SR 303 Corridor Study

Prepared for
City of Bremerton and WSDOT

May 2021

Prepared by
Parametrix

(This page intentionally left blank)

SR 303 Corridor Study

Prepared for

City of Bremerton
and WSDOT

Prepared by

Parametrix
719 2nd Avenue, Suite 200
Seattle, WA 98104
T. 206.394.3700 F. 1.855.542.6353
www.parametrix.com

in partnership with:
PRR, Inc.
Community Attributes Inc.
Fehr and Peers

May 2021 | 554-1896-156

CITATION

Parametrix. 2021. SR 303 Corridor Study. Prepared by Parametrix, Seattle, WA. May 2021.

Acknowledgements

The following agencies and organizations participated in the SR 303 Corridor Study. The study team would like to acknowledge and thank everyone involved.

Project Management Team

- Katie Ketterer – City of Bremerton
- Dennis Engel – WSDOT
- Matthew Pahs – WSDOT

Stakeholders

- City of Bremerton
- WSDOT
- Bremerton Chamber of Commerce
- Naval Base Kitsap
- Kitsap County
- Kitsap Transit
- Suquamish Tribe
- Olympic College
- Kitsap Public Health District

Consultant Team

- Parametrix – Prime Consultant
- Fehr & Peers – Travel Demand Modeling
- PRR – Public Involvement
- Community Attributes Inc – Economic Analysis

(This page intentionally left blank)

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES

TABLE OF CONTENTS (CONTINUED)

TABLE OF CONTENTS (CONTINUED)

LIST OF TABLES

TABLE OF CONTENTS (CONTINUED)

APPENDICES

ACRONYMS

ADA	Americans with Disabilities Act
BAT	Business access transit
City	City of Bremerton
FHWA	Federal Highway Administration
GIS	geographic information system
HSM	Highway Safety Manual
JCTP	Joint Compatibility Transportation Plan
KEDA	Kitsap Economic Development Alliance
LOS	level of service
LPI	leading pedestrian interval
mph	miles per hour
NEPA	National Environmental Policy Act
NMP	Non-Motorized Facility Plan
OFM	Washington State Office of Financial Management
P&R	park & ride
PDO	property-damage-only
PHB	pedestrian hybrid beacon
PPA	Preferred Preliminary Alternative
PSRC	Puget Sound Regional Council
SAG	stakeholder advisory group
SEPA	Washington State Environmental Policy Act
SPA	study preferred alternative
SR	State Route
TC	Transit Center
TSP	Transit signal priority
TWLTL	two-way left-turn lane
TWSC	two-way stop-controlled
UGA	urban growth area
WSDOT	Washington State Department of Transportation

(This page intentionally left blank)

1. EXECUTIVE SUMMARY

The State Route (SR) 303 corridor is a state highway that connects Bremerton to Silverdale in Kitsap County. The SR 303 corridor is a multi-modal network of local roads, sidewalks, bicycle paths, bus routes, and other facilities that balance mobility and critical access for residents throughout Kitsap County as well as City of Bremerton (City) residents by connecting a variety of diverse residential and commercial neighborhoods.

The Washington State Legislature provided funding in 2018 for a transportation study of the SR 303 corridor, noting "*SR 303 is a major transportation corridor that bisects Bremerton and is essential to the economic vitality of the City. The corridor requires modernization; a comprehensive effort is needed to identify safe, reliable and cost effective transportation options, contextualized for the corridor, which will improve livability, attract investment, and increase economic vitality for people and business.*"

This study recognizes that improvements along the SR 303 corridor will have lasting benefits for the region. This study plans to improve safety and mobility for people and goods along SR 303, further supporting the vision of a socially, economically, and physically healthy community. The City and Washington State Department of Transportation (WSDOT), in coordination with Kitsap County, have undertaken this study to identify safe, reliable, and cost-effective transportation options that improve livability, attract investment, and increase economic vitality for people and businesses.

1.1 Study Purpose and Process

The purpose of this study was to assess constraints on the SR 303 corridor and provide prioritized potential projects that would help meet the corridor needs as identified by the study team, a stakeholder advisory group (SAG), and the public.

To achieve this purpose, the study team used the WSDOT Practical Solutions approach to develop a study preferred alternative (SPA), as illustrated in Figure 1. The study team also actively engaged stakeholders and the community as part of the following approach:

- Outline corridor needs
- Identify existing and future performance issues
- Recommend efficient transportation corridor improvements that meet the needs
- Identify near-term, mid-term and long-term improvement strategies for the corridor
- Provide groundwork for development and funding of future solutions

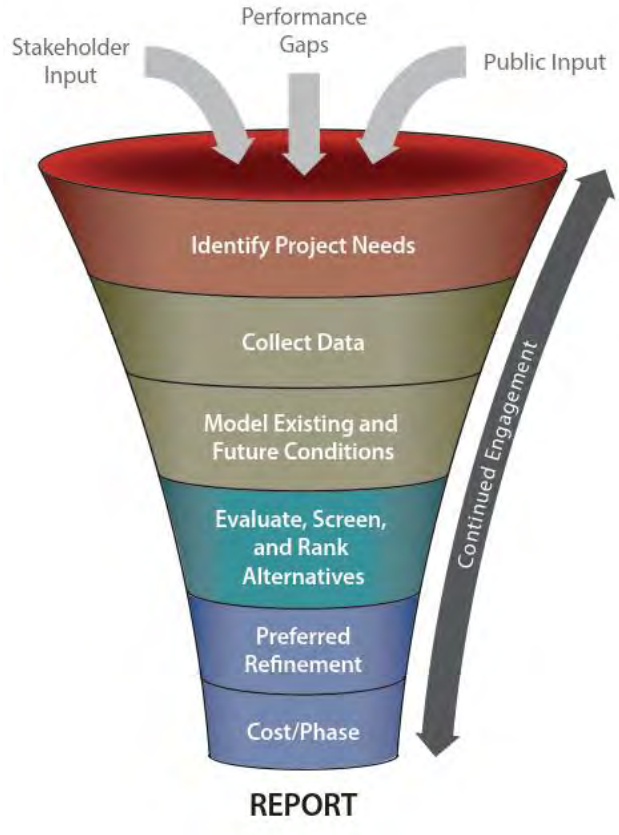


Figure 1. Practical Solutions Approach

Additional information about each of these steps is included in the body of this report. For example, a description of how the project team worked with the public, stakeholders, and elected officials to develop

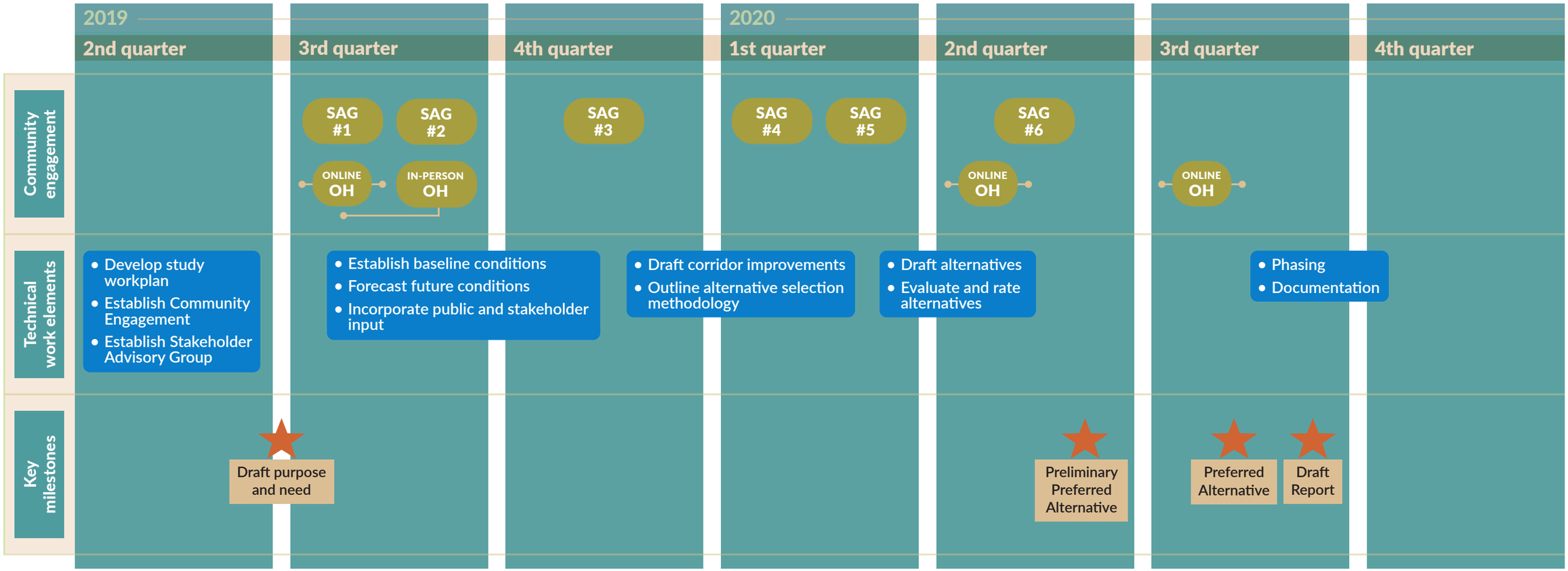
the corridor needs is located in Section 6.1, Identifying Needs. The remaining steps shown in Figure 1 are also described in the following sections.

The SR 303 Corridor Study was kicked off in May 2019. The schedule for the study process with the key milestones is shown in Figure 2. The specific dates for the key milestones as well as additional internal milestones are shown in Table 1. These meeting dates were scheduled to ensure that public input was received at each of the study decision points, consistent with the WSDOT Practical Solutions approach. SAG meetings were used to gather information from key representatives from various interested agencies, organizations, and jurisdictions. This information was then used to create materials for public input on the direction, findings, and recommendations of the study.

Table 1. Key Public Outreach Milestones

July 10, 2019	SAG Meeting No. 1
August 6, 2019	In-Person Open House
August 5 to September 6, 2019	Online Open House
September 12, 2019	Corridor Element Development Workshop
September 18, 2019	SAG Meeting No. 2
October 31, 2019	SAG Meeting No. 3
January 30, 2020	SAG Meeting No. 4
March 19, 2020	Screening Results Technical Review
March 30, 2020	SAG Meeting No. 5
April 21 to May 8, 2020	Online Open House
June 5, 2020	SAG Meeting No. 6
July 16, 2020	Virtual Open House

SR 303 Corridor Study Schedule



SAG Stakeholder Advisory Group meetings

ONLINE OH IN-PERSON OH Open Houses

SR 303 Corridor Study
Figure 2. Study Schedule

(This page intentionally left blank)

1.2 Report Structure

The purpose of this report is to document the SR 303 Corridor Study process and findings. The report includes the following sections:

- **Executive Summary** presents a summary of the study and the preferred corridor solution
- **Corridor Planning History** lists previous studies along the SR 303 corridor
- **Public and Agency Involvement Process** documents how the community was involved in the study process, including SAG meetings and public open houses
- **Existing Conditions** documents the existing roadway characteristics, traffic operations, multi-modal facilities, crash data, and economic vitality of the SR 303 corridor
- **Future No Build Conditions** presents anticipated conditions for the years 2030 and 2040
- **Alternative Development and Screening Process** presents the Draft Corridor Need Statement and documents the First Level Screening and Second Level Screening processes that help shape the SPA
- **Next Steps** discusses what follows the completion of the SR 303 Corridor Study

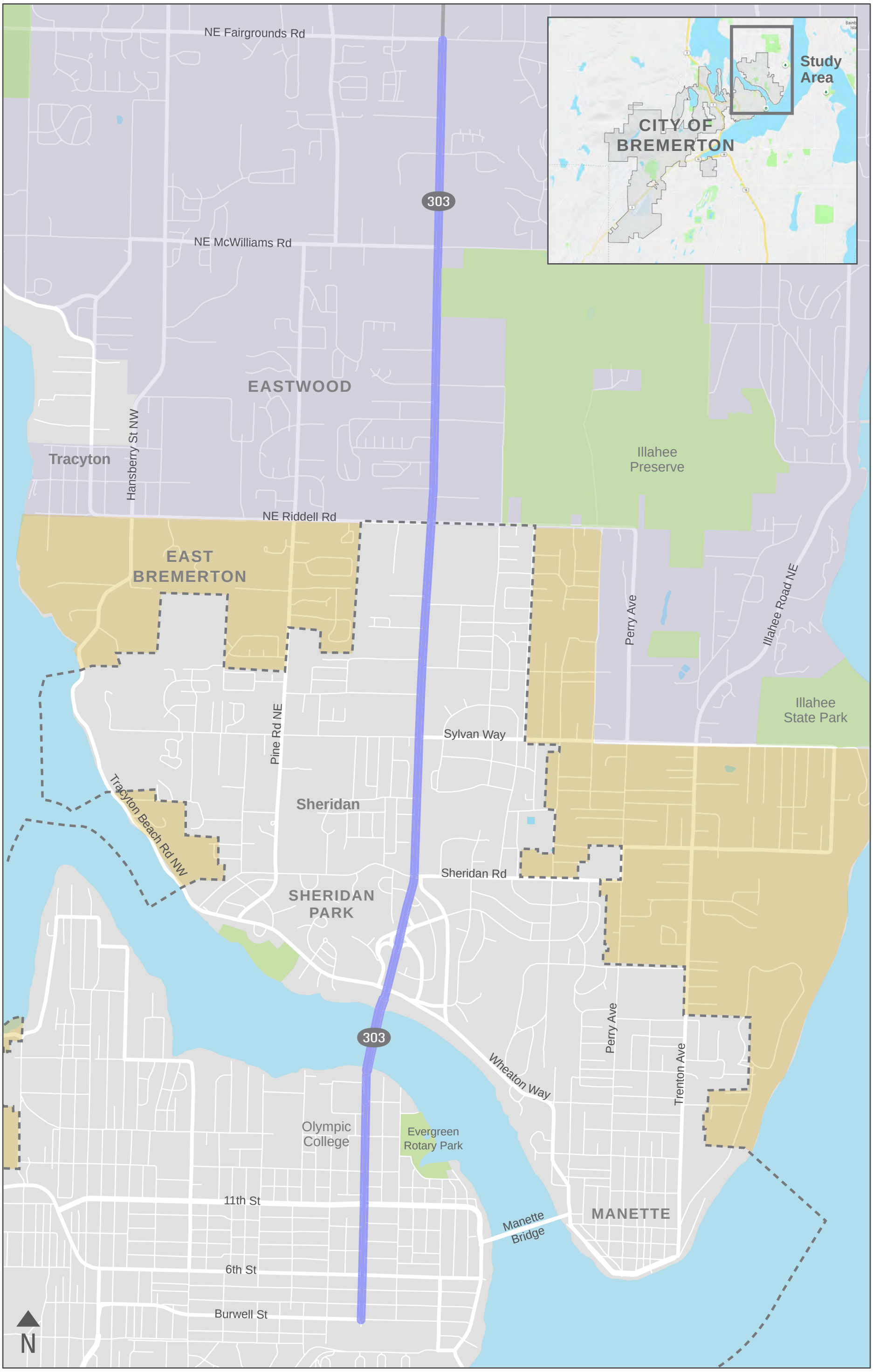
1.3 Study Area

The study area for this project, shown in Figure 3, extends approximately 4.7 miles between Burwell Street (SR 304) and NE Fairgrounds Road/NE John Carlson Road. For this study, Burwell Street and NE Fairgrounds will only be referred to as such. SR 303 is also known as Warren Avenue between Burwell Street (SR 304) and Sheridan Road and additionally known as Wheaton Way between Sheridan Road and NE Riddell Road. For this study, SR 303 will only be referred to as such.

The City's jurisdiction is within city limits from Burwell Street to NE Riddell Road. Kitsap County's jurisdiction includes the study area from NE Riddell Road north to NE Fairgrounds Road. The County participated in the study and provided oversight for areas within their jurisdiction. The study considered improvements within this full study area to meet the project needs.

Kitsap County's Comprehensive Plan establishes land use policy within unincorporated Kitsap County. The SR 303 corridor bisects the Central Kitsap UGA (urban growth area) north of NE Riddell Road. As a State Highway, WSDOT is the lead agency for improvements and access control on SR 303 within the County portion of the corridor. When development applications are filed with the County, WSDOT will review and require improvements consistent with this Plan. Finally, when projects are pursued within Bremerton City limits, the City of Bremerton will be the lead agency and will coordinate with WSDOT and Kitsap County.

(This page intentionally left blank)



SR 303 Corridor Study
Figure 3. Study Area

(This page intentionally left blank)

1.4 Study Preferred Alternative

The study preferred alternative (SPA) is the preferred alternative chosen through a collaborative process that included the public, the SAG, and the study team. The final outcome is the result of WSDOT's Practical Solutions approach that outlines performance-based needs and reasonable solutions that meet the needs at the right time.

The remainder of this report outlines the methodology, process, and decision-making timeline that was used to reach concurrence on the SPA. Section 6.7, Study Preferred Alternative Development, in particular details the improvements that required additional consideration and the analysis of the SPA compared to the other proposed Build Alternatives.

This section provides information about the SPA improvements, project phasing, preliminary cost opinions, and potential funding sources.

1.4.1 Corridor Vision

The vision for the SR 303 corridor is a prosperous economic area that includes mixed land uses along the corridor that are accessible by vehicles, transit, freight, and active transportation. People using the corridor will feel safe, experience reliable mobility, have accessibility, and recognize economic growth opportunities consistent with the needs for the corridor and the long-range plans of the City, WSDOT, Kitsap County, and Kitsap Transit. To achieve this vision, the SPA includes an emphasis on improved sidewalks, reduced conflict points, attention to transit, and corridor traffic management.

The needs for the SR 303 corridor are detailed in the Draft Corridor Need Statement in Section 6.1.1.

1.4.2 Proposed Improvements

The SPA is made up of several improvements that address the corridor needs. The themes of the SPA include:

- Adaptive signal technology with option for transit signal priority (TSP).
- Roundabouts at key locations that contribute to traffic operations, pedestrian accessibility, safety, and context.
- Widened and completed City sidewalks south and north of the Warren Avenue Bridge. Sidewalks that are 10 feet wide may be used by all modes of active transportation.
    - Active transportation facilities within County limits will be 11 feet wide with a 5-foot bike lane for bicyclists and a 6-foot sidewalk for pedestrians
- More connections for active transportation along, across, and adjacent to the corridor.
- Designated bicycle facilities across and adjacent to the corridor that are consistent with the City of Bremerton Non-Motorized Plan and the Kitsap County Non-Motorized Facility Plan (NMP).
- Median control north of the Warren Avenue Bridge.
- Business access transit (BAT) lane between Callahan Drive and Hollis Street.

The SPA is illustrated in Figure 4 (pages 1-11 through 1-19) as well as in Appendix A. Figure 5 through Figure 13 (pages 1-21 through 1-23) are typical sections for the SPA. A typical section represents the predominant section of a roadway and does not represent every configuration present on a particular roadway section.

(This page intentionally left blank)

SR 303 CORRIDOR STUDY: STUDY PREFERRED ALTERNATIVE

Segment 5: NE McWilliams Road to NE Fairgrounds Road

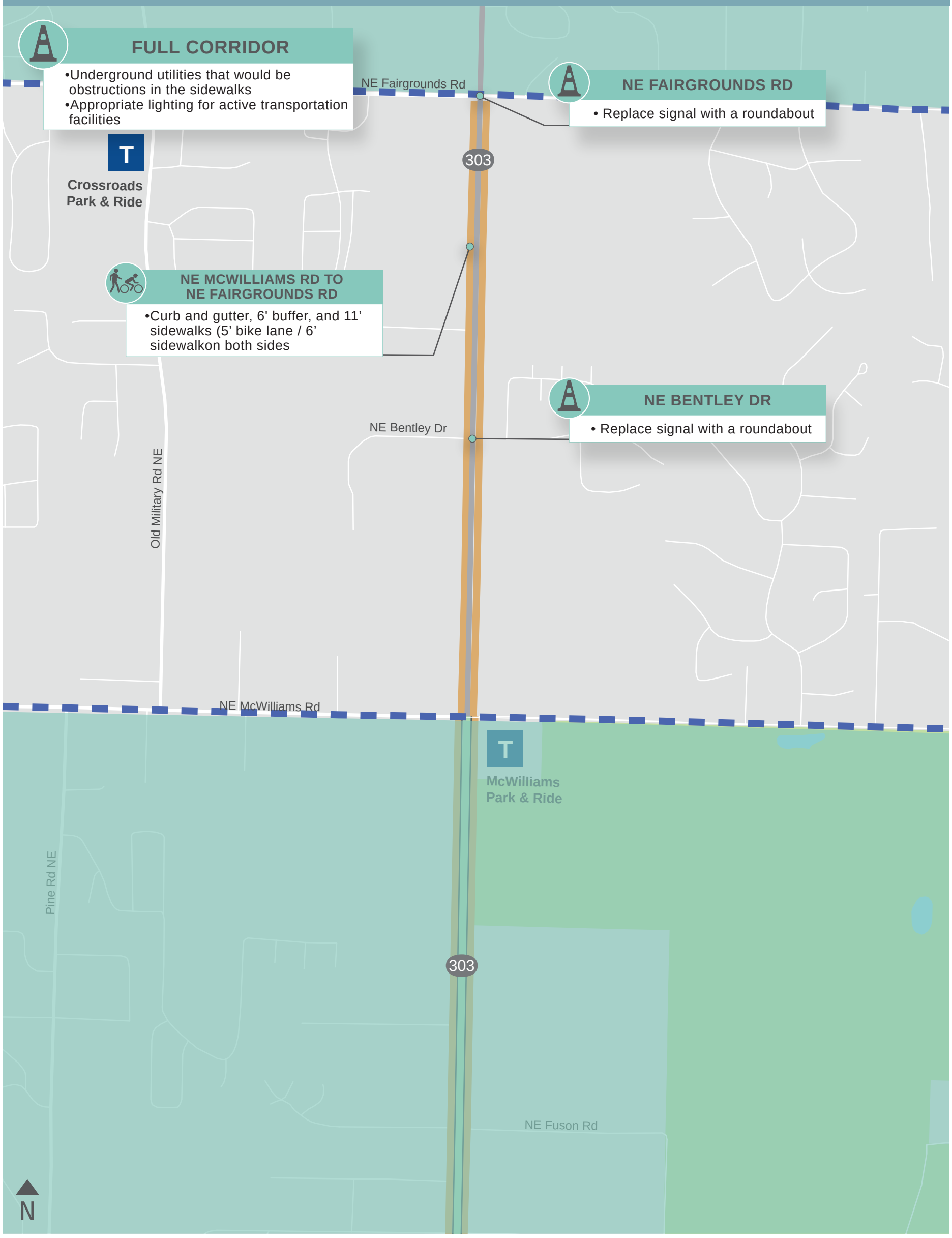
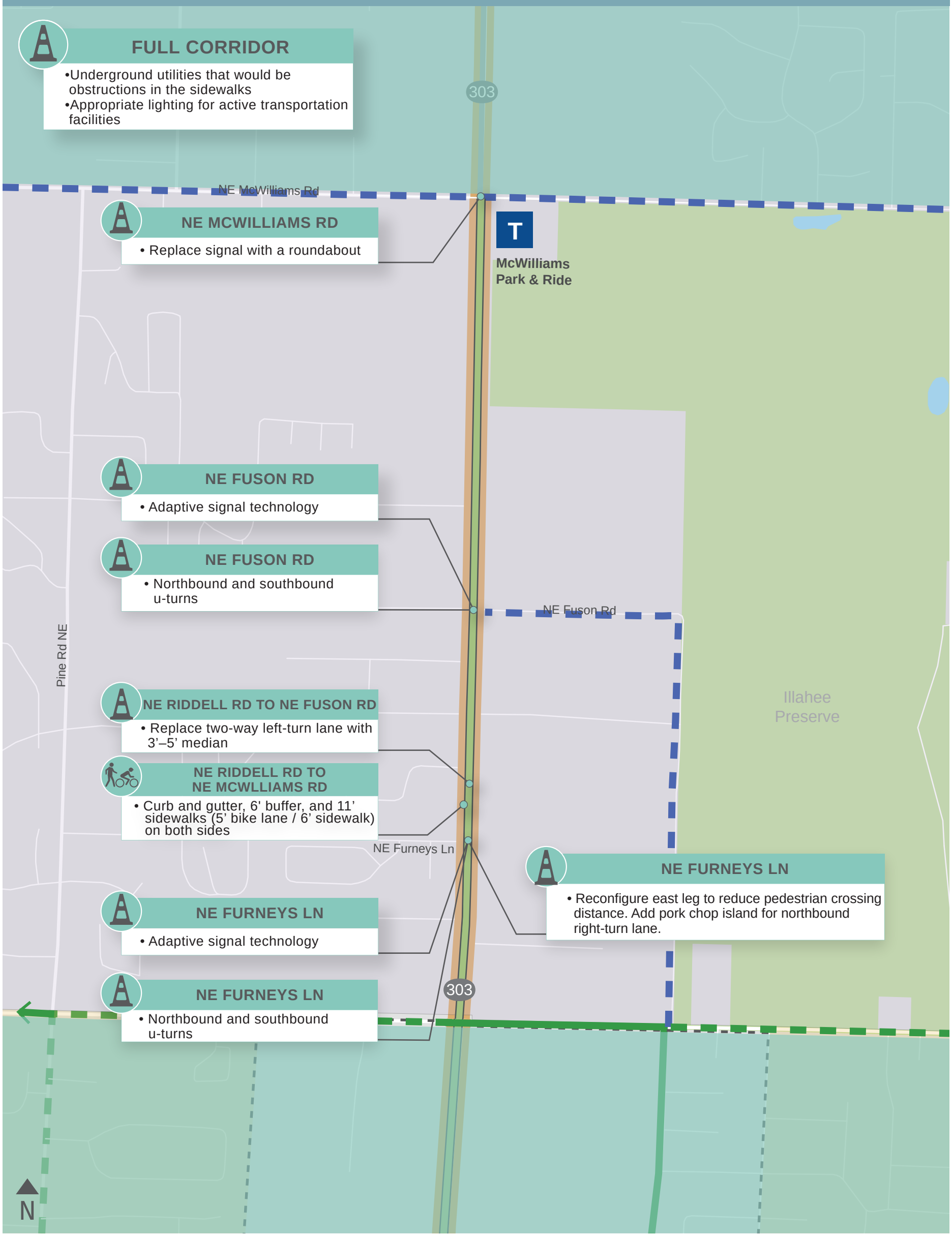


FIGURE 4A.
STUDY PREFERRED ALTERNATIVE

(This page intentionally left blank)

SR 303 CORRIDOR STUDY: STUDY PREFERRED ALTERNATIVE

Segment 4: NE Riddell Road to NE McWilliams Road



0 750 1500 3000 feet

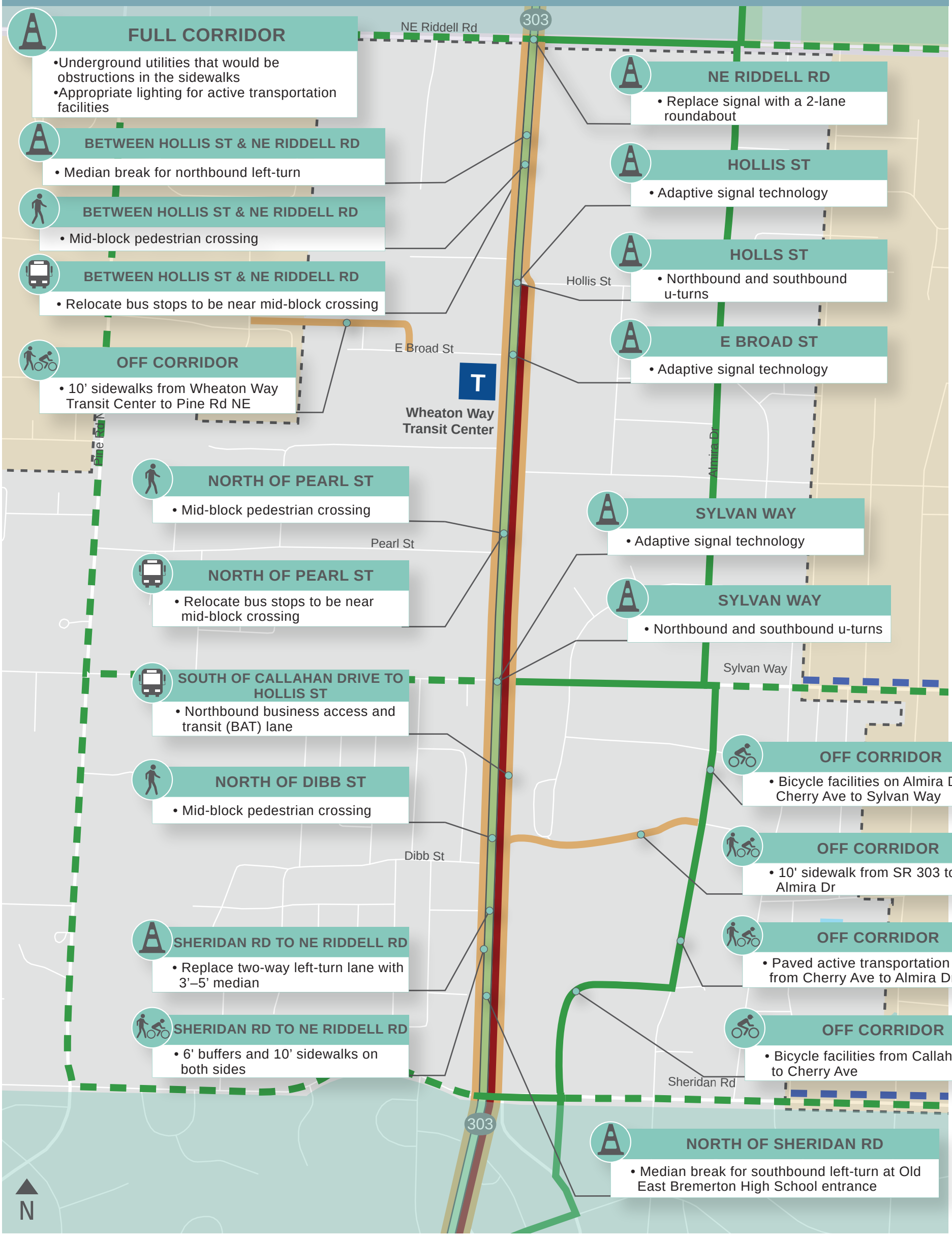
FIGURE 4B.
STUDY PREFERRED ALTERNATIVE

Sidewalk / Active Transportation Facility
C Curb
East Bremerton UGA Boundary
Bicycle Facility per City Plan
Barrier
Central Kitsap UGA Boundary
Bicycle Facility
Median
City of Bremerton / Kitsap County Boundary
Non-Motorized Route per County Plan
Business Access and Transit (BAT) Lane

(This page intentionally left blank)

SR 303 CORRIDOR STUDY: STUDY PREFERRED ALTERNATIVE

Segment 3: Sheridan Road to NE Riddell Road



0 750 1500 3000 feet

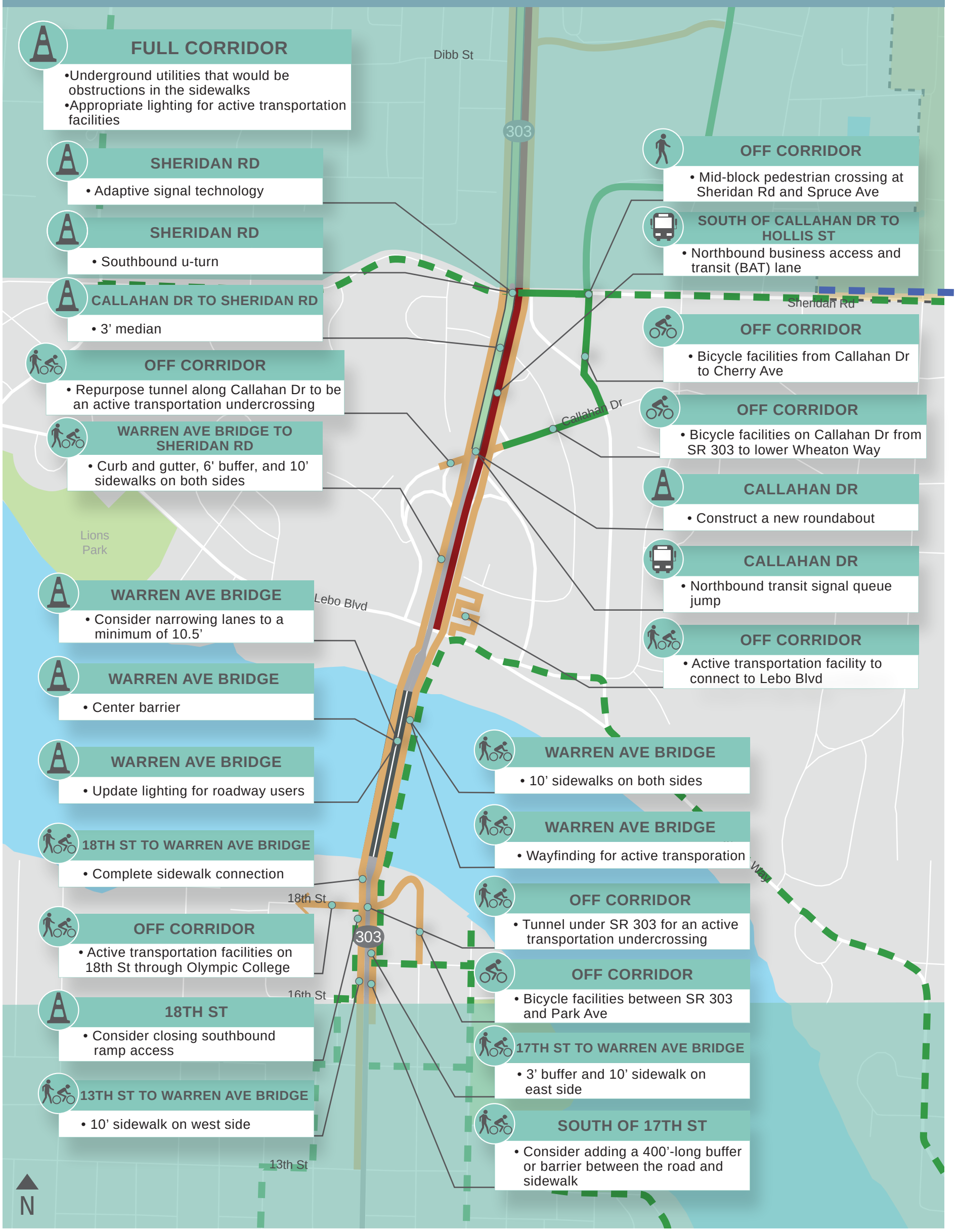
FIGURE 4C.
STUDY PREFERRED ALTERNATIVE

Sidewalk / Active Transportation Facility
C Curb
Bicycle Facility per City Plan
Barrier
Bicycle Facility
Median
Non-Motorized Route per County Plan
Business Access and Transit (BAT) Lane
East Bremerton UGA Boundary
Central Kitsap UGA Boundary
City of Bremerton / Kitsap County Boundary

(This page intentionally left blank)

SR 303 CORRIDOR STUDY: STUDY PREFERRED ALTERNATIVE

Segment 2: 16th Street to Sheridan Road



FULL CORRIDOR
- Underground utilities that would be obstructions in the sidewalks
- Appropriate lighting for active transportation facilities

SHERIDAN RD
- Adaptive signal technology

SHERIDAN RD
- Southbound u-turn

CALLAHAN DR TO SHERIDAN RD
- 3’ median

OFF CORRIDOR
- Repurpose tunnel along Callahan Dr to be an active transportation undercrossing

WARREN AVE BRIDGE TO SHERIDAN RD
- Curb and gutter, 6' buffer, and 10’ sidewalks on both sides

WARREN AVE BRIDGE
- Consider narrowing lanes to a minimum of 10.5’

WARREN AVE BRIDGE
- Center barrier

WARREN AVE BRIDGE
- Update lighting for roadway users

18TH ST TO WARREN AVE BRIDGE
- Complete sidewalk connection

OFF CORRIDOR
- Active transportation facilities on 18th St through Olympic College

18TH ST
- Consider closing southbound ramp access

13TH ST TO WARREN AVE BRIDGE
- 10’ sidewalk on west side

OFF CORRIDOR
- Mid-block pedestrian crossing at Sheridan Rd and Spruce Ave

SOUTH OF CALLAHAN DR TO HOLLIS ST
- Northbound business access and transit (BAT) lane

OFF CORRIDOR
- Bicycle facilities from Callahan Dr to Cherry Ave

OFF CORRIDOR
- Bicycle facilities on Callahan Dr from SR 303 to lower Wheaton Way

CALLAHAN DR
- Construct a new roundabout

CALLAHAN DR
- Northbound transit signal queue jump

OFF CORRIDOR
- Active transportation facility to connect to Lebo Blvd

WARREN AVE BRIDGE
- 10’ sidewalks on both sides

WARREN AVE BRIDGE
- Wayfinding for active transporation

OFF CORRIDOR
- Tunnel under SR 303 for an active transportation undercrossing

OFF CORRIDOR
- Bicycle facilities between SR 303 and Park Ave

17TH ST TO WARREN AVE BRIDGE
- 3’ buffer and 10’ sidewalk on east side

SOUTH OF 17TH ST
- Consider adding a 400’-long buffer or barrier between the road and sidewalk

0 750 1500 3000 feet

FIGURE 4D.
STUDY PREFERRED ALTERNATIVE

Sidewalk / Active Transportation Facility
Bicycle Facility per City Plan
Bicycle Facility
Non-Motorized Route per County Plan
C Curb
Barrier
Median
Business Access and Transit (BAT) Lane
East Bremerton UGA Boundary
Central Kitsap UGA Boundary
City of Bremerton / Kitsap County Boundary

(This page intentionally left blank)

