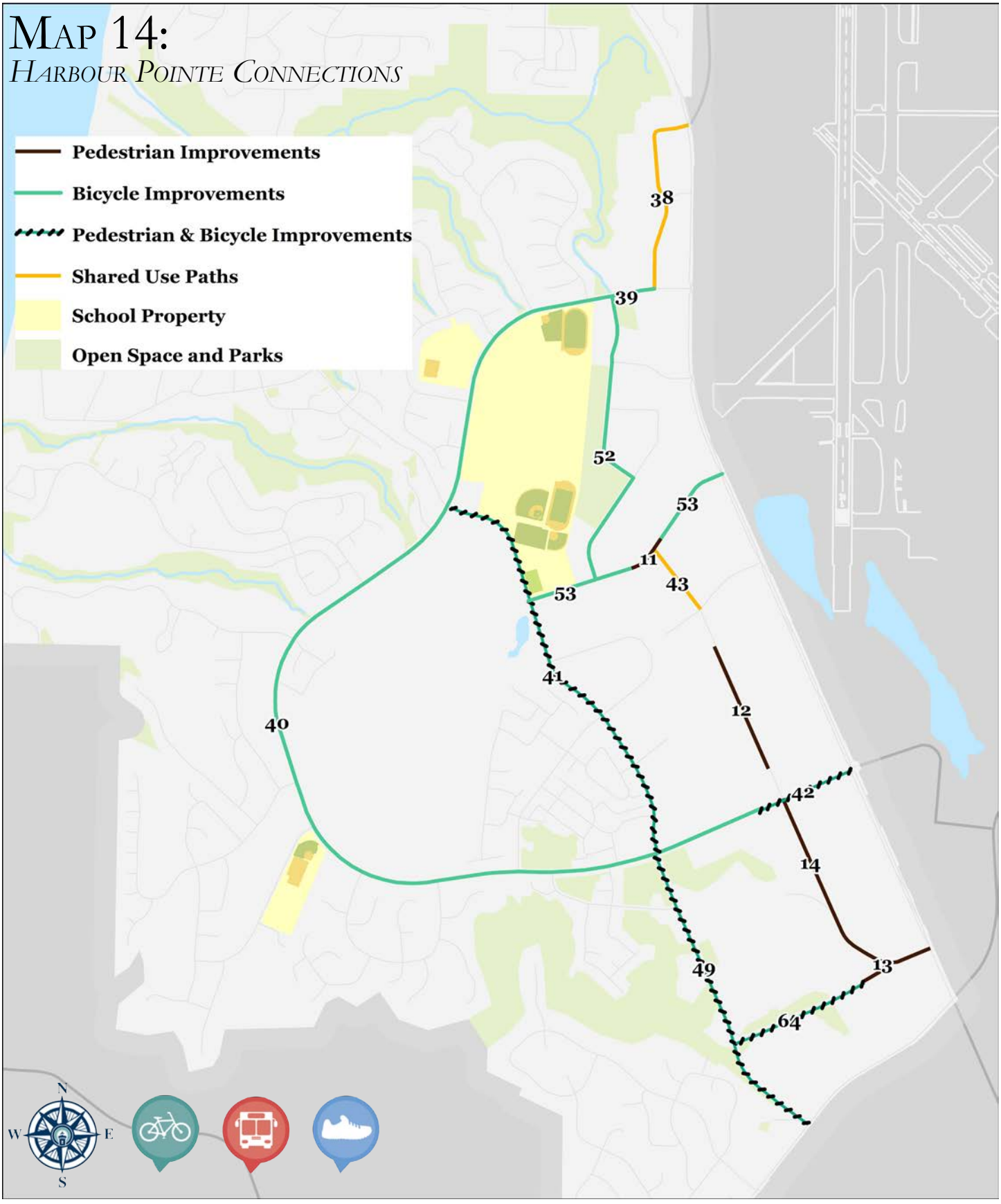
- Roadway east of the Dog Park can be implemented with a re-striping project.
- Identify future water and waste water capital projects that require significant work within the right-of-way for project pairing.
- Minimize use of physical barriers (curbs) to lower costs of implementing (project costs) and maintaining (future costs) ADA facilities.

Table 17: 5th Street - Project 17	
Total Work Done by Contractor	$1,396,400
Design, Sales Tax, Contingency, Permits	$730,596
Subtotal	**$2,126,996**
Additional Contingency(20%)	$379,820
Estimated Total	**$2,506,817**
2021 Dollars at 3% Annual	**$2,905,902**

5th Street - Existing

5th Street - Alternative 3

Map 14:
Harbour Pointe Connections



Harbour Pointe Connections

The Harbour Pointe Master Planned Community contains the highest level of sidewalks per household throughout the neighborhoods. This feature provide excellent connection throughout each subdivision, but as a greater community connectivity is lacking for all modes of transportation. The identified projects will improve connectivity for all modes for both inside the Harbour Pointe community and connection within Mukilteo.

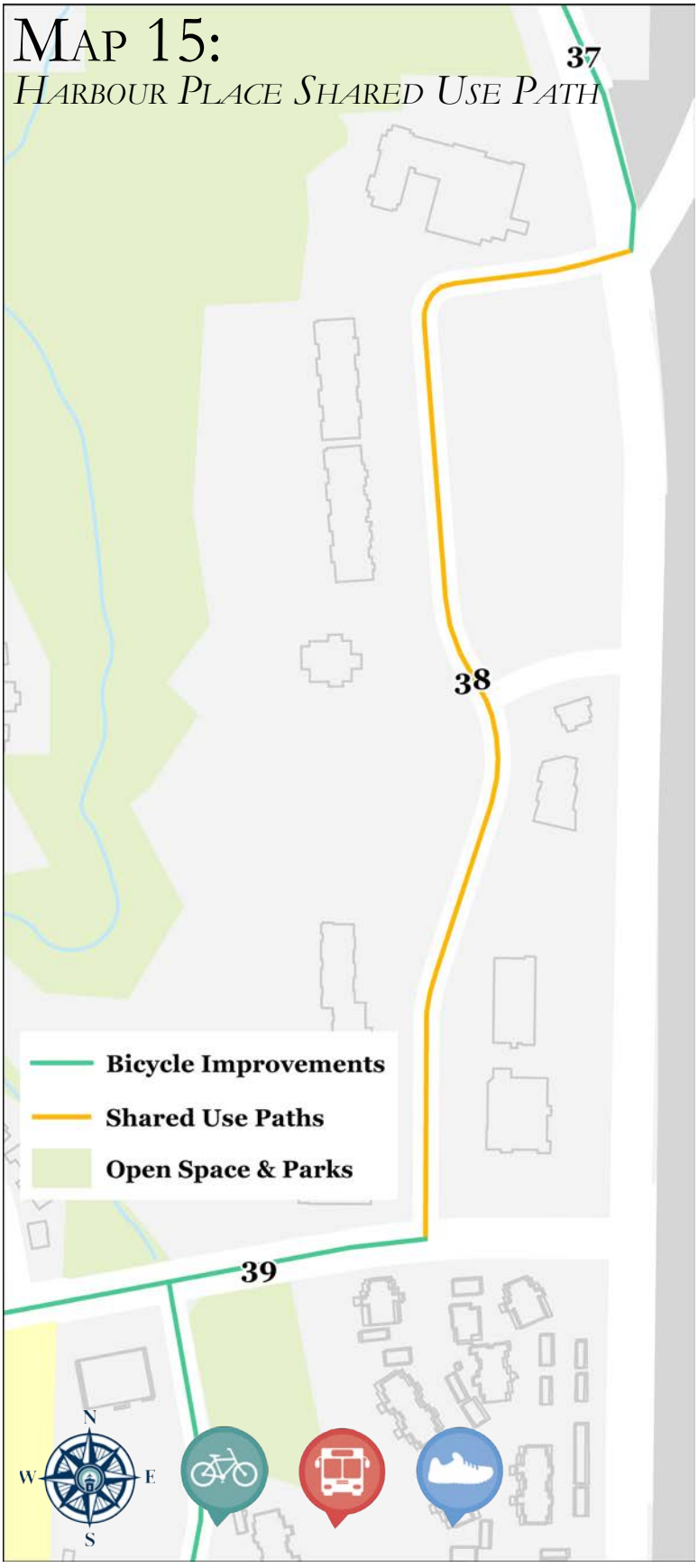
Harbour Place Shared Use Path - Project 38

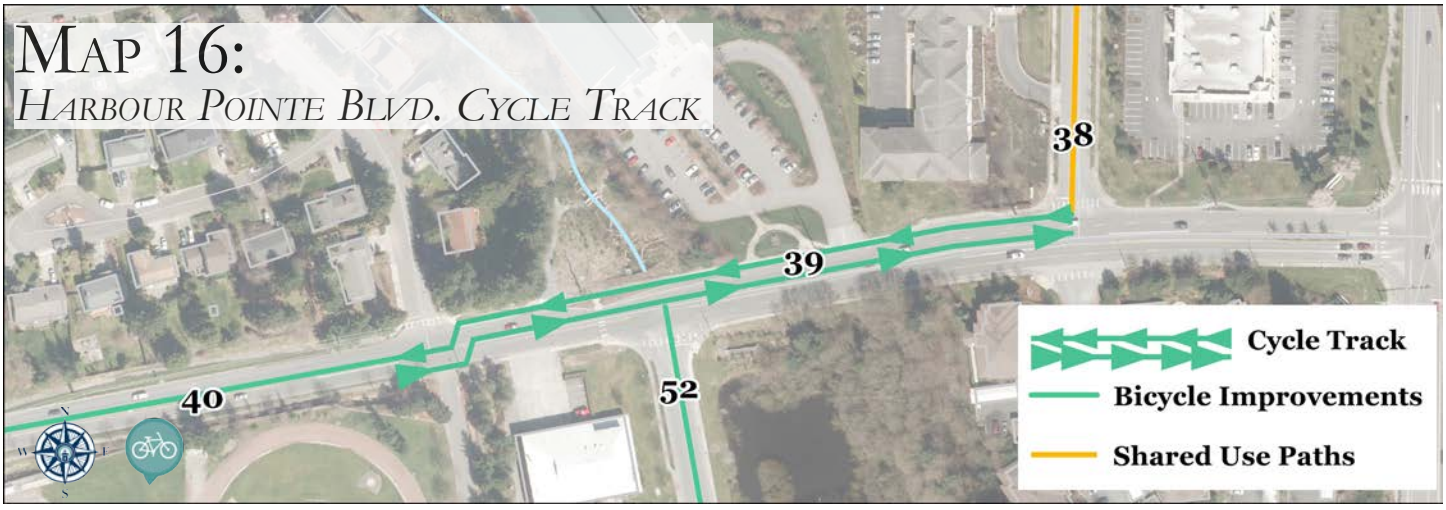
Harbour Place is a roadway that connects to two shared use paths from 44th Ave West, and SR 525. This shared use path makes logical sense to continue the path as far as reasonably possible. As portions of Section 3 are undeveloped, this provides the highest opportunity of implementing a shared use path connection that transitions to sidewalks within existing development. The identified project costs is based on all of Harbour Place including a shared use path, whereas further design may reduce that length to just undeveloped portions.

Table 18: Harbour Place Shared Use Path Project 38	
Total Work Done by Contractor	$990,877
Design, Sales Tax, Contingency, Permits	$491,475
Estimated Total	**$1,482,352**
2021 Dollars at 3% Annual	**$1,718,343**

- Easy Wins -

Update Engineering Standards for development of shared use path with requirements of new development at Sector 3.





Harbour Pointe Blvd. Cycle Track - Project 39

Cycle tracks are an incredible way for cyclists to move about a community, but are seldom used for specific causes when using bike lanes make more sense. This project proposes to transition the dual bike lanes as proposed in Project 40 to a cycle track on the north side of Harbour Pointe Blvd. By doing so, a cyclist attempting to connect to Harbour Place's Shared Use Path will have a safer turning movement. The existing turning movement includes climbing a hill in order to make a left in front of two lanes of oncoming traffic while waiting in a center-turn lane. The proposed project design will allow cyclists to transition to the north side of the roadway near the 4800 block of Harbour Pointe Blvd where the terrain is still flat, and then transition on Harbour Place to the preferred facility.

Table 19: Harbour Pointe Blvd. Cycle Track	
Total Work Done by Contractor	$49,100
Design, Sales Tax, Contingency, Permits	$25,689
Subtotal	**$74,789**
Additional Contingency(20%)	$13,355
Estimated Total	**$88,144**
2021 Dollars at 3% Annual	**$102,176**

