Pacific Avenue || SR 7 Corridor
HIGH CAPACITY TRANSIT
FEASIBILITY STUDY

Environmental Critical Issues Report

August 24, 2018

Deliverable Task 9.1

Prepared for:

Pierce Transit

Prepared by:

wsp

Historical Research Associates, Inc.

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Acronyms and Abbreviations

ADT	Average daily traffic
API	Application programming interface
APE	Area of Potential Effects
BAT	Business access and transit
BRT	Bus Rapid Transit
CE	Categorical exclusion
CT	Census tract
DAHP	Washington State Department of Archaeology and Historic Preservation
DCE	Documented categorical exclusion
EA	Environmental assessment
EIS	Environmental impact statement
FTA	Federal Transit Administration
GIS	Geographic Information System
GLO	General Land Office
HCT	High Capacity Transit
HRA	Historical Research Associates, Inc.
I-5	Interstate 5
LEP	Limited English proficiency
LPA	Locally preferred alternative
LRT	Light rail transit
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PSRC	Puget Sound Regional Council
RCW	Revised Code of Washington
TSP	Traffic signal priority
USDOT	U.S. Department of Transportation
USGS	United States Geologic Survey
USSG	U.S. Surveyor General
v/c	Volume to capacity
WISAARD	Washington State Information System for Architecture and Archaeological Records Data
WSDOT	Washington State Department of Transportation
WSHR	Washington State Heritage Register

1 INTRODUCTION

Pierce Transit, working in partnership with the City of Tacoma, Pierce County, Washington State Department of Transportation (WSDOT), Sound Transit, Puget Sound Regional Council (PSRC), and other agencies, is conducting a high capacity transit (HCT) study of an approximately 14-mile corridor along Pacific Avenue/State Route (SR) 7 between downtown Tacoma and Spanaway (Figure 1). This corridor is currently served by the Route 1, which has Pierce Transit's highest fixed route ridership (nearly 20 percent of the fixed route system) with almost 1.7 million passenger boardings in 2016. Pierce Transit's *Destination 2040 Long Range Plan*, Sound Transit's *ST3 Plan*, and PSRC's *Regional Transportation Plan* all identify this corridor for potential HCT service.

Currently, it is assumed that future transit improvements in the corridor would be, at least in part, federally funded by the Federal Transit Administration (FTA). To receive federal funding requires compliance with the FTA's policies and procedures for implementing the National Environmental Policy Act of 1969 as amended (NEPA) (23 CFR part 771). The purpose of this Environmental Critical Issues Report is to evaluate the project's conceptual alternatives for a select set of environmental resources that may be affected or has specific regulatory protection to:

- Support the alternatives analysis process and selection of the Locally Preferred Alternative (LPA)
- Assist the FTA's determination of the project's NEPA class of action and inform the work that would be required to complete the NEPA process
- Support the project's future NEPA documentation

1.1 PURPOSE AND NEED

The purpose and need statement is a critical element of the study as it documents what Pierce Transit intends to accomplish with the project (purpose) and the problems affecting the current service that the project would address (need). In addition to the purpose and need statement 12 goals and 48 evaluation measures, linked to the project purpose, were developed to evaluate project alternatives.

The need for the project results from:

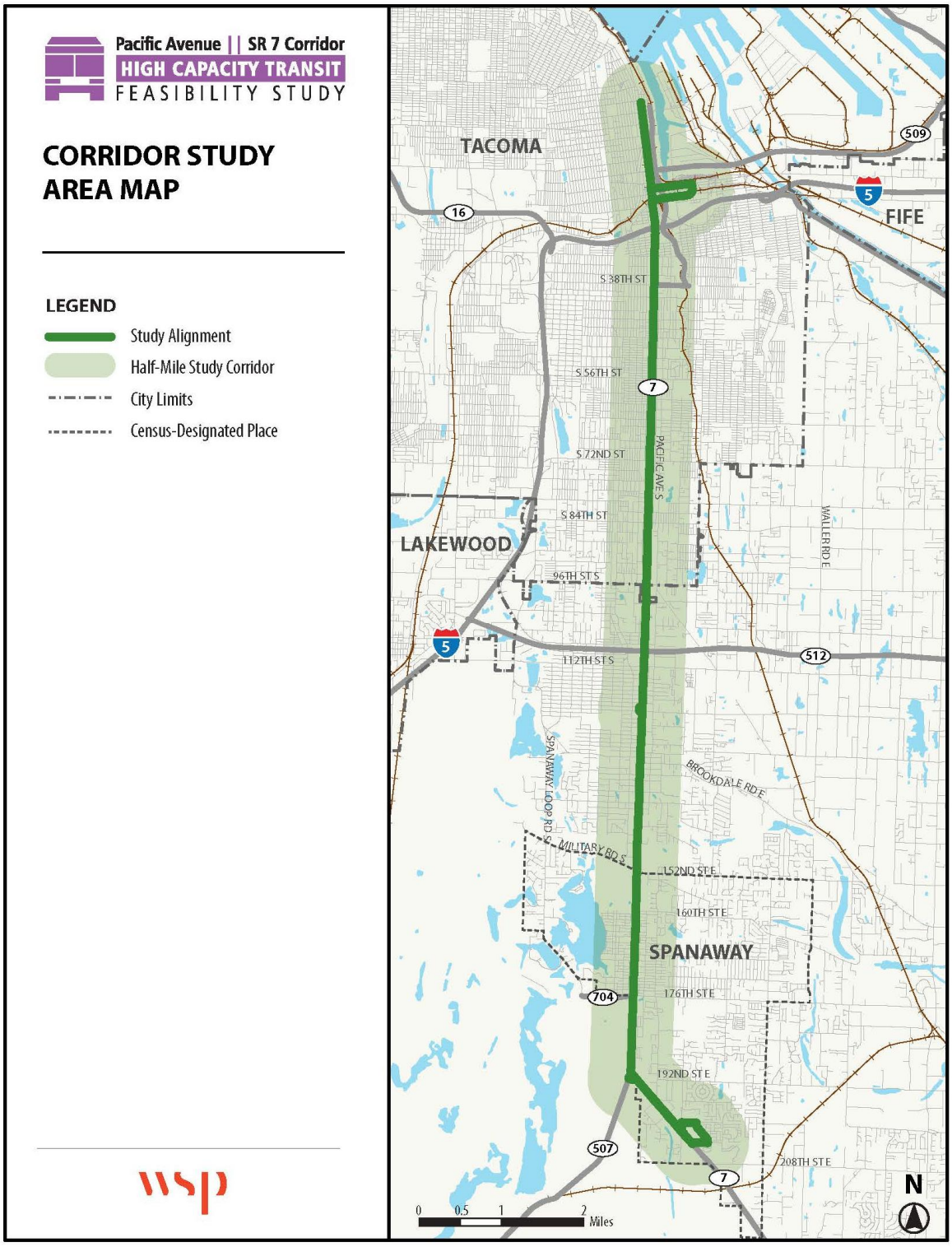
- High transit demand
- Decreasing transit travel speeds
- Poor service reliability
- High corridor population and population density
- Increased employment
- Transit dependency
- Safety concerns
- Growing transit communities' designation
- Corridor development potential

The purpose of the Pacific Avenue/SR 7 HCT project is to establish a north/south HCT link in the heart of Pierce County and serving Pierce Transit's busiest transit corridor. The project will:

- Increase transit ridership through enhanced transit service
- Deliver cost-effective service that provides capacity to meet future demand
- Promote transportation equity in the corridor by ensuring that transit service is accessible to all populations
- Improve multi-modal access and connectivity
- Support a regional vision for the community as documented in land use and transportation plans
- Enhance safety and security for transit patrons and public health overall

- Support existing economic activity and be a catalyst for sustainable economic growth and corridor redevelopment
- Promote environmental stewardship and sustainability

Figure 1. Corridor Study Area Map

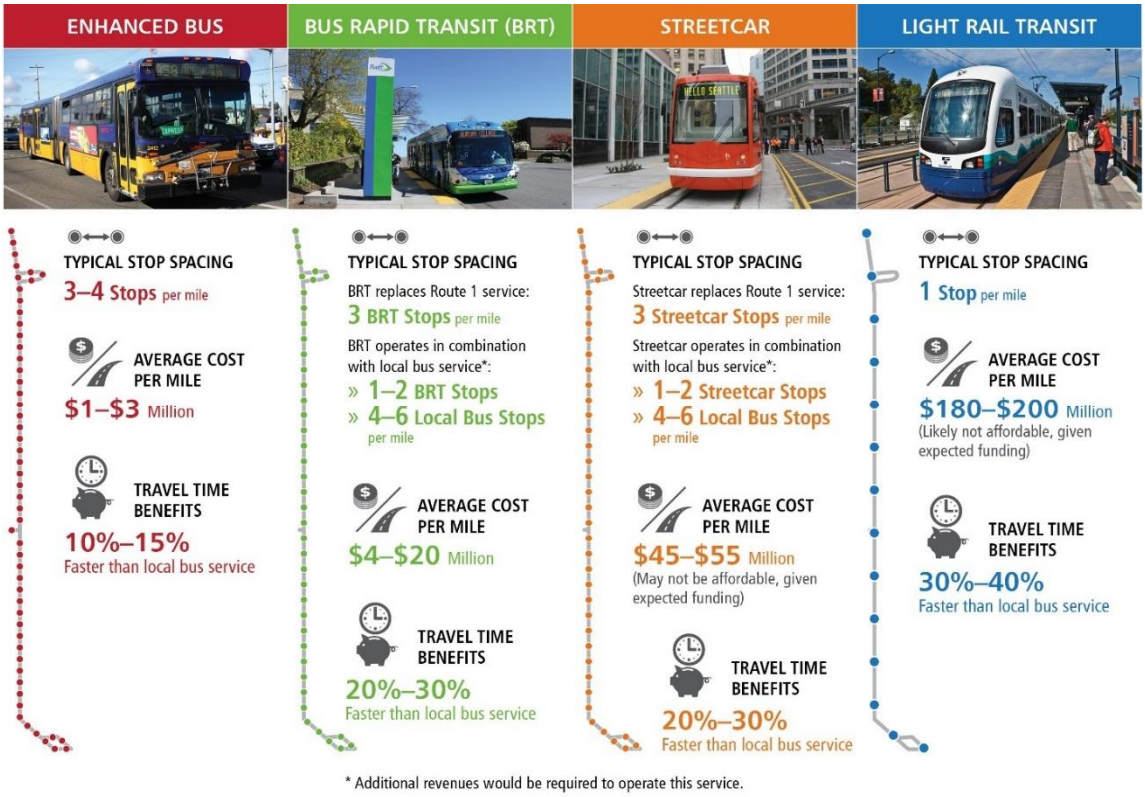


2 ALTERNATIVES ANALYSIS

2.1 HCT MODE EVALUATION

The HCT Feasibility Study began in February 2017 with an evaluation of HCT modes; including enhanced bus service, bus rapid transit (BRT), streetcar and light rail transit (LRT). Photographs of these HCT modes are shown in Figure 2. Each HCT mode was evaluated for how well it met the project's purpose and needs and advanced the project's goals.

Figure 2. HCT Modes Evaluated



After Pierce Transit and partners analyzed the HCT modes, and obtained public input at several open house meetings held in September 2017, BRT was selected as the project's HCT mode because it:

- Best serves the current and future expected increased ridership and enhanced BRT stations would improve the passenger's transit experience in the corridor.
- Improves transit speed and reliability in the corridor compared to the existing service because of reduced transit vehicle dwell time at stations, increased station spacing, and optimizing traffic signals.
- Meets the corridor's existing land use and population distribution. While the station spacing would increase from the existing Route 1 service, BRT's access profile still fits the existing corridor context and it has greater flexibility to work within the existing built environment, which allows for reduce impacts.
- Supports the regional community vision for the corridor.
- Provides many of the features of LRT but for a much lower capital construction cost.

2.2 First Screening - BRT Design Configurations

The next step in the HCT Feasibility Study's alternatives analysis process was to evaluate different BRT design configurations. The existing operations and five (5) different design configurations were evaluated. The five design configurations, shown in Figure 3, included operating the bus in either a mixed traffic lane or a more exclusive lane and whether the bus would travel in the right lane (near the curb) or within the center/median of the roadway.

As with the mode evaluation, the design configuration options were evaluated for how well they met the project's purpose and needs and advanced the project's goals. After analyzing the design configuration options, and obtaining public input at the second round of open house meetings held in November 2017, two primary options were selected for further design: 1) a curbside-running option where the bus would operate in a mix of business access and transit (BAT) lanes and mixed traffic and 2) a center-running option where the bus would operate in a mix of exclusive lanes and mixed traffic.

Figure 3. BRT Design Configurations Evaluated

Mixed Traffic: Curbside Lane

Mixed Traffic: Median Lane

Business Access Transit (BAT): Curbside Lane

Median Exclusive Lane: Right Side Vehicle Boarding

Median Exclusive Lane: Left Side Vehicle Boarding

2.3 SECOND SCREENING – CONCEPTUAL ALTERNATIVES

The recommended design configurations were advanced and refined into two (2) conceptual alternatives for the whole corridor, including a more precise layout of the roadway configurations and station placement. These conceptual alternatives were identified as the Curbside Alternative and the Median Alternative. This Environmental Critical Issues Report evaluates these two conceptual alternatives as part of the study's alternatives second screening step. The conceptual alternatives are shown and briefly described below in Section 3.

3 DESCRIPTION OF CONCEPTUAL ALTERNATIVES

This report evaluates two conceptual alternatives have been developed for the study corridor; the Curbside Alternative and the Median Alternative. The alternatives evaluated in this report are generally described and shown in Figure 4 and Figure 5 below. More detailed figures of the two conceptual alternatives are included in Appendix A.

As described below, in the north end of the alignment, between S. 9th Street and S. 36th Street in Tacoma, the design of the two conceptual alternatives (such as station locations and lane configurations) are the same. Between S. 36th Street and 132nd Street S the designs of the conceptual alternatives are different. At the south end of the alignment, between 132nd Street S and 204th Street E, the design of the two conceptual alternatives are again the same.

3.1 CURBSIDE ALTERNATIVE

The Curbside Alternative is schematically shown in Figure 4. The Curbside Alternative includes BRT vehicles operating in curbside lanes in mixed traffic in less congested parts of the corridor and curbside BAT lanes in congested segments. For all segments, the Curbside Alternative features enhanced curbside stations with unique brand identity, off-board fare collection, low-floor buses, and traffic signal priority (TSP) for BRT vehicles.

The segments where the BRT vehicle travels in mixed traffic are strategically located in areas that generally do not require significant transit priority treatments to maintain transit speed and reliability, such as in downtown Tacoma between S. 9th Street and S. 21st Street and in the southern portion of the corridor, such as south of Pirnie Road. Additionally, these sections would not require changes to the existing roadway. This would reduce the time and cost needed for construction and minimize impacts to property. The BAT lane segments would improve bus travel time and reliability in congested segments and would add a buffer between pedestrians and bicyclists and vehicle traffic, except for slower-moving right-turning vehicles. The BAT lanes would not limit mid-block left turn access as a center left turn lane would remain. The addition of BAT lanes would require restriping the existing lanes to be a slightly narrower width, such as narrowing the inside travel lane from an existing 11-foot width to a width of 10-feet and narrowing the existing center turn lane from 12-feet to 10-feet. The roadway would still include two through general purpose traffic lanes in both the northbound and southbound direction and a center turn lane.

3.1.1 S. 9th Street to S. 36th Street

In downtown Tacoma, at the north end, the alignment begins at S. 9th Street where BRT vehicles would circulate onto Commerce Street with a BRT station at the existing Commerce Street Transfer Area that

would provide a connection to local and regional bus and local light rail transit services. BRT vehicles would then travel south to S. 11th Street and then south along Market Street/Jefferson Avenue to S. 25th Street. Between S. 11 Street and S. 25th Street both southbound and northbound BRT vehicles would operate in mixed traffic in the curbside lane. Along Market Street there would be three BRT station pairs; at S. 13th Street, S. 19th Street and S. 23rd Street. At S. 25th Street southbound BRT vehicles would turn left onto Pacific Avenue and then right onto Puyallup Avenue, circulating clockwise onto S. 26th Street with a BRT station at the existing Tacoma Dome Station to provide another connection to local and regional transit services. In the northbound direction, BRT vehicles along Pacific Avenue would continue to Puyallup Avenue (eastbound) stopping at the same Tacoma Dome Station BRT station and follow the same clockwise circulation on E. G Street to E. 26th Street (westbound). After completing the Tacoma Dome Station connection, the BRT vehicles would travel along Pacific Avenue, operating in mixed traffic in the curbside lane, with a station pair at S. 34th Street.

3.1.2 S. 36th Street to 132nd Street S.

Along Pacific Avenue/SR 7, between S. 36th Street and 132nd Street S, BRT vehicles would operate in segments that are mixed traffic in the curbside lane and curbside BAT lanes (Figure 4). As previously noted, proposed BAT lanes are in congested segments to improve transit speeds and reliability. Where Pacific Avenue crosses Washington SR 512 an exclusive curbside lane for BRT vehicles is proposed. In this section 15 BRT station pairs are proposed at or near the following locations/cross streets along Pacific Avenue/SR 7:

1. S. 38th Street
2. S. 43rd Street
3. S. 50th Street
4. S. 56th Street
5. S. 64th Street
6. S. 72nd Street
7. S. 78th Street
8. S. 84th Street
9. E. 90 Street
10. S. 96th Street
11. 101st Street S.
12. 108th Street S.
13. 112th Street S.
14. Garfield Street S.
15. Tule Lake Road S.

3.1.3 132nd Street S. to 204th Street E.

Along Pacific Avenue/SR 7, between S 132nd Street S and 204th Street E, BRT vehicles would continue to operate in segments that alternative between mixed traffic in the curbside lane and curbside BAT lanes (Figure 4). In this section 10 BRT station pairs are proposed at or near the following locations/cross streets along Pacific Avenue/SR 7:

1. 138th Street S.
2. 146th Street S.
3. Military Road S.
4. 159th Street S.
5. 168th Street S.
6. 175th Street S.
7. 184th Street S.
8. SR 507
9. Pirnie Road East/B Street E.
10. 8th Avenue E.

3.2 MEDIAN ALTERNATIVE

The Median Alternative is schematically shown in Figure 5. The Median Alternative includes sections in less congested parts of the corridor where the BRT vehicles would operate in curbside lanes in mixed traffic and in the median lanes in mixed traffic. In congested segments BRT vehicles would operate in either curbside BAT lanes or in median exclusive transit lanes. For all segments, the Median Alternative features enhanced median stations with unique brand identity, elevated platforms to align with low-floor buses, off-board fare collection, and TSP for BRT vehicles.

The segments where the BRT vehicles would operate in mixed traffic would not require changes to the existing roadway. This would reduce the time and cost needed for construction and minimize impacts to properties. The BAT lane segments would require restriping the lane widths to be slightly narrower; however, in these segments the roadway would still include two through traffic lanes in both the northbound and southbound direction and a center left-turn lane. In segments where the BRT vehicles would operate in median exclusive lanes there would still be two through traffic lanes in both the northbound and southbound direction (restriped to slightly narrow the lane widths); however, the center left-turn lane would be eliminated.

3.2.1 S. 9th Street to S. 36th Street

The Median Alternative would be the same as the Curbside Alternative (see Section 3.1.1).

3.2.2 S. 36th Street to 132nd Street S.

Along Pacific Avenue, between S. 36th Street and 132nd Street S., BRT vehicles would operate in segments that alternative from median lane mixed traffic and median exclusive lanes (Figure 5). As previously noted, exclusive lanes are in congested segments to improve transit speeds and reliability. Where Pacific Avenue/SR 7 crosses SR 512 a short segment of a bi-directional median exclusive lane for BRT vehicles is proposed. In this section 15 BRT station pairs are proposed at or near the same locations/cross streets along Pacific Avenue as the Curbside Alternative as described in Section 3.1.2.

3.2.3 132nd Street S. to 204th Street E.

The Median Alternative would be the same as the Curbside Alternative (see Section 3.1.3).

3.3 SOUTH TRANSIT LAYOVER OPTIONS

A transit layover and turnaround area is proposed at the southern terminus of the project near the intersection of Mountain Highway E. and 204th Street E., south of the last BRT station at Mountain Highway E. and 8th Avenue E. Both transit layover area options, Option 1 and Option 2, include layover space for approximately four buses, a driver comfort station with restrooms and a small lounge area. In addition, Option 2 provides additional space for a potential park-and-ride facility.

Figure 4. Curbside Alternative

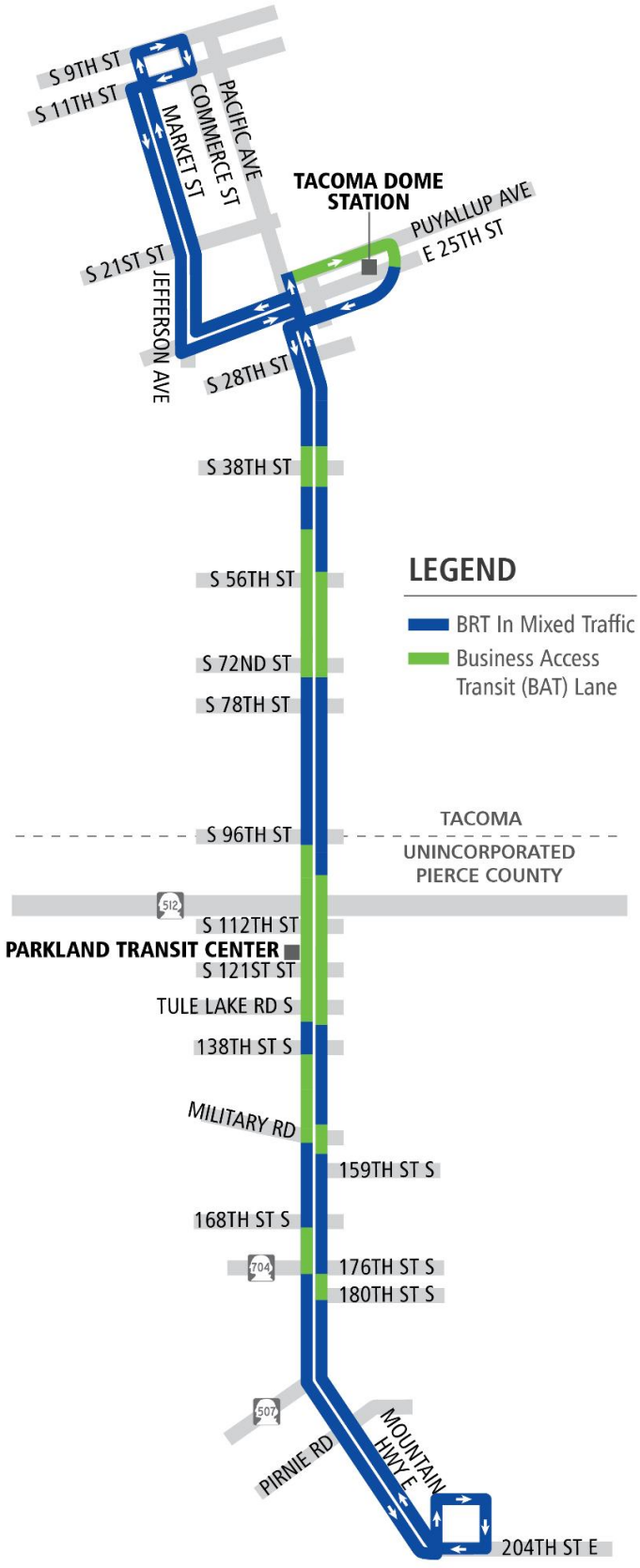
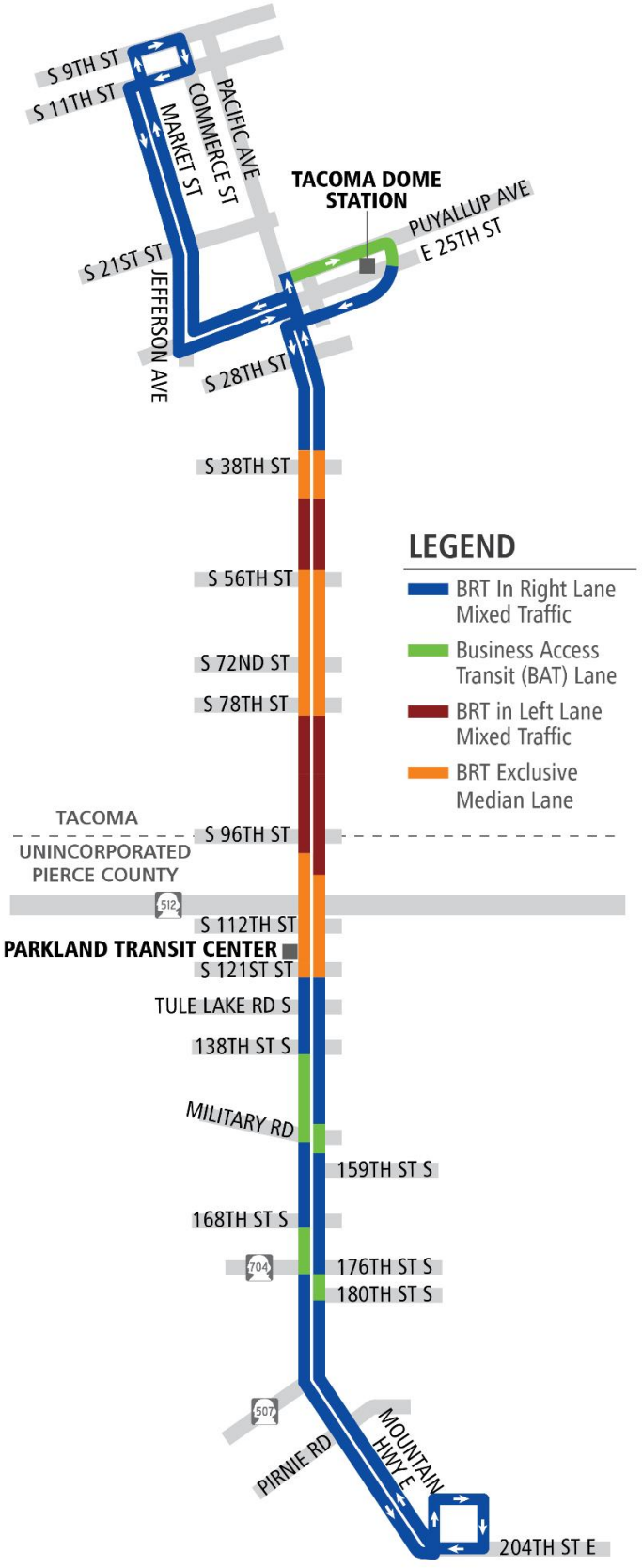


Figure 5. Median Alternative



4 ASSESSMENT OF ENVIRONMENTAL CRITICAL ISSUES

This section provides an assessment of the environmental resources that were identified as a critical issue for the corridor. Potential critical issues identified within the study corridor and discussed in this report are:

- Property and access impacts (including identifying impacts to Section 4(f) properties)
- Traffic
- Environmental Justice and Title VI
- Historic and cultural resources

4.1 COMPARISON OF PRELIMINARY IMPACTS

Table 1 provides a summary and comparison of the conceptual alternatives' potential impacts and benefits for each environmental critical resource. The environmental resources are discussed in more detail in Sections 4.2 through 4.5.

Table 1. Summary of the Conceptual Alternatives' Potential Impacts to Environmental Critical Issues

Environmental Critical Issue		Curbside Alternative	Median Alternative
Property and Access	*Total parcels with acquisition*	76	140
	Total square footage of property acquisitions	27,055	46,773
	Land use displacements	0	0
	Section 4(f) properties with potential acquisition	1 -Lake Spanaway Golf Course, likely considered *de minimis*	
	Access modifications	• BAT lane segments would add a lane for transit and vehicles turning right into driveways or other roadways • New traffic signals proposed at 6 intersections	• BAT lane segments would add a lane for transit and vehicles turning right into driveways or other roadways • Exclusive median lane segments would restrict 49 percent of the driveways in the corridor (291 driveways) to right-in/right-out only • 35 unsignalized roadway intersections would be restricted to right turn only • Signalized intersections would be modified to provide for left turns and U-turns
	On-street parking spaces removed	50	58
	Layover Option 1	• 1 full parcel acquisition (29,537 square feet) • No displacement	

Environmental Critical Issue		Curbside Alternative	Median Alternative
	Layover Option 2	• 2 partial parcel acquisitions (67,226 square feet) • No displacements	
Traffic	*Congestion – Both alternatives*	• Increased transit ridership on BRT could reduce congestion from single-occupancy vehicles • Reduced number of BRT stations and improved passenger loading and unloading of BRT vehicles would reduce delays and congestion from buses stopping • Traffic signal coordination would be optimized throughout the corridor • No change to the existing number of general traffic through lanes	
	Congestion – Exclusive lane treatments	• BAT lane segments would separate BRT vehicles and right-turning vehicles, reducing congestion and delays to through traffic • BAT lane segments would add capacity for northbound and southbound movements by adding right turn lanes	• BAT lane segments would separate BRT vehicles and right-turning vehicles, reducing congestion and delays to through traffic • BAT lane segments would add capacity for northbound and southbound movements by adding right turn lanes • Exclusive median lanes would prohibit mid-block left turns and left turns at unsignalized intersections. Travel distance would increase to make a U-turn at the nearest signalized intersection. Travel time may not be affected due to existing corridor congestion that requires waiting for gaps in traffic. • Reduced traffic collisions from left turning vehicles would reduce congestion associated with accidents

Environmental Critical Issue		Curbside Alternative	Median Alternative
	Safety	• Potential reduction in rear-end crashes in BAT lane segments from separating right-turning vehicles • BAT lane would serve as a buffer to pedestrians and bicyclists from higher traffic volumes in general purpose lanes	• Potential reduction in rear-end crashes in BAT lane segments from separating right-turning vehicles • BAT lane would serve as a buffer to pedestrians and bicyclists from higher traffic volumes in general purpose lanes • Eliminating mid-block left turns and left turns at unsignalized intersections reduces: o Left turn and right angle crashes o Conflict points with pedestrians and bicyclists
Environmental Justice and Title VI	*Transit service changes*	• Improved transit travel times, transit reliability and improved station amenities would benefit all riders, including environmental justice populations • Pedestrian and bicycle access to proposed BRT stations would improve safety of non-motorized travel in the corridor • Existing Route 1 bus stops would be consolidated from 65 pairs to 32 BRT stations. The minor increases in walk times from a removed bus stop to the nearest BRT station would be offset by faster transit travel times for a net travel time reduction.	
	Property acquisitions	No residential or business displacements.	No residential or business displacements. Minor acquisition of parcel with uses that serve environmental justice populations; the uses are not modified or displaced.
	Preliminary determination of Environmental Justice impacts	Not anticipated to have disproportionately high and adverse effects on minority or low-income populations.	
Historic and Cultural Resources	*Historic Districts*	The 9th Street station downtown Tacoma is within the boundary of the Old City Hall Historic District and adjacent to a contributing structure at 901-909 Broadway	
	Parcels with architectural resources aged 45 years	94	95

Environmental Critical Issue		Curbside Alternative	Median Alternative
	Stations adjacent to properties listed in, eligible for, or eligibility undetermined for, the National Register of Historic Places	3	4
	Archaeological Resources	8 station areas with moderate to high likelihood of encountering archaeological resources	7 station areas with moderate to high likelihood of encountering archaeological resources

4.2 PROPERTY AND ACCESS

Along the BRT alignment the design of the Curbside and Median Alternatives is primarily within the existing public road right-of-way for Pacific Avenue/SR 7. At the southern terminus of the alignment the transit layover options, Option 1 and Option 2, are proposed to be on property that is outside of the existing public right-of-way. This section discusses the alternatives' and layover options' potential to impact privately-owned properties along the corridor by right-of-way acquisitions, changes to property access, and access changes to roadways that intersect the project corridor.

4.2.1 Applicable Regulations

NEPA requires that all actions sponsored, funded, permitted or approved by federal agencies be reviewed to ensure that environmental effects, including effects to property and access, are considered in the planning and decision making process. The FTA's Environmental Impact and Related Procedures (23 CFR § 771) defines the agency's policies and processes for complying with NEPA.

Section 4(f) of the *Department of Transportation Act of 1966*, 49 USC 303, provides protection for publicly owned park and recreation lands, wildlife and waterfowl refuges, and historic sites of national, state or local significance. The Secretary of Transportation has the authority to approve a transportation program or project requiring the use of these publicly owned lands only if:

- There is no prudent or feasible alternative;
- The program or project includes all possible planning to minimize harm to the property resulting from use, or
- It is determined that the use of the property would not affect the features, activities, attributes that qualify the property for Section 4(f) protection and the use is determined to be *de minimis*.

Section 4(f) properties may also be a Section 6(f) recreational property. Section 6(f) of the Land and Water Conservation Act (LWCA) protects the lands or facilities that have been purchased or developed, partially or entirely, through grants from the Land and Water Conservation Fund (LWCF). The LWCA requires that an area funded with this assistance be "continually maintained in public recreation use" unless the National Park Service approves substitution or conversion to other uses. Another similar grant program is the Urban Park and Recreation Recovery grant, which is also administered by the National Park Service and includes similar restrictions.

4.2.2 Methods

Potential property impacts were evaluated using agencies Geographic Information Systems (GIS) by overlaying the conceptual plans for the proposed Curbside and Median Alternatives (including station locations, roadway design configurations, and identified right-of-way) and conceptual plans for the transit layover Option 1 and Option 2 with an aerial background of the study area, as well as georeferenced parcel data from Pierce County's *PublicGIS* database. This evaluation determined where the alternative concept designs extended beyond the existing right-of-way and parcel boundaries. For each property impacted, GIS analysis tools were used to estimate the area of impact and the acquisition type; either partial or full. The property impact was calculated as a square foot area and as a percentage of the total area of each parcel.

In addition to the parcel impact, an analysis of existing parking was done along the corridor by overlaying the conceptual plans with the aerial background to identify areas of on-street parking that would potentially be impacted.

Similarly, the Curbside and Median Alternatives were evaluated for their potential to eliminate or restrict driveway access to properties. Access restrictions to intersecting roadways were also evaluated. The conceptual designs were used to determine the number and type of access restrictions along the corridor.

4.2.3 Existing Conditions

The following provides a summary of the existing land use of properties within the corridor and of the existing roadway characteristics. The existing conditions of the corridor's study area are discussed in greater detail in the *Existing and Future Conditions Report* (June 2017).

LAND USE

The study area is an urbanized corridor that includes the City of Tacoma (Downtown Tacoma and South Tacoma) and unincorporated Pierce County (Parkland-Spanaway-Midland).

Properties within the corridor are comprised primarily of commercial, institutional and residential land uses. Downtown Tacoma is heavily developed with commercial use with some vacant and underutilized parcels. Property in the Parkland-Spanaway-Midland areas of unincorporated Pierce County is primarily comprised of residential land uses with a mixed use of residential and commercial at nodes along Pacific Avenue that are zoned as future "centers," which would support denser commercial development. Institutional and government land uses, which primarily includes Joint Base Lewis-McChord (JBLM) and public recreation lands, is also located within the unincorporated area.

CORRIDOR ROADWAY CHARACTERISTICS

Most of the corridor's study area is on Pacific Avenue/SR 7. SR 7 is a Washington State operated and maintained highway. The City of Tacoma and Pierce County are responsible for maintenance of the sidewalk within their respective jurisdictions.

Current access to properties within the corridor is provided by direct driveway access, a median turn lane that provides access for midblock left turns and merging, as well as signalized and unsignalized intersections that allow for through traffic movements and right and left turns. There are very few

designated bicycle lanes present along the corridor; less than one mile within the downtown Tacoma area and approximately six miles south of S. 122th Street.

There is existing on-street parking within downtown Tacoma along Pacific Avenue, Puyallup Avenue and the E. 26th Street segments. There is very little on-street parking along the remainder of the Pacific Avenue/SR 7 corridor.

Table 2 below identifies the existing roadway characteristics of the corridor study area, including length, travel lanes, bikes lanes, and parking. Table 3 shows the estimated existing right-of-way widths along the corridor.

Table 2. Study Area Roadway Characteristics

Study Corridor Roadway	From	To	Length (miles)	Number of Travel Lanes	Bike Lanes Present	On-Street Parking
Pacific Ave	S 9th St	S 11th St	0.15	2 NB, 2 SB, L Turn at Intersections	Y, sharrows*	Y, Parallel
Pacific Ave	S 11th St	S 17th St	0.43	2 NB, 2 SB, L Turn at some Intersections	Y, sharrows	Y, Parallel
Pacific Ave	S 17th St	S 21st St	0.29	1 NB, 1 SB, L Turn Lane, Transit in Median	N	Y, Parallel and Angle
Pacific Ave	S 21st St	S 24th St	0.22	2 NB, 2 SB, Transit in Median	N	N
Puyallup Ave	SR 7	E G St	0.51	2 EB, 2 WB, Median Turn Lane	N	Y, Parallel
E G St /E 26th St	Puyallup Ave	SR 7	0.61	1 EB, 1 WB	N	Y, parallel
Pacific Ave	S 24th St	S 25th St	0.07	2 NB, 2 SB, Transit in Median	N	Y, parallel on west side
Pacific Ave	S 25th St	S 27th St	0.14	2 NB, 2 SB, L Turn at some Intersections	N	N
Pacific Ave	S 27th St	S 32nd St	0.48	2 NB, 2 SB, L Turn at some Intersections	N	N
Pacific Ave	S 32nd St	S 38th St	0.63	2 NB, 2 SB, Median Turn Lane	N	N
Pacific Hwy/SR 7	S 38th St	S 40th St	0.15	2 NB, 2 SB, Median Turn Lane	N	N
Pacific Hwy/SR 7	S 40th St	S 46th St	0.39	2 NB, 2 SB, L Turn at some Intersections	N	N
Pacific Hwy/SR 7	S 46th St	S 55th St	0.55	2 NB, 2 SB, Median Turn Lane	N	N
Pacific Hwy/SR 7	S 55th St	S 57th St	0.13	2 NB, 2 SB, Median Turn Lane		Y, parallel on west side
Pacific Hwy/SR 7	S 57th St	S 63rd St	0.35	2 NB, 2 SB, Median Turn Lane	N	N
Pacific Hwy/SR 7	S 63rd St	S 65th St	0.18	2 NB, 2 SB, Median Turn Lane	N	Y, parallel at S 64th St intersection
Pacific Hwy/SR 7	S 65th St	S 82nd St	1.04	2 NB, 2 SB, Median Turn Lane	N	N
Pacific Hwy/SR 7	S 82nd St	S 84th St	0.12	2 NB, 2 SB, Median Turn Lane	N	Y, parallel on west side
Pacific Hwy/SR 7	S 84th St	S 112th St	1.77	2 NB, 2 SB, Median Turn Lane	N	N
Pacific Hwy/SR 7	S 112th St	204th St E	6.10	2 NB, 2 SB, Median Turn Lane, L Turn at some Intersections	Y, striped	N
8th Ave E	SR 7	200th St E	0.10	1NB, 1 SB	Y, striped	N
200th St E	8th Ave E	Hidden Village Dr E	0.18	1 EB, 1 WB	N	N
Hidden Village Dr E	200th St E	204th St E	0.30	1 NB, 1 SB, Median Turn Lane	N	N
204th St	Hidden Village Dr E	SR 7	0.19	1 EB, 1 WB	N	N

Source: Googlemaps.

WB = westbound, EB = eastbound, NB = northbound, SB = southbound

*Also known as Shared Lane Markings (SLM). Road markings used to indicate a shared lane environment for bicycles and automobiles. (Definition provided by National Association of City Transportation Officials (NACTO). Urban Bikeway Design Guide. http://nacto.org/publication/urban-bikeway-design-guide/bikeway-signing-marking/shared-lane-markings/ .