SR 303 CORRIDOR STUDY: STUDY PREFERRED ALTERNATIVE

Segment 1: Burwell Street to 16th Street

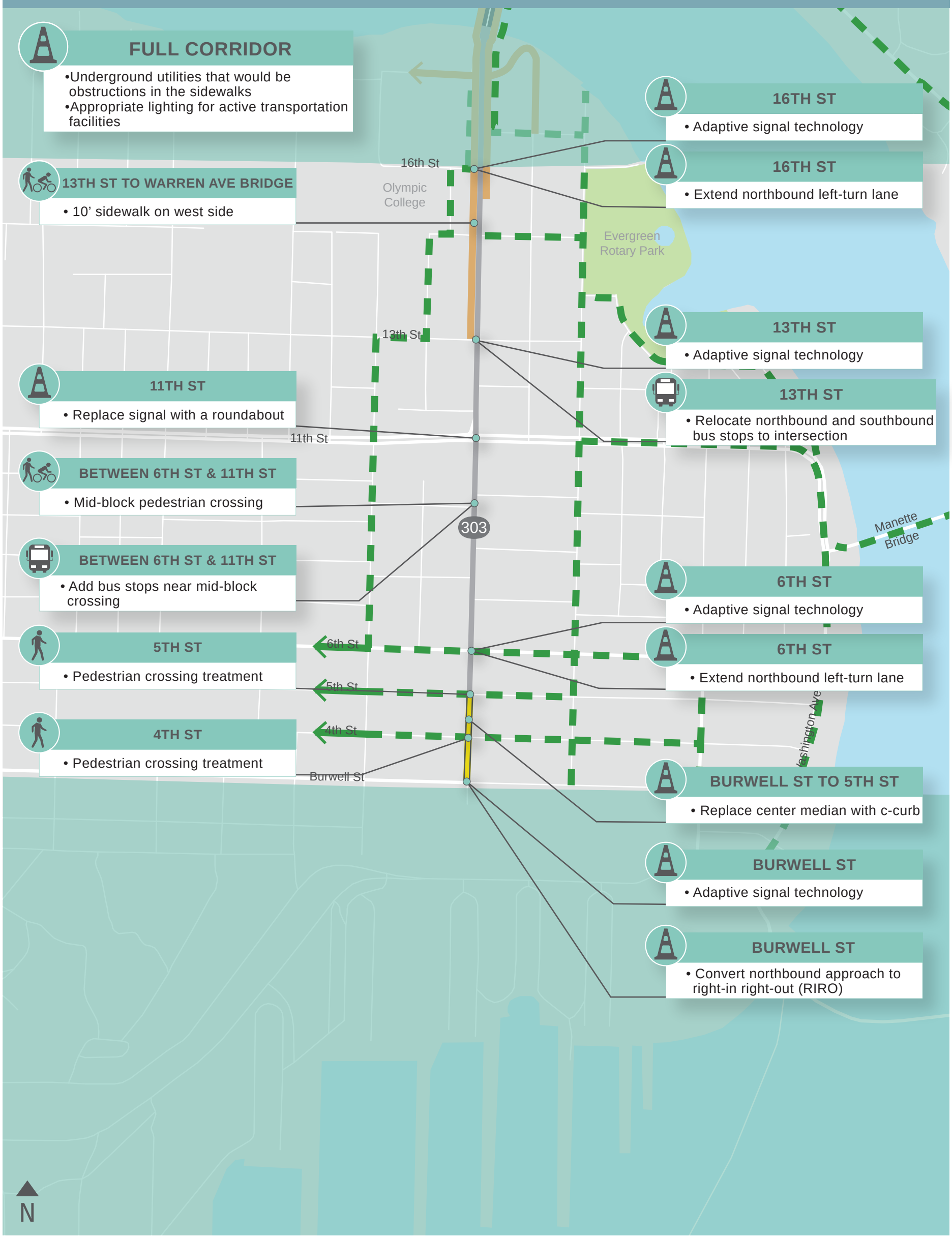


FIGURE 4E.
STUDY PREFERRED ALTERNATIVE

(This page intentionally left blank)

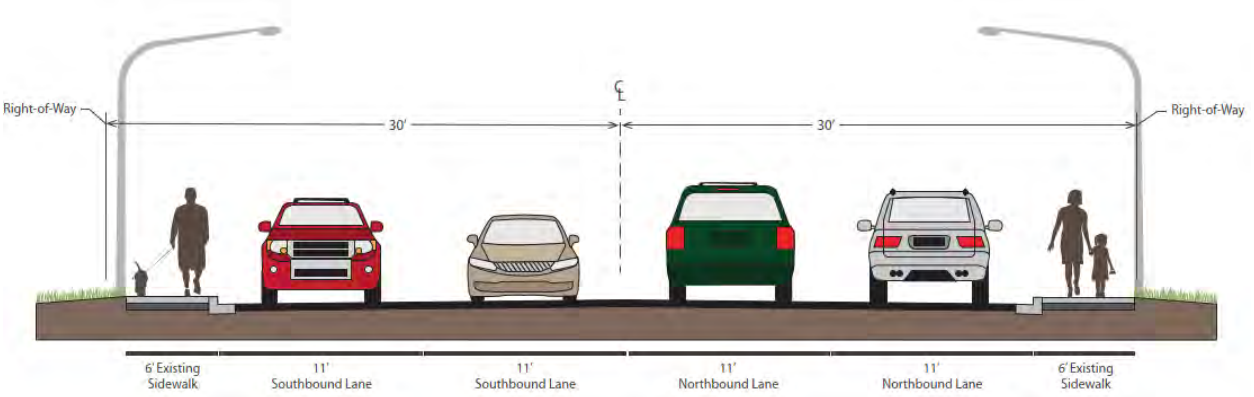


Figure 5. Proposed Typical Section – Burwell Street to 13th Street

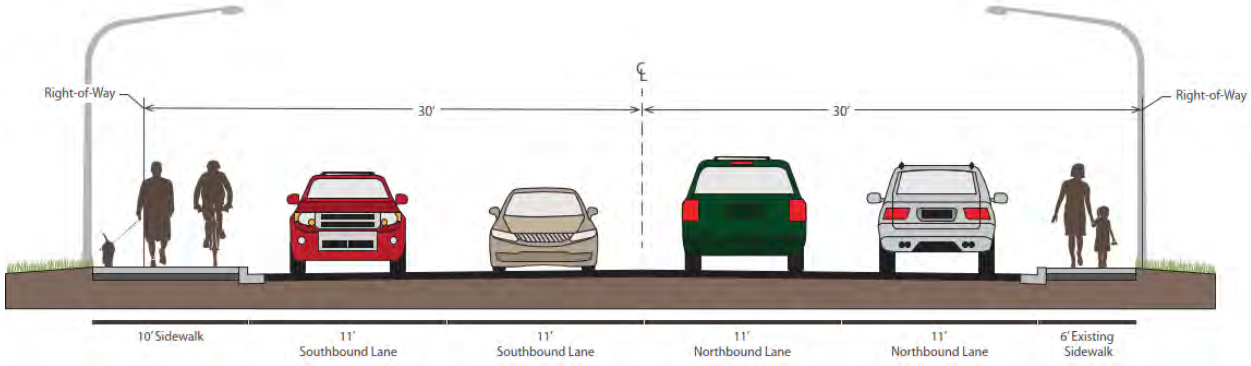


Figure 6. Proposed Typical Section – 13th Street to 17th Street

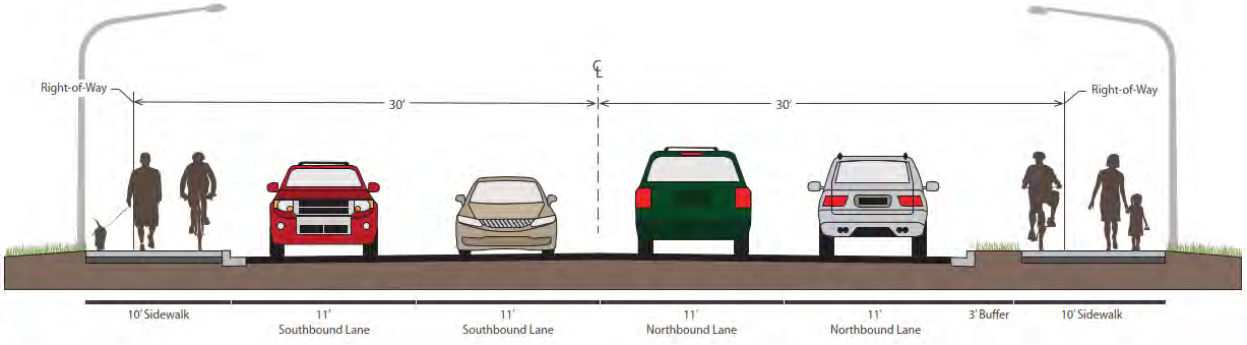


Figure 7. Proposed Typical Section – 17th Street to Warren Avenue Bridge

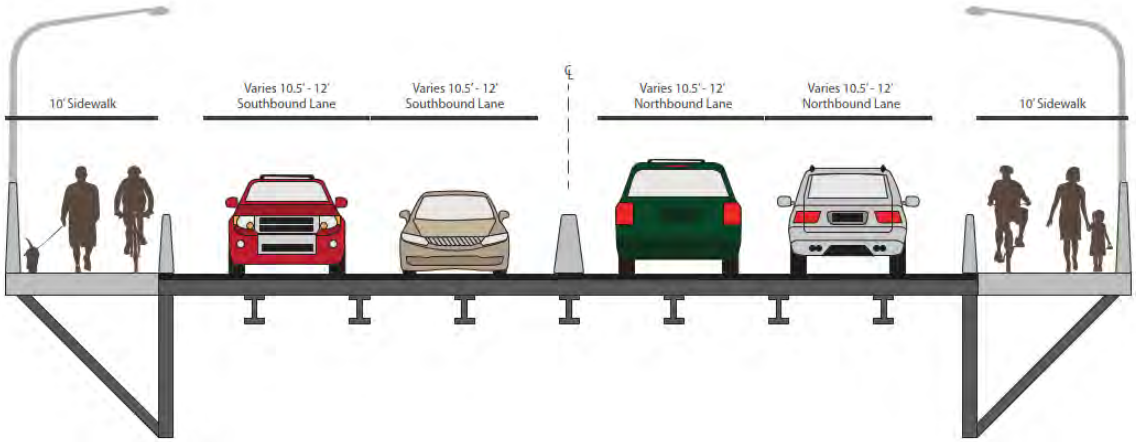


Figure 8. Proposed Typical Section – Warren Avenue Bridge

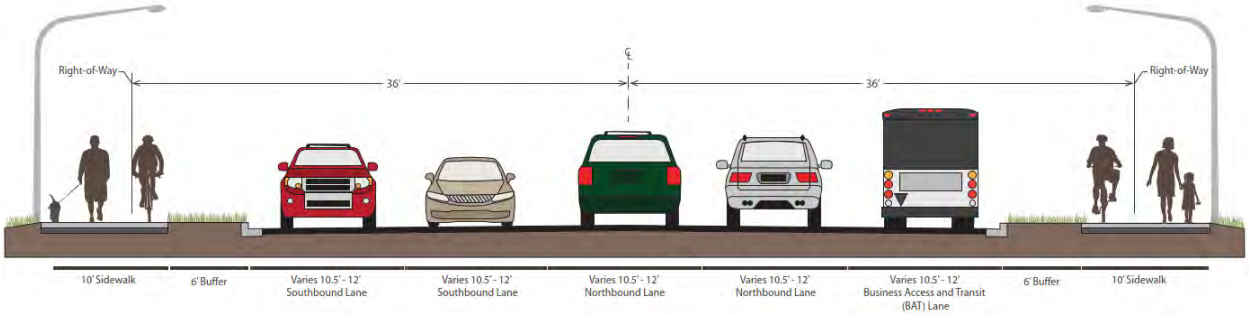


Figure 9. Proposed Typical Section – Warren Avenue Bridge to Callahan Drive

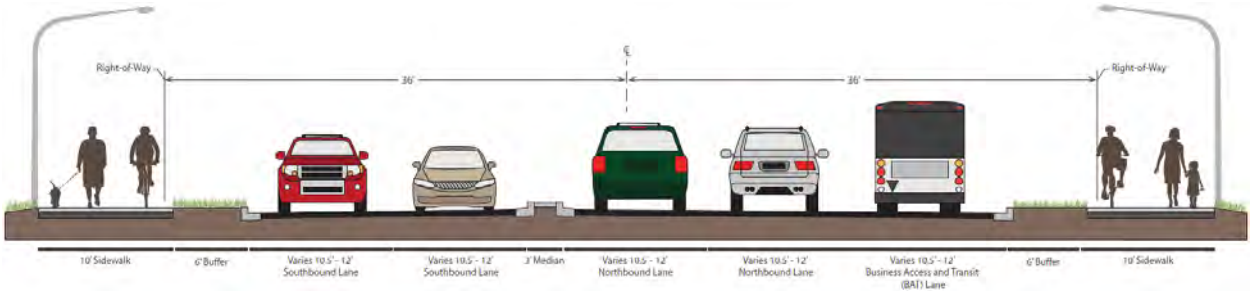


Figure 10. Proposed Typical Section – Callahan Drive to Hollis Street

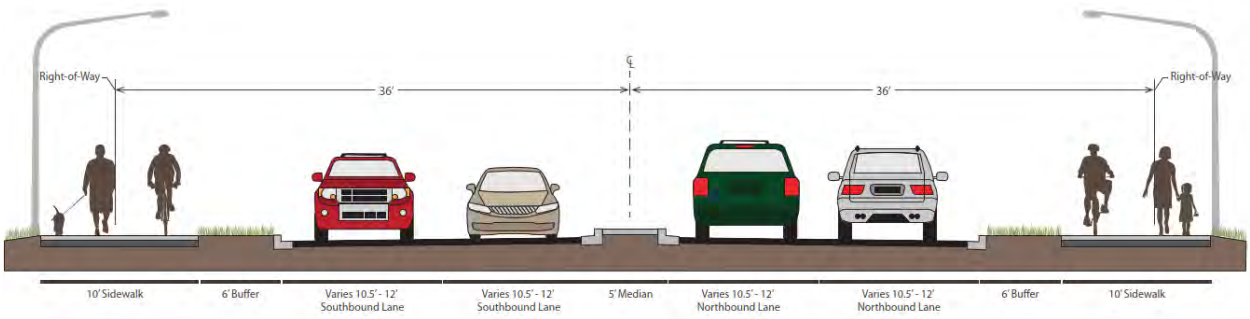


Figure 11. Proposed Typical Section – Hollis Street to NE Riddell Road

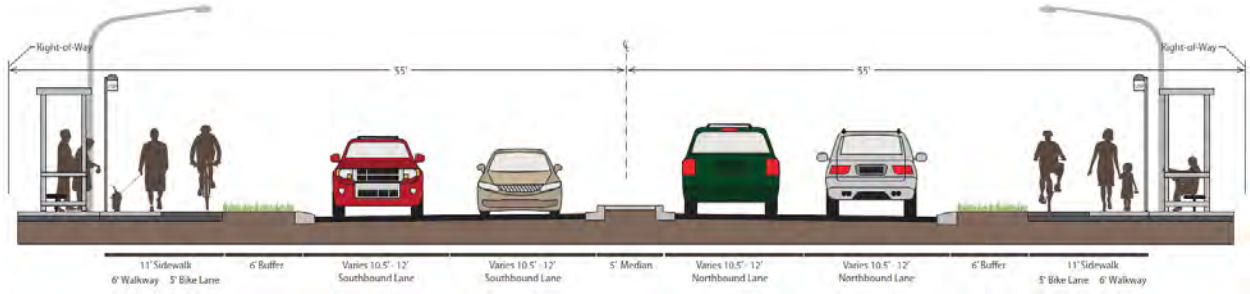


Figure 12. Proposed Typical Section – NE Riddell Road to NE McWilliams Road

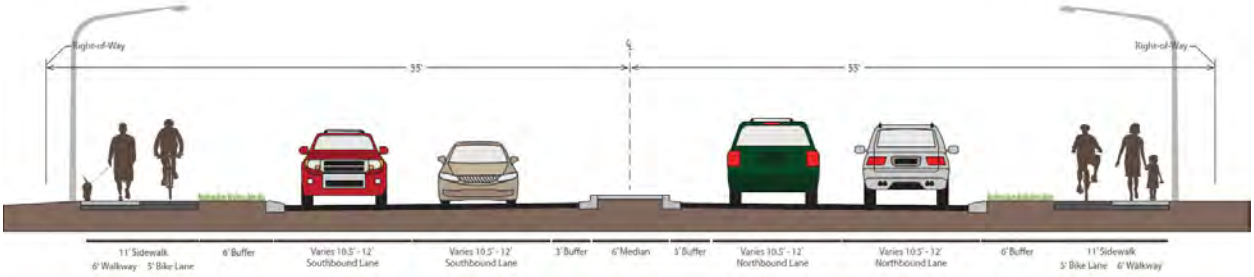


Figure 13. Proposed Typical Section –NE McWilliams Road to NE Fairgrounds Road

1.4.3 Project Phasing

The improvements included in the SPA were divided into 33 project combinations across the five study segments. These projects were then grouped into phases based on how necessary the project was, the estimated cost range, and the relative ease of implementation. There is separate project phasing for projects within City limits and projects within Kitsap County limits.

The horizon year for the SR 303 Corridor Study traffic analysis was 2040. The proposed projects phases were not scheduled for specific years, but it is anticipated that all projects will be constructed over the next 20 years. The proposed project phases for this study are suggestions and may be updated as the projects move towards design stages. Additionally, the order of the project phases may be altered during coordination with other jurisdictions, as conditions change along the SR 303 corridor, or as new funding sources become available.

City Projects

The methodology for how the City projects were combined into phases is discussed in more detail in Section 6.7.3, Phasing. A summary of the proposed City project phasing is shown in Table 2.

The preliminary recommended SPA project phases are also documented in phasing information sheets that provide detailed information on the included improvements, benefits, issues, risks, and estimated cost ranges. In coordination with WSDOT, the City of Bremerton will continue to monitor the project needs and funding options and consider possible refinements to the project phases. The phasing information sheets are included in Appendix A. The page numbers shown in Table 2 correspond to the phasing information sheets in Appendix A-2.

Table 2. Study Preferred Alternative City Project Phasing

Phase	Location	Project Description	Page No.
1A	Segment 1 – 4	Adaptative signal technology at signalized intersections, reconfiguration of Burwell Street intersection.	1
1B	Warren Avenue Bridge	Roadway and sidewalk improvement across the bridge, sidewalk and active transportation improvements south and north of the bridge	3
1C	Off corridor	Bicycle facilities on Almira Drive	5
1D	Segment 1 – 5	Develop a corridor schematic between Burwell Street and NE Riddell Road using updated survey data	6
2A	Segment 3	Mid-block crossing at Dibb Street	7
2B	Segment 1	Mid-block crossing between 6th Street and 11th Street	8
2C	Segment 3	Mid-block crossing at Pearl Street	9
2D	Segment 3	Mid-block crossing between Hollis Street and NE Riddell Road	10
3A	Segment 2	Active transportation facilities between Warren Avenue Bridge and Sheridan Road	12
3B	Segment 3	Median, channelization, and signing improvements between Sheridan Road and Sylvan Way	13
3C	Segment 3	Median, channelization, and signing improvements between Sylvan Way and Hollis Street	14
4A	Segment 1	Median, channelization, and signing improvements between Burwell Street and 6th Street	15
4B	Segment 1	Roundabout at 11th Street	16

Table 2. Study Preferred Alternative City Project Phasing (Continued)

Phase	Location	Project Description	Page No.
5	Off corridor	Bicycle facilities on Callahan Drive and Cherry Avenue/Almira Drive, sidewalks connecting SR 303 to neighborhoods	17
6	Segment 1	Channelization, sidewalk, and transit improvements between 13th Street and Warren Avenue Bridge	19
7	Segment 3	BAT lane and sidewalk improvements between Sheridan Road and Sylvan Way	21
8A	Segment 1	Sidewalk improvements between Burwell Street and 13th Street	22
8B	Segment 3	BAT lane and sidewalk improvements between Sylvan Way and NE Riddell Road	23
9A	Segment 2	Roundabout and active transportation facilities at Callahan Drive, BAT lane between Warren Avenue Bridge and Sheridan Road	24
9B	Segment 3	Roundabout at NE Riddell Road	26
10	Off corridor	Active transportation undercrossing and facilities south of the Warren Avenue Bridge and through Olympic College	27

County Projects

The proposed County project phasing, as recommended by Kitsap County, is shown in Table 3. Detailed information on the included improvements, benefits, issues, risks, and estimated cost ranges is included in Appendix A. The page numbers shown in Table 3 correspond to the phasing information table in Appendix A-3.

Table 3. Study Preferred Alternative County Project Phasing

Phase	Location	Project Description	Page No.
1a	Segment 4	Sidewalk, median, channelization, and signing improvements between NE Riddell Road and NE Furneys Lane, adaptative signal technology at signalized intersections, and reconfiguration of NE Furneys Lane intersection	1
1b	Segment 4	Sidewalk, median, channelization, and signing improvements between NE Furneys Lane and NE Fuson Road, adaptative signal technology at signalized intersections	2
2a	Segment 4	Roundabout at NE McWilliams Road	3
2b	Segment 4	Sidewalk and median improvements between NE Fuson Road and 1,300 feet north of NE Fuson Road	3
2c	Segment 4	Sidewalk improvements between 1,300 feet north of NE Fuson Road and NE McWilliams Road	4
3	Segment 3	Roundabout at NE McWilliams Road *(refer to City Project Phase 9B)*	4
4a	Segment 5	Sidewalk improvements between NE McWilliams Road and NE Bentley Drive	5
4b	Segment 5	Sidewalk improvements between NE Bentley Drive and NE Fairgrounds Road	5
5	Segment 5	Roundabout at NE Fairgrounds Road	6
6	Segment 5	Roundabout at NE Bentley Drive	7

1.4.4 Potential Funding

The SPA consists of several project phases of varying costs that improve the corridor in many different ways. Because the improvements range from safety to mobility and address a range of modes from automotive travel to active transportation, there are several opportunities for potential funding.

Different parts of the SR 303 corridor lie in different jurisdictions. More information on funding for the City projects and County projects is below.

City Projects

WSDOT is responsible for the SR 303 roadway from curb to curb while the City of Bremerton is responsible for the areas east and west of the curb. Kitsap Transit also operates along the SR 303 corridor and many of the intersecting roadways. It is assumed that the jurisdictions along the SR 303 corridor are potential contributors of funding for this project.

The City will work with WSDOT and Kitsap Transit to pursue funding for City projects south of NE Riddell Road. The fact that multiple jurisdictions would work toward providing transportation benefits through a collaborative approach could strengthen opportunities for securing outside funding.

In 2019, a coordinated effort between the Washington State Department of Commerce, Washington State Department of Ecology, Washington State Department of Health, and WSDOT compiled a list of potential funding sources for transportation projects in Washington State. The table is included in Appendix A and highlights a range of funding options from a Local Transportation Act Impact Fee to Federal funding programs. Continued monitoring of local, state, and federal funding opportunities will be required as existing programs expire and new programs are initiated.

The City of Shoreline recently completed a similar corridor improvement project along SR 99 between 145th Street and 205th Street. That project was funded over time and capitalized on multiple funding sources that were available at the time. Between the year 2009 and the completion of the project in 2017, Shoreline was able to secure funding through many of the following sources: WSDOT Transportation Partnership Account, Federal Surface Transportation Program, King County Federal Transit Authority grants, Washington State Regional Mobility grants, Washington State Nickel Funds, Federal SAFETEA-LU, Highway Safety Improvement Program, Federal Transportation Community and System Preservation Program, Region CMAQ/STP, and Federal Transit Authority Omnibus. This project provides a good example of the many different sources of funding that can and will be pursued to fund the various projects along the SR 303 corridor.

County Projects

Within County limits, WSDOT has total development and access control of the right-of-way. Kitsap Transit also operates along the SR 303 corridor and many of the intersecting roadways. WSDOT will work with Kitsap County and Kitsap Transit to pursue funding on projects within the County north of NE Riddell Road.

2. CORRIDOR PLANNING HISTORY

2.1 Previous Studies

The study team collected previous studies to help identify existing and future conditions for the SR 303 corridor. The following studies were previously completed in the study area and were referenced by the study team:

- State Route 303 Bremerton to Silverdale Transportation Corridor Study (WSDOT and FHWA 2002)
- Bremerton Non-Motorized Transportation Plan (City of Bremerton 2007)
- Kitsap County Non-Motorized Facility Plan (Kitsap County 2013, 2018)
- Warren Avenue Bridge White Paper (City of Bremerton 2015)
- Warren Avenue Bridge Workshop (City of Bremerton 2016a)
- City of Bremerton Comprehensive Plan (City of Bremerton 2016b)
- Kitsap County Comprehensive Plan (Kitsap County 2016)
- WSDOT Mobility Assessment for Segment of Corridor 314 (WSDOT 2017)
- WSDOT SR 303 Corridor Sketch (WSDOT 2018)

Additional studies or projects along the SR 303 corridor are being completed now or in the near future:

- SR 303 Warren Avenue Bridge Pedestrian Improvement design
- City of Bremerton Eastside Employment Center EIS
- City of Bremerton Joint Compatibility Transportation Plan (JCTP)
- City of Bremerton Comprehensive Plan 2024
- HSIP III – Kitsap Way and Warren Avenue Traffic Signal and Multimodal Safety Project

These studies helped the team organize data collection, identify needs to be included in the Draft Corridor Need Statement, and develop possible solutions for the SR 303 corridor.

(This page intentionally left blank)

3. PUBLIC AND AGENCY INVOLVEMENT PROCESS

3.1 Stakeholder Advisory Group

The SR 303 Corridor Study was led by the City and WSDOT and advised by a stakeholder advisory group (SAG) of leadership representatives from affected agencies and governments. This group was committed to a strong ongoing partnership and fostering a regional perspective and approach to the development of the SR 303 corridor. The following study partners provided ongoing assistance to the project team and participated in five SAG meetings between July 2019 and June 2020, as outlined in Section 1.1 above. A large portion of the study area is within Kitsap County's jurisdiction and public outreach was conducted in partnership with the County.

Project Management Team

- Dennis Engel – WSDOT
- Katie Ketterer – City of Bremerton
- Matthew Pahs – WSDOT

Stakeholder Advisory Group (SAG)

- Mayor Greg Wheeler – City of Bremerton
- Councilmember Leslie Daugs – City of Bremerton
- Denise Frey – Bremerton Chamber of Commerce
- Richard Warren – WSDOT
- Kathy Murray – WSDOT
- Alison O'Sullivan – Suquamish Tribe
- Lynn Wall – Naval Base Kitsap
- David Forte – Kitsap County
- Ed Coviello – Kitsap Transit
- Ariel Birtley – Olympic College
- Megan Moore – Kitsap Public Health District
- Tom Knuckey – City of Bremerton
- Shane Weber – City of Bremerton
- Allison Satter – City of Bremerton

The presentations from each SAG meeting are included in Appendix A**.**

3.2 Community Engagement

The SR 303 Corridor Study involved community stakeholder engagement through several communications channels. The community involvement effort followed WSDOT's Practical Solutions approach. Prior to the beginning of the study, a community engagement plan was developed to outline how public input through equitable outreach would support the study findings. The community engagement plan included a

preliminary list of SAG members, a review of local demographics, a list of outreach strategies, and key communication milestones. More detailed information on the outcomes of the community engagement for this study is available in the Community Outreach Summary in Appendix C.

Community engagement was conducted through these open houses and events:

- Corridor Outreach: June 11 and June 13, 2019
- Bridging Bremerton: June 22, 2019
- In-Person Open House: August 6, 2019, at East Bremerton Gym
- Online Open House No. 1: August 5 to September 6, 2019
- Online Open House No. 2: April 21 to May 8, 2020
- Virtual Open House: July 16, 2020

Information on the open houses is summarized below and included in Appendix C.

3.2.1 Demographics and Accessibility

Demographic information was collected for zip codes 98310 and 98337. Data related to age, sex, income, race, Hispanic/Latino identity, and poverty were collected from the United States Census Bureau's American FactFinder 2013-2017 American Community Survey 5-Year Estimates (USCB 2018). Data related to language and English proficiency was collected from the 2013-2017 American Community Survey 5-Year Estimates, with the 2017 report being the most recent data set available.

Approximately 83 percent of the study area speaks English only. Three percent of the study area speaks Spanish and 5 percent speak Asian and Pacific Island languages, primarily Tagalog. The City has a Title VI plan that outlines when project materials should be translated. For this project, translation services for all materials and meetings were available upon request.

In an effort to reach as many people as possible who currently use the corridor or who would be impacted by improvements to the corridor, the following strategies were used:

- The project team walked along the corridor to meet with people walking, riding, or using transit.
- The project team notified the public about open house meetings using various methods including direct mail to people within a mile of the corridor, website notifications, and newspaper notifications.
- The In-Person Open House was held at a location central to the corridor that would be easily accessible and meet ADA access standards.
- All online materials were section 508 compliant so all people could understand the materials being presented.
- Language experts were available for translation of materials to Spanish and Tagalog as needed.

Starting in March 2020, the COVID-19 pandemic prevented in-person events from happening. In order to allow the community to continue contributing to this study, the Online Open House No. 2 and the Virtual Open House were added to the schedule of events.

3.2.2 Open Houses

Several open houses were held to educate community members on the status of the study, listen to community interest and recommendations, and gather input about the corridor issues, needs, and opportunities for improvement.

Early in the study process, participants provided a variety of improvement suggestions at the In-Person Open House and Online Open House No. 1. When participants were asked to rank their top requested improvements, the majority of commenters requested more bike lanes and pedestrian accessibility improvements. Below is a summary of key themes received from the public.

Accessibility and Mobility

- Add roundabouts where possible
- Improve intersection signal timing
- Widen the pedestrian path on the Warren Avenue Bridge
- Include shared use paths near the Warren Avenue Bridge and at Olympic College
- Add more bike lanes
- Build pedestrian and bicycle overpasses where possible
- Increase bus service
- Improve bus stops by providing a safer buffer for street furniture
- Improve sidewalks for Americans with Disabilities Act (ADA) accessibility

Safety

- Add more marked crosswalks and mid-block crossings to prevent illegal crossings
- Reduce speeds along the corridor to improve safety at crossings
- Widen shoulders and sidewalks for people walking or riding their bikes
- Increase lighting along the corridor

Aesthetics

- Add more greenery and landscaping near businesses and in the center travel lane
- Limit plantings at business driveways to maintain safe sight distance
- Provide increased separation or barrier between pedestrians and cars
- Attract business to fill vacated buildings

During the In-Person Open House and Online Open House No. 1, participants were asked to share feedback on the needs they consider most important in developing improvements for the SR 303 Corridor. As shown in Figure 14, pedestrian and bicycle connectivity, safety, and reliability were considered the most important needs by the open house participants.

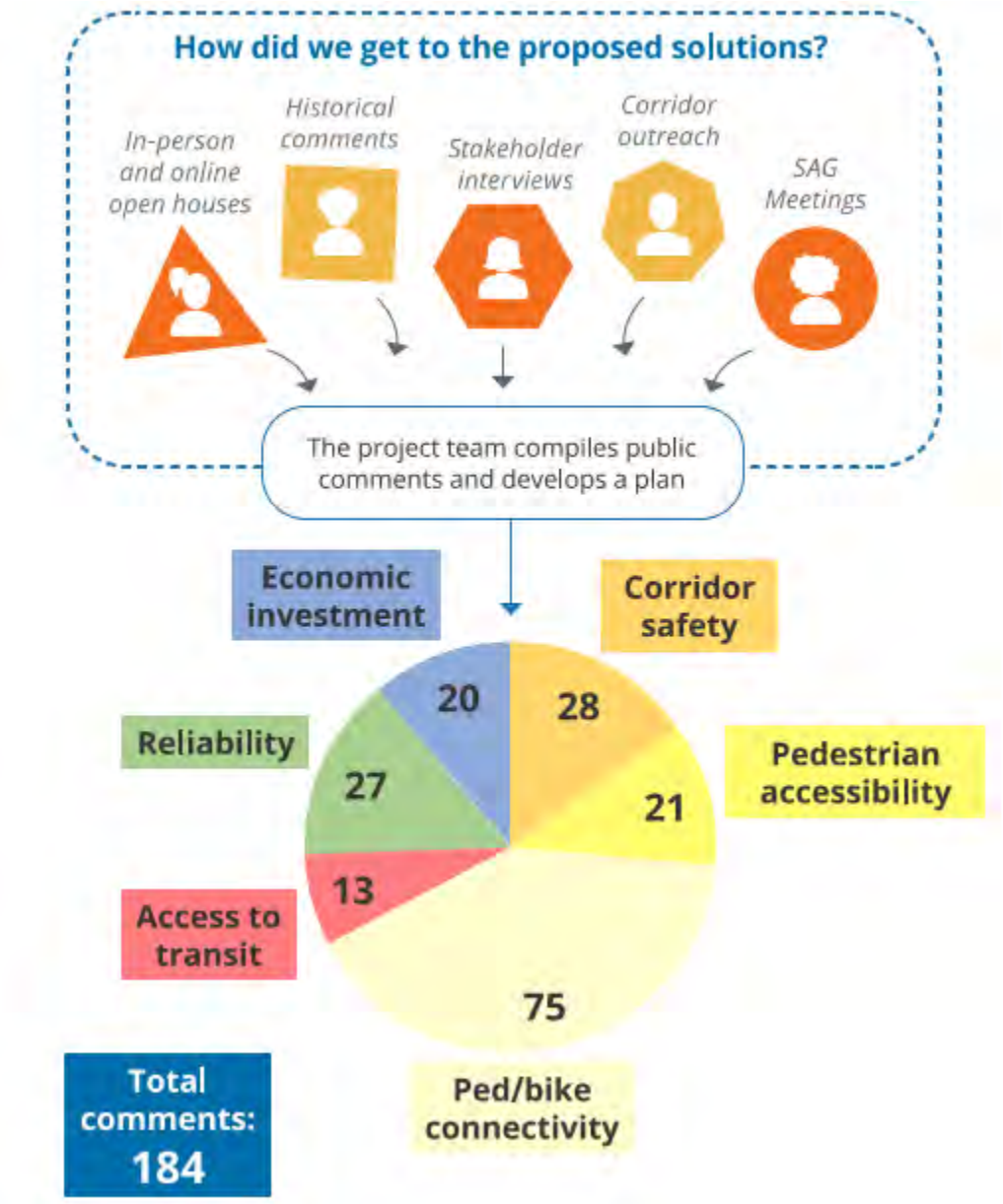


Figure 14. In-Person Open House and Online Open House No. 1 Responses

This feedback was taken into consideration in developing corridor elements that would address these needs. Corridor elements refers to specific localized improvements like a traffic signal, a turn lane improvement, a relocated bus stop, or pedestrian crossing as some examples.

After the corridor elements were developed and screened, the project team worked with the SAG members to develop Build Alternatives for the full corridor. This process is outlined in Section 6, Alternative Development and Screening Process. During the Online Open House No. 2, the community was invited to provide feedback on the Build Alternatives developed by the SAG. Community members were most

interested in alternatives that would improve transit, add facilities to improve biking or walking through the area, widen pathways across Warren Avenue Bridge, provide more frequent safe pedestrian crossings, and widen sidewalks along the corridor.

Participants were asked once again to share feedback on the needs they consider most important across all alternatives. As shown in Figure 15, safety, bicycle and pedestrian connectivity, and corridor reliability were considered the most important by the open house participants, with economic investment and transit accessibility being considered less important. This was consistent with the feedback from the In-Person Open House and Online Open House No. 1. The project team understood that the public did not put as much emphasis on the transit accessibility need because improvements in the other three needs would support a transit friendly corridor.

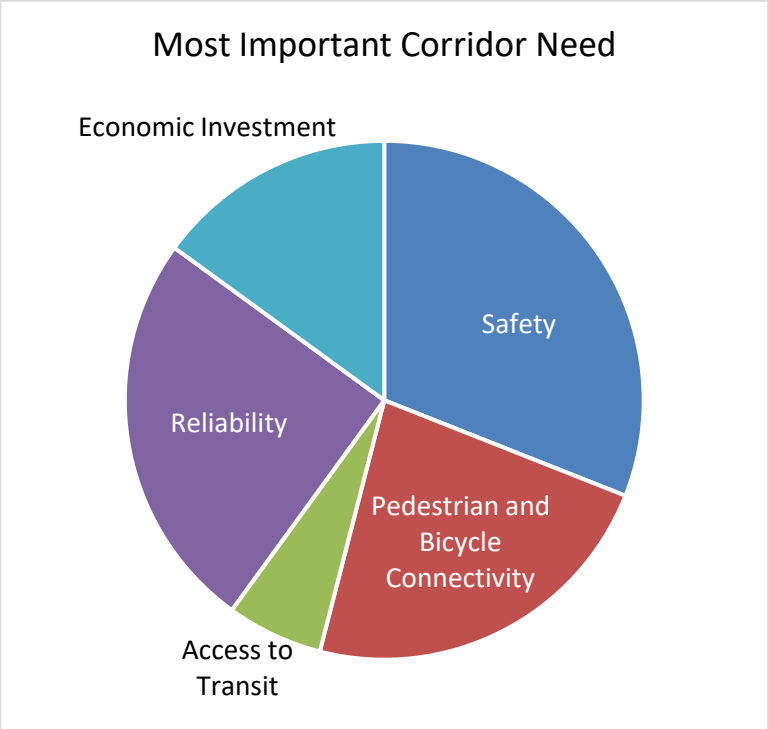


Figure 15. Online Open House No. 2 Responses

Summaries of the individual open houses are included in Appendix C.