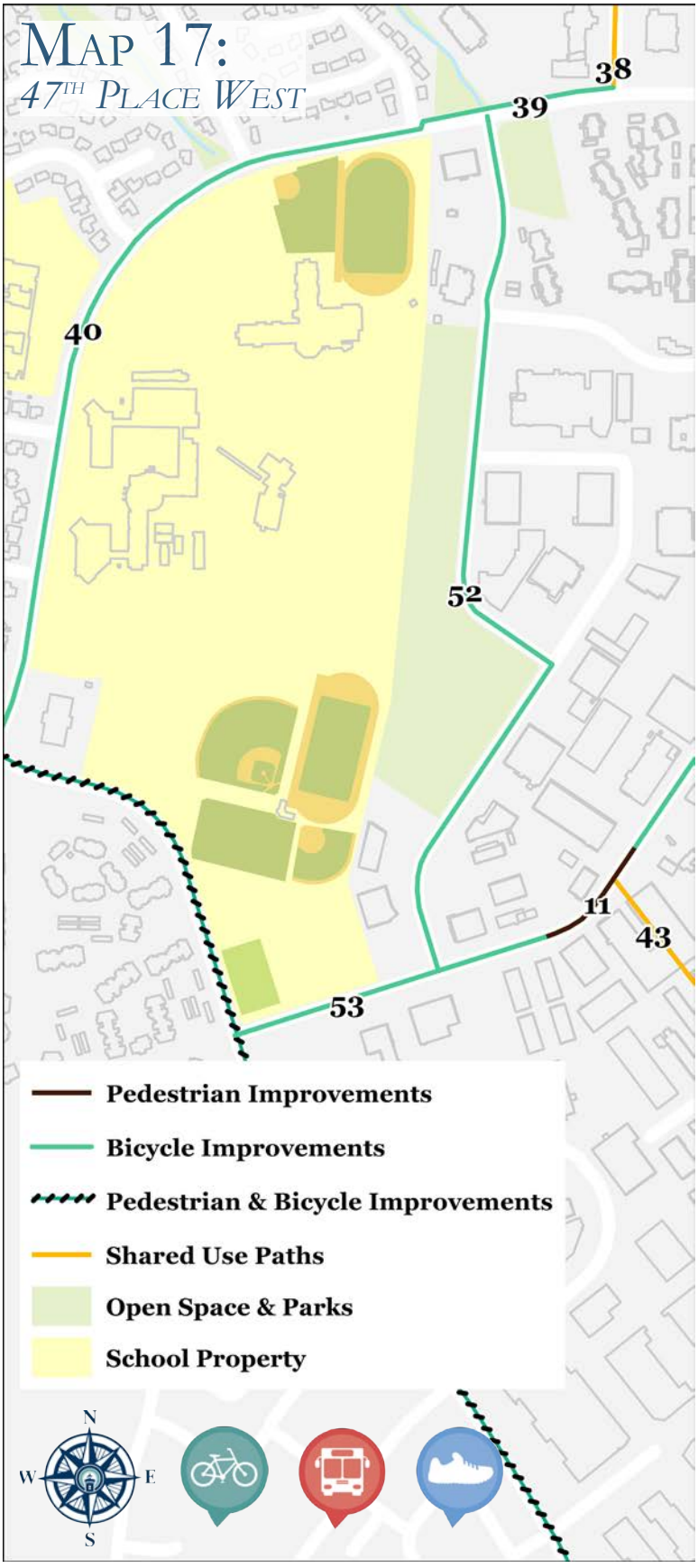
47th Place West - Project 52

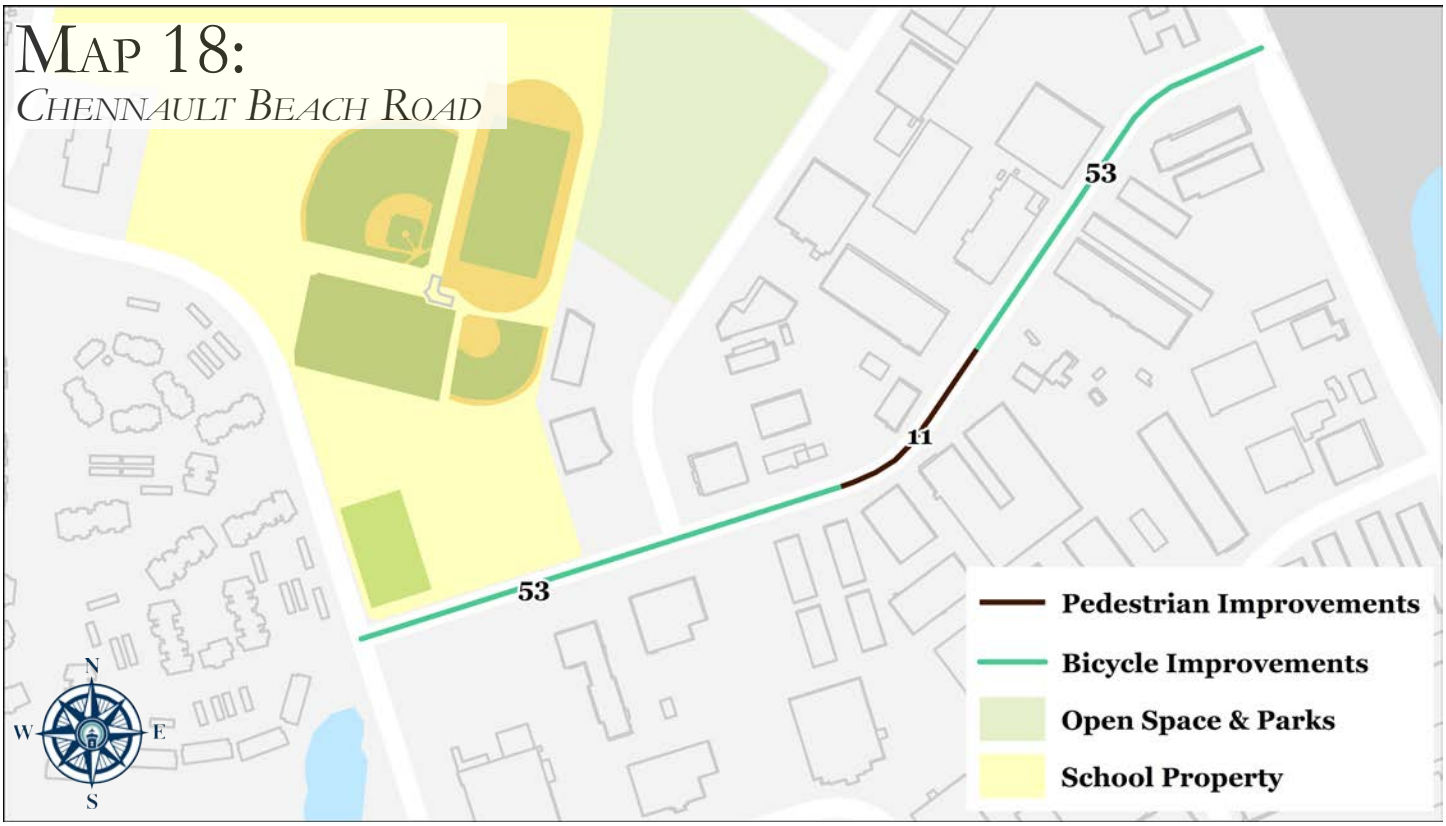
47th Place West is a roadway that connects several important community assets including the YMCA, Police Station, Fire Station 25, and the future Boys & Girls Club Facility. These community assets are also adjacent to several employers that will have the opportunity to enjoy an increased level of mobility. Because of the number of employers, there appears to be an overflow of parking onto the street. To ensure that there is adequate parking for both peak demand of the employers and community assets, *the City should consider the transition of parking from parallel to angle parking with future improvements.*

Table 20: 47th Place West Project 52	
Total Work Done by Contractor	$85,174
Design, Sales Tax, Contingency, Permits	$44,563
Subtotal	**$129,737**
Additional Contingency(20%)	$23,167
Estimated Total	**$152,904**
2021 Dollars at 3% Annual	**$177,246**

- Easy Wins -

- Sign roadway as a Bike Route
- Pair construction of Boys & Girls Club with parking and bike realignments.
- Restrict parking of commercial trucks on the roadway.





Chennault Beach Road - Project 11 & Project 53

Chennault Beach Road is defined as an urban collector and transports residential and commercial traffic from SR 525 to Harbour Reach Drive. This section of roadway, much like 47th Ave West, has a significant number of employers and with the future development of the Bernie Webber Park and Ride, providing adequate pedestrian and bicycle facilities along this section will provide connectivity between dense residential development within Harbour Pointe, large employers, and a regional transit facility. This type of connectivity improves mobility options to lessen the dependency on single-occupancy vehicles.

The two projects on Chennault Beach Road include Project 11 as a sidewalk gap completion that is further identified in the Tuttle Planning-Level Sidewalk Assessment, 2014. The second project is bike markings along Chennault Beach Road as to provide the roadway as a bike route between Harbour Reach Drive and SR 525.

Table 21: Chennault Beach Road Sidewalk - Project 11	
Total Work Done by Contractor	$157,836
Design, Sales Tax, Contingency, Permits	$78,286
Estimated Total	**$236,122**
2021 Dollars at 3% Annual	**$273,713**

Table 22: Chennault Beach Road Bike Improvements - Project 53	
Total Work Done by Contractor	$25,333
Design, Sales Tax, Contingency, Permits	$12,565
Estimated Total	**$37,898**
2021 Dollars at 3% Annual	**$43,931**

- Easy Wins -

- Update Engineering Standards for this roadway
- Pair bike improvements with annual roadway striping

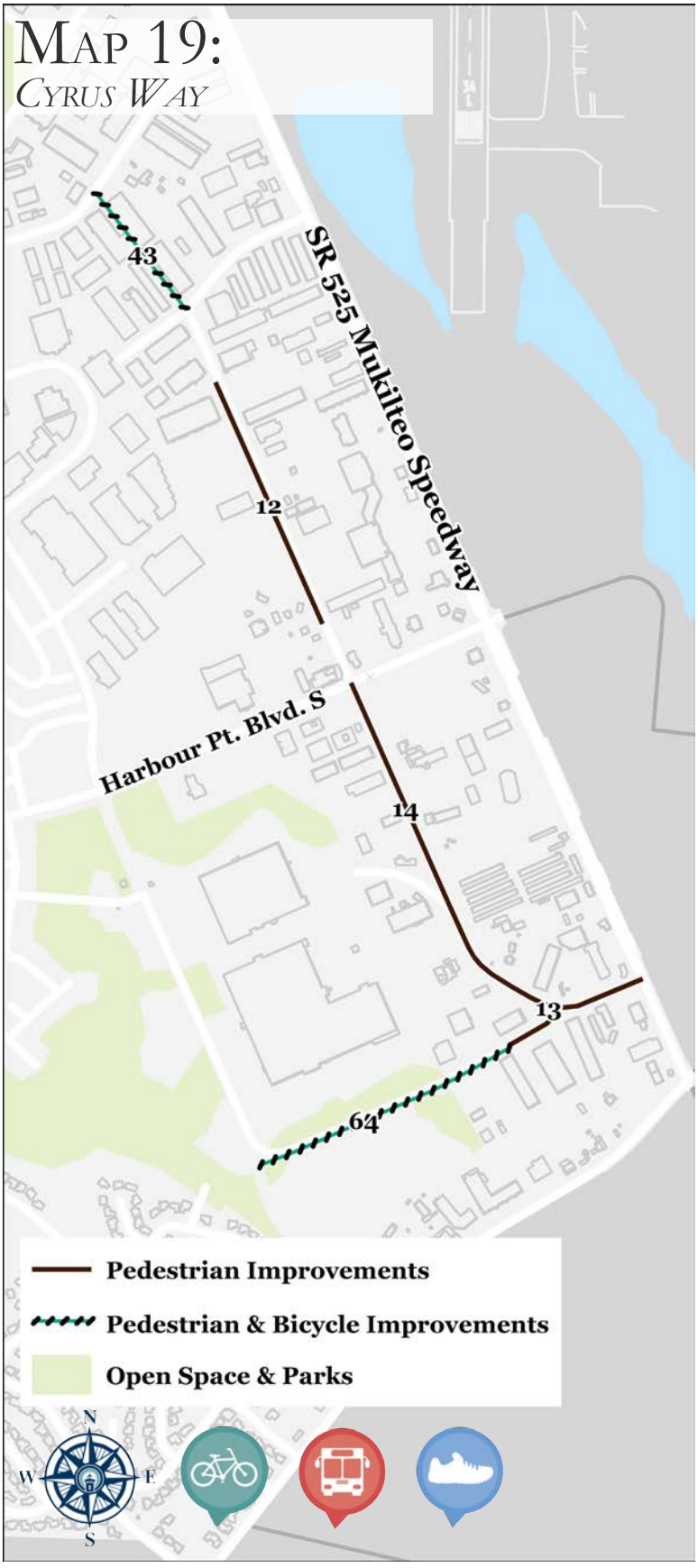
Cyrus Way - Project 43, 12, 13, 14, & 64

The projects identified along Cyrus Way include connection between Chennault Beach to South Road and Harbour Reach Drive. The largest piece of the project includes the implementation of a new roadway through existing industrial property. This would be made possible with the expansion of the manufacturing industry on Chennault Beach Road redeveloping single-story warehousing. Through this redevelopment, the City could either require land dedication for the roadway or require development of the future street frontage. The City also has the option to develop the roadway in efforts of supporting further redevelopment and higher density uses along Cyrus Way.

Easy Win

- Pair South Road Markings Project within Harbour Reach Corridor to incorporate the city-wide wayfinding program.

Table 23: Cyrus Way Improvements	
Project 43 - Cyrus Way Extension	$5,527,497
Project 12 - Cyrus Way Sidewalks	$694,177
Project 13 - Cyrus Way Sidewalks	$764,826
Project 14 - Cyrus Way Sidewalks	$842,682
Project 64 - South Road Markings	$86,094
Estimated Total	**$7,915,276**
2022 Dollars at 3% Annual	**$9,175,387**



Harbour Pointe Boulevard - Project 40

The concept for Harbour Pointe Boulevard was that pedestrian and cyclists would be able to adequately share a single recreation path. This 5 mile roadway is no longer adequate for all modes of travel, as many cyclists choose to ride the roadway and not on the recreation path. Given the width of the existing lanes, most places within Harbour Pointe Boulevard are suitable for a standard bike lane or at minimum bike sharrows at narrow lane portions. By implementing this option, the existing recreational path is less dependent for cyclists and provides more capacity for pedestrians.

Integrating bike lanes on to Harbour Pointe Blvd is a simple project currently under development that has been paired with the annual striping project. During this striping project, the soft costs associated with city management, mobilization, and typical overhead costs are practically zero given the partnership with Snohomish County who conducts the annual roadway striping project. This is an easy win.

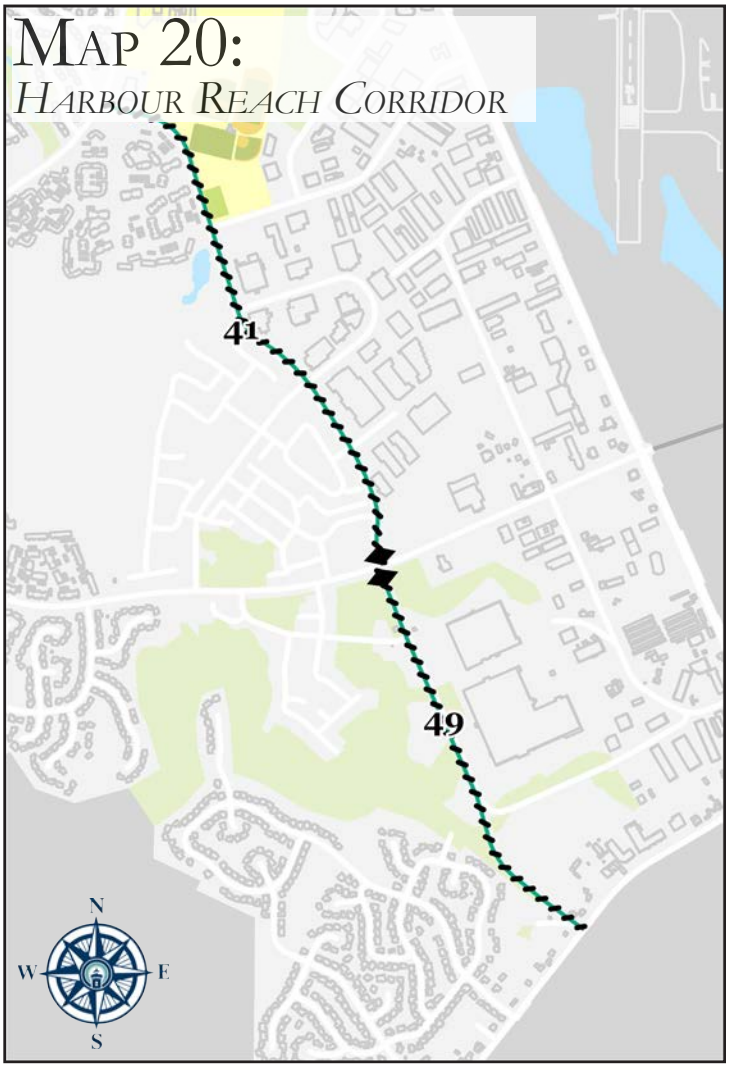
- Easy Win -

Implement signage as a preferred bike route signage

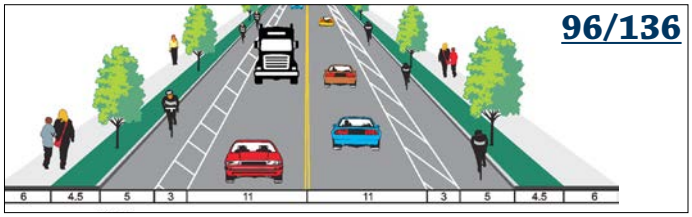
Harbour Reach Corridor - Project 41 & 49

Harbour Reach Drive is an existing roadway that will be extended to connect Harbour Pointe Boulevard South to Beverly Park Road. This project is a capacity project as it will alleviate congestion at the intersection of SR 525 & Harbour Pointe Blvd as well as SR 525 & Beverly Park. As Project 49 - Harbour Reach Corridor is a fully funded project currently under development, Project 41 - Harbour Reach Drive Retrofit will reformat the existing roadway to conform to the proposed cross section. As Harbour Reach Corridor is fully funded, final construction cost estimates will allow City Staff and consulting engineering firm, HW Lochner, to determine the feasibility of implementing a retrofit project. Because the retrofit project is dependent upon the extension project, the BTW Plan did not perform cost estimates at this time. Should the Harbour Reach Corridor be unable to perform the necessary level of retrofitting, the City shall consider Project 41 incomplete and maintain the project on the 6-year list with cost estimates determined by HW Lochner.

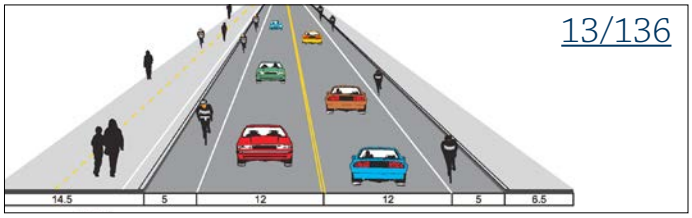
During the public outreach for the BTW Plan, an online-survey was conducted for the Harbour Reach Corridor to determine the preferred street cross-section. This survey review four different cross-sections including various levels of bike facilities and pedestrian facilities with consistent vehicle facilities. The survey results on each option are indicated below. This is representing the number of preferred responses to the total number of responses.