Table 3. Existing Right-of-Way Widths

Corridor Segment	Streets	Approximate Right-of-Way Width (Range in feet)
Downtown Tacoma	Pacific Avenue/Market Street/Jefferson Avenue	80 – 130
Tacoma Dome	Puyallup, E. 26th Street	80 – 100
South Tacoma	Pacific Avenue	80 – 100
Unincorporated Pierce County	Pacific Avenue	80 – 100
Unincorporated Pierce County (Spanaway)	Pacific Avenue/Mountain Hwy E./204th Street E.	65 - 120

Source: Pierce County, PublicGIS, Right-of-Way

4.2.4 Preliminary Impact Evaluation

PROPERTY

Table 4 shows the total potential number of parcels that would require some amount of property to be acquired for additional right-of-way for the Curbside or Median Alternative and the transit layover options. Table 4 also shows the total square footage of property that would need to be acquired; the number of parcels with acquisition by current land use on the parcel; the range of the percent of the total parcel area that would be acquired; and the total number of partial and full parcel acquisitions. The parcels with potential acquisition, for both the Curbside and Median Alternatives, are shown in Figure 6 through Figure 22. Figure 22 shows the parcels potentially impacted for the transit layover Option 1 and Option 2. Appendix B includes tables of additional information for the parcels with potential right-of-way acquisition, including parcel number and total area, for both alternatives and layover options. The numbering of parcels shown in Figure 6 through Figure 22 corresponds to the parcel count for the alternative in the tables in Appendix B.

Full acquisition involves the purchase of the entire parcel and a partial acquisition involves the purchase of a portion of the parcel. A displacement of an existing residence or business on a site could occur when a full acquisition is required for a project or when the partial acquisition impacts the continued economic viability or use of the existing property.

Table 4. Summary of Potential Property Acquisitions

Potential Property Impacts	Curbside Alternative	Median Alternative	Layover Option 1	Layover Option 2
Total Parcels with Acquisition	76	140	1	2
Total Square Footage of Property Acquisitions	27,055	46,773	29,537	67,226
Full Parcel Acquisition	0	0	1	0
Partial Parcel Acquisition	76	140	0	2
Displacement (existing business or residence)	0	0	0	0
Number of Parcels by Land Use				
Commercial	65	108	1	2
Residential	5	22	0	0

Potential Property Impacts	Curbside Alternative	Median Alternative	Layover Option 1	Layover Option 2
Other (unknown, recreation, institution, religious)	6	10	0	0
Percent of parcel area to be acquired				
Less than 2 percent	58	106	0	0
Between 2 and 5 percent	14	22	0	0
Between 5 and 15 percent	3	8	0	2
Between 5 and 30 percent	0	4	0	0
Greater than 30 percent	1	0	1	0

Sources: Property impacts, WSP; Land use data, Pierce County, PublicGIS

Curbside Alternative

The Curbside Alternative includes the construction of additional BAT lanes that would require widening the existing roadway and curbside stations that would require widening the existing sidewalk for the station platform. In some locations, this widening would require acquiring additional right-of-way width from adjacent properties. The Curbside Alternative would result in a total of approximately 27,000 square feet of property acquisitions, from a total of 76 parcels, along the entire length of the BRT alignment. As shown in Table 4, most of the properties with acquisitions are commercial uses and most of the partial acquisitions would require less than two percent of the total property area. The Curbside Alternative would not require the full acquisition of a parcel and no business or residential displacements are anticipated.

The Curbside Alternative would require the acquisition of approximately 1,120 square feet of the Lake Spanaway Golf Course property, at the southwest corner of the intersection of Military Road S. and Pacific Avenue/SR 7. The Lake Spanaway Golf Course is a Section 4(f) protected property because it is publicly owned recreation land. The area impacted includes a landscaped portion of the property outside of the fairway, near the roadway intersection, adjacent to the golf course signage. The potential area of acquisition would not impact the recreational use of the golf course and would likely be considered a *de minimis* use of a Section 4(f) property. During the project's NEPA process, the potential use of publicly owned land would be evaluated under Section 4(f).

From a review of Pierce County projects that have received LWCF assistance, provided by the National Park Service, State and Local Assistance Programs office in Seattle, confirmed that the Lake Spanaway Golf Course has not received LWCF assistance and, therefore, is not a Section 6(f) property. In addition, data from the National Park Service confirmed that the Lake Spanaway Golf Course has not received an Urban Park and Recreation Recovery grant, which has similar restrictions as Section 6(f) properties.

Median Alternative

The Median Alternative involves the construction of median exclusive lanes, queue jumps and median stations that would require widening the existing roadway. In some locations, this widening would require acquiring additional right-of-way from adjacent properties. As shown in Table 4, the proposed design would result in a total of approximately 46,700 square feet of property acquisitions, from a total of 140 parcels, along the entire length of the BRT alignment. The Median Alternative impacts 64 more parcels (and approximately 19,700 square feet) than the Curbside Alternative. Much like the Curbside Alternative, most of the properties with acquisitions for the Median Alternative are commercial uses; however, the Median Alternative has more residential property impacts than the Curbside Alternative.

Most of the property impacts with Median Alternative would require less than two percent portion of the total area of the property. The Median Alternative would not require the full acquisition of a parcel and no business or residential displacements are anticipated.

The Median Alternative would have the same potential acquisition from the Lake Spanaway Golf Course property, approximately 1,120 square feet at the southwest corner of intersection of Military Road S. and Pacific Avenue/SR 7. The area impacted includes a landscaped portion of the property outside of the fairway, near the roadway intersection, adjacent to the golf course signage. The potential area of acquisition would not impact the recreational use of the golf course and would likely be considered a *de minimis* use of a Section 4(f) property. During the project's NEPA process, the potential use of publicly owned land would be evaluated under Section 4(f).

Transit Layover Options

As shown in Table 4, Option 1 would result in one (1) full property acquisition (approximately 29,500 square feet). According to Pierce County data, the property is currently designated as vacant commercial land; therefore, Option 1 would not result in a business displacement.

Option 2 would result in two (2) partial acquisitions (approximately 67,000 square feet); one from a parcel that is currently undeveloped and another from a parcel that is currently owned by Walmart and provides additional retail parking. The potential partial acquisition from the property owned by Walmart is not expected to impact the economic viability of the Walmart retail business; therefore, no displacements are anticipated for Option 2.

Figure 6. Potential Property Acquisitions for the Curbside and Median Alternatives (1 of 17)

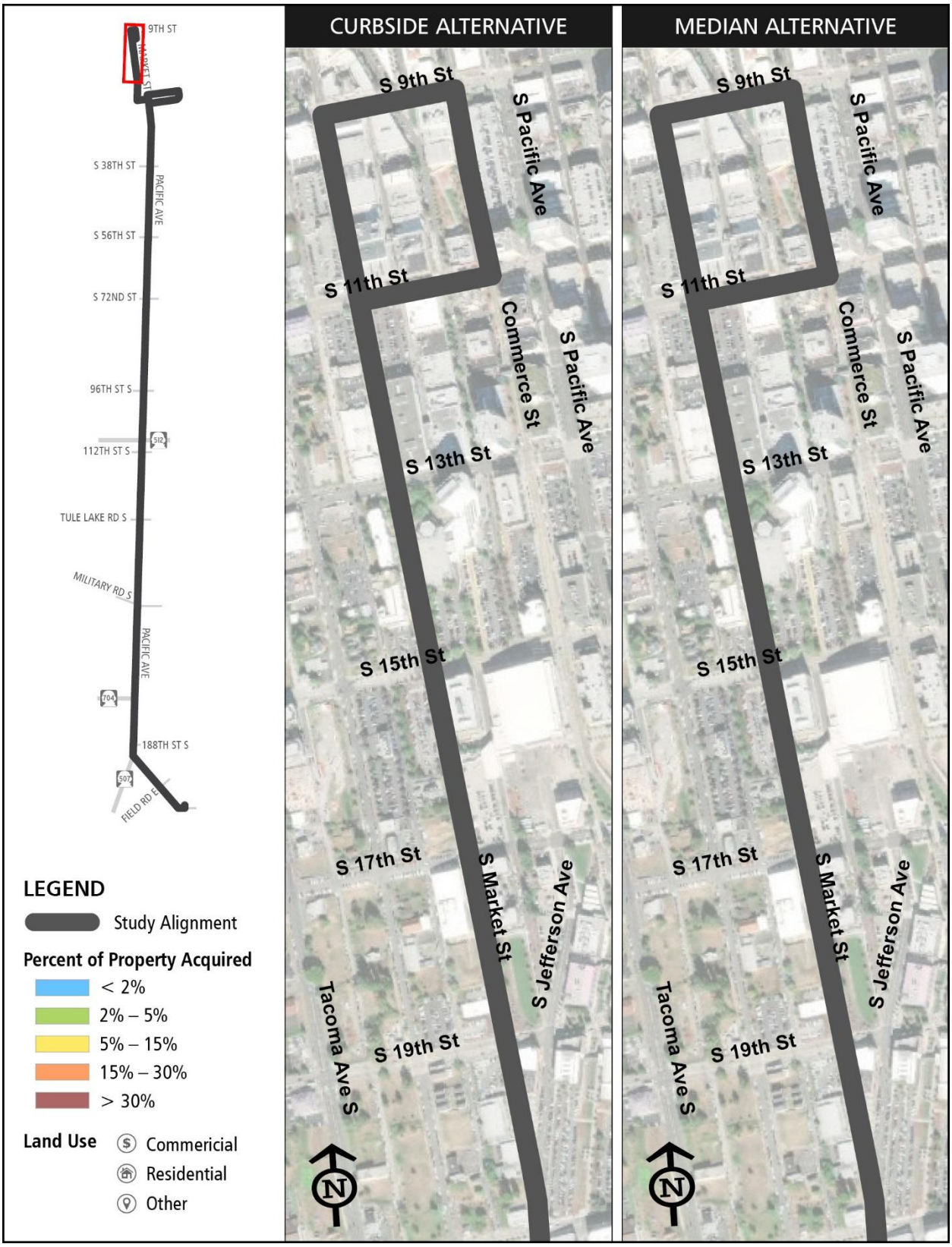


Figure 7. Potential Property Acquisitions for the Curbside and Median Alternatives (2 of 17)

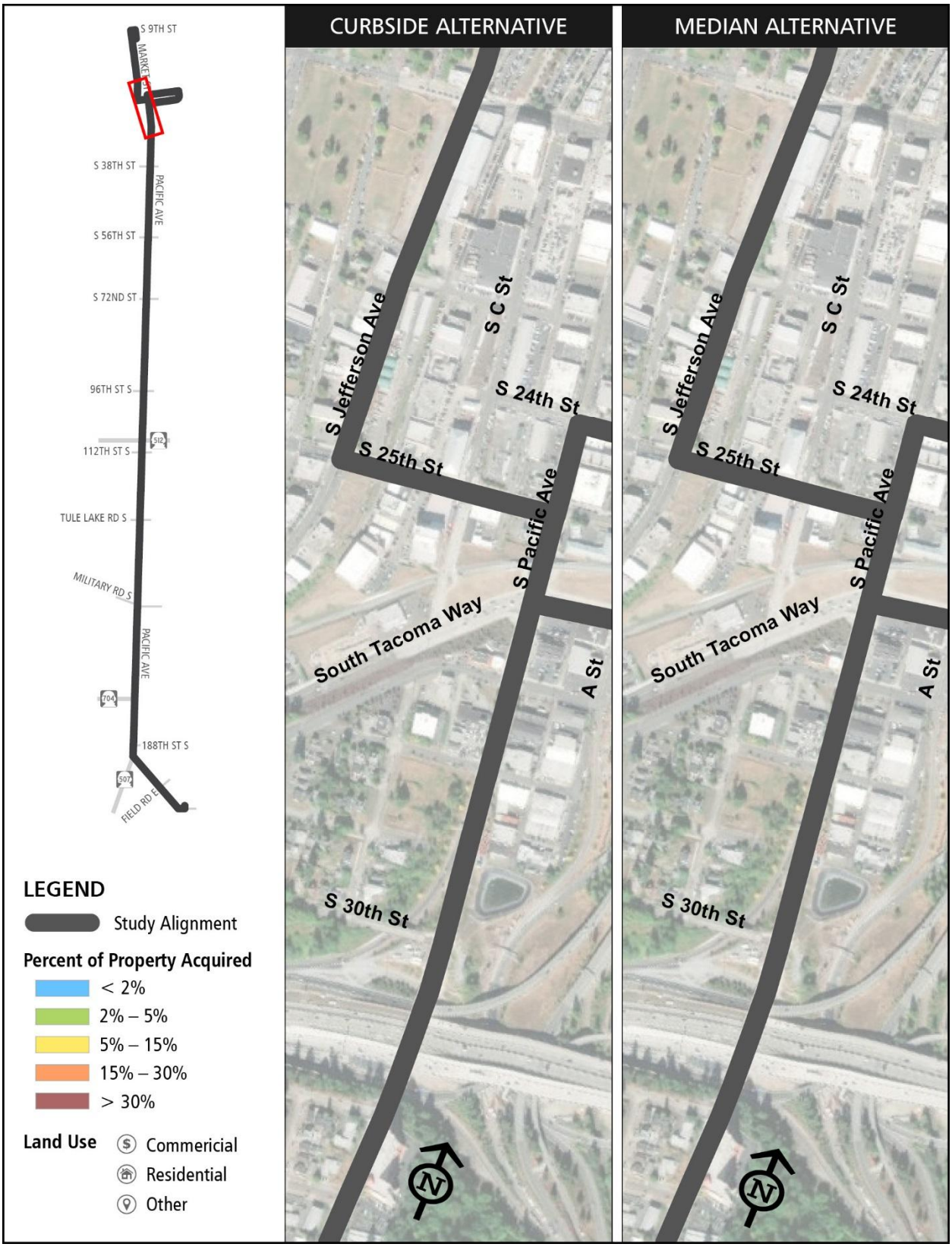


Figure 8. Potential Property Acquisitions for the Curbside and Median Alternatives (3 of 17)

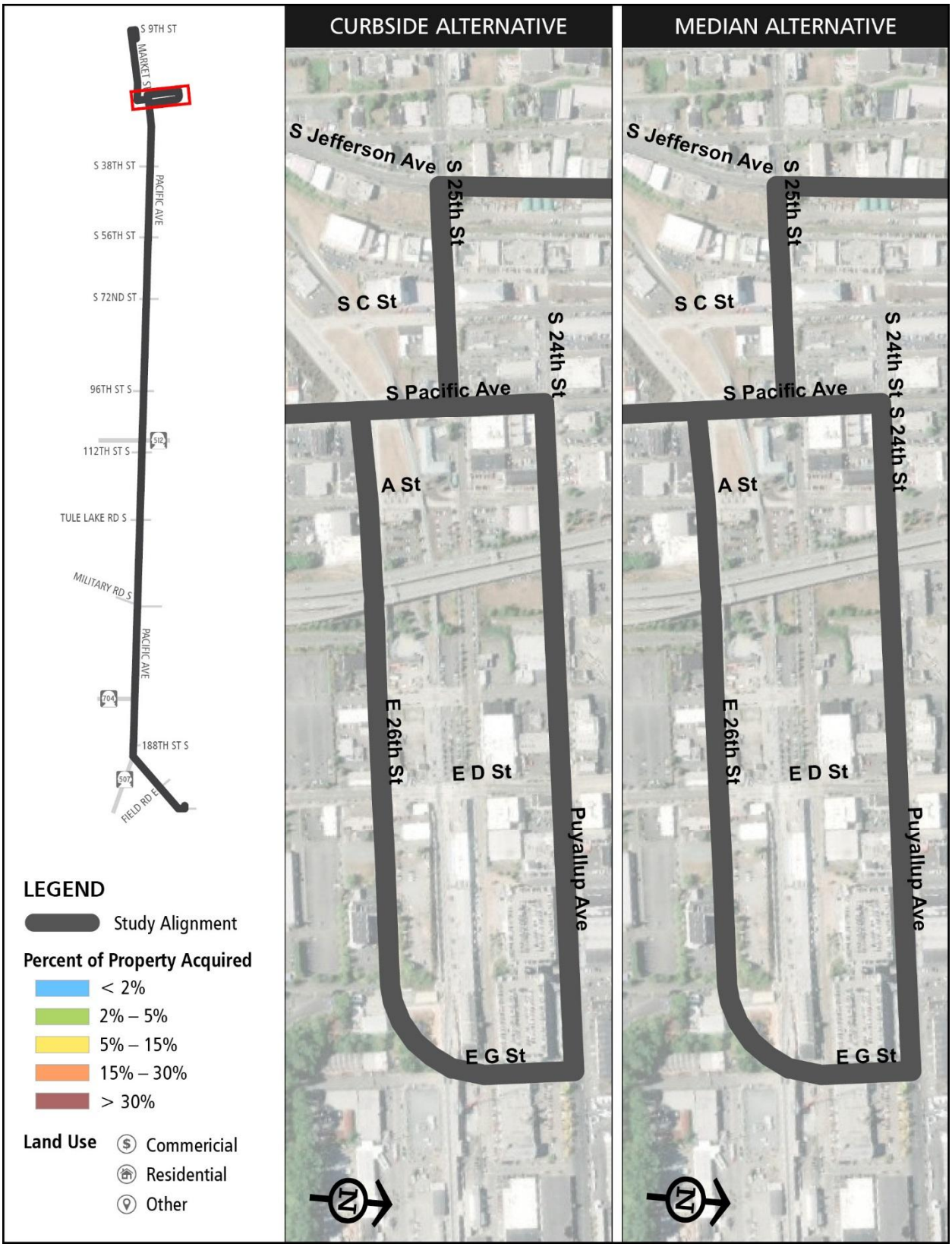
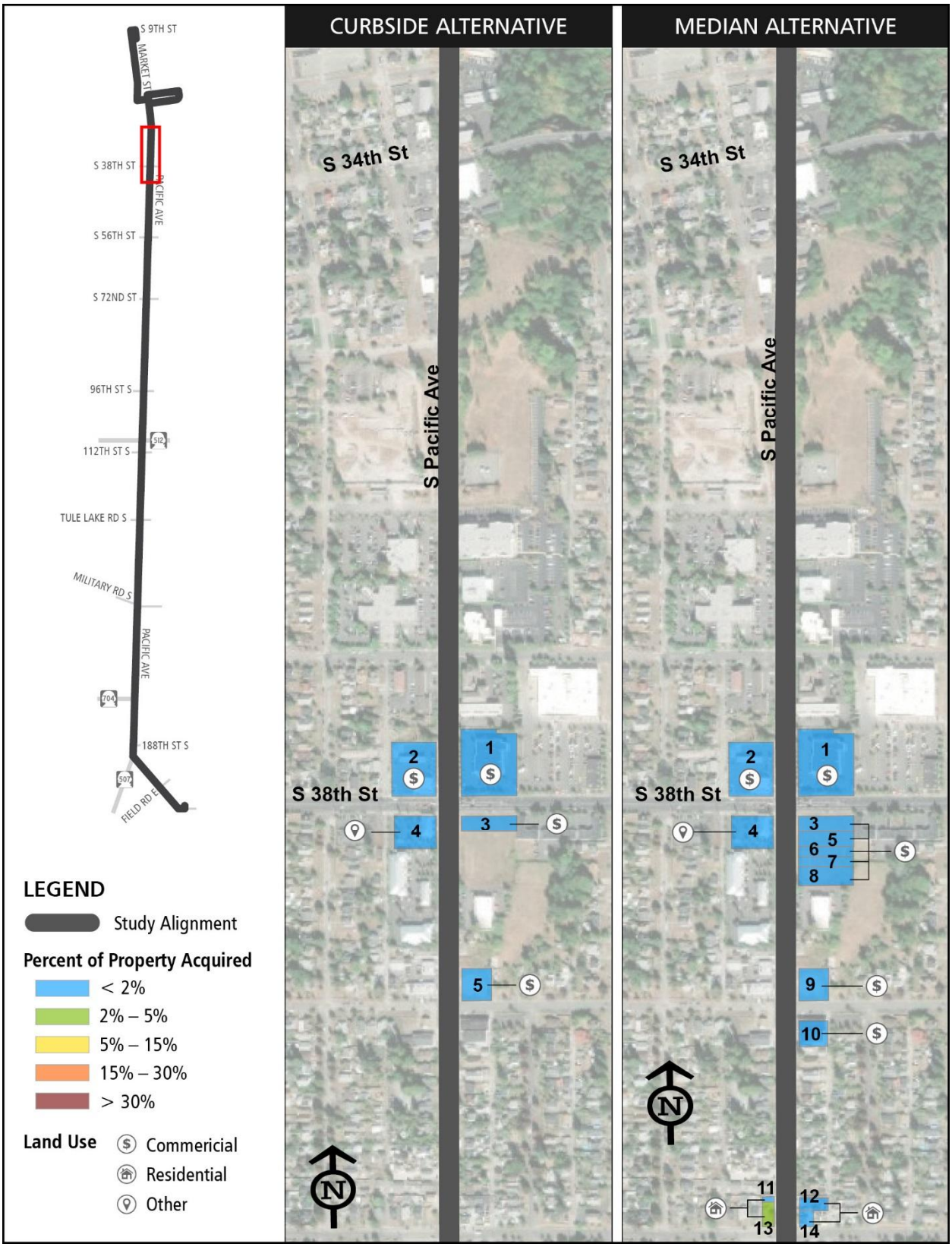
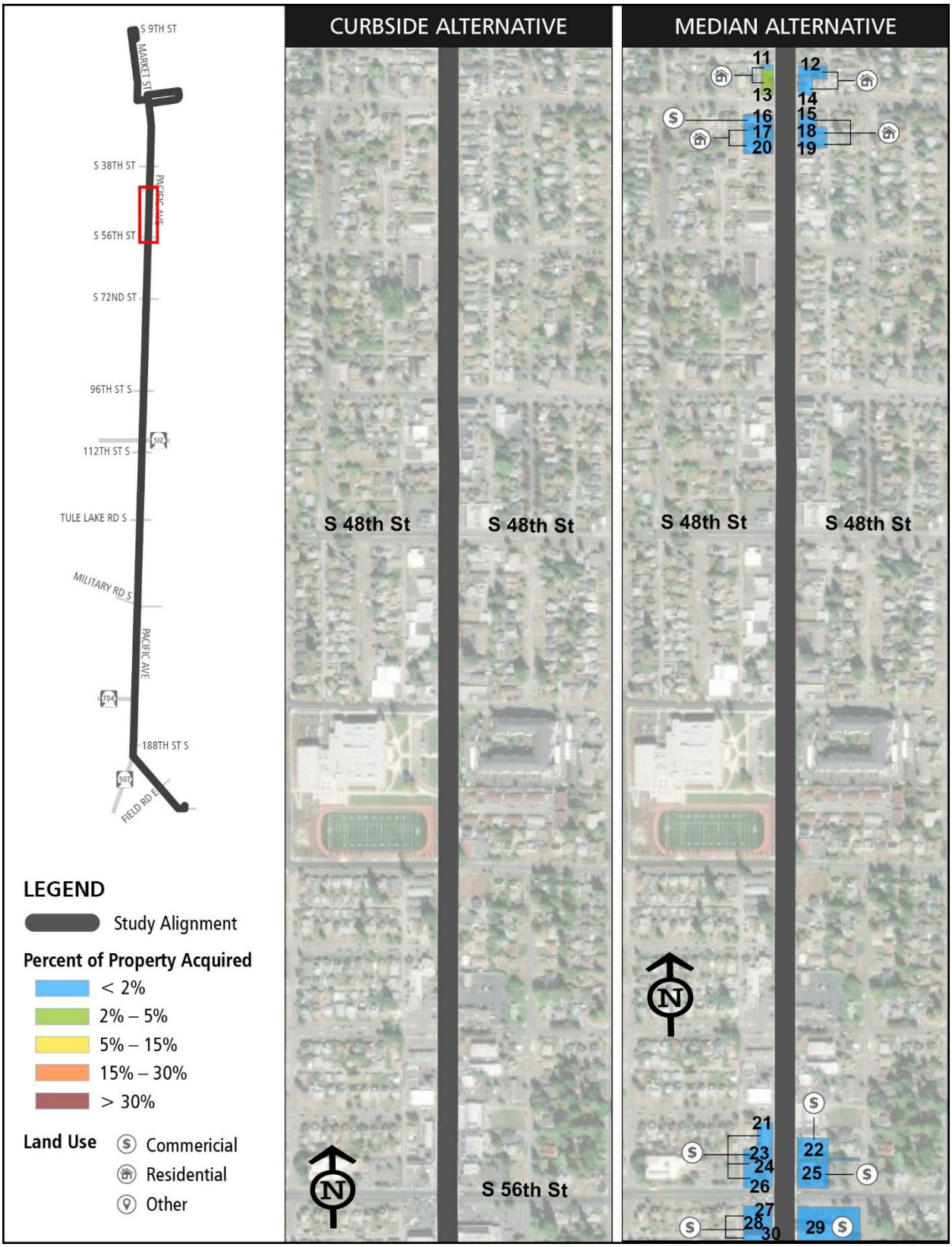


Figure 9. Potential Property Acquisitions for the Curbside and Median Alternatives (4 of 17)



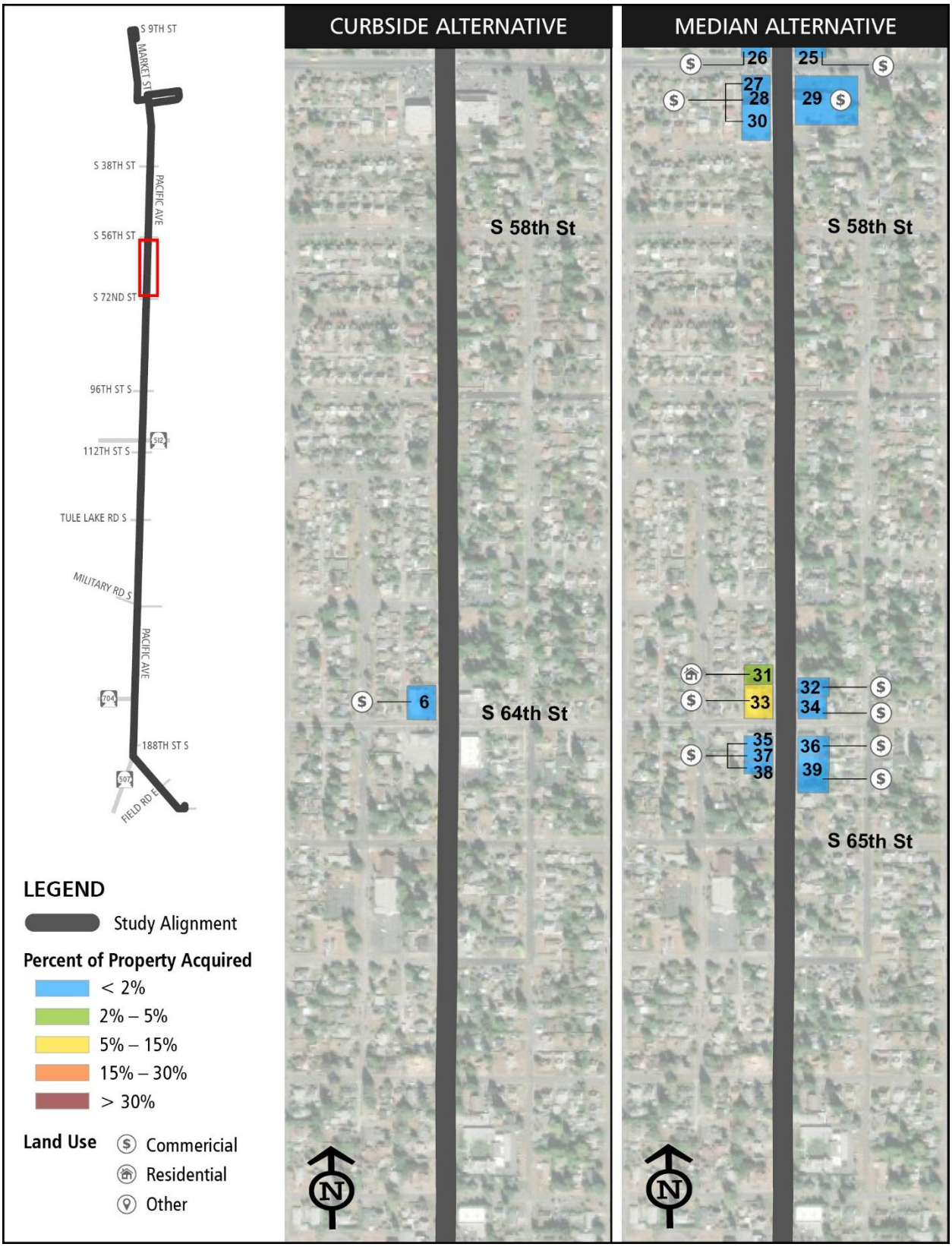
Note: The numbering of the parcel corresponds to the parcel count for the Curbside and Median Alternative in Appendix B. Refer to Appendix B for additional property details.

Figure 10. Potential Property Acquisitions for the Curbside and Median Alternatives (5 of 17)



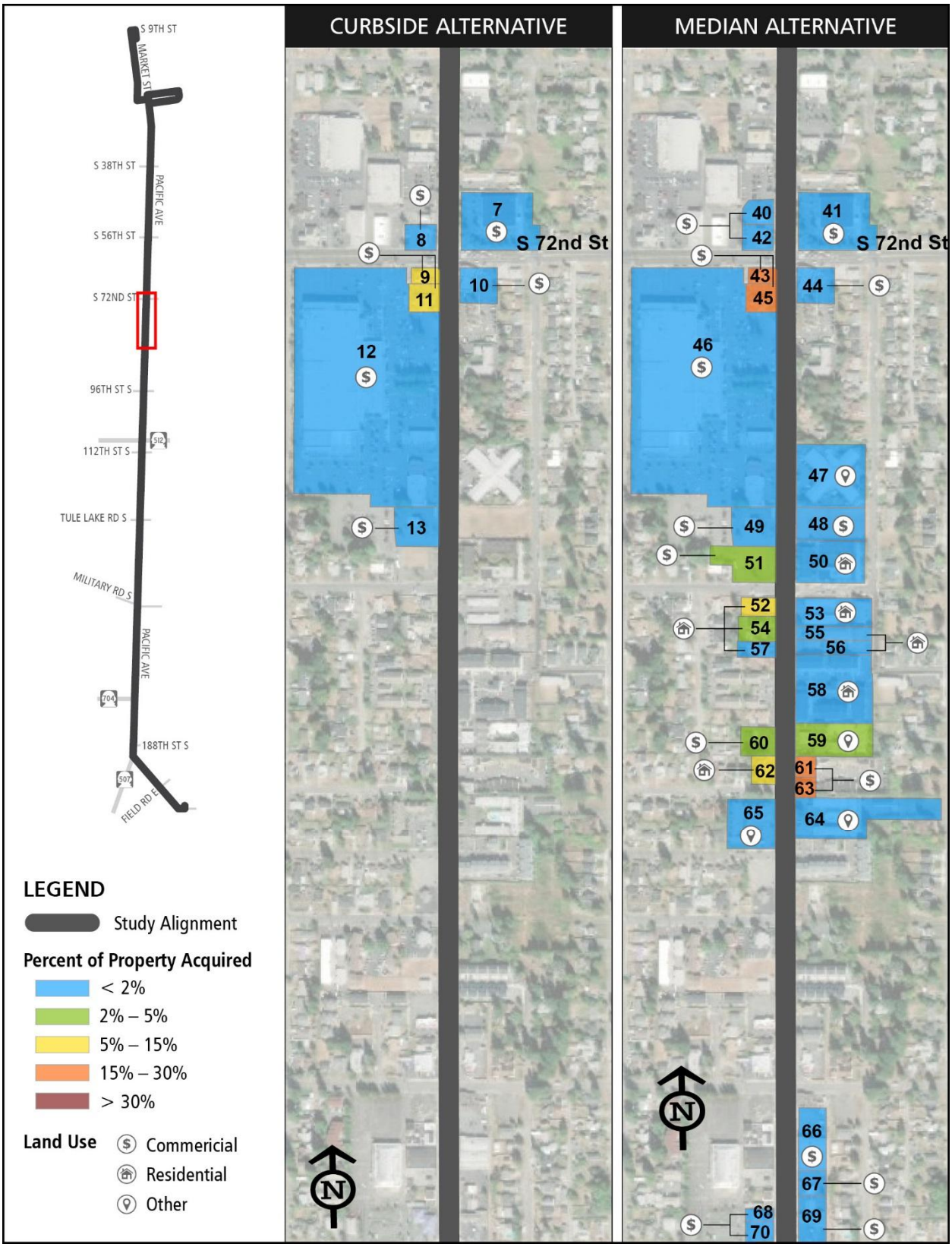
Note: The numbering of the parcel corresponds to the parcel count for the Curbside and Median Alternative in Appendix B. Refer to Appendix B for additional property details.

Figure 11. Potential Property Acquisitions for the Curbside and Median Alternatives (6 of 17)



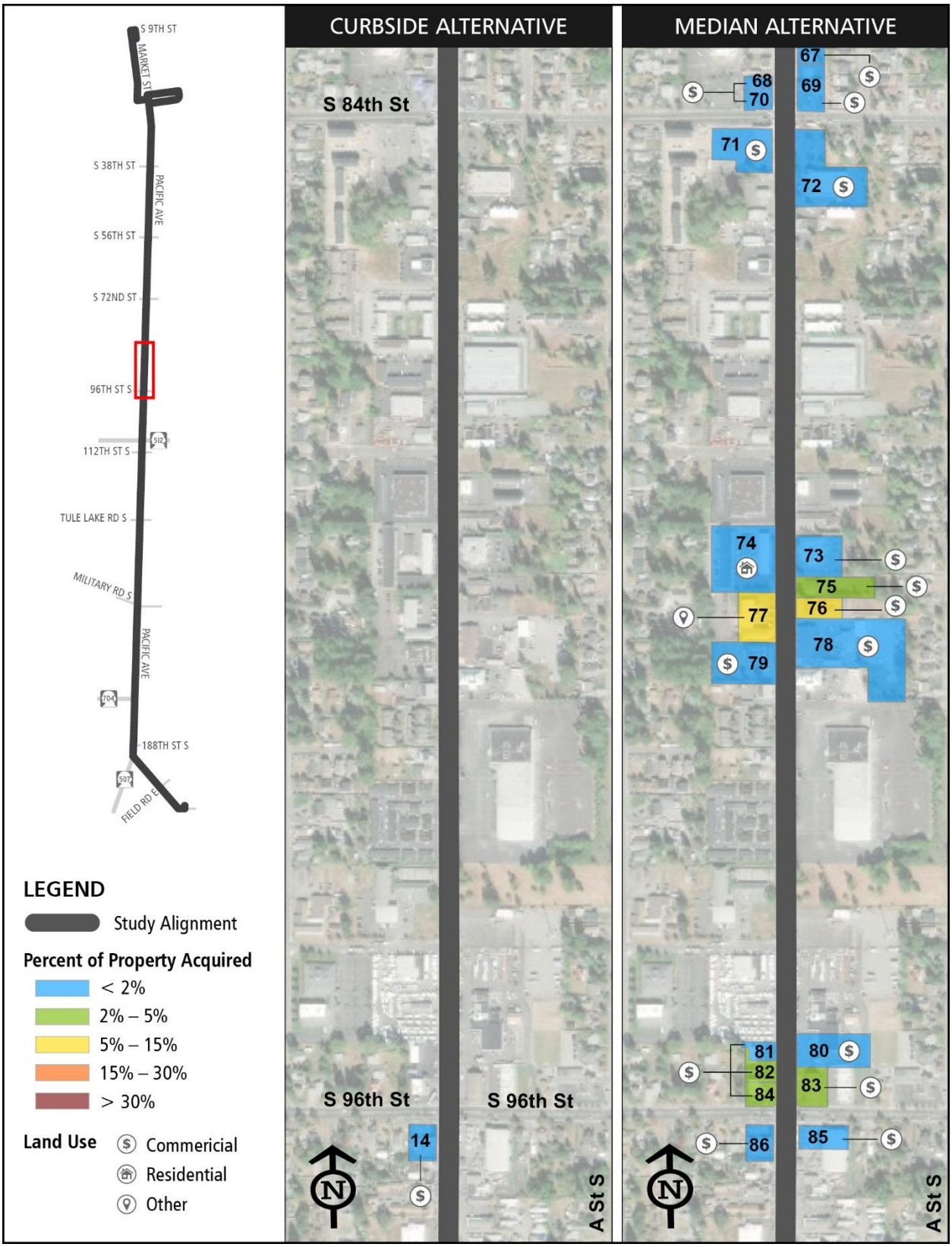
Note: The numbering of the parcel corresponds to the parcel count for the Curbside and Median Alternative in Appendix B. Refer to Appendix B for additional property details.

Figure 12. Potential Property Acquisitions for the Curbside and Median Alternatives (7 of 17)



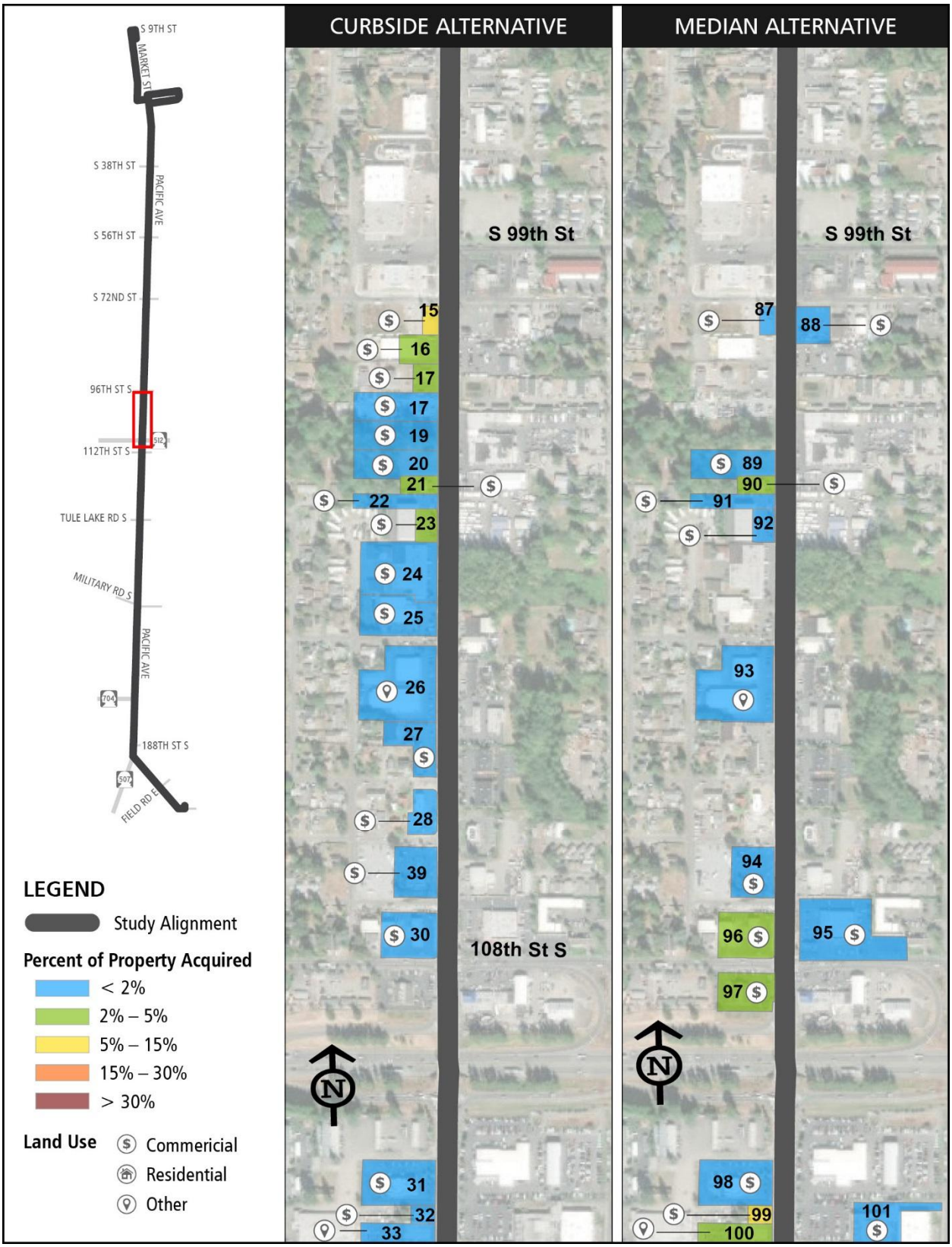
Note: The numbering of the parcel corresponds to the parcel count for the Curbside and Median Alternative in Appendix B. Refer to Appendix B for additional property details.