Many of the suggestions that were provided during the open houses were ultimately used to shape the study preferred alternative (SPA). For example, community members were interested in improving bicycle and walking facilities near the Warren Avenue Bridge, so the SPA includes widened sidewalks up to and across the bridge, active transportation facilities that connect to Lebo Boulevard north of the bridge, a tunnel undercrossing south of the bridge, and potential bicycle facilities through Olympic College. Community members were also interested in improving safety for all modes along the corridor, so the SPA includes lighting for all active transportation facilities, buffers between the roadway and sidewalks in many locations, and medians between northbound and southbound traffic north of the Warren Avenue Bridge.

(This page intentionally left blank)

4. EXISTING CONDITIONS

4.1 Study Area

SR 303 is part of WSDOT's "urban other principal arterial system" and connects Kitsap County to the City, the Kitsap Naval Shipyard, and the Washington State ferry system that is a continuation of the state highway system. The study area for this project, shown in Figure 3, extends approximately 4.7 miles between Burwell Street and NE Fairgrounds Road.

The key intersections along the SR 303 corridor are listed in Table 4. E Broad Street was previously an unsignalized two-way stop-controlled (TWSC) intersection but was converted to a signalized intersection in December 2019 with the completion of the new Wheaton Way Transit Center. The SR 303 Corridor Study began in May 2019 so E Broad Street was treated as an unsignalized intersection in Existing Conditions and a signalized intersection in Future No Build Conditions.

SR 303 is a state highway but the streets that intersect SR 303 fall within the local agencies. Table 4 lists the jurisdiction in which each study intersection lies. More information on which jurisdictions operate which signals is available in the following section.

Table 4. Study Intersections

No.	Intersection	Existing Control Type	Jurisdiction
1	Burwell Street (SR 304)	Signal	City of Bremerton
13	4th Street	Two-way stop control	City of Bremerton
14	5th Street	Two-way stop control	City of Bremerton
2	6th Street	Signal	City of Bremerton
3	11th Street	Signal	City of Bremerton
4	13th Street	Signal	City of Bremerton
5	16th Street	Signal	City of Bremerton
15	Callahan Drive/SB Ramps	Two-way stop control	City of Bremerton
16	Callahan Drive/NB Ramps	Two-way stop control	City of Bremerton
6	Sheridan Road	Signal	City of Bremerton
7	Sylvan Way	Signal	City of Bremerton
17	E Broad Street	–	City of Bremerton
8	Hollis Street	Signal	City of Bremerton
9	NE Riddell Road	Signal	City of Bremerton/Kitsap County
10	NE Furneys Lane	Signal	Kitsap County
11	NE Fuson Road	Signal	Kitsap County
12	NE McWilliams Road	Signal	Kitsap County
18	NE Bentley Drive	Signal	Kitsap County
19	NE Fairgrounds Road	Signal	Kitsap County

4.2 Data Collection

In order to complete the Existing Conditions analysis, the following information was collected:

- Intersection turning movement counts
- Average daily traffic
- Speed data
- Vehicle classification data
- Signal timing data
- Active transportation data
- Transit data
- Safety data

Data was collected along the entire study area between (and including) the Burwell Street intersection to the south and the NE Fairgrounds Road intersection to the north.

Traffic data is discussed below. Active transportation data, transit data, and safety data are discussed in later sections.

4.2.1 Intersection Turning Movement Counts

Turning movement counts were collected for each of the study intersections shown in Table 4. The City collected turning movement count data at 10 intersections in January 2018. Additional turning movement count data was collected for five additional intersections in May 2019 during the two study time periods: the midweek AM peak period from 7:00 AM to 9:00 AM and the midweek PM peak period from 4:00 PM to 6:00 PM. The turning movement count data was collected in 15-minute increments and included heavy vehicle percentages as well as pedestrian and bicycle volumes.

Turning movement counts for the NE Bentley Drive and NE Fairgrounds Road intersections were collected by WSDOT in August 2018. This turning movement count data did not include heavy vehicle percentages and pedestrian and bicycle volumes.

4.2.2 Average Daily Traffic, Speed and Vehicle Classification Data

WSDOT collected ADT tube counts at several locations along SR 303 in 2017 but these counts included limited vehicle classification data. The City also collected ADT tube counts along several city streets, including most of the study intersections along SR 303, but these counts also did not include vehicle classification data.

To collect vehicle classification data, tube counts were placed at four locations along SR 303:

1. North of Burwell Street
2. North of 6th Street
3. North of the Warren Avenue Bridge
4. North of NE Riddell Road

Tube count data was collected for seven days in May 2019 during the same week that intersection turning movement counts were collected. This allowed for the evaluation of weekday and Friday/weekend recreation travel patterns. The tube data included Federal Highway Administration (FHWA) vehicle classification breakdowns, hourly speed data, and 15-minute volume data for the northbound and southbound directions.

4.2.3 Signal Timing Data

There are 14 signalized intersections in the study area, as shown in Table 3. The City of Bremerton maintains the signal control for the intersections within City limits, including NE Riddell Road. The City also operates the signal for the NE Furneys Lane intersection. WSDOT maintains the signal control for the intersections in

Kitsap County, excluding the NE Furneys Lane intersection. Signal timing dial cards were requested from both the City and WSDOT for the Existing Conditions analysis.

4.3 Existing Roadway Conditions

For this study, the SR 303 corridor was analyzed in five segments. Each segment has unique characteristics and was analyzed separately to ensure that the proposed solutions addressed the needs of every part of the corridor. Jurisdiction of the segments varies and is noted below:

Segment 1. Burwell Street to 16th Street (City of Bremerton)

Segment 2. 16th Street to Sheridan Road (City of Bremerton)

Segment 3. Sheridan Road to NE Riddell Road (City of Bremerton)

Segment 4. NE Riddell Road to NE McWilliams Road (Kitsap County)

Segment 5. NE McWilliams Road to NE Fairgrounds Road (Kitsap County)

The existing roadway conditions for each segment are documented in Sections 4.3.1 through 4.3.5 below.

4.3.1 Segment 1: Burwell Street to 16th Street

Figure 16 is a typical section, which represents the predominant section of the roadway in Segment 1 and does not represent every configuration present on a particular roadway section. Additional information about the section between Burwell Street and 6th Street is included below.

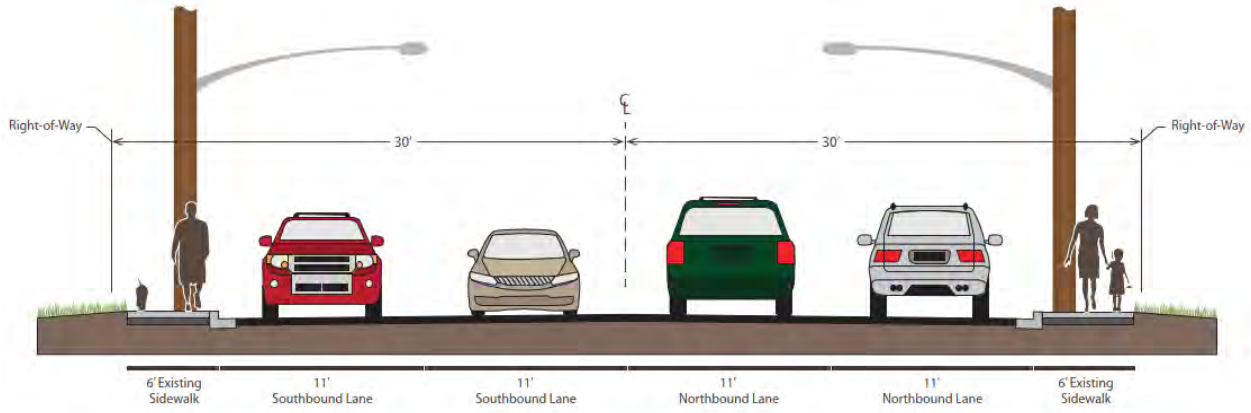


Figure 16. Existing Typical Section – Segment 1

Table 5 documents the existing roadway characteristics for Segment 1. These represent typical conditions along the segment and do not account for each individual intersection and roadway segment. Additional information on specific locations and characteristics is provided below the table.

Table 5. Existing Roadway Characteristics – Segment 1

Characteristic	Width (feet)	Description
Burwell Street to 6th Street		
Speed	–	Posted: 30 miles per hour 85th Percentile[1]: 27 miles per hour
Right-of-Way[2]	60-70	
Lanes	11-13	Two southbound lanes and one to two northbound lanes No left turns permitted at 4th Street and 5th Street
Median	0-8	Raised median
Driveways	–	Residential and business driveways Driveways do not meet WSDOT standards for managed access control
Bicycles	–	No protected or marked bike lanes
Sidewalks	6	Both sides of SR 303 with minimal gaps, obstructions present
Crossings	–	Marked crossings at key intersections, spaced 250 feet apart
Freight	–	Less than 5% heavy vehicles
Transit	–	Bus stops
Land Use	–	Small businesses, parking areas, office space, and churches
6th Street to 16th Street		
Speed	–	Posted: 30 miles per hour 85th Percentile[1]: 33 miles per hour
Right-of-Way[2]	60-90	
Lanes	11	Two travel lanes in each direction No left turns permitted at 13th Street
Median	0-11	No raised median Section of two-way left-turn lane (TWLTL) between 6th Street and Dr MLK Way
Driveways	–	Residential and business driveways Driveways do not meet WSDOT standards for managed access control
Bicycles	–	No protected or marked bike lanes
Sidewalks	6-10	Both sides of SR 303 with minimal gaps, obstructions present
Crossings	–	Marked crossings at signalized intersections, spaced 550 to 1,300 feet apart
Freight	–	Less than 5% heavy vehicles
Transit	–	Bus stops, spaced 2,500 feet apart
Land Use	–	Small businesses, residential, and Olympic College

[1] The 85th percentile speed is the speed that 85 out of 100 vehicles travel at or below

[2] Source: Kitsap County parcel map

Figure 17 is looking from south to north and shows the existing raised median between Burwell Street and 6th Street. This median travels thru the intersections at 4th Street and 5th Street and is intended to prohibit left turns for northbound and southbound traffic and prohibit left turns and thru movements for eastbound and westbound traffic. This project was recommended as part of the 4th-5th Street Bicycle Boulevard project recommended in the Bremerton Non-Motorized Transportation Plan (City of Bremerton 2007). The project was constructed in 2012. It has been observed by City staff that vehicles are still turning left through the pedestrian openings in the medians at both 4th Street and 5th Street.

Figure 17. Existing Roadway Characteristics – 4th Street Median

Figure 18 is looking from south to north and shows the existing two-way left-turn lane (TWLTL) between 6th Street and Dr MLK Way. This provides a center lane exclusively for northbound and southbound vehicles turning left into the driveways north of 6th Street.

Figure 18. Existing Roadway Characteristics – 6th Street TWLTL

Figure 19 is looking from south to north and shows an example of a sidewalk obstruction. This type of obstruction is common in Segment 1, with utility poles, light poles, signposts, signal camera poles, pedestrian push button posts, and vegetation blocking part of the sidewalk width and reducing its effective width to less than 6 feet.

Figure 19. Existing Roadway Characteristics – Sidewalk Obstructions

4.3.2 Segment 2: 16th Street to Sheridan Road

Figure 20 through Figure 22 are typical sections, which represent the predominant section of the roadway in Segment 2 and do not represent every configuration present on a particular roadway section.

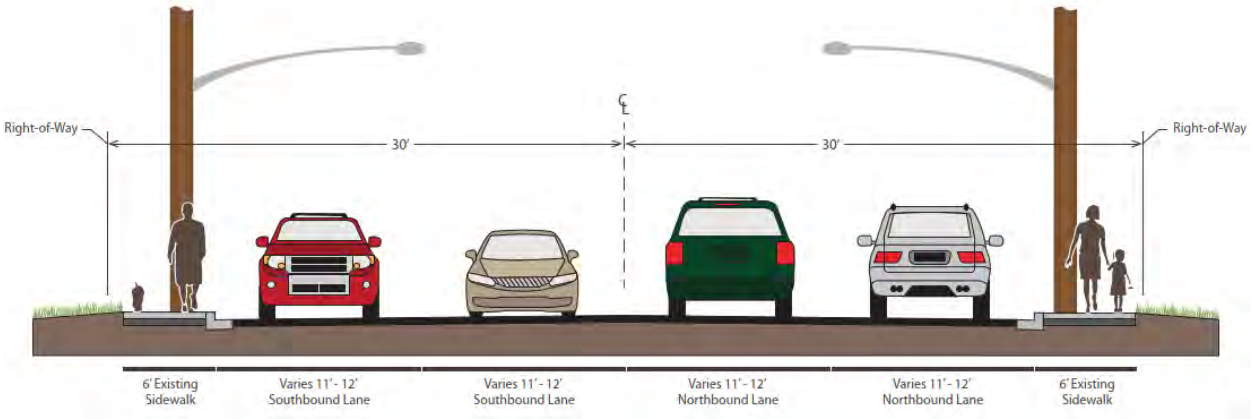


Figure 20. Existing Typical Section – Segment 2 (south of Warren Avenue Bridge)

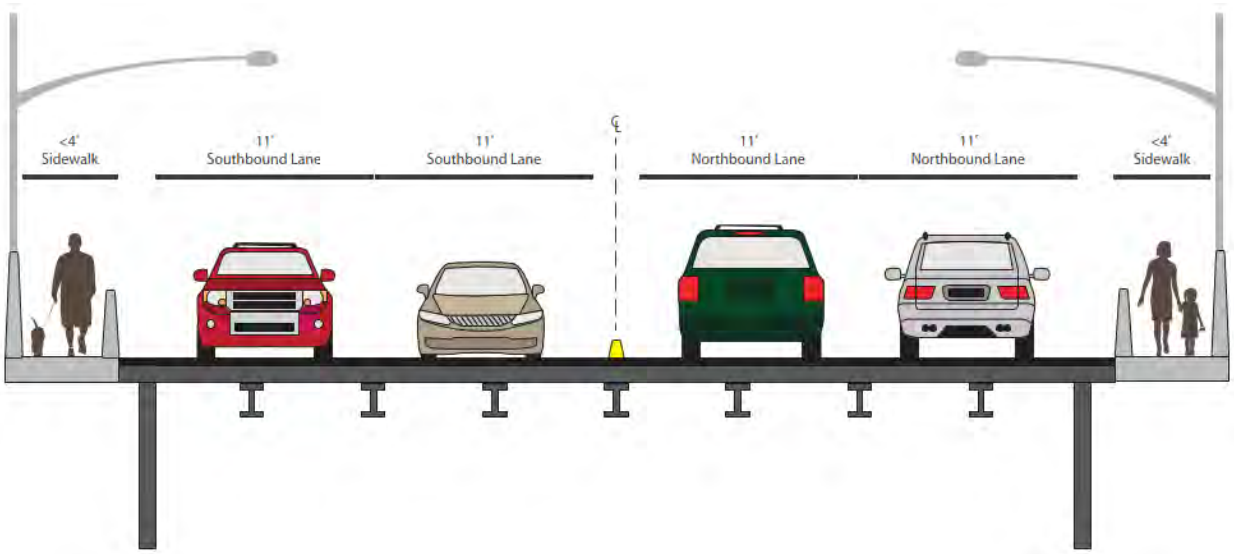


Figure 21. Existing Typical Section – Segment 2 (Warren Avenue Bridge)

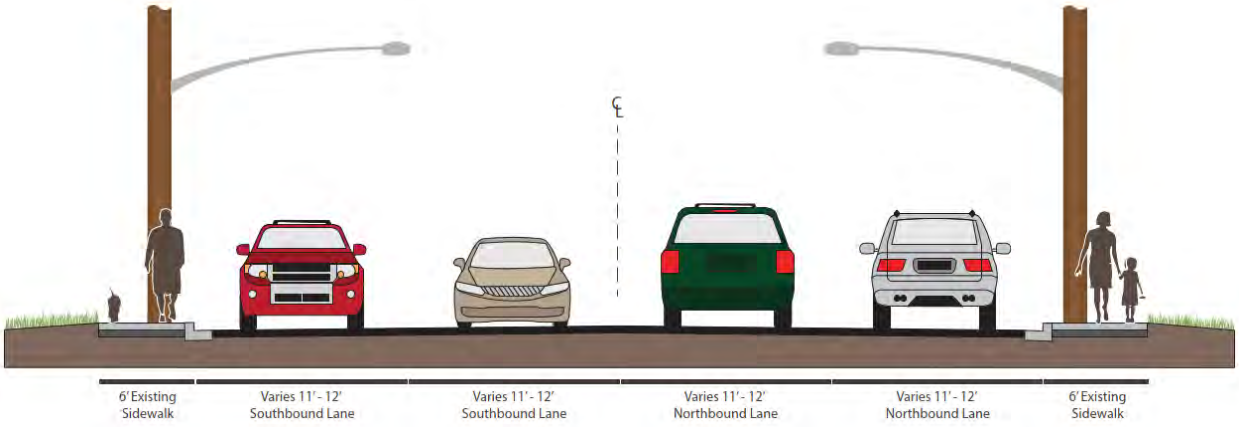


Figure 22. Existing Typical Section – Segment 2 (north of Warren Avenue Bridge)

Table 6 documents the existing roadway characteristics for Segment 2. These represent typical conditions along the segment and do not account for each individual intersection and roadway segment. Additional information on specific locations and characteristics is provided below the table.

Table 6. Existing Roadway Characteristics – Segment 2

Characteristic	Width (feet)	Description
16th Street to Warren Avenue Bridge		
Speed	-	Posted: 30 miles per hour 85th Percentile[1]: 33 miles per hour
Right-of-Way2	65-90	
Lanes	11	Two to three northbound and southbound lanes
Median	0-11	No raised median Section of striped median north of 16th Street
Driveways	-	Residential driveways
Bicycles	-	No protected or marked bike lanes
Sidewalks	6	Both sides of SR 303 with minimal gaps, obstructions present
Crossings	-	Marked crossings at signalized intersections
Freight	-	Less than 5% heavy vehicles
Transit	-	No bus stops
Land Use	-	Olympic College and residential
Warren Avenue Bridge		
Speed	-	Posted: 35 miles per hour 85th Percentile[1]: 48 miles per hour
Right-of-Way[2]	-	
Lanes	11	Two travel lanes in each direction
Median	1	Raised median (c-curb)
Driveways	-	None
Bicycles	-	No protected or marked bike lanes
Sidewalks	< 4	Both sides of SR 303 with minimal gaps, obstructions present
Crossings	-	None
Freight	-	Less than 5% heavy vehicles
Transit	-	No bus stops
Land Use	-	Not applicable

Table 6. Existing Roadway Characteristics – Segment 2 (Continued)

Characteristic	Width (feet)	Description
Warren Avenue Bridge to Sheridan Road		
Speed	-	Posted: 30 miles per hour 85th Percentile[1]: 48 miles per hour
Right-of-Way[2]	130-200	
Lanes	11-12	Two to three northbound and southbound lanes
Median	0	No raised median
Driveways	-	No driveways, but on-ramps and off-ramps in both directions
Bicycles	-	No protected or marked bike lanes
Sidewalks	6-10	Both sides of SR 303 with significant gaps, obstructions present
Crossings	-	No marked crossings
Freight	-	Less than 5% heavy vehicles
Transit		No bus stops
Land Use		Eastside Employment Center (medical center, small businesses, housing, and parks) and residential

1 The 85th percentile speed is the speed that 85 out of 100 vehicles travel at or below

2 Source: Kitsap County parcel map

Figure 23 is looking from south to north at the west side of the Warren Avenue Bridge. About 300 feet south of the bridge, the existing path ends. Pedestrians and bicyclists can either use the stairs shown in the figure to access 18th Street or travel to the curb ramp at the end of the sidewalk and cross the southbound on-ramp from 18th Street to SR 303 to continue traveling along the west side of SR 303.

Figure 23. Existing Roadway Characteristics – Warren Avenue Bridge Sidewalks

Figure 24 is looking from north to south at the east side of the Warren Avenue Bridge. Just north of the bridge, the existing 12-foot-wide path splits into a stairwell going down to Lebo Boulevard and the path across the bridge.

Figure 24. Existing Roadway Characteristics – Warren Avenue Bridge Sidewalks

Figure 25 is looking from south to north and shows the northbound off-ramps at Callahan Drive. This is the only location in the study area where there are ramps to or from SR 303. This area just north of the bridge also has the highest 85th percentile speed along SR 303 of 48 miles per hour (mph), despite the posted speed limit being 30 mph. East of SR 303 is the Eastside Employment Center (EEC) which is being transformed with the relocation of the Harrison Medical Center to Silverdale.

Figure 25. Existing Roadway Characteristics – Callahan Drive Ramps

Figure 26 is looking from south to north and shows the existing roadside conditions on the west side of SR 303 just north of Callahan Drive. Instead of a sidewalk, there is a 6-foot asphalt shoulder with no curb and gutter. Additionally, because of the southbound off-ramp there is a 200-foot gap between this shoulder and the sidewalk just north of the off-ramp with no protected crossing. The safest way for northbound or

southbound pedestrians and bicyclists to travel through this interchange area is to travel on the outside sidewalk or shoulder of the off-ramp down to Callahan Drive, cross Callahan Drive at an unmarked crossing, then travel back up to SR 303 on the outside sidewalk or shoulder of the on-ramp.

Figure 26. Existing Roadway Characteristics – Callahan Drive Sidewalk Gaps

4.3.3 Segment 3: Sheridan Road to NE Riddell Road

Figure 27 is a typical section, which represents the predominant section of the roadway in Segment 3 and does not represent every configuration present on a particular roadway section.

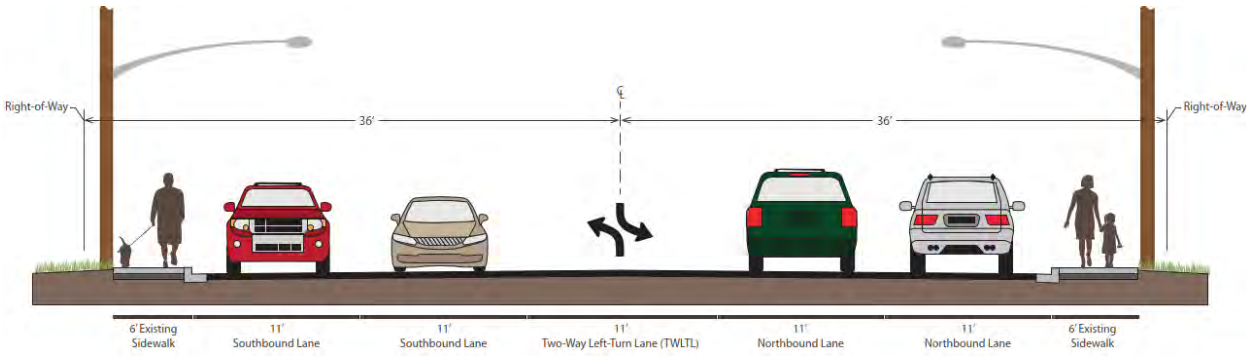


Figure 27. Existing Typical Section – Segment 3

Table 7 documents the existing roadway characteristics for Segment 3. These represent typical conditions along the segment and do not account for each individual intersection and roadway segment. Additional information on specific locations and characteristics is provided below the table.

Table 7. Existing Roadway Characteristics – Segment 3

Characteristic	Width (feet)	Description
Sheridan Road to NE Riddell Road		
Speed	–	Posted: 30 mph 85th Percentile[1]: 41 mph
Right-of-Way[2]	65-95	
Lanes	11	Two travel lanes in each direction
Median	11	No raised median, only two-way left-turn lane (TWLTL)
Driveways	–	Residential and business driveways Do not meet WSDOT standards for managed access control
Bicycles	–	No protected or marked bike lanes
Sidewalks	6	Both sides of SR 303 with minimal gaps, obstructions present
Crossings	-	Marked crossings at signalized intersections, spaced at 1,500 to 2,600 feet apart
Freight	-	Less than 5% heavy vehicles
Transit	-	Bus stops, spaced 1,000 to 1,900 feet apart East Bremerton Transit Center (relocated to new Wheaton Way Transit Center in December 2019)
Land Use	-	Large and small businesses, parking areas, office space, residential and education

1 The 85th percentile speed is the speed that 85 out of 100 vehicles travel at or below

2 Source: Kitsap County parcel map

Figure 28 is looking from south to north and shows an example of a sidewalk obstruction. Similar to Segment 1, this type of obstruction is common in Segment 3, with utility poles, light poles, signposts, signal camera poles, pedestrian push button posts, and vegetation blocking part of the sidewalk width. Additionally, there are numerous driveways in Segment 3 that are often spaced closely together, as shown.

Figure 28. Existing Roadway Characteristics – Sidewalk Obstructions

4.3.4 Segment 4: NE Riddell Road to NE McWilliams Road

Figure 29 and Figure 30 are typical sections, which represent the predominant section of the roadway in Segment 4 and do not represent every configuration present on a particular roadway section.

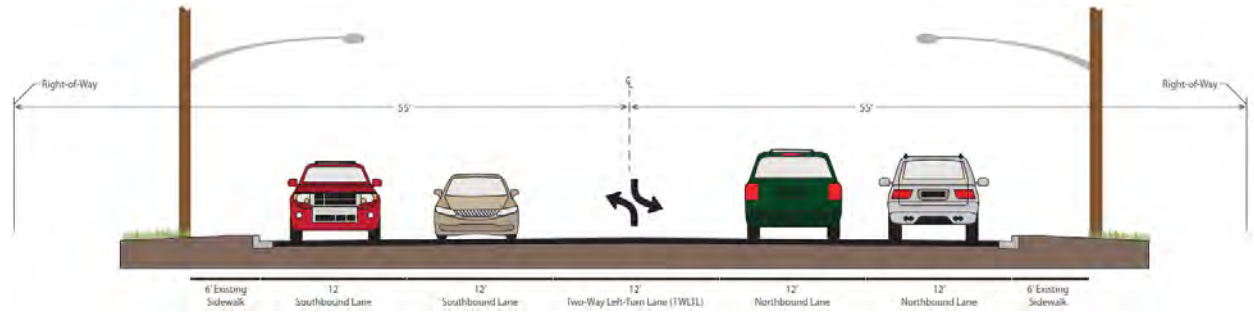


Figure 29. Existing Typical Section – Segment 4 (NE Riddell Road to NE Furneys Lane)

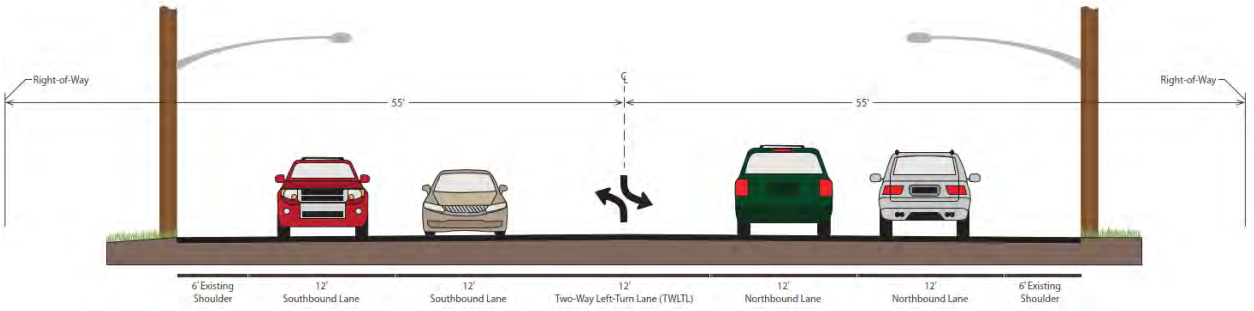


Figure 30. Existing Typical Section – Segment 4 (NE Furneys Lane to NE McWilliams Road)

Table 8 documents the existing roadway characteristics for Segment 4. These represent typical conditions along the segment and do not account for each individual intersection and roadway segment. Additional information on specific locations and characteristics is provided below the table.

Table 8. Existing Roadway Characteristics – Segment 4

Characteristic	Width (feet)	Description
NE Riddell Road to NE Furneys Lane		
Speed	–	Posted: 30 miles per hour 85th Percentile[1]: 41 mph
Right-of-Way2	110	
Lanes	12	Two travel lanes in each direction
Median	12	No raised median, only two-way left-turn lane (TWLTL)
Driveways	–	Residential and business driveways Do not meet WSDOT standards for managed access control
Bicycles	–	No protected or marked bike lanes
Sidewalks	6	Both sides of SR 303 with significant gaps, obstructions present
Crossings	–	Marked crossings at signalized intersections, spaced at 1,100 feet apart
Freight	–	Less than 5% heavy vehicles
Transit	–	Bus stops, spaced 1,500 to 1,900 feet apart
Land Use	–	Large and small businesses, parking areas, office space, and residential
NE Furneys Lane to NE McWilliams Road		
Speed	–	Posted: 40 mph 85th Percentile[1]: 41 miles per hour
Right-of-Way[2]	110-125	
Lanes	12	Two travel lanes in each direction
Median	12	No raised median, only TWLTL
Driveways	–	Residential and business driveways Do not meet WSDOT standards for managed access control
Bicycles	–	No protected or marked bike lanes
Sidewalks	6	Both sides of SR 303 with significant gaps, obstructions present Gravel or asphalt shoulder without curb and gutter
Crossings	–	Marked crossings at signalized intersections, spaced at 1,350 to 2,650 feet apart
Freight	–	Less than 5% heavy vehicles
Transit	–	Bus stops, spaced 500 to 2,400 feet apart McWilliams Park & Ride (P&R)
Land Use	–	Large and small businesses, parking areas, office space, residential, and parks (Illahee Preserve)

1 The 85th percentile speed is the speed that 85 out of 100 vehicles travel at or below

2 Source: Kitsap County parcel map

Figure 31 is looking from south to north and shows an example of the roadside conditions in Segment 4, especially north of NE Furneys Lane. Instead of a sidewalk, there is an asphalt shoulder with no curb and gutter.

Figure 31. Existing Roadway Characteristics – Sidewalk Gaps

4.3.5 Segment 5: NE McWilliams Road to NE Fairgrounds Road

Figure 32 is a typical section, which represents the predominant section of the roadway in Segment 5 and does not represent every configuration present on a particular roadway section.

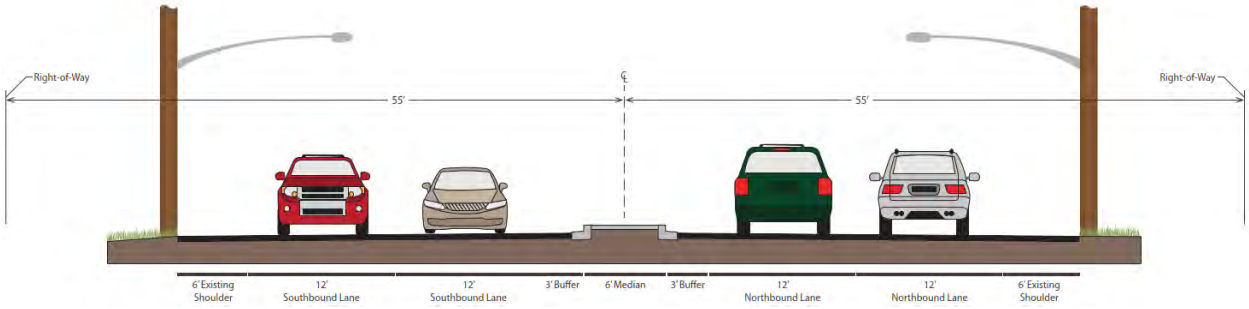


Figure 32. Existing Typical Section – Segment 5

Table 9 documents the existing roadway characteristics for Segment 5. These represent typical conditions along the segment and do not account for each individual intersection and roadway segment. Additional information on specific locations and characteristics is provided below the table.

Table 9. Existing Roadway Characteristics – Segment 5

Characteristic	Width (feet)	Description
NE McWillams Road to NE Fairgrounds Road		
Speed	–	Posted: 40 mph 85th Percentile[1]: 41 mph
Right-of-Way[2]	110-125	
Lanes	12	Two travel lanes in each direction
Median	12	Raised 6-foot median
Driveways	–	Residential and business driveways Do not meet WSDOT standards for managed access control
Bicycles	–	No protected or marked bike lanes
Sidewalks	6	Both sides of SR 303 with significant gaps, obstructions present Gravel or asphalt shoulder without curb and gutter
Crossings	–	Marked crossings at signalized intersections, spaced at 1,950 to 2,200 feet apart
Freight	–	Less than 5% heavy vehicles
Transit	–	Bus stops, spaced 1,800 feet apart
Land Use	–	Large and small businesses, parking areas, and residential

1 The 85th percentile speed is the speed that 85 out of 100 vehicles travel at or below

2 Source: Kitsap County parcel map

Figure 33 is looking from south to north and shows an example of the raised median in Segment 5. This median is present for the entire length of Segment 5, except at intersections, where c-curb separates the northbound and southbound travel lanes.

Figure 33. Existing Roadway Characteristics – Median

4.4 Existing Traffic Operations

4.4.1 Traffic Volumes

As discussed above, AM and PM peak hour traffic volumes were collected for each of the study intersections. The E Broad Street intersection was unsignalized in early 2019 and was not included in the Existing Conditions analysis. Existing traffic volumes are included in Appendix D.

In general, overall volumes are larger during the PM peak hour than during the AM peak hour. During the PM peak hour, volumes are larger in the northbound direction than in the southbound direction. A large portion of traffic travels to and from 11th Street, which provides access to west Bremerton and SR 3. During the PM peak hour, 50 percent of southbound traffic turns right onto westbound 11th Street and 75 percent of eastbound traffic turns left onto northbound SR 303.

4.4.2 Operations Analysis

The operations analysis for the study intersections used the software programs Synchro (version 10) for signalized and unsignalized intersections and Sidra (version 8) for roundabout-controlled intersections. A common method of measuring traffic operations is level of service (LOS), defined in terms of average intersection delay on a scale ranging from A to F, depending on the delay conditions at the intersection. LOS A represents the best conditions with minimal delay and LOS F represents the worst conditions with severe congestion.

Two factors determine delay: (1) the capacity of the intersection as defined by the number of lanes, lane widths, pedestrian volumes, and other features; and (2) signal timing. Capacity, delay, and LOS are calculated for each traffic movement or group of traffic movements at an intersection. The weighted average delay across all traffic movements determines the overall LOS for a signalized intersection. The LOS at unsignalized intersections that are stop-controlled on one or two approaches are also defined in terms of delay, but only for the worst stop-controlled approach, which is typically the minor street. Table 10 summarizes the criteria used to define LOS.

Table 10. Level of Service Criteria

LOS	Average Control Delay (seconds per vehicle)		Traffic Flow Characteristics
	Signalized Intersections	Unsignalized Intersection	
A	< 10	< 10	Virtually free flow; completely unimpeded.
B	> 10 and < 20	> 10 and < 15	Stable flow with slight delays; less freedom to maneuver.
C	> 20 and < 35	> 15 and < 25	Stable flow with delays; less freedom to maneuver.
D	> 35 and < 55	> 25 and < 35	High density but stable flow.
E	> 55 and < 80	> 35 and < 50	Operating conditions at or near capacity; unstable flow.
F	> 80	> 50	Forced flow; breakdown conditions.

Source: Transportation Research Board Highway Capacity Manual, 6th Edition

The City has a level of service standard of LOS E or better (City of Bremerton 2016b). The LOS results for the Existing Conditions AM and PM peak hour are shown in Table 11. The NE Bentley Drive and NE Fairgrounds Road intersections were only evaluated for the PM peak hour. Synchro reports are included in Appendix E.

Table 11. Existing Traffic Operations Results

Intersection No.	Intersection	Control Type[1]	Existing 2019			
			AM Peak		PM Peak Hour	
			LOS	Delay (s)	LOS	Delay (s)
1	Burwell Street (SR 304)	Signal	D	36	D	44
13	4th Street	TWSC	B	13	C	16
14	5th Street	TWSC	B	13	C	18
2	6th Street	Signal	C	31	D	52
3	11th Street	Signal	C	33	F	82
4	13th Street	Signal	B	12	D	51
5	16th Street	Signal	B	17	B	12
15	Callahan Drive/SB Ramps	TWSC	A	8	A	8
16	Callahan Drive/NB Ramps	TWSC	A	8	A	9
6	Sheridan Road	Signal	C	31	D	42
7	Sylvan Way	Signal	B	18	C	34
17	E Broad Street	–	–	–	–	–
8	Hollis Street	Signal	A	3	B	10
9	NE Riddell Road	Signal	B	14	C	33
10	NE Furneys Lane	Signal	B	16	C	25
11	NE Fuson Road	Signal	B	14	B	19
12	NE McWilliams Road	Signal	C	27	D	47
18	NE Bentley Drive	Signal	–	–	C	27
19	NE Fairgrounds Road	Signal	–	–	C	35

[1] TWSC = two-way stop-controlled

NOTE: Yellow shading indicates LOS D and red shading indicates LOS F

As shown in the table, the 11th Street intersection operates at LOS F during the PM peak hour. This level of service is a result of much higher traffic demand for the intersection than can be serviced with the existing number of lanes and current intersection control.

The LOS results for the Existing Conditions AM and PM peak hour between Burwell Street and NE McWilliams Road are also shown in Figure 34 and Figure 35. In addition to LOS, these figures also show the queue length for each intersection approach and the movement (left, right, or through) that has the largest queue length. All queue lengths are 95th percentile queue lengths from the Synchro analysis and are reported in feet. Queue lengths that are highlighted in red exceed the storage length available for that approach. Some queue lengths are designated with an “m” or a “#” which were included in the Synchro outputs for queue length. An “m” indicates that volume for the 95th percentile queue is metered by an upstream signal. A “#” indicates that the volume for the 95th percentile cycle exceeds capacity and that the actual queue length may be longer than the reported queue length. Synchro reports are included in Appendix E.

Another method of measuring traffic operations is travel time. Travel time was calculated by adding the intersection delay and the segment delay–or the time it takes to travel between intersections–for one direction along the corridor. The intersection delay was calculated using Synchro analysis for a specific movement. The segment delay was calculated from the average travel speed and the distance between intersection.