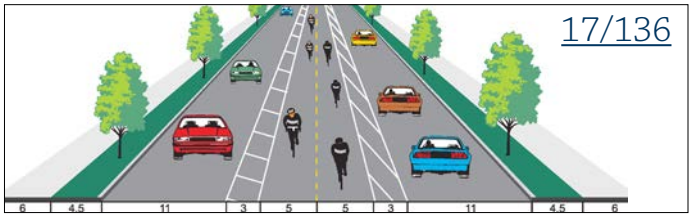
Option 1 - Buffered Bike Lanes



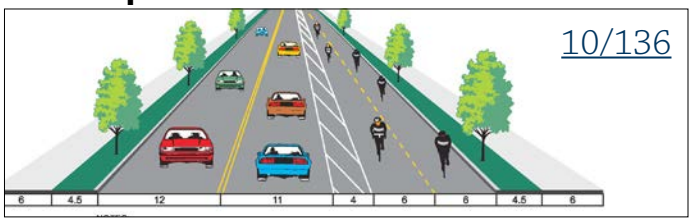
Option 2 - Shared Use Path



Option 3 - Center Cycle Track



Option 4 - Side Cycle Track



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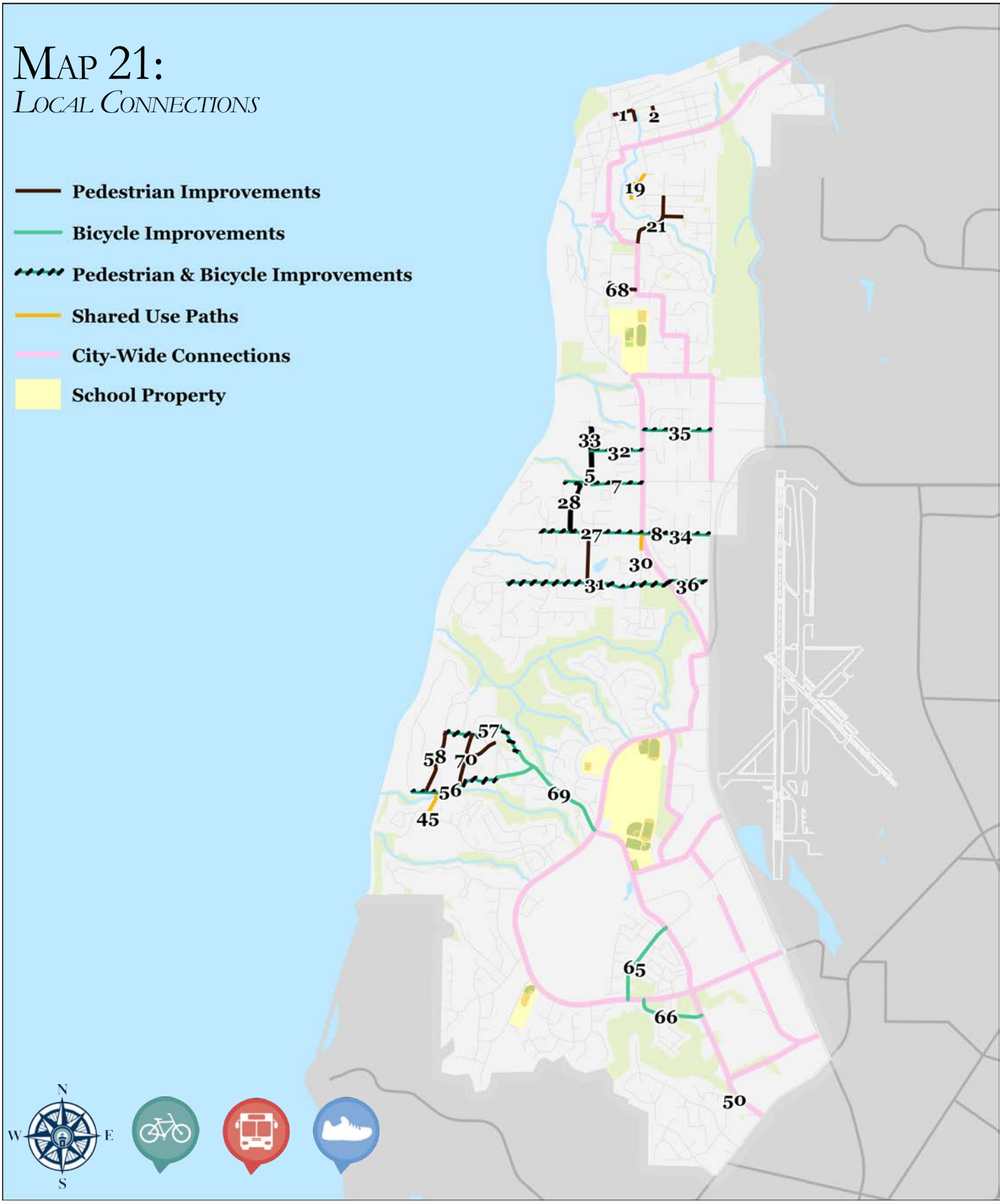
Map 21:
Local Connections



Map 22:
North Mukilteo Local Connections

North Mukilteo Local Connections

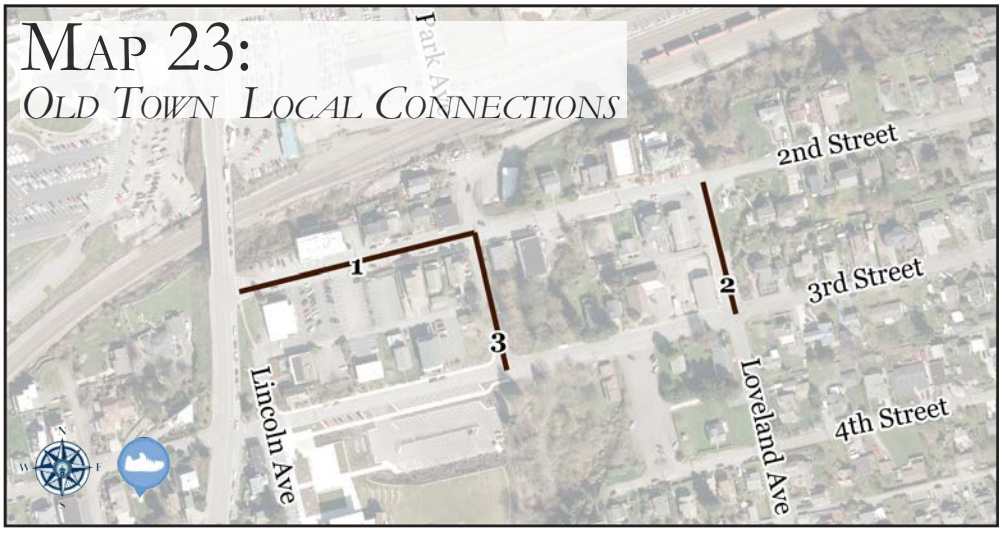
Local Connections are projects that serve a smaller population of individuals to connect to the City Wide Connections. These project alternatives decrease barriers to larger facilities and improve the opportunity for the large facilities to serve more users. An example of a Local Connection includes a solution to an individual choosing to not walk to the store, not because there isn't a shared use path to the store, but because there isn't a safe manner to the shared use path. While projects like a shared use path to the store were previously identified in the City Wide Connections, these projects are to provide connections to the shared use path.

This section on local connections breaks the projects based on the location within Mukilteo. This includes identification of Local Connections in Old Town, Sky-Hi-La, Goat Trail, Mid-Mukilteo, Chennault Beach, Sector 15, and Harbour Reach Drive Access.

Old Town Local Connections

Old Town's unique character of a beach town with lumber mill history recognizes that the residential portions of Old Town function well as a complete street without typical curb, gutter, and sidewalks. However, the adjacent commercial and community assets including Rosehill Community Center require a certain level of typical sidewalks through these portions to support commerce and mobility. These three projects were identified through the Tuttle Sidewalk Assessment and included cost estimates as identified below.

Table 24: Old Town Local Connections	
Project 1 - Second Street Sidewalks	$878,178
Project 2 - Loveland Sidewalks	$220,181
Project 3 - Park Ave Sidewalks	$584,078
Estimated Total	**$1,682,437**
2021 Dollars at 3% Annual	**$1,950,2836**



Sky-Hi-La Local Connections

The community known as Ski-Hi-La is an area that was also previously known as 'Teachers' Hill'. This nick-name comes from the number of teachers who taught at the Rosehill School and would walk to Park Avenue and then to Rosehill. This pathway is still in existence in one way, though the schools have moved. Being on top of a hill, this neighborhood is fairly well cut-off with only one primary entrance/exit for motorists on 8th Drive. This route is also the primary access for school children to walk to and from school or the bus stop. The BTW Projects identified for the Sky-Hi-La community provide additional access outside of the neighborhood including Safe Routes to School and connection to Old Town.

Project 19: Water Tower Shared Use Trail

This trail project is a formalization of an existing trail that currently crosses over private property. While the Mukilteo Water Wastewater District is one of the property owners, additional outreach and communication will be required to formalize the trail segment. The trail itself will be oriented for pedestrian uses and will be made of organic materials including gravel and hard packed soils. The completion of this trail segment will provide a formalized connection for residents to Old Town.

Project 20-21: 8th Drive & 11th Street Sidewalks - Safe Routes to School

Connecting neighborhoods to schools is incredibly important for the health and safety of children within the community. Currently, 8th Drive is a narrow roadway with a steep grade and limited sight distance. While the roadway includes a widened shoulder, the facility is inadequate to provide the sense of safety and security for parents to allow their children to walk to Mukilteo Elementary. The intent of Projects 20 and 21 is to remove the barrier of sense of safety and security to promote walkability within young students and connect to Stair-Step Greenway as illustrated on page 29.

Table 25: Sky-Hi-la Local Connections	
Project 19 - Water Tower Shared Use Path	$667,590
Project 20 - 8th Drive Sidewalks	$561,670
Project 21 - 11th Street Sidewalks	$2,479,848
Estimated Total	**$3,709,109**
2021 Dollars at 3% Annual	**$4,299,599**

Goat Trail Local Connections

The Goat Trail Community will be a very well connected community with the implementation of the Stair-Step Greenway, but one additional project and one future park concept could provide additional facilities to promote Safe Routes to School.

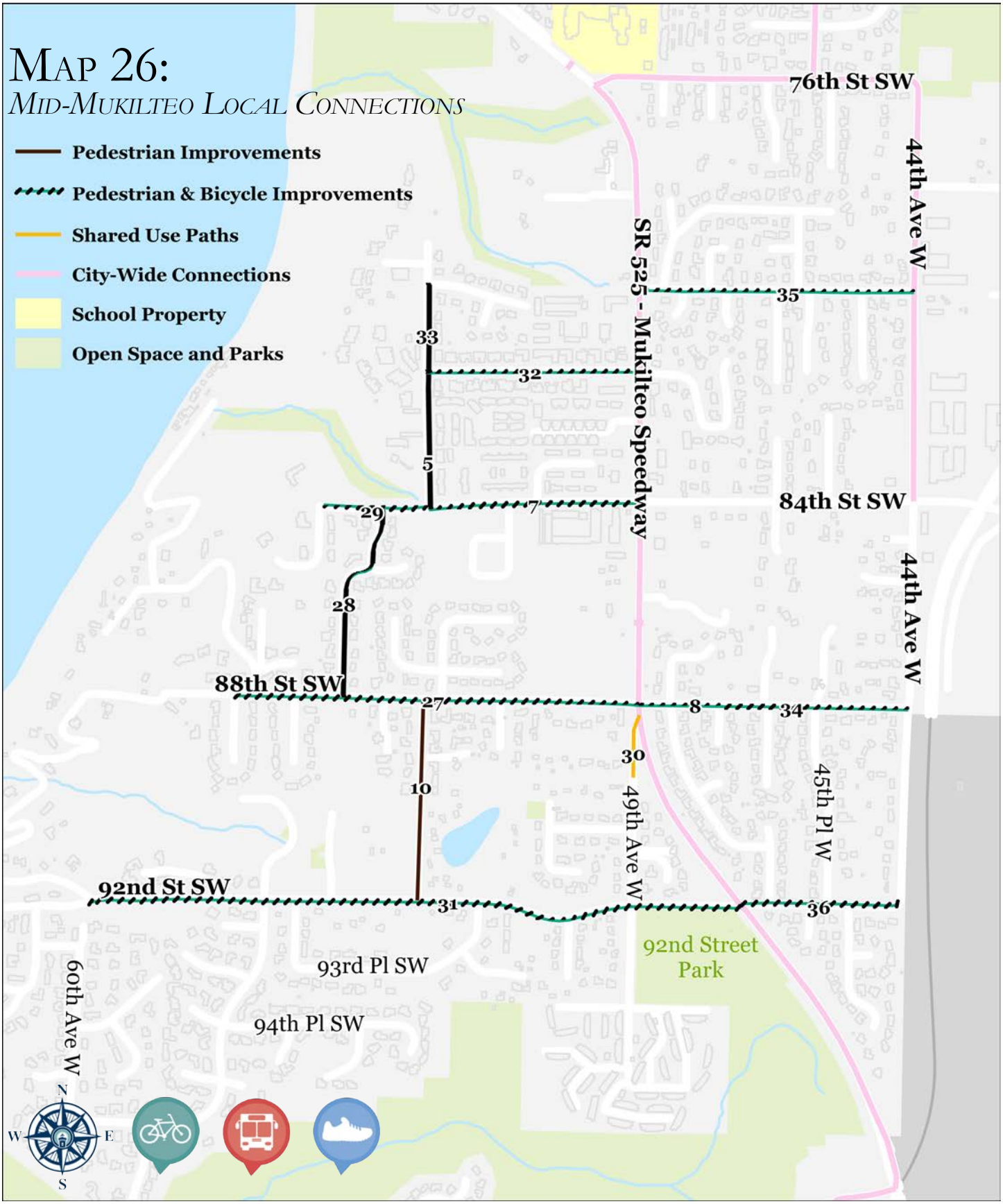
Goat Trail Park - School Drop Off - Safe Routes to School

This project concept is to address issues related to parents dropping off their kids at non-designated locations and creating a traffic hazard. The opportunity to encourage walking to school and mitigating for potential traffic is to design Goat Trail Park as a designated school drop off location and program with Mukilteo School District a 'walking bus' to and from the location. The intersection of Goat Trial Road and 8th Drive is also currently a school bus stop for Kamiak, so the initiation of a 'walking-bus' to transition to a school bus is consistent with providing higher modal options. This project concept requires additional vetting through the future update of the Parks Master Plan scheduled for 2017 including feasibility, community outreach, projected costs, and preliminary designs.

Project 68: Possession View Lane Sidewalks - Safe Routes to School

The Possession View Lane section of Goat Trail 'C' Community is the bottom leg of multiple small developments that create a 'C' shape on Goat Trail Road. This specific section was originally platted as part of Snohomish County and includes limited right-of-way and no pedestrian facilities. Unfortunately this is the section of the 'C' Community that is closest to the access at Mukilteo Elementary. Project 68 would propose to add a sidewalk on the north side of Possession View Lane.

Table 24: Possession View Lane Sidewalks	
Total Work Done by Contractor	$596,426
Design, Sales Tax, Contingency, Permits	$295,827
Estimated Total	**$892,253**
2021 Dollars at 3% Annual	**$1,034,301**


Map 26:
Mid-Mukilteo Local Connections
Pedestrian Improvements
Pedestrian & Bicycle Improvements
Shared Use Paths
City-Wide Connections
School Property
Open Space and Parks
76th St SW
44th Ave W
SR 525 - Mukilteo Speedway
84th St SW
88th St SW
92nd St SW
49th Ave W
45th Pl W
93rd Pl SW
94th Pl SW
60th Ave W
92nd Street Park
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Mid-Mukilteo Local Connections

Mid-Mukilteo is the area that extends from 76th Street to approximately the 'Spur' at the intersection of Paine Field Boulevard and Mukilteo Speedway. This neighborhood was primarily developed when Mukilteo was considered the 'sticks' and was developed as an autodominate community. Even after the annexation of 1980, this area has primarily remained the same regarding pedestrian facilities with the exception of a few projects (92nd Street) and new development. In order to provide higher connectivity to primary corridors, Mid-Mukilteo needs a significant amount of pedestrian and bicycle facilities.