Figure 13. Potential Property Acquisitions for the Curbside and Median Alternatives (8 of 17)



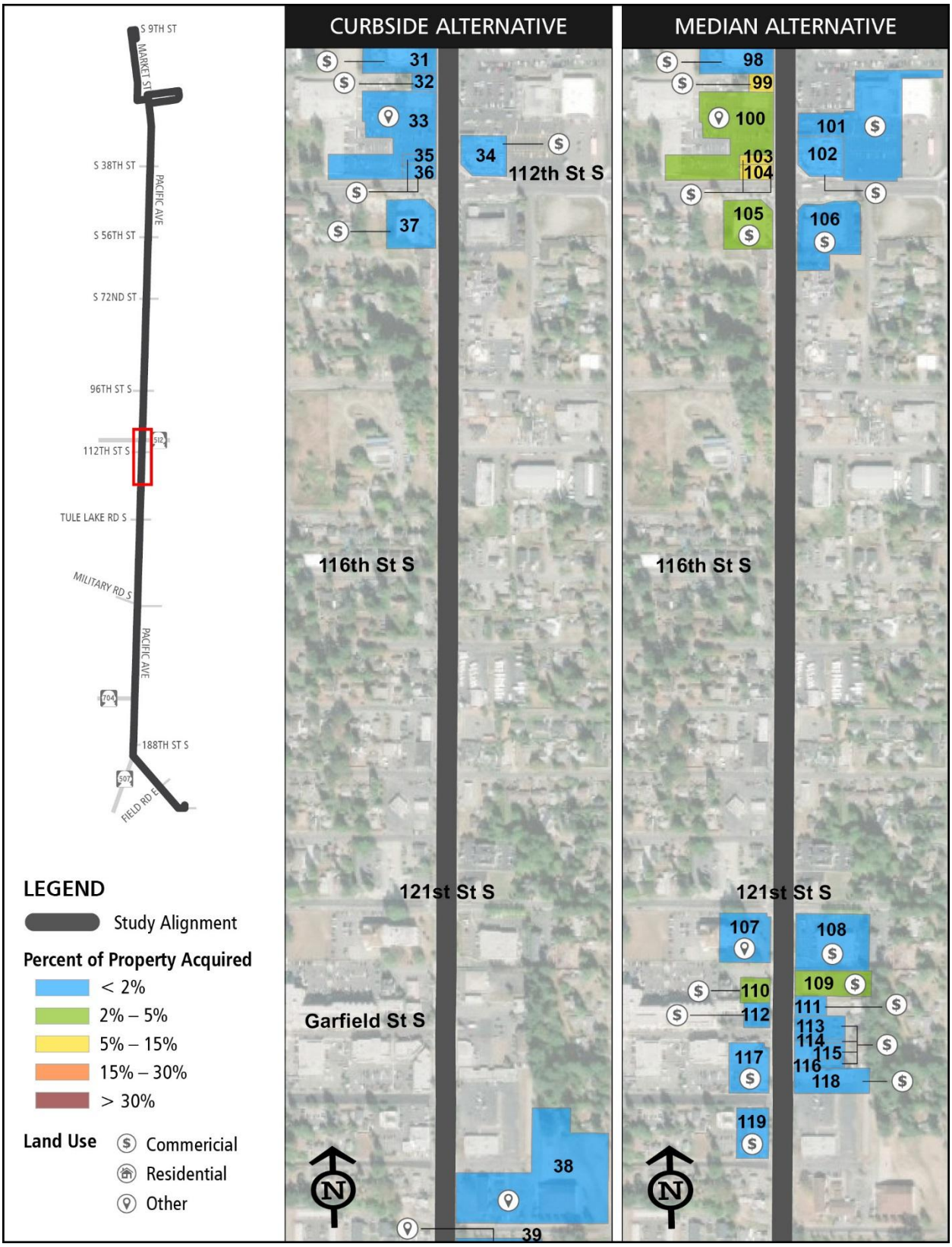
Note: The numbering of the parcel corresponds to the parcel count for the Curbside and Median Alternative in Appendix B. Refer to Appendix B for additional property details.

Figure 14. Potential Property Acquisitions for the Curbside and Median Alternatives (9 of 17)



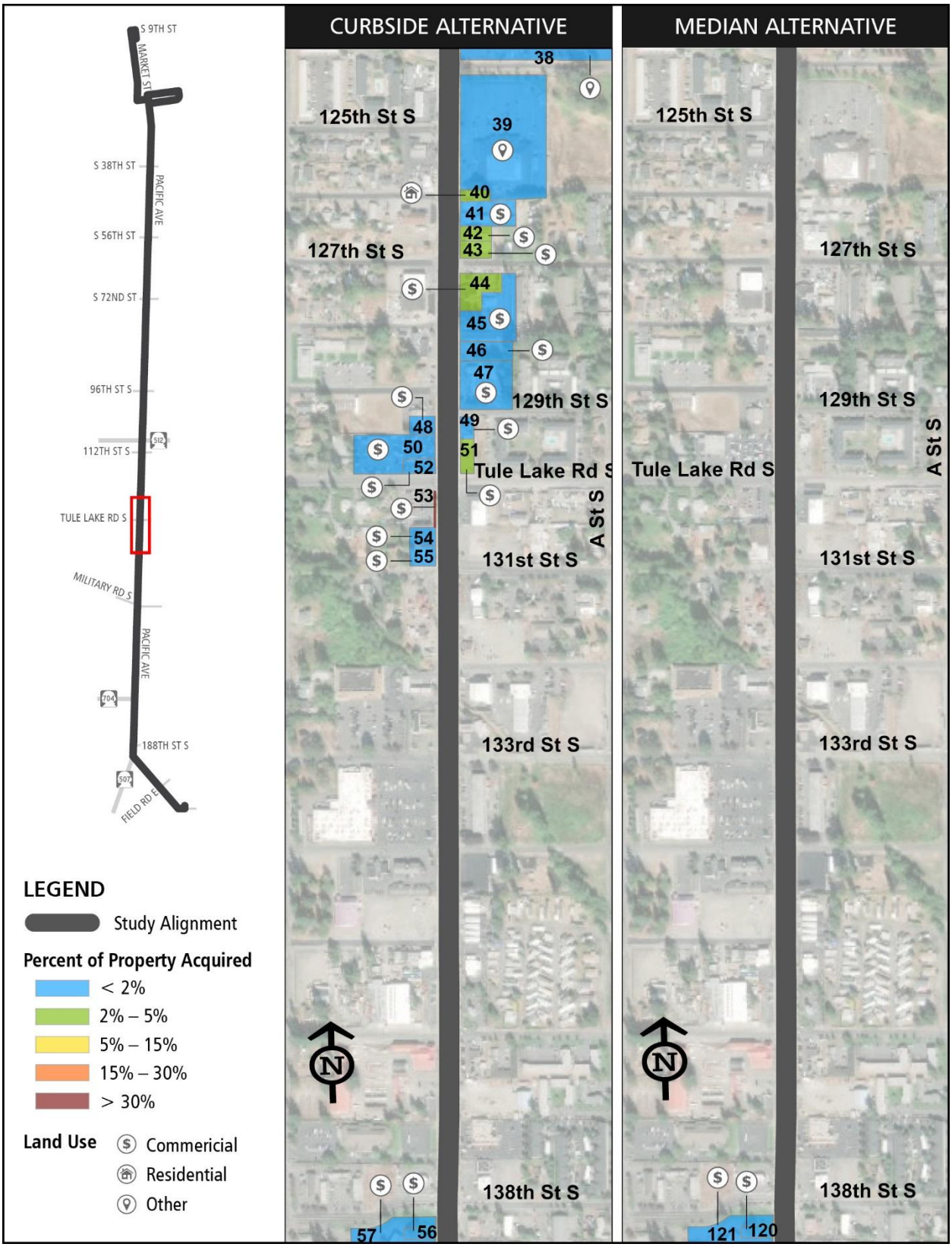
Note: The numbering of the parcel corresponds to the parcel count for the Curbside and Median Alternative in Appendix B. Refer to Appendix B for additional property details.

Figure 15. Potential Property Acquisitions for the Curbside and Median Alternatives (10 of 17)



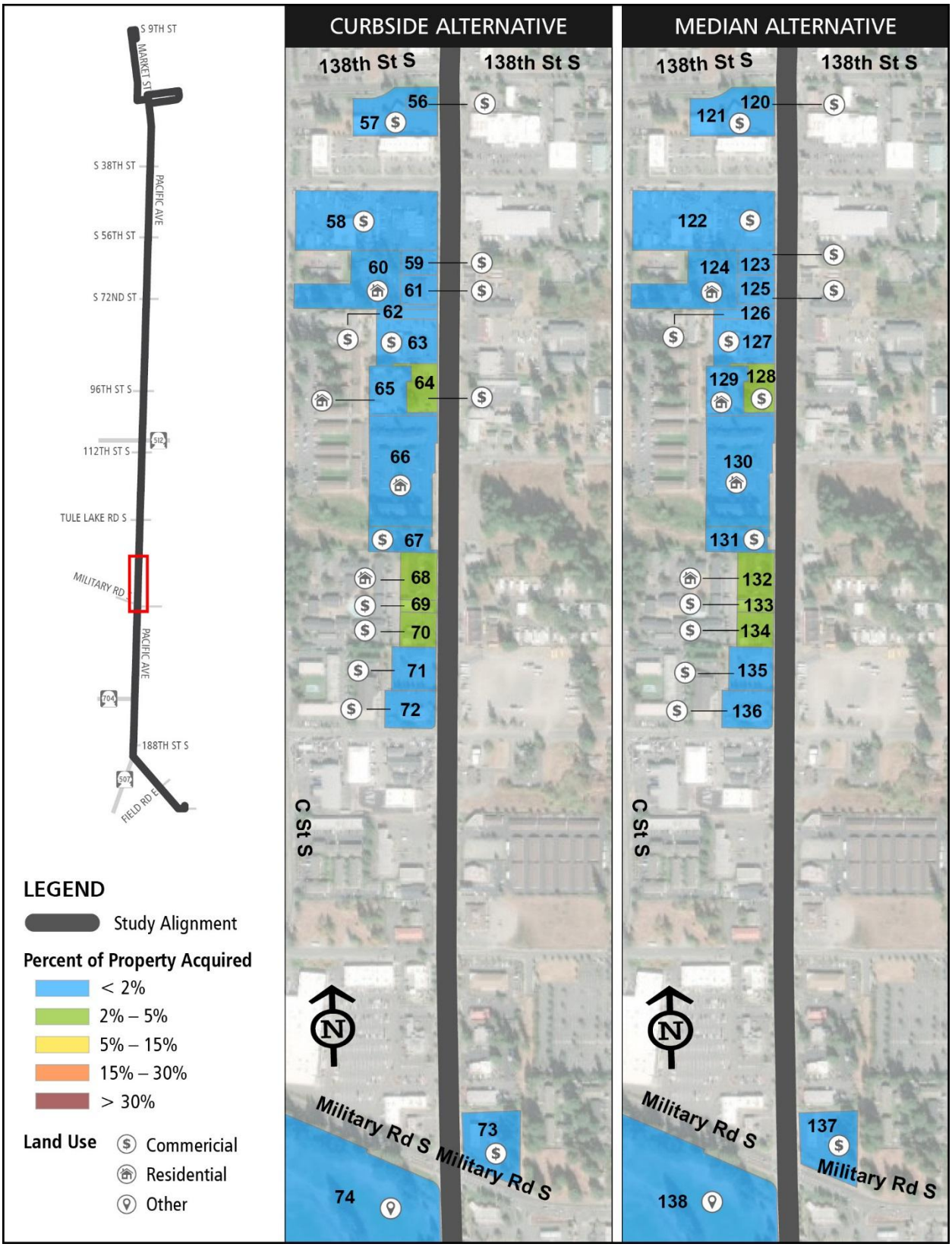
Note: The numbering of the parcel corresponds to the parcel count for the Curbside and Median Alternative in Appendix B. Refer to Appendix B for additional property details.

Figure 16. Potential Property Acquisitions for the Curbside and Median Alternatives (11 of 17)



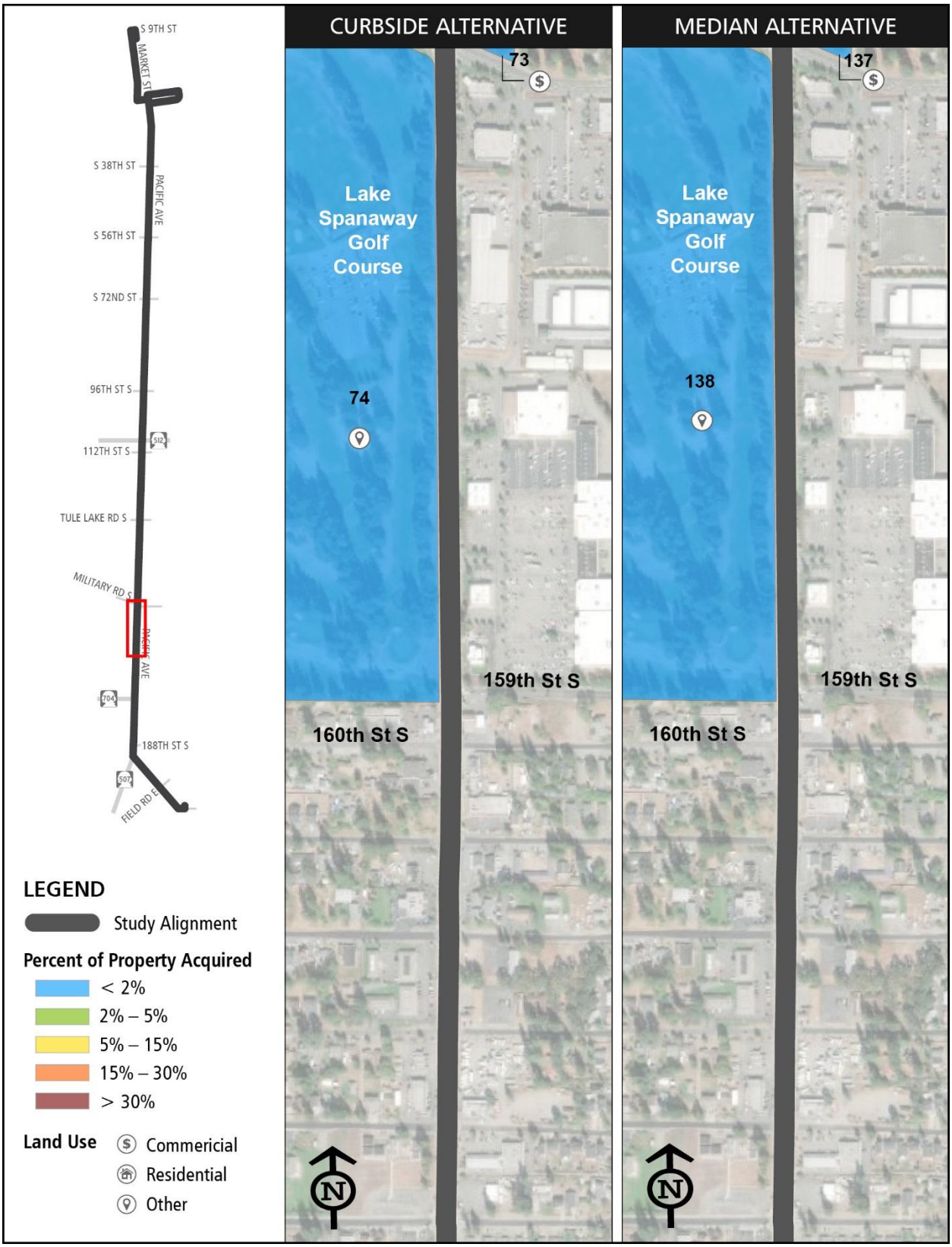
Note: The numbering of the parcel corresponds to the parcel count for the Curbside and Median Alternative in Appendix B. Refer to Appendix B for additional property details.

Figure 17. Potential Property Acquisitions for the Curbside and Median Alternatives (12 of 17)



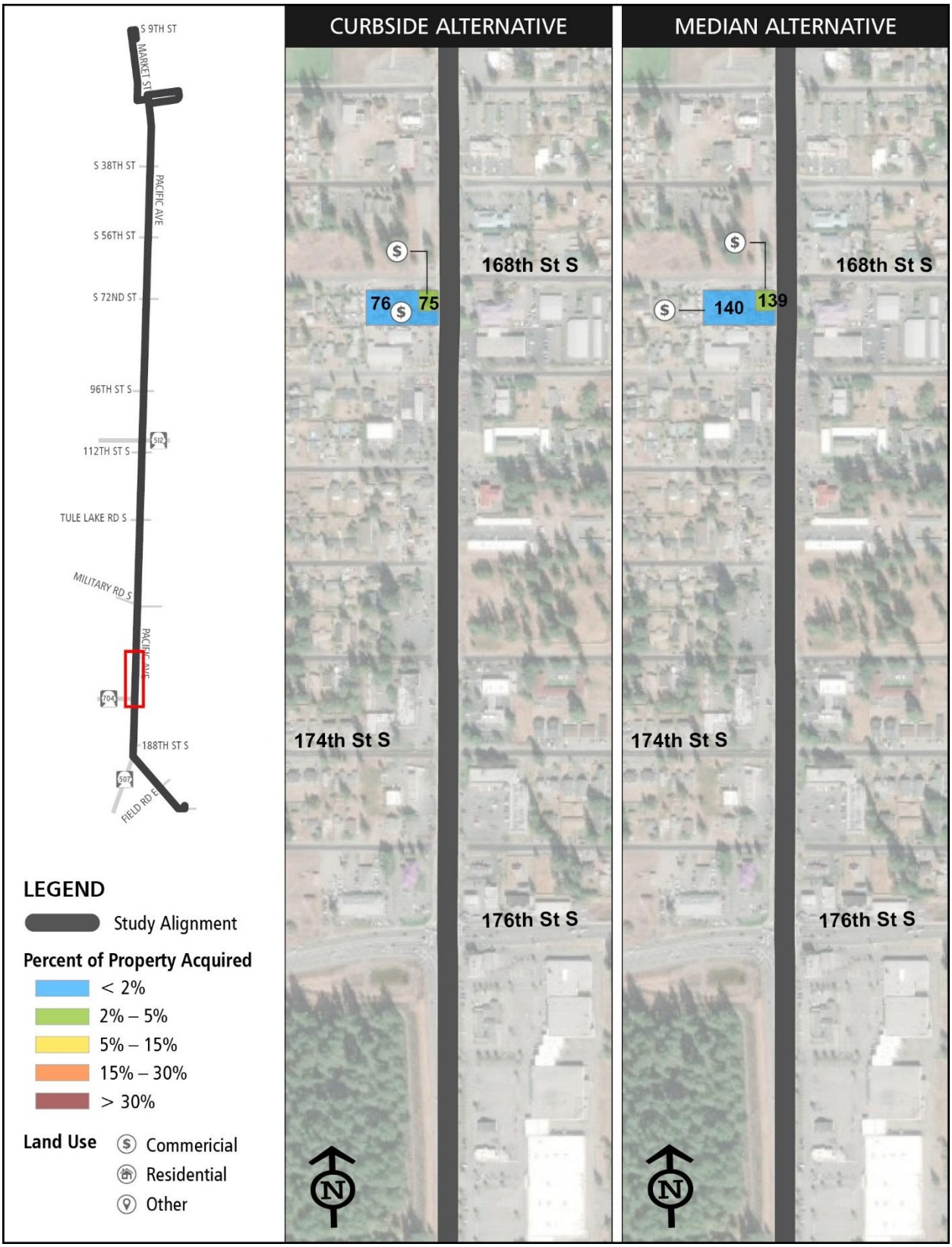
Note: The numbering of the parcel corresponds to the parcel count for the Curbside and Median Alternative in Appendix B. Refer to Appendix B for additional property details.

Figure 18. Potential Property Acquisitions for the Curbside and Median Alternatives (13 of 17)



Note: The numbering of the parcel corresponds to the parcel count for the Curbside and Median Alternative in Appendix B. Refer to Appendix B for additional property details.

Figure 19. Potential Property Acquisitions for the Curbside and Median Alternatives (14 of 17)



Note: The numbering of the parcel corresponds to the parcel count for the Curbside and Median Alternative in Appendix B. Refer to Appendix B for additional property details.

Figure 20. Potential Property Acquisitions for the Curbside and Median Alternatives (15 of 17)

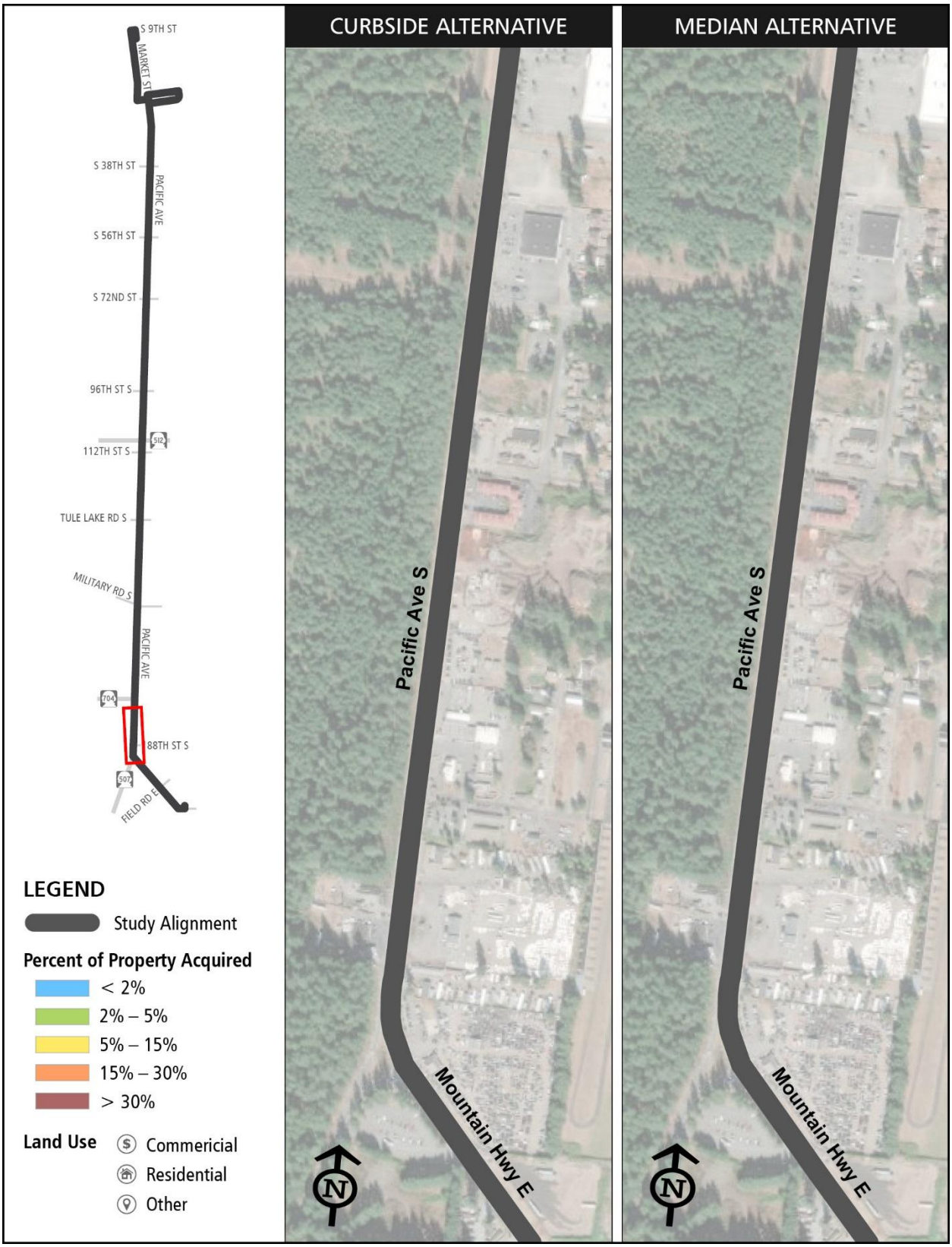


Figure 21. Potential Property Acquisitions for the Curbside and Median Alternatives (16 of 17)

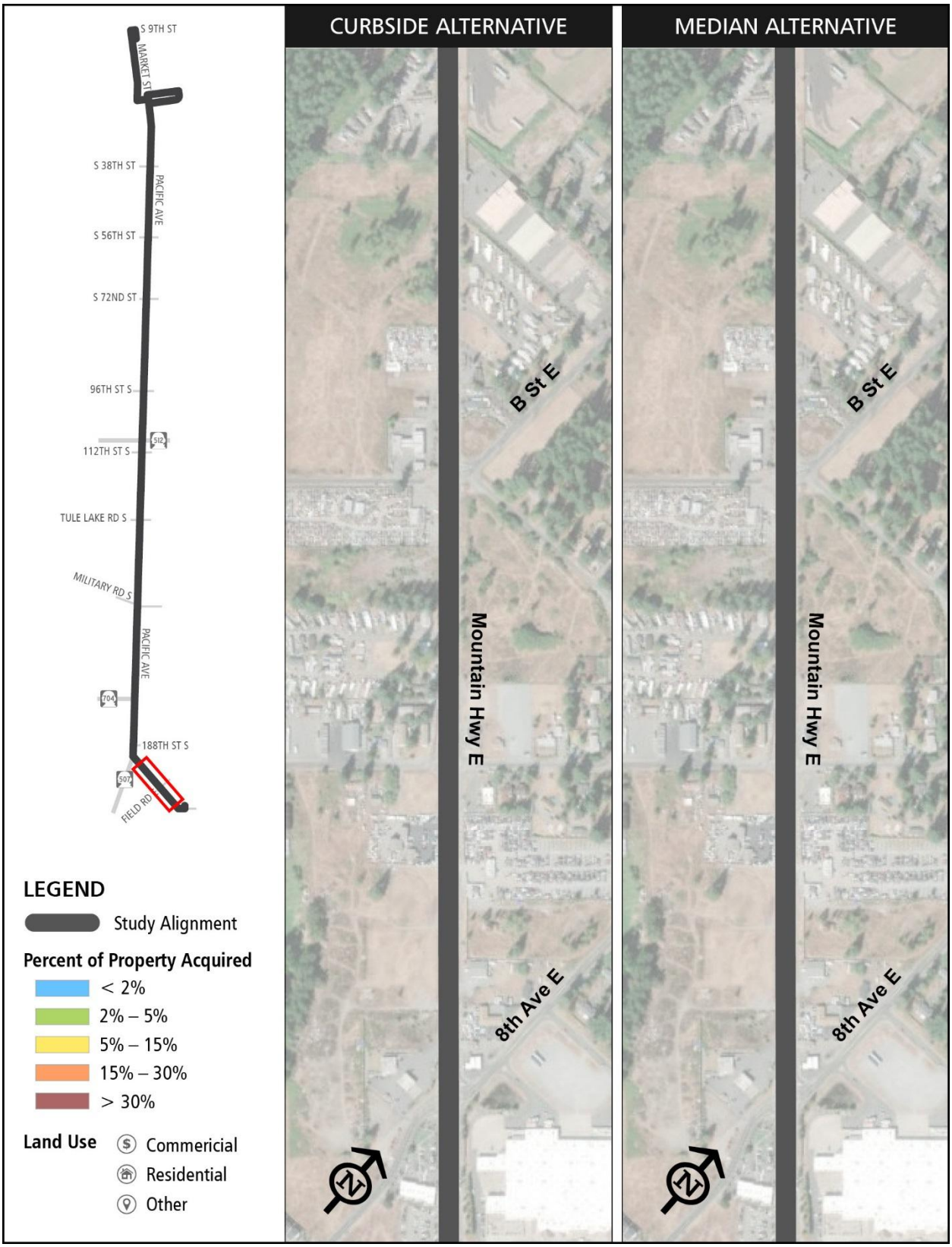
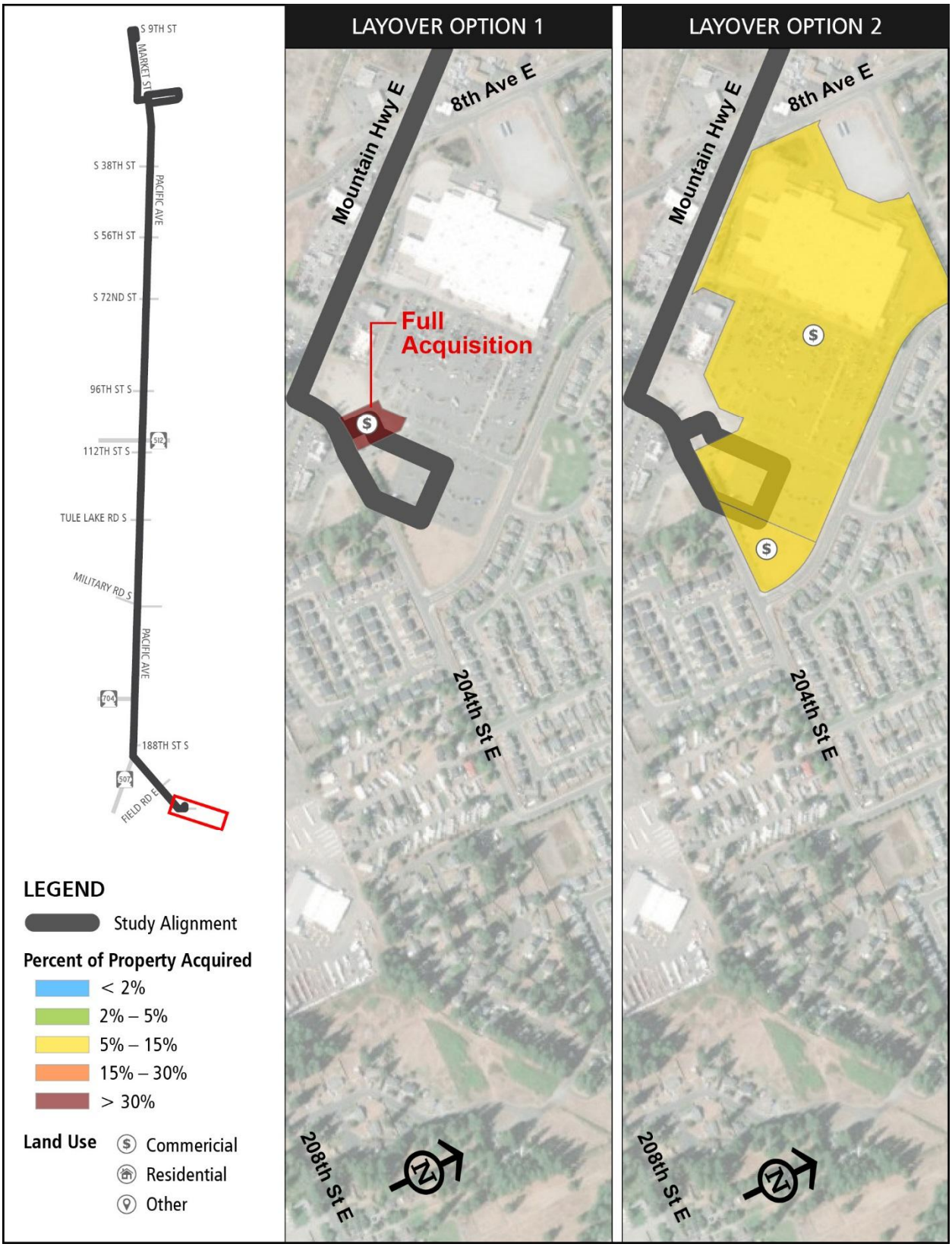


Figure 22. Potential Property Acquisitions for the Transit Layover Options (17 of 17)



Note: Refer to Appendix B for additional property details.

ACCESS

Existing access to properties within the corridor includes direct driveway access, center turn lane access for midblock left turns, and signalized and un-signalized intersections that allow for through traffic movements and right and left turns. The proposed alternatives would impact existing access to properties adjacent to the corridor and at intersections as discussed below.

Curbside Alternative

With the Curbside Alternative there would be no access changes where the BRT service would operate in curbside mixed traffic. In the segments with curbside BAT lanes there would continue to be two through general traffic lanes, vehicles turning right at driveways and intersections would be allowed to use the BAT lane. When leaving a driveway, vehicles could make a right turn into the BAT lane and then merge into a general traffic lane. To accommodate the additional BAT lane the Curbside Alternative would slightly widen the existing roadway and slightly narrow the existing lane widths. While the width of the existing center turn lane may be slightly reduced, there would still be a center turn lane that would continue to allow mid-block left turn movements into driveways and left turns at signalized or unsignalized intersections. Further, while some driveways may require reconstruction due to BAT lane or BRT station construction, roadway widening, or construction of sidewalks, it is expected that existing property access would be maintained.

A total of six (6) new traffic signals are proposed at unsignalized intersections that would also provide for signalized pedestrian crossing.

Median Alternative

With the Median Alternative, where BRT vehicles would operate in curbside mixed traffic or curbside BAT lanes there would be no change in access, same as the Curbside Alternative. Between S 36th Street and 132nd Street S, where the Median Alternative is different from the Curbside Alternative there would be access changes.

Within the median mixed traffic segments where the lanes are not exclusive to transit and the bus runs in general traffic, midblock left turns into driveways would continue to be allowed and unsignalized intersections would generally continue to operate with no left turn restrictions; with exceptions at Pacific Avenue and S. 45 Street, Pacific Avenue and S. 52 Street, Pacific Avenue and S. 54 Street, Pacific Avenue and S. 55 Street, Pacific Avenue and S. 79 Street, Pacific Avenue and S. 82 Street, and Pacific Avenue and S. 94 Street.

For approximately five miles of the corridor where the BRT service would operate in exclusive median lanes, the center-turn lane would be replaced with the BRT-only lanes. In these segments the bus lanes would act as a median that would prohibit left turns at midblock driveways and unsignalized intersections. Figure 23 shows the potential access restrictions that would occur with the Median Alternative. The midblock left turn restriction would impact approximately 49 percent of the driveways (291) within the corridor; the other 51 percent of driveways along the curbside and median mixed traffic segments would have no access changes. Left turn restrictions would occur at approximately 35 unsignalized roadway intersections; these intersections would be modified to right turn only. Signalized intersections would be modified to provide for left turns and U-turns from the north and/or south leg of the intersection as well as left turns from the east and/or west intersecting roadways.

The left turn restrictions at midblock driveways and unsignalized intersections would require drivers to travel "out-of-direction" to the next signalized intersection to execute left or U-turn movements to access their destination. Between S 55th Street and S 79th Street the 1.5-mile segment of median exclusive lanes has an average distance of 0.31 miles between signalized intersections. In this segment of the corridor the longest out-of-direction travel distance would be approximately 0.50 miles between S. 64th Street and S. 72nd Street. The 1.4-mile segment of median exclusive lanes between S. 99th Street and S. 121st Street has an average distance of 0.34 miles between signalized intersections. The longest out-of-direction travel distance in this segment, and in the whole corridor, would be approximately 0.54 miles between S. 112th Street and S. 121st Street.

ON-STREET PARKING

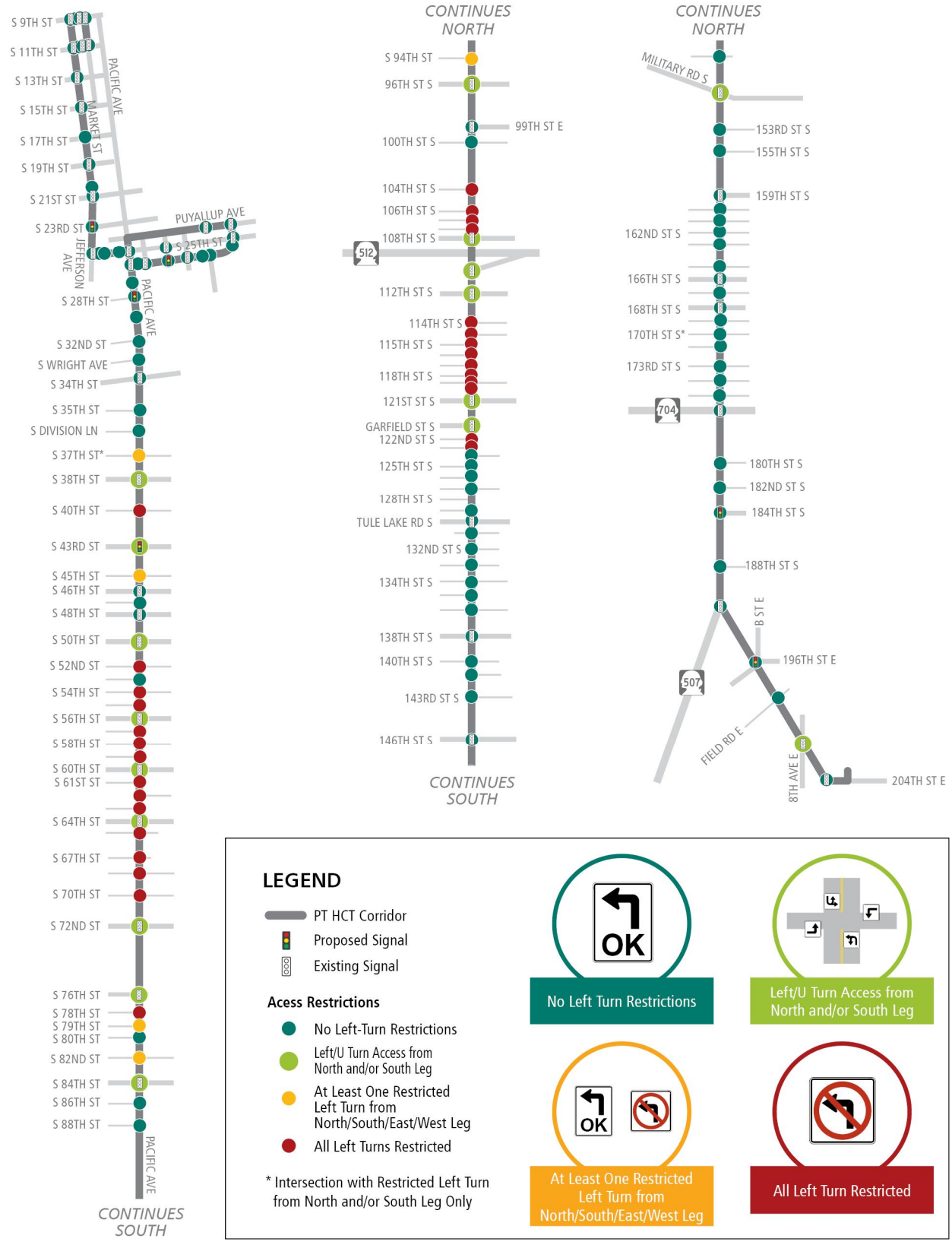
As shown in Table 2, existing on-street (parallel) parking within the corridor is limited. With both the Curbside and Median Alternatives, the potential removal of on-street parking would be limited to the segments south of downtown Tacoma where BAT lanes and/or median exclusive lane treatments are proposed. Table 5 shows the existing on-street parking within the corridor and indicates the approximate number of spaces that would be lost due to the proposed Curbside and Median Alternatives. The construction of the Curbside Alternative would result in the loss of approximately 50 on-street parking spaces and the Median Alternative would result in the loss of approximately 58 spaces along the entire length of the corridor.

Table 5. On-Street Parking Spaces Removed for both Curbside and Median Alternatives

Study Corridor Roadway	Study Corridor Segment	Existing On-Street Parking?	Length (feet) of Parking Areas	Curbside Alternative Parking Spaces Removed*	Median Alternative Parking Spaces Removed*
Pacific Ave	From S 9th St To S 11th St	Y, Parallel	790	0	0
Pacific Ave	From S 11th St To S 17th St	Y, Parallel	2,270	0	0
Pacific Ave	From S 17th St To S 21st St	Y, Parallel and angle	1,530	0	0
Puyallup Ave	From SR 7 To E G St	Y, Parallel	2,690	0	0
E G St/E 26th St	From Puyallup Ave To SR 7	Y, Parallel	3,220	0	0
Pacific Ave	From S 24th St To S 25th St	Y, Parallel on west side	370	0	0
Pacific Ave/SR 7	From S 46th St To S 48th St	Y, Parallel on west side	355	28	28
Pacific Ave/SR 7	From S 55th St To S 57th St	Y, Parallel on west side	380	0	0
Pacific Ave/SR 7	From S 63rd St To S 65th St	Y, Parallel at S 64th St intersection	255	0	9
Pacific Ave/SR 7	From S 82nd St To S 84th St	Y, Parallel on west side	430	22	21
Total on-street parking spaces removed				**50**	**58**

**Approximate number of on street parallel parking spaces is based on an estimated 20-foot length for each space (Source: https://en.wikipedia.org/wiki/Parking_space)*

Figure 23. Access Restrictions at Roadways with the Median Alternative



4.3 TRAFFIC

This section discusses the potential changes to general traffic congestion and safety from the proposed conceptual alternatives, which include using dedicated bus lanes (BRT-only), BAT lanes, new station locations, changes to existing traffic operations, and roadway design modifications to improve transit travel time along the corridor. Additional information on traffic in the corridor is in the project's *Traffic Analysis Working Paper*, dated July 10, 2018.