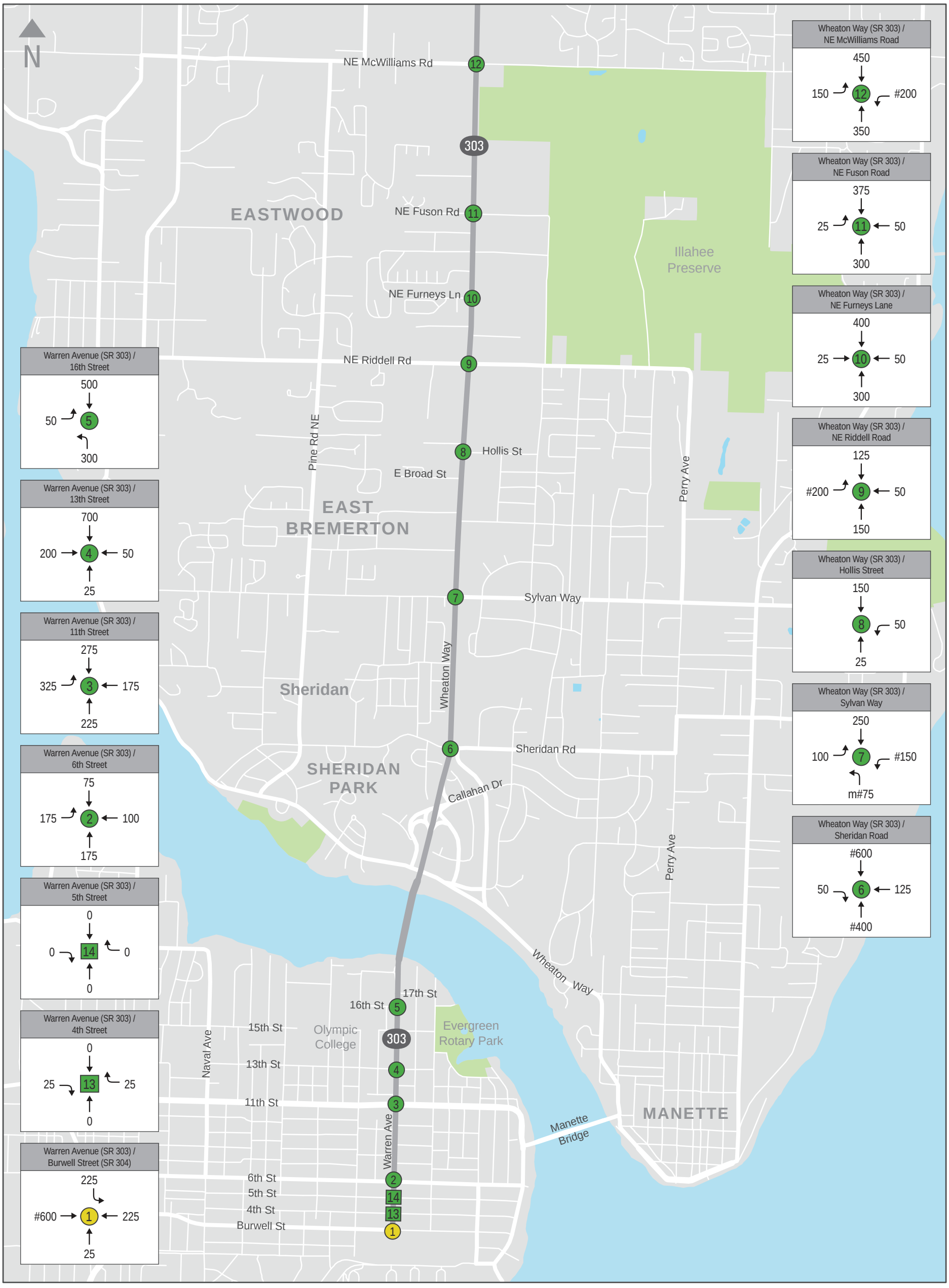
The northbound and southbound travel time results for the Existing PM peak hour are shown in Table 12. These calculated travel times were compared to travel time data provided by the City between Burwell Street and NE Riddell Road. During the PM peak hour in the northbound direction, travel times range from 7 minutes to 15 minutes. This variation in travel time could be attributed to changes in volume over the course of the hour, signal timing, or non-recurrent congestion issues. As shown in Table 12, the northbound travel time during the PM peak hour is 12.2 minutes. This is similar to the observed travel times and confirms that the methodology for calculating travel time for Existing Conditions and – as will be discussed in later sections – for Future No Build Conditions and Future Build Alternatives is reasonable.

Synchro reports are included in Appendix E.

Table 12. Existing Travel Time

		Existing 2019	
		PM Peak Hour	
	Segment	Northbound Travel Time (minutes)	Southbound Travel Time (minutes)
1	Burwell Street to 16th Street	6.3	5.3
2	16th Street to Sheridan Road	2.2	1.5
3	Sheridan Road to NE Riddell Road	3.7	2.8
4	NE Riddell Road to NE McWilliams Road	3.0	2.9
5	NE McWilliams Road to NE Fairgrounds Road	1.9	1.8
	TOTAL:	**17.1**	**14.3**

(This page intentionally left blank)



0 750 1,500 3,000 Feet

SR 303 Corridor Study
Figure 34. Existing 2019 AM Peak Hour Operations

95th %-tile volume exceeds capacity, queue may be longer

m Volume for 95th %-tile queue is metered by upstream signal

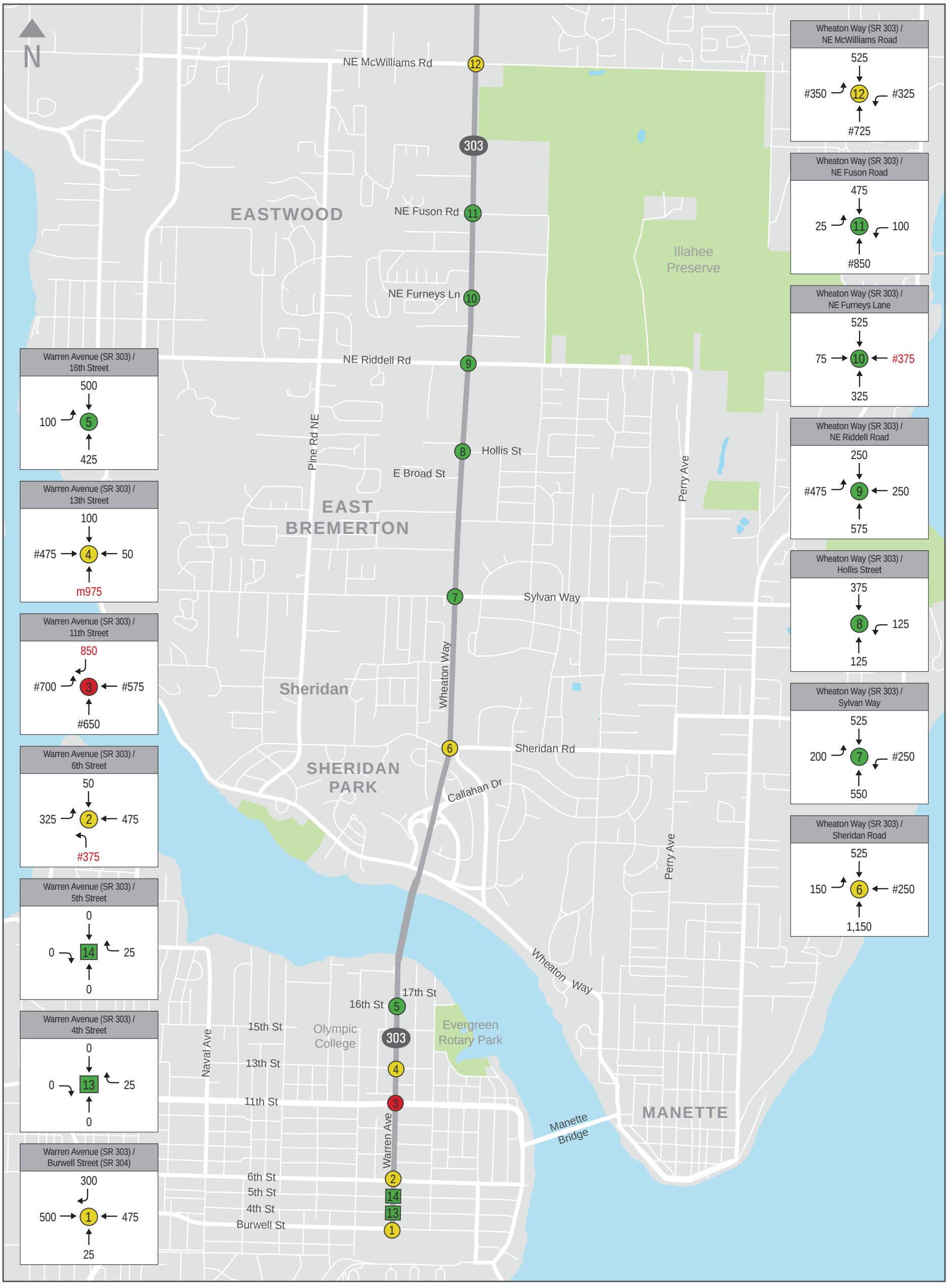
☐ TWSC (Two-Way Stop-Controlled)
Queues are reported in vehicle; assumed vehicle was 25 feet

◯ Signalized Intersection

Level of Service

- LOS A-C
- LOS D
- LOS E
- LOS F

(This page intentionally left blank)



0 750 1,500 3,000 Feet

SR 303 Corridor Study

Figure 35. Existing 2019 PM Peak Hour Operations

95th %-tile volume exceeds capacity, queue may be longer

m Volume for 95th %-tile queue is metered by upstream signal

☐ TWSC (Two-Way Stop-Controlled)
Queues are reported in vehicle; assumed vehicle was 25 feet

◯ Signalized Intersection

Level of Service

- LOS A-C
- LOS D
- LOS E
- LOS F

(This page intentionally left blank)

4.5 Existing Multi-Modal

4.5.1 Active Transportation Facilities

Active transportation is defined as using an active means of travel such as walking, biking, or skateboarding to get from one place to another. In the past, these types of travel modes have been referred to as "non-motorized." This term was used throughout the SR 303 Corridor Study process, including in the Draft Corridor Need Statement and in the Second Level Screening process. These types of travel modes are now referred to as "active transportation" by several agencies, including WSDOT, and that term is used in this corridor study report.

The existing bicycle facilities, sidewalks, and crossings are documented in the Existing Roadway Conditions section. As discussed above, the existing sidewalks are mostly 6 feet wide, which meets the City standard for sidewalk width.

Additional information on existing active transportation users and facilities is included in below in Table 13. Data for the number of bicyclists and pedestrians during the Existing AM and PM peak hours was collected at the same time as the intersection turning movement counts. The turning movement counts for the NE Bentley Drive and NE Fairgrounds Road intersections did not include pedestrian and bicycle volumes. It should be noted that low active transportation use does not equate to low demand when active transportation networks are incomplete or are high stress. In other words, many more people might want to use active transportation modes like walking, biking, boarding, or other rolling methods to reach their destinations, but because adequate facilities are not available, they choose to drive or ride transit instead.

Data for the existing sidewalk gaps and obstructions were documented using geographic information system (GIS) provided by the City, field visits, and Google maps. Detailed information on the existing active transportation users and facilities is included in Appendix F.

Table 13. Existing Active Transportation Users and Facilities

Characteristic		Description
Segment 1: Burwell Street to 16th Street		
Bicyclists	<5 bicyclists	Average crossings at intersections (AM and PM)
Pedestrians	45 pedestrians 105 pedestrians	Average crossings at intersections (AM and PM) Crossings at 16th Street intersection (AM)
Sidewalk Gaps	200 feet	Length of gaps, on east side of SR 303
Sidewalk Obstructions	70	Number of obstructions, on both sides of SR 303
Segment 2: 16th Street to Sheridan Road		
Bicyclists	<5 bicyclists	Average crossings at intersections (AM and PM)
Pedestrians	10 pedestrians	Average crossings at intersections (AM and PM)
Sidewalk Gaps	450 feet	Length of gaps, on both sides of SR 303
Sidewalk Obstructions	15	Number of obstructions, on both sides of SR 303

Table 13. Existing Active Transportation Users and Facilities (Continued)

Characteristic		Description
Segment 3: Sheridan Road to NE Riddell Road		
Bicyclists	<5 bicyclists	Average crossings at intersections (AM and PM)
Pedestrians	10 pedestrians 30 pedestrians	Average crossings at intersections (AM) Average crossings at intersections (PM)
Sidewalk Gaps	0 feet	No sidewalk gaps
Sidewalk Obstructions	25	Number of obstructions, on both sides of SR 303
Segment 4: NE Riddell Road to NE McWilliams Road		
Bicyclists	<5 bicyclists	Average crossings at intersections (AM and PM)
Pedestrians	<5 pedestrians 25 pedestrians	Average crossings at intersections (AM) Average crossings at intersections (PM)
Sidewalk Gaps	4,600 feet	Length of gaps, on both sides of SR 303
Sidewalk Obstructions	<5	Number of obstructions, on east side of SR 303
Segment 5: NE McWilliams Road to NE Fairgrounds Road		
Bicyclists	–	–
Pedestrians	–	–
Sidewalk Gaps	4,700 feet	Length of gaps, on both sides of SR 303
Sidewalk Obstructions	<5	Number of obstructions, on west side of SR 303

4.5.2 Transit

Public transit in Bremerton consists of fixed-route bus and ferry service provided by Kitsap Transit and Washington State Ferries. Kitsap Transit operates several bus routes along SR 303 that serve the Bremerton-Silverdale-Poulsbo area. Kitsap Transit opened the new Wheaton Way Transit Center (TC) in December 2019 to allow for future growth of public transit operations along the corridor for the next 30 to 40 years. The agency also operates a park & ride (P&R) lot at the intersection of SR 303 and NE McWilliams Road.

SR 303 connects commuters to the Bremerton Transportation Center located in Downtown Bremerton and the Bremerton Ferry Terminal indirectly through SR 304. The Bremerton Transportation Center provides connections to key local and regional destinations through 12 Kitsap Transit bus routes and two Mason Transit bus routes. The Bremerton Ferry Terminal is a major transportation hub for Kitsap County, with the Bremerton to Seattle ferry carrying almost 2.9 million riders in 2018. The ferry terminal also provides passenger-only connections to Seattle, Port Orchard, and Annapolis through the Kitsap Transit fast ferry and local ferry routes.

Kitsap Transit operates 12 bus routes in the study area, four of which operate primarily along SR 303. There are transit stops along SR 303 at Burwell Street (SR 304), 6th Street, 15th Street, Sheridan Road, Dibb Street, Pearl Street, NE Riddell Road, NE Furneys Lane, NE Fuson Road, NE McWilliams Road, and NE Bentley Drive. More information on these routes, including route numbers and descriptions, peak period headway – or the amount of time between arrivals – and AM and PM peak hour ridership is included in Table 14.

Table 14. Existing Transit Service

Route No.	Route Name	Route Description	Peak Headway (mins)	AM Peak Hour Ridership	PM Peak Hour Ridership
Kitsap Transit Buses					
20	Navy Yard City	via Burwell Street connecting downtown and West Bremerton Transit Center (TC)	30–60	45	30
22	Gateway Express	via 6th Street connecting downtown and First United Methodist Park & Ride (P&R)	60–75	15	25
24	Olympic College	via Olympic College and Kitsap Way connecting downtown and West Bremerton TC	30–60	25	25
26	Bay Vista	via 6th Street and Kitsap Way connecting downtown and West Bremerton TC	30–60	40	5
202	Central Kitsap Fast Ferry Express	via 6th Street and SR 3 connecting downtown and Silverdale TC	75	15	15
212	Bremerton/ Silverdale West	via SR 303, 11th Street, and SR 3 connecting downtown and Silverdale TC	30	40	40
215	McWilliams Commuter	via SR 303 connecting downtown and McWilliams P&R	60–90	35	45
217	Bremerton/ Silverdale East	via SR 303 connecting downtown and Silverdale TC	30	45	45
219	Crossroads Commuter	via SR 303 connecting Naval Shipyard and Crossroads P&R	30	20	-
223	Kariotis	via SR 303 connecting Wheaton Way TC and Silverdale TC	60	5	5
225	Sheridan Park	via Lebo Boulevard and Pine Road connecting downtown and Wheaton Way TC	60	30	15
301	North Kitsap Fast Ferry Express	via SR 303 connecting downtown and Poulsbo	75–90	15	15

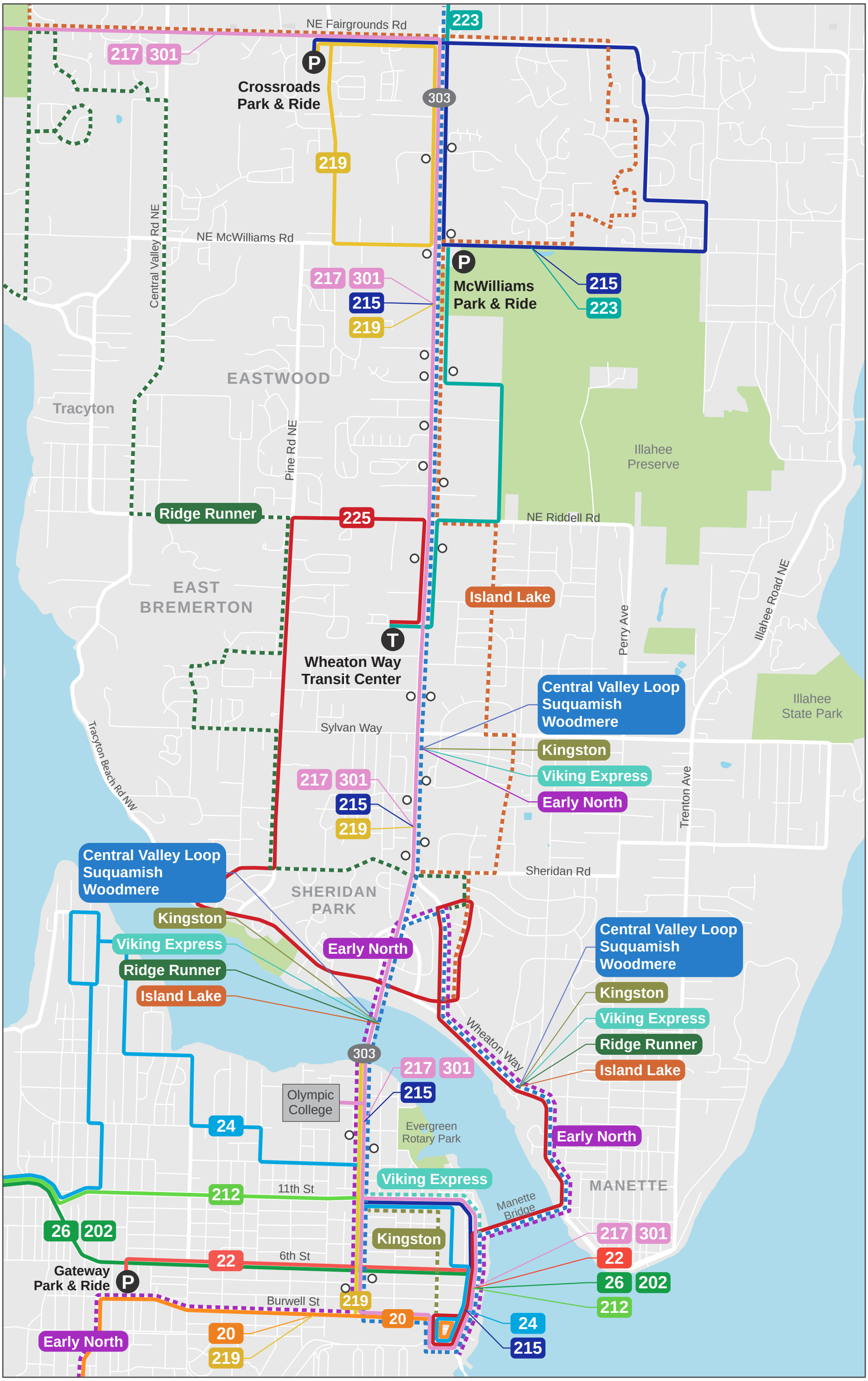
Sources: Kitsap Transit, 2019; Kitsap Transit ORCA and Non-Fare Ridership data, October 2019

Kitsap Transit also operates a worker/driver bus program for employees traveling to and from Naval Base Kitsap. Buses serve both the Puget Sound Naval Shipyard and SubBase Bangor and are open to the general public outside of the military bases. The buses operate like a large carpool, with the driver boarding a bus near their home and picking up coworkers on the way to work. For each worker/driver route, there is one trip to work during the morning commute and one trip from work during the evening commute. There are eight routes that operate along SR 303:

- Central Valley Loop
- Ridge Runner
- Woodmere
- Early North
- Island Lake
- Kingston
- Suquamish
- Viking Express

The Kitsap Transit bus routes and worker/driver bus routes are shown in Figure 36 below.

(This page intentionally left blank)



SR 303 Corridor Study

Figure 36. Existing Transit Service

(This page intentionally left blank)

4.5.3 Freight

The SR 303 corridor is designated as a T3 freight corridor through the WSDOT Freight and Goods Transportation System. A T3 designation indicates that truck traffic on a corridor carries between 300,000 and 4 million tons of freight per year. Some corridors that intersect with SR 303 are also designated as T3 freight corridors, including Burwell Street (SR 304), 6th Street, 11th Street, Sheridan Road, Sylvan Way, NE Riddell Road, NE McWilliams Road, and NE Fairgrounds Road.

SR 303 is also an important element of the freight network on the Kitsap Peninsula. The corridor serves as the City's designated north-south truck route and connects with SR 3 and SR 304, which are identified as WSDOT Highways of Statewide Significance. SR 303 also serves the Naval Base Kitsap, which brings cargo to freight facilities located on the Puget Sound Naval Shipyard.

Tube counts were collected at four locations along SR 303 for seven days in May 2019. This tube count data included FHWA vehicle classification breakdowns, with Class 6 through Class 13 designating larger freight trucks with three or more axles. Information on larger freight trucks in the study area collected from the tube counts is summarized in Table 15.

Table 15. Existing Freight Data

Location	Average Annual Daily Truck Traffic (Trucks/day)	Truck Percentage of Total Traffic
North of Burwell Street (SR 304)	570	0.6%
North of 6th Street	940	0.8%
North of Warren Avenue Bridge	2,900	1.0%
North of NE Riddell Road	4,870	2.0%

4.6 Existing Safety

Under 23 United States Code §148 and 23 United States Code §409, safety data, reports, surveys, schedules, list compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

A safety analysis of the study intersections and roadway segments along the SR 303 corridor was performed to assess current safety performance, summarize recent crash history, and report on any major contributing factors to fatal and serious injury crashes. WSDOT crash data was collected for the most recent 5-year period (January 1, 2014, through December 31, 2018) on the SR 303 corridor between Burwell Street (SR 304) and NE McWilliams Road. The segment between NE McWilliams Road and NE Fairgrounds Road was not evaluated. Study intersection crashes are crashes that occurred within the intersections shown in Table 4 and segment crashes are crashes that occurred between the study intersections. During the 5-year period 1,203 crashes were reported for the overall corridor, with 528 at the study intersections and 675 on the roadway segments between intersections.

The 2014-2018 reported crash data for study area intersections and segments are shown in Figure 37 (pages 4-33 through 4-37). Additional information on the intersection and segment crashes, including contributing factors to the fatal and serious injury crashes, is presented below. Detailed information is available in the Safety Analysis Summary Memo in Appendix G.

Under 23 United States Code §148 and 23 United States Code §409, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

Warren Avenue (SR 303)/ Burwell Street (SR 304) 0.55 Collisions/MEV

Warren Avenue (SR 303)/ 4th Street 0.51 Collisions/MEV

Warren Avenue (SR 303)/ 5th Street 0.23 Collisions/MEV

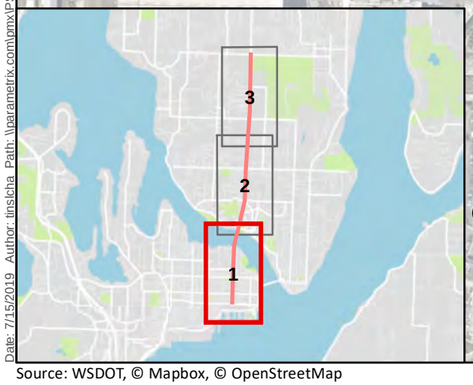
Warren Avenue (SR 303)/ 6th Street 0.69 Collisions/MEV

Warren Avenue (SR 303)/ 11th Street 0.48 Collisions/MEV

Warren Avenue (SR 303)/ 13th Street 0.5 Collisions/MEV

Warren Avenue (SR 303)/ 16th Street (Olympic College) 0.28 Collisions/MEV

PENNSYLVANIA AVE
HIGH AVE
SIDNEY AVE
ANOKA AVE
MAHA
GREGORY WAY
DECATUR AVE
STATE AVE
VENETA AVE
7TH ST
8TH ST
9TH ST
10TH ST
17TH ST
OHIO AVE
LINCOLN AVE
13TH ST
LENT AVE
REID AVE
CHESTER AVE
FARRAGUT AVE
4TH ST
11TH ST
BROADWAY AVE
16TH ST
18TH ST
5TH ST
6TH ST
15TH ST
ELIZABETH AVE
303
PARK AVE
MCKENZIE AVE
12TH ST
SHELDON BLVD
14TH ST
PARK DR
LEBO BLVD
CAMPBELL WAY
CLARE AVE
JUNIPER ST
COGEAN AVE
PACIFIC AVE
PLEASANT AVE
11TH STREET PL
HIGHLAND AVE
WHEATON WAY
CHERRY PL
CHERRY AVE
HICKORY ST
304
WASHINGTON AVE



Source: WSDOT, © Mapbox, © OpenStreetMap

0 250 500 1,000 Feet

1 inch = 500 feet

- Crash Location on Corridor (1205)
- Crash Involving Bus (13)
- Crash Involving Pedestrian (24)
- Crash Involving Bicycle (14)
- Serious Injury Crash (13)
- Fatal Crash (2)
- Intersection (Collisions/MEV)

SR 303 Corridor Study
Figure 37A. Crash Summary

(This page intentionally left blank)

Under 23 United States Code §148 and 23 United States Code §409, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

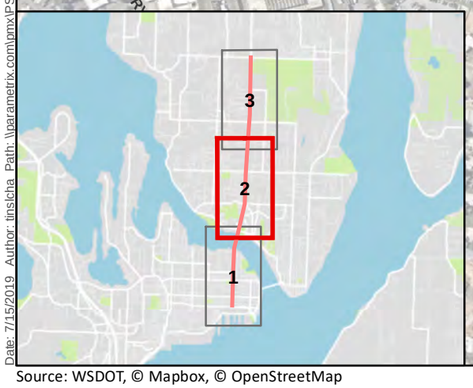
SR 303 SB Ramp/
Callahan Drive
0.39 Collisions/MEV

SR 303 NB Ramp/
Callahan Drive
0 Collisions/MEV

Wheaton Way (SR 303)/
NE Sheridan Road
0.78 Collisions/MEV

Wheaton Way (SR
303)/ NE Sylvan Way
0.73 Collisions/MEV

Wheaton Way (SR 303)/
NE Hollis Street
0.31 Collisions/MEV



Source: WSDOT, © Mapbox, © OpenStreetMap

0 250 500 1,000 Feet

1 inch = 500 feet

- Crash Location on Corridor (1205)
- Crash Involving Bus (13)
- Crash Involving Pedestrian (24)
- Crash Involving Bicycle (14)
- Serious Injury Crash (13)
- Fatal Crash (2)
- Intersection (Collisions/MEV)

SR 303 Corridor Study
Figure 37B. Crash Summary

(This page intentionally left blank)

Under 23 United States Code §148 and 23 United States Code §409, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

Wheaton Way (SR 303)/ NE Hollis Street 0.31 Collisions/MEV

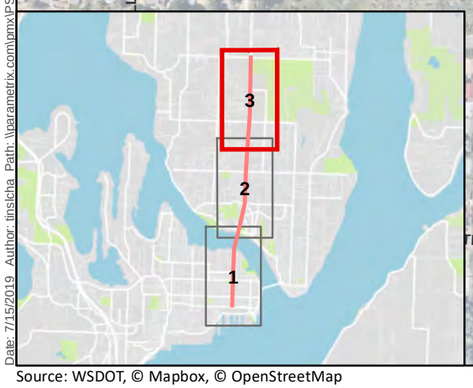
Wheaton Way (SR 303)/ NE Riddell Road 0.85 Collisions/MEV

Wheaton Way (SR 303)/ NE Furneys Lane 0.46 Collisions/MEV

Wheaton Way (SR 303)/ NE Fuson Road 0.43 Collisions/MEV

Wheaton Way (SR 303)/ NE McWilliams Road 0.64 Collisions/MEV

RIDGEMONT DR NE
NE RIMROCK DR
GATEWAY LN NE
SYCAMORE LN NE
YODER LN
NE MEJIA LN
OLD MILITARY RD NE
SPICE LN NE
NE BEAUMONT LN
HANLEY LN
GRACELAND AVE NE
GALAHAD CIR
LOCKSEY CIR
GAWAINE LN
LANCELOT PL
NE CAMELOT DR
GIBSON LN NE
HYLEN AVE NE
NE MARIAH LN
NE FURNEYS LN
ROSEWAY LN
NE FRANKLIN AVE
NE VENA AVE
NE DAWN RD
NE JASMINE LN
E RIDDELL
E BROAD ST
NE MILLS RD
NE RIDDELL RD
NE FUSON RD
NE MCWILLIAMS RD
303
MAPLE AVE
BRADLEY ST
HOLLIS ST
ALMIRA DR SE
ALMIRA CT
VUE CT
AVON CT NE
NE LEXINGTON DR
GENTILE LN NE
CLOVER BLOSSOM LN NE



Source: WSDOT, © Mapbox, © OpenStreetMap

0 250 500 1,000 Feet

1 inch = 500 feet

- Crash Location on Corridor (1205)
- Crash Involving Bus (13)
- Crash Involving Pedestrian (24)
- Crash Involving Bicycle (14)
- Serious Injury Crash (13)
- Fatal Crash (2)
- Intersection (Collisions/MEV)

SR 303 Corridor Study
Figure 37C. Crash Summary

Date: 7/15/2019 Author: inslcha Path: \\parametrix.com\ampx\PSO\Projects\Clients\1896-CityOfBremerton\554-1896-156 SR 303 Corridor Study\99Svcs\GIS\MapDocs\SR303_CrashSummary.mxd

(This page intentionally left blank)

4.6.1 Study Intersection Crashes

The number of crashes at the study intersections were highest north of the Warren Avenue Bridge, with the most crashes occurring at the Sheridan Road and NE Riddell Road intersections.

Rear-end crashes were the most common type of crash (51 percent) at all study intersections. Angle (17 percent) and sideswipe (12 percent) crashes were the next most common crash types, together accounting for about a third of all intersection crashes. The contributing factors noted for rear-end crashes at the study intersections included inattention or distraction (55 percent), following too closely (19 percent), and exceeding reasonably safe speeds (8 percent).

Figure 38 shows the crash types and the number of crashes for each type from 2014 to 2018.

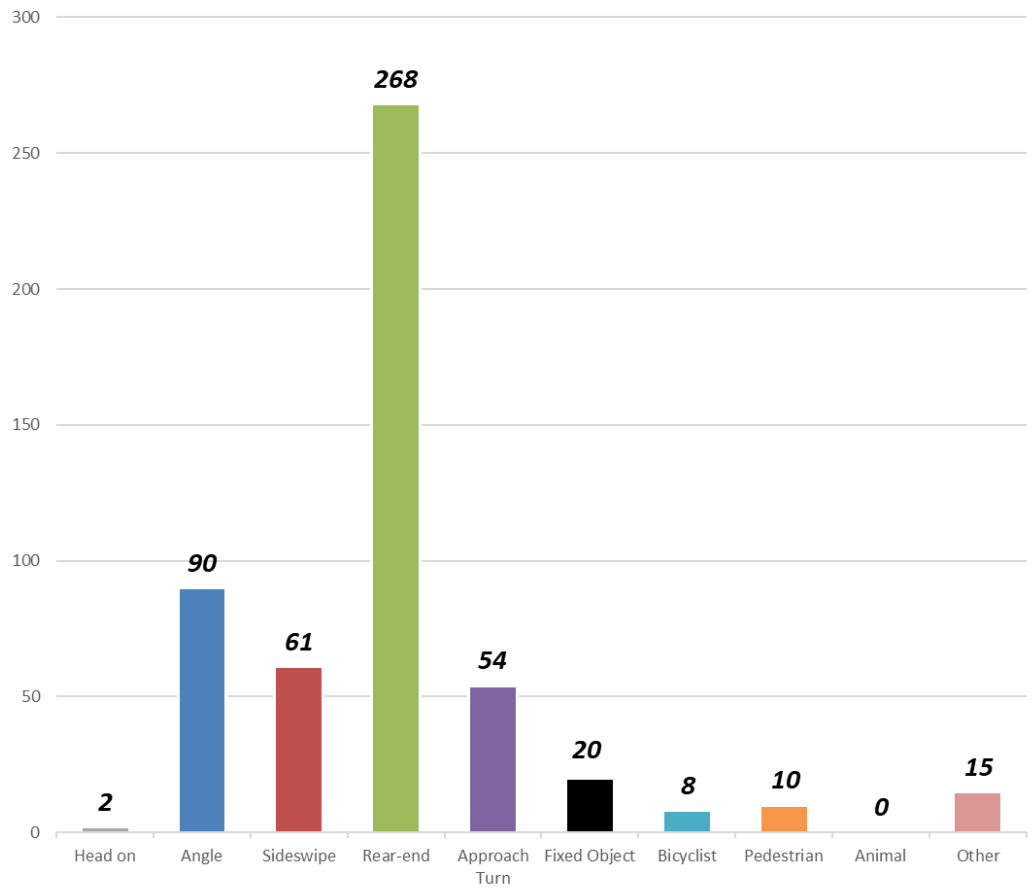


Figure 38. Crashes by Type – Study Intersections (2014-2018)

During the 5-year study period, four crashes at the study intersections resulted in serious injuries, with 11 total injuries for those four crashes. There were no fatalities at the study intersections.

The serious injury crash at the 6th Street intersection was a pedestrian crash that occurred when the lighting conditions were dark with no streetlights and the roadway surface was icy. The two serious injury crashes at the Sheridan Road intersection were approach turn crashes. Inattention was cited as the contributing factor for one of these crashes and while no contributing factor was cited for the other, the roadway was wet. The serious injury crash at the Hollis Street intersection was a rear-end crash with inattention as a contributing factor.

Figure 39 shows the crash severity and the number of crashes for each level of severity from 2014 to 2018.

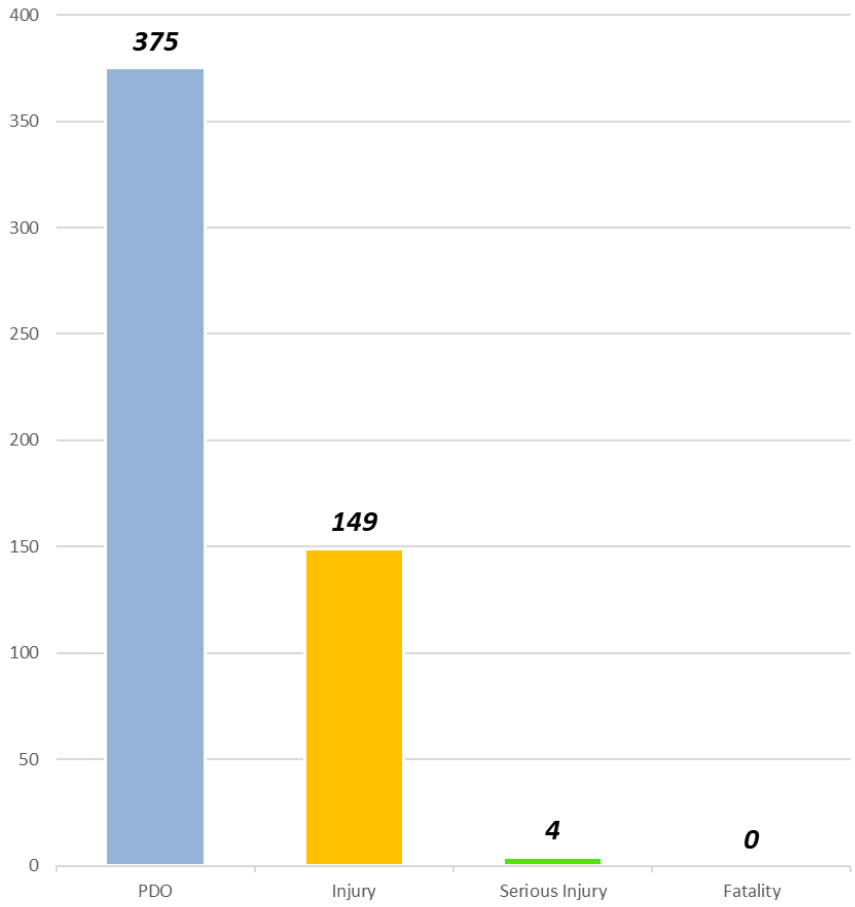


Figure 39. Crashes by Severity – Study Intersections (2014-2018)

The type and severity of crashes on SR 303 are consistent with urban congested traffic, with rear-end and property-damage-only (PDO) or non-injury crashes accounting for the majority. As noted in Section 1.5.3 of the FHWA Freeway Management and Operations Handbook, though the relationship between congestion and safety is not well-defined, it is generally accepted that crash potential tends to increase as congestion increases, but the severity of those crashes is lower.

4.6.2 Segment Crashes

The number of crashes along the segments between the study intersections were highest north of the Warren Avenue Bridge, with about two thirds of segment crashes occurring between Sheridan Road and NE McWilliams Road.