Hilltop Local Connections

The Hilltop Community is essentially Mid-Mukilteo that is east of SR 525. The following projects provide increased connection between the SR 525 and the 44th Shared Use Path in addition to 76th Street SW Project 4 as identified in City-Wide Connections.

Projects 8, 34, 35, 36 - SR 525 to 44th Shared Use Path

These projects would include the implementation of a sidewalk and downhill sharrows with a sidewalk and bike lane in the uphill direction. The identified project locations include 80th Street SW, 88th Street SW, and 92nd Street SW. These three different roadways have varied widths of improved area, but includes some portions of completed sidewalks such as 92nd Street. One benefit with these roadways is that there aren't as many houses that access directly to the connection route as a typical local access road would have.

- Easy Wins -

- Implement Bike Sharrows in 'Downhill Fashion' and Sign as Bike Route
- Convert the Widened Shoulder on 88th to Uphill Bike Lane, Sign 'No Parking'
- Sign Connection from 92nd Street Park up 92nd Street to 44th Shared Use Path to connect 92nd Street Park to 76th Street Trailhead.

Table 25: Hilltop Local Connections	
Project 8 - 88th Street SW Section 1	$214,523
Project 34 - 88th Street SW Section 2	$678,095
Project 35 - 80th Street SW	$2,155,825
Project 36 - 92nd Street SW	$593,333
Estimated Total	**$3,641,776**
2021 Dollars at 3% Annual	**$4,221,546**

Smuggler's Gulch Local Connections

Smuggler's Gulch neighborhood extends from 76th Street to Big Gulch that is west of the Mukilteo Speedway. This large area includes several different connection opportunities to provide for mobility throughout the community. The challenges within the section is that existing pedestrian facilities are disconnected. The intent of the identified projects is to provide for routes from residences to the destinations of 92nd Street Park, Mid-Mukilteo Commercial Corridor, and connections to the City-Wide Connections.

Project 5, 7, 28, 29, 32, & 33 - 81st to 88th Street

These identified projects will provide pedestrian and bicycle facilities for a large portion of the multifamily development that is outside of Harbour Pointe. What is unique about this community is that most of the multifamily development is serviced by multiple owners, unlike large single owner complexes. Several of these units are under-market rate and provide for a high level of affordability to families. These identified projects would follow the typical local access cross section with on-street parking, and sidewalks, with bike sharrows. When funding becomes available for design, additional landscaping should be included into the project.

Easy Wins

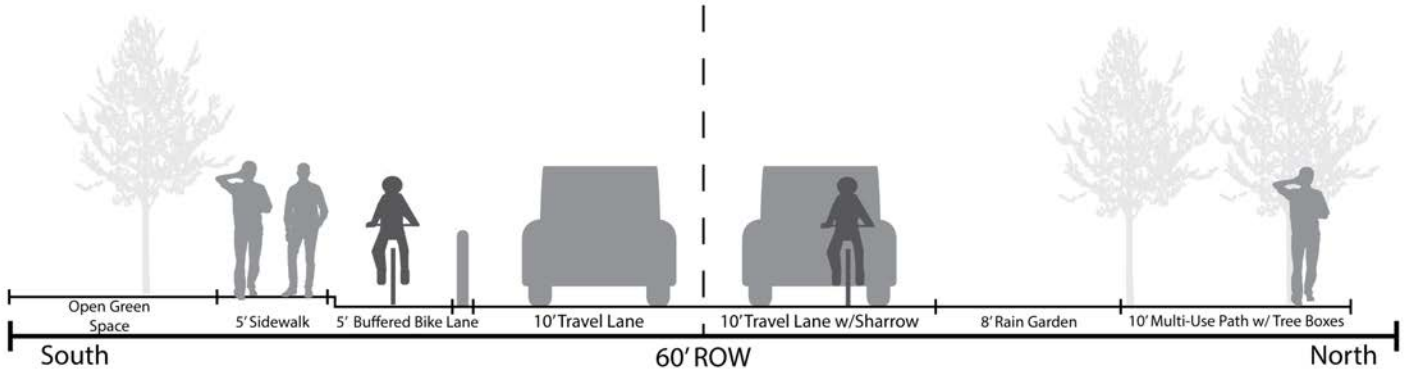
- Pave gravel sections for a widened shoulder when available.
- Restripe roadway to 10' travel lanes to increase shoulder width.
- Formalize pedestrian routes to define on-street parking locations.

Table 26: 81st to 84th Street	
Project 5 - 53rd Phase 1	$570,979
Project 7 - 84th Street SW Section 1	$752,142
Project 28 - 53rd Phase 2	$2,694,782
Project 29 - 84th Street SW Section 2	$1,044,570
Project 32 - 81st Place	$2,910,364
Project 33 - 53rd Phase 3	$1,185,704
Estimated Total	**$9,158,541**
2021 Dollars at 3% Annual	**$10,616,580**

Project 27 - 88th Street SW

88th Street SW is one of Mukilteo designated 'urban collectors' that provides direct connection for local neighborhoods to the Mukilteo Speedway. Typically an urban collector is a 30-35 MPH roadway with a center turn lane, but this road was originally constructed as a two lane local access road with 10' lanes at 25 MPH, and has remained relatively the same since. As patchwork development occurred on the roadway, 88th was not improved. To bring this roadway up to the livability standards that the Mukilteo Comprehensive Plan identifies, there must be a large commitment of funds to this roadway.

The 88th Street Proposal below includes deviations from the existing urban collector standards to support maintaining the roadway as a 25 MPH path. This cross-section includes a limited footprint of 60 feet of ROW where there is an existing 80 feet of ROW.



Proposed 88th Street SW Cross-Section from SR 525 to 56th Place West

Existing 88th Street SW

- Easy Wins -

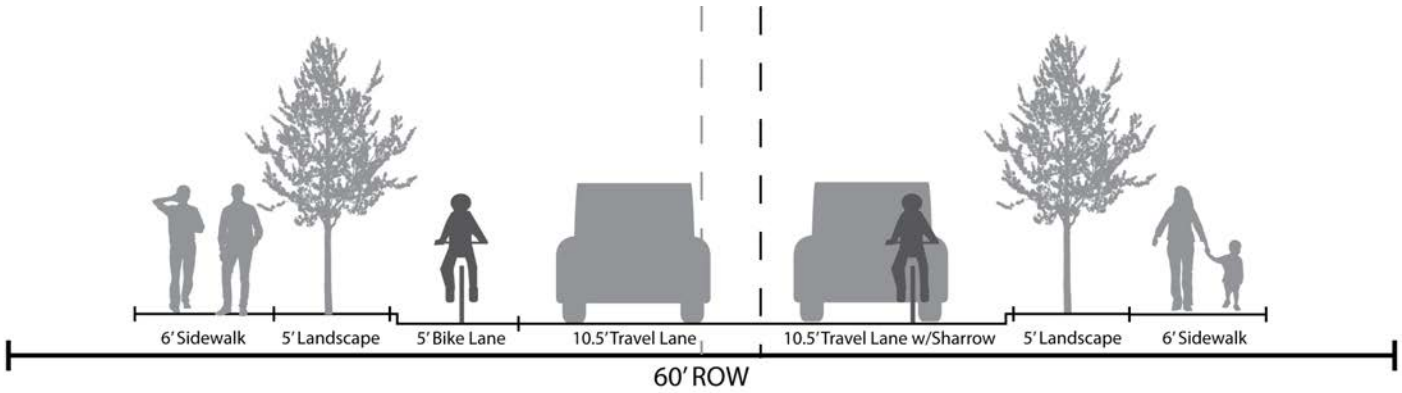
- Implement Bike Sharrows in 'Downhill Fashion' and Sign as Bike Route
- Construction can be split between north section and south section to spread costs. South section should be constructed first.
- Update Engineering Standards to require future development of the 'Strickland Property' to implement frontage improvements.

Table 27: 88th St. SW West of SR 525	
Total Work Done by Contractor	$3,638,676
Design, Sales Tax, Contingency, Permits	$1,903,756
Subtotal	**$5,542,432**
Additional Contingency(20%)	$989,720
Estimated Total	**$6,532,152**
2021 Dollars at 3% Annual	**$7,572,070**

Project 31 - 92nd Street SW

92nd Street SW is currently classified as a local access roadway, but functions as an urban collector. Similar to 88th Street SW, this roadway was initially developed as a County road with a speed limit of 25 MPH, but unlike 88th Street, the 92nd Street Corridor received a high level of growth. During the mid-2000s the City completed a project that installed a sidewalk along the southern portion of 92nd Street. Prior to the sidewalk concept, a widened shoulder was considered as the preferred alternative and received stiff objection from the neighborhood who successfully advocated for a sidewalk. This project is a continuation of that previous intent in order to finish the roadway.

The proposed cross-section below is similar in style to 88th Street SW, but differs because 88th Street SW is less constrained by private property and cut slopes when compared to 92nd Street. This is because development around 88th Street SW identified an 80 ft. wide right-of-way whereas 92nd Street is a 60 ft. wide right-of-way. The image below identifies the addition of a 5' bike lane and to 'shift' the center of the roadway to the north as illustrated by the ghosted centerline. As some of 92nd Street has portions of sidewalks, the design below is the ideal concept, but should incorporate existing facilities as much as reasonably possible.



Proposed 92nd Street SW Cross-Section from SR 525 to 91st Place Intersection

Existing 92nd Street SW

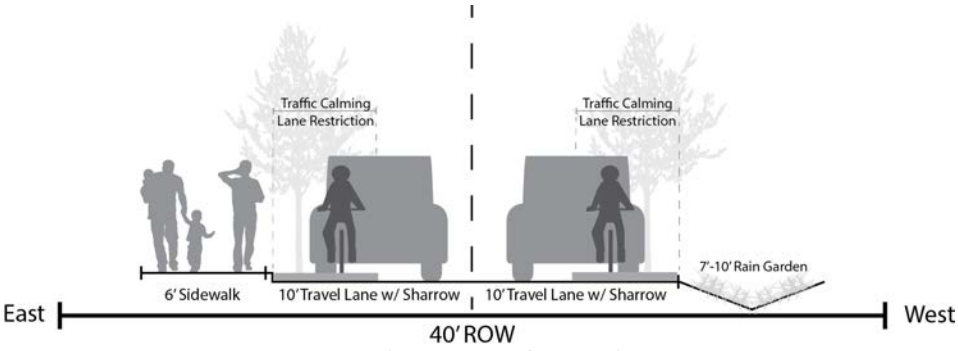
- Easy Wins -

- Implement Bike Sharrows in 'Downhill Fashion' and Sign as Bike Route

Table 28: 92nd Street SW West of SR 525	
Total Work Done by Contractor	$2,954,173
Design, Sales Tax, Contingency, Permits	$1,465,269
Estimated Total	**$4,419,422**
2021 Dollars at 3% Annual	**$5,123,018**

Project 10 - 53rd Ave West

This connection is currently approximately a 20 ft paved two lane road with no pedestrian or bike facilities. This roadway between 88th and 92nd Street is extremely important to ensure that Mid-Mukilteo Commercial Corridor and 92nd Street Park are connected to each other though routes other than the Mukilteo Speedway. One consideration with this roadway is to ensure that 53rd Ave West does not become a 'cut through' for vehicle traffic. Part of the character on 53rd Ave West is the limited facilities and woodsy feel. Given the 25 MPH speed limit and existing 40 ft. of right-of-way, the proposed design for 53rd Ave West is minimal, but provides for all modes of connection. This BTW Plan design varies from the proposed design and costs as identified in the Tuttle Report to maintain the existing character.



Proposed 53rd Ave West Cross-Section from 88th Stret SW to 92nd Street SW

- Easy Win -

Implement a widened path for a future sidewalk as an interim option.

Table 29: Project 10 - 53rd Ave West	
Work Done by Contractor	$472,158
Design, Sales Tax, Contingency, Permits	$234,190
Estimated Total	**$706,349**
2021 Dollars at 3% Annual	**$818,799**

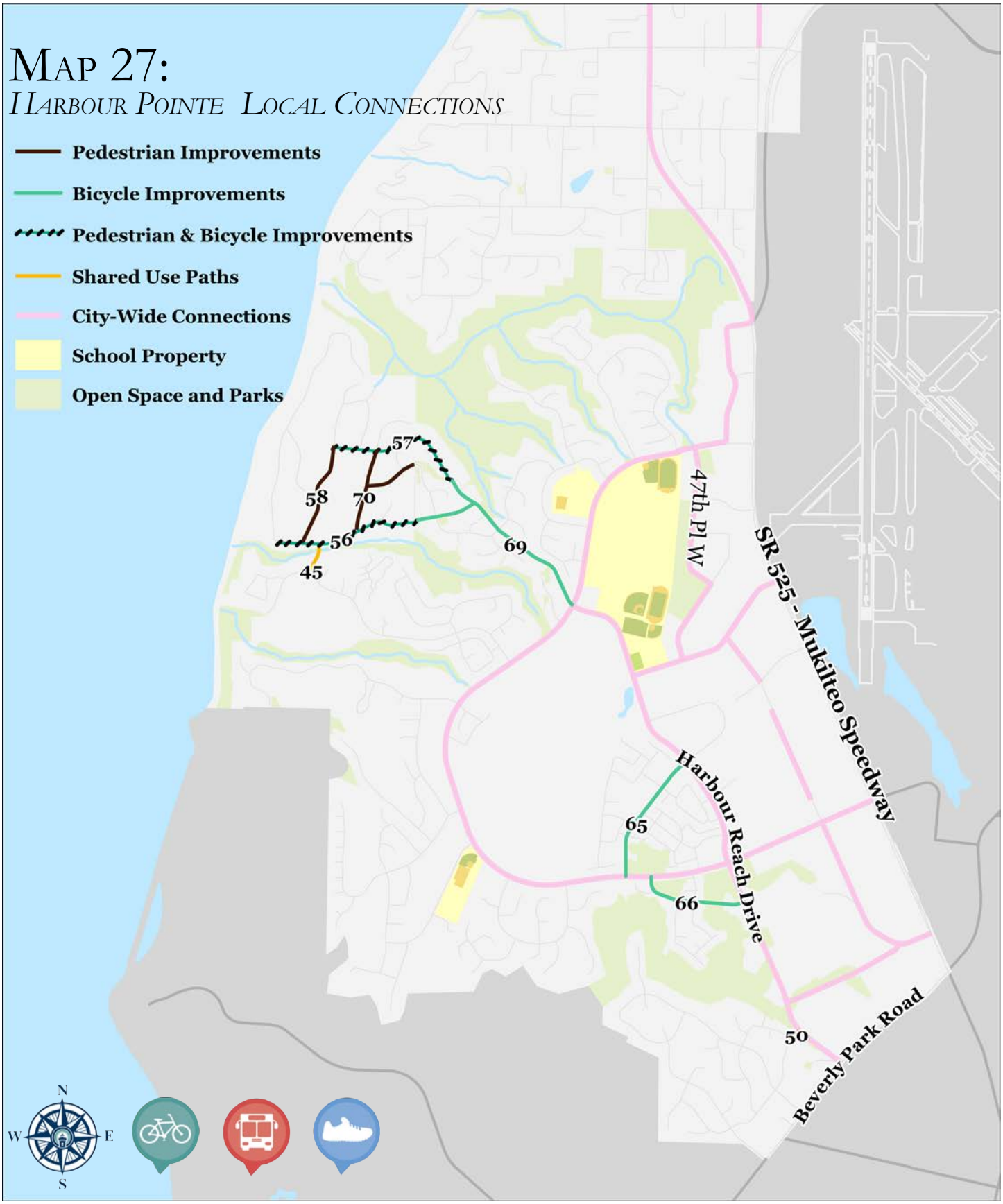
Project 30 - 49th Avenue Transit Connection

This connection is currently an established connection, but has a sidewalk gap between the existing facilities and the transit stop. This pathway has become overgrown over the years, but is still an existing connection is serving a legitimate purpose. The purpose of Project 30 is to take an existing connection that is deficient and improve the connection to a widened shoulder/shared-use pedestrian path. Phase 1 of the project is an 'easy win' which would include no new pavement surfaces and would focus on restriping. This section includes access to only one residence and with creative restriping, a dedicated walking path can be created within the existing roadway. This restriping is considered 'Phase 1' and is a functional alternative until future redevelopment of the property occurs. When redevelopment occurs, Phase 2 of the connection would the construction a large portion of the sidewalk and the missing gap would require the City to complete approximately 139 ft of sidewalk.