4.3.1 Methods

Existing conditions for general traffic in the corridor was summarized based on observed traffic volumes and congestion and travel times gathered from Google Application Programming Interface (API) data. Conceptual plans for the proposed alternatives, including station locations and roadway changes were then reviewed to assess likely effects they would have on general traffic operations.

4.3.2 Existing Conditions

Existing traffic and transportation conditions are documented in the Pacific Avenue/SR 7 Corridor HCT's Existing and Future Conditions Report, June 2, 2017. Some key traffic and safety-related aspects of that document are summarized below.

CONGESTION

Pacific Avenue /SR 7 is a major north-south corridor that connects Spanaway to Downtown Tacoma. Traffic volumes vary along the project's 14.4-mile length. Average Daily Traffic (ADT) on the south end of the corridor between the Roy 'Y' and Military Road is approximately 38,000 vehicles. Continuing northward, volumes on Pacific Avenue decline steadily until they are below 10,000 daily vehicles in downtown Tacoma. Table 6 provides ADT data at key locations along Pacific Avenue within the study corridor. The following is a high-level assessment of corridor conditions based on a review of these daily volumes.

Table 6. Existing Traffic Volumes at Key Locations along Pacific Avenue

Pacific Avenue	ADT
South of S. 11th Street	9,000
South of S. 21st Street	15,000
South of S. 26th Street	11,000
South of S. 38th Street	19,000
North of S. 72nd Street	21,000
South of S. 96th Street	20,000
South of S. 112th Street	32,000
South of Military Road S.	38,000
South of Roy 'Y'	27,000

Source: WSDOT Olympic Region 2015

The traffic flow along Pacific Avenue is mostly directional, heading northbound in the AM peak and southbound in the PM peak. Table 7 below summarizes estimated volume to capacity (v/c) ratios at five screenlines along Pacific Avenue. Generally, any v/c ratio less than 0.60 reflects free-flow traffic

conditions; greater v/c ratios reflect increasing congestion, with a v/c ratio of 1.00 being the worst. In the project corridor the highest levels of congestion, corresponding to the highest v/c ratios, occur north of Military Road in both the AM and PM peak periods. Traffic congestion in the off-peak direction is minimal, and similar, throughout the corridor.

Table 7. Existing Corridor Congestion

Pacific Avenue	Volume to Capacity (v/c) Ratio			
	AM		PM	
	NB	SB	NB	SB
North of S. 19th Street	0.08	0.20	0.13	0.17
North of E. 56th Street	0.71	0.25	0.41	0.68
North of SR 512	0.55	0.28	0.39	0.53
North of Military Road S.	0.95	0.31	0.57	0.85
North of 208th Street E.	0.78	0.24	0.41	0.74

Source: WSDOT Olympic Region 2015

SAFETY

The crash data for a five-year period between 2012 and 2016 were evaluated for the study corridor, extending from S. 9th Street in downtown Tacoma to 8th Avenue E. at the south end in Spanaway. The data set provides an overview of the travel safety issues along the proposed BRT corridor. Crash patterns were evaluated based on location, crash type, year, and severity.

A total of 2,931 crashes were recorded during the five-year period; an average of 1.6 crashes per day, or about three crashes every two days. There were 13 fatal crashes in the study corridor, with 12 fatal crashes along Pacific Avenue and one in the downtown Tacoma area. Figure 24 shows crash locations using graduated symbols corresponding with the increased number of crashes for both vehicle crashes and crashes involving pedestrians and bicyclists. The figure illustrates a clustering of vehicle crashes around key intersections and commercial districts, such as at the Cross Base Highway/SR 704, Military Road, 112th Street S., SR 512, and S. 72nd Street.

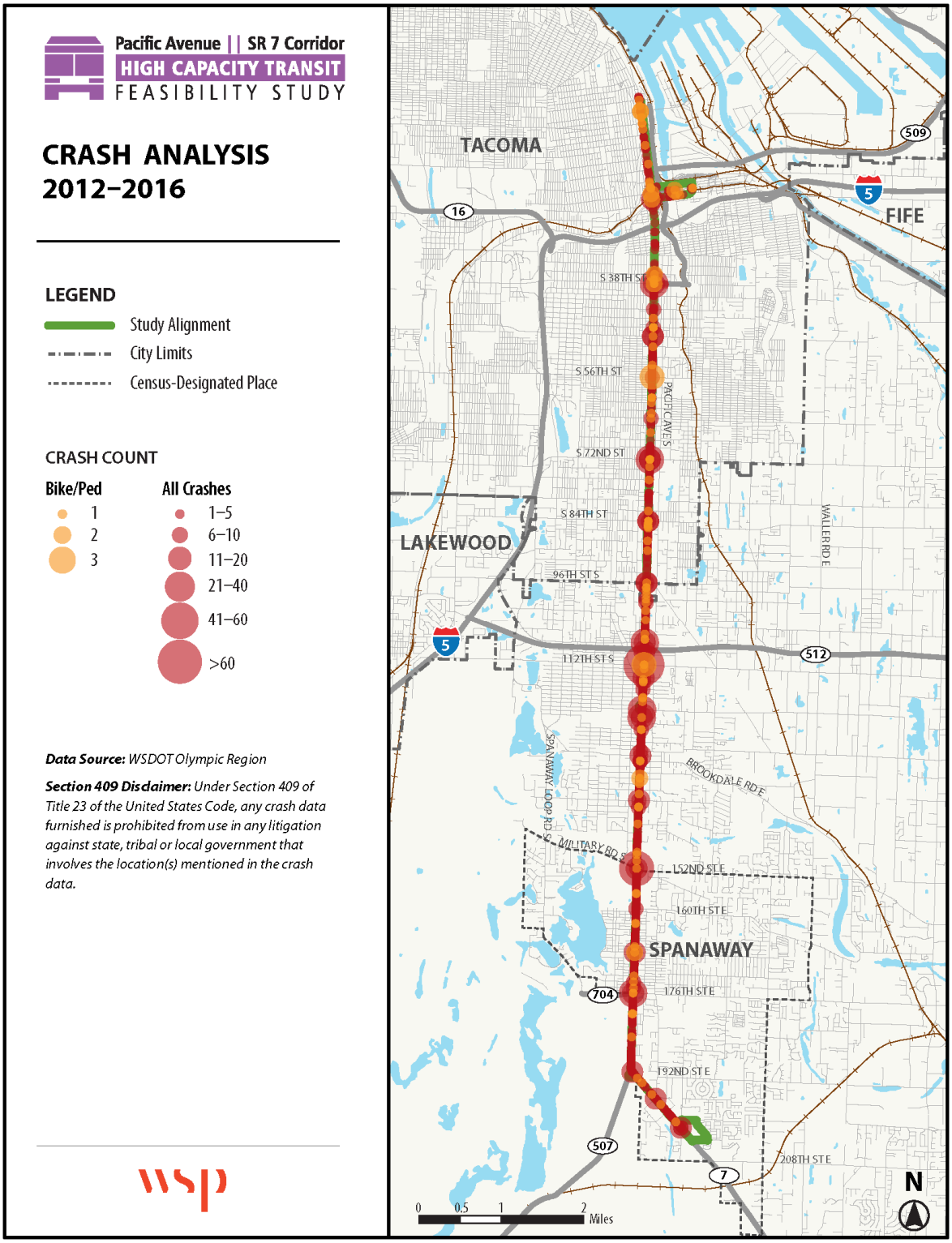
Pedestrian and Bicycle Crashes

The existing corridor is a long stretch of five-lane roadway with occasional marked crossing locations and often long spacing between signalized crossings. Bicycle facilities along the existing Pierce Transit Route 1 are limited to a 0.15-mile segment of sharrows from S. 9th Street to S. 17th Street on Pacific Avenue and a 6.1-mile segment of striped bike lanes on Pacific Avenue/SR7 from S. 112th Street to 204th Street E., extending for a 0.10-mile section on 8th Avenue E. to 200th Street E. Crashes involving pedestrians are of key interest since most transit riders are walking to access bus stops.

A total of 137 crashes involving pedestrians and bicyclists were recorded on Pacific Avenue during the five-year period; 89 crashes involving pedestrians and 48 crashes involving bicyclists. Another five pedestrian crashes and two bicycle crashes were reported within the downtown Tacoma loop. Pedestrian and bicycle crashes occurred primarily near intersections, but not always at the signalized crossings. A total of five pedestrian crashes and one bicyclist crash resulted in fatalities. Two of the fatal pedestrian crashes occurred near a marked crossing adjacent to bus pullouts. All five of the pedestrian fatalities involved vehicles traveling straight along the roadway, striking the pedestrian; four at mid-

block locations and one at an unsignalized intersection. The bicycle fatality occurred on E. 25th Street near E. G Street in downtown Tacoma where a turning truck struck the bicyclist.

Figure 24. Corridor Multimodal Crash Count



Vehicle Crashes

Rear-end crashes are the most common type of vehicle crash in the study corridor, accounting for about half of the total crashes reported, approximately 300 annually. Along with sideswipe crashes, rear-end crashes are an indication of high volumes of traffic and high levels of congestion at major intersections, especially during peak travel periods.

Left turn and right angle crashes may be due to the high number of unprotected left turns at mid-block or unsignalized intersection locations. This may indicate a need for a higher level of traffic control, such as protected and signalized left turns at intersections or access management to limit mid-block left turns.

Figure 25. Crash Type Summary

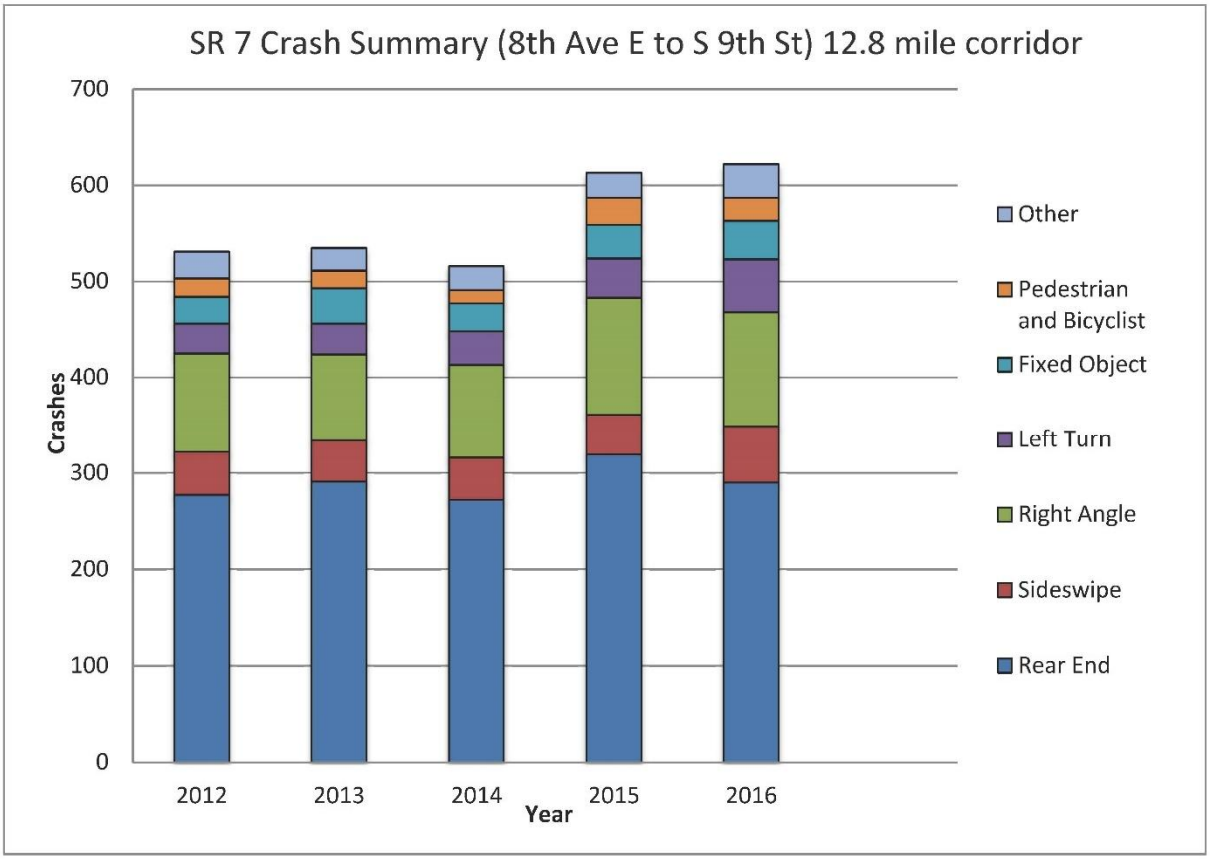


Table 8. Summary of 5 Years of Crash Data for the Study Corridor Intersections

SR 7 Mile Post	Segment	Intersection Cross Street	Signalized (S) or Unsignalized (U)	Crashes over 5 years (2012-2016)	Average Crashes per Year	Severity		Pedestrian Crashes	Bicycle Crashes
						Fatal Crashes	Injury Crashes (Evident and Serious)		
46.45	SR 7, Mtn Hwy	8th Ave E.	S	44	8.8	0	2		
47.36	SR 7, Mtn Hwy	SR 507 Junction	S	30	6	1	6		
48.31	SR 7/Pacific Ave	Cross Base Highway	S	78	15.6	0	6*		2
48.82	SR 7/Pacific Ave	168th Street S.	S	28	5.6	0	2*	3	
48.96	SR 7/Pacific Ave	166th Street S.	S	21	4.2	0	3		
49.37	SR 7/Pacific Ave	159th Street S.	S	22	4.4	0	1*		
49.86	SR 7/Pacific Ave	Military Road S.	S	105	21	0	5*	1	
50.03	SR 7/Pacific Ave	149th Street S.	U	34	6.8	0	1		
50.19	SR 7/Pacific Ave	146th Street S.	S	13	2.6	0	0		
50.61	SR 7/Pacific Ave	140th Street S.	U	28	5.6	0	3		2
50.67	SR 7/Pacific Ave	138th Street S.	S	38	7.6	0	1		
50.97	SR 7/Pacific Ave	134th Street S.	U	19	3.8	0	3*	3	1
51.24	SR 7/Pacific Ave	Tule Lake Road	S	22	4.4	0	2*		
51.7	SR 7/Pacific Ave	Garfield Street	S	43	8.6	0	0		1
51.17	SR 7/Pacific Ave	131st Street S.	U	42	8.4	0	2		2
51.57	SR 7/Pacific Ave	124th Street S.	U	24	4.8	0	2		1
51.79	SR 7/Pacific Ave	121st Street S.	S	49	9.8	0	1		
52.18	SR 7/Pacific Ave	114th Street S.	U	58	11.6	0	2*		1
52.34	SR 7/Pacific Ave	112th Street S.	S	116	23.2	1	4*	3	2
52.5	SR 7/Pacific Ave	SR 512 On/Off Ramp	S	94	18.8	1	5	2	3

SR 7 Mile Post	Segment	Intersection Cross Street	Signalized (S) or Unsignalized (U)	Crashes over 5 years (2012-2016)	Average Crashes per Year	Severity		Pedestrian Crashes	Bicycle Crashes
						Fatal Crashes	Injury Crashes (Evident and Serious)		
52.61	SR 7/Pacific Ave	108th Street S. and SR 512 WB ramps	S	58	11.6	0	3*		
53.35	SR 7/Pacific Ave	S. 96th Street	S	57	11.4	0	9*		1
53.76	SR 7/Pacific Ave	Pedestrian Crossing with flasher	U	1	0.2	0	1	1	
54.03	SR 7/Pacific Ave	Mid-block between S. 86th and S. 84th Street	U	3	0.6	0	5	3	
54.1	SR 7/Pacific Ave	S. 84th Street	S	49	9.8	0	8*	4	
54.61	SR 7/Pacific Ave	S. 76th Street	S	23	4.6	0	1		
54.85	SR 7/Pacific Ave	S. 72nd Street	S	94	18.8	0	11*	3	1
55.35	SR 7/Pacific Ave	S. 64th Street	S	16	3.2	0	2		1
55.6	SR 7/Pacific Ave	S. 60th Street	S	15	3	0	1	2	1
55.86	SR 7/Pacific Ave	S. 56th Street	S	24	4.8	0	4	3	
56.22	SR 7/Pacific Ave	S. 50th Street	S	3	0.6	0	1		
56.36	SR 7/Pacific Ave	S. 48th Street	S	27	5.4	1	2*	1	
56.46	SR 7/Pacific Ave	S. 46th Street	S	15	3	0	1	3	1
57.03	SR 7/Pacific Ave	S. 38th Street	S	55	11	0	6*	3	2
	Pacific Avenue	S. Tacoma Way/S. 26th Street	S	14	2.8	1	2	2	0
	Pacific Avenue	S. 24th Street/S. Puyallup	S	10	2	0	2	1	1
	Pacific Avenue	S. 21st Street/ SR 705 LX	S	36	7.2	0	2	0	1
	Pacific Avenue	S. 15th Street	S	5	1	0	0	0	0
	Pacific Avenue	S. 13th Street	S	13	2.6	0	2	2	0
	Pacific Avenue	S. 11th Street	S	14	2.8	0	4	2	2
	Pacific Avenue	S. 9th Street	S	8	1.6	0	1	0	1

4.3.3 Preliminary Impact Evaluation

This section provides a preliminary assessment of the conceptual alternatives' effects to general traffic safety and congestion. Additional information is provided in the project's *Traffic Analysis Working Paper*, dated July 10, 2018. Additional assessment of traffic operations and safety data, including expected changes to traffic operations such as intersection level of service, traffic delay, roadway capacity, average peak period speeds, and vehicle crashes, will occur once the LPA is selected.

CONGESTION

With both the Curbside and Median Alternative the decreased travel time and increased convenience, comfort, and reliability of transit service could result in a mode shift from automobiles, particularly single-occupancy vehicles. An increase in transit ridership would allow for additional person-throughput in the corridor while not increasing traffic congestion.

With both the Curbside and Median Alternative the 65 Route 1 bus stop pairs would be consolidated to 32 BRT station pairs. Fewer BRT stations in the corridor would reduce delays to traffic that result from buses stopping in the travel lane at bus stops or from exiting and entering traffic to serve bus stops at pullouts.

With both the Curbside and Median Alternatives off-board fare collection and level-boarding of BRT vehicles would decrease the time needed to load passengers at BRT stations. This benefit would increase through 2040 as ridership is estimated to grow between 27 percent and 60 percent. In sections of the corridor where the BRT service would operate in mixed traffic, the reduced passenger loading times would minimize the delay to general traffic behind the BRT vehicles. However, the Curbside and Median Alternatives propose stations where the BRT vehicles would be stopped in the travel lane in mixed traffic, where currently Route 1 buses use a pull out to stop outside of the travel lane. With the Curbside Alternative and the Median Alternative, stations in curbside mixed traffic segments could result in minor delays to general traffic; however, because passengers can board BRT vehicles very quickly the dwell time at stations is very brief (under 20 seconds). With the Median Alternative BRT vehicles in both median mixed traffic and median exclusive lane segments would not stop in a travel lane; therefore, there would be no delays to general traffic.

Curbside Alternative

The Curbside Alternative would improve signal coordination for the BRT route, which would optimize the corridor for a higher flow of all traffic. In addition, the Curbside Alternative would not eliminate the existing center left turn lane or place restrictions on left turns.

In the BAT lane segments of the Curbside Alternative transit and traffic travel time would be improved as BRT vehicles would be separated from general traffic in segments that are currently congested. Since the Curbside Alternative does not reduce the number of general traffic lanes, general traffic operations would operate similarly to, or better than it currently does.

In addition, there are numerous driveways and intersecting roadways along the corridor where vehicles entering and exiting local businesses to and from Pacific Avenue/SR 7 result in some delay and congestion. Along the roughly five (5) miles of BAT lanes vehicles turning right into driveways and at intersections would have a separate lane along Pacific Avenue/SR 7, which would improve the flow of

through traffic and reduce congestion. Therefore, the proposed BAT lanes would be expected to result in faster travel times for all vehicles and increased capacity in the corridor.

Median Alternative

The Median Alternative would have some similar benefits to traffic operations as the Curbside Alternative, such as optimizing traffic signal coordination for a higher flow of all traffic and additional capacity in the segments where the BRT vehicles would operate in curbside BAT lanes. In addition, in the approximately five (5) miles of exclusive median lanes separating the BRT vehicles from general traffic in currently congested segments would improve transit and traffic travel time.

In the five (5) miles of exclusive median lane segments the existing center bi-directional left turn lane would be eliminated; the BRT exclusive lanes would act as a median, prohibiting mid-block left turns and left turns at unsignalized intersections. With the elimination of the center left turn lane, vehicles that currently turn left at mid-block locations to access businesses would be required to drive to the nearest signalized intersection to make a U-turn. In many cases the additional driving distance would be less than one block. Due to existing congestion in the corridor, designated left turn movements at signals could decrease the time to make the turning movement to access businesses along the corridor as vehicles would not have to wait for gaps in oncoming traffic.

A benefit of the median exclusive lanes to traffic congestion is that they would be expected to decrease traffic congestion that occurs because of traffic collisions along the corridor, particularly from left turning vehicles with oncoming traffic. Minor general traffic rerouting could occur as some vehicles would use adjacent streets to avoid U-turns while accessing businesses. This effect could be monitored. In moderation, this shift to side streets could decrease corridor congestion and better balance the road network.

SAFETY

Curbside Alternative

With the Curbside Alternative the curbside BAT lanes would act as a dedicated lane for vehicles turning right into businesses or at intersections. This would reduce the number of conflict points with through traffic, which would be expected to reduce rear-end crashes while improving both general traffic and transit speeds. Additionally, the BAT lanes would provide a buffer for bicycle and pedestrian traffic from the general traffic lanes that would be expected to have higher traffic volumes.

However, the Curbside Alternative would not restrict left turns out of driveways and at unsignalized roadways. For vehicles turning left onto Pacific Avenue the widening of Pacific Avenue for the addition of BAT lanes to cross could exacerbate left turn conflicts at these locations.

Median Alternative

With the Median Alternative the segments where BRT vehicles would operate in curbside BAT lanes would be expected to reduce right turn conflict points and rear-end crashes and provide a buffer between pedestrians and bicyclists and through traffic, as described for the Curbside Alternative.

The exclusive median lane segments would restrict mid-block left turn movements and left turns at unsignalized intersections. Drivers would make a protected left turn/U-turn at the nearest signalized intersection instead of making an unprotected left turn against oncoming traffic. This would standardize access and would be expected to reduce left turn and right angle crashes along the corridor, thereby

improving safety in the corridor. In the exclusive median lane segments the Median Alternative would improve pedestrian and bicycle safety by reducing conflict points from vehicle left turn movements; however, it would not provide a buffer from through traffic as would be provided by BAT lane segments.

4.4 ENVIRONMENTAL JUSTICE AND TITLE VI

This section discusses the potential effects to environmental justice populations, minority and low-income populations, from the Curbside or Median Alternative. Existing conditions are described and public outreach and engagement with environmental justice populations is summarized. Because the two conceptual alternatives follow the same route, with a different lane configuration within the roadway right-of-way, potential impacts that would be nearly the same are discussed once; potential differences are discussed in more detail.

4.4.1 Applicable Regulations

ENVIRONMENTAL JUSTICE

The assessment of environmental justice impacts is required by Presidential Executive Order 12898, *Federal Actions to Address Environmental Justice to Minority[1] Populations and Low-Income[2] Populations* (February 11, 1994); the U.S. Department of Transportation (USDOT) Order 5610.2, *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (April 5, 1997); and the USDOT Order 5610.2(a) (May 2, 2012), updating the USDOT policy to consider environmental justice principles in all programs, policies, and activities. The guiding principles followed by FTA, as described by FTA Circular 4703.1, are to (1) avoid, minimize, and mitigate disproportionately high and adverse effects on minority and low-income populations; (2) ensure full and fair opportunities for public involvement by members of minority and low-income populations during project planning; and (3) prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

FTA's environmental justice guidance defines a disproportionately high and adverse effect as one that:

- Is predominantly borne by a minority or low-income population, or
- Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Related to the environmental justice guidance, Presidential Executive Order 13166, *Improving Access to Services for Persons with Limited English Proficiency,* requires agencies to conduct public outreach and public involvement activities to meaningfully engage members of the community. Effective transportation decision-making depends upon understanding the communities affected by a proposed project and community outreach activities that would create conditions that encourage meaningful engagement of all groups in the community. Efforts to encourage engagement include understanding what population groups may live in the study area and what non-English languages may be spoken by

[1] A minority person includes persons who belong to any readily identifiable racial or ethnic group, including the following: Black or African American, Asian American, American Indian and Alaskan Native, Native Hawaiian or Other Pacific Islander, as well as Hispanic or Latino.

[2] A low-income person is identified as a person whose median household income below the Department of Health and Human Services poverty guidelines. The U.S. Census Bureau updates poverty thresholds each year for use by the Department of Health and Human Services.

residents. Special targeted community outreach can encourage their input and opinions on proposed project alternatives, perceived community impacts, and appropriate mitigation measures to avoid or minimize impacts.

TITLE VI

In compliance with *Title VI of the Civil Rights Act of 1964,* FTA protects people from discrimination based on race, color and national origin in programs and activities receiving federal financial assistance. FTA Circular 4702.1B, *Title VI Requirements and Guidelines for Federal Transit Administration Recipients* (effective October 1, 2012), outlines the Title VI requirements for FTA recipients. The FTA requires transit agencies that receive federal funding to evaluate fare and major service changes at the planning and programming stages to determine whether they have a discriminatory impact.

In compliance with this, Pierce Transit has adopted the following three key policies:

- *Major Service Change Policy* adopted in 2013, and amended in 2014, establishes a threshold for a major service change and an adverse effect caused by a service change. A major service changes is defined as a change lasting 12 months or more on any one route that would add or eliminate 20 percent or more of the route revenue miles or 20 percent or more of the revenue hours. An adverse effect is defined as a geographical or time-based reduction in service that includes frequency changes, re-routing, or route elimination.
- *Disparate Impact Policy* adopted in 2013 establishes a threshold for adverse effects of a major service change or fare change that are borne disproportionately by minority populations. A disparate impact occurs when the minority population adversely affected by the change is 10 percent more than the average minority population of Pierce Transit's service area, which is defined as 35.3 percent (Pierce Transit 2015).
- *Disproportionate Burden Policy* establishes a threshold when adverse effects of a major service change or fare change disproportionately burden low-income populations. A disproportionate burden occurs when the low-income population adversely affected by the change is 5 percent more than the average low-income population of Pierce Transit's service area, which is defined as 12.3 percent (Pierce Transit 2015).

4.4.2 Methods

The methodology to assess potential impacts to environmental justice populations follows FTA's guidance in Circular C 4703.1, which includes:

- Describe the minority and low-income populations within the study area.
- Discuss adverse project effects during construction and operations that would affect minority and low-income populations, including proposed mitigation and enhancement actions to avoid or minimize effects.
- Discuss the remaining effects, if any, and why further mitigation is not proposed.
- Discuss all positive effects for minority and low-income populations.
- For projects that are only partially located in predominately minority and low-income areas, provide a comparison of mitigation and environmental enhancement actions that could affect these populations versus those in predominantly non-minority and low-income areas.

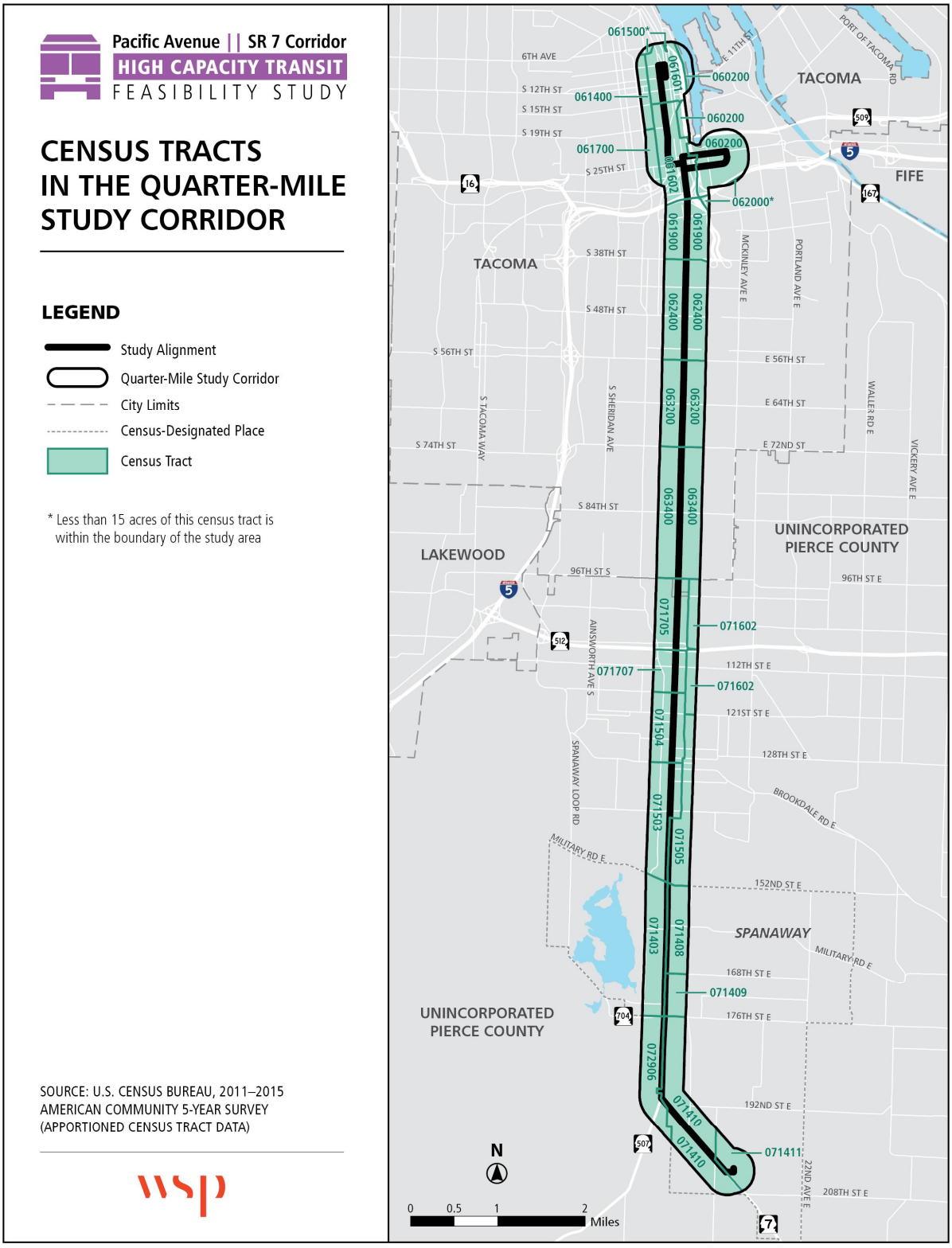
Census tract data from the 2011-2015 American Community 5-Year Survey were used to describe the demographic characteristics of the 0.25-mile study area. In total, there are 23 census tracts (CT) that are located wholly or partially within the study area. The analysis includes all of the CT data if it were located entirely within the study area, but includes only a proportion of the data if only part of the CT is located within the study area. For example, if 25 percent of the geographic area covered by the census tract is in the study area, then 25 percent of the CT population was included in the study area population estimate. The exception was for the assessment of foreign languages spoken in the home when residents over the age of 5 years of age could not speak English "very well." In these cases, the data for the entirety of all CTs were used consistent with the analysis conducted for the public involvement plan.

GIS was used to categorize the study area's CT demographic characteristics relative to county-wide demographics. In addition, where available data for the Pierce Transit Benefit Area were also cited.

4.4.3 Existing Conditions

For the Pacific Avenue/SR 7 HCT study the population within the 0.25-mile study area is racially and ethnically diverse and includes a high proportion of the population living below poverty. Figure 26 shows the census tracts within the study area.

Figure 26. Census Tracts in the 0.25-mile Study Area



TOTAL POPULATION

Within the study area the estimated population is about 27,800, based on apportioned 2010 Census Tract data. Residences within the study area are primarily single-family housing, except in downtown Tacoma where many multi-story apartment buildings are mixed with commercial and retail establishments. Within Joint Base Lewis-McChord, at the south end of the corridor, there are no residences and the few businesses are beyond the study area approximately one mile west of Pacific Avenue S.

RACE AND ETHNIC MINORITY POPULATIONS

The study area population is racially and ethnically diverse (see Table 9). The population is an estimated 66 percent White and 36 percent non-White. In addition, Hispanics or Latinos comprise an estimated 11 percent of the population. Together, an estimated 41 percent of the population is minority, either non-White or Hispanic or Latino. In comparison, an estimated 37.2 percent of the population of Pierce County and 35.3 percent of the Pierce Transit Benefit Area (i.e., Pierce Transit service area), which covers an estimated 70 percent of the county, is minority. Figure 27 shows total minority distribution within the study area.

Table 9. Study Area Population Race and Ethnicity

Race or Ethnicity	Study Area Estimated Population	Study Area Percentage	Pierce Transit Benefit Area
Total	**27,800**		
Race			
White	18,300	66%	67%
Black or African American	2,900	10%	26%
American Indian or Alaska Native	400	1%	11%
Asian	2,400	9%	6%
Hawaiian and Other Pacific Islander	600	2%	---
One other race or two or more races	3,200	12%	1%
Hispanic or Latino[1]	3,100	11%	12%
Total Minority[2]	**11,300**	**41%**	**35.3%**

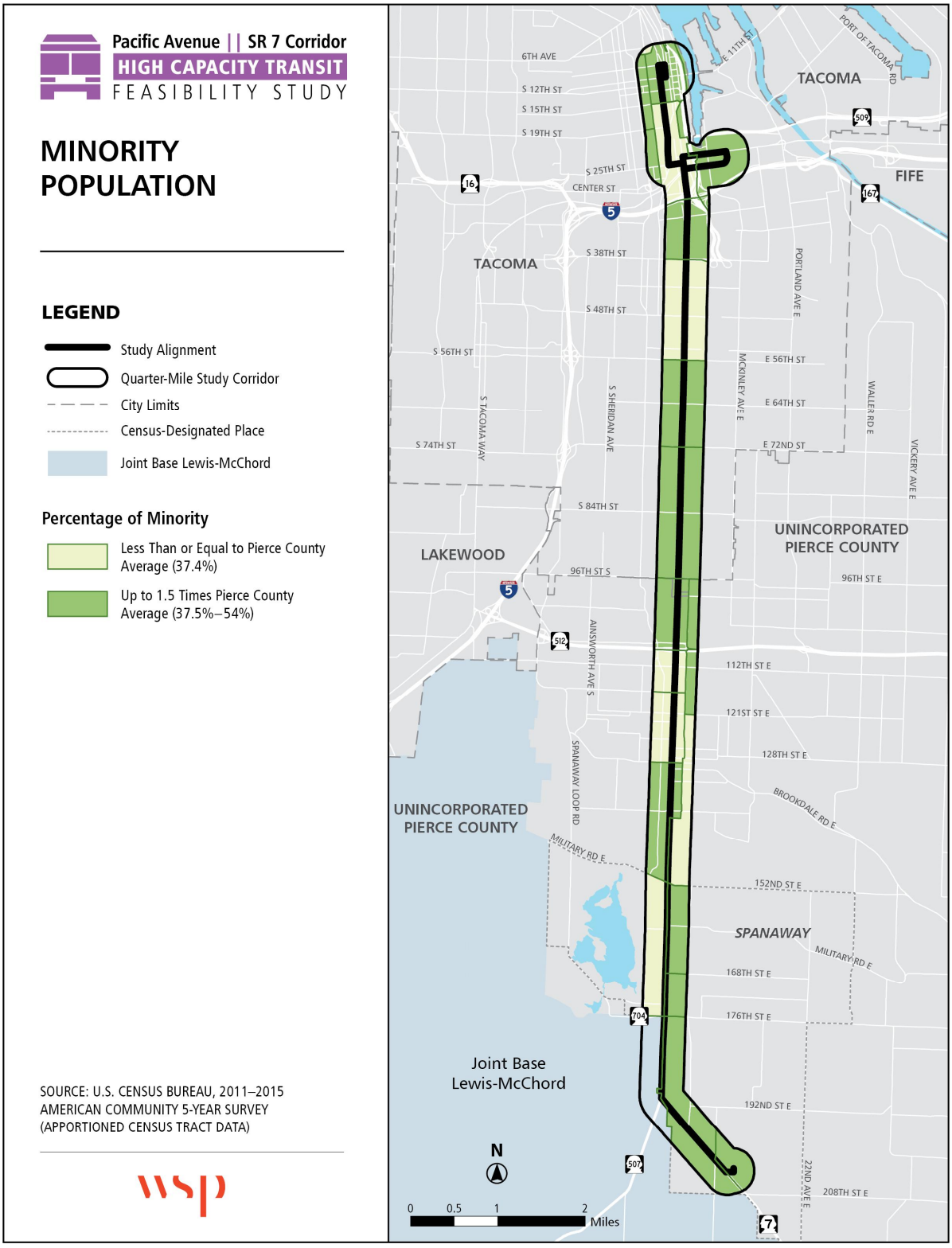
Source: 2015 ACS- 5 Year Data (B03002), Pierce Transit 2015.

Notes:

1. *Hispanic or Latino persons may be of any race.*
2. *Total minority population includes all persons who are non-White and Hispanic/Latino.*

The many ethnic religious facilities and service organizations within the study area reflect the diverse population. These community facilities include the following: Tacoma Buddhist Temple, East Asian Market, Japanese International Baptist Church, La Huerta International Market, Japanese Food Market, St. Nicholas Greek Orthodox Church; Macedonian Missionary Baptist Church, Elim Moldovia Evangelical Church, Russian Center of Seventh-day Adventist Church, Korean Women's Association, Japanese Community Church, and Inglesia Ni Cristo Church of Christ.

Figure 27. Minority Population



Approximately 7 percent of the population over the age of 5 years speaks a language other than English in the home and they speak English less than very well (Pierce Transit, 2017). Figure 28 shows the distribution of persons with limited English proficiency (LEP) in the study area. In comparison, an estimated 5.7 percent of Pierce County residents is LEP and an estimated 3.6 percent of the Pierce Transit Benefit Area is LEP. Research for the preparation of the project's *Public Involvement Plan* identified the languages most frequently spoken in the home include: Spanish, Korean, Cambodian, and Vietnamese. The elementary public school non-English speaking portals at the local school district webpages included Spanish, Russian, Korean, Moldavian, Tagalog, Arabic, Cambodian, Ukrainian, Chinese, Khmer, Vietnamese, Hindi, and Lao.

LOW-INCOME POPULATIONS

The 2015 ACS data indicate an estimated 6,000 or almost 22 percent of individuals in the study area are living below the poverty level. In comparison, this poverty rate is more than 70 percent higher than both Pierce County (12.4 percent) and the Pierce Transit Benefit Area (12.3 percent). Figure 29 shows the distribution of persons living in poverty.

Of the estimated 10,700 households in the study area, a substantial number are residing in either subsidized or very affordable housing. There are over 1,400 subsidized housing units located within the study area, predominantly in downtown Tacoma (National Housing Preservation Database, 2017). Some sites have over 100 units, while others have as few as 4 to 20 units. In addition, there are 13 mobile home parks with an estimated 445 units located within the study area. The mobile home parks, which provide among the lowest market rates for renting single-family housing, are all located south of 97th Street S in unincorporated Pierce County with several located within the Spanaway unincorporated community. As such, almost 18 percent of study area households reside in either subsidized or very affordable housing.

Another indicator of low-income populations is the number of households that do not have a vehicle available for personal use by residents. These persons are referred to as "transit dependent." In the study area, an estimated 12 percent of the households do not have access to a personal vehicle (see Figure 30). In comparison, an estimated 5.8 percent of Pierce County households have no personal vehicle. At almost twice the rate compared to the county, the study area residents have a higher level of transit dependency.