Rear-end crashes were the most common type of crash (55 percent) for all four segments. Angle (15 percent) and sideswipe (14 percent) crashes were the next most common crash types, together accounting for about a third of all segment crashes. The contributing factors noted for rear-end crashes along the segments included inattention or distraction (59 percent), following too closely (25 percent), and exceeding reasonably safe speeds (8 percent). Of the 675 crashes that occurred along the four segments, less than 15 percent occurred at a driveway along the corridor.

Figure 40 shows the crash types and the number of crashes for each type from 2014 to 2018.

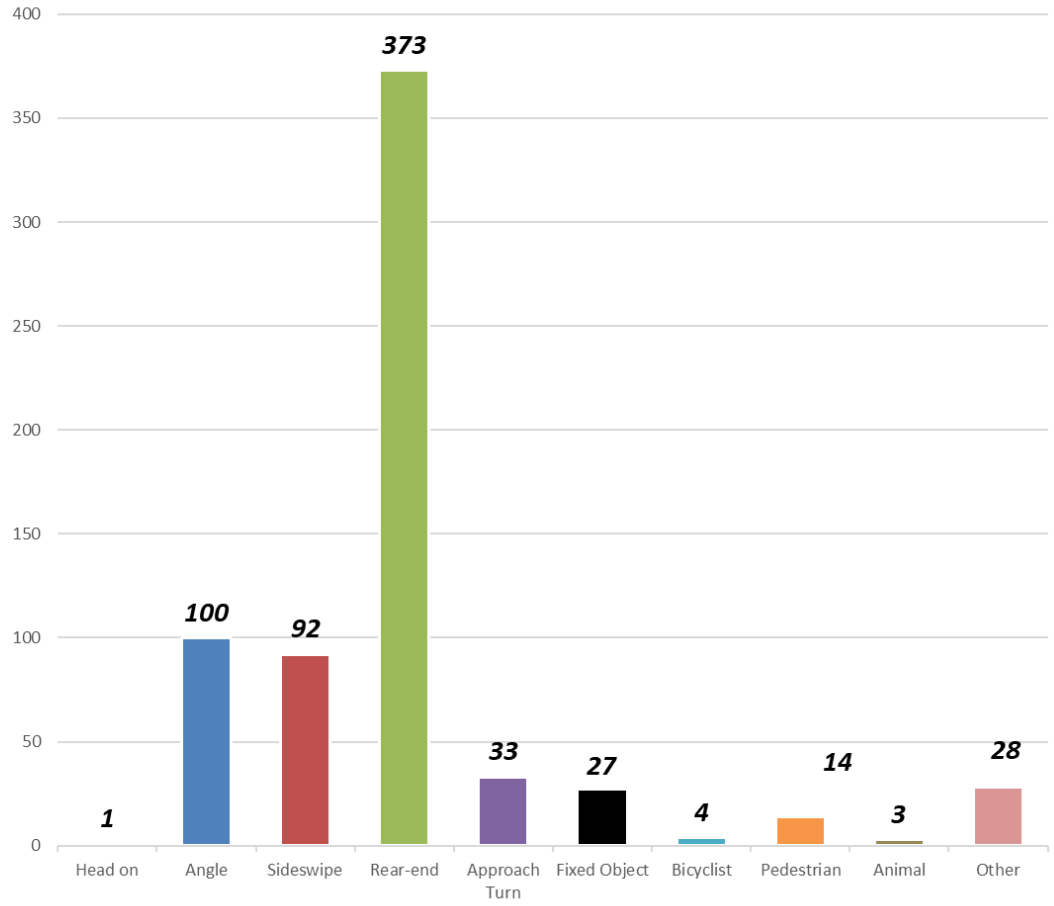


Figure 40. Crashes by Type – Segments (2014-2018)

During the 5-year study period, nine crashes along the segments between study intersections resulted in serious injuries, with 15 total injuries from those nine crashes. Six of those crashes occurred on or north of the Warren Avenue Bridge. There were two fatalities along the segment between Sheridan Road and NE McWilliams Road.

Of the nine serious injury crashes along the four segments, two of the crashes were rear-end crashes and three of the crashes involved a pedestrian or bicyclist. Contributing factors were only identified for six of the serious injury crashes and included inattention (50 percent), exceeding reasonably safe speeds (38 percent), and alcohol (12 percent).

The two crashes that resulted in a fatality occurred just north of the Sylvan Way intersection and just north of the NE Riddell Road intersection. Both were classified as pedestrian crashes and involved a vehicle traveling northbound along SR 303. No contributing factors were identified for either fatal crash, but the crash just north of the NE Riddell Road intersection occurred when the lighting conditions were dark with no streetlights.

Figure 41 shows the crash severity and the number of crashes for each level of severity from 2014 to 2018.

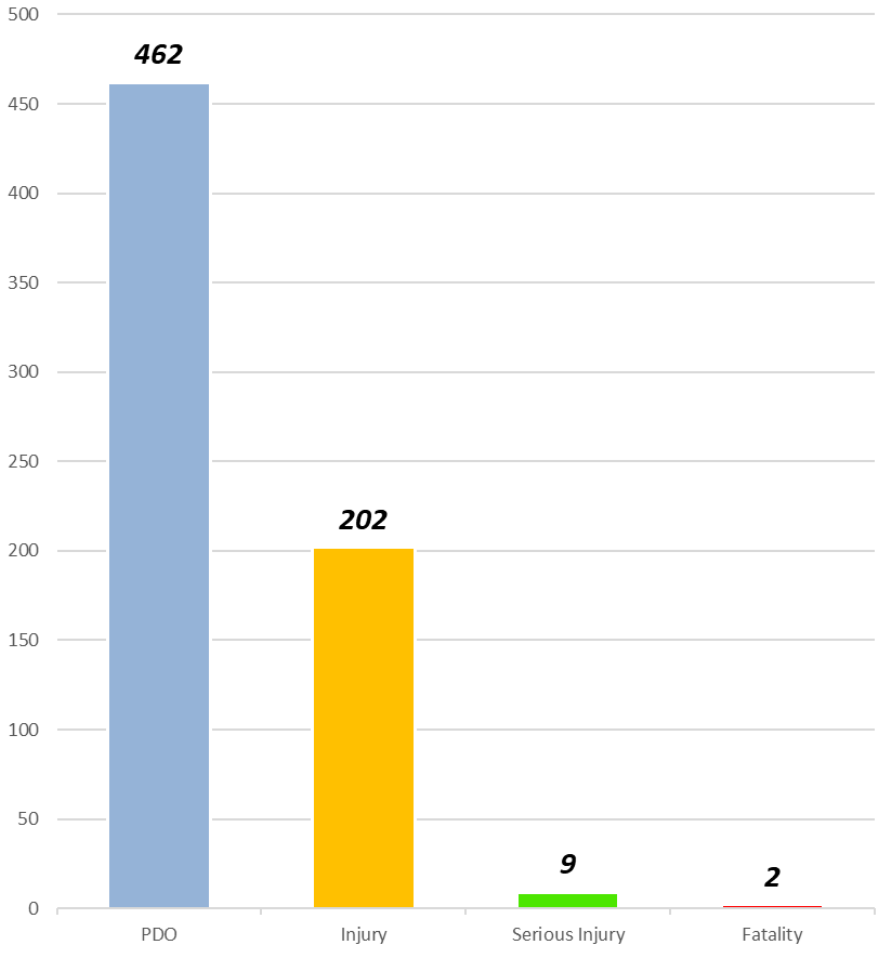


Figure 41. Crashes by Severity – Segments (2014-2018)

4.7 Existing Economics

The study team conducted an economic assessment that documented current economic conditions, historic growth trends, and economic drivers along the SR 303 corridor and surrounding areas. The assessment included a review of SR 303 corridor users, origins and destinations data used to determine the travel shed of interest, and analysis of economic and real estate market indicators. Data comes from a comprehensive study (Community Attributes 2019) that collected from several sources, including the Puget Sound Regional Council (PSRC), Washington State Office of Financial Management (OFM), Kitsap Economic Development Alliance (KEDA), Kitsap County Assessor's office, and CoStar. The segment between NE McWilliams Road and NE Fairgrounds Road was not included in this assessment.

The Baseline Economic Assessment is included in Appendix H.

4.7.1 Industry and Employment

Total employment in the study area increased from 24,200 jobs in 2006 to 26,100 jobs in 2018, as shown in Figure 42. Following a period of decline during the Great Recession, the study area added 2,800 jobs between 2013 and 2018. The highest growth in employment occurred in 2015 and was mainly due to an increase in government sector jobs. The employment change per year from 2006 to 2018 for the SR 303 corridor compared to other areas is as follows (Community Attributes 2019):

- 0.6 percent - SR 303 Corridor
- 1.0 percent - City of Bremerton
- 0.5 percent - Kitsap County
- 1.4 percent - Central Puget Sound Region

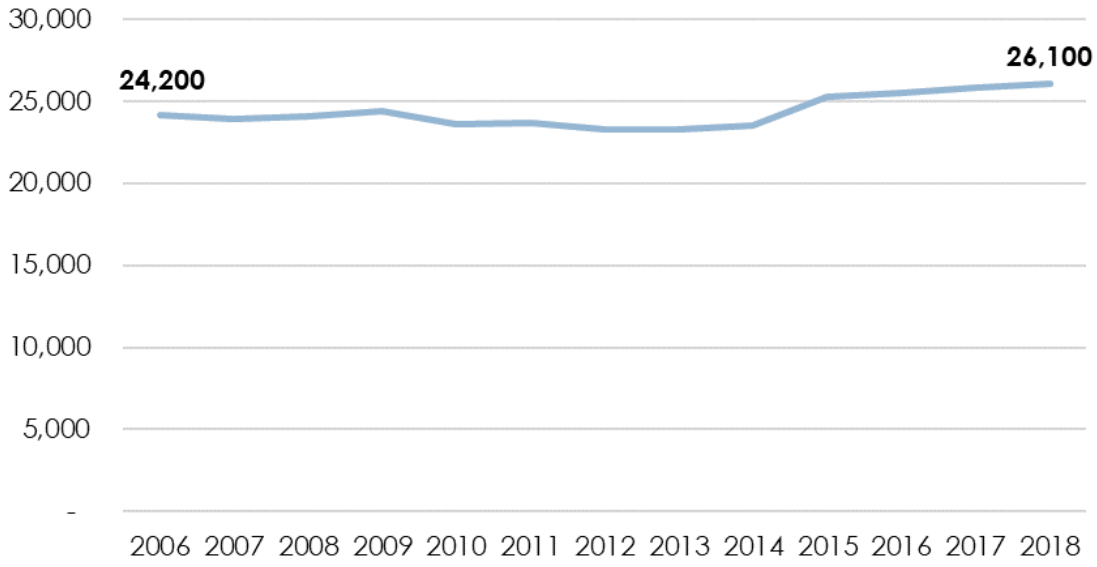


Figure 42. Study Area Employment (2006-2018)
Source: Community Attributes, 2019
Note: PSRC-covered employment estimates do not include estimates of military personnel

In 2018, over 56 percent of total employment in the study area was concentrated in the government sector with another 29 percent in the services industry. The share of government jobs as a percentage of total employment in the study area has increased since 2006, as shown in Figure 43. Some of the major employers in this sector include the Kitsap Naval Base, the Puget Sound Naval Shipyard and Intermediate Maintenance Facility, the Bremerton Transportation Center, and state and county government services facilities. Because of these facilities, Bremerton's growth patterns remain heavily dependent on military and other government expenditures.

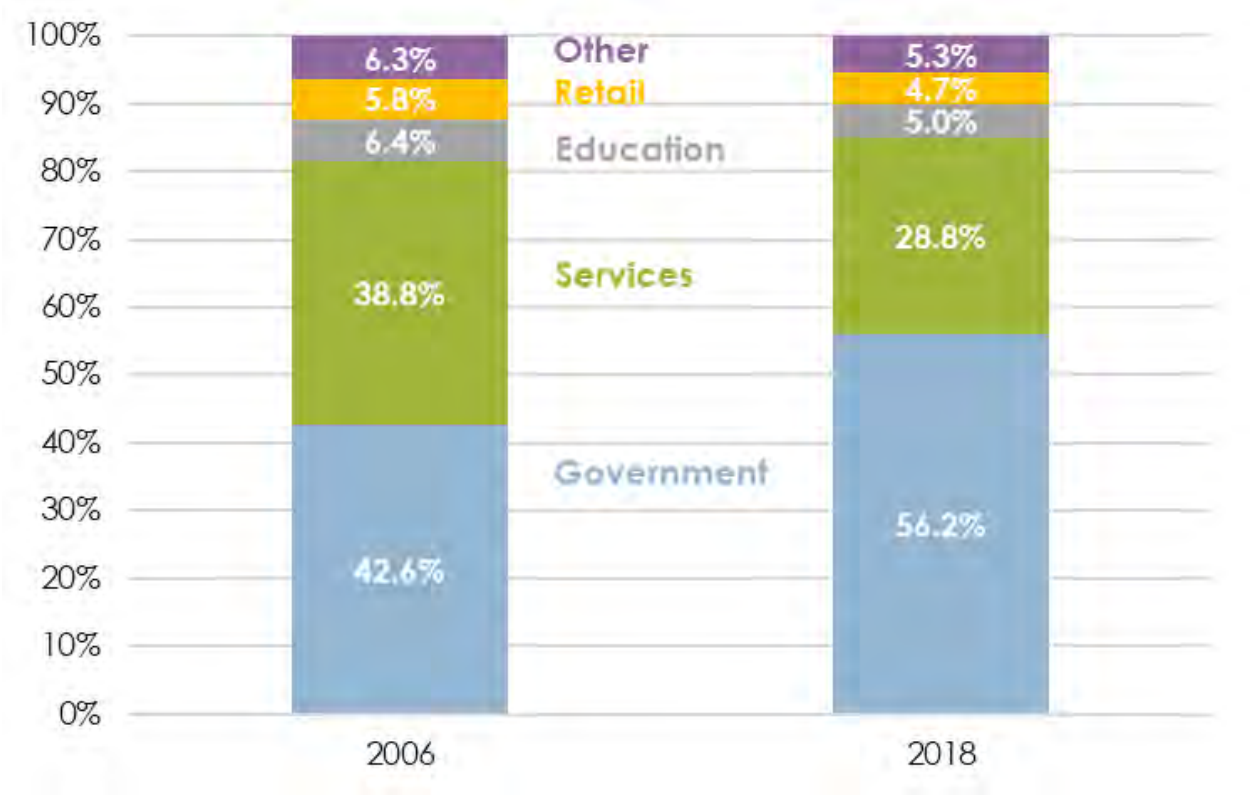


Figure 43. Study Area Employment Share by Industry (2006, 2018)
Source: Community Attributes, 2019
Note: Other includes Construction/Resources, Finance, Insurance and Real Estate, Manufacturing and Wholesale, Transportation and Utilities.

While manufacturing and government jobs increased between 2006 and 2018 and supported an overall increase in employment in the study area, other sectors such as services, retail, and education have experienced a decrease in employment. The breakdown of employment in the corridor study area shows the local economy is heavily influenced by the presence of the Naval Base and Shipyard, with most of the employment in government jobs. Improvements to the SR 303 corridor could enhance the ability of the City to recruit new companies to diversify the local economy.

4.7.2 Demographics

The total population in the study area in 2018 was 41,400 people and it grew by around 1 percent on average per year since 2000. The population change per year from 2000 to 2018 for the SR 303 corridor compared to other areas is as follows (Community Attributes 2019):

- 0.9 percent - SR 303 Corridor
- 0.6 percent - City of Bremerton
- 0.8 percent - Kitsap County
- 1.3 percent - Central Puget Sound Region

In 2017, median household income in the study area was mostly below the countywide median household income of roughly $68,400, except for a couple of census tracts to the north. The City median household income in the same period was $48,800. The study area median household income is shown in Figure 44.

Most study area residents age 25 and older (93.3 percent) were high school graduates in the period 2013 to 2017, a similar proportion to the County and the region. The percentage of SR 303 corridor residents age 25 or older with a bachelor's degree or higher compared to other areas is as follows (Community Attributes 2019):

- 23 percent - SR 303 Corridor
- 32 percent - Kitsap County
- 41 percent - Central Puget Sound Region

Between 2000 and 2018, population in the study area grew at a slower rate than population in the Central Puget Sound Region. Median income in the study area is mostly below Kitsap County median income. Transportation improvements to SR 303 could increase the attractiveness of the study area as a place to live and attract new residents which bring with them investments in housing, goods, and services.

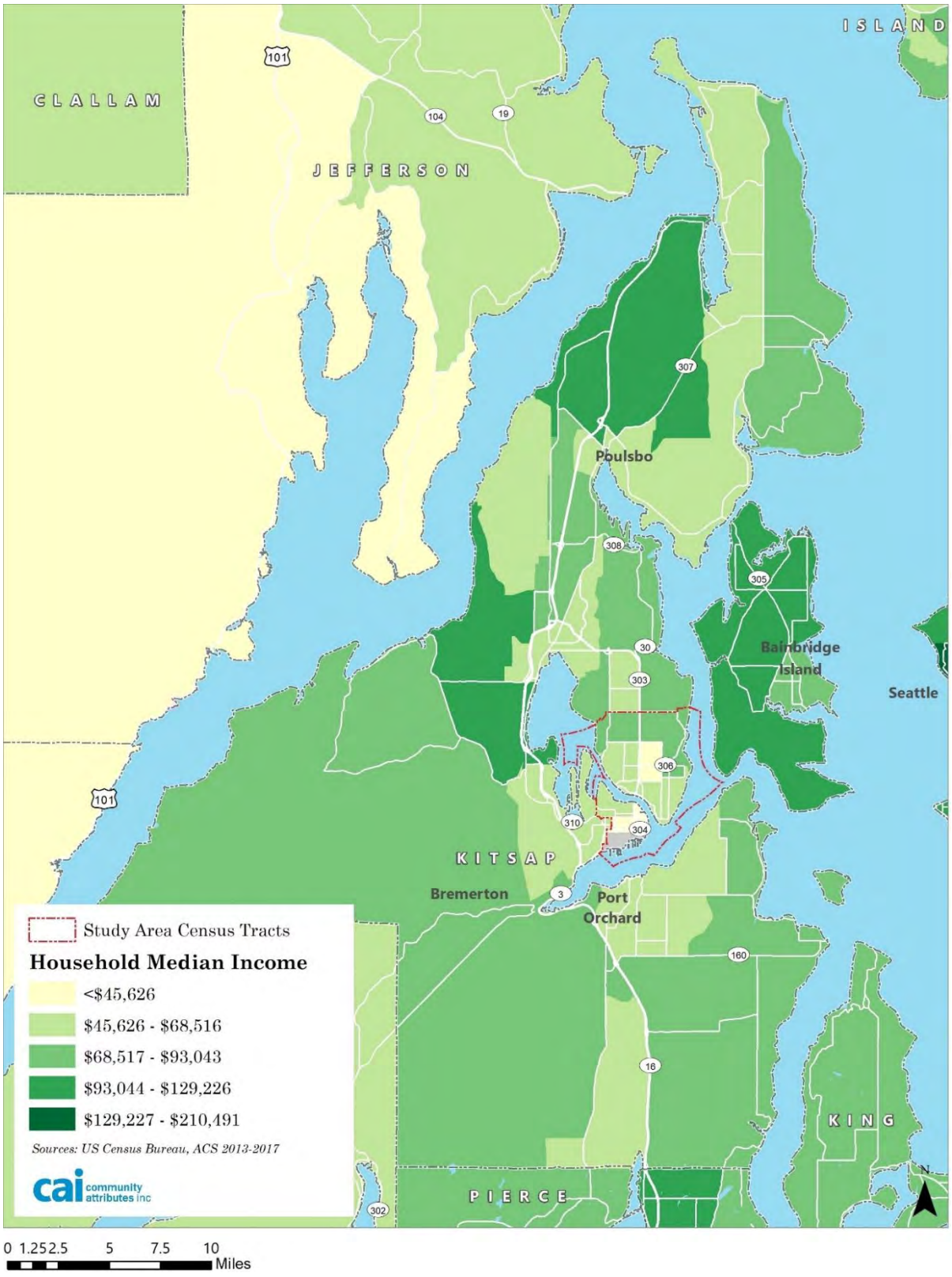


Figure 44. Study Area Median Household Income (2013-2017)
Source: Community Attributes, 2019

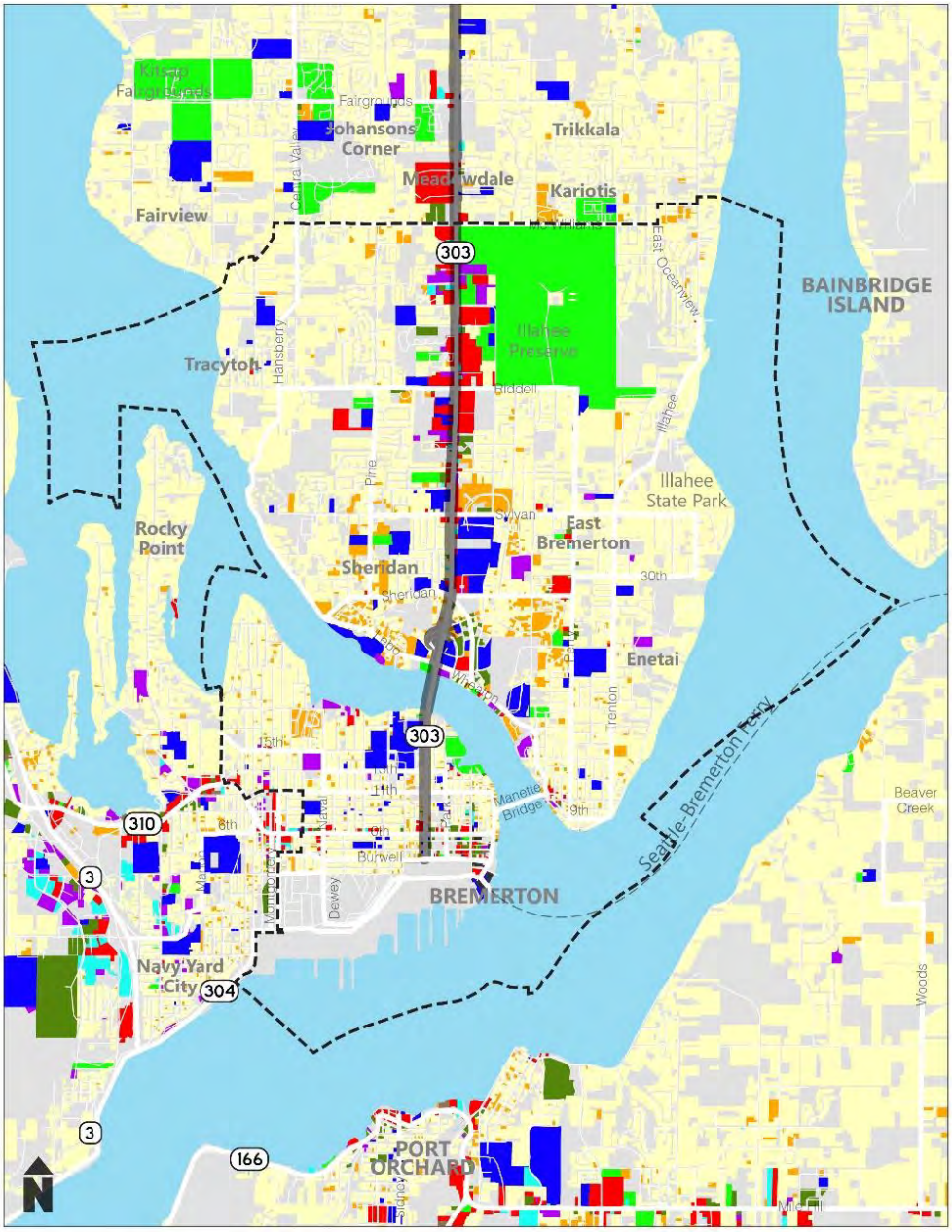
4.7.3 Land Use and Real Estate

Figure 45 describes generalized land use patterns along the SR 303 corridor, the study area, and surrounding areas. The SR 303 corridor itself is dominated by general commercial uses and institutional uses such as the Sheridan Park healthcare node, View Ridge Elementary, the East Bremerton Community Gym, Rotary Club, and Boys and Girls Club. To the immediate north of the study area lie a number of large recreational uses, including the Kitsap County Fairgrounds and Kitsap Tennis Center. Multifamily residential uses are concentrated along the SR 303 corridor itself in Sheridan Park, along McWilliams, and in Downtown Bremerton. Downtown Bremerton also contains Olympic College and a dense node of pedestrian-scale, mixed-use development north and west of the ferry terminal and Navy Yard. The rest of the study area is comprised of single-family residential development, vacant land, and open space.

Absorption is a measure of the difference between space being vacated and being occupied in a given period. When net absorption is positive, more space is becoming occupied than being vacated. Positive absorption can provide evidence of demand for a given type of space, though natural swings can occur when large new construction becomes available.

Office, retail, and multifamily residential real estate submarkets all experienced a marked period of higher vacancy rates, relatively low lease and rental rates, and negative to flat absorption in the post-Great Recession period. Most of Bremerton's multifamily housing units are concentrated in the study area, especially in East Bremerton, and constitute a critical workforce housing supply for the City and the region. However, with declining vacancy rates and rents rising, this supply of affordable market rate housing may not meet future demand.

Retail and multifamily housing recovered more quickly, though all three types achieved period-low (2009-2019) vacancy rates. New retail and multifamily housing construction occurred between 2016 and 2018 and absorption (leasing and sales) since 2018 remains positive.



Sources: Kitsap County, 2019; US Census Bureau, 2019

Figure 45. Study Area Generalized Land Use (2018)
Source: Community Attributes, 2019

5. FUTURE NO BUILD CONDITIONS

5.1 Future No Build Traffic Operations

5.1.1 Traffic Volumes

In order to analyze the Future No Build Conditions for the years 2030 and 2040, traffic volumes were forecasted using the Kitsap County travel demand model. The travel demand model was reviewed and updated to include any revised street network connections that could affect forecast results, time of day factors for generating AM peak period traffic volumes, and revised land use estimates to correlate with the forecast years.

Results from the travel demand forecasting show that future traffic volumes at the corridor intersections will grow by 30 percent by the year 2040. This is about 1.45 percent growth in traffic volume per year. The growth factors developed through the forecasting effort were applied to the existing turning movement counts to estimate future turning movement volumes for the years 2030 and 2040. Because the current land use forecasts are similar in the future to what they are today, no modifications were made to the percentage distribution of traffic volumes at each intersection.

The SR 303 Corridor Traffic Forecasting Memo is included in Appendix I.

As mentioned earlier, the E Broad Street intersection was converted to a signalized intersection in December 2019 with the completion of the new Wheaton Way TC. Existing turning movement counts were not collected for the E Broad Street intersection for this study, so the Future No Build volumes were developed using different methods than the other intersections. A traffic study (Perteet 2018) was completed in 2018 for the Wheaton Way TC that looked at intersection control for the E Broad Street intersection for the design year 2035 PM peak hour. The PM peak hour volumes from this traffic study were adjusted for the years 2030 and 2040 based on the growth rate provided in the traffic study. These estimated PM peak hour volumes for years 2030 and 2040 were validated using ITE Trip Generation (10th Edition). The PM peak hour volumes for years 2030 and 2040 were then used to develop AM peak hour volumes for years 2030 and 2040 which were validated using similar methods.

Future traffic volumes for all study intersections are included in Appendix D. Similar to Existing Conditions, volumes are forecasted to be larger in the northbound and southbound direction during the PM peak hour than during the AM peak hour. During the PM peak hour, volumes are forecasted to be larger in the northbound direction than in the southbound direction. A large portion of traffic is still expected to travel to and from 11th Street, with large volumes on the southbound right turn and the eastbound left turn.

5.1.2 Operations Analysis

The LOS results for the Future No Build AM and PM peak hour are shown in Table 16. The NE Bentley Drive and NE Fairgrounds Road intersections were only evaluated for the 2040 PM peak hour. Synchro reports are included in Appendix E.

As shown in the table, the 11th Street intersection is expected to operate at LOS E during the 2030 PM peak hour and LOS F during the 2040 PM peak hour. The 2030 results are a slight improvement over the Existing Conditions PM peak hour which operates at LOS F with 82 seconds of delay. This improvement is expected to occur because the signal timing was optimized for the Future No Build Conditions. Several other intersections are expected to operate at LOS E during the PM peak hour during 2030 and 2040, just meeting LOS standards. The 2040 PM peak hour was used as the baseline for comparing Build Alternatives, which will be discussed in a later section.

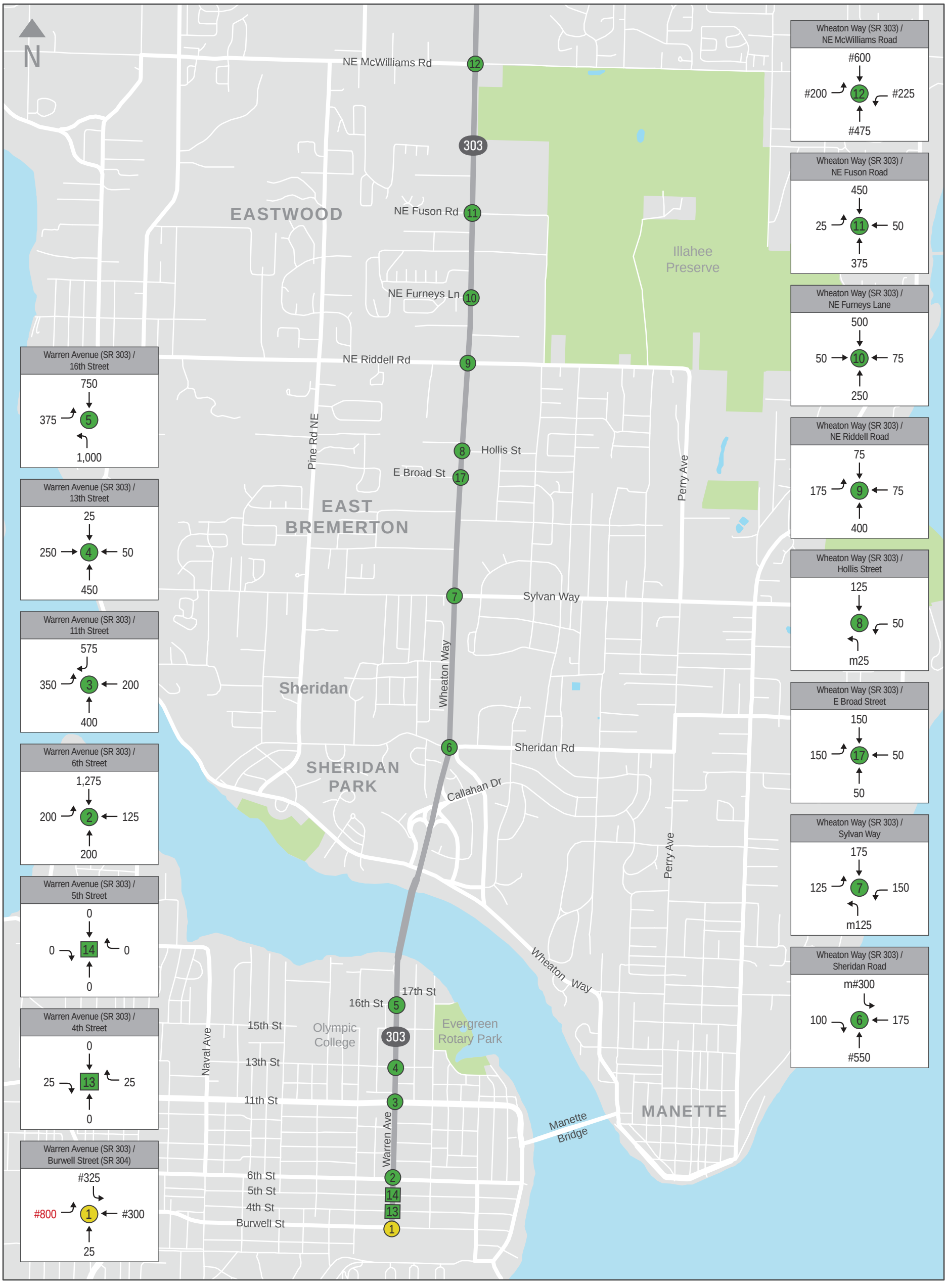
Table 16. Future No Build Traffic Operations Results

Intersection No.	Intersection	Control Type[1]	Mid-Term 2030				Horizon 2040			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			LOS	Delay(s)	LOS	Delay(s)	LOS	Delay(s)	LOS	Delay(s)
1	Burwell Street (SR 304)	Signal	D	43	D	52	D	53	E	65
13	4th Street	TWSC	B	14	C	18	C	16	C	22
14	5th Street	TWSC	B	14	C	22	B	15	D	27
2	6th Street	Signal	C	24	D	54	C	23	E	67
3	11th Street	Signal	C	29	E	76	C	32	F	109
4	13th Street	Signal	B	12	D	38	B	15	D	53
5	16th Street	Signal	B	18	B	15	B	18	B	18
13	Callahan Drive/SB Ramps	TWSC	A	8	A	8	A	8	A	9
14	Callahan Drive/NB Ramps	TWSC	A	9	A	9	A	9	B	10
6	Sheridan Road	Signal	C	29	E	55	C	32	E	77
7	Sylvan Way	Signal	B	19	C	35	C	21	D	42
17	E Broad Street	Signal	A	10	B	14	B	15	B	17
8	Hollis Street	Signal	A	3	A	9	A	5	A	8
9	NE Riddell Road	Signal	B	18	D	36	C	20	E	63
10	NE Furneys Lane	Signal	B	15	C	31	B	15	D	44
11	NE Fuson Road	Signal	B	15	C	23	B	17	C	23
12	NE McWilliams Road	Signal	C	29	D	52	C	32	E	69
18	NE Bentley Drive	Signal	-	-	-	-	-	-	D	46
19	NE Fairgrounds Road	Signal	-	-	-	-	-	-	D	47

[1] TWSC = two-way stop-controlled

NOTE: Yellow shading indicates LOS D, orange indicates LOS E, and red shading indicates LOS F

The LOS results for the Future No Build AM and PM peak hour between Burwell Street and NE McWilliams Road are also shown in Figure 46 through Figure 49. In addition to LOS, these figures also show the queue length for each intersection approach and the movement (left, right, or through) that has the largest queue length. All queue lengths are 95th percentile queue lengths from the Synchro analysis and are reported in feet. Queue lengths that are highlighted in red exceed the storage length available for that approach. Synchro reports are included in Appendix E.