- Easy Win -

- Cut back brush
- Implement Phase 1 including restriping roadway with annual maintenance

Table 30: Project 30 - 49th Avenue	
Work Done by Contractor	$148,934
Design, Sales Tax, Contingency, Permits	$73,871
Estimated Total	**$222,806**
2021 Dollars at 3% Annual	**$258,277**


Map 27:
Harbour Pointe Local Connections
Pedestrian Improvements
Bicycle Improvements
Pedestrian & Bicycle Improvements
Shared Use Paths
City-Wide Connections
School Property
Open Space and Parks
57
58
70
56
45
69
47th Pl W
SR 525 - Mukilteo Speedway
Harbour Reach Drive
65
66
50
Beverly Park Road
N
W
E
S

Harbour Pointe Local Connections

Harbour Pointe is an area that is well serviced by sidewalks and low volume streets that supports safe bicycle infrastructure. The reason for this is that Harbour Pointe was primarily developed during a time when sidewalks were recognized as needed public infrastructure for communities. One community that predated this development was the Chennault Beach Community.

Chennault Beach Connections

The Chennault Beach Plat was recorded during World War II and would develop into an affluent single family community with only a single access point in and out of the community. These proposed connections are to improve connectivity within the neighborhood of over 350 homes as well as provide access to Boeing Harbour Pointe Technical Center.

Projects 56, 57, & 69 - Chennault Beach Primary Routes

Project 56 & 57 are similar projects to provide a safe bike lane in the uphill direction while also providing a sidewalk to promote a connection to travel to Harbour Pointe Boulevard. While some of this route is supported by a widened shoulder, for a community of over 350 homes these two routes require a minimum of a 6-ft. sidewalk with an uphill bike lane on the primary routes. Bicycle sharrows can be used in the 'downhill fashion' as the speed limit is 25 MPH. Once constructed, these two pedestrian and bicycle paths will promote a higher level of mobility to connect to the existing pedestrian facilities on Chennault Beach Drive. Project 69 is the second phase of Chennault Beach Drive and is an extension of the bicycle facilities by slimming the road widths down to approximately 10-ft in width and implementing 4-ft bike lanes.

- Easy Wins -

- **Project Pairing:** The Comprehensive Surface Water Management Plan (SWMP) Update identifies opportunity for project pairing of BTW 56 & 57 with SWMP #1 & #6
- **Project Pairing:** Complaints regarding speeding on Chennault Beach Drive provides opportunity for Project 69 to be implemented while also implementing traffic calming.
- Add sharrows in 'downhill fashion' with road striping projects.
- Sign as a bike a route and add a bicycle awareness at the intersection of Central Drive and Chennault Beach Road.

Table 31: Chennault Beach Primary Connections

Bike-Transit-Walk Plan		*2015-SWMP*
Project 56 - Chennault Beach Drive (Ph.1)	$4,342,738	#1 - $3,811,000
Project 57 - Central Drive Sidewalks	$2,974,219	#6 - $5,267,000
Project 69 - Chennault Beach Drive (Ph. 2)	$30,779	
Estimated Total	**$7,347,736**	
2022 Dollars at 3% Annual	**$8,517,495**	

Projects 58, & 70 - Chennault Beach Secondary Routes

Project 58 & 70 are similar in nature as they are to provide connection to Chennault Beach Road (Project 56) and Central Drive (Project 57) as identified on page 55. Both Project 58 (64th Place West) and Project 70 (62nd Place West and Canyon Drive) are also located within project scopes of the Comprehensive Surface Water Master Plan (SWMP) and provide great opportunity for project pairing between the SWMP and the BTW Plan.

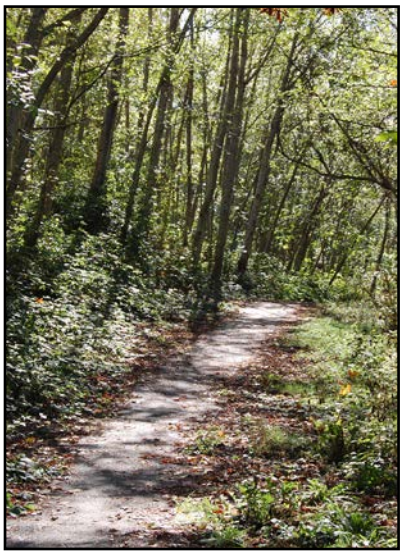
- Easy Wins -

- **Project Pairing:** The Comprehensive Surface Water Management Plan (SWMP) Update identifies opportunity for project pairing of BTW 56 & 57 with SWMP #4 & #7

Table 32: Chennault Beach Secondary Connections		
Bike-Transit-Walk Plan		*2015-SWMP*
Project 58 - 64th Place West	$1,179,981	#4 - $1,202,000
Project 70 - 62nd Place West & Canyon Dr.	$892,254	#7 - $2,852,000
Estimated Total	**$2,072,235**	
2021 Dollars at 3% Annual	**$2,402,135**	

Projects 45 - South Gulch Shared Use Path

Project 45 is to establish a connection between Chennualt Beach Drive and Harbour Heights Parkway. This shared use path would exist within a stretch of property that is owned by the City of Mukilteo used for utilities and would cross South Gulch. This site does have a wetland and stream on the site and mitigation would be required for the project. As an interim option, a trail could be established prior to the construction of the shared use path.



- Easy Wins -

- Implement an interim trail within the property to create a usable connection until funding is available for the shared use path construction.

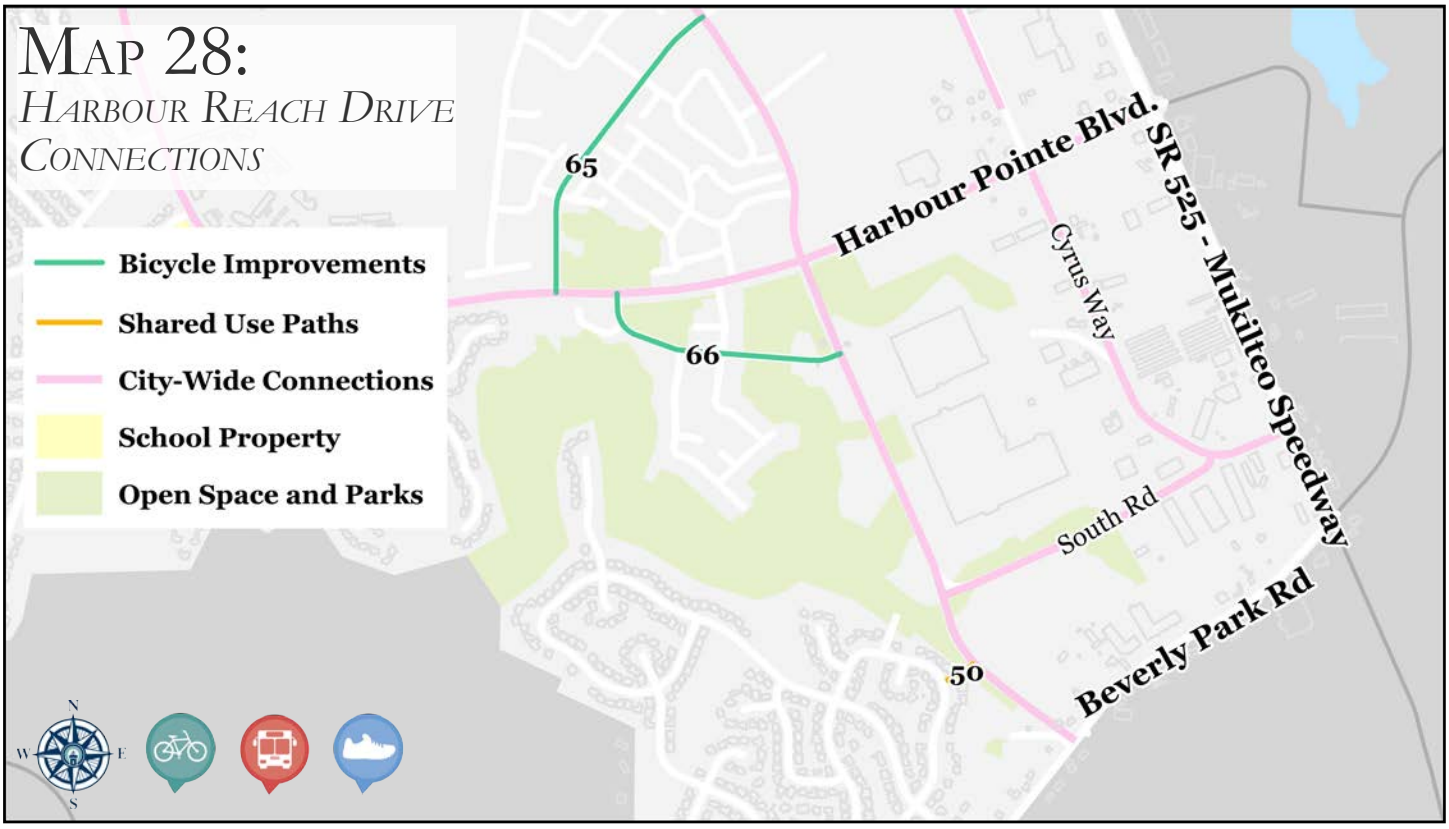
Table 33: South Gulch Shared Use Path	
Total Work Done by Contractor	$101,750
Design, Sales Tax, Contingency, Permits	$56,695
Subtotal	**$158,445**
Additional Contingency(20%)	$27,676
Wetland Mitigation(25%)	$34,595
Estimated Total	**$220,716**
2021 Dollars at 3% Annual	**$255,854**

Projects 50, 65 & 66 - Harbour Reach Drive Connections

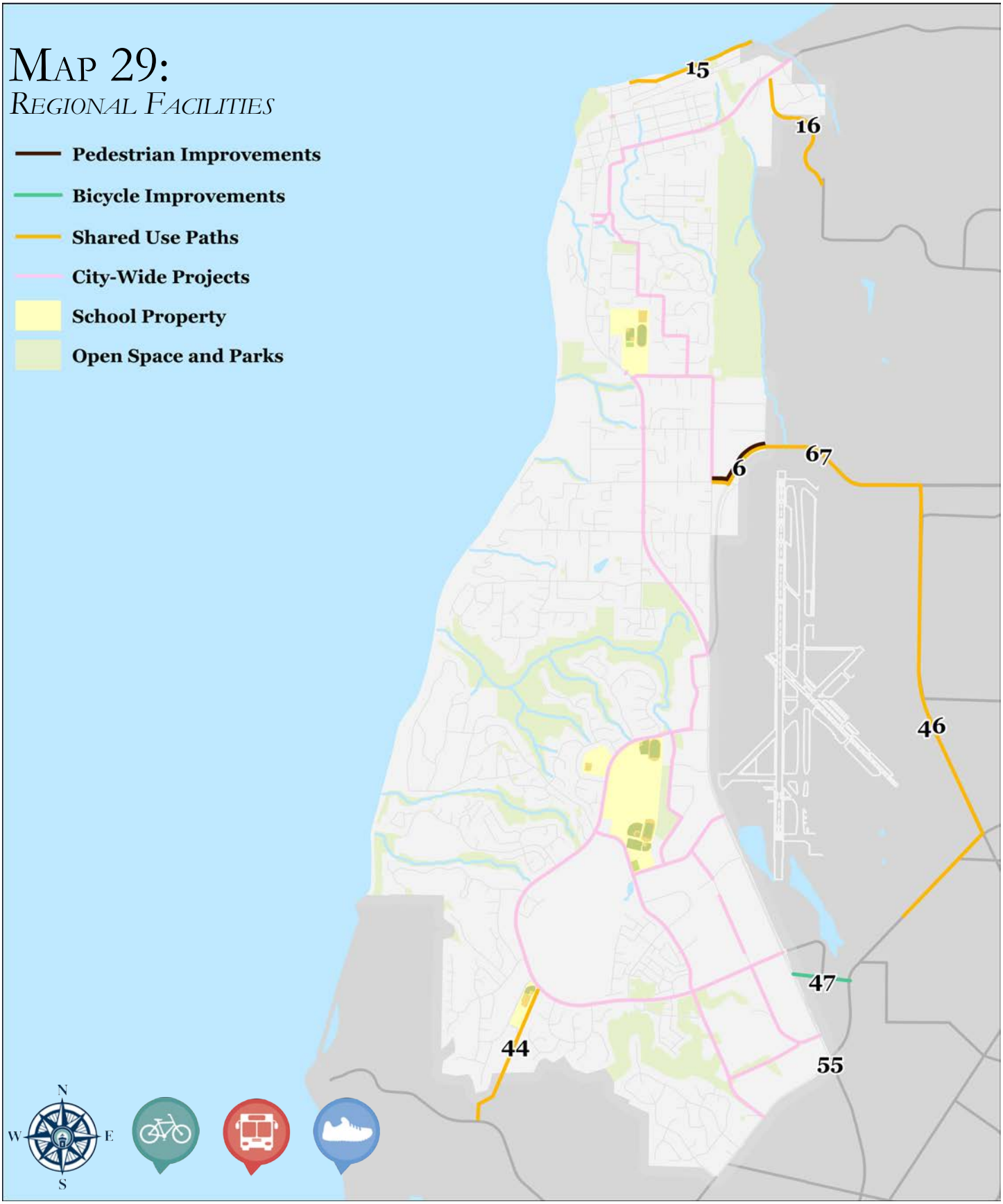
Project 50 is a proposed shared use path to connect Harbour Heights to Harbour Reach Drive. This connection would eliminate the requirement for pedestrians to use Beverly Park Road to connect to Harbour Reach Drive. While this connection seems small, when the BTW Plan's proposed projects are completed, this connection will provide access for residents of Harbour Heights to the Mukilteo Waterfront without requiring traveling along the Mukilteo Speedway. Even if all the projects are not connected, Harbour Heights will still immediately benefit from the connection to Harbour Reach Drive and into the heart of Harbour Pointe creating a stronger connection between this neighborhood and Mukilteo.

Projects 65 and 66 are to improve bike facilities on Possession Way within Sector 15 of Harbour Pointe (Project 65), and on Blue Heron Drive within Crown Park of Sector 20. Both of these routes have suitable pedestrian facilities, but both lack any bicycle facilities. The focus of the proposed project is to add sharrows into the roadway with a restriping project. This project will also be signed as a preferred bike route to and from the Harbour Reach Corridor.