One population group that often does not have access to a vehicle are disabled persons. In the study area, an estimated 16 percent of the population is disabled (see Figure 31), which is slightly higher than the estimated 13.5 percent for all of Pierce County.

Figure 28. Households with Limited English Proficiency

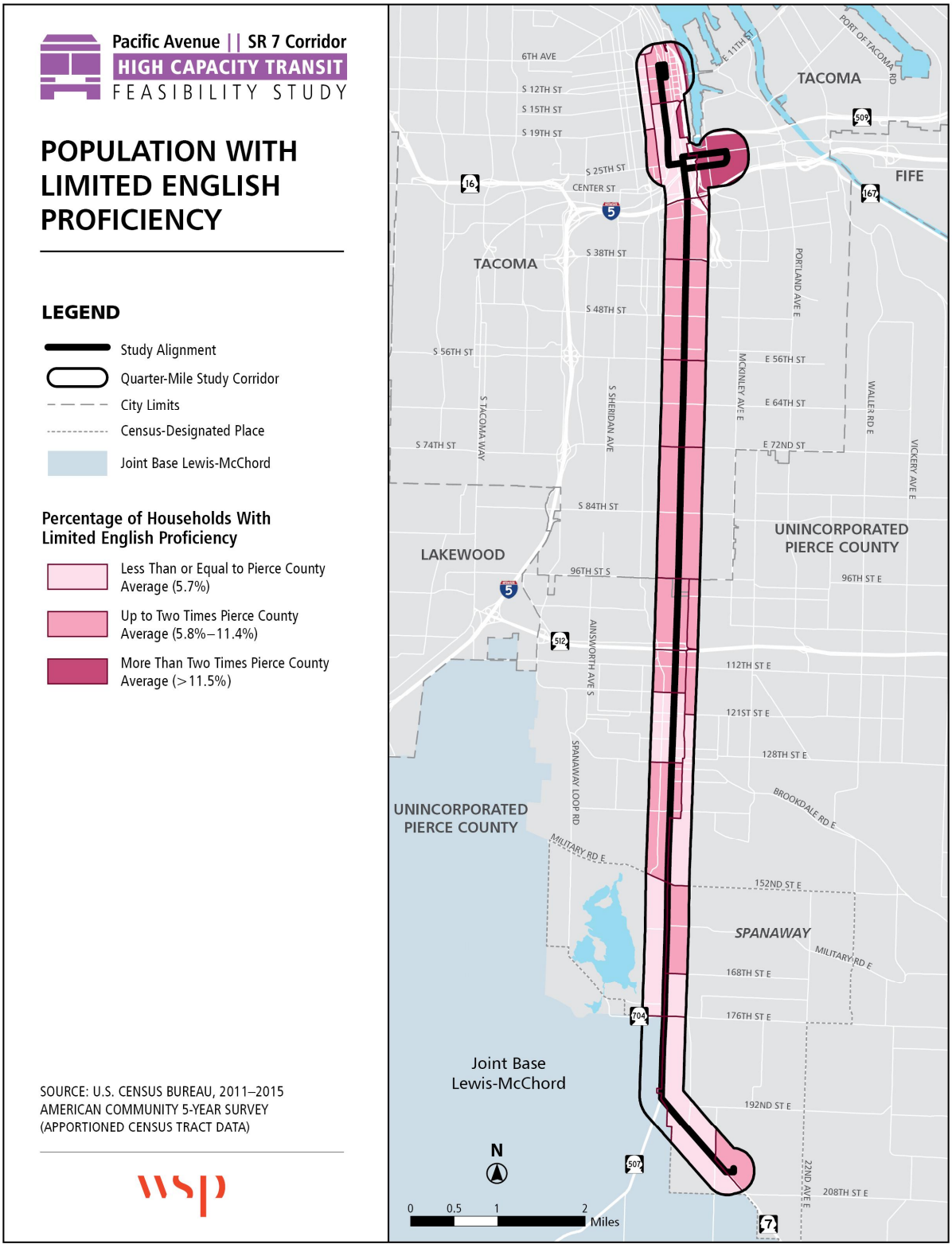


Figure 29. Population in Poverty

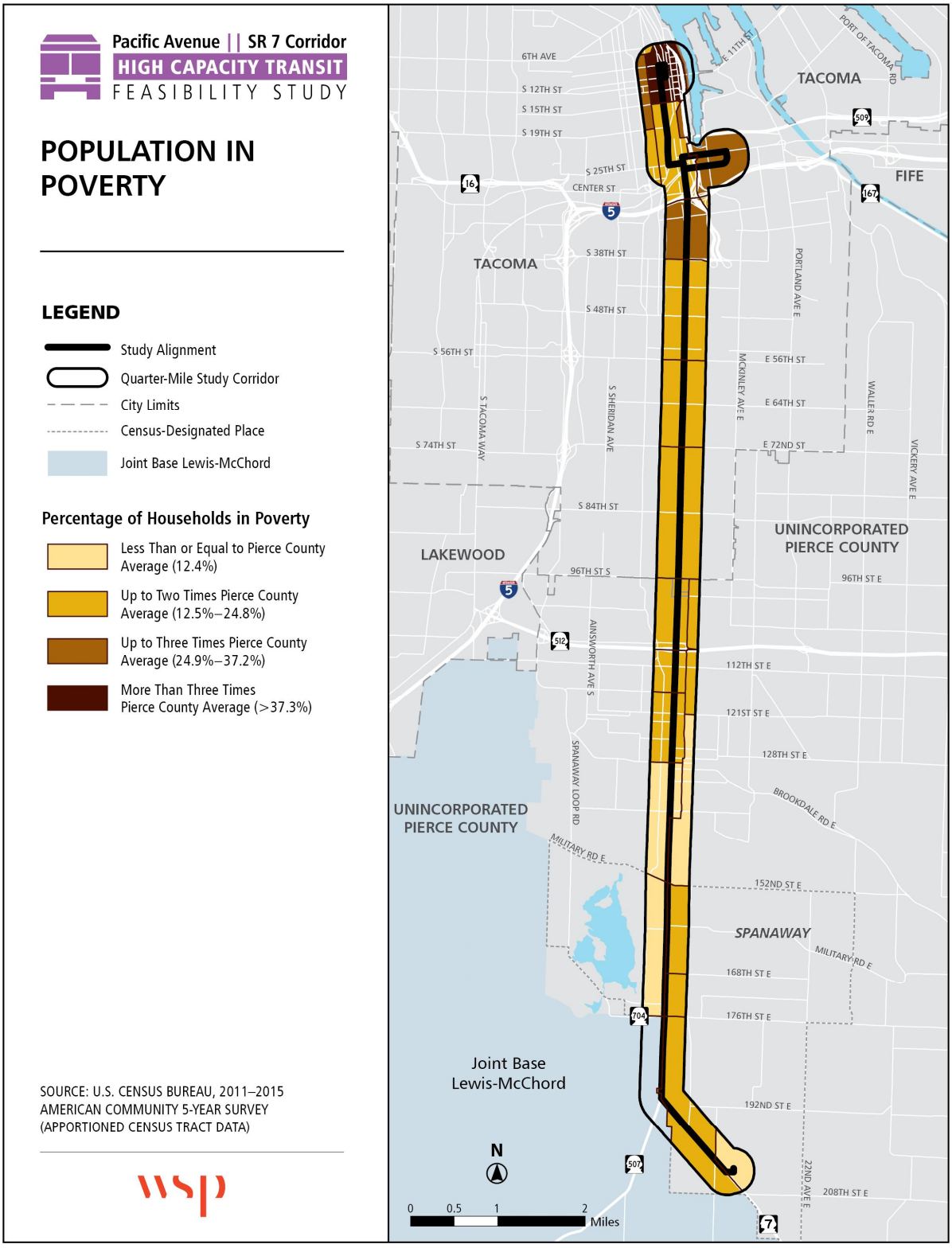


Figure 30. Households with No Vehicle

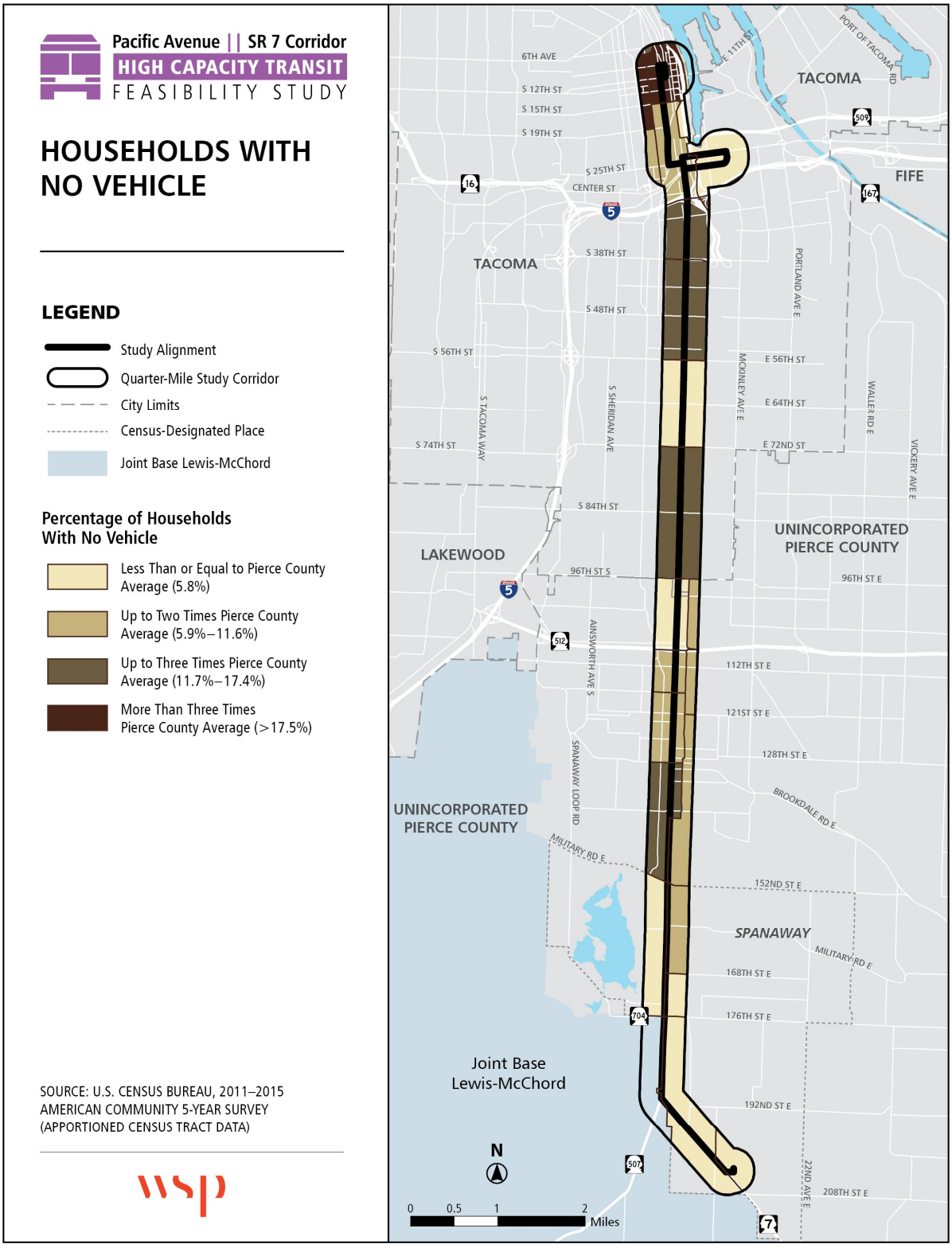
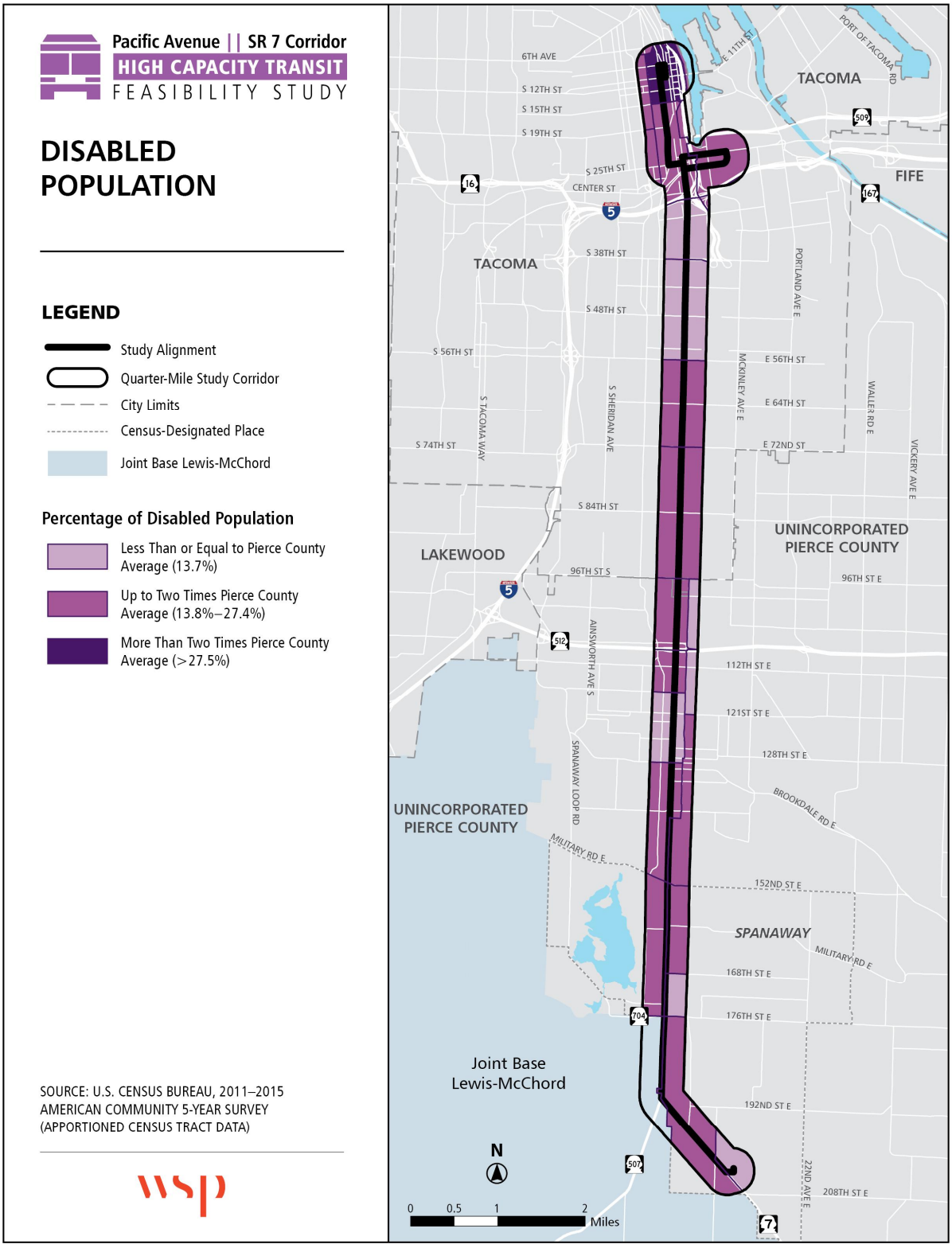


Figure 31. Disabled Population



COMMUNITY FACILITIES AND SERVICES

The corridor is a major arterial connecting Pierce County and downtown Tacoma. For those without access to a personal vehicle Pierce Transit's Route 1 provides access, and connections to other transit routes, to employment, shops, community facilities and services, and the homes of friends and family. Though there are many commercial areas scattered along the corridor, none appear to be obviously serving a specific minority population residing in the study area. The following describes the many community facilities and services in study area. Figure 32 shows the distribution of these facilities and services along the north section of the study area and Figure 33 shows the south section.

In downtown Tacoma, community facilities and services within the study area include:

- Government offices: Pierce County Veterans Bureau, Pierce County Corrections, Tacoma Municipal Court, the Washington State Employment Security Department, Work Source Offices of Pierce County.
- Educational facilities: University of Washington-Tacoma, Bates Technical College, Tacoma Public Library, City University of Seattle, and the Northwest College of Art and Design.
- Social services: Tacoma Indian Center, Pierce County Family Support, Social Security Disability, Catholic Community Services Guadalupe House, and the Tacoma Rescue Mission shelter for homeless men.
- Museums: Tacoma Art Museum, the Washington State History Museum, Museum of Glass, Children's Museum of Tacoma, and the Lemay Car Museum.
- Transportation facilities: Greyhound bus station, the Sounder (commuter rail) Tacoma Station, the Tacoma Link Light Rail Station, and the future Amtrak Cascade Station are all located in the study area adjacent to the Tacoma Dome Station and Freighthouse Square.

In addition, in downtown Tacoma there are several banks, a few small public parks, and a YMCA.

South of Interstate Highway 5, the number and variety of community facilities and services located within the study area are reduced. Government offices include the Tacoma-Pierce County Health Department, Pierce County Housing Programs, Pierce Community Corrections, Pierce County Medical Examiner, and a post office. A credit union and a pharmacy are located near the intersection of Pacific Avenue/SR 7 and S. 37th Street. Several religious institutions, a small market, and the Lyon Elementary School are located near Pacific Avenue/SR 7 and S. 45th Street. The Lighthouse Senior Activity Center and Stewart Middle School are located near Pacific Avenue/SR 7 and S. 50th Street.

Between S. 53rd Street and S. 57th Street a commercial area includes several banks and two drug stores. The Moore Branch of the public library is located two blocks west of Pacific Avenue/SR 7 at S. 56th Street. Around the intersection of Pacific Avenue/SR 7 and S. 72nd Street the commercial district includes a Fred Meyer superstore, which has both a grocery store and a pharmacy, banks, a drug store and a rehabilitation facility. Metro Parks Tacoma's 20-acre Charlotte's Blueberry Park is southeast of this intersection. Between S. 82nd Street and S. 84th Street the commercial area includes several banks and a drug store. South to SR 512 and S. 112 Street a wide variety of small businesses that serve the community along the corridor are along both sides of Pacific Avenue/SR 7.

Figure 32. Community Facilities and Services – North Section

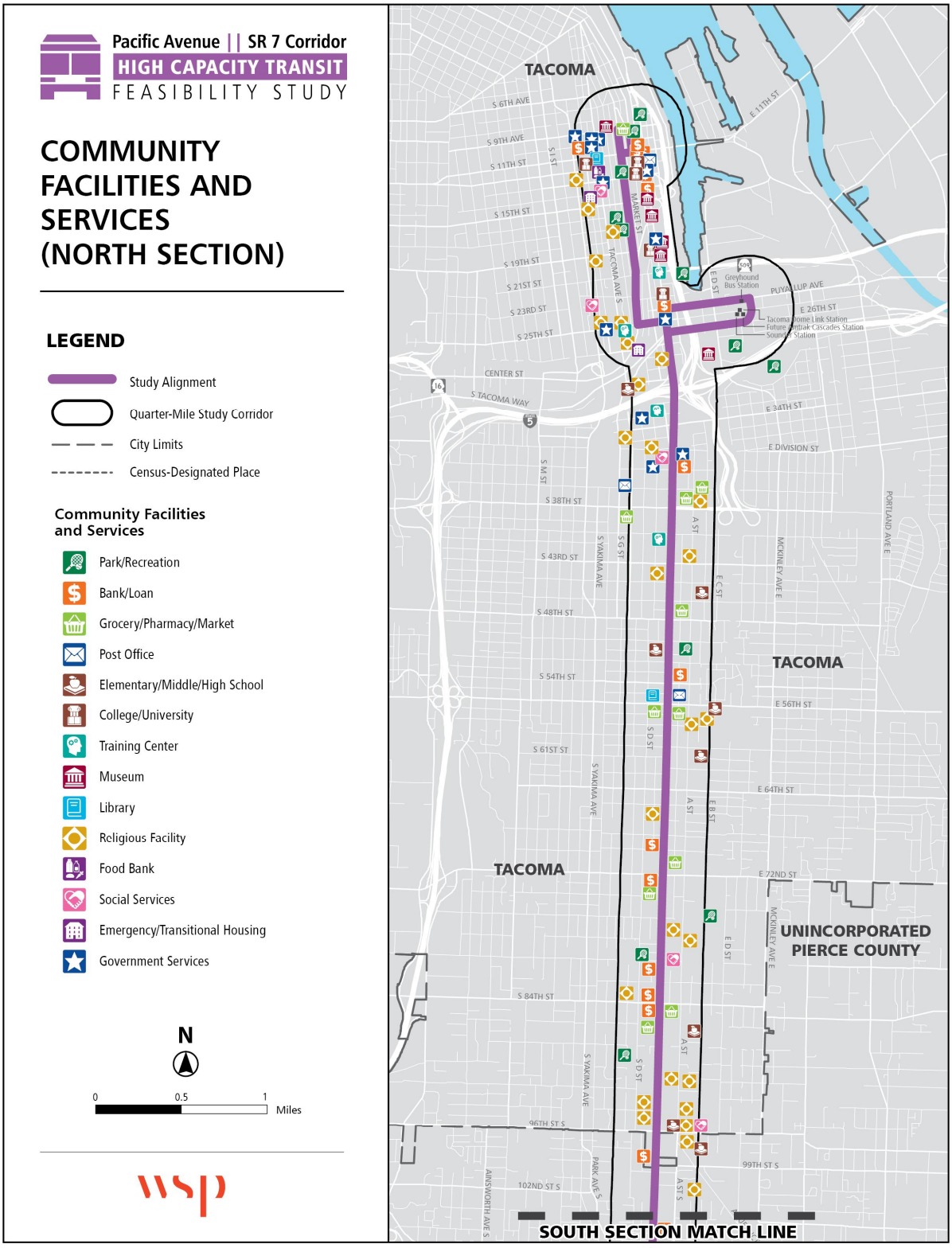
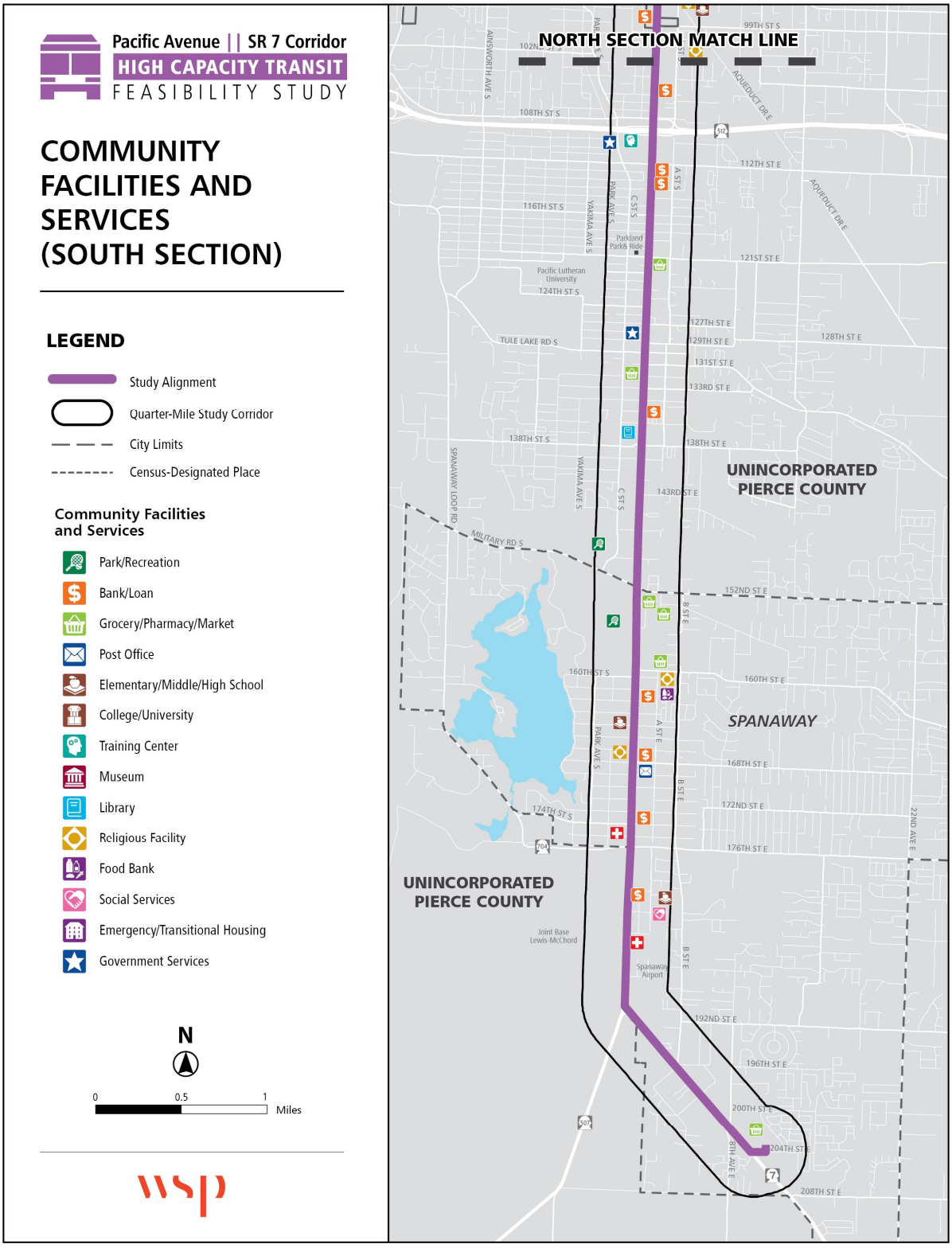


Figure 33. Community Facilities and Services – South Section



South of 121st Street S. educational facilities include Pacific Lutheran University, the Mt. Rainier Lutheran High School, and the Parkland/Spanaway Pierce County Library. Government services include the Parkland Auto Licensing, a post office and the Pierce County Sheriff's Department. This area also includes the Asian Market Pacific.

Around 149th Street S. there are a couple large-scale recreation facilities; the Sprinkler Recreation Center and the Lake Spanaway Golf Course. Educational facilities include the Spanaway Middle School and the Spanaway Elementary School. The Spanaway food bank is located east of Pacific Avenue/SR 7 near 160th Street S. and a post office is at the corner of Pacific Avenue/SR 7 and 168th Street S. Commercial services include Home Depot, grocery stores, the Multicare Spanaway Urgent Care Clinic located near 176th Street S., and the Walmart Supercenter at the south end of the corridor.

4.4.4 Public Outreach

The following subsections describe the various public outreach events, methods used to encourage public participation by environmental justice populations, public comments received including issues raised by environmental justice populations.

Outreach Activities

Pierce Transit has conducted many public involvement and outreach activities since project initiation in spring 2017, including specific efforts to reach out to environmental justice populations. Three rounds of public open house meeting occurred at several locations along the corridor in September 2017, November 2017 and March 2018, coinciding at key decision points during the study. Future open houses will be scheduled in September 2018 to present the locally preferred alternative (LPA) and to solicit input from the public.

In addition to these open houses, Pierce Transit has participated in meetings with many community groups, such as the Eastside Neighborhood Council and Spring Hill Safe Streets and engaged the public at community events such as street festivals, block parties, farmers' markets, arts events, and ethnic festivals. A list of activities where Pierce Transit has presented and discussed the project with the community is included in Appendix C. This list of activities also includes future planned outreach to stakeholders and the public. In addition, Pierce Transit maintains a project page on their public website to continuously make project information available to the public.

Outreach Methods

The following describes key outreach methods used to encourage public participation, particularly those from environmental justice populations.

- Advertising and Informational Materials
    - All meeting advertising materials include a footnote regarding translation services, written in the top seven non-English languages spoken within the Pierce County PTBA (Spanish, Russian, Vietnamese, Tagalog, Korean, Khmer, and German).
    - Notices for public meetings were published in local newspapers and on line social media, including Facebook posts in Spanish, the predominant language spoken in study area homes
    - Bus rack cards were distributed to advertise open houses and on-board audio announcements were made on the Route 1 bus, in both English and Spanish. Over 5,000 bus rack cards were

distributed for each round of open house meetings and included bus route directions to meeting locations

- All outreach materials are posted on the project web page (https://www.piercetransit.org/hct-feasibility-study/), which can be translated into more than 90 languages using Google Translate
- Project fact sheets were prepared in English and Spanish and were available at the open house meetings and distributed at community events

- Open Houses
  - Open house meetings times were schedule to accommodate a variety of work schedules and were held in facilities with Americans with Disabilities Act (ADA) access
  - A "virtual open house" was posted to the project webpage for individuals that could not attend in person, https://www.piercetransit.org/hct-virtual-open-house/ and comments could be submitted to hct@piercetransit.org
  - On-call translators were available for public meetings (upon request with advanced notice required)

PUBLIC INPUT

Key input received from the public at the open house events, including the virtual open houses, is listed below:

Open House 1
- Study corridor would benefit from HCT service
- BRT would provide the most benefit
- Extend the BRT route to 6th Avenue and Tacoma Community College to eliminate transfers
- Improve existing Route 1 service

Open House 2
- Interested in frequent and reliable bus service and better station shelters and amenities
- Concerned about increased vehicle traffic congestion due to BRT service and crossing the street to access a median station

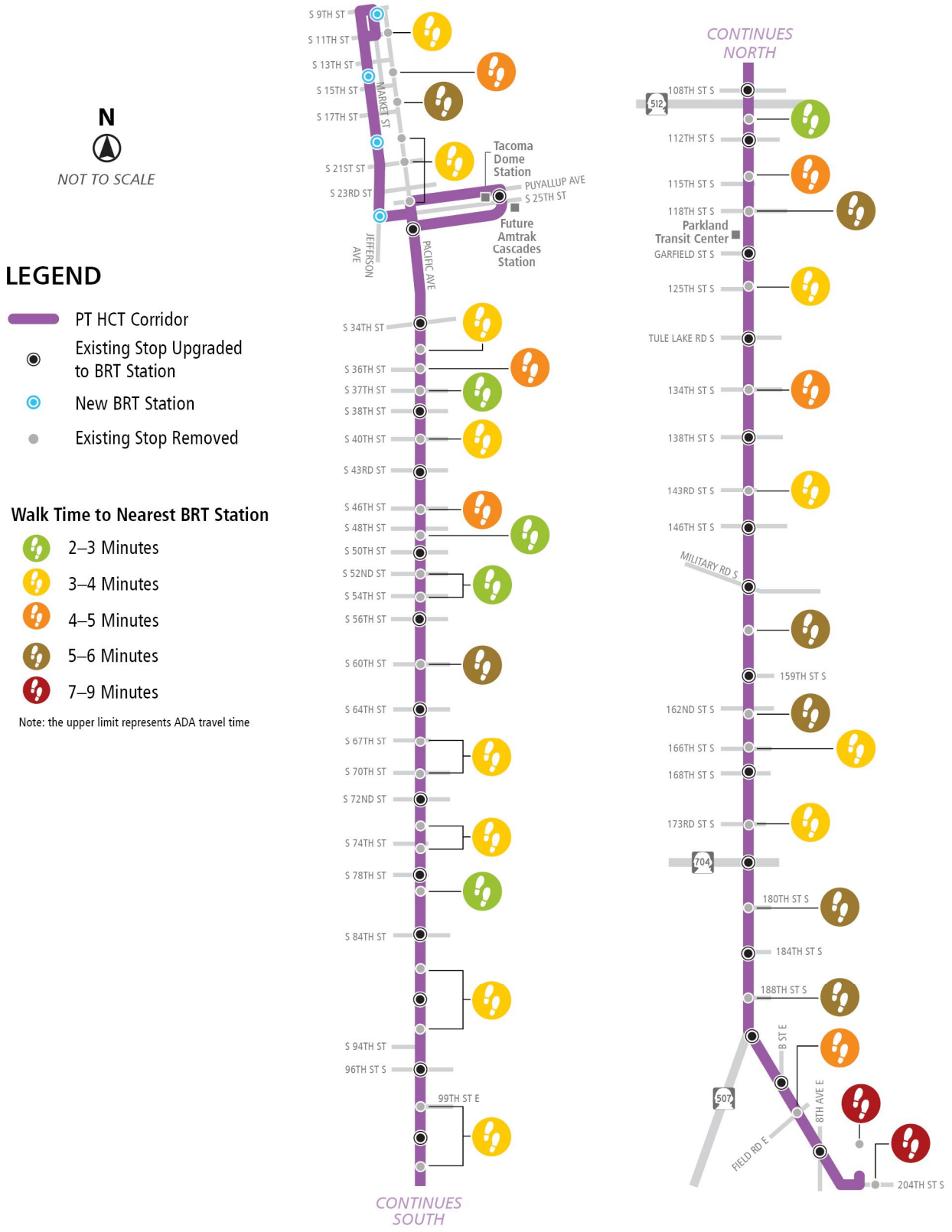
Open House 3
- Project should be selected based on better connections to other transit services, improved transit travel time reliability and increased transit ridership
- Median Alternative was the most preferred alternative
- Regardless of the alternative selected, there is support for the project

4.4.5 Preliminary Impact Evaluation

Because the two conceptual alternatives follow the same route and have BRT stations proposed in the same locations, the following is a qualitative assessment of potential adverse and beneficial effects to environmental resources that environmental justice individuals would experience with both the Curbside and Median Alternative:

- Proposed transit service improvements, such as improved reliability, decreased travel times and additional station amenities and safety features (such as shelters with overhead lighting and CCTV cameras) are expected to benefit all transit users, including environmental justice populations.
- Pedestrian and bicycle access to proposed BRT stations would be improved by new and/or expanded sidewalks, new signalized pedestrian crossings, and improved bicycle facilities. These improvements are expected benefit all pedestrians and bicyclists in the corridor, including environmental justice populations.
- Route 1 bus stops would be consolidated from 65 pairs to 32 BRT station pairs, which would increase the average station spacing along the corridor to roughly one-third to one-half mile. An assessment of the additional walk times from an existing bus stop to the nearest new BRT station is provided in Figure 34. Increased walk times to BRT stations would affect all transit riders, which may include a greater percentage of low-income and transit dependent individuals. On Route 1 the existing travel time from the Spanaway Walmart to downtown Tacoma average 62 minutes. With either the Curbside or Median Alternative the transit travel time would decrease to an estimated 50 to 55 minutes. Therefore, even with the increase in walk times to BRT stations the decrease in transit travel time would reduce the overall travel time for most of the corridor.
- Proposed BRT station locations would provide similar service/access to community services and facilities along the corridor. Two BRT station pairs would provide nearby access to the many community facilities and services located in downtown Tacoma between S 9th Street and S 15th Street in the study area. Throughout the corridor BRT station pairs are located near other community facilities and services, such as at S. 38th Street, S. 56th Street, S. 84th Street, S. 96th Street, the connection to Pacific Lutheran University at Garfield Street, and recreational facilities near Military Road S.
- No business or residential displacements are anticipated.
- Minor acquisition at the Lake Spanaway Golf Course would not affect the recreational use.
- No historic buildings are anticipated to be disturbed.
- Air quality within the corridor could be improved somewhat with fewer transit stops and reduced vehicle idling.
- Noise levels in the corridor could be reduced somewhat due to less deceleration and acceleration at fewer transit stops. In the segments with exclusive transit lanes, roadway widening could change noise levels at land uses immediately adjacent to the corridor, which may include sensitive noise receptors such as residences.
- Surface water run-off during construction and final design roadway improvements would be managed with best management practices.
- Potentially contaminated soils would be identified prior to construction and best management practices to excavate, contain, and dispose of any potential contaminated soils would be implemented.

Figure 34. Increased Walk Times from Existing Route 1 Bus Stops to Proposed BRT Stations with both the Curbside and Median Alternatives



CURBSIDE ALTERNATIVE

The following describes the potential adverse and beneficial effects to environmental resources that environmental justice individuals would experience with the Curbside Alternative:

- Section 4.3 provides an assessment of traffic in the corridor for the Curbside Alternative. The changes to general traffic would be the same for all populations residing and/or traveling within the corridor, including environmental justice individuals.
- Section 4.2 provides an assessment of property acquisitions and access changes associated with the Curbside Alternative. As almost all the required property acquisitions are narrow slivers of land (such as less than 100 square feet) adjacent to the edges of the existing roadway right-of-way, there would be no land use displacement. All acquisitions would comply with the Uniform Relocation Act.
- BRT vehicles would travel in the outside lane of the roadway. Transit riders would access curbside BRT stations from the sidewalk. In segments where a BAT lane is proposed they would provide an additional buffer between pedestrians on the sidewalk and general purpose through traffic; however, they would also increase the roadway width, which increases the crossing distance for pedestrians. Overall, the amenities and improvements of the proposed Curbside Alternative would provide a safety benefit to all populations within the corridor including environmental justice individuals.

MEDIAN ALTERNATIVE

The following describes the potential adverse and beneficial effects to environmental resources that environmental justice individuals would experience with the Median Alternative:

- Section 4.3 provides an assessment of traffic in the corridor for the Median Alternative. The changes to traffic would be the same for all populations residing and/or traveling within the corridor, including environmental justice individuals.
- Section 4.2 provides an assessment of property acquisitions and access changes associated with the Median Alternative. As almost all the required property acquisitions are narrow slivers of land adjacent to the edges of the existing roadway right-of-way, there would be no land use displacement. Property acquisition would be required on the parcel where the La Huerta International Market is located (southeast corner of the intersection at S. 56th Street), but the market building would not be affected. All acquisitions would comply with the Uniform Relocation Act.
- BRT vehicles would travel in the center lane of the roadway. Transit riders would be required to cross half of the roadway width to access median BRT stations. The median station would also serve as a pedestrian refuge for those crossing the entire roadway. In areas where there is exclusive median transit lanes, left turn restrictions could enhance pedestrian safety by limiting turning vehicles into driveways and unsignalized intersections. Overall, the amenities and improvements of the proposed Median Alternative would provide a safety benefit to all populations within the corridor including environmental justice individuals.

PRELIMINARY DETERMINATION OF ENVIRONMENTAL JUSTICE IMPACTS

The Curbside Alternative and the Median Alternative are not anticipated to have disproportionately high and adverse effects on minority or low-income populations. For the most part, project impacts would be

limited in scope and would not alter the character, functions or interactions of neighborhoods. Best management practices during construction would be expected to minimize impacts on all populations, including minority and low-income individuals.

TITLE VI

As defined by Pierce Transit's *Major Service Change Policy* the Curbside Alternative and the Median Alternative could be considered a major service change, if it adds 20 percent or more revenue miles or revenue hours to the Route 1. The frequency of BRT in the corridor would be the same as or more frequent compared to the existing Route 1. In the north end of the alignment, between S. 9th Street and S. 26th Street, the conceptual alternatives would have a slightly different routing from the Route 1 with the connection to the Tacoma Dome Station and traveling along Market Street/Jefferson Avenue and Commerce Street within the Tacoma central business district instead of Pacific Avenue/SR 7. Along the remainder of the corridor, the routing would be the same as the Route 1 and frequency of service. Pierce Transit would conduct an equity analysis to determine whether this minor change in routing would be considered a disparate impact or disproportionate burden, in compliance with Pierce Transit's policies. If Pierce Transit finds that there would be a disparate impact or disproportionate burden, the agency would take steps to avoid, minimize, or mitigate impacts.

4.5 HISTORIC AND CULTURAL RESOURCES

4.5.1 Applicable Regulations

Section 106 of the *National Historic Preservation Act* (NHPA) requires federal agencies to consult on the effects of any federal undertaking on historic properties. The intent of the Section 106 process and consultations is to identify historic properties that would potentially be affected by the undertaking, assess the effects, and to avoid, minimize, or mitigate any adverse effects on historic properties. Historic properties may include prehistoric or historic districts, sites, buildings, structures, or objects that could be considered eligible for listing on the National Register of Historic Places (NRHP).

The Pierce Transit BRT project as proposed would potentially be funded by the FTA and would be required to comply with Section 106 of the NHPA as implemented under 36 CFR 800 (as amended).

The proposed project is also subject to laws of the State of Washington, including the Revised Code of Washington (RCW), including RCW 27.44 regarding Indian Graves and Records and RCW 68.60 regarding Abandoned Historic Cemeteries and Historic Graves.

4.5.2 Methodology

The area of potential effects (APE) is the geographic area within which the undertaking may directly or indirectly effect historic properties. Indirect effects include visual or auditory effects to historic properties, while direct effects include physical alteration (e.g., ground disturbance) of historic properties. The APE for the Curbside and Median Alternatives are the tax parcels adjacent to the curbside or median stations. Historical Research Associates, Inc. (HRA), evaluated the effects on architectural resources for the entire APE while limiting the evaluation of archaeological resources to where ground disturbance will occur (i.e., proposed curbside and median station locations).