0 750 1,500 3,000 Feet

SR 303 Corridor Study

Figure 46. Future No Build 2030 AM Peak Hour Operations

\# 95th %-tile volume exceeds capacity, queue may be longer

m Volume for 95th %-tile queue is metered by upstream signal

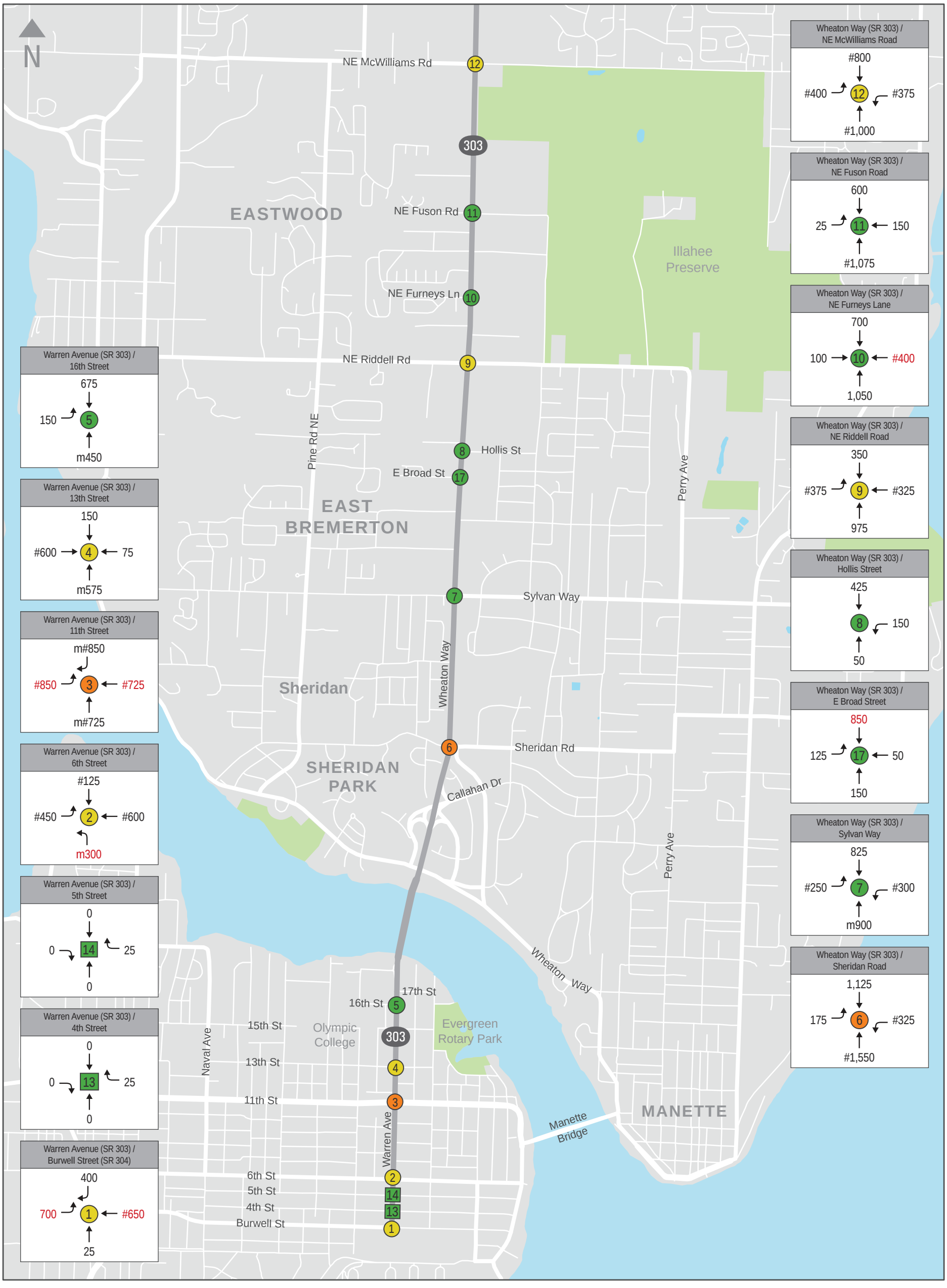
☐ TWSC (Two-Way Stop-Controlled)
Queues are reported in vehicle; assumed vehicle was 25 feet

◯ Signalized Intersection

Level of Service

- LOS A-C
- LOS D
- LOS E
- LOS F

(This page intentionally left blank)



0 750 1,500 3,000 Feet

SR 303 Corridor Study

Figure 47. Future No Build 2030 PM Peak Hour Operations

\# 95th %-tile volume exceeds capacity, queue may be longer

m Volume for 95th %-tile queue is metered by upstream signal

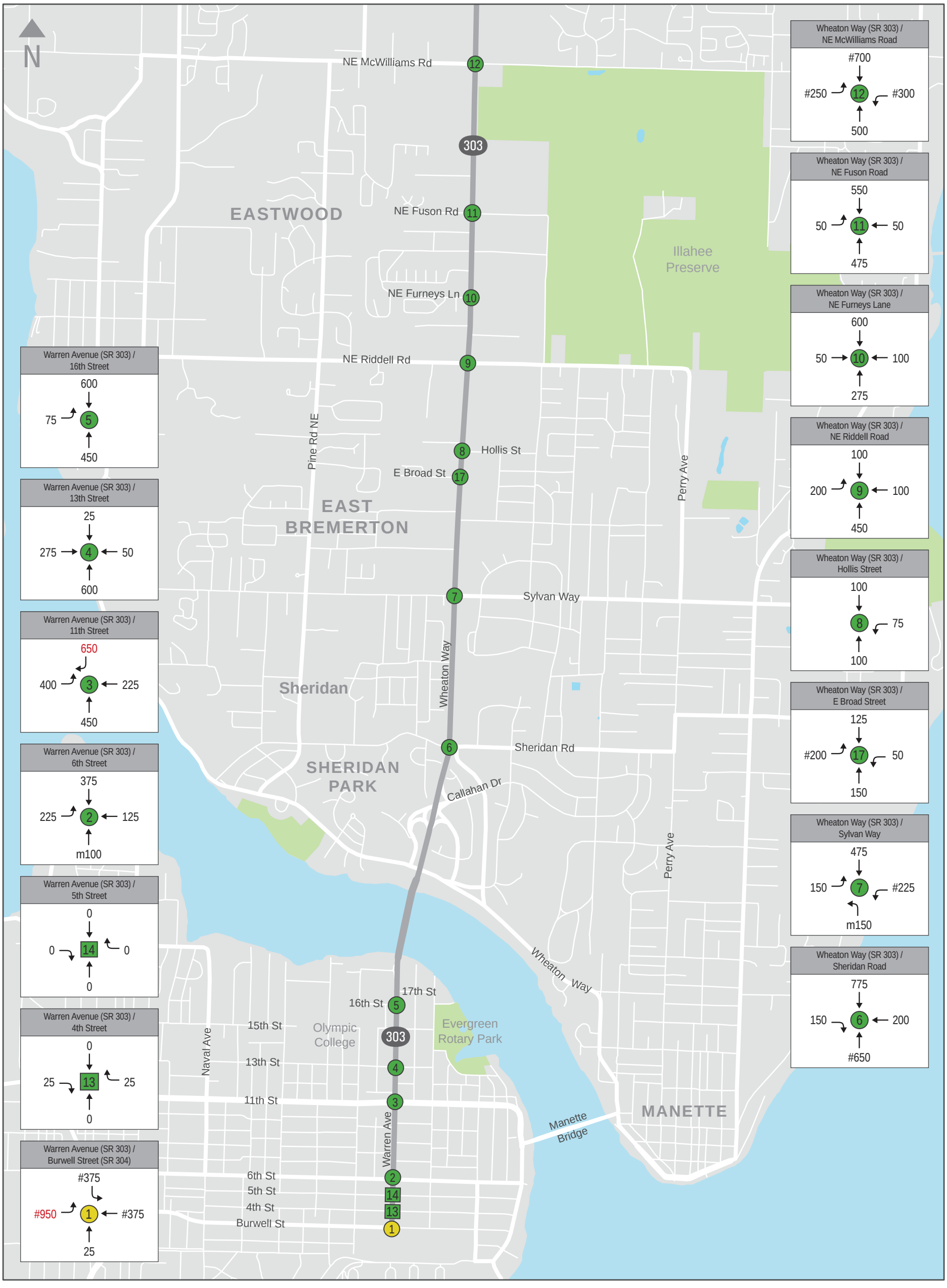
☐ TWSC (Two-Way Stop-Controlled)
Queues are reported in vehicle; assumed vehicle was 25 feet

◯ Signalized Intersection

Level of Service

- LOS A-C
- LOS D
- LOS E
- LOS F

(This page intentionally left blank)



0 750 1,500 3,000 Feet

SR 303 Corridor Study

Figure 48. Future No Build 2040 AM Peak Hour Operations

\# 95th %-tile volume exceeds capacity, queue may be longer

m Volume for 95th %-tile queue is metered by upstream signal

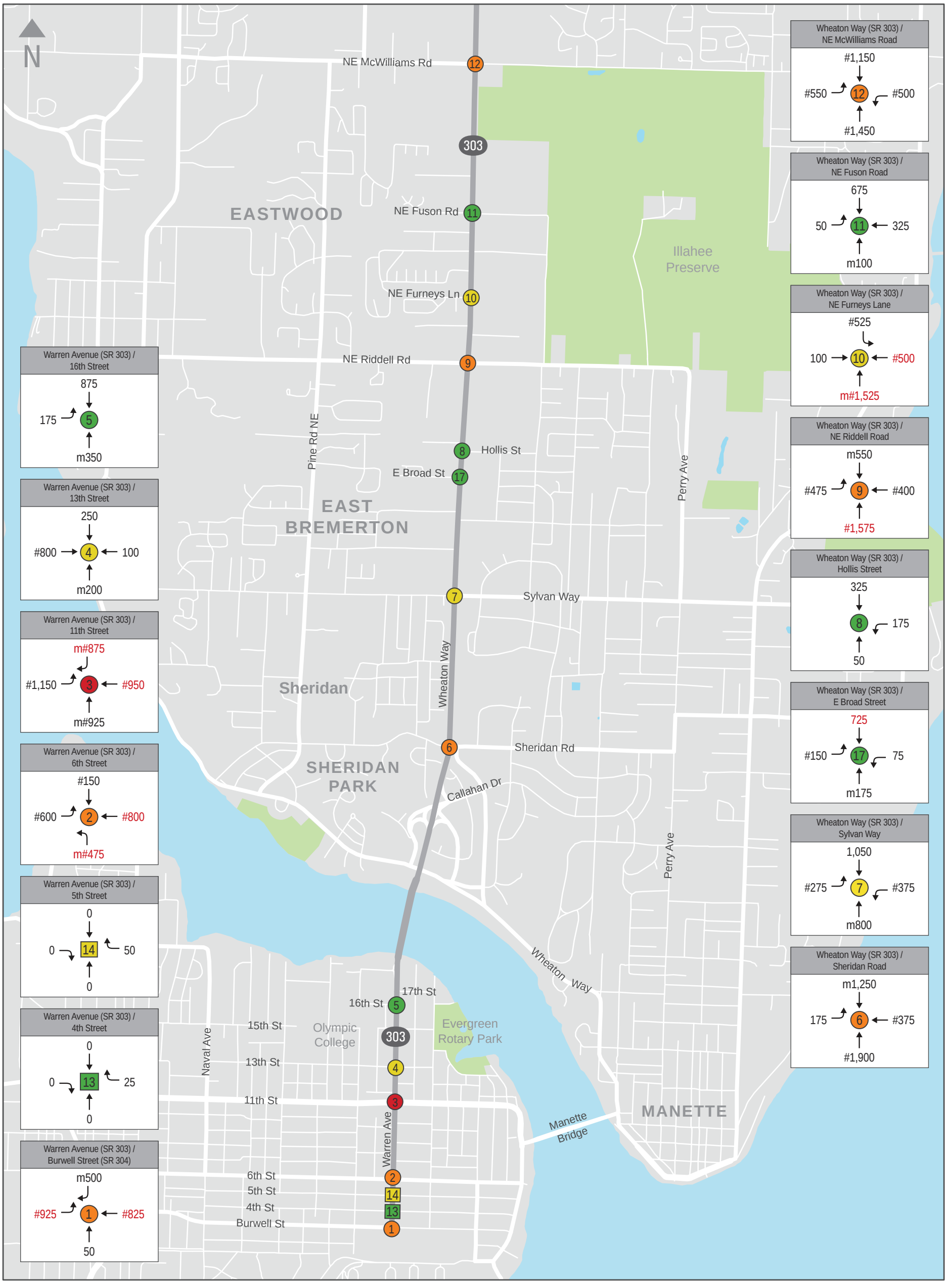
☐ TWSC (Two-Way Stop-Controlled)
Queues are reported in vehicle; assumed vehicle was 25 feet

◯ Signalized Intersection

Level of Service

- LOS A-C
- LOS D
- LOS E
- LOS F

(This page intentionally left blank)



0 750 1,500 3,000 Feet

SR 303 Corridor Study

Figure 49. Future No Build 2040 PM Peak Hour Operations

95th %-tile volume exceeds capacity, queue may be longer

m Volume for 95th %-tile queue is metered by upstream signal

☐ TWSC (Two-Way Stop-Controlled)
Queues are reported in vehicle; assumed vehicle was 25 feet

◯ Signalized Intersection

Level of Service

- LOS A-C
- LOS D
- LOS E
- LOS F

(This page intentionally left blank)

The northbound and southbound travel time results for the Future No Build 2040 PM peak are shown in Table 17. Synchro reports are included in Appendix E.

Table 17. Future No Build Travel Time

	Segment	Existing 2019 PM Peak Hour Northbound Travel Time (minutes)	Existing 2019 PM Peak Hour Southbound Travel Time (minutes)	Future No Build Horizon 2040 PM Peak Hour Northbound Travel Time (minutes)	Future No Build Horizon 2040 PM Peak Hour Southbound Travel Time (minutes)
1	Burwell Street to 16th Street	6.3	5.3	6.7	6.8
2	16th Street to Sheridan Road	2.2	1.5	3.2	2.0
3	Sheridan Road to NE Riddell Road	3.7	2.8	4.6	3.8
4	NE Riddell Road to NE McWilliams Road	3.0	2.9	4.0	2.5
5	NE McWilliams Road to NE Fairgrounds Road	1.9	1.8	2.3	2.1
	TOTAL:	**17.1**	**14.3**	**20.7**	**17.1**

The travel times for the 2040 PM peak hour are expected to increase compared to the Existing Conditions PM peak hour. The travel time in the northbound direction is expected to increase by four minutes and the travel time in the southbound direction is expected to increase by three minutes. This is likely due to the increase in volume between now and the year 2040, which is expected to cause more congestion in both directions.

5.2 Future No Build Multi-modal

5.2.1 Active Transportation Facilities

The existing active transportation facilities are discussed earlier in Section 4.5 Existing Multi-Modal. The City and Kitsap County have both published plans that outline the agencies' vision for their active transportation facilities in the future.

The City released the Non-Motorized Transportation Plan in December 2007 which presented a vision of a fully developed bicycle/pedestrian system over the next 20 years that will serve residents, commuters, shoppers, and visitors alike. A complete bikeway and walkway network will increase connections within the community, increase the number of children walking and bicycling to school, and promote the health of Bremerton residents by making walking and bicycling safe, comfortable, and attractive travel modes. The proposed bicycle facility network is shown in Figure 50.

The City released the ADA Transition Plan in March 2016, which was intended to guide the City's efforts to provide an accessible transportation system. The purpose of the ADA Transition Plan was to identify deficiencies in City policies, procedures, and physical assets, and to provide a path to correction of those deficiencies. This plan also provides guidance for removal of accessibility barriers. The minimum requirement for the scope of the ADA Transition Plan is accessibility of all curb ramps and ancillary facilities (pedestrian push buttons and pedestrian signals) within the right-of-way.

Kitsap County released the Non-Motorized Facility Plan in December 2013. The Plan goals were:

- Recognize mobility needs of everyone
- Identify differences between rural and urban areas

- Make connections within communities, i.e., schools, parks, and services
- Make connections between communities within Kitsap County
- Promote recreational uses

The Plan did not propose any new routes on the SR 303 corridor.

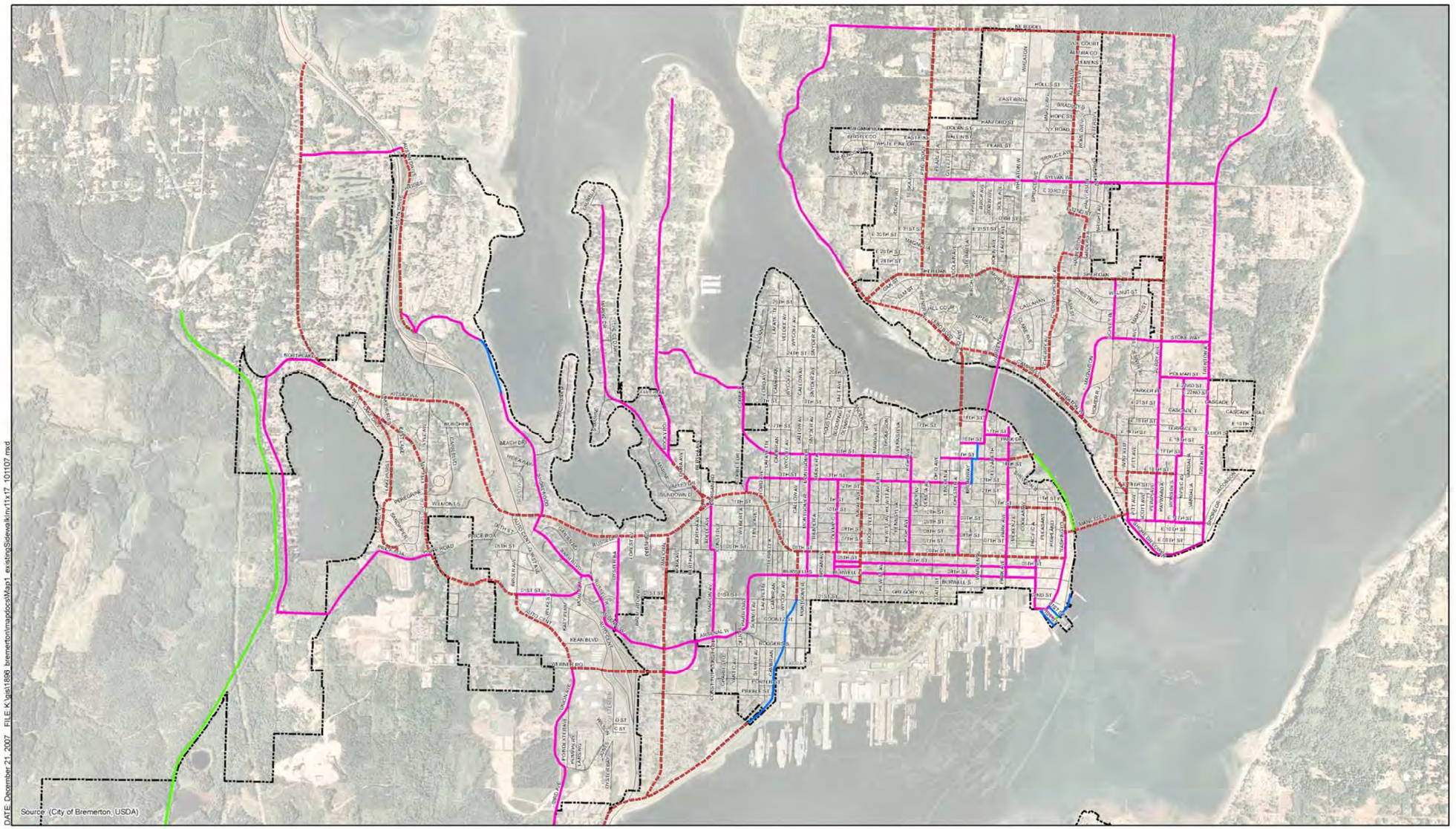
5.2.2 Transit

Existing transit service is discussed earlier in Section 4.5, Existing Multi-Modal. The study team discussed potential changes to routes, route frequency, and ridership between now and the year 2040 with Kitsap Transit. Kitsap Transit has identified the SR 303 corridor as its primary high-capacity transit corridor for the future. Though it is too early to anticipate specific changes in routes or types of services, Kitsap Transit was able to provide these estimates for transit service in the year 2040:

- 14 hours per day of service
- 10-minute to 15-minute headways
- 20 percent growth in ridership from Existing Conditions

5.2.3 Freight

Existing freight is discussed in Section 4.5, Existing Multi-Modal. In 2019, freight was around 2 percent of total traffic along SR 303 on an average day and around 3 to 5 percent of total traffic at intersections along SR 303 during the peak hours. The current land use forecasts are similar in the future to Existing Conditions, so freight traffic is expected to be approximately 5 percent of traffic in the years 2030 and 2040.



Map 5
Bremerton Non-Motorized Transportation Plan
Proposed Bicycle Facility Network

SR 303 Corridor Study
Figure 50. City of Bremerton Non-Motorized Transportation Plan

(This page intentionally left blank)

5.3 Future No Build Safety

Under 23 United States Code §148 and 23 United States Code §409, safety data, reports, surveys, schedules, list compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

Existing safety is discussed earlier in Section 4.6, Existing Safety. In accordance with the WSDOT Safety Analysis Guide, methods and tools associated with the Highway Safety Manual (HSM) 1st Edition (AASHTO 2014),were used to analyze Future No Build Conditions as well as the proposed Build Alternatives discussed in later sections.

The HSM Part C Training Tool spreadsheets were used to calculate predicted average crash frequency for the study intersections as well as the roadway segments between intersections. This series of spreadsheets has been developed to assist in the application of the predictive methods contained in the HSM for analyzing urban and suburban arterials, rural multilane roads, and rural two-lane roads. The segment between NE McWilliams Road and NE Fairgrounds Road was not evaluated.

The average crash frequencies for the study intersections are generally larger in the Future No Build Conditions than in Existing Conditions, but the average crash frequencies for some intersections are smaller in the Future No Build Conditions than in the Existing Conditions. The average crash frequencies for the Existing Conditions were based on crash data collected between 2014 and 2018. The average crash frequencies calculated for the Future No Build Conditions are based on the configuration of the intersection and represent the safety conditions for a typical intersection with a similar configuration. At intersections where the Existing Conditions are worse than the expected Future No Build Conditions, this is likely due to an above average amount of crashes at that intersection compared to similar intersections.

The HSM spreadsheet and results for Future No Build Conditions is available in Appendix G.

5.4 Future No Build Economics

Existing economic conditions are discussed earlier in Section 4.7, Existing Economics. In addition to the economic assessment for Existing Conditions, the study team conducted an assessment of the type, character, location, and intensity of development that has occurred along the SR 303 corridor and the development trajectories and potential for each of the four study segments. The segment between NE McWilliams Road and NE Fairgrounds Road was not evaluated.

The Baseline Economic Assessment is included in Appendix H.

5.4.1 Segment 1: Burwell Street to 16th Street

The development trajectory of this area is rather fixed as Segment 1 is mostly built out. The segment consists of a neighborhood retail and services node in the lower downtown area, single-family housing in the upper corridor, and college campus development in the upper corridor. Vacancy and underutilization are low and little vacant developable land exists here. Average property values are highest in this segment.

Using improvement value per square foot of land ratios as a measure, the mostly small, centrally located downtown commercial, residential, and institutional lots of this segment are relatively high value. This makes it more unlikely that built lots here would be redeveloped. The greatest development potential here probably lies in the intensification of uses on built commercial properties and parking lots in the lower corridor downtown area.

5.4.2 Segment 2: 16th Street to Sheridan Road

Slightly more potential for new development and/or redevelopment exists in Segment 2. The development trajectory of this area has been mixed. Property values are lower here than all other segments except Segment 4, the unincorporated county portion of the corridor. A highway interchange dominates the frontage in the center of the segment, but vacant land near the waterfront and Sheridan Road exists and has already seen some recent multifamily development. The major institutional anchor of Harrison Medical Center has determined the fate of much of the development up to this point in the segment, both east and west of the corridor, with numerous medical and dental offices, rehabilitation centers, and specialist offices largely built from the 1960s to the 1980s occupying the zone. These medical uses are very valuable in terms of improvement value to land ratios and are therefore unlikely to redevelop themselves.

However, given this major anchor plus the proximity of open spaces such as Stephenson Canyon and Sheridan Park, combined with the presence of modest amounts of developable land and low improvement value ratios at the north and south ends of the segment, there is potential here for new development. This development could take the form of recreational uses, housing, additional medical uses, arts and entertainment uses (Bremerton Community Theater is located here), or limited service uses.

5.4.3 Segment 3: Sheridan Road to NE Riddell Road

A great deal of both new development and redevelopment potential exists in Segment 3. The trajectory of this northern-most incorporated area of the City has thus far has consisted of older single-family housing tracts from the 1950s and 1960s, large former institutional uses such as the now-defunct old East Bremerton High School, and more recent large-format, auto-oriented, stand-alone and strip commercial development and shopping centers built mainly in the 1970s and 1980s. Property values are higher here than all segments except for Segment 1.

The greatest potential for new development exists on the school district's very large, old Bremerton High School property, as well as on the 20 acres of properties abutting NE Riddell Road to the south (though these are set back off the main corridor and may have access and visibility issues). However, given relatively low improvement value to land ratios in the mid- and large-sized commercial parcels fronting the corridor, combined with hundreds of acres of surface parking, significant redevelopment potential may exist in this segment. Uses including multifamily housing, institutional, mixed use commercial and residential, and a variety of general commercial uses would be most likely here.

5.4.4 Segment 4: NE Riddell Road to NE McWilliams Road

The development trajectory of Segment 4 is more recent. Many uses in this unincorporated segment of SR 303 just north of the city limits–especially "big box" retail uses such as Lowe's and Fred Meyer–were built as recently as 2012. In fact, most of the commercial development in this segment occurred in the 1990s and 2000s. The relative value of these parcels is high, but other parcel values are quite low and much vacant land remains here for new development. On the higher value built commercial parcels, redevelopment is unlikely. In addition to self-storage uses, some industrial use is also present here at the northern end of the segment. Also, at the north end of the segment, the large Illahee Nature Preserve fronts on SR 303.

Likely new development in this segment could include industrial uses and recreational uses related to the open space at the north end of the segment; auto-oriented commercial, big box commercial, and general commercial in the middle of the segment; and retail, service, and hospitality around the existing node at the south end of the segment.

6. ALTERNATIVE DEVELOPMENT AND SCREENING PROCESS

6.1 Identifying Needs

The SAG was tasked with developing a draft need statement for the SR 303 corridor. The draft need statement helped guide the SR 303 Corridor Study by focusing the study effort on a larger corridor vision and using the needs described here to evaluate potential solutions.

Five needs were identified based on the existing conditions shown in Figure 51.

EXISTING CONDITIONS		PROJECT NEEDS
	▪ 1,200 crashes in 5-year period ▪ Two pedestrian fatalities	Improve corridor safety
	▪ Existing PM Peak Hour: 7 intersections ≥ LOS D / 1 intersections at LOS F ▪ 2040 PM Peak Hour: 9 intersections ≥ LOS D / 1 intersections at LOS F	Improve corridor reliability
	▪ Sidewalks are narrow ▪ 90 obstructions south of bridge ▪ 30 obstructions north of bridge ▪ Narrow walk on bridge ▪ 1 mile of sidewalk gaps	Improve pedestrian and bicycle connectivity
	▪ 10% office space vacancy rate ▪ 6% retail space vacancy rate ▪ 3% multifamily vacancy rate ▪ 24% of the total parcel acreage is vacant (including parks)	Increase economic investment
	▪ Limited accessibility ▪ Impacted by traffic operations ▪ No bus bypass options	Improve access to transit

Figure 51. Existing Conditions and Corridor Needs

6.1.1 Draft Corridor Need Statement

The draft need statement, drafted by the SAG, is shown on the following page.

SR 303 Corridor Study – Draft Corridor Need Statement

Livability, safety, and economic vitality are common areas for improvement highlighted by the City, Kitsap County, the State, the public, and business owners along the SR 303 corridor. These higher-level categories of improvement were considered by the study team and were broken into more measurable needs with specific performance gaps.

Improve corridor safety

Existing data shows multiple serious injury accidents and two fatalities along the SR 303 corridor in the last 5 years. Based on the State's Target Zero goal, as shared by the City and County, and the community's desire to improve safety there is a need to reduce crash potential in the study area.

Improve corridor reliability

SR 303 provides a direct connection to downtown Bremerton, the Washington State ferries, and the Naval Shipyard. The SR 303 corridor needs to provide reliable travel time for people delivering goods, traveling to work, accessing the ferries, and trying to reach service facilities. People have noted that their travel times can vary considerably from one day to the next and that travel planning can be difficult. Travel time reliability needs to be improved for all modes along the corridor.

Improve pedestrian and bicycle connectivity

The SR 303 corridor lacks consistent, delineated pedestrian and bicycle connectivity both along and across the corridor. This lack of connectivity discourages walking and biking and creates possible safety issues. Increased levels of connectivity improve safety and equity, are associated with higher levels of physical activity, and improve health by increasing access to health care, goods, and services, thereby helping the City meet their goal of improved livability. Pedestrian and bicycle connectivity improvements are needed to improve accessibility to transit facilities for improved transit usage along the corridor.

Increase economic investment

The SR 303 corridor is essential to the economic vitality of the region. The existing corridor bisects the community, negatively impacting quality of life and affecting economic investment. To meet the City and County's growth targets and goals for attracting more businesses and mixed-use development to the corridor, transportation improvements that help spur future investments are needed.

Improve access to transit

Kitsap County and the City of Bremerton are expected to experience significant growth in the next 20 years. To meet future needs of the public, Kitsap Transit has identified the SR 303 corridor as its primary high capacity transit corridor for the future. Better non-motorized access to transit facilities as well as improved transit speed and reliability are needed to provide sustainable transit operations, improve regional connectivity, and attract new riders.

6.2 Screening Process

A multi-step screening process was used to identify, screen, evaluate, and rank potential improvements to the SR 303 corridor. This process was guided by the needs outlined in the Draft Corridor Need Statement and included these steps:

1. Develop corridor elements
2. Evaluate corridor elements through First Level Screening
3. Combine passing corridor elements into three different corridor alternatives
4. Evaluate corridor alternatives through Second Level Screening
5. Develop Preferred Preliminary Alternative (PPA)
6. Develop Study Preferred Alternative (SPA)

Each of these steps is discussed in the sections below.

Improvements to the segments between Burwell Street and NE McWilliams Road were developed and evaluated through the entire screening process. The segment between NE McWilliams Road and NE Fairgrounds Road was not included in the SR 303 Corridor Study until after the Second Level Screening was completed. Improvements north of NE McWilliams Road are discussed in Section 6.7, Study Preferred Alternative Development, below.

6.3 Corridor Elements

The first step in the screening process was to generate ideas, or corridor elements, with the potential to address the needs of the corridor. Corridor elements were generated based on input from previous studies, stakeholders, the study team, and the public. A workshop to develop these corridor elements was held in September 2019 with the project management team and key partners. The SAG was then asked to provide comments on the proposed corridor elements as well as additional suggestions. The proposed corridor elements were then divided into the following categories which generally align with the corridor needs outlined in the Draft Corridor Need Statement.

- Major Projects
- Intersection Control improvements
- Transit improvements
- Pedestrian and Bicycle improvements
- Access Management improvements
- Traffic Control improvements
- Other/Economic Investment improvements

The proposed corridor elements are shown in Figure 52.

6.4 First Level Screening

6.4.1 First Level Screening Metrics

The First Level Screening was a mostly qualitative evaluation that measured each corridor element's ability to meet the corridor needs. Each corridor element was assigned one or two needs from the Draft Corridor Need Statement that it was proposed to meet and was measured according to the following three metrics.

- **Does the corridor element meet the project need?**

  If the corridor element met its intended need(s), it was considered passing. If it did not meet the intended need but was determined to fit within the context of a larger strategy, the corridor element could be revisited.

- **Is the corridor element feasible?**

  Feasibility was measured by determining if the corridor element would be reasonable given necessary conditions to support its functionality. Feasibility was also estimated based on adjacent corridor conditions. Feasibility did not include right-of-way impacts.

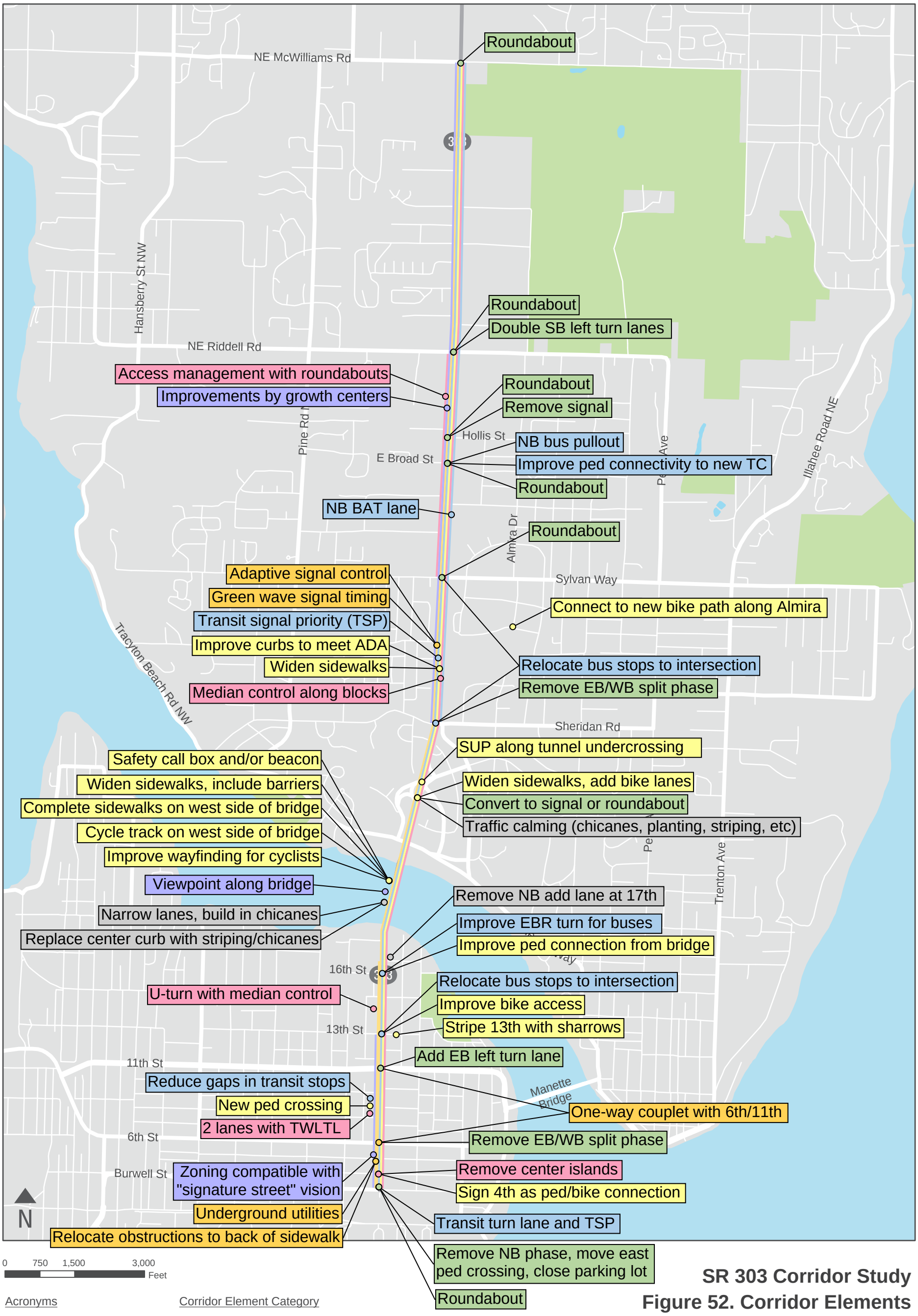
  Examples:

  - Transit alternatives like a streetcar (T2) without the population density needed to provide a substantial cost-benefit to the area would be considered infeasible.

- **Is the corridor element within the scope of the study?**

  The study scope is focused on improvements to the SR 303 corridor within the study area. If a corridor element included non-corridor improvements or off-corridor improvements that are not specifically associated with the SR 303 corridor users, then the corridor element was considered out of scope. The corridor elements that were screened out because of this metric were not discarded; rather they will be passed on as additional projects for future consideration.

The First Level Screening process is illustrated in Figure 53 (page 6-7).



Acronyms

BAT	business access transit
EB	eastbound
NB	northbound
SB	southbound
SUP	shared-use path
TC	transit center
TSP	transit signal priority
WB	westbound

Corridor Element Category

- Major Projects
- Intersection Control
- Transit
- Ped/Bike
- Access Management
- Traffic Control
- Other/Economic Investment

SR 303 Corridor Study
Figure 52. Corridor Elements

This is a mapped list of potential corridor elements to give a visual summary of a longer matrix of potential solutions.
This list is preliminary and solutions represented here may be eliminated, and/or new solutions added.

(This page intentionally left blank)

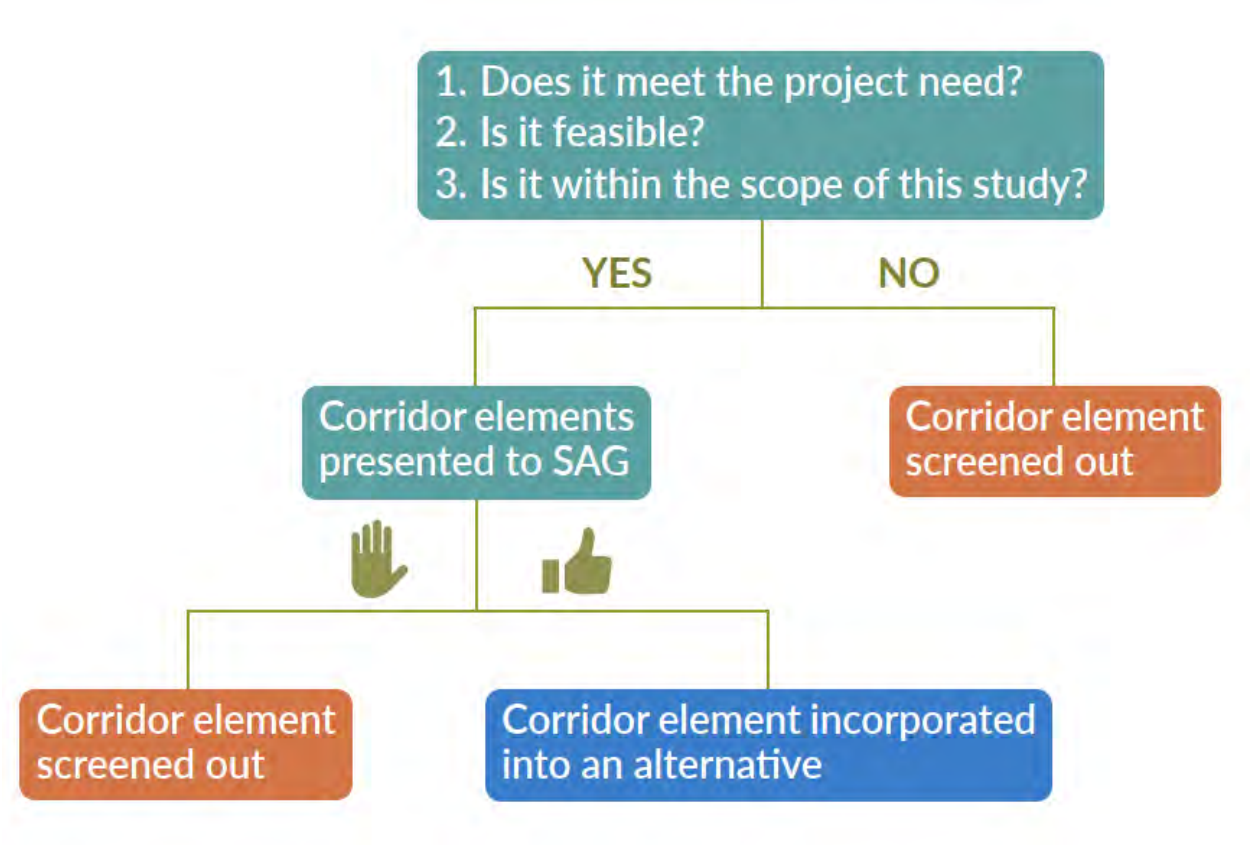


Figure 53. First Level Screening Process

6.4.2 First Level Screening Results

Each corridor element was evaluated according to the three metrics described in Figure 53. If the corridor element passed all three metrics, it passed the First Level Screening. Most elements were able to be evaluated qualitatively but a few elements required planning-level traffic modeling to determine if the element was feasible.

Below is a summary of the results of the First Level Screening:

- 88 corridor elements were evaluated
- 32 corridor elements did not meet criteria and were screened out
- 56 corridor elements met criteria and passed First Level Screening

Descriptions of the individual corridor elements as well as detailed First Level Screening results are included in Appendix J.

6.5 Corridor Alternatives

Following the First Level Screening, the corridor elements that passed the screening were combined into three different Build Alternatives. These alternatives were developed with guidance from the stakeholder

advisory group and each centered around a unique vision for the SR 303 corridor. The three Build Alternatives included:

- Traffic Management Alternative
- Multi-modal Alternative
- Boulevard Alternative

Most of the corridor elements that passed First Level Screening were incorporated into a Build Alternative. A few corridor elements were adjusted or removed based on quantitative analysis and additional discussion with the SAG.