Table 34: Harbour Reach Drive Connections	
Project 50 - Harbour Reach to Harbour Heights Shared Use Path	$195,228
Project 65 - Possession Way Sharrows	$75,763
Project 66 - Blue Heron Drive	$27,415
Estimated Total	**$298,406**
2022 Dollars at 3% Annual	**$345,912**

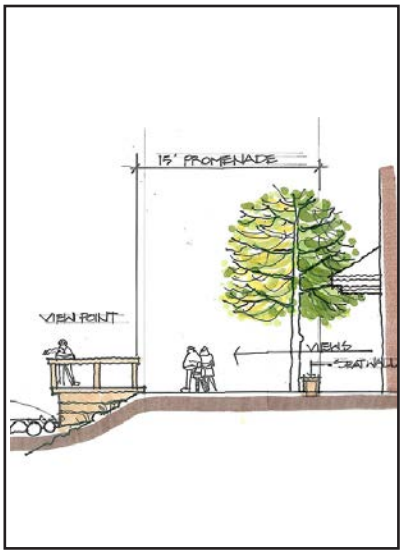


Map 29:
Regional Facilities



Regional Facilities

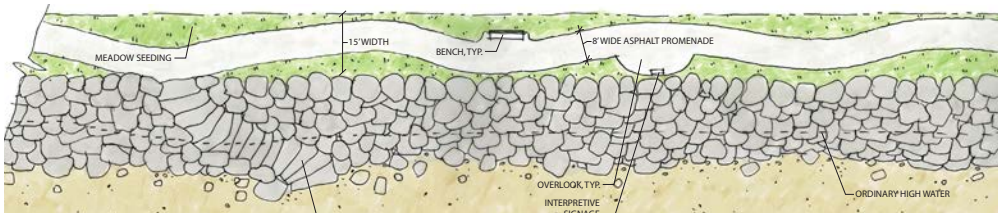
Regional facilities are facilities that either provide connectivity to and from Mukilteo. Unlike City-Wide Facilities, Regional Facilities will require a much higher level of coordination with external agencies to ensure concurrency and funding availabilities. The success of a regional facility is to ensure that project does not end at the Mukilteo boundaries, but continues to the adjacent communities to improve connectivity within our region.



Project 15 - Waterfront Promenade

The Waterfront Promenade is considered a regional facility as it provides services to users of the Multi-Modal Center with Washington State Ferries, Sound Transit, Community Transit, and Everett Transit all converging into a single hub. This hub is not only a destination to leave Mukilteo and head to Seattle or Everett, but this hub is also the end destination. The implementation of the Mukilteo Waterfront Master Plan will make the Mukilteo shoreline a vivid and vibrant place to experience Possession Sound's gorgeous shorelines and interact with our aquatic nature. Not only will the Waterfront Promenade provide recreational amenities with the transportation hub, the Waterfront Promenade will provide connectivity between the Waterfront and Japanese Gulch Park's expansive trails. The Waterfront Promenade is a project that should be lead through the implementation of the Waterfront Master Plan and the cost estimates for an interim promenade is shown. As the City continues the preliminary design work of the promenade additional cost estimates regarding the final design will become more readily available and should be incorporated into future updates of this plan.

Table 35: Interim Promenade Design (Waterfront Master Plan pg. 47)	
Total Construction Cost	$127,186
Design, Sales Tax, Contingency, Permits	$104,587
Subtotal (2014 U.S.D.)	**$231,773**
Inflation over 5 years	$34,766
Total (2019 U.S.D.)	**$266,539**
City Staff PE/CE	$52,769
Grand Total (2019 U.S.D.)	**$319,309**



Downtown Waterfront Master Plan
Interim Promenade Design

Project 16 - Boeing Recreation Shared Use Path

The proposed Boeing Recreational Shared Use Path is to provide connectivity between 5th Street up to 36th Ave West in Everett. This project in theory will provide active Boeing commuters a route between the Mukilteo Multi-Modal Terminal and the Boeing Recreation Facility with showers and lockers. Understandably, controlled access of the Boeing Facility is important in the design consideration with this project and the Boeing Company is the primary partner with this project.

The route of this pathway is undetermined at this point, because the route requires significant flexibility to address concerns of future stakeholders. The cost estimates below include the length as shown, but will require additional review once a route has been identified.

Table 36: Boeing Shared Use Path	
Total Work Done by Contractor	$1,549,404
Design, Sales Tax, Contingency, Permits	$810,648
Subtotal	**$2,360,052**
Additional Contingency(20%)	$421,437
Estimated Total	**$2,781,490**
2021 Dollars at 3% Annual	**$3,224,303**

Project 47- 121st Street Improvements

The intersection at 121st Street and the Mukilteo Speedway is a vital link between Beverly Park Road and the Mukilteo Speedway. This link provides the opportunity for pedestrians and bicyclists to reduce their route by approximately 3,000 feet. This efficiency increases opportunity for connection to the Paine Field Community Park, but currently 121st Street lacks safe bike connections. The proposal would be to add bike lanes on this roadway and improve connection between 121st Street and Harbour Pointe Blvd.

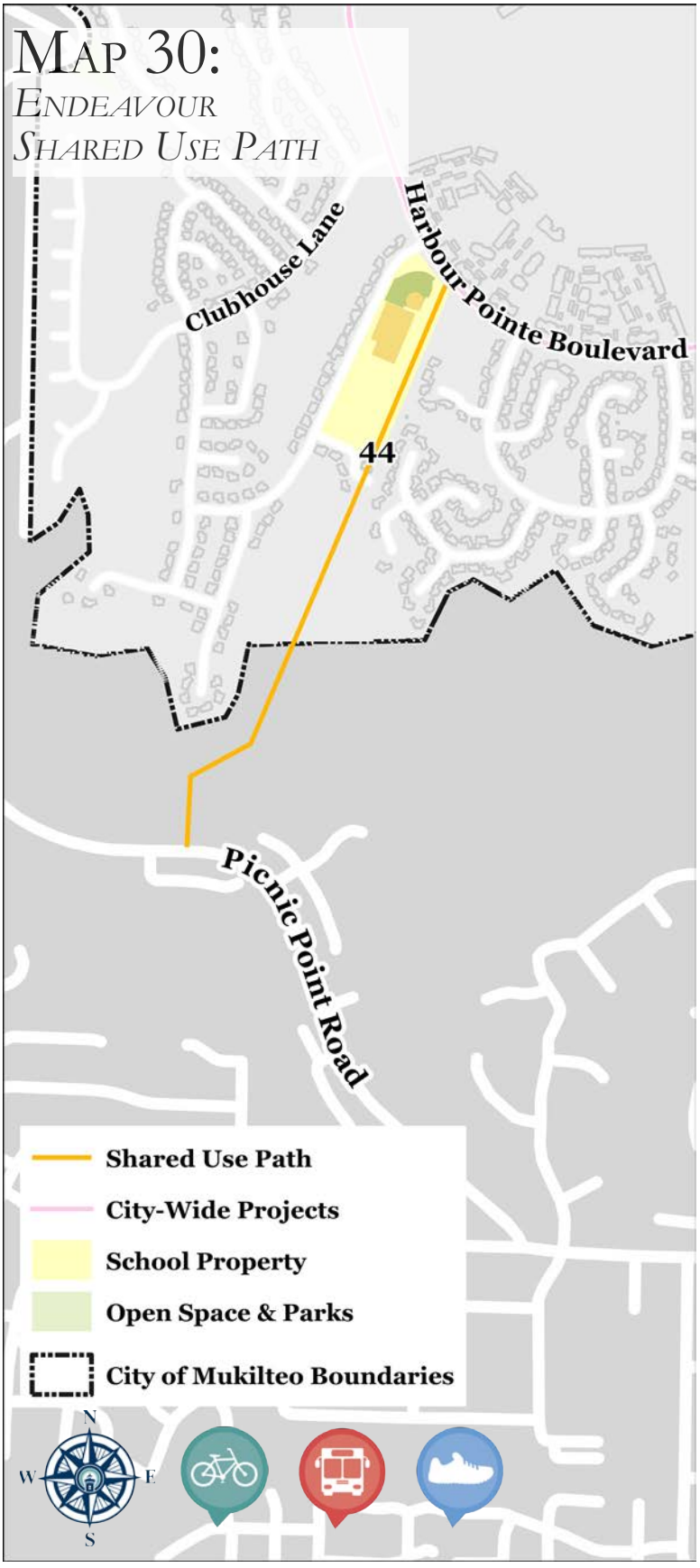
Table 37: 121st Street Bike Improvements	
Total Work Done by Contractor	$212,250
Design, Sales Tax, Contingency, Permits	$111,049
Subtotal	**$323,299**
Additional Contingency(20%)	$57,732
Estimated Total	**$381,031**
2021 Dollars at 3% Annual	**$441,691**

Project 44 - Endeavour Shared Use Path

The proposed Endeavour Shared Use Path would connect Harbour Pointe Blvd to Picnic Point Road through an existing utility easement. This connection between Harbour Pointe Blvd and Picnic Point Road is primarily a recreational facility as Picnic Point Road connects to the Picnic Point Park with beach access. By providing this connection with a shared use path, individuals will be able to travel from Picnic Point Park to Edgewater Beach and Lighthouse Park without the use of the Mukilteo Speedway by connection through Japanese Gulch Park. However, before this level of connection could be made, additional partnerships with Snohomish County is required as pedestrian facilities on Picnic Point Road are lacking. If the Endeavour Shared Use Path is developed, there will be additional projects outside the boundaries of Mukilteo to provide adequate facilities to Picnic Point Park.

Table 38: Endeavour Shared Use Path	
Total Work Done by Contractor	$741,000
Design, Sales Tax, Contingency, Permits	$367,536
Estimated Total	**$1,108,536**
2021 Dollars at 3% Annual	**$1,285,014**

Existing Utility Easement for Endeavour Shared Use Pathway



Airport Heritage Loop

The Airport Heritage Loop concept is to provide a separated shared use path between 84th Street SW and Beverly Park Road. This project requires partnerships with the Boeing Company, Snohomish County, Paine Field Airport, and WSDOT to make this joint partnership project a reality. Once completed the Airport Heritage Loop will provide a 6-mile pathway for regional access encompassing our Aerospace Industry.

Project 6 - SR 526 Sidewalk

As identified by the Tuttle Report, the need for sidewalks on SR 526 is clear. This section of roadway has seen the establishment of a 'goat' trail that borders several of the properties. This has been created by individuals continuing to walk on the same pathway over and over again. Future consideration should be given as to if Project 6 is no longer needed or significantly less needed with the implementation of Project 67 for the SR 526 Shared Use Path on the other side of the roadway.

Table 39: SR 526 Sidewalks (Project 6)	
Total Work Done by Contractor	$167,293
Design, Sales Tax, Contingency, Permits	$82,978
Estimated Total	**$250,271**
2021 Dollars at 3% Annual	**$290,114**

Existing 'Goat Trail' as Pedestrian Refuge Route

Project 67- SR 526 Shared Use Path

Currently the City is working with regional partners on the design of the SR 526 Shared Use Path. This project would provide connection from 84th Street SW to Airport Road by utilizing a shared use path on the south side of SR 526. While funding only currently exists for the design phase, future construction funds may become available through grant opportunities and lobbying for additional state, and county funds for the regional connection. This pathway will provide safer bicycling access to the Boeing Facility, and ultimately connect to Project 46 - Airport Road Shared Use Path.

Table 40: SR 526 Shared Use Path	
Total Work Done by Contractor	$3,421,000
Design, Sales Tax, Contingency, Permits	$1,836,393
Subtotal	**$5,257,393**
Additional Contingency(30%)	$1,395,768
Estimated Total	**$6,653,161**
2021 Dollars at 3% Annual	**$7,712,344**

Project 46- Airport Road Shared Use Path

The Airport Road Shared Use Path is a proposed pedestrian and bike facility separate from Airport Road. Currently, Airport Road is a 45 MPH Arterial with heavy flows of traffic during rush-hour events, and the existing bike lanes and sidewalks is inadequate for a roadway with this volume and speed. This project is a long-range project. The opportunity to implement this projects is when Airport Road requires additional capacity due to a reduced level of service. When additional capacity is needed, the existing bike lanes could be transitioned into additional width for vehicle travel lanes. If the bike lanes are removed, a shared use path should be the preferred alternative. This shared use path should be setback from the roadway by a minimum of 25 feet and incorporate landscaping for additional sensory protection from the high traffic volumes and travel speeds.

Table 41: Airport Road Shared Use Path	
Total Work Done by Contractor	$7,590,000
Design, Sales Tax, Contingency, Permits	$4,074,312
Subtotal	**$11,664,312**
Additional Contingency(30%)	$3,096,720
Estimated Total	**$14,761,032**
2021 Dollars at 3% Annual	**$17,110,988**

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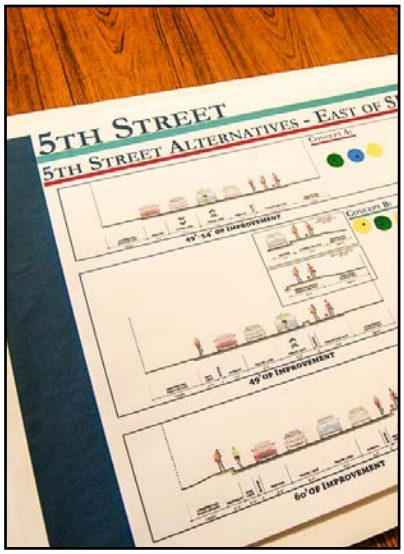
Project Implementation

The implementation of the BTW Projects will occur through various methods and various funding sources. The BTW Plan will require many years, and even generations to implement these project, but by focusing resources to project a specific project criteria, public funding can be allocated in the most rational and logical method possible. In order to fund and prioritize the identified projects, these projects were broken into three categories:

- Near-Term (Less than 7 years)
- Mid-Term (Less than 20 Years)
- Far-Term (More than 20 Years)

By identifying these three groups of projects, decision makers are better able to determine funding needs for each project. While a project may be listed as 'Mid-Term' that does not preclude the opportunity to fund the project earlier if additional funding becomes available through external sources or internal revenue generations.

These three categories also include projects that are eligible for impact fees called Capacity Projects. Capacity Projects provide specific opportunities for funding from new development/redevelopment to assist in the costs of project implementation. These projects must be used for new facilities that increase the capacity of the route, and can not be used for maintenance of existing routes.



Near-Term Projects

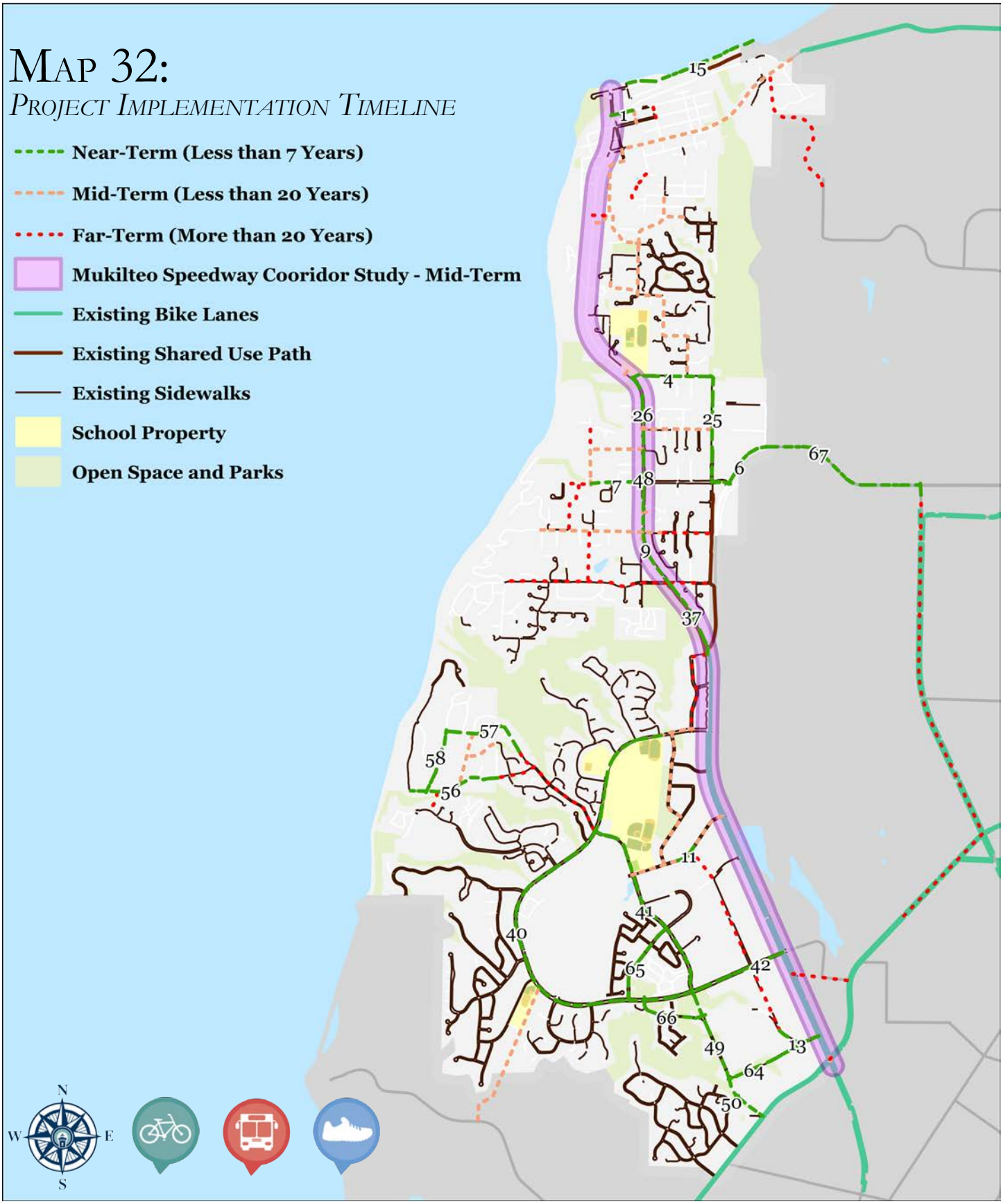
Projects identified as Near-Term Projects is the focus of the funding considerations. For the next 7 years, the ability to complete these near-term projects will provide a large increase in the connectivity for residents of Mukilteo. Following this identified 7 year period, an update to the Bike-Transit-Walk Plan should be considered in concurrency with the Mukilteo Speedway Corridor Study to:

- Address projects costs of the Mukilteo Speedway Corridor,
- Remove Completed Projects within the BTW Plan,
- Review annual funding opportunities to address implementation of projects identified as 'Mid-Term' Projects, and
- Provide public outreach opportunity to address new community concerns.