In April 2018, HRA architectural historian Libby Provost, MA, conducted a desktop survey of all tax parcels adjacent to the proposed station locations to identify those with architectural resources that are 45 years of age or older. Provost consulted records from the online Pierce County tax parcel research tool, as well as U.S. Geological Survey (USGS) maps, to date all architectural resources on tax parcels within or adjacent to the APE. A search of the Washington Department of Archaeology and Historic Preservation's (DAHP) online database and the Washington Information System for Architectural and Archaeological Records Data (WISAARD) was conducted to determine if any of the resources had been previously surveyed for or listed in the National Register of Historic Places (NRHP) and the Washington Heritage Register (WHR). HRA also consulted the Tacoma Register of Historic Places (TRHP) to identify locally listed properties within the study area.

An archaeological archival record search was conducted using a research radius of 0.5 miles around the area of direct disturbance for the Curbside and Median Alternatives proposed station locations. The WISAARD database provided information on previous cultural resource studies, archaeological site records, and cemetery records within the research radius. The statewide predictive model layer in WISAARD was also examined for probability estimates of encountering archaeological resources within the Curbside or Median Alternative station areas of direct disturbance.

HRA's in-house library was searched for information on the environmental, archaeological, and historical context of the Project's vicinity. Historic-period plats from the U.S. Surveyor General (USSG) General Land Office (GLO), historic-period land patents, and historic-period maps and atlases (e.g., Metskers) were reviewed for the presence of structures, sites, and features that might be extant within area of direct disturbance for the Curbside and Median Alternative stations, and are indicators of potential archaeological sites and past land use patterns. Ethnographic sources (e.g., Hilbert et al. 2001) were reviewed for information regarding place names, burials, and land-use practices.

4.5.3 Existing Conditions

Existing archaeological and historic resources for the Curbside and Median Alternative APEs were evaluated. Because the proposed BRT station pair locations for both alternatives are the same, the APEs for both alternatives are generally the same with slight variations which account for placement of curbside stations versus median or center-lane stations. The existing resources below describe the conditions for both the Curbside and Median Alternative APEs and distinctions between the two are described when applicable.

ARCHITECTURAL RESOURCES

The results of the HRA records search identified 94 parcels with architectural resources aged 45 years or older that have potential to be impacted by the proposed Curbside Alternative and 95 parcels for the proposed Median Alternative. Table 10 provides a listing of those properties that have been identified as individually listed in the NRHP, those eligible for listing, or with an undetermined eligibility within the APE for each proposed alternative. A complete list of all historic-period, including non-listed and non-eligible resources, identified in the Curbside and Median Alternative APEs is provided in Appendix D.

Table 10. Summary of NRHP and WHR Status of Architectural Resources Identified within the APE

Station Location	Tax Lot ID	Address	Build Date	NRHP and WHR Status	City of Tacoma Registry	APE (Curbside, Median, or Both)
S. 9th St.	2009050010	901–909 Broadway Tacoma, WA 98402	1917; 1919	Individually listed in NRHP (1976); Old City Hall Historic District (contributing)	Yes; individually	Both
Garfield St. S.	319093002; 6762002501	214 121st Street S Tacoma, WA 98444	1908	Eligible (WSDOT 1999); Undetermined by DAHP	—	Median
S. 50th St.	320212004	5010 Pacific Avenue Tacoma, WA 98408	1924; 2016	Surveyed, eligibility not determined (2009)	Yes	Both
112th St. S.	9375000202	11205 Pacific Avenue Tacoma, WA 98444	1969	Surveyed, eligibility not determined (2003)	—	Both

Both the Curbside and Median Alternative APEs extend into two historic districts within downtown Tacoma, the Old City Hall Historic District (listed in the NRHP in 1977) and the Union Depot–Warehouse Historic District (1980). Three buildings within the APE (901–909 Broadway, 745 Commerce Street, and 773 Broadway) are located along the southern border of the Old City Hall Historic District and contribute to the district. The proposed S. 9th Street station is along the curb adjacent to 901–909 Broadway, on the east side. This is within the boundary of the historic district.

Three buildings within the APEs (1904 Jefferson Ave., 1910–1914 Jefferson Ave., and 1918–1926 Jefferson Ave.) are along the western border of the Union Depot–Warehouse Historic District. 1904 Jefferson Ave. contributes to the districts as a "primary property" and 1910–1914 Jefferson Ave. contributes to the district as a "secondary property" (Gallacci and Sias, 1979). The proposed S. 19th Street station is positioned across the street from these buildings and is not within the boundary of the historic district.

Archaeological Resources

A variety of archaeological sites, studies, and ethnographically recorded place names were identified within 0.5 mile of the area of direct disturbance for the proposed BRT stations. The vast majority of information relates to the northern stations, north of Interstate 5 (I-5).

Previous Cultural Resource Studies

There have been 44 previous cultural resource studies within 0.5 mile of the area of direct disturbance for the proposed BRT stations. Previous cultural resource studies conducted in the area were related to project activities including railroad right-of-way work, I-5, or SR 7 maintenance or improvement; redevelopment of downtown Tacoma and waterway improvement; historic structure or building surveys within the city limits of Tacoma; construction of new cellular telephone towers; Clover Creek restoration projects; Spanaway area restoration projects; and one cultural resource study of 55 sites located on JBLM. A complete list of previous cultural resource studies conducted within 0.5 mile of the area of direct disturbance for the BRT stations is provided in Appendix D.

Of the 44 previous cultural resource studies, a total of 6 studies overlap with the area of direct disturbance for either the Curbside or Median Alternative APEs. Those overlapping studies are also included in Appendix D. The findings of these studies did not identify any cultural resources within any of the areas of direct disturbance for the proposed BRT stations.

Archaeological Sites

The area of direct disturbance for the proposed BRT stations are within 0.5 mile of 19 previously recorded listed or eligible archaeological sites for listing on the NRHP. All of the recorded archeological sites are listed in Appendix D-3. None of these previously recorded sites are within any of the area of direct disturbance for the proposed BRT stations.

Cemeteries

There are three cemeteries within 0.5 mile of the area of direct disturbance for curbside stations. The first is located near the intersection of A Street and 25th Ave. where a coffin was discovered in 1890 while A Street was being graded. The exact location and condition of the coffin is unknown. The closest area of direct disturbance for the proposed BRT stations to the cemetery is the S. 28th Street station, located 0.3 miles SW of the cemetery. The two other cemeteries are located near the intersection of 176th Street E and A Street S. The two cemeteries are adjacent to one another and are known as the Spanaway Cemetery. The 176th Street curbside station is located 0.1 miles west of the cemeteries.

Ethnographically Recorded Place Names

Several ethnographically recorded place names are in the vicinity of the area of direct disturbance for the curbside stations. Near the intersection of Pacific Ave. and Jefferson Street is a place known in Lushootseed as *TsalalL-ali*, which translates to “place of lake,” where people used to camp temporarily (Hilbert et al. 2001:251). This place name is near the S. 15th Street curbside station.

Another place name is at the mouth of a stream in a gully near S. 24th Street, known in Lushootseed as *Tuxwa’dabcEb*, which translates to “place of tide; place of where the tide has gone out” (Hilbert et al. 2001:251). A tributary to that stream is known in Lushootseed as *Tca’tc*, which translates to “hide,” because trees arched over the stream (Hilbert et al. 2001:251). These place names are near the S. 23rd Street curbside station.

Swan Creek is known in Lushootseed as *Bswa’qed*, which translates to “a place that has swans” (Hilbert et al. 2001:252). Another creek near Swan Creek is known in Lushootseed as *KE’labid*, which translates to “coming from the salmon eggs” (Hilbert et al. 2001:252).

Farther south, near the fork of the Clover Creek, is a village site with an unknown name, but the people were called *t'STEHL-eh-kuhb-ahbsh* and had a principal village at the present-day town of Steilacoom (Dailey 2018). This village is near the 138th Street S curbside station.

Surface Geology

The surface geology of the area of direct disturbance for the proposed BRT stations is described as different types of Vashon Till, a Pleistocene glacial deposit of the Vashon Stade of the Fraser Glaciation. The northern end of the BRT route Alternatives to approximately the 34th Street station is described as recessional outwash. Then from approximately the 34th Street station to the 112th Street station is Vashon Till. Finally, from approximately the 112th Street station to the 8th Street station, at the southern end of the route, is recessional outwash, Steilacoom gravel (Schuster et al., 2015). The presence of glacial sediments near the surface makes deeply buried archaeological resources unlikely.

Historic-Period Maps

The historic-period maps of the area provide information on the landownership and use of the areas of direct disturbance for the proposed BRT stations. The earliest depictions and landownership information comes from 1868, 1871, and 1873 GLO plats and BLM land patents (USSG 1868, 1871, 1873). More detailed landownership information is provided in several Pierce County Atlases dating between 1889 and 1960 (Metsker 1951, 1960; Plummer 1889; White 1928). Building and structure locations in the vicinity of the S. 9th Street and S. 15th Street stations are depicted as early as 1885 (Sanborn 1885). The 1896 edition of those maps expands the area mapped and includes the 19th Street area of direct disturbance for the station, and the 1896 edition further expands the coverage to include the E. G Street, S. 28th Street, and the S. 34th Street area of direct disturbance for the stations (Sanborn 1896). The 1912 edition of the Sanborn Fire Insurance map for Tacoma is the most expansive and includes depictions of the areas of direct disturbance as far south as the S. 84th Street station (Sanborn 1912).

Predictive Model

The WISAARD predictive model indicates that the area of direct disturbance for the proposed BRT stations ranges from a very high likelihood to a low likelihood of encountering cultural resources. From the northern end of the route to the southern end of the route, the model predicts a high to very high likelihood of encountering cultural resources at the northern areas of direct disturbance until the S. 56th Street station (City of Tacoma section of the corridor), where it decreases to a moderate likelihood of encountering cultural resources. The stations between the Spooner Street stations and the station located near 8800 Pacific Avenue have a high likelihood of encountering cultural resources. South of the station located near 8800 Pacific Avenue, the likelihood decreases to moderate and transitions between moderate and low risk until the southern terminus of the proposed BRT route Alternatives.

4.5.4 Preliminary Impact Evaluation

Since the potential impacts to historic and archaeological resources for both the Curbside and Median Alternative are similar, they are discussed together.

CURBSIDE AND MEDIAN ALTERNATIVE

The Curbside Alternative APE includes 94 parcels and the Median Alternative APE includes 95 parcels with architectural resources aged 45 years or older that have potential to be impacted by the project. Of these, two have been surveyed within the past 10 years and therefore do not require resurvey for the

purposes of this project. The five properties already listed (individually or as contributing to a district) also do not require resurvey. Both the Curbside and Median Alternative APEs cross into the Old City Hall Historic District and the Union Depot–Warehouse Historic District within the Tacoma central business district.

Once an LPA is selected, the remaining unsurveyed parcels within the APE would need to be surveyed at a reconnaissance level to evaluate their potential eligibility to the NRHP. Parcels located within the historic districts would be evaluated for potential adverse effects to the districts.

Based on the results of the archival research, there is a moderate to high likelihood of encountering archaeological resources at eight of the areas of direct disturbance for the stations within the Curbside Alternative APE. The eight curbside stations are located at S. 9th Street, S. 15th Street, S. 19th Street, S. 23rd Street, 25th Street, G Street, 28th Street, and 34th Street There is a moderate to high likelihood of encountering archaeological resources at seven of the areas of direct disturbance for the stations within the Median Alternative APE, located at S. 9th Street, S. 13th Street, S. 19th Street, S. 25th Street, S. G Street, S. 28th Street, and S. 34th Street The high likelihood of encountering archaeological resources is based on the proximity to previously recorded historic-period sites and the historic-period maps depicting buildings and structures in close proximity to the areas of direct disturbance for the proposed BRT stations.

Based on the results of the archival research, there is a low likelihood of encountering archaeological resources at the remaining areas of direct disturbance for the proposed BRT stations within the Curbside and Median Alternative APEs. The low likelihood of encountering archaeological resources within the areas of direct disturbance is based on the surface geology being glacial till, and the amount and intensity of the historic-period and modern land disturbance that has occurred in the area has likely destroyed any archaeological resources.

5 CONCLUSIONS

The Curbside Alternative and Median Alternative were evaluated for their potential to affect a select set of environmental resources that were identified as the project's "critical issues." Based on the existing built environment of the corridor, this report evaluated potential changes to property and access, traffic, environmental justice populations and Title VI compliance, and historic and cultural resources. Based on this evaluation of the environmental critical issues, neither the Curbside Alternative nor the Median Alternative are expected to have significant environmental impacts.

Because the project will be pursuing Small Starts funds from the FTA beginning in September 2018, completing the NEPA process will be required for the alternative selected as the project's Locally Preferred Alternative (LPA). The NEPA process has three classes of action; Categorical Exclusion (CE)/Documented Categorical Exclusion (DCE), Environmental Assessment (EA), and Environmental Impact Statement (EIS). Generally, completing a CE/DCE requires the least amount of time and effort and completing an EIS requires the most. As shown in Table 11, a project's class of action depends on the type of work/action that is proposed and the following three main factors: impacts, public and agency controversy, and the number of alternatives/options being evaluated.

Table 11. NEPA Class of Action Summary

Factors	NEPA Class of Action		
	Documented Categorical Exclusion	Environmental Assessment	Environmental Impact Statement
Impacts	Known, Not Significant	Unknown if Significant	Known, Significant
Public and Agency Controversy	Low	Moderate	High
Project Alternatives/Options	1	1 or more	1 or more

The Curbside Alternative would not require modifying or demolishing existing structures and would not displace residences or businesses. Over the entire approximately 14.4-mile corridor length, the number of properties that would require a minor acquisition of land is not an intense impact and the addition of BAT lanes would result in improvements to general purpose traffic along Pacific Avenue/SR 7. The impacts of the Curbside Alternative that are currently known are not significant and, based on current public outreach efforts, it would be expected to have low public and agency controversy. Therefore, a DCE could be considered the appropriate NEPA class of action.

Compared to the Curbside Alternative, with the Median Alternative the number of properties that would require a minor acquisition of land over the entire corridor length is notably higher. However, like the Curbside Alternative, the Median Alternative would not require modifying or demolishing existing structures and would not displace residences or businesses. Therefore, the property impacts could be considered to be not significant. In addition, while the access changes that would occur with the Median Alternative would improve general purpose traffic and safety in the corridor, they would also restrict left turns to signalized intersections and would require some traffic to travel further to make U-turns at signalized intersections to get to their destination. Based on current public and agency outreach efforts, the access changes with the Median Alternative have not been controversial. Pierce Transit will continue their public outreach activities, including conducting direct corridor contacts with property owners to identify and address concerns. In addition, to address agency concerns from Pierce County, WSDOT, and the City of Tacoma, more detailed traffic analyses will be conducted for the corridor to ensure that the project would not degrade general purpose traffic conditions in the corridor. These efforts are intended to keep the public and agency controversy low, which could also result in a DCE being considered the appropriate NEPA class of action.

Ultimately, the FTA will make the determination on the project's NEPA class of action. Currently, it is anticipated that the time to complete either a DCE or an EA would not delay the project schedule.