> *Examples:*
> *Adaptive signal control and green wave signal timing were both proposed as corridor elements but only one is needed for the Traffic Management Alternative.*
> *A Michigan left, or a left-turn lane U-turn would not provide any benefit to safety or reliability for the segment between 13th Street and 16th Street based on further analysis.*

The process for developing the three Build Alternatives based on community engagement and the corridor needs is illustrated in Figure 54. As shown in this figure, the alternatives build on top of each other. The Multi-modal Alternative includes many of the same improvements as the Traffic Management Alternative while the Boulevard Alternative included many of the same improvements as both the Traffic Management and Multi-modal Alternatives.

The No Build Alternative was also included as a potential alternative. The No Build Alternative represents the Future No Build Conditions for the year 2040 and serves as a baseline for the comparison of potential corridor improvements.

6.5.1 No Build Alternative

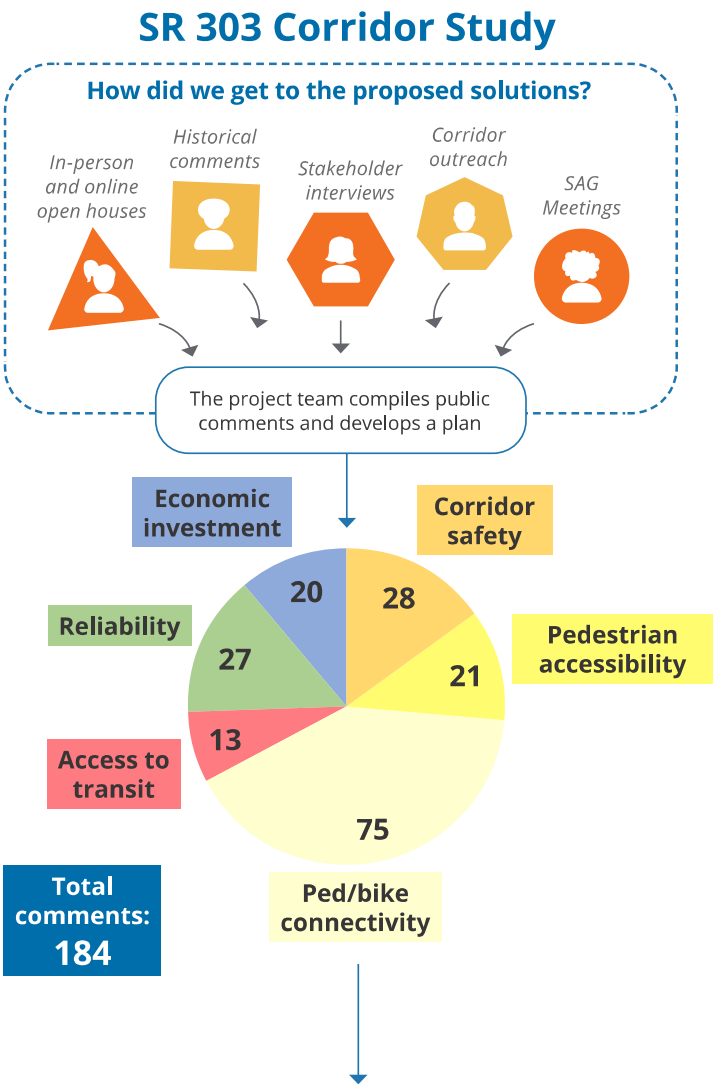
The No Build Alternative represents the Future No Build Conditions for the year 2040 and serves as a baseline for the comparison of potential corridor improvements.

6.5.2 Traffic Management Alternative

The Traffic Management would improve traffic operations along the SR 303 corridor by improving the signal timing and coordination to minimize traffic delay and improve corridor travel time reliability. Key elements in this alternative include:

- State of the art traffic signal equipment
- An additional left-turn lane at the 11th Street intersection
- New shared-use path on Warren Avenue Bridge
- Improved bike route along Almira Drive to Warren Avenue Bridge

The Traffic Management Alternative is shown in Figure 55 (pages 6-11 through 6-17).



Alternatives	Corridor Needs					
	Corridor safety	Pedestrian accessibility	Ped/bike connectivity	Access to transit	Reliability	Economic investment
Traffic Management	• Pedestrian lighting	• ADA ramps	• Complete gaps in bike network		• Green wave or adaptive signal timing • Improve signal phasing	• Placemaking and wayfinding
Multi-modal	*Includes Traffic Management improvements* • Pedestrian crossings • Lighting • Wider shoulders	*Includes Traffic Management improvements* • Remove utilities from sidewalks • Widen sidewalks	*Includes Traffic Management improvements* • Complete gaps in sidewalk network • Pedestrian crossings • Neighborhood connectivity	• Neighborhood connectivity • Relocate bus stops closer to crossings	• Signal timing for transit • Transit-only lane	*Includes Traffic Management improvements* • Remove utilities from sidewalks • Widen sidewalks • Viewpoint on Warren Ave Bridge • Public art
Boulevard	*Includes Multi-modal improvements* • Roundabouts • Median control	*Includes Multi-modal improvements* • Bury utilities	*Includes Multi-modal improvements*	• Neighborhood connectivity	• Roundabouts	*Includes Multi-modal improvements* • Bury utilities

Figure 54. Alternative Development Process

(This page intentionally left blank)

Full Corridor
Signal control
- Option A: Adaptive signal timing
- Option B: Green wave signal timing

Improve curb cuts to meet ADA requirements
Install lighting for pedestrians
Improve placemaking and wayfinding

303

NE McWilliams Rd

T

McWilliams
Park & Ride

Designate Pine Rd NE
as bicycle route

Pine Rd NE

NE Fuson Rd

Illahee
Preserve

Designate Almira Dr
and NE Fuson Rd as
bicycle route

NE Furneys Ln

Fred Meyer

303

NE Riddell Rd

N

0 750 1,500 3,000 Feet

Existing Bus Stop
Bike Facility per City Plan
Bike Facility
Existing Non-Motorized Facility
Signal Improvement
Option A: Adaptive signal timing
Option B: Green wave signal timing

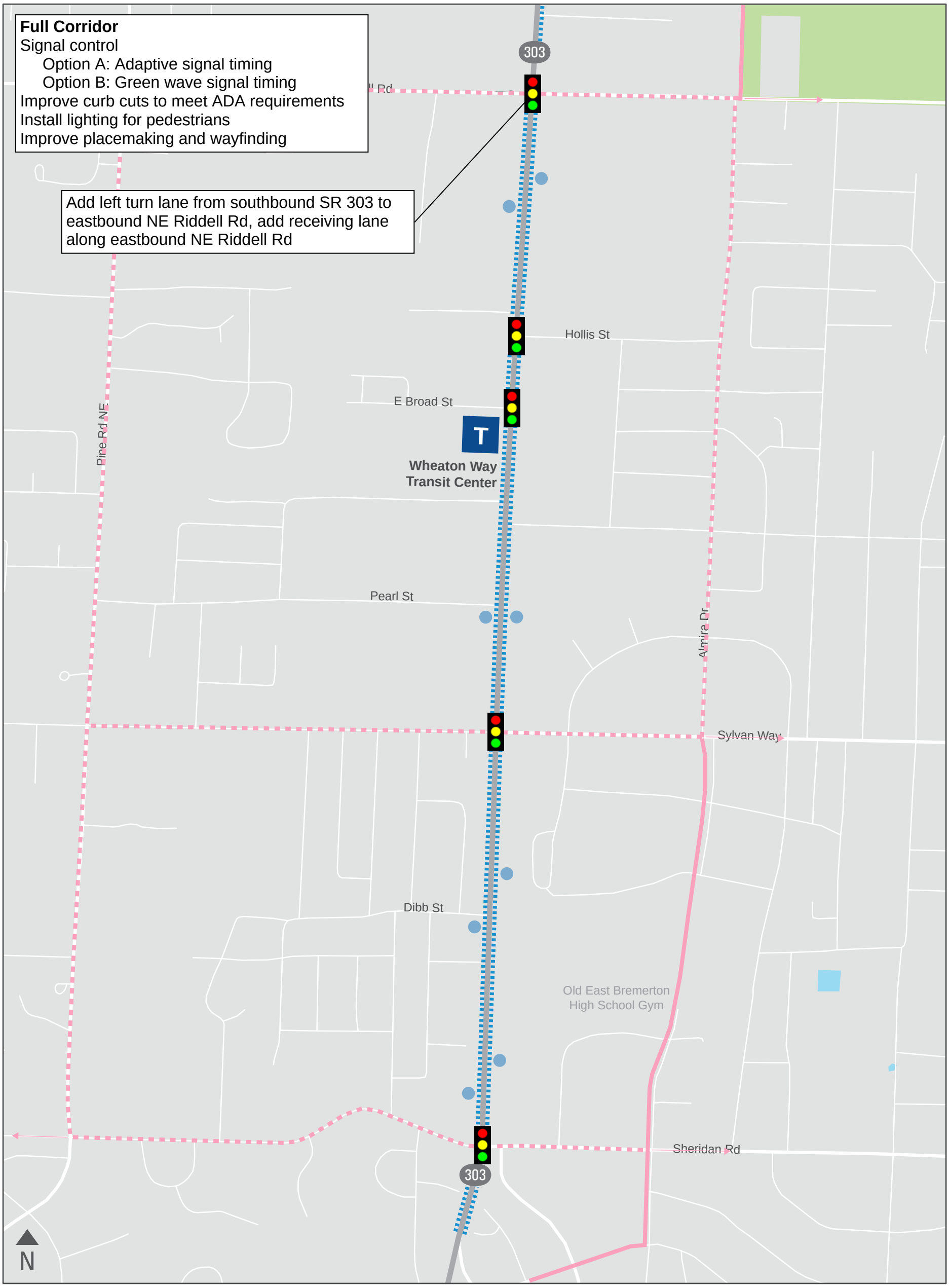
SR 303 Corridor Study

Figure 55A. Traffic Management Alternative

Segment 4: NE Riddell Road to NE McWilliams Road

Alternative subject to change

(This page intentionally left blank)



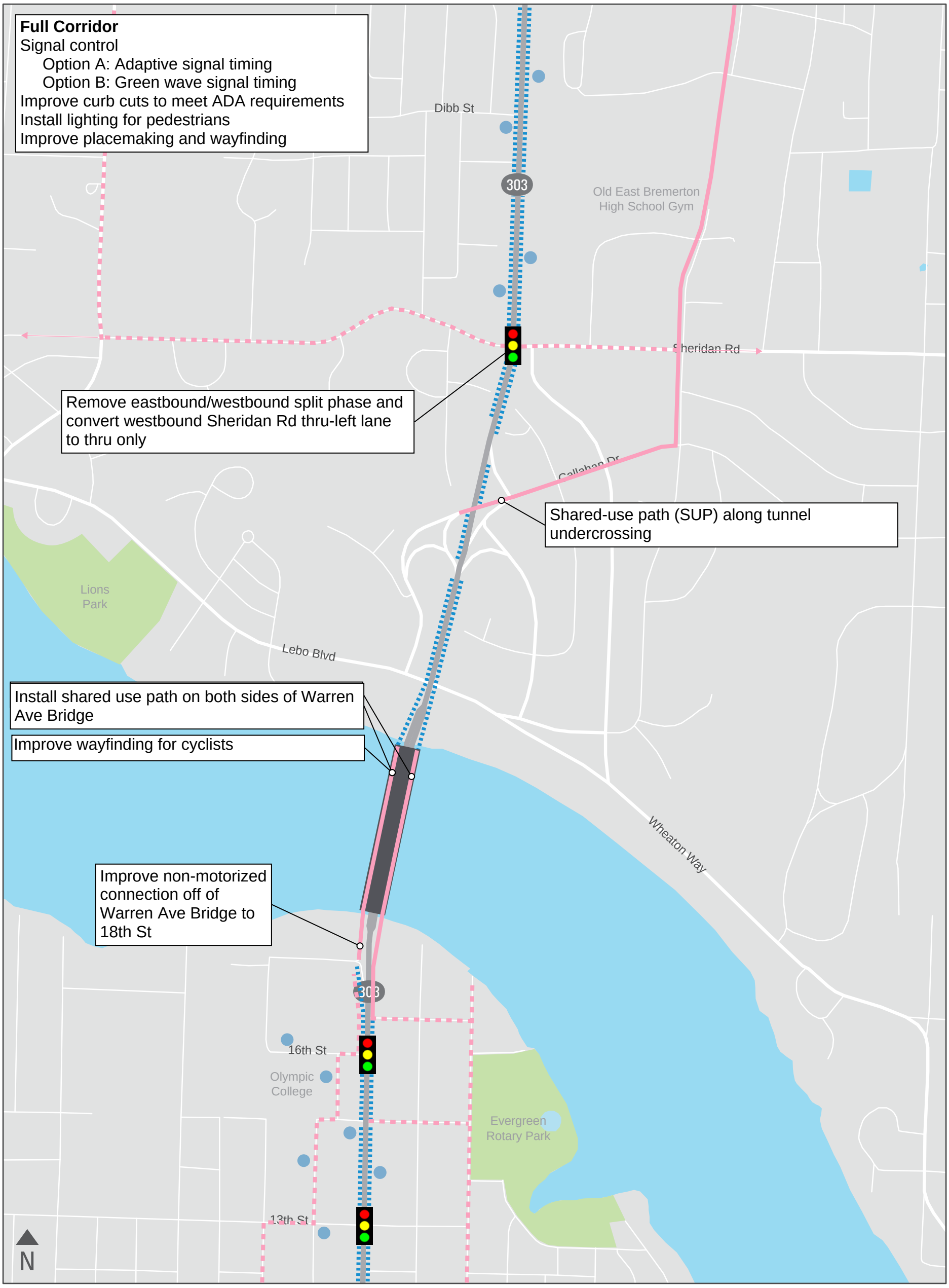
SR 303 Corridor Study

Figure 55B. Traffic Management Alternative

Segment 3: Sheridan Road to NE Riddell Road

Alternative subject to change

(This page intentionally left blank)



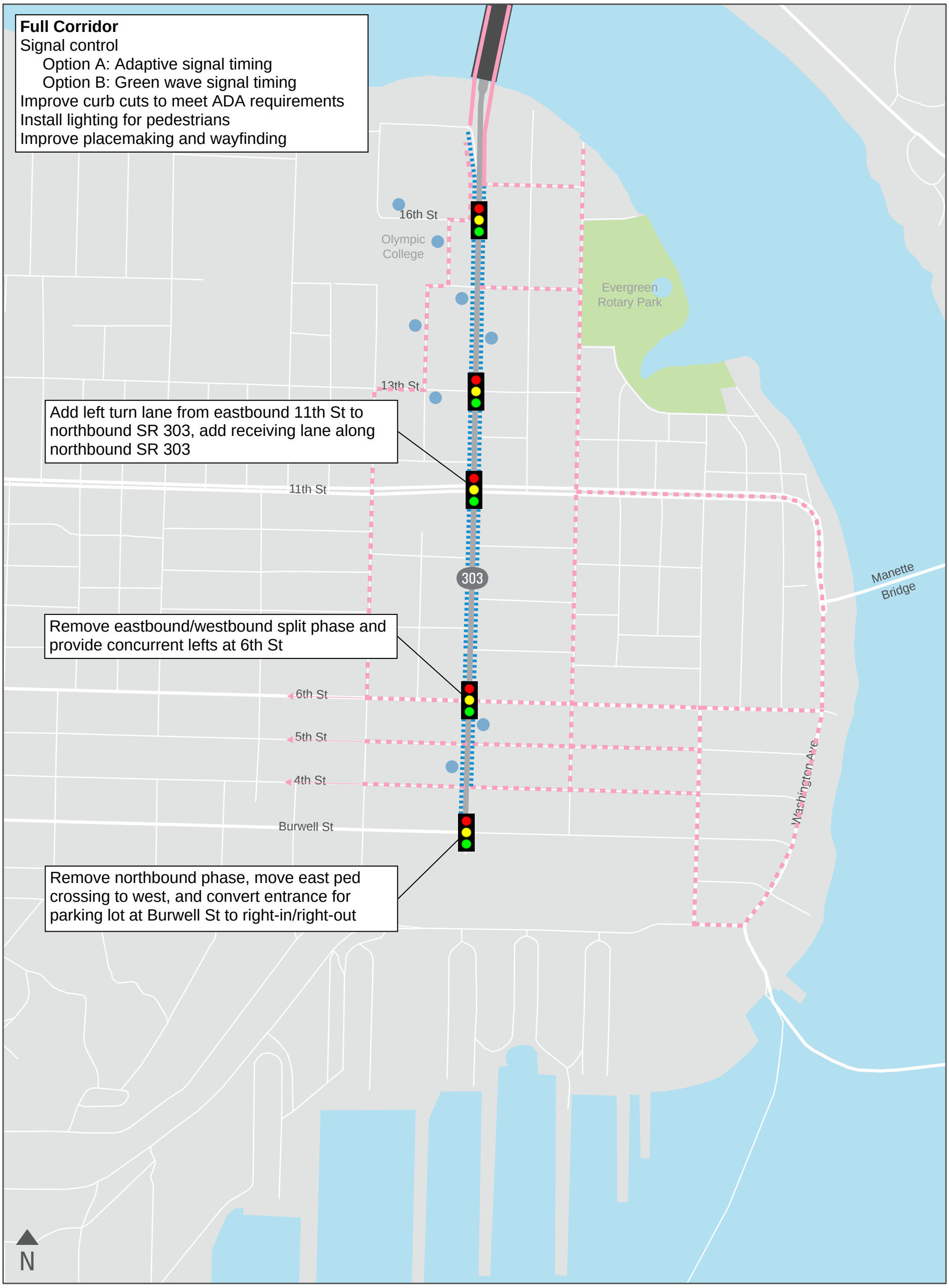
SR 303 Corridor Study

Figure 55C. Traffic Management Alternative

Segment 2: 16th Street to Sheridan Rd

Alternative subject to change

(This page intentionally left blank)



SR 303 Corridor Study

Figure 55D. Traffic Management Alternative

Segment 1: Burwell Street to 16th Street

Alternative subject to change

(This page intentionally left blank)

6.5.3 Multi-modal Alternative

In an effort to improve transit travel times and reliability along the corridor, the Multi-modal Alternative would implement transit signal priority, improve transit accessibility, and provide a BAT lane. Key elements in this alternative include:

- Transit signal priority (TSP) at signalized intersections
- New shared-use path tunnel under SR 303 at south end of Warren Avenue Bridge
- New shared-use path on Warren Avenue Bridge
- Widened sidewalks north of Warren Avenue Bridge
- Improved bike route along Almira Drive to Warren Avenue Bridge
- Northbound BAT lane north of Callahan Drive to Hollis Street
- New pedestrian connections between neighborhoods and SR 303
- The relocation of bus stops closer to intersections
- New mid-block pedestrian crossing SR 303 at Dibb Street

The Multi-modal Alternative is shown in Figure 57 (pages 6-21 through 6-27).

6.5.3.1 Business Access Transit (BAT) Lane Options

The BAT lane is a key element for this alternative. Several options for BAT lane extents and cross section were evaluated prior to the Second Level Screening. These BAT lane options included:

Extent Option		**Cross Section Options**	
Option A	Sheridan Road to Hollis Street	Option 1	Add a new lane to the east
Option B	Callahan Drive to Hollis Street	Option 1b	Add a new lane and realign to the existing center line
		Option 2	Remove existing TWLTL and shift northbound traffic to the west

The BAT lane cross section options are shown in Figure 56. The BAT lane extent and cross section options were combined and evaluated using similar metrics as were used in the Second Level Screening, which is discussed in Section 6.6, Second Level Screening. The BAT lane option that was ultimately included in the Multi-modal Alternative is Option B2: Callahan Drive to Hollis Street, remove existing TWLTL and shift northbound traffic to the west.

The detailed Second Level Screening results, which include the BAT lane screening results, are available in Appendix K.

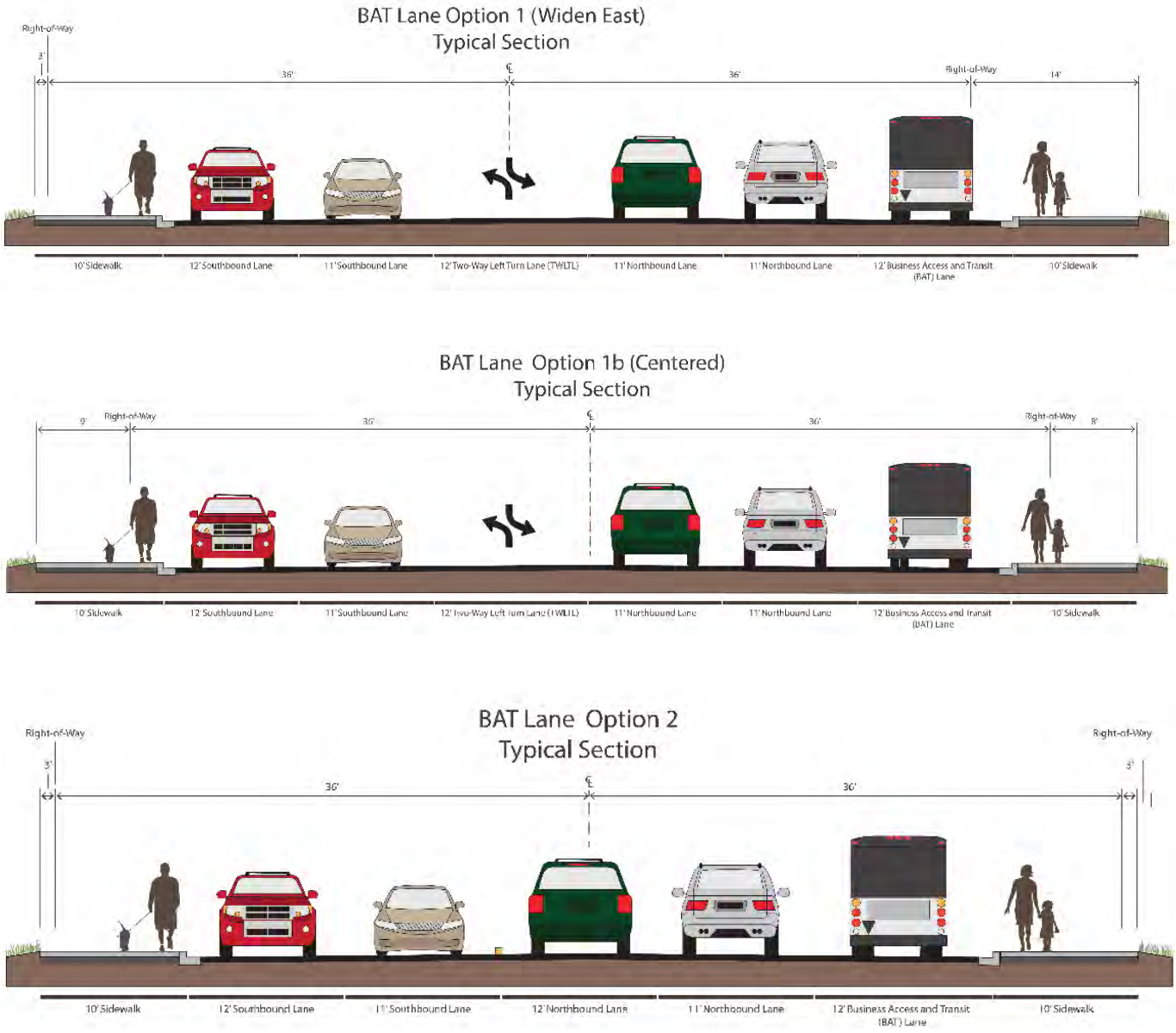
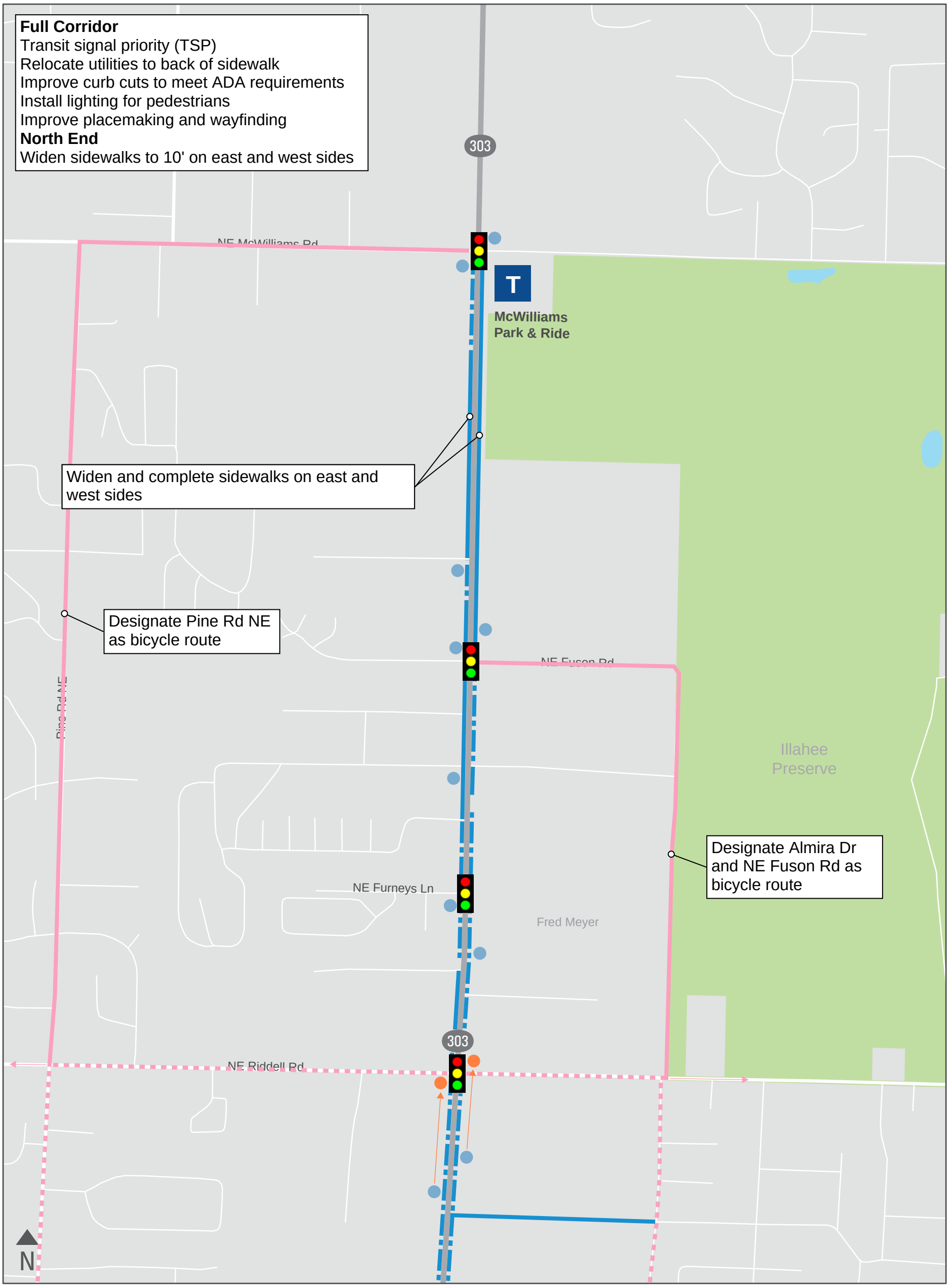


Figure 56. Multi-modal Alternative – BAT Lane Options



SR 303 Corridor Study

Figure 57A. Multi-modal Alternative

Segment 4: NE Riddell Road to NE McWilliams Road

Alternative subject to change

- Existing Bus Stop
- Bus Stop
- Bike Facility per City Plan
- Bike Facility
- Existing Non-Motorized Facility
- Widened Existing Non-Motorized Facility
- Non-Motorized Facility
- Signal Improvement
- Transit Signal Priority (TSP)
- C Curb
- Business Access Transit (BAT) Lane

(This page intentionally left blank)

Full Corridor
Transit signal priority (TSP)
Relocate utilities to back of sidewalk
Improve curb cuts to meet ADA requirements
Install lighting for pedestrians
Improve placemaking and wayfinding
North End
Widen sidewalks to 10' on east and west sides

Relocate bus stops to intersection

Improve pedestrian connectivity from neighborhoods to transit
(Line is representative only. Likely requires land purchase or easement agreements)

Install northbound u-turn at Hollis St

Install bus pullout across from Wheaton Way Transit Center

Improve pedestrian connectivity from neighborhoods to Wheaton Way Transit Center
(Line is representative only. Likely requires land purchase or easement agreements)

Improve pedestrian connectivity from neighborhoods to transit
(Line is representative only. Likely requires land purchase or easement agreements)

Relocate bus stops to intersection

Install ped crossing at Dibb St with ped button

Improve pedestrian connectivity from neighborhoods to transit *(Line is representative only. Likely requires land purchase or easement agreements)*

Northbound business access transit (BAT) lane
Option A: Sheridan Rd to Hollis St
Option B: Callahan Dr to Hollis St
Option 1: Add new lane for BAT lane
Option 2: Remove center lane and shift traffic to the west to accommodate BAT lane

303
Hollis St
E Broad St
Pine Rd NE
Wheaton Way Transit Center
Pearl St
Almira Dr
Sylvan Way
Dibb St
Old East Bremerton High School Gym
N

0 750 1,500 3,000 Feet

Existing Bus Stop
Bus Stop
Bike Facility per City Plan
Bike Facility
Existing Non-Motorized Facility
Widened Existing Non-Motorized Facility
Non-Motorized Facility
Signal Improvement
Transit Signal Priority (TSP)
C Curb
Business Access Transit (BAT) Lane

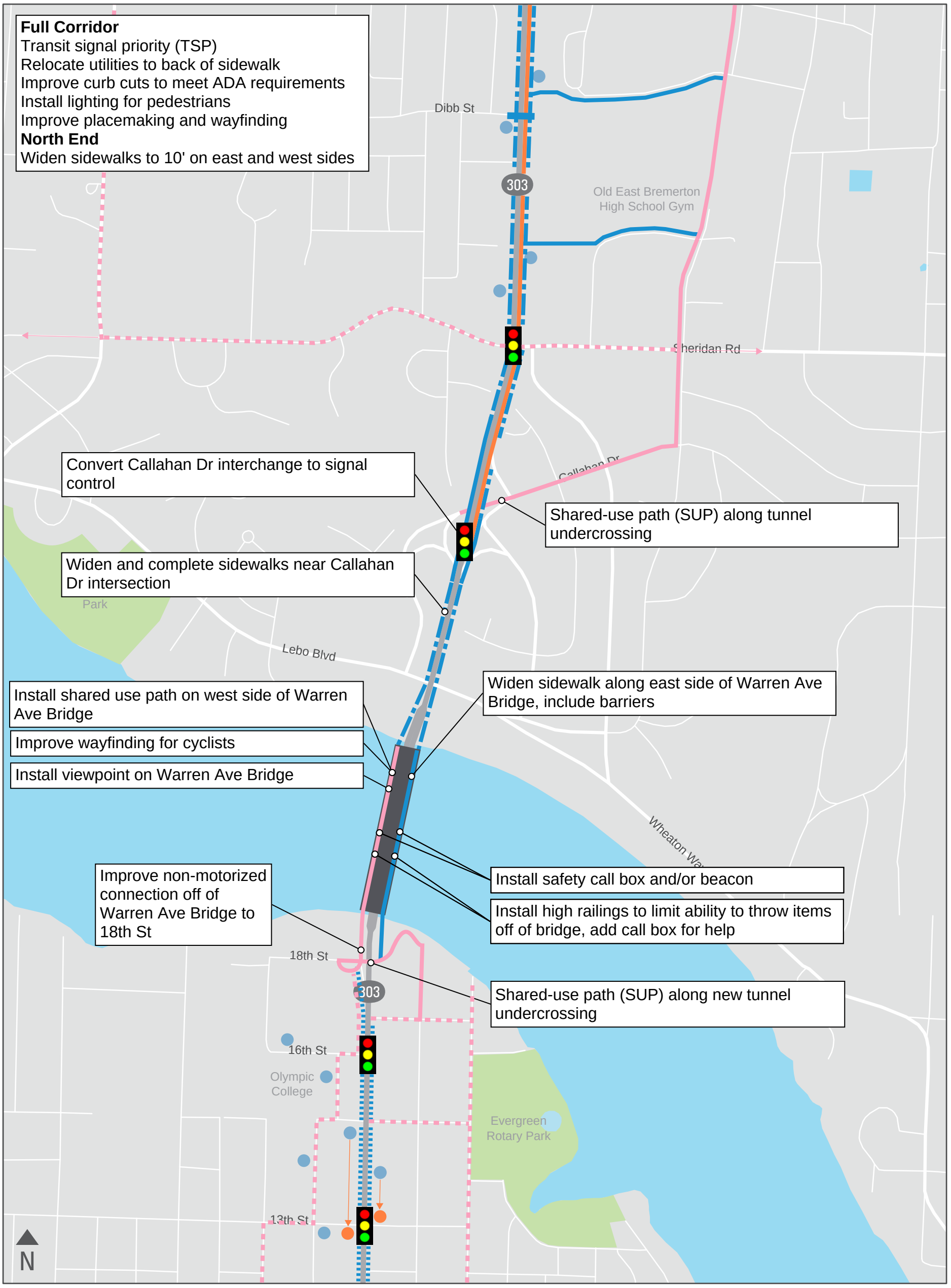
SR 303 Corridor Study

Figure 57B. Multi-modal Alternative

Segment 3: Sheridan Road to NE Riddell Road

Alternative subject to change

(This page intentionally left blank)



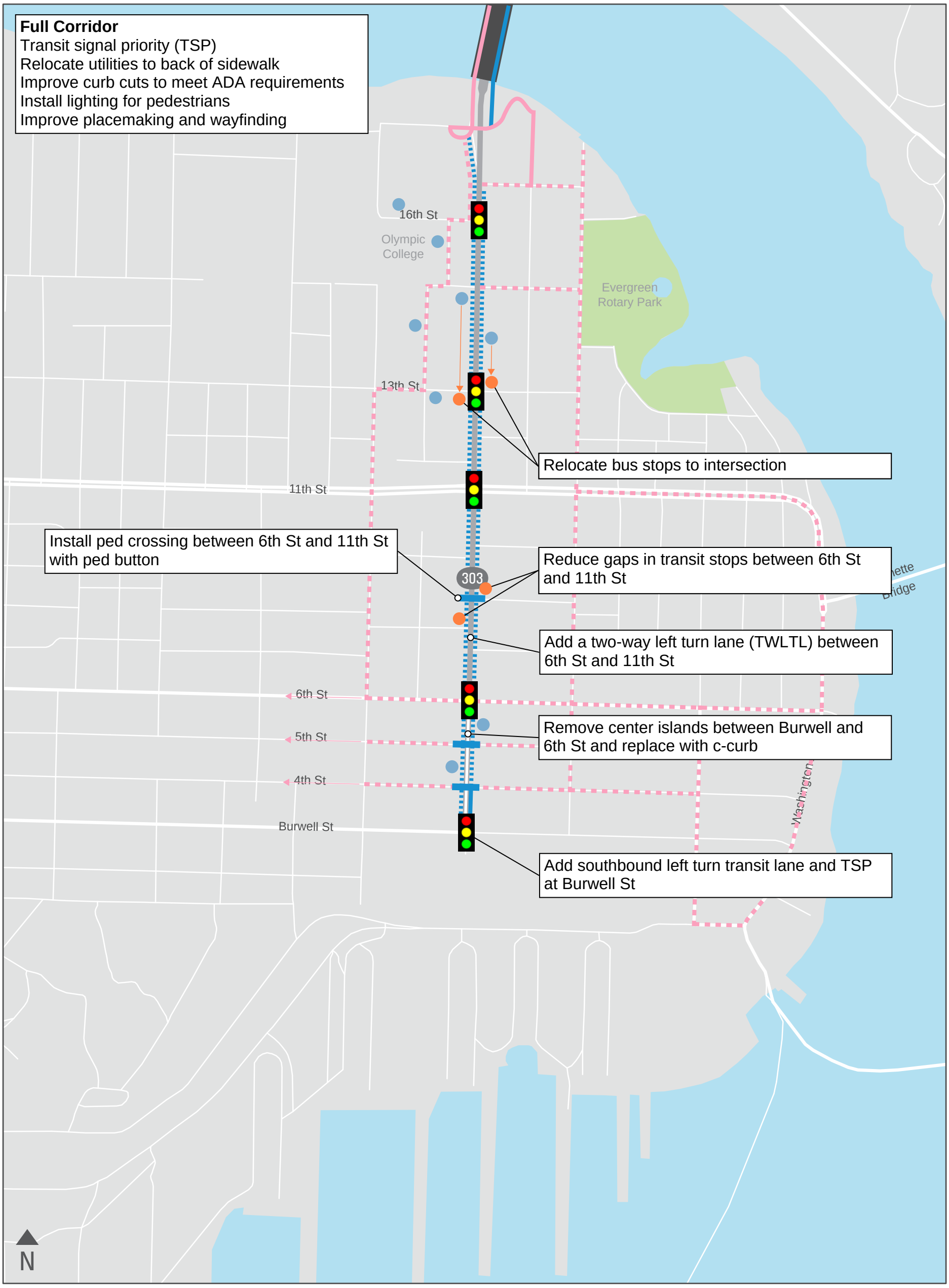
SR 303 Corridor Study

Figure 57C. Multi-modal Alternative

Segment 2: 16th Street to Sheridan Road

Alternative subject to change

(This page intentionally left blank)



Existing Bus Stop
Bus Stop
Bike Facility per City Plan
Bike Facility
Existing Non-Motorized Facility
Widened Existing Non-Motorized Facility
Non-Motorized Facility
Signal Improvement
Transit Signal Priority (TSP)
C Curb
Business Access Transit (BAT) Lane

SR 303 Corridor Study

Figure 57D. Multi-modal Alternative

Segment 1: Burwell Street to 16th Street

Alternative subject to change

(This page intentionally left blank)

6.5.4 Boulevard Alternative

The Boulevard Alternative would improve consistency in corridor context, safety, and pedestrian connectivity. This alternative would build roundabouts to reduce delay and maintain reliability and a center median to control where left turns occur and improve accessibility to transit and businesses. Key elements in this alternative include:

- Roundabouts at key intersections:
  - Burwell Street
  - Callahan Drive
  - Sheridan Road
  - Sylvan Way
  - E Broad Street
  - Hollis Street
  - NE Riddell Road
  - NE McWilliams Road
- New median between Warren Avenue Bridge and NE McWilliams Road to limit left turns
- U-turns at signalized intersections to mitigate impacts to left turns between intersections
- Transit signal priority (TSP) at all signalized intersections
- New pedestrian crossing SR 303 between 6th and 11th Street
- New shared use path on Warren Avenue Bridge
- Widened sidewalks north of Warren Avenue Bridge
- Improved bike route along Almira Drive to Warren Avenue Bridge
- New pedestrian connections between neighborhoods and SR 303
- New pedestrian crossing SR 303 at Dibb Street

The Boulevard Alternative is shown in Figure 58 (pages 6-31 through 6-37).