Map 32 on the following page (page 70) identifies the timeline for each project supplemented by Table 42 on page 71 identifying each near term project, projected project cost, and priority score.

Map 32:

Project Implementation Timeline

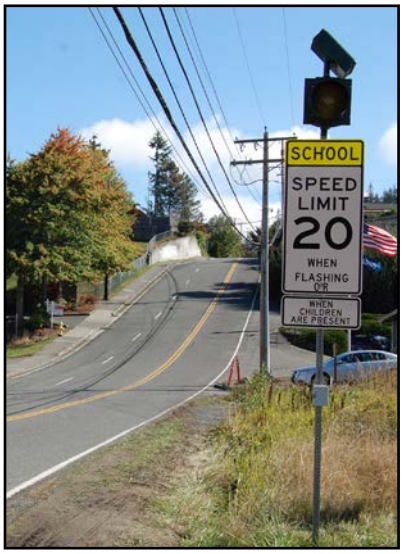


Near-Term Projects

Table 42: Near-Term Project List

Project Number	Project Name	Priority Score	Cost ($ 2016)
Existing Near-Term Projects*			
40	Harbour Pointe Blvd. Bike Markings	104	$217,390.34
41	Harbour Reach Corridor Retrofit	93	$2,200,000
42	Harbour Pointe Blvd. S Widening	85	$1,929,850.00
49	Harbour Reach Corridor	82	$16,000,000.00
67	526 Shared Use Path	95	$6,653,161.00
Proposed Near-Term Projects			
26	SR 525 Sidewalks - Safe Route to School	94	$1,044,404.73
15	Waterfront promenade multi-use path	90	$319,309.00
48	Mid-Town Mukilteo Sidewalk & Bike Markings	89	$5,317,815.73
4	76th Street Sidewalks & Bike Markings	89	$1,336,733.89
25	44th Shared-Use Path	88	$1,945,548.00
6	SR 526 Sidewalks	82	$250,271.36
37	SR 525 Bike Lane	81	$34,437.92
9	SR 525 Sidewalks & Bike Markings	77	$1,921,561.54
7	84th Street Sidewalks	68	$752,142.42
11	Chennault Beach Road Sidewalks	60	$236,122.92
50	Harbour Reach Drive Connection	57	$195,228.00
1	2nd Street Sidewalks	57	$878,178.47
13	Cyrus Way Sidewalks	43	$764,826.02
57	Central Drive Sidewalk & Bike Markings	40	$2,974,219.00
56	Chennault Beach Drive Sidewalk & Bike Markings	40	$4,342,738.00
65	Possession Way Bike Markings	37	$75,763.42
58	64th Place West Sidewalks	36	$1,765,251.58
66	Blue Heron Drive Bike Markings	34	$27,415.69
64	South Road Markings	30	$86,094.80
		Average Priority Score:	**64.35**
		Existing Near-Term Project List:	**$27,000,401**
		Proposed Near-Term Projects:	**$24,268,062**
		Grand Total:	**$51,268,463**

** Funded, Under Construction, Under Funding Review, Or Anticipated for 100% External Funded*



Priority Matrix

To take these projects and 'grade' to create a project priority list, City Staff completed a workshop with the Planning Commission to discuss how should one project characteristic should be weighted against another project description. This discussion led to the following criteria list and points eligible for the project:

- **Connectivity**
  - 20 Points - Proximity to Schools
  - 15 Points - Proximity to Community Facilities (YMCA, Rosehill, Boys & Girls Club, Medical Facilities, Parks, Trails, City Hall, and similar)
  - 10 Points - Transit Connections
  - 5 Points - Proximity to Commercial/Employment Centers
  - 5 Points - Connections to 'Greenways'
- **Safety**
  - 10 Points - Speed of Vehicles
  - 10 Points - Accident History
  - 5 Points - Existing Bicycle Facilities
  - 5 Points - Existing Pedestrian Facilities
  - 5 Points - Separated Facility
  - 5 Points - Number of Daily Vehicle Trips (ADT)
- **Other**
  - 20 Points - Project Pairing Opportunities
  - 10 Points - Grant Eligible
  - 10 Points - Social Equity
  - 5 Points - Public Outreach

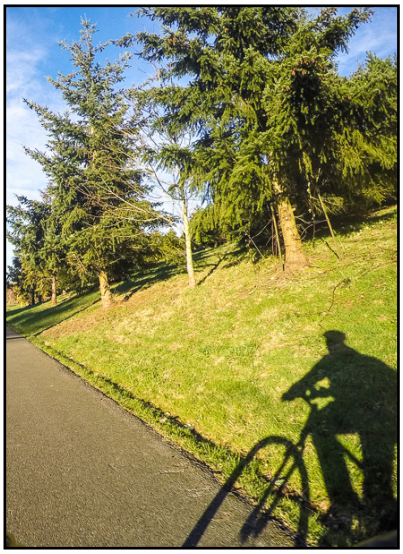
In order to continue a grading methodology for 'which projects to fund', Chart 1 on the next page plots the projects based on their priority score and ranking. This chart is further subdivided into four quadrants based on the average cost and average score of the projects. This quadrant analysis is commonly used within risk management for the understanding of 'high risk-high reward' and this is the same concept. The quadrants above include, Low Cost-High Priority, High Cost-High Priority, High Cost-Low Priority, and Low Cost-Low Priority. The projects that should be most considered for funding include the projects that are Low Cost-High Priority (LC-HP). Please note that there is additional cost savings when pairing projects with pavement maintenance that is not identified within this plan.

Funding Level for Near-Term Projects:

The Near-Term Projects have total unfunded costs of $24,268,062. Assuming that external funding and 'in-house' cost savings can reduce the funding requirements by approximately 60%, the required funding level for the Near-Term projects is $12,368,489.

Estimated Project costs were reduced by 60% to account for external funding opportunities and in house savings. This ratio is based on the City funding the 'soft costs' (36%) including design costs to create 'shovel-ready' projects that are more successful in grant applications. The additional 4% is to account for opportunities the City of Mukilteo may identify for in-house savings. Because this reduction level will vary depending on each project, one project may be significantly more dependent on internal funding whereas other projects may succeed primarily on external funding.

To meet this funding demand over 7-year expectation, a funding level of approximately $1,386,746 per year would be required. This funding level is unfeasible within the existing revenue structure of the City of Mukilteo. However, not all alternatives may meet constraints of the City's fiscal limits. These alternatives would include any projects with a priority score of less than 65 points and that has a cost of more than $1,546,000. In order to fund the remaining projects, a funding level of $213,559 per year is required.



The recommendation for funding would be to increase project cost cut off from $1,546,000 to $2,000,000 to allow for two additional projects and to continue regional efforts of the SR 526 Shared Use Path at an estimated $6,650,000. These three projects will complete a sidewalk gap on SR 525 and connect the existing 44th Shared Use Path to the 76th Street Trailhead, in addition to providing a shared use path to Boeing and Airport Road. Because the project costs of the SR 526 Shared Use Path are anticipated to be funded externally, the increase in annual funding for this level of support is from $213,559 to $434,537. On the following page is a summary of the preferred funding levels for near term projects for implementation.

One additional consideration is the inclusion of three near-term projects within the Chennault Beach Neighborhood. These projects are prioritized on the Stormwater CIP, and the opportunity to pair a BTW Project with a Stormwater Project can provide some cost savings. These cost savings can include savings in mobilization, design, and reducing redundant construction costs. One of the highest cost savings may not be known until the projects move to design in order to address any additional stormwater needs of the increased impervious surfaces of the project area.

CHART 1:

NEAR-TERM PROJECT COSTS VS. PRIORITIES

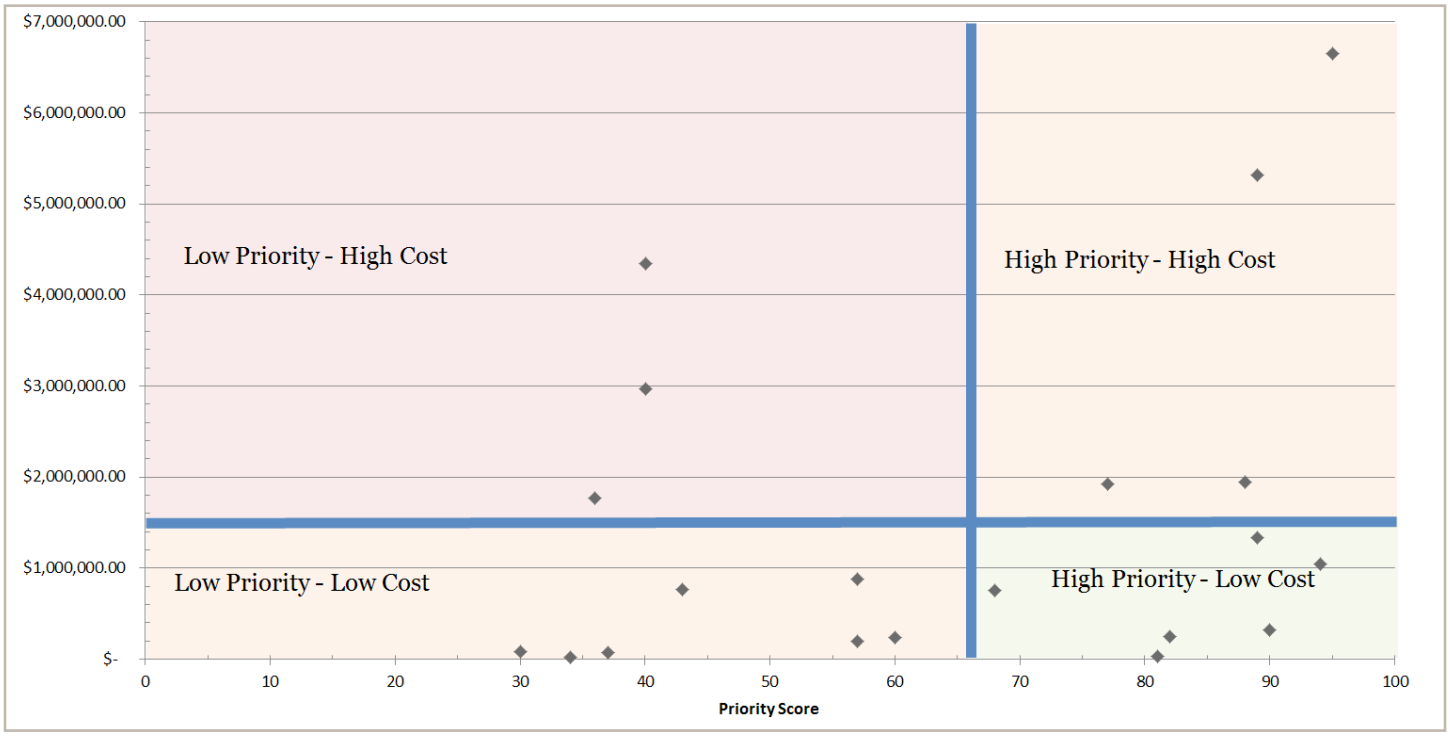


Table 43: Preferred Near-Term Projects Funding Level			
Project Number	**Projects**	**Priority Score**	**Cost**
67	526 Shared Use Path	95	$6,653,161.00
26	SR 525 Sidewalks - SRTS	94	$1,044,404.73
15	Waterfront promenade multi-use path	90	$319,309.00
4	76th Street Sidewalks & Bike Markings	89	$1,336,733.89
25	44th Shared-Use Path	88	$1,945,548.00
6	SR 526 Sidewalks	82	$250,271.36
37	SR 525 Bike Lane	81	$34,437.92
9	SR 525 Sidewalks & Bike Markings	77	$1,921,561.54
7	84th Street Sidewalks	68	$752,142.42
	Subtotal 1		**$14,257,569**
	Less SR526 Shared Use Project		($6,653,161)
	Less External Funding and In House Project Savings (60%)		($4,562,645)
	City Needs - Preferred Near-Term Project Total		$3,041,763
	Near-Term Project Timeline		7 Years
	Preferred Annual Funding		**$ 434,537**
Inclusion of Chennault Beach Projects			
57	Central Drive Sidewalk & Bike Markings	40	$2,974,219.00
56	Chennault Beach Drive Sidewalk & Bike Markings	40	$4,342,738.00
58	64th Place West	36	$1,765,251.58
	Subtotal 2:		**$9,082,208**
	Less External Funding and In House Project Savings (30%)		($2,724,662)
	City Needs		**$6,357,546**
	Near-Term Project Timeline		7 Years
	Chennault Beach Projects- Minimum Annual Funding		$ 908,220
	Preferred Annual Funding		$434,537
	Annual Total		**$1,342,758**