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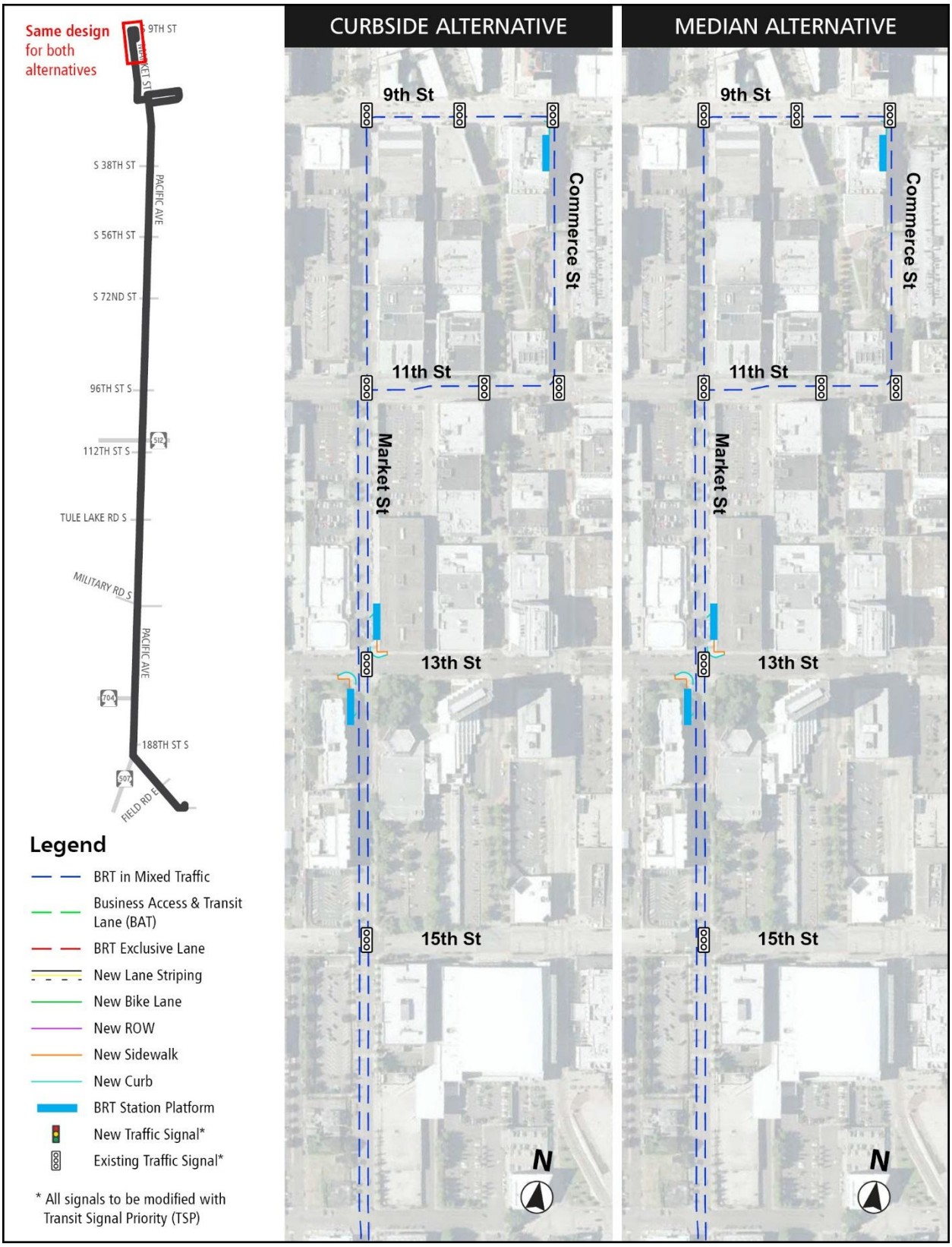
APPENDIX A: CONCEPTUAL ALTERNATIVES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FIELD RD E
Legend
BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
* All signals to be modified with Transit Signal Priority (TSP)
CURBSIDE ALTERNATIVE
MEDIAN ALTERNATIVE
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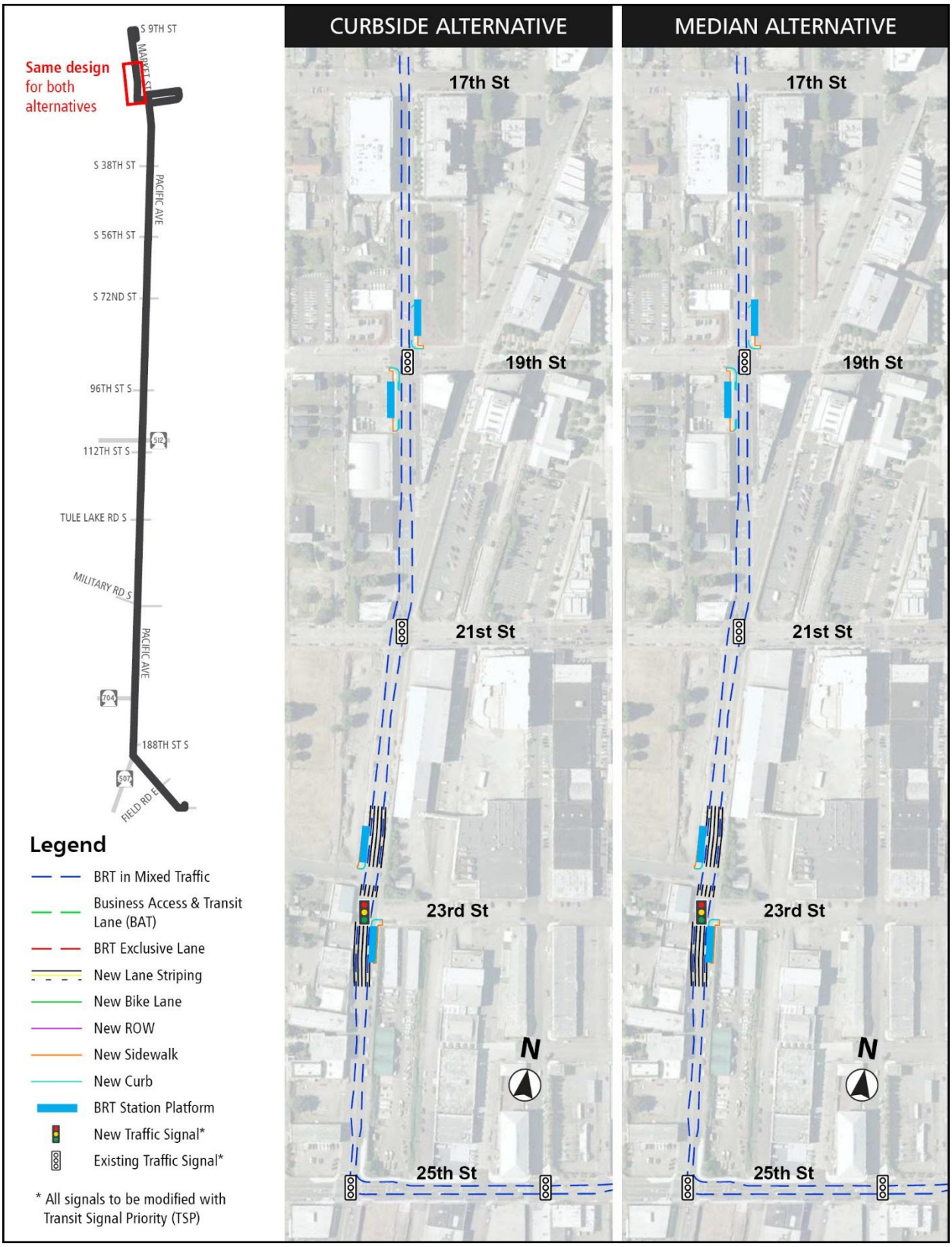
Commerce St
11th St
Market St
13th St
15th St
N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BRT in Mixed Traffic
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BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
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19th St
21st St
23rd St
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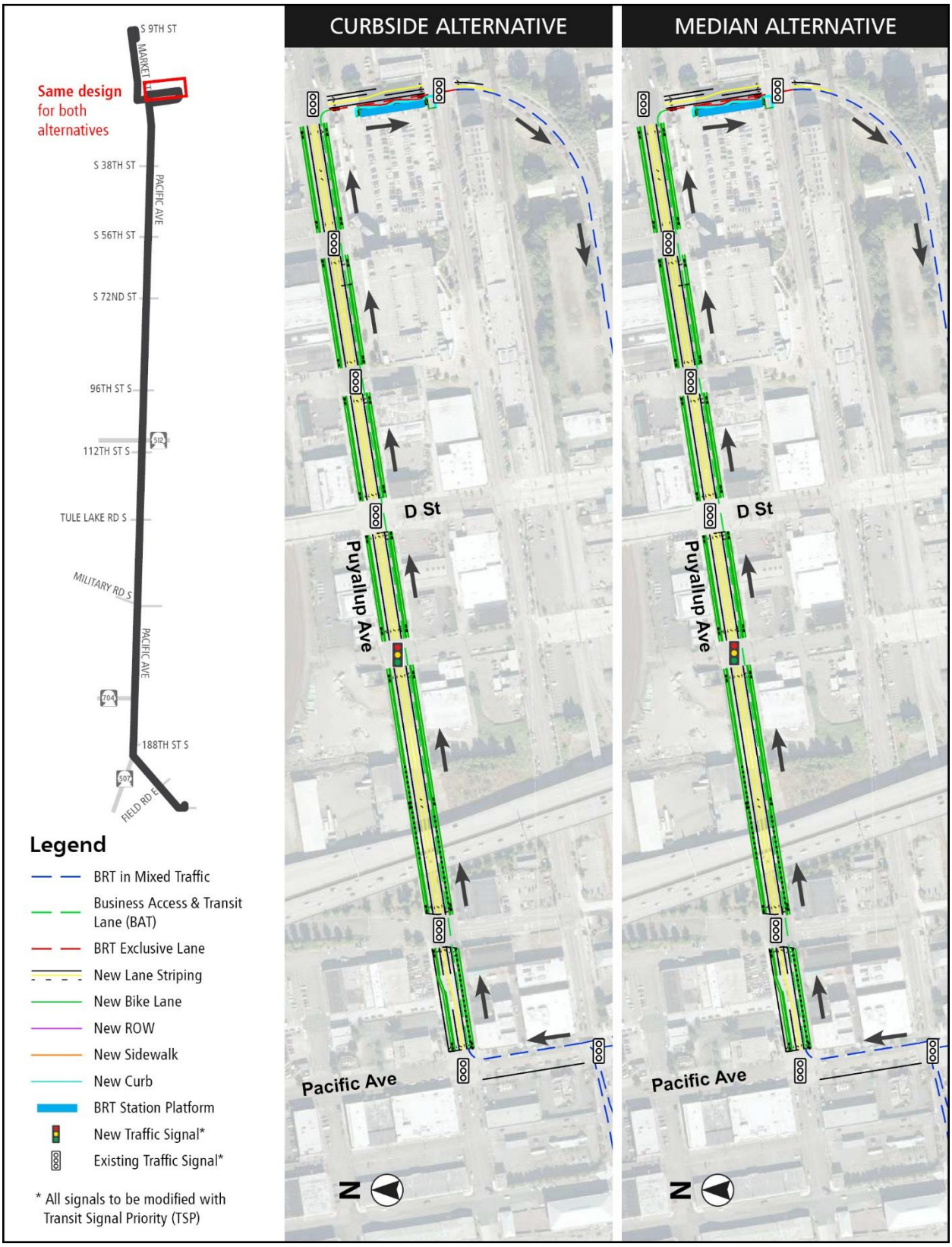
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BRT in Mixed Traffic
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New Bike Lane
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BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
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MEDIAN ALTERNATIVE
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Pacific Ave
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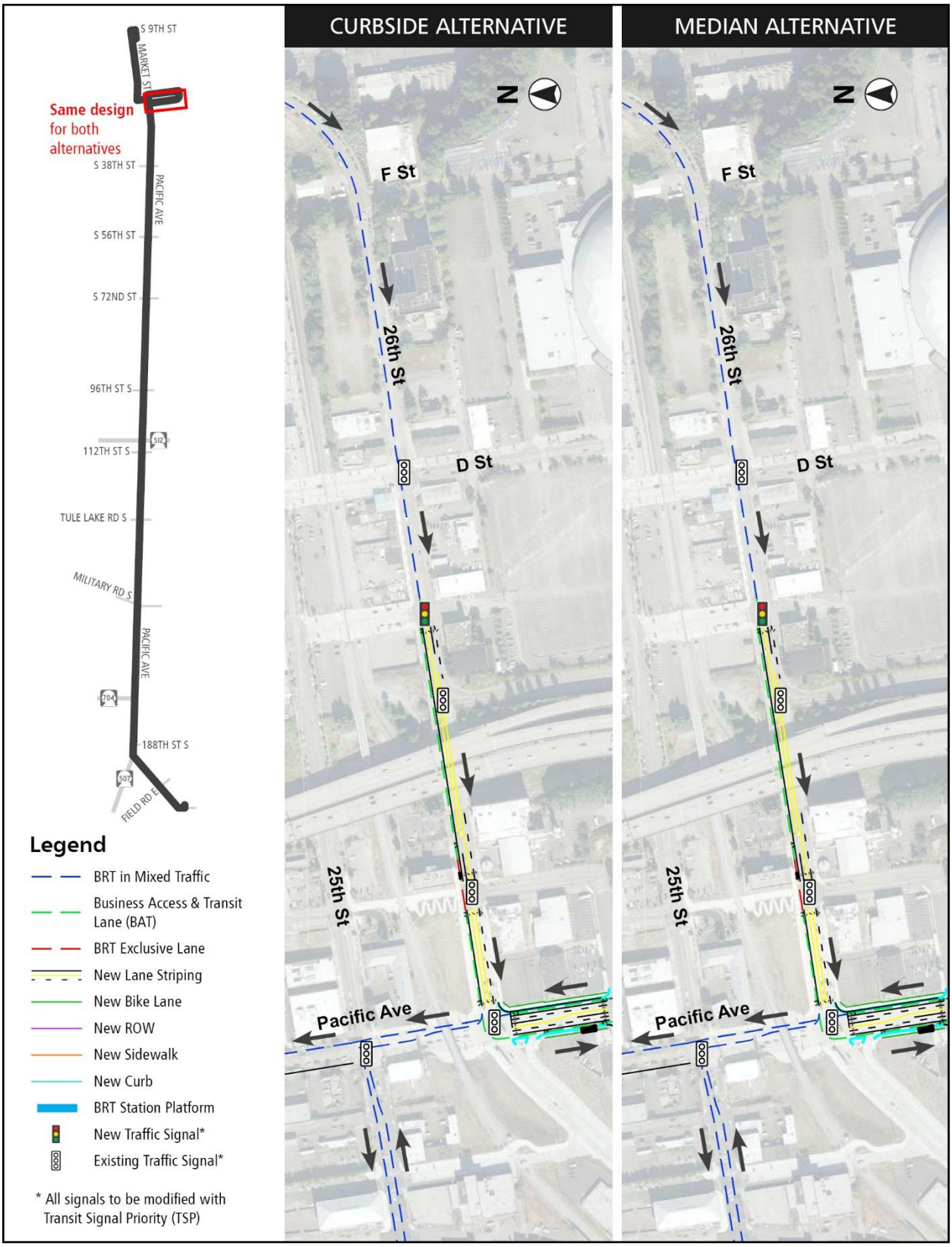
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FIELD RD E
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F St
26th St
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25th St
Pacific Ave
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BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
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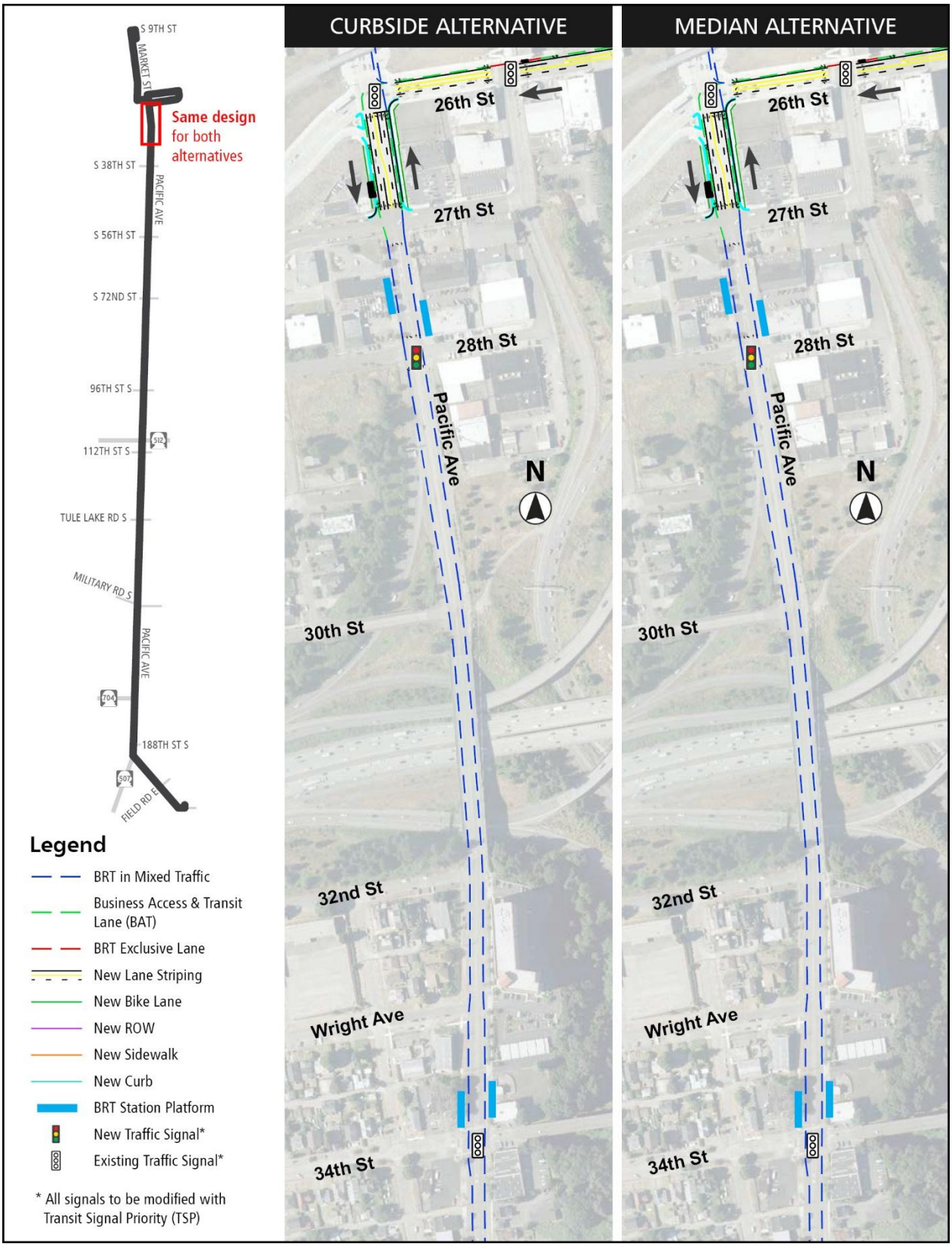
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New Curb
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Existing Traffic Signal*
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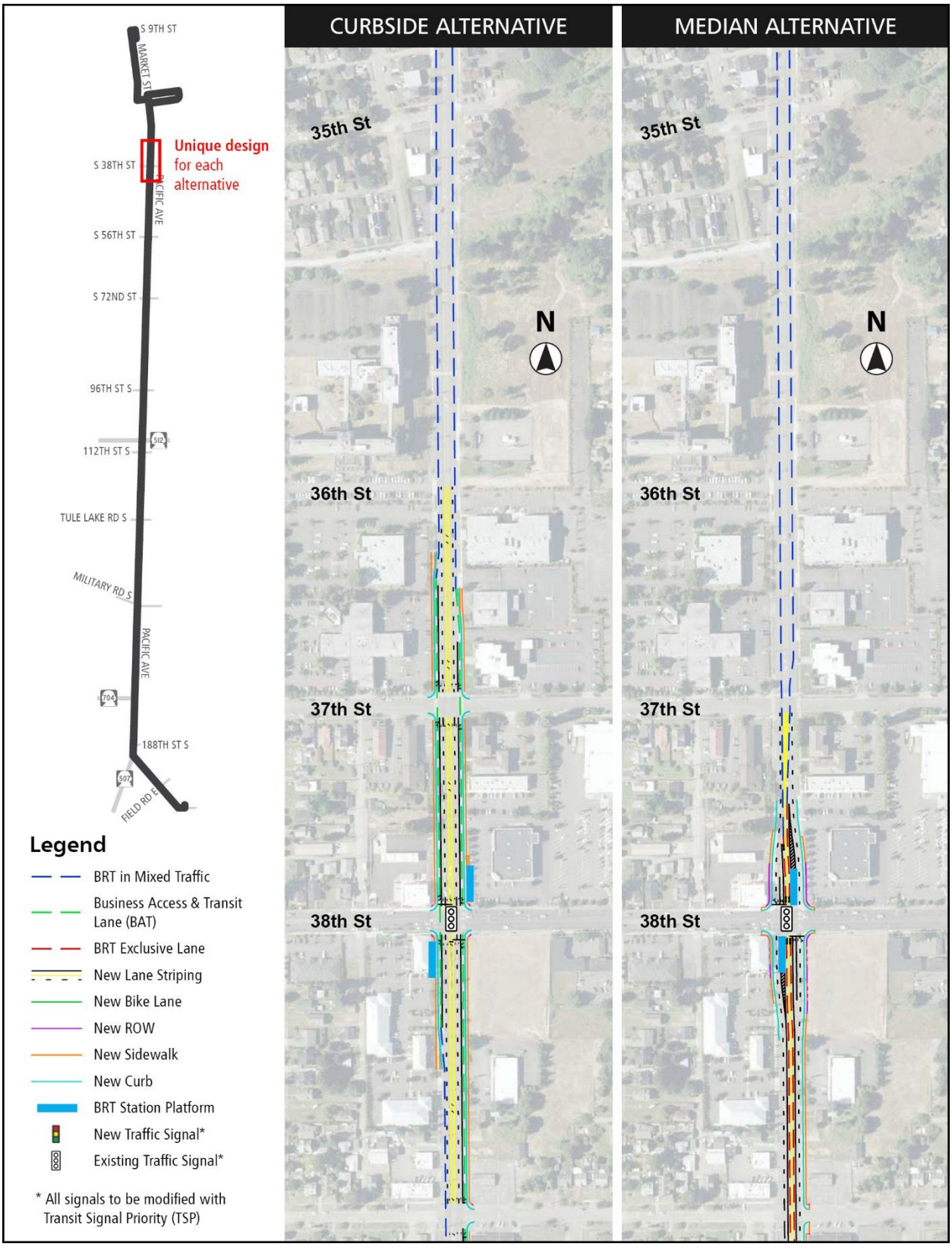
32nd St
Wright Ave
34th St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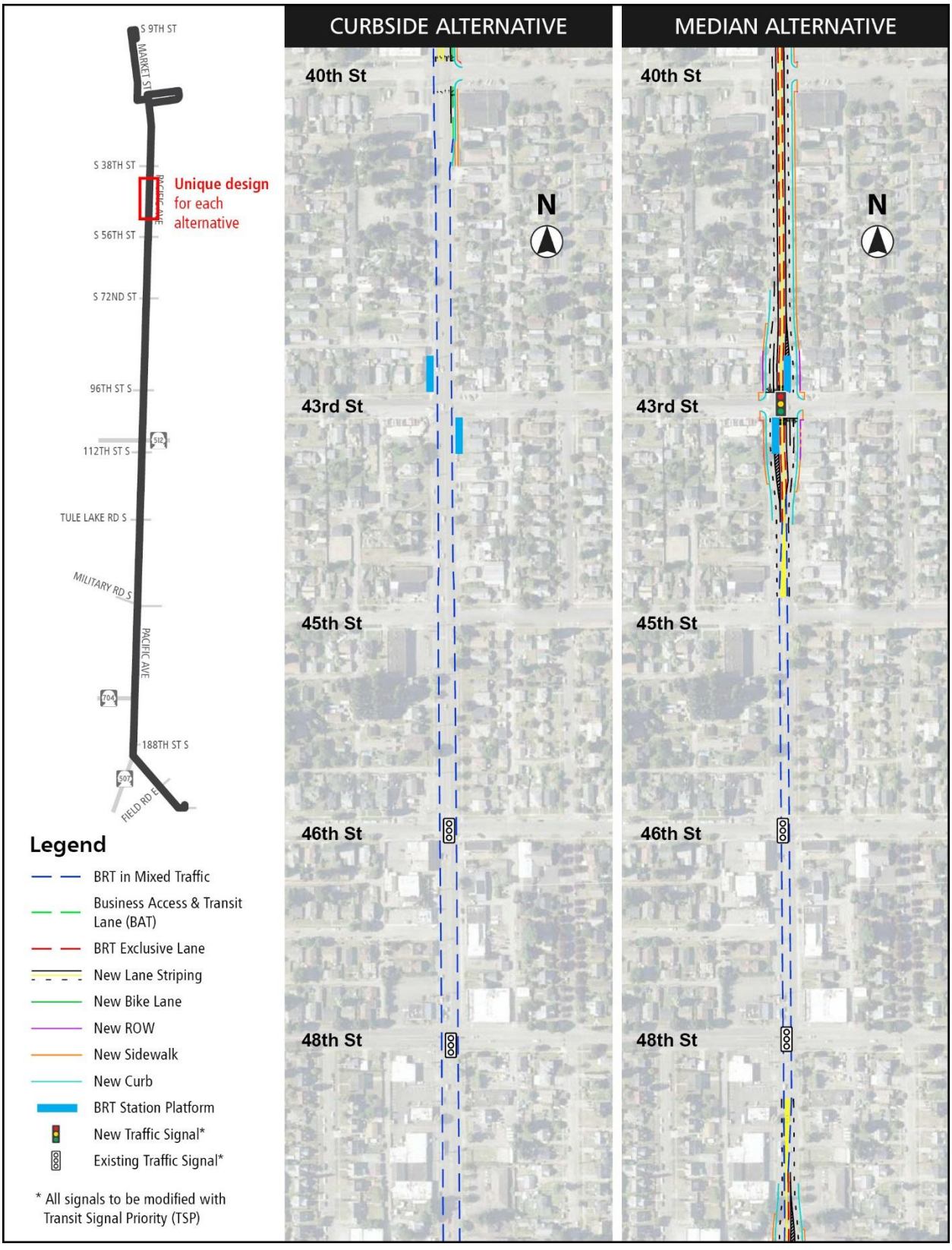
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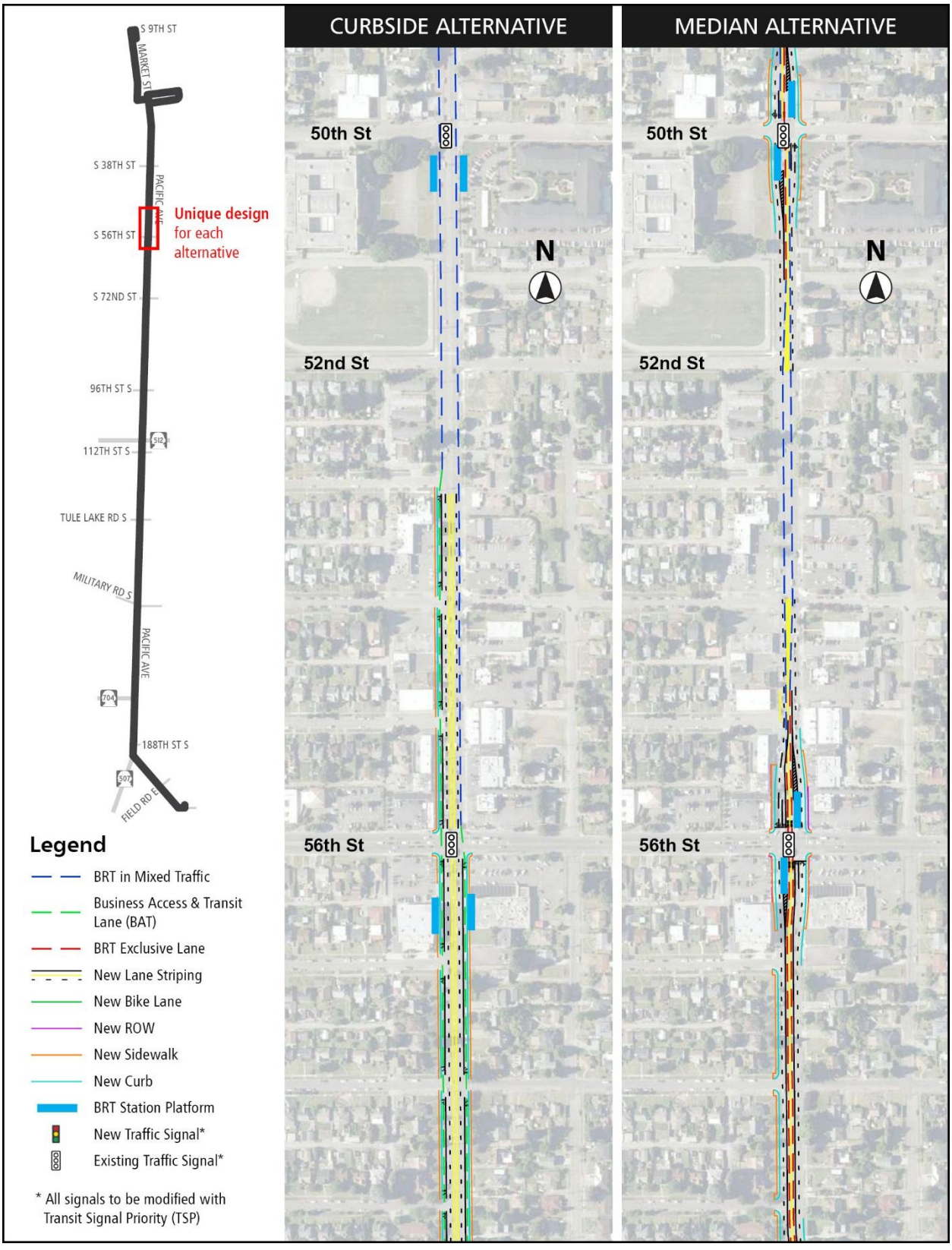
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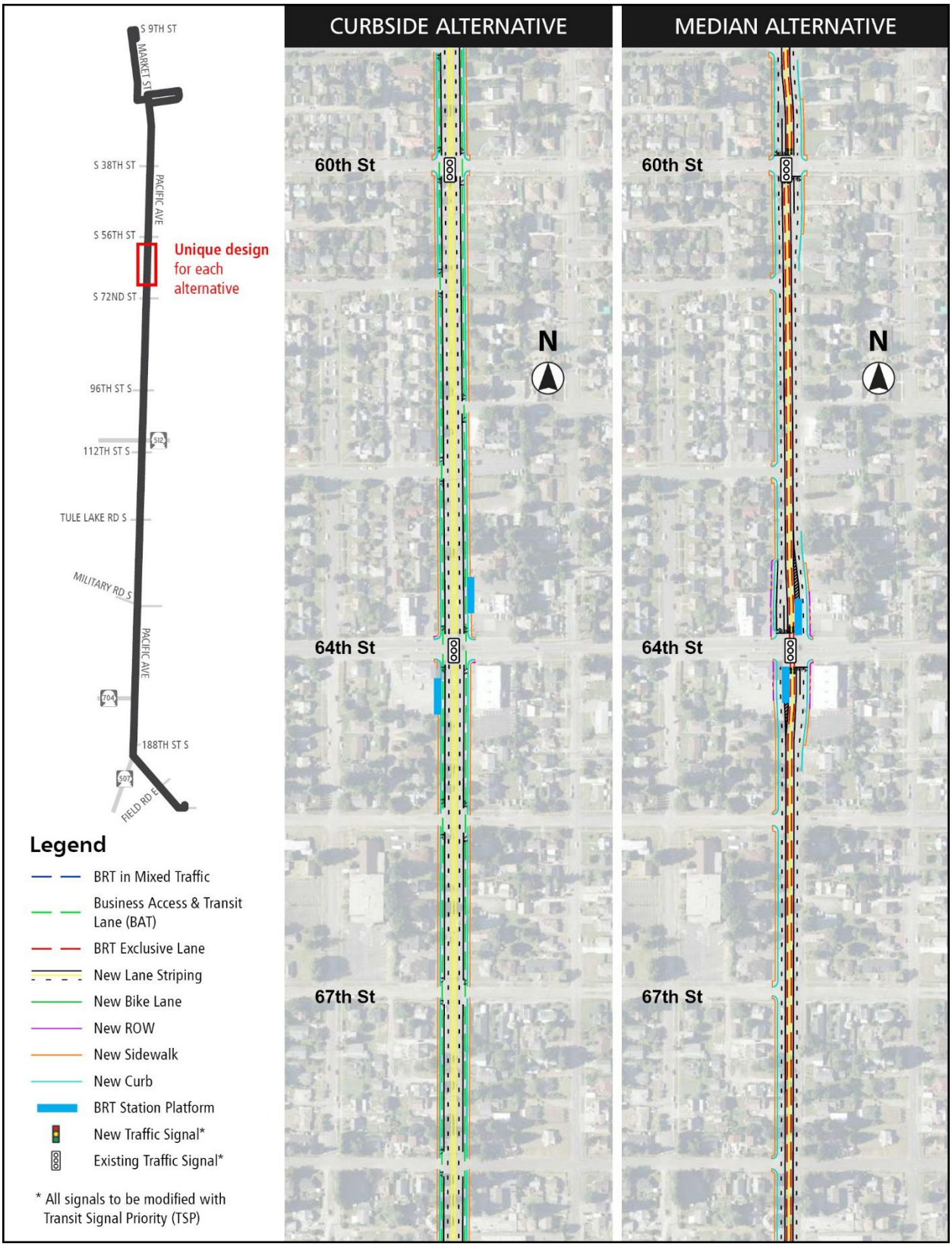
56th St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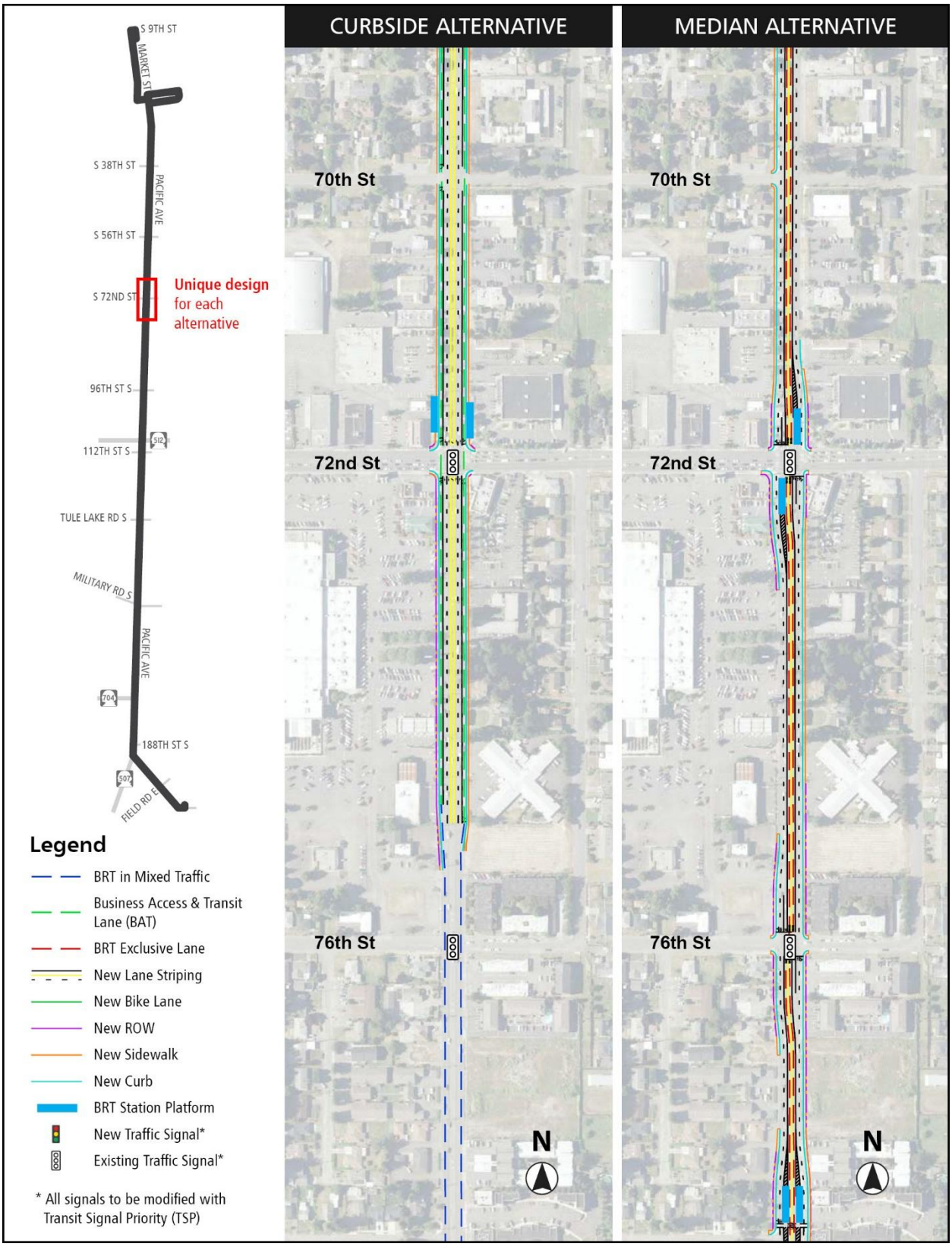
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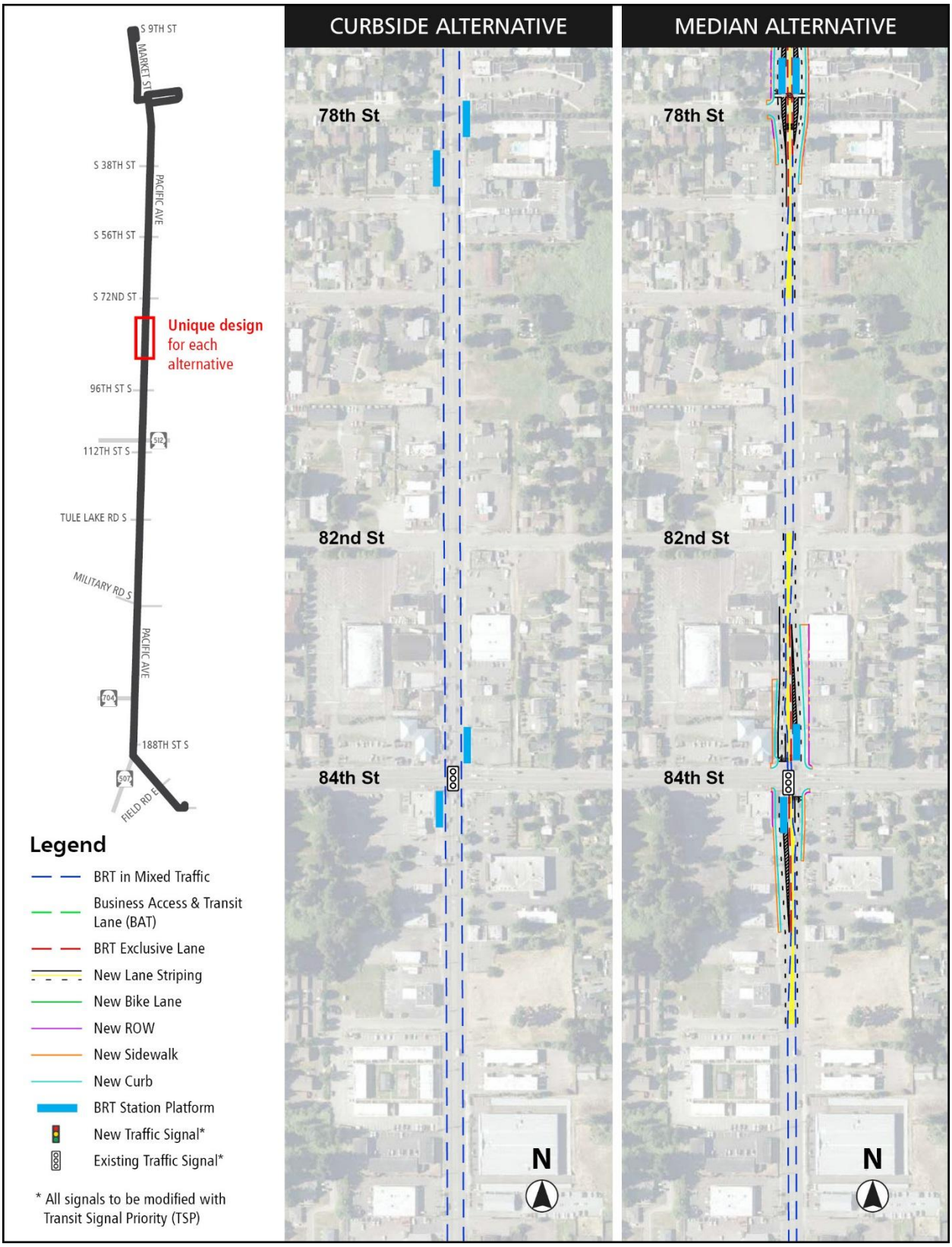
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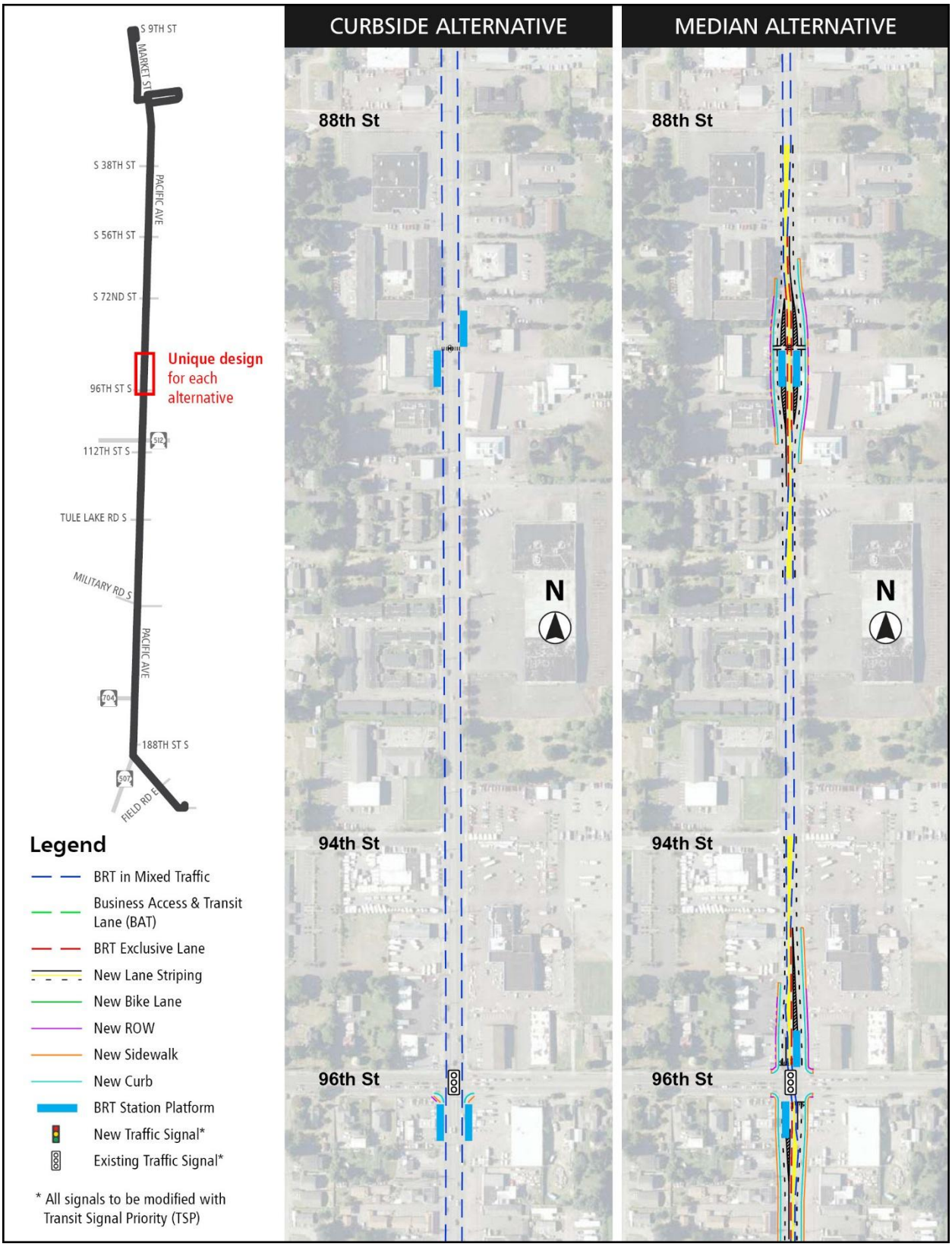
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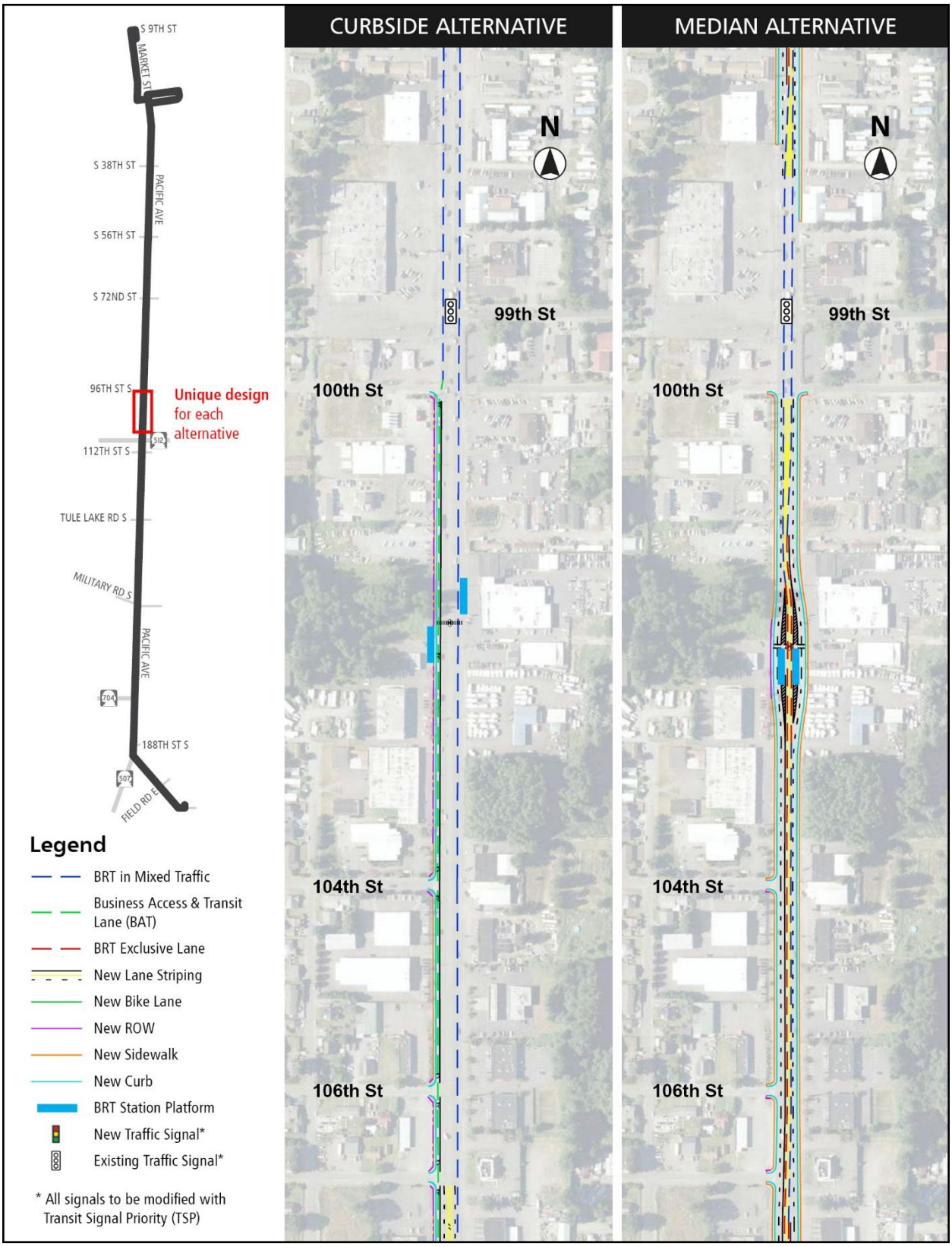
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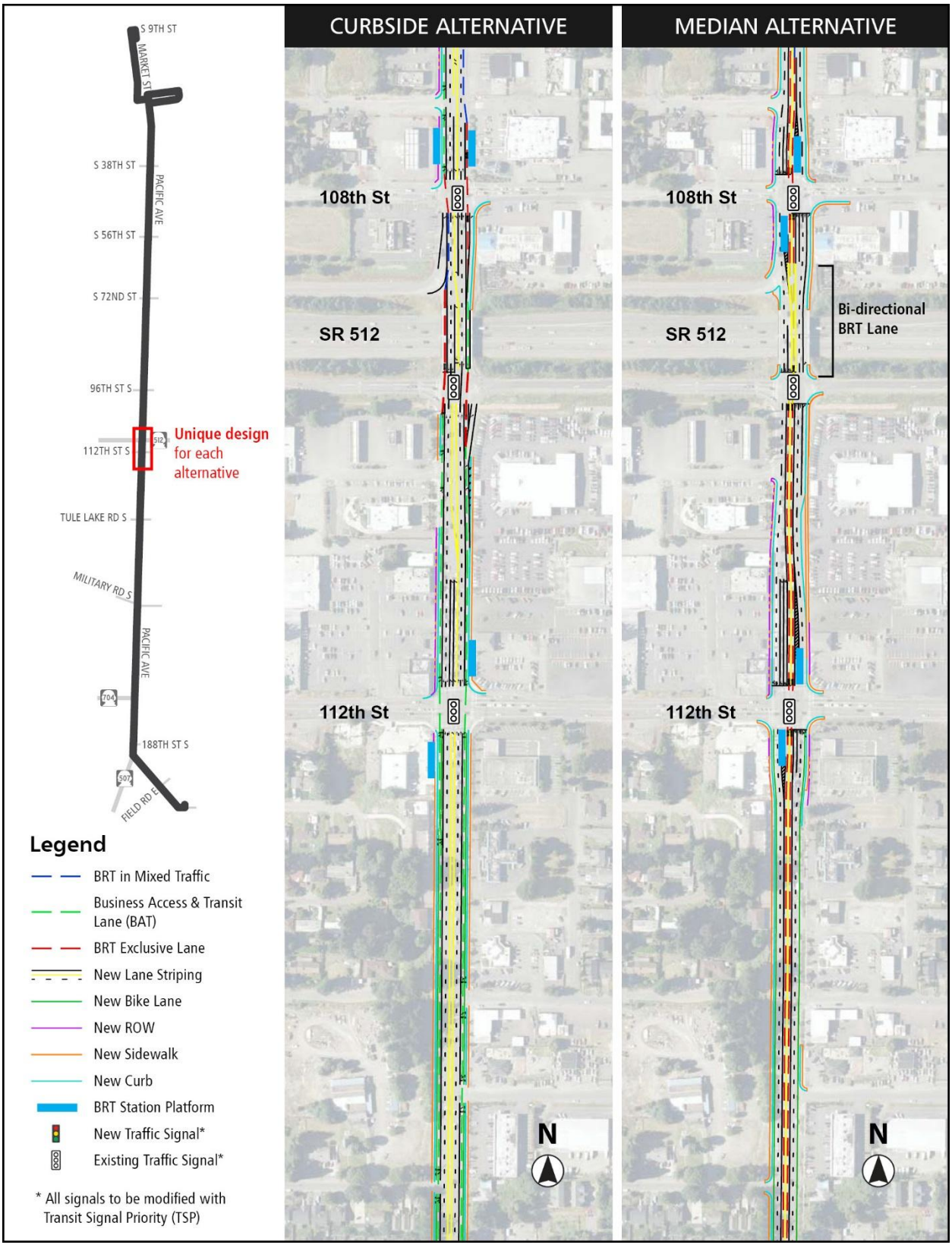
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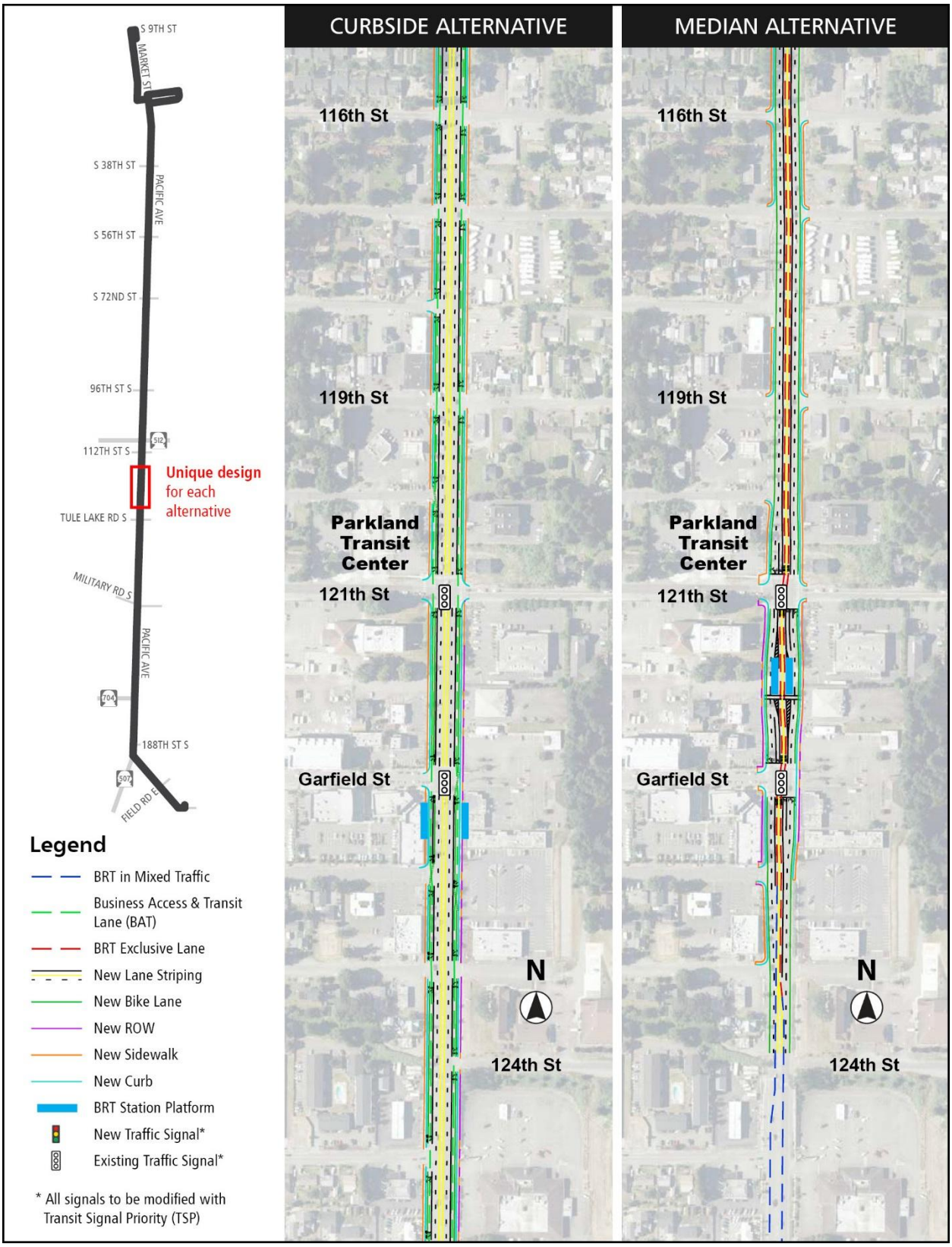
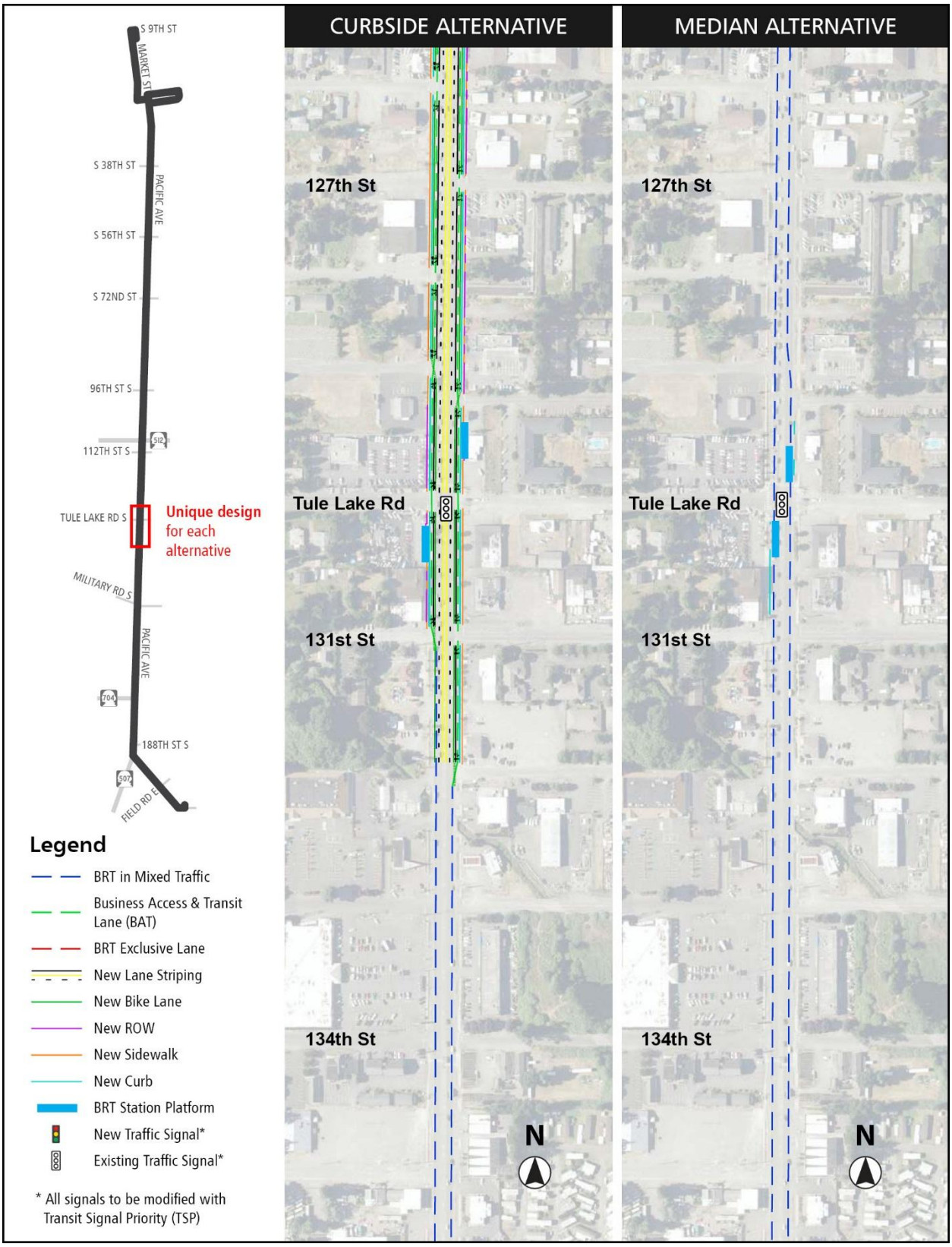
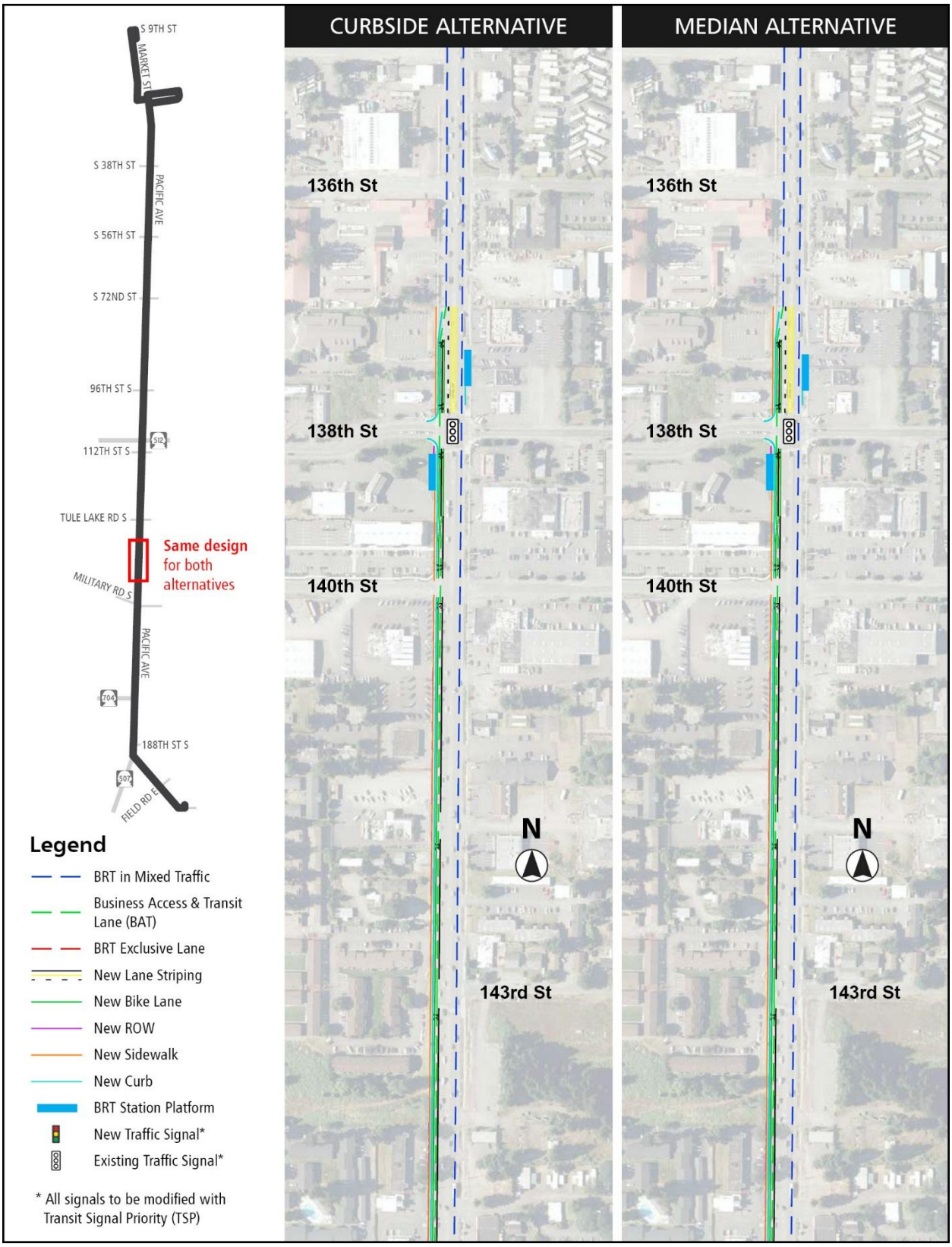
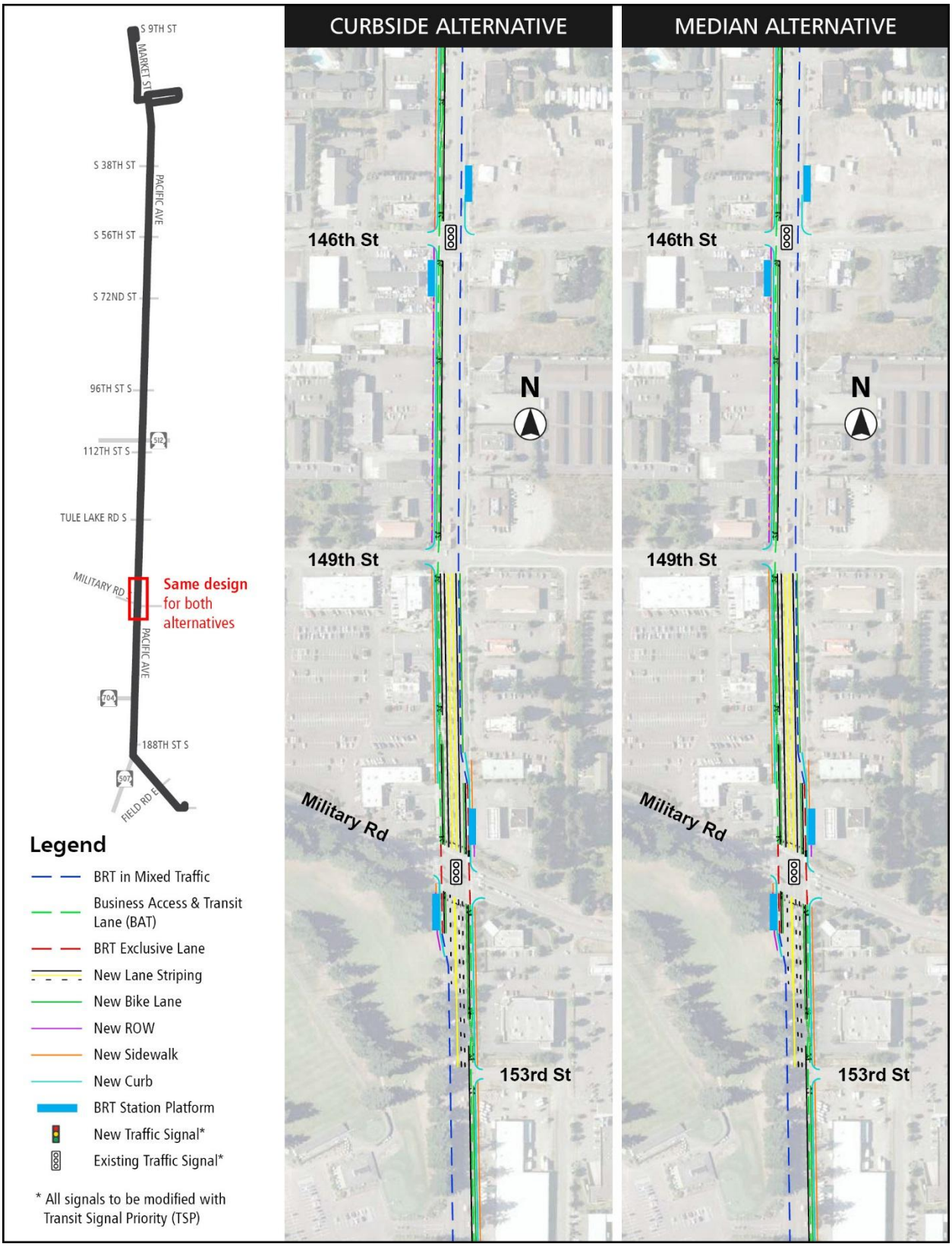
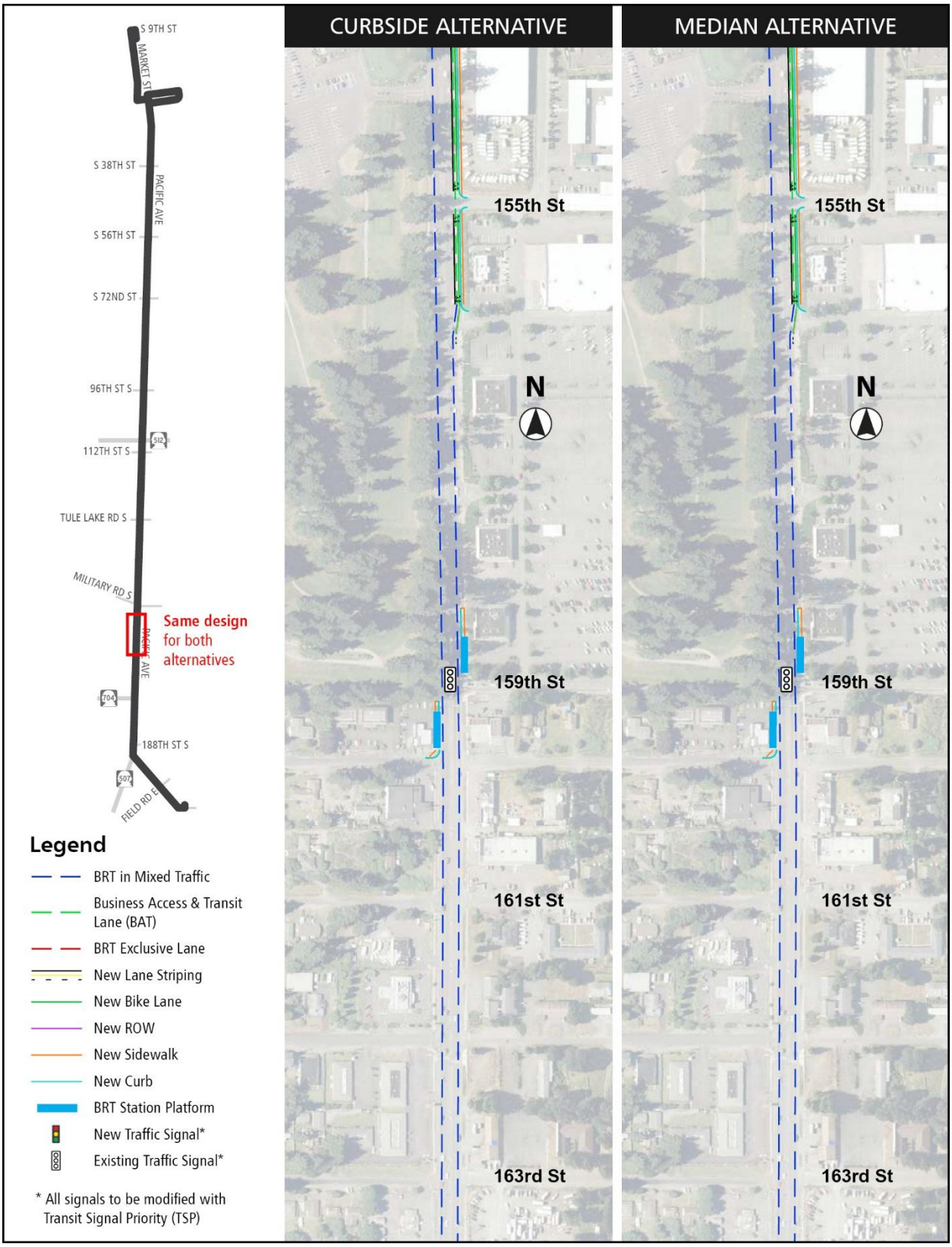
Bi-directional BRT Lane
112th St
N