6.6 Second Level Screening

6.6.1 Second Level Screening Metrics

The Second Level Screening was a more quantitative analysis that measured each alternative's ability to meet the corridor needs. The corridor needs were evaluated using the following metric categories:

- Safety – improve corridor safety
- Non-Motorized – improve pedestrian and bicycle connectivity

- Traffic Operations – improve corridor reliability
- Transit – improve access to transit
- Economic Vitality – increase economic investment

Right of Way was not identified as a corridor need but was included as a metric category. Right of Way refers to how the implementation of an alternative may affect private property and was included as a metric category for Second Level Screening to help understand impacts to the SR 303 corridor.

Each alternative was measured according to the following metrics selected by the SAG and ranked in order of which alternative would provide the most benefit for each metric. For Second Level Screening, alternatives were evaluated for the year 2040. Each study segment was evaluated individually. The segment between NE McWilliams Road and NE Fairgrounds Road was not evaluated.

6.6.1.1 Safety

- **Total Crash Frequency**: The study team used the Crash Modifications Factors Clearinghouse crash reduction factors and the HSM analysis tools to estimate the change in total crash frequency expected after implementation of the alternative.
- **Crash Severity:** The study team used the Crash Modifications Factors Clearinghouse crash reduction factors and the HSM analysis tools to estimate the change in crash severity expected after implementation of the alternative.

6.6.1.2 Non-Motorized

- **Gaps:** Alternatives were evaluated based on the length of improvements to gaps in the existing pedestrian and bicycle facilities along SR 303.
- **Obstructions:** Alternatives were evaluated based on the number of improvements to obstructions in the existing pedestrian and bicycle facilities along SR 303.
- **Walkability:** Alternatives were evaluated based on the increase in the number of marked pedestrian crossings across SR 303.

SR 303 Corridor Study

Figure 58A. Boulevard Alternative

Segment 4: NE Riddell Road to NE McWilliams Road

Alternative subject to change

(This page intentionally left blank)

Full Corridor
Underground utilities
Improve curb cuts to meet ADA requirements
Install lighting for pedestrians
Improve placemaking and wayfinding
North End
Widen sidewalks to 10' on east and west sides
Median control along blocks

Convert NE Riddell Rd signal to roundabout

Improve pedestrian connectivity from neighborhoods to transit
(Line is representative only. Likely requires land purchase or easement agreements)

Convert Hollis St signal to roundabout

Convert E Broad St signal to roundabout

Improve pedestrian connectivity from neighborhoods to Wheaton Way Transit Center
(Line is representative only. Likely requires land purchase or easement agreements)

Convert Sylvan Way signal to roundabout

Install ped crossing at Dibb St with ped button

Improve pedestrian connectivity from neighborhoods to transit *(Line is representative only. Likely requires land purchase or easement agreements)*

303

Riddell Rd

Hollis St

E Broad St

Pine Rd NE

T

Wheaton Way
Transit Center

Pearl St

Almira Dr

Sylvan Way

Dibb St

Old East Bremerton
High School Gym

Sheridan Rd

N

0 750 1,500 3,000 Feet

Existing Bus Stop
Bike Facility per City Plan
Bike Facility
Existing Non-Motorized Facility
Widened Existing Non-Motorized Facility
Non-Motorized Facility
Roundabout
Signal Improvement
Transit Signal Priority (TSP)
Median

SR 303 Corridor Study

Figure 55B. Boulevard Alternative

Segment 3: Sheridan Road to NE Riddell Road

Alternative subject to change

(This page intentionally left blank)

Full Corridor
Underground utilities
Improve curb cuts to meet ADA requirements
Install lighting for pedestrians
Improve placemaking and wayfinding
North End
Widen sidewalks to 10' on east and west sides
Median control along blocks

Convert Sheridan Rd signal to roundabout

Roundabout at Callahan Dr
(Final connections to be refined in analysis)

Shared-use path (SUP) along tunnel undercrossing

Widen and complete sidewalks near Callahan Dr intersection

Install shared use path on both sides of Warren Ave Bridge

Improve wayfinding for cyclists

Install viewpoint on Warren Ave Bridge

Improve non-motorized connection off of Warren Ave Bridge to 18th St

Install safety call box and/or beacon

Install high railings to limit ability to throw items off of bridge, add call box for help

Remove northbound add lane at 17th and require a t-intersection for right turns

Dibb St
303
Old East Bremerton High School Gym
Sheridan Rd
Callahan Dr
Park
Lebo Blvd
Wheaton Way
18th St
17th St
16th St
Olympic College
Evergreen Rotary Park
13th St
N

0 750 1,500 3,000 Feet

Existing Bus Stop
Bike Facility per City Plan
Bike Facility
Existing Non-Motorized Facility
Widened Existing Non-Motorized Facility
Non-Motorized Facility
Roundabout
Signal Improvement
Transit Signal Priority (TSP)
Median

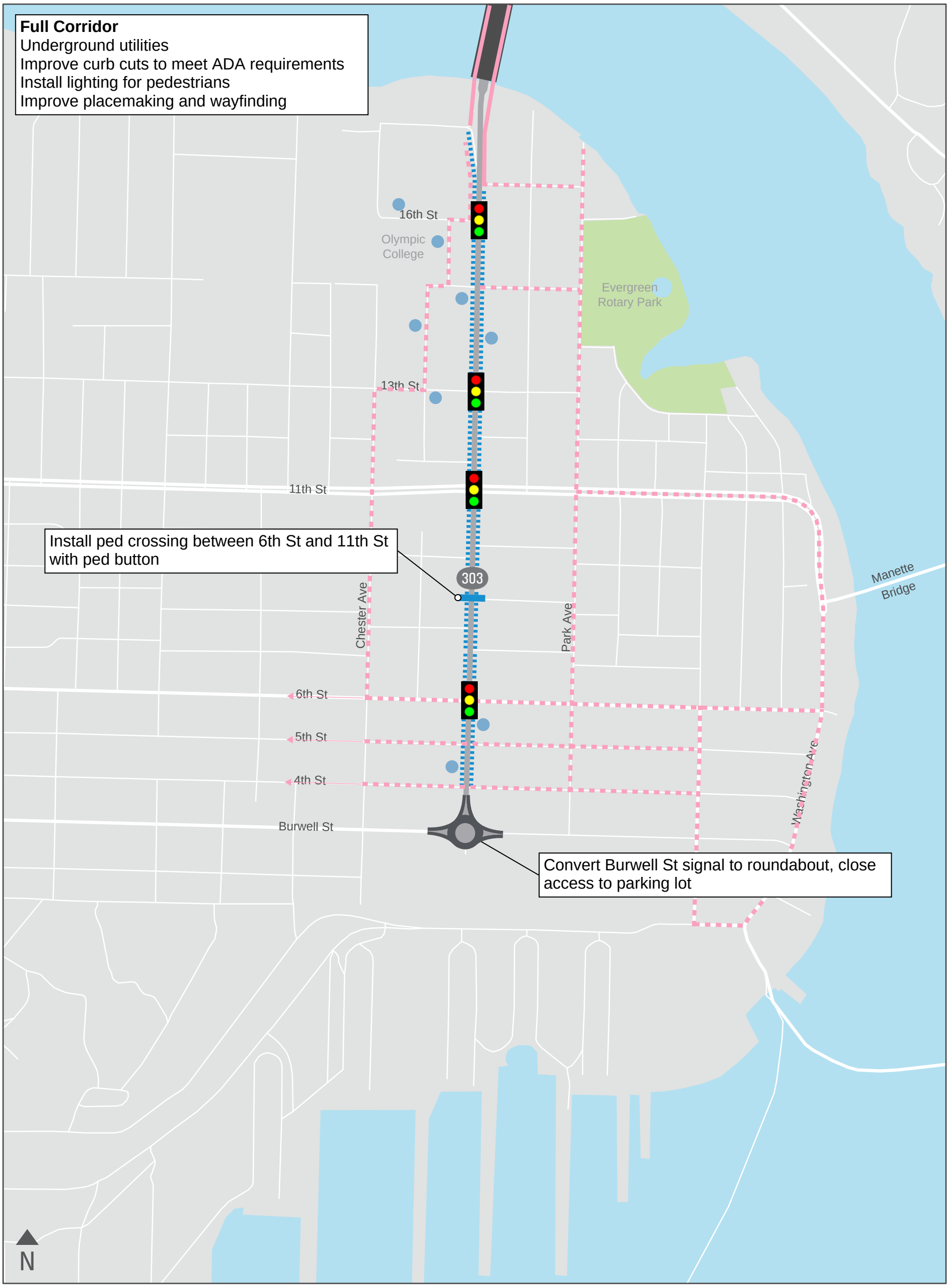
SR 303 Corridor Study

Figure 58C. Boulevard Alternative

Segment 2: 16th Street to Sheridan Road

Alternative subject to change

(This page intentionally left blank)



SR 303 Corridor Study

Figure 58D. Boulevard Alternative

Segment 1: Burwell Street to 16th Street

Alternative subject to change

(This page intentionally left blank)

Traffic Operations

The peak direction for the peak hour was evaluated as it represents the direction and time period of travel with the highest delay. For the SR 303 corridor, the peak direction is northbound and the peak hour is the PM peak hour.

- **Segment Delay:** Alternatives were modeled for the northbound 2040 PM peak hour in Synchro and Sidra. Delay data (in seconds) was pulled from this modeling software and alternatives were ranked based on intersection and travel time delay for each segment.
- **Person Mobility:** Person mobility is the ratio of people by mode compared to the travel time by mode. The number of people traveling along SR 303 was estimated using an average vehicle occupancy of 1.13 passengers per car. Travel time was estimated using the segment delay calculated for each alternative for the northbound 2040 PM peak hour.
- **Freight Access:** Alternatives were evaluated based on the number of existing freight routes that could be potentially redirected after implementation of the alternative.

Transit

- **Accessibility:** Alternatives were evaluated qualitatively based on whether the proposed improvements would reduce the walking distance between transit facilities and neighborhoods.
- **Person Mobility:** Person mobility is the ratio of people by mode compared to the travel time by mode. The number of transit riders traveling along SR 303 was estimated based on data from Kitsap Transit. Travel time was estimated using the segment delay calculated for each alternative for the northbound 2040 PM peak hour as well as additional delay at bus stops.

Right of Way

- **Property Impacts:** Alternatives were evaluated based on the number of properties impacted by the alternative that would require some level of property purchase. This metric was scored based on preliminary design layouts and acquisition costs based on approximate property values.
- **Property Acquisitions:** Alternatives were evaluated based on the number of properties impacted by the alternative that would require full property acquisition. This metric was scored based on preliminary design layouts and acquisition costs based on approximate property values.

Economic Vitality

- **Adjacent Property Values:** Alternatives were evaluated based on how they might improve, have no effect on, or degrade property values. The potential change in property value was calculated based on similar projects in the region.
- **Access to Business:** Alternatives were evaluated qualitatively based on how access to existing business would be impacted after implementation of the alternative.

The Second Level Screening Methodology Memo includes more detailed information on the metrics used and is available in Appendix K.

6.6.2 Second Level Screening Results

For each of the four study segments along the SR 303 corridor, each alternative was ranked in order of which would provide the most benefit for each metric. These scores were then combined for each metric category for the overall SR 303 corridor. The final Second Level Screening scores are shown in Figure 59. This figure

uses an open circle to denote the lowest rating and a full circle to denote the highest rating. The dollar signs represent the estimated cost ranges, which are discussed in Section 6.6.3, Cost Ranges, below.

For the overall corridor, the Boulevard Alternative performed the best.

Alternative	Cost	Safety	Non-Motorized	Traffic Operations	Transit	Right of Way	Economic Vitality	TOTAL
No Build		◔	○	◔	○	●	○	○
Traffic Management	$	◕	◔	●	◔	◕	◔	◔
Multi-modal	$$	◕	◕	◕	●	◔	◕	◕
Boulevard	$$$	●	●	●	◕	○	●	●

○ Lowest Rating → ● Highest Rating

Figure 59. Second Level Screening Results Summary

The detailed Second Level Screening results are available in Appendix L. Many of the metrics used in the Second Level Screening were analyzed quantitatively. Additional documentation is included in Appendix L for following metric categories:

- Safety – HSM spreadsheets
- Traffic Operations – Synchro and Sidra reports
- Economic Vitality – Economic Vitality Impacts of Build Alternatives Memo

6.6.3 Cost Ranges

Preliminary cost ranges were estimated for each of the three Build Alternatives. These cost ranges were estimated based on preliminary design layouts and planning-level cost estimates. Cost ranges were calculated for each of the four study segments and were classified as low, medium, or high. These cost ranges were not used in the Second Level Screening process but were developed to facilitate the discussion in choosing a SPA.

The preliminary cost ranges for the Build Alternatives are shown in Figure 60.

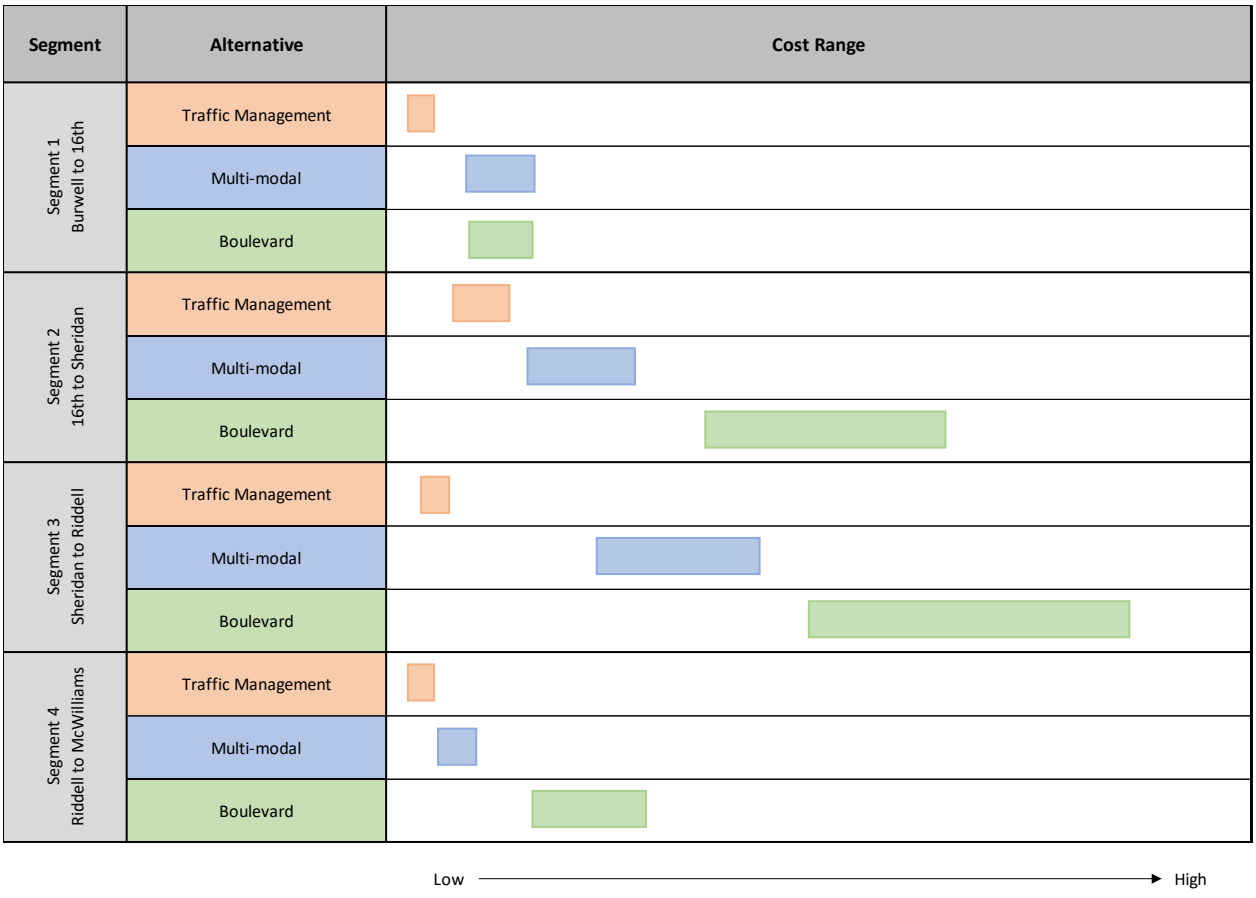


Figure 60. Build Alternative Cost Ranges

6.7 Study Preferred Alternative Development

Following Second Level Screening and with feedback from the SAG and from the virtual open house public input, a preferred preliminary alternative (PPA) was developed. The PPA was developed using a combination of elements from the Build Alternatives that were evaluated during Second Level Screening and recommended by members of the SAG.

Though the Boulevard Alternative scored the best in meeting the corridor needs, it was also expected to have the highest cost. The Multi-modal Alternative scored the second best during the Second Level Screening and was selected by the SAG as the baseline for the PPA. Additional elements from the other Build Alternatives were added to improve safety and non-motorized facilities. Modifications to the Multi-modal Alternative include:

- Adaptive signal control at signalized intersections
- Roundabouts where reasonable to provide corridor reliability improvements
- Medians between intersections with the ability to maintain business access
- Additional mid-block pedestrian crossings with refuge islands
- Improvements to the 11th Street intersection to include a roundabout

The PPA was presented to the public during the virtual open house in July 2020. Using the feedback from the open house and further discussions with the SAG, the PPA was refined to become the SPA, presented earlier

in Section 1.4, Study Preferred Alternative. This section provides more detail on how the SPA was developed and divided into projects and phases.

6.7.1 Considerations

In developing the PPA and SPA, additional consideration was required for some segments and intersections along the SR 303 corridor. The additional analysis and discussion for the following areas is documented in this section.

- Burwell Street to 6th Street
- 11th Street intersection
- 11th Street to Warren Avenue Bridge
- Callahan Drive intersection
- NE Furneys Lane intersection
- NE Fairgrounds Road extension

Burwell Street to 6th Street

The existing center median between Burwell Street and 6th Street was installed to provide a refuge area for bicycles and pedestrians who use the 4th and 5th Street corridors. The Multi-modal Alternative proposed removing the existing median to accommodate a second northbound through lane on Warren Avenue between Burwell Street and 6th Street. Further analysis was done to determine if this should be included in the PPA. The project team also evaluated concepts suggested by the public. The Burwell to 6th Street Memo is included in Appendix M.

The following improvements were recommended to be included in the SPA for the SR 303 Corridor Study. These improvements will be further considered and evaluated as part of the City of Bremerton's Joint Compatibility Transportation Plan (JCTP).

- Replace the existing median between 4th Street and 6th Street with a second northbound lane
- Add either a rectangular rapid-flashing beacon or a pedestrian hybrid beacon at 4th Street and 5th Street

11th Street Intersection

The 11th Street intersection is a key intersection on the SR 303 corridor and required additional consideration.

The Multi-modal Alternative did not propose any improvements to the 11th Street intersection. The Traffic Management Alternative proposed a third eastbound left-turn lane, which would improve delay and congestion but would have significant impacts on the adjacent houses and park. A workshop was held in May 2020 with WSDOT and City staff to discuss additional improvements to the 11th Street intersection, including a roundabout and a flyover ramp for the eastbound left movement. A roundabout was determined to be the preferred intersection control at the 11th Street intersection. The roundabout concept was selected because it would provide the necessary mobility improvements, more readily fit the local context, and provide sustainability.

The 11th Street Intersection Alternative Comparison White Paper is included in Appendix M.

11th Street to Warren Avenue Bridge

During the development of the SPA, several stakeholders requested additional improvements between 11th Street and Warren Avenue Bridge be evaluated for inclusion in the SPA. Four additional improvements were proposed, including:

- Closing the 18th Street southbound access ramp onto SR 303
- Extending the length of the northbound left turn pocket at the 16th Street intersection
- Widening sidewalks on both sides of SR 303 to 10 feet between 11th Street and Warren Avenue Bridge
- Providing a TWLTL between 11th Street and 16th Street

Closing the 18th Street southbound access ramp is expected to improve safety by eliminating a conflict point for southbound traffic on SR 303 and removing the southbound weaving movement between 18th Street and SR 303. This improvement is not expected to have negative impacts to traffic operations at the 16th Street intersection and was recommended to be included in the SPA. Closure of the 18th Street southbound access ramp and realignment of traffic to 16th Street will require continued coordination with the neighborhood, Olympic College, WSDOT, and the City.

The northbound left-turn lane at the 16th Street intersection is currently 75 feet long. Northbound left-turn queues frequently extend beyond the available storage capacity. It is recommended that the northbound left-turn pocket be extended to 275 feet to adequately serve the expected queue for the year 2040 PM peak hour. Additional right-of-way would be required on the west side of the SR 303 corridor.

Widening sidewalks on both sides of SR 303 between 11th Street and the Warren Avenue Bridge would require significant right-of-way impacts in some areas. It is recommended that sidewalks be widened to 10 feet on both sides between 17th Street and Warren Avenue Bridge with a 3-foot buffer included on the east side only. It is also recommended to include 10-foot-wide sidewalks on the west side of SR 303 between 13th Street and 17th Street.

The segment of sidewalk on the east side of SR 303 between 17th Street and 150 feet south of 16th Street is used by many pedestrians. Future planning efforts should consider adding a barrier or buffer between the existing sidewalk and the traveled way for pedestrian comfort. Additionally, raising the height of the curb and sidewalk would improve drainage and delineation.

Providing a TWLTL between 11th Street and 16th Street is not recommended as it would not provide benefits to safety and the expected right-of-way impacts and cost would outweigh any benefits associated with this improvement.

The 11th Street to Warren Avenue Bridge Memo is included in Appendix M.

Callahan Drive Intersection

The Multi-modal Alternative included a new signalized intersection at Callahan Drive. While this new signal was expected to provide safety improvements by slowing down vehicles traveling to and from the Warren Avenue Bridge, the signal would also add delay to general purpose vehicles and transit.

The Boulevard Alternative included a new roundabout at Callahan Drive. The study team consulted a WSDOT roundabout expert for strategic advice and recommendations, and a roundabout was determined to be the preferred intersection control at Callahan Drive. In conjunction with the northbound BAT lane being provided as part of the SPA, the roundabout is proposed to include a northbound queue jump for transit to be able to enter the roundabout before general purpose vehicles. Further coordination with WSDOT and Kitsap Transit will outline when this feature would be beneficial and how it would be managed.

NE Furneys Lane Intersection

During the development of the SPA, some stakeholders expressed interest in improving the experience of active transportation users when crossing the NE Furneys Lane intersection. Additional improvements were proposed to decrease the walking distance across the intersection or provide more walk time to pedestrians, including:

- Removing the northbound right-turn lane and the receiving lane on the east leg
- Constructing a pedestrian refuge island on the east leg
- Adding a leading pedestrian interval to the signal timing
- Realigning the east leg to better align with the west leg

In the Future No Build Conditions, analysis results show the northbound 95th percentile queue length is expected to spill back into the NE Riddell Road intersection. Removing the northbound right-turn lane would cause the northbound 95th percentile queue length to increase and would cause the northbound approach to decrease from LOS E to LOS F. This improvement is not recommended.

Constructing a pedestrian refuge island on the east leg without realigning the east leg would also provide marginal benefits to pedestrians. Adding a leading pedestrian interval to the signal timing and realigning the east leg together would provide more benefits to pedestrians. The leading pedestrian interval would provide more visibility and reduce conflicts between pedestrians and vehicles. Realigning the east leg to better align with the west leg and removing one of the receiving lanes on the east leg would reduce the crossing distance for pedestrians.

The Furneys Lane Intersection Configuration Memo is included in Appendix M.

NE Fairgrounds Road Extension

The segment between NE McWilliams Road and NE Fairgrounds Road was not included in the SR 303 Corridor Study until after the Second Level Screening was completed; therefore, it was not included in either the Traffic Management, Multi-modal, or Boulevard Alternatives. Concepts for this segment were analyzed as part of a separate Future Build Conditions.

In the Future No Build Conditions for the 2040 PM Peak, both the NE Bentley Drive and NE Fairgrounds Road intersections operate at LOS D. The southbound 95th percentile queues at both intersections are fairly long, with 1,200 feet at NE Bentley Drive and 950 feet at NE Fairgrounds Road.

For the Future Build Conditions, roundabouts were analyzed at both intersections. The proposed roundabouts were modeled to improve delay and queue lengths compared to the Future No Build Conditions. The proposed roundabout at NE Bentley Drive would reduce northbound and southbound queue lengths to 470 feet and the proposed roundabout NE Fairgrounds Road would reduce northbound and southbound queue lengths to 370 and 350 feet, respectively.

Both intersections operate within WSDOT thresholds for LOS in the Existing and Future No Build Conditions, so roundabouts are not required for traffic operations. Roundabouts would provide a sustainable traffic operations improvement and would fulfill the corridor needs for safety and reliability for the SR 303 Corridor Study and were recommended for the SPA. Kitsap County and WSDOT were advised to reconsider the intersection control at these two intersections if any changes to land use and residential density are expected to increase the traffic demand.

The PM peak hour traffic operations results for NE Bentley Drive and NE Fairgrounds Road are included in Appendix M.

Almira Drive Bicycle Facilities

Almira Drive between Sheridan Road and NE Riddell Road was identified by the public as an important route for the bicycle network. This is also consistent with the City of Bremerton Non-Motorized Transportation Plan and the Kitsap County NMP. Almira Drive runs parallel to SR 303 and would allow bicyclists to have a designated north-south route that is separate from the busy SR 303 corridor. East-west connections could be made to SR 303 along Sheridan Road, Sylvan Way, and NE Riddell Road. In order to provide these bicycle facilities, the roadway footprint would likely need to be expanded, which would include roadway widening and stormwater improvements in addition to the bicycle striping. The City will continue to refine the project requirements and cost estimate through the design and implementation stages.

6.7.2 Study Preferred Alternative Analysis

The SPA was evaluated using the metrics from Second Level Screening to determine how well it meets the corridor needs. Similar to Second Level Screening, the SPA and the other Build Alternatives were ranked in order of which would provide the most benefit for each metric. These scores were then combined for each metric category for the overall SR 303 corridor. The SPA Analysis scores are shown in Figure 61. This figure uses an open circle to denote the lowest rating and a full circle to denote the highest rating. The dollar signs represent the estimated cost ranges, which are discussed in Section 6.6.3, Cost Ranges.

For the overall corridor, the SPA performed second best after the Boulevard Alternative. Though the Boulevard Alternative scored the best in meeting the corridor needs, it was also expected to have the highest cost. The SPA provides the most benefit to safety and non-motorized facilities and provides the second most benefit to traffic operations and economic vitality.

Alternative	Cost	Safety	Non-Motorized	Traffic Operations	Transit	Right of Way	Economic Vitality	TOTAL
No Build		○	○	◕	◔	●	○	○
Traffic Management	$	◑	◔	●	◕	◕	◔	◑
Multi-modal	$$	◔	◑	◑	●	◑	◑	◔
Boulevard	$$$	◕	◕	●	●	◔	●	●
Preferred	$$	●	●	◕	◑	○	◕	◕

○ Lowest Rating → ● Highest Rating

Figure 61. Study Preferred Alternative Analysis Results Summary

The detailed SPA Analysis results are available in Appendix N. Many of the metrics used in the SPA Analysis were analyzed quantitatively. Additional documentation is included in Appendix N for the following metric categories:

- Safety – HSM spreadsheets
- Traffic Operations – Synchro and Sidra reports
- Economic Vitality – Potential Economic Vitality Impacts of SR 303 Corridor Alternatives Memo

The northbound and southbound travel time results for the SPA PM peak are shown in Table 18. Synchro reports are included in Appendix N.

As shown in Table 18, the overall travel times for the SPA 2040 PM peak hour are expected to decrease compared to the Future No Build 2040 PM peak hour. The travel time in the northbound direction and southbound direction is expected to decrease by one minute. While the overall travel time decreases, some segments have travel times that stay the same or increase. Some travelers will experience a small increase in travel time due to the required U-turns along the corridor. This travel time delay is offset by the improvement in traffic flow along the corridor and the safety improvements associated with replacing the TWLTL with a center median.

Table 18. Study Preferred Alternative Travel Time

	Segment	Future No Build Horizon 2040		Build Horizon 2040	
		PM Peak Hour		PM Peak Hour	
		Northbound Travel Time (minutes)	Southbound Travel Time (minutes)	Northbound Travel Time (minutes)	Southbound Travel Time (minutes)
1	Burwell Street to 16th Street	6.7	6.8	5.0	5.3
2	16th Street to Sheridan Road	3.2	2.0	4.1	2.3
3	Sheridan Road to NE Riddell Road	4.6	3.8	4.6	3.8
4	NE Riddell Road to NE McWilliams Road	4.0	2.5	4.3	3.6
5	NE McWilliams Road to NE Fairgrounds Road	2.3	2.1	1.7	1.2
	TOTAL:	**20.7**	**17.1**	**19.7**	**16.2**

6.7.3 Phasing

The improvements included in the SPA were divided into project combinations across the five study segments as well as outside the corridor limits. Improvements were grouped together into what could be considered reasonable construction packages, with consideration given to limiting the number of times a section of roadway would be reconstructed.

The project combinations were then scored based on the following three criteria. For each criterion, a score of 1, 2, or 3 was assigned. The Need Priority score was then doubled. These scores were added up for a maximum score of 12.

- **Need Priority:** This criterion assessed how necessary the project is based on the corridor need or needs the project fulfills. A score of 3 was assigned to projects that are high need while a score of 1 was assigned to projects that are low need.
- **Cost Level:** This criterion assessed the cost level of the project. These cost levels were estimated based on preliminary design layouts and planning-level cost estimates. A score of 3 was assigned to a project that would be a low cost (less than $500,000), a score of 2 was assigned to a project that would be medium cost (between $500,000 and $5 million), and a score of 1 was assigned to a project that would be high cost (greater than $5 million).
- **Ease of Implementation:** This criterion assessed how difficult it would be to construct the project based on limitations such as funding and/or acquiring right-of-way. A score of 3 was assigned to projects that could be implemented within 5 years while a score of 1 was assigned to projects that could be implemented more than 10 years from now.

The total scores assigned to each project were used as a baseline for grouping projects into phases. Early phases include projects that will provide much-needed benefits at lower costs. For example, TSP and

mid-block pedestrian crossings are relatively low-cost improvements that provide benefits to mobility, access to transit, and safety. Early phases also include larger capital projects that meet immediate needs, such as widening shared-use paths across the Warren Avenue Bridge and constructing a roundabout at the 11th Street intersection which operates at LOS F in the Existing Conditions PM peak hour.

The project combinations and phasing analysis results are included in Appendix O.

(This page intentionally left blank)

7. NEXT STEPS

The purpose of this study was to assess constraints on the SR 303 corridor and provide prioritized potential projects that will help meet the corridor needs. The proposed phasing plan includes short-term and long-term improvements that will provide benefits to all users along the SR 303 corridor.

Using the SR 303 Corridor Study, the City, County, and WSDOT will:

- Work with Kitsap Transit to plan for transit accessibility improvements, transit service improvements, and transit infrastructure improvements along the corridor
- Continue to monitor needs along the corridor to ensure each proposed project phase meets those needs
- Continue to engage the public to refine and improve the proposed project phases
- Identify and apply for various funding sources for each project phase along the corridor
- Continue to consider construction phasing packages based on needs and funding availability

The City may also:

- Create a corridor sketch-level design layout for improvements within City limits, that utilizes updated survey data and base maps to refine designs to maximize benefit and limit right-of-way impacts

Low-cost corridor enhancements could occur as soon as 2025. Longer-term projects that may require property acquisition and environmental review could take longer to implement. All projects could be completed by 2045.

7.1 Ongoing Study Roles and Responsibilities

It is anticipated that the SAG members for this study, including the City, WSDOT, Kitsap County, Kitsap Transit, Suquamish Tribe, Naval Base Kitsap, Olympic College, and Kitsap Public Health District, will continue to coordinate during the design and implementation stages for the proposed improvements. Coordination between the City of Bremerton, WSDOT, Kitsap County, Naval Base Kitsap, and Kitsap Transit will continue as funding sources are identified and pursued.

7.2 Ongoing Public Involvement

Just as public involvement helped shape the outcome of the SR 303 Corridor Study, ongoing public involvement will be critical to the corridor's future planning, design, and development.

As discussed in Section 6.7.1, Considerations, above, several improvements in the SPA and additional improvements that were recommended during the development of the SPA may require additional consideration and coordination. These improvements should continue to be considered and analyzed during the design stages. Consistent with the community engagement for this study, future phases of study will need to actively provide opportunities for the public and corridor stakeholders to provide comments and input. All community engagement during the design and implementation stages will need to closely follow National Environmental Policy Act (NEPA) and Washington State Environmental Policy Act (SEPA) procedures related to public involvement.

7.3 Future Studies

As discussed in Section 2, Corridor Planning History, additional studies along the SR 303 corridor are being completed now or in the near future.

SR 303 Warren Avenue Bridge Pedestrian Improvement Design

The SR 303 Corridor Study has made recommendations for active transportation facilities on and leading up to the Warren Avenue Bridge that should guide the final design.

City of Bremerton Eastside Employment Center EIS

Any land use changes related to the Eastside Employment Center will depend on investments in the area, which could affect the timing of the lower Wheaton Way realignment. This realignment affects the proposed bicycle facilities that connect to Spruce Avenue north of Sheridan Road included in the SR 303 Corridor Study improvements. If the SR 303 Corridor Study bicycle facilities are constructed before the lower Wheaton Way realignment, the City will work to determine if a temporary connection between Callahan Drive and Sheridan Road would be needed.

City of Bremerton Joint Compatibility Transportation Plan (JCTP)

The JCTP will review the work completed in the SR 303 Corridor Study to determine if other City of Bremerton roadway network improvements would modify recommendations from the SR 303 Corridor Study. This could include resizing the proposed roundabout at 11th Street, finalizing recommendations for median treatments on Warren Avenue at 4th Street and 5th Street, or policy modifications that would adjust bus stop locations. These are just some examples of considerations that will be made during the JCTP study process.

City of Bremerton Comprehensive Plan 2024

Recommendations included in the SR 303 Corridor Study will be reviewed to determine if changes to the Transportation Element of the Comprehensive Plan will be needed to address the City's goals.

8. REFERENCES

AASHTO (American Association of State Highway and Transportation Officials). 2014. Highway safety manual, first edition, 2014 Supplement. Washington D.C.

City of Bremerton. 2007. Bremerton Non-Motorized Transportation Plan. Prepared by Parametrix and Alta Planning & Design. <https://www.bremertonwa.gov/DocumentCenter/View/840/Non-Motorized-Transportation-Plan-PDF>.

City of Bremerton. 2015. SR-303 Warren Avenue Bridge proposal for ADA compliant upgrade.

City of Bremerton. 2016a. Warren Avenue Bridge Feasibility Study Workshop Summary. Prepared by Exeltech Consulting, Inc., Lacey, Washington. August 18, 2016.

City of Bremerton. 2016b. City of Bremerton Comprehensive Plan. City of Bremerton comprehensive plan. May 2016. https://www.bremertonwa.gov/DocumentCenter/View/3818/2016-Comprehensive-Plan-PDF.

Community Attributes. 2019. Baseline Economic Assessment for SR 303 Corridor. Seattle, Washington. September 10, 2019.

Kitsap County. 2013. Kitsap County Non-Motorized Facility Plan. Adopted December 2, 2013; Maps Amended December 11, 2018.

Kitsap County. 2016. Kitsap County Comprehensive Plan. Adopted June 2016 with revisions through April 2020.

Perteet. 2018. Wheaton Way (SR 303) and E Broad Street Intersection Control Analysis. Memorandum by Perteet dated November 21, 2018, to City of Bremerton.

WSDOT (Washington State Department of Transportation). 2017. Mobility assessment for segment of corridor 314. <https://www.bremertonwa.gov/DocumentCenter/View/6215/SR-303-Corridor-Sketches-PDF>.

WSDOT. 2018. SR 303 Corridor sketch summary. <https://wsdot.wa.gov/sites/default/files/2019/01/08/CSS314-SR303-SR304JctBremerton-SR3JctSilverdale.pdf>.

WSDOT and FHWA (Washington State Department of Transportation and Federal Highway Administration). 2002. State Route 303 Bremerton to Silverdale Transportation Corridor Study. In partnership with City of Bremerton, Kitsap County, and Kitsap Transit. Olympic Region Washington State Department of Transportation. June 2002.

United States Department of Commerce. United States Census Bureau. USCB 2018. American Community Survey 2013-2017 5-Year Estimates. <https://www.census.gov/newsroom/press-kits/2018/acs-5year.html>.

(This page intentionally left blank)