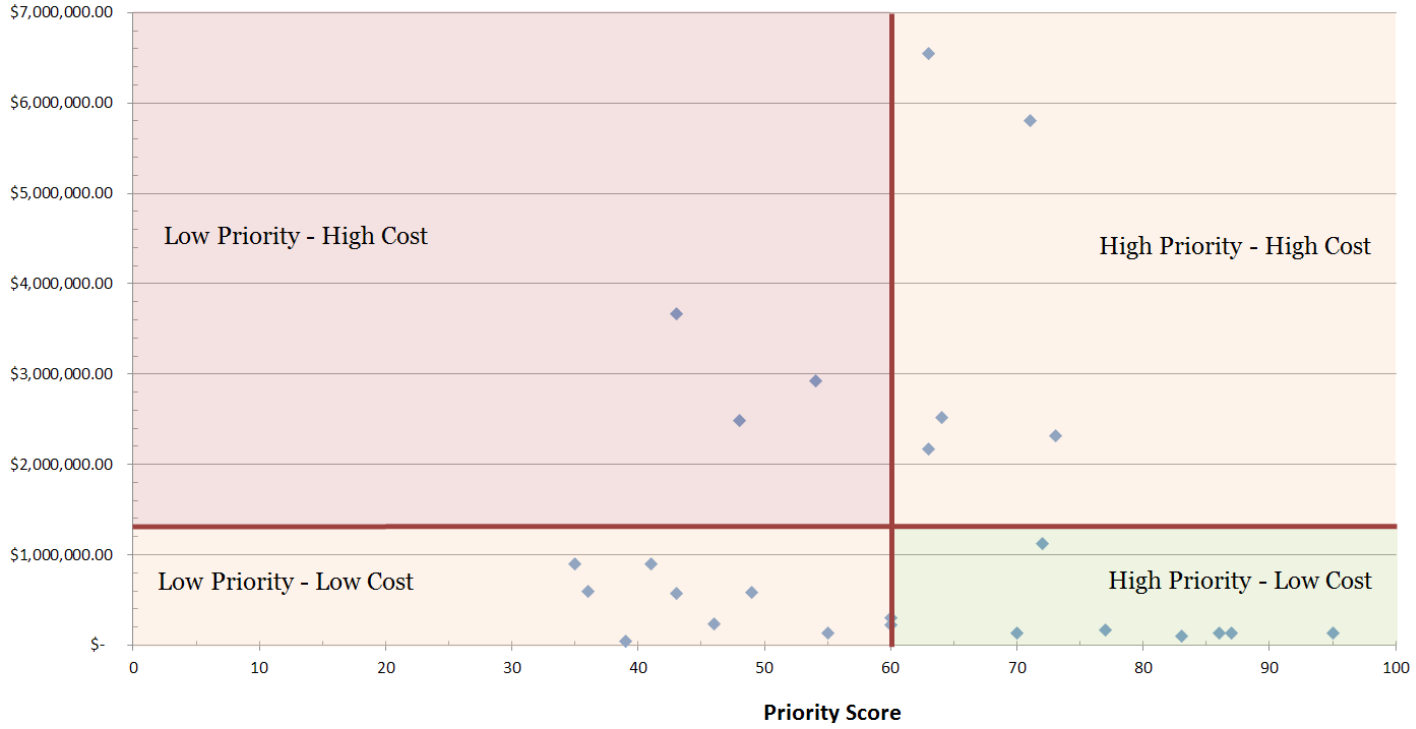
The Chennault Beach Projects received a reduced 'External Funding and In House Project Savings' to compensate for the neighborhood characteristics and limited grant attractiveness. This means the 30% is assuming some cost savings with the Stormwater CIP which revenue is through the dedicated stormwater utility fund. While funds for the stormwater fund can not be spent on non-stormwater projects, there is a cost savings when two projects are being completed at the same time. The recommendation is to fund the Chennault Beach Projects through a variety of bonds to provide immediate funds to coincide with the Stormwater CIP. These bonds could be potentially issued in combination with a Local Improvement Districts (LIDs) for the neighborhood.

Mid-Term Projects

Table 44: Mid-Term Project List			
Project Number	**Project Name**	**Priority Score**	**Cost ($ 2016)**
61	80th/81st Crossing	95	$120,946.34
23	SR 525 Corridor Study	87	$129,399.59
59	76th Street Crossing	86	$120,946.34
39	Harbour Pointe Blvd. North Cycle Track	83	$88,144.32
52	47th Bike Improvements	77	$152,904.37
22	Goat Trail Path & Bike Markings	73	$2,306,767.76
44	Endeavor Elementary Shared Use Path	72	$1,108,536.00
24	Stairstep Path & Bike Markings	71	$5,788,392.17
62	86th Crossing	70	$120,946.34
17	5th Street Pedestrian Projects	64	$2,506,817.28
35	80th Sidewalks & Sharrows	63	$2,155,825.76
27	88th Street Sidewalks & Bike Markings	63	$6,532,152.05
8	88th Street Sidewalks & Bike Markings	60	$214,523.40
54	Beverly Park Intersection Improvements	60	$287,267.08
63	2nd Street Crosswalk	55	$120,946.34
32	81st Place SW Sidewalks	54	$2,910,364.78
5	53rd Avenue Sidewalks & Bike Markings	49	$570,979.29
21	Sky Hila Pathway Safe Route to School	48	$2,479,848.08
30	49th Place Transit Connection	46	$222,806.34
20	11th Street Sidewalk	43	$561,670.95
51	Washington Ave Sidewalks	43	$3,658,716.87
68	Possession View Lane Sidewalks	41	$892,254.43
53	Chennault Beach Road Bike Markings	39	$37,898.17
3	Park Ave Sidewalks	36	$584,078.55
70	62nd Street & Canyon Road Sidewalks	35	$892,254.43
			Average Priority Score: 60.52
			Proposed Mid-Term Projects: $34,565,387

Chart 2:

Mid-Term Project Costs vs. Priorities



Funding Level for Mid-Term Projects:

The Mid-Term Projects have a total unfunded costs of $34,585,387. Assuming that external funding and 'in-house' cost savings can reduce the funding requirements by approximately 60%, the required funding for the Mid-Term projects is $13,826,154.

To meet this funding demand over 13-year expectation (Less than 20 years, more than 7 Years), an annual funding level of approximately $1,063,000 per year would be required. This is more than a two-fold increase from the recommended 7-year annual funding level $434,537. While this analysis identifies several projects in the 'High Priority - Low Cost' category, the list of Mid-Term projects includes major connections that promote the ultimate goals of the BTW Plan. In order to meet this increase, the City will have to consider additional revenue sources including transportation levies.

Table 45: Mid-Term Projects Funding Level of $450,000			
Project Number	**Projects**	**Priority Score**	**Cost**
61	**80th/81st Crossing**	**95**	**$120,946.34**
23	**SR 525 Corridor Study**	**87**	**$129,399.59**
59	**76th Street Crossing**	**86**	**$120,946.34**
39	**Harbour Pointe Blvd. North Cycle Track**	**83**	**$88,144.32**
52	**47th Bike Improvements**	**77**	**$152,904.37**
22	**Goat Trail Path & Bike Markings**	**73**	**$2,306,767.76**
44	**Endeavor Elementary Shared Use Path**	**72**	**$1,108,536.00**
24	**Stairstep Path & Bike Markings**	**71**	**$5,788,392.17**
62	**86th Crossing**	**70**	**$120,946.34**
17	**5th Street Pedestrian Projects**	**64**	**$2,506,817.28**
21	**Sky Hila Pathway Safe Route to School**	**48**	**$2,479,848.08**
	Subtotal 1		**$15,210,951.67**
	Less External Funding and In House Project Savings (60%)		($9,126,549)
	City Needs - Preferred Mid-Term Project Total		$6,084,366
	Mid-Term Project Timeline		13 Years
	Preferred Annual Funding		**$ 468,028**
Inclusion of All Mid-Term Projects			
	Subtotal 2 - Remaining Project Cost:		$19,354,471
	Less External Funding and In House Project Savings (60%)		($11,612,682)
	City Needs - Remaining Mid-Term Project Total		$7,741,788
	City Needs - Preferred Mid-Term Project Total (Above)		$6,084,366
	Grand Total		**$13,826,154**
	Mid-Term Project Timeline		13 Years
	Total Annual Funding		**$ 1,063,550**

Far-Term Projects

Table 46: Far-Term Project List				
Project Number	Project Name	Priority Score	Cost ($ 2016)	Cost - Priority Quadrant
31	92nd Street Sidewalk & Bike Markings	71	$4,419,442.81	High Cost - High Priority
38	Harbour Place Shared Use Path	66	$1,482,352.74	Low Cost - High Priority
46	Airport Road Shared Use Path	60	$14,761,032.00	High Cost - High Priority
55	Beverly Park Intersection Improvements	60	$1,411,207.00	Low Cost - High Priority
29	84th Street Sidewalks	57	$1,044,570.79	Low Cost - High Priority
36	92nd Street Sidewalk & Bike Markings	56	$593,333.26	Low Cost - High Priority
60	Goat Trail Pedestrain Bridge	51	$7,763,975.16	High Cost - High Priority
34	88th Sidewalks & Bike Lanes	51	$678,095.15	Low Cost - High Priority
47	121st Bike Connection	47	$381,031.20	Low Cost - High Priority
14	Cyrus Way Sidewalks	47	$842,682.10	Low Cost - High Priority
10	53rd Avenue Sidewalks & Bike Markings	45	$706,349.12	Low Cost - Low Priority
12	Cyrus Way Sidewalks	43	$694,177.58	Low Cost - Low Priority
43	Cyrus Way Road Extension	41	$5,527,497.09	High Cost - Low Priority
33	53rd Avenue Sidewalks & Bike Markings	41	$1,185,704.17	Low Cost - Low Priority
19	Shared Use Path to Old Town	37	$667,590.00	Low Cost - Low Priority
28	54th Avenue Sidewalks & Bike Markings	36	$2,694,782.20	High Cost - Low Priority
16	Share Use Path from Mukilteo Blvd to Boeing Recreation Center	36	$2,781,490.06	High Cost - Low Priority
45	Chennault Beach Gulch Shared Use Path	34	$220,716.10	Low Cost - Low Priority
69	Chennault Beach Road Bike Markings	32	$30,779.87	Low Cost - Low Priority
2	Loveland Avenue Sidewalks	29	$220,181.76	Low Cost - Low Priority
				Average Priority Score: 47
				Proposed Mid-Term Projects: $48,106,990

Funding Level for Far-Term Projects:

The Far-Term Projects have a total unfunded costs of $48,106,990. However, because these projects are identified as future projects to be completed within the next twenty-years, considering the annual funding expenditures is more or less a guessing game. To best use these figures, the City should advance projects from the 'Far-Term' list into the Near or Mid-Term lists as conditions change and update the required annual funding based on those conditions. Unlike the previous two sections that identified the Near and Mid-Term Projects, the 'benefit quadrant' has been integrated into the chart above. While some 'Low Cost - Low Priority' projects exist within a 20+ year timeline, should the opportunity for implementation or an opportunity for the interim option be available, the City of Mukilteo should consider the opportunity.

Capacity Projects:

Impact fees are assessed to new development in order to expand the capacity of the system. Such as, if a development is proposing to add 100 single-family homes to an existing system, it is reasonable to charge the development for new demands on the parks system, traffic system, and school system to pay for projects that maintain the same level-of-service that existed prior to development.

Pedestrian, Bike, and Transit projects can provide additional capacity to the system by providing alternative transportation modes. These BTW Capacity Projects are eligible to receive impact fee funding.

The primary criteria to determine if a project qualifies as a capacity project was that the project area must provide connectivity or alternative connection to SR 525, SR 526, and 5th Street. If the project area did provide connectivity, the project area must also be significantly lacking existing facilities. Project list and costs of the capacity projects are located under ***on page 74.***

Capacity Projects

The image above shows a primary thoroughfare that is supported by users as a bike route, even with no facilities. This location or an immediate alternative would be considered as capacity project to provide safe facilities to improve travel for both motorists and cyclists.

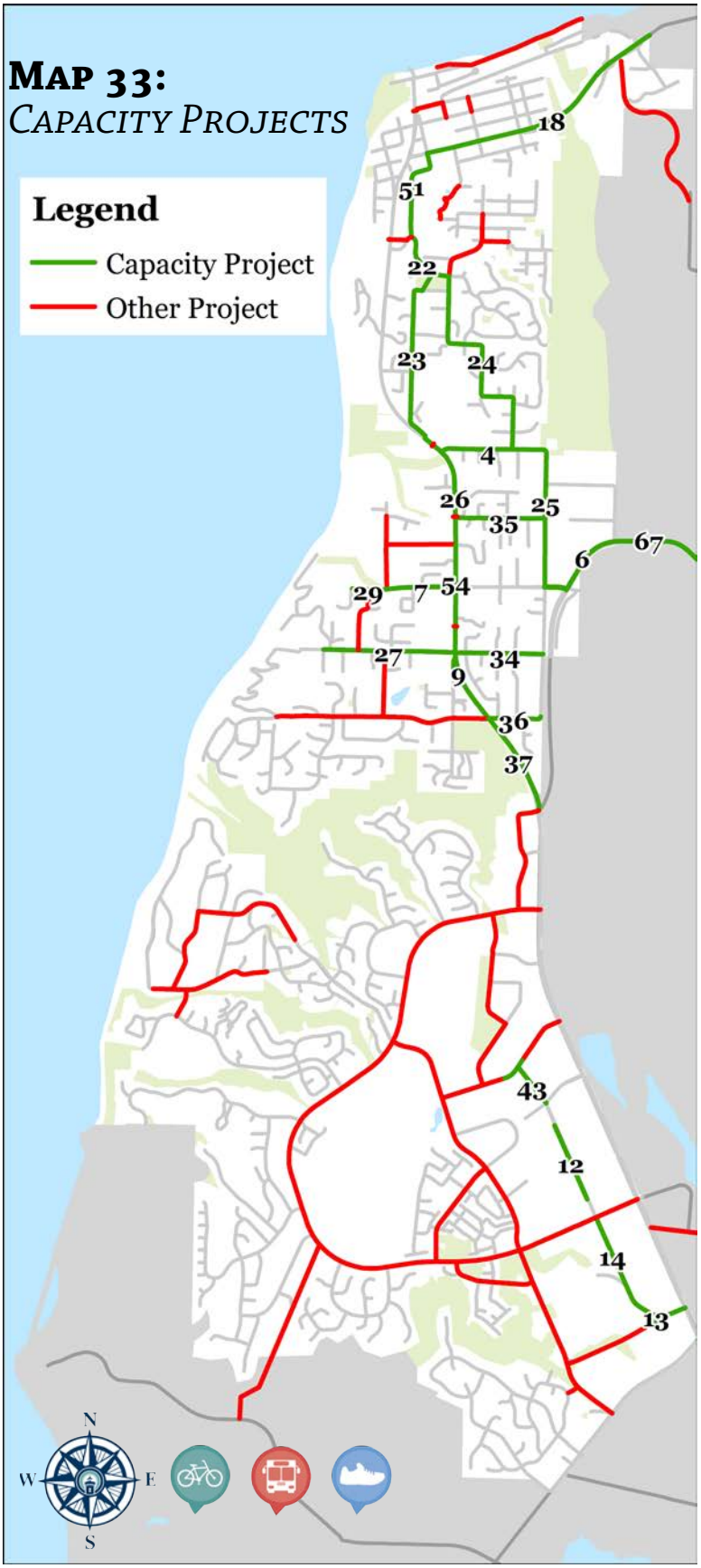


Table 47: Capacity Projects			
Project Number	Project Name	Cost ($ 2016)	Timeline
6	SR 526 Sidewalks	$250,271.36	Near
9	SR 525 Sidewalks & Bike Markings	$1,921,561.54	Near
11	Chennault Beach Road Sidewalks	$236,122.92	Near
12	Cyrus Way Sidewalks	$694,177.58	Far
13	Cyrus Way Sidewalks	$764,826.02	Near
14	Cyrus Way Sidewalks	$842,682.10	Far
17	5th Street Pedestrian Projects	$2,506,817.28	Mid
24	Stairstep Path & Bike Markings	$5,788,392.17	Mid
25	44th Shared-Use Path	$1,945,548.00	Near
26	SR 525 Sidewalks - SRTS	$1,044,404.73	Near
30	49th Place Transit Connection	$222,806.34	Mid
34	88th Sidewalks & Bike Lanes	$678,095.15	Far
36	92nd Street Sidewalk & Bike Markings	$593,333.26	Far
37	SR 525 Bike Lane	$34,437.92	Near
42	Harbour Pointe Blvd. S Widening	$1,929,850.00	Near
43	Cyrus Way Road Extension	$5,527,497.09	Far
48	Mid-Town Mukilteo Sidewalk & Bike Markings	$5,317,815.73	Near
49	Harbour Reach Corridor	$16,000,000.00	Near
54	Beverly Park Intersection Improvements	$287,267.08	Mid
55	Beverly Park Intersection Improvements	$1,411,207.00	Far
67	526 Shared Use Path	$6,653,161.00	Near

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Appendix:

Walking Audits Prepared by Snohomish Health District
- Mukilteo Elementary
- Columbia Elementary
- Endeavour Elementary

Planning-Level Sidewalk Assessment 2014 by Tuttle Engineering

Individual Project Estimates by City Staff


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