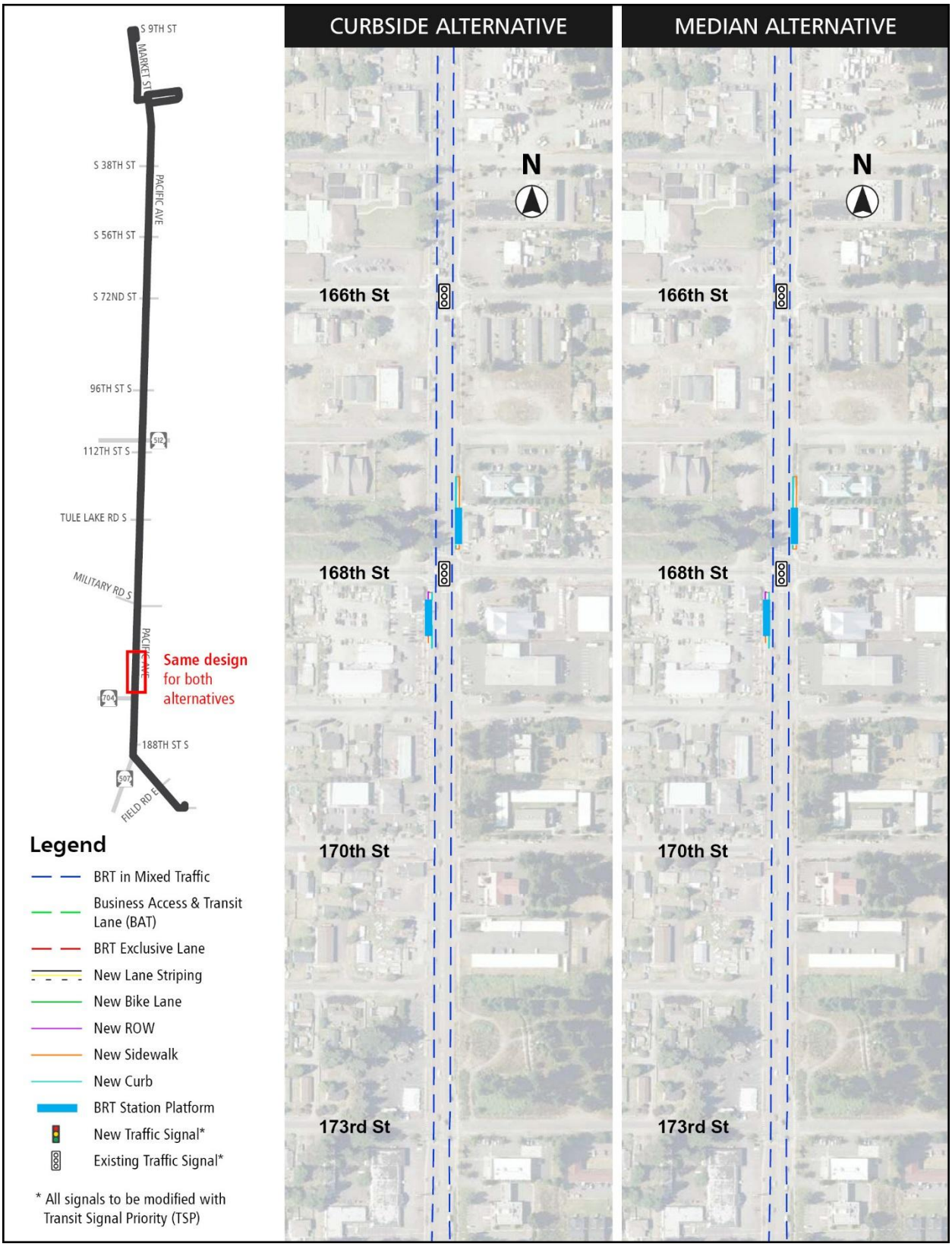

S 9TH ST
MARKET ST
S 38TH ST
PACIFIC AVE
S 56TH ST
S 72ND ST
96TH ST S
112TH ST S
512
Unique design for each alternative
TULE LAKE RD S
MILITARY RD S
PACIFIC AVE
704
188TH ST S
507
FIELD RD E
Legend
BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
* All signals to be modified with Transit Signal Priority (TSP)
CURBSIDE ALTERNATIVE
MEDIAN ALTERNATIVE
116th St
119th St
Parkland Transit Center
121th St
Garfield St
124th St
N

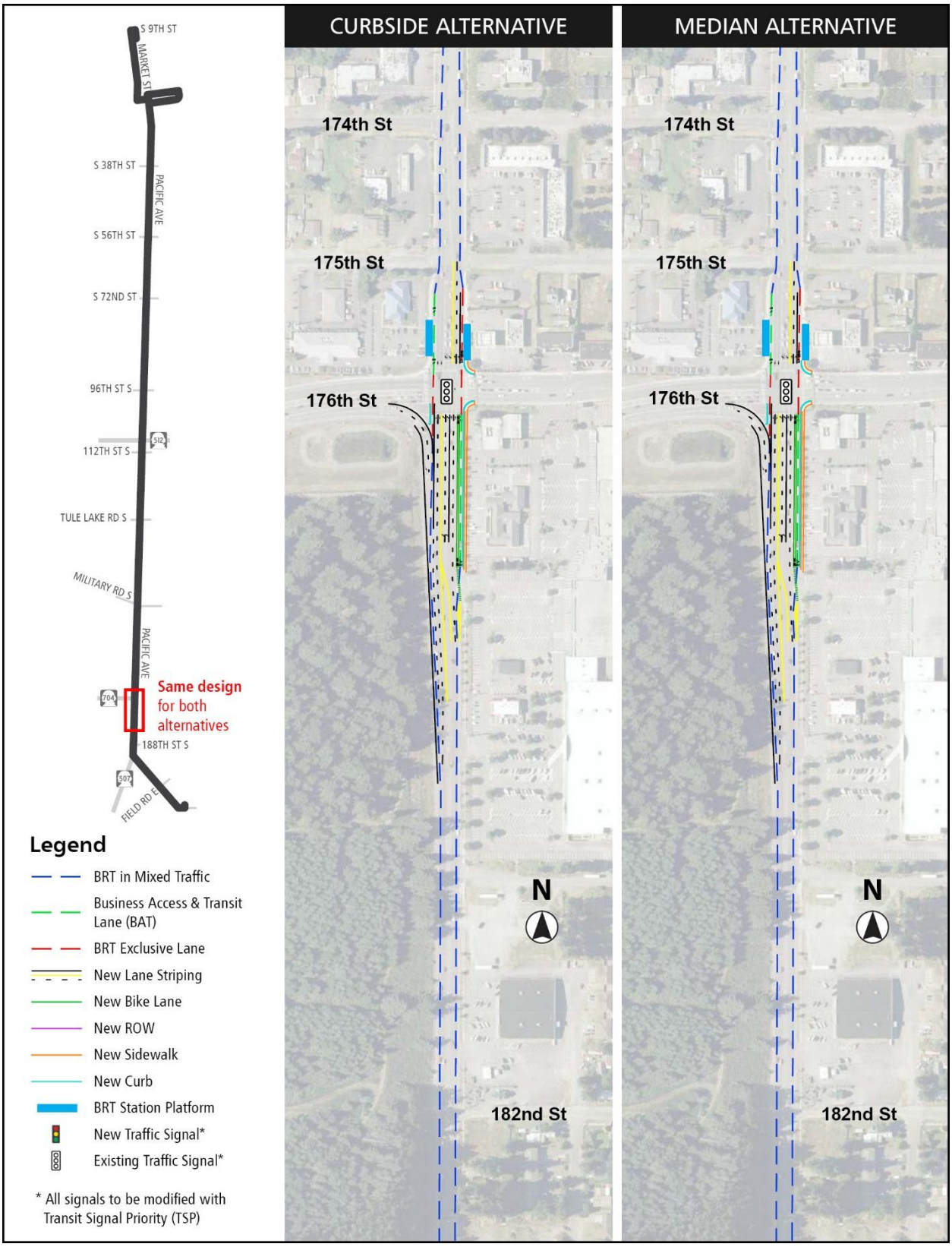

S 9TH ST
MARKET ST
S 38TH ST
PACIFIC AVE
S 56TH ST
S 72ND ST
96TH ST S
112TH ST S
512
TULE LAKE RD S
Unique design for each alternative
MILITARY RD S
PACIFIC AVE
704
188TH ST S
507
FIELD RD E
Legend
BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
* All signals to be modified with Transit Signal Priority (TSP)
CURBSIDE ALTERNATIVE
MEDIAN ALTERNATIVE
127th St
Tule Lake Rd
131st St
134th St
N

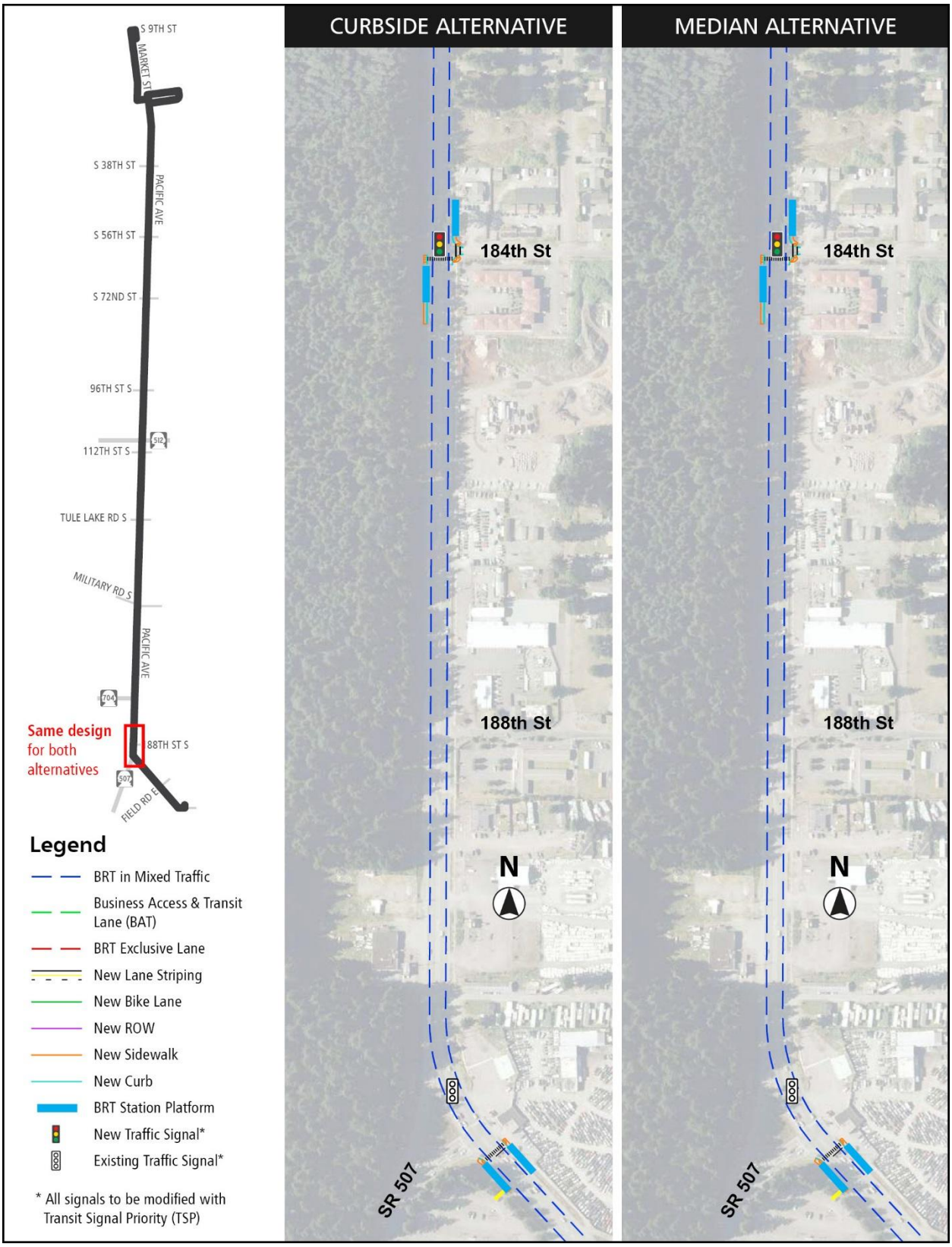

S 9TH ST
MARKET ST
S 38TH ST
PACIFIC AVE
S 56TH ST
S 72ND ST
96TH ST S
512
112TH ST S
TULE LAKE RD S
Same design for both alternatives
MILITARY RD S
PACIFIC AVE
704
188TH ST S
507
FIELD RD E
Legend
BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
* All signals to be modified with Transit Signal Priority (TSP)
CURBSIDE ALTERNATIVE
136th St
138th St
140th St
N
143rd St
MEDIAN ALTERNATIVE
136th St
138th St
140th St
N
143rd St

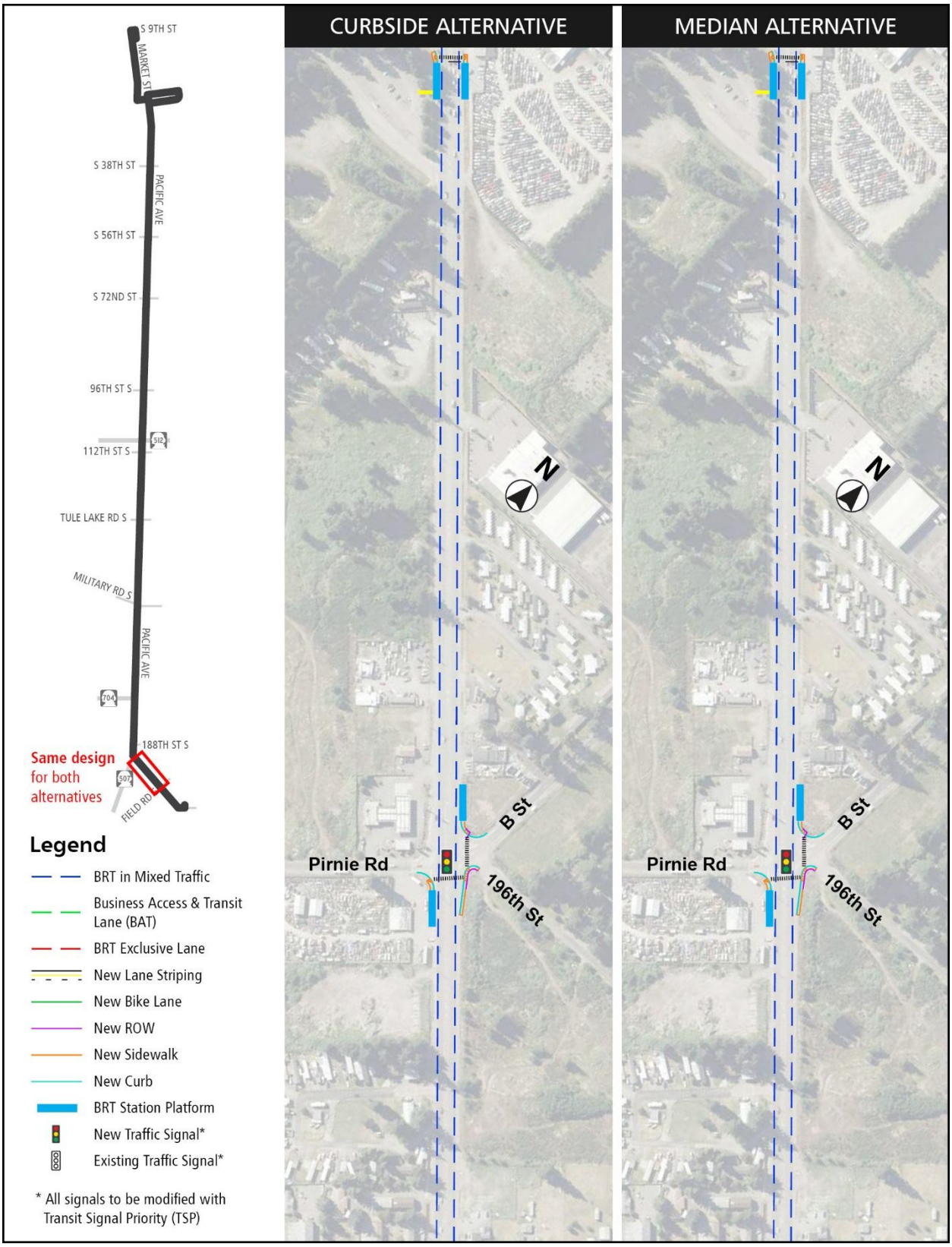

S 9TH ST
MARKET ST
S 38TH ST
PACIFIC AVE
S 56TH ST
S 72ND ST
96TH ST S
512
112TH ST S
TULE LAKE RD S
MILITARY RD
Same design for both alternatives
PACIFIC AVE
704
188TH ST S
507
FIELD RD E
Legend
BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
* All signals to be modified with Transit Signal Priority (TSP)
CURBSIDE ALTERNATIVE
MEDIAN ALTERNATIVE
146th St
149th St
153rd St
Military Rd
N

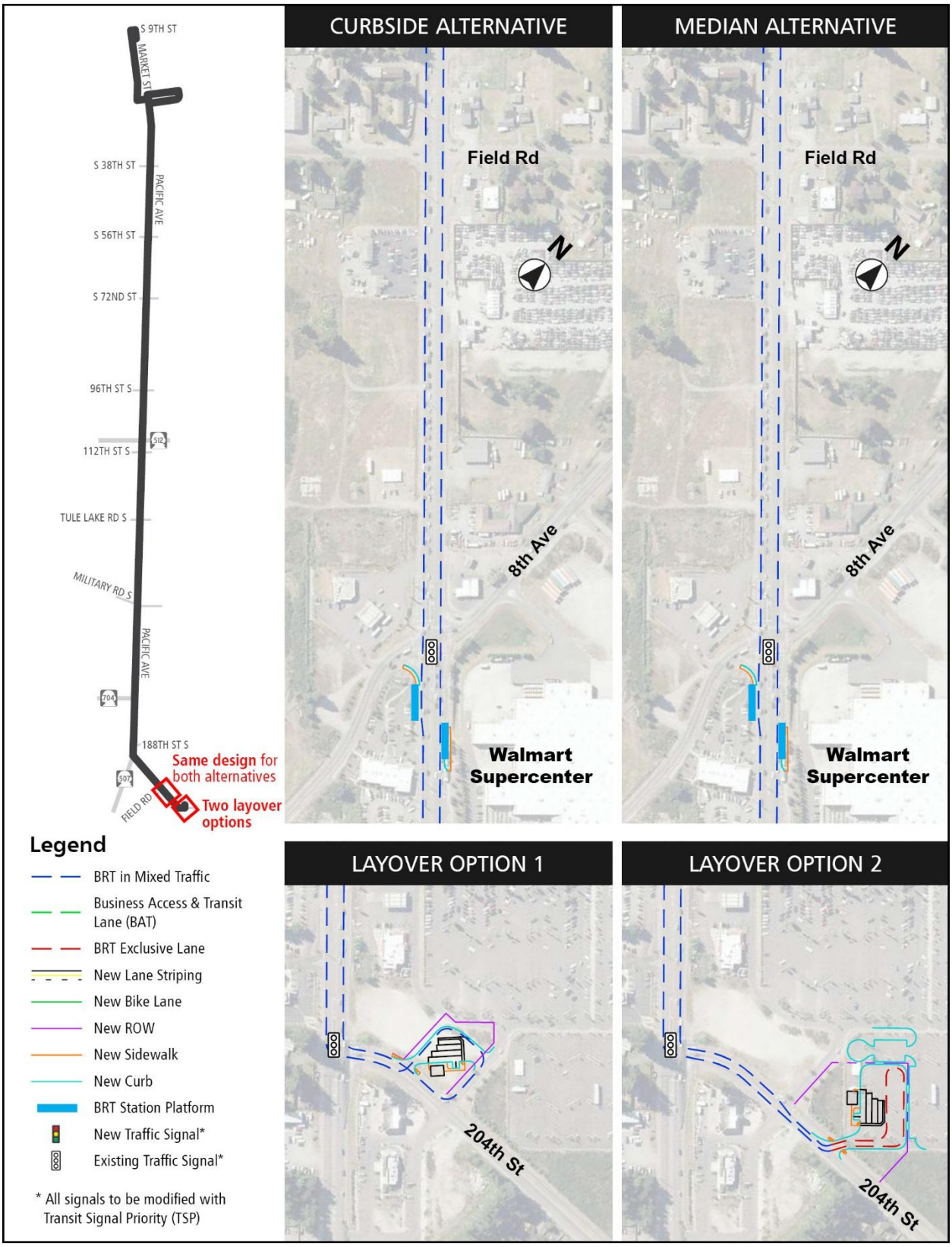

S 9TH ST
MARKET ST
S 38TH ST
PACIFIC AVE
S 56TH ST
S 72ND ST
96TH ST S
512
112TH ST S
TULE LAKE RD S
MILITARY RD S
Same design for both alternatives
PACIFIC AVE
704
188TH ST S
507
FIELD RD E
Legend
BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
* All signals to be modified with Transit Signal Priority (TSP)
CURBSIDE ALTERNATIVE
MEDIAN ALTERNATIVE
155th St
159th St
161st St
163rd St
N


S 9TH ST
MARKET ST
S 38TH ST
PACIFIC AVE
S 56TH ST
S 72ND ST
96TH ST S
512
112TH ST S
TULE LAKE RD S
MILITARY RD S
PACIFIC AVE S
Same design for both alternatives
704
188TH ST S
507
FIELD RD E
Legend
BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
* All signals to be modified with Transit Signal Priority (TSP)
CURBSIDE ALTERNATIVE
MEDIAN ALTERNATIVE
N
166th St
168th St
170th St
173rd St


S 9TH ST
MARKET ST
S 38TH ST
PACIFIC AVE
S 56TH ST
S 72ND ST
96TH ST S
512
112TH ST S
TULE LAKE RD S
MILITARY RD S
PACIFIC AVE
704
Same design for both alternatives
188TH ST S
507
FIELD RD E
Legend
BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
* All signals to be modified with Transit Signal Priority (TSP)
CURBSIDE ALTERNATIVE
174th St
175th St
176th St
N
182nd St
MEDIAN ALTERNATIVE
174th St
175th St
176th St
N
182nd St


S 9TH ST
MARKET ST
S 38TH ST
PACIFIC AVE
S 56TH ST
S 72ND ST
96TH ST S
512
112TH ST S
TULE LAKE RD S
MILITARY RD S
PACIFIC AVE
704
Same design for both alternatives
88TH ST S
507
FIELD RD E
Legend
BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
* All signals to be modified with Transit Signal Priority (TSP)
CURBSIDE ALTERNATIVE
184th St
188th St
N
SR 507
MEDIAN ALTERNATIVE
184th St
188th St
N
SR 507


S 9TH ST
MARKET ST
S 38TH ST
PACIFIC AVE
S 56TH ST
S 72ND ST
96TH ST S
512
112TH ST S
TULE LAKE RD S
MILITARY RD S
PACIFIC AVE
704
188TH ST S
507
FIELD RD
Same design for both alternatives
Legend
BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
* All signals to be modified with Transit Signal Priority (TSP)
CURBSIDE ALTERNATIVE
MEDIAN ALTERNATIVE
N
N
Pirnie Rd
B St
196th St
Pirnie Rd
B St
196th St


S 9TH ST
MARKET ST
S 38TH ST
PACIFIC AVE
S 56TH ST
S 72ND ST
96TH ST S
512
112TH ST S
TULE LAKE RD S
MILITARY RD S
PACIFIC AVE
704
188TH ST S
507
FIELD RD
Same design for both alternatives
Two layover options
CURBSIDE ALTERNATIVE
MEDIAN ALTERNATIVE
Field Rd
8th Ave
Walmart Supercenter
N
LAYOVER OPTION 1
LAYOVER OPTION 2
204th St
Legend
BRT in Mixed Traffic
Business Access & Transit Lane (BAT)
BRT Exclusive Lane
New Lane Striping
New Bike Lane
New ROW
New Sidewalk
New Curb
BRT Station Platform
New Traffic Signal*
Existing Traffic Signal*
* All signals to be modified with Transit Signal Priority (TSP)

APPENDIX B: PARCELS WITH POTENTIAL ACQUISITION

Table B-1. Curbside Alternative - Potential Property Acquisitions (1 of 2)

Appendix B-1
Pacific Avenue | SR 7 High Capacity Transit Feasibility Study
Curbside Alternative

Count	Parcel Number	Site Address	Business Name (if applicable)	Land Use Description	General Land Use	Total Area of Parcel (SF)	Area of Impact (SF)	Percent of Parcel Impacted	Property Owner Address		
									Street Address	City, State	Zipcode
1	7470021641	3739 PACIFIC AV	WALGREENS	OTHER RETAIL TRADE	Commercial	57912.73275	6.843226	0%	PO BOX 1159	DEERFIELD, IL	60015-6002
2	7470023471	3740 PACIFIC AV	JACKSONS	GAS STATION SERV GAR	Commercial	38423.1821	1.722477	0%	3450 E COMMERCIAL CT	MERIDIAN, ID	83642-8915
3	7470021770	3801 PACIFIC AV		COMM VAC LAND	Commercial	13891.6986	7.215293	0%	PO BOX 8431	HARRISBURG, PA	17105-8431
4	7470023651	3802 PACIFIC AV		NGB COMMUNITY SC	Other	22220.19448	8.583842	0%	PO BOX 98922	LAKEWOOD, WA	98496-8922
5	7470021840	3855 PACIFIC AV		FAST FOOD	Commercial	15251.5277	1.893054	0%	32402 58TH AVE S	AUBURN, WA	98001-3871
6	5620000541	6332 PACIFIC AV		GEN MERCHANDISE RETAIL TRADE	Commercial	15668.94847	3.085035	0%	27215 51ST PL S	KENT, WA	98032-6230
7	6615001241	7041 PACIFIC AV	RITE AID	OTHER RETAIL TRADE	Commercial	68281.07429	44.076693	0%	PO BOX 3165	HARRISBURG, PA	17105-3165
8	6615001840	7056 PACIFIC AV	JIFFY LUBE	MINI LUBE SERVICE	Commercial	12855.12987	96.258889	1%	1422 EDINGER AVE STE 150	TUSTIN, CA	92780-6299
9	7850000131	7202 PACIFIC AV	CHECKMATE	RETAIL STAND ALONE	Commercial	7413.217807	732.259024	10%	2838 UMALU PL	KIHEI, HI	96753-8504
10	7850000010	7217 PACIFIC AV	MCDONALDS	FAST FOOD	Commercial	21340.33504	19.543474	0%	PO BOX 182571	COLUMBUS, OH	43218-2571
11	7850000221	7210 PACIFIC AV		RESTAURANT	Commercial	14063.97625	1248.23949	9%	1014 VINE ST	CINCINNATI, OH	45202
12	7850000041	7250 PACIFIC AV	FRED MEYER #385 72ND & PACIFIC AVE	DISCOUNT STORES	Commercial	519859.082	7610.730234	1%	1014 VINE ST	CINCINNATI, OH	45202
13	7850000464	7430 PACIFIC AV	PAPA JOHNS PIZZA	FOOD RETAIL TRADE	Commercial	28070.80082	344.292013	1%	1014 VINE ST	CINCINNATI, OH	45202
14	319042088	9602 PACIFIC AV	KARHU'S KARS	USED CAR LOTS ONLY RETAIL	Commercial	16010.17796	81.834917	1%	9402 E D ST	TACOMA, WA	98445-2144
15	3810000291	10004 PACIFIC AV		ESPRESSO SHOP	Commercial	7455.898139	514.139963	7%	2605 N STARR ST	TACOMA, WA	98403-2938
16	3810000311	10014 PACIFIC AV	WONDER BREAD	SPECIALTY FOOD MKTS	Commercial	18193.40204	432.541287	2%	315 NE 10TH AVE	PORTLAND, OR	97232-2712
17	3810000320	10018 PACIFIC AV		RETAIL STAND ALONE	Commercial	11646.0831	411.921258	4%	152 E 58TH ST	TACOMA, WA	98404-1218
18	3810000340	10030 PACIFIC AV	RICHS AUTO SALES	USED CAR LOTS ONLY RETAIL	Commercial	39516.47094	399.225268	1%	13512 30TH AVE E	TACOMA, WA	98446-1808
19	3810000350	10200 PACIFIC AV		COMM VAC LAND	Commercial	38809.24508	371.456604	1%	2 BRIDLE WAY	FORT LEE, NJ	07024-6313
20	3810000361	10116 PACIFIC AV		COMM VAC LAND	Commercial	37428.5609	455.390083	1%	2 BRIDLE WAY	FORT LEE, NJ	07024-6313
21	3810000371	10122 PACIFIC AV	CASCADE CUSTOM JEWELERS	OTHER RETAIL TRADE	Commercial	10912.04488	293.789917	3%	10122 PACIFIC AVE S	TACOMA, WA	98444-6549
22	3810000380	10202 PACIFIC AV S	PACIFIC BUSINESS PARK	MISC OFFICE SPACE	Commercial	19953.36738	169.310318	1%	6524 CROMWELL BEACH DR NW	GIG HARBOR, WA	98335-7513
23	4745000010	10202 PACIFIC AV S	PACIFIC BUSINESS PARK	MISC OFFICE SPACE	Commercial	11720.40225	315.263845	3%	6524 CROMWELL BEACH DR NW	GIG HARBOR, WA	98335-7513
24	4745000021	10228 PACIFIC AV	PACIFIC RUN ANTIQUE MALL	RETAIL STAND ALONE	Commercial	67589.78751	266.669669	0%	10228 PACIFIC AVE S	TACOMA, WA	98444-6048
25	4745000051	10234 PACIFIC AV	PACIFIC AVE VETERINARY HOSPITAL	VETERINARIAN SERVICES	Commercial	47873.75487	53.06951	0%	12401 W OLYMPIC BLVD	LOS ANGELES, CA	90064-1022
26	4745000293	REFERENCE		UNKNOWN	Other	83648.49313	88.177467	0%	REFERENCE	TACOMA, WA	
27	4745000111	10422 TO 10428 PACIFIC AV S		GEN MERCHANDISE RETAIL TRADE	Commercial	31597.34427	43.990268	0%	3820 SPYGLASS DR NE	TACOMA, WA	98422-2484
28	4745000760	10610 PACIFIC AV		GAS STATION MINI MART	Commercial	19284.73205	96.996482	1%	13215 SE MILL PLAIN BLVD STE C-8 #529	VANCOUVER, WA	98684
29	4745001021	10656 PACIFIC AV	JACK IN THE BOX	FAST FOOD	Commercial	34655.4362	301.524617	1%	9330 BALBOA AVE	SAN DIEGO, CA	92123-1516
30	4745001162	10716 PACIFIC AV	SHELL	GAS STATION MINI MART	Commercial	41008.66753	0.002049	0%	3450 E COMMERCIAL CT	MERIDIAN, ID	83642-8915
31	319043133	11012 PACIFIC AV S		FAST FOOD	Commercial	52941.30929	35.932262	0%	PO BOX 98356	LAKEWOOD, WA	98496
32	319043080	11024 PACIFIC AV S	TRACY & TRACY ATTORNEY AT LAW	PROFESSIONAL SERVICES	Commercial	7123.652126	72.291522	1%	11024 PACIFIC AVE S	TACOMA, WA	98444-5738
33	319043113	11102 PACIFIC AV S		NGB COMMUNITY SC	Other	95546.81452	248.680782	0%	11027 NE 116TH ST	KIRKLAND, WA	98034-7015
34	319043141	11111 PACIFIC AV S	LAKEWOOD FORD USED CAR SALES	USED CAR LOTS ONLY RETAIL	Commercial	28218.73189	132.393989	0%	7230 HIGHLANDS DR NE	OLYMPIA, WA	98516-2134
35	319043055	11118 PACIFIC AV	SHAMROCK TAVERN	TAVERNS	Commercial	5087.184052	37.564901	1%	11118 PACIFIC AVE	TACOMA, WA	98444
36	319043019	11122 PACIFIC AV S	PARKLAND SLEEP CENTER	APPAREL ACCSSRS RETAIL	Commercial	8215.142041	102.031954	1%	1635 E PORTLAND AVE	TACOMA, WA	98421-2802
37	319092061	11202 PACIFIC AV S	AUTOZONE	AUTO ACCESSORIES RETAIL	Commercial	37244.20116	203.972709	1%	123 S FRONT ST DEPT 8088	MEMPHIS, TN	38103-3607
38	319093074	120 123RD ST S	PARKLAND EVANGELICAL LUTHERAN CHURCH	RELIGIOUS SERVICES	Other	187049.8682	1116.589917	1%	116 123RD ST S	TACOMA, WA	98444-5103
39	319093068	12505 PACIFIC AV S	PARADISE BOWL & CASINO	REC ACTIVITIES	Other	166748.5237	2095.368071	1%	3519 HARBOR VIEW DR STE 3	GIG HARBOR, WA	98332
40	319093030	12517 PACIFIC AV S		COMM LND WITH SFR	Residential	5614.968464	180.874607	3%	3819 100TH ST SW STE 7D	LAKEWOOD, WA	98499-4478
41	319093011	130 126TH STCT S		GEN MERCHANDISE RETAIL TRADE	Commercial	22696.8517	325.071063	1%	3819 100TH ST SW STE 7D	LAKEWOOD, WA	98499-4478
42	319093080	12615 B PACIFIC AV S		AUTO ACCESSORIES RETAIL	Commercial	7463.586444	184.192841	2%	11310 SHAWNEE RD E	PUYALLUP, WA	98374-2479
43	319093081	12615 A PACIFIC AV S		AUTO ACCESSORIES RETAIL	Commercial	8765.637312	200.303463	2%	11310 SHAWNEE RD E	PUYALLUP, WA	98374-2479
44	319093037	12705 PACIFIC AV S	PREFERRED AUTO SALES	USED CAR LOTS ONLY RETAIL	Commercial	18916.10801	340.153531	2%	1201 122ND STREET CT E	TACOMA, WA	98445-3519
45	319093009	12715 PACIFIC AV S	BLUE SPRUCE MOTEL	HOTELS/MOTELS	Commercial	41823.85716	219.722181	1%	413 SW 352ND ST	FEDERAL WAY, WA	98023-8129
46	319166017	12811 PACIFIC AV S		COMM VAC LAND	Commercial	16574.99403	114.318755	1%	220 TACOMA AVE S STE 808	TACOMA, WA	98402
47	319166016	12821 PACIFIC AV S	STARBUCKS COFFEE/TACO DE MAR	FAST FOOD	Commercial	40719.92137	188.98709	0%	14205 SE 36TH ST STE 215	BELLEVUE, WA	98006
48	2695002392	12910 PACIFIC AV S	BEST WAYS TRANSPORTATION	MISC OFFICE SPACE	Commercial	7820.50304	17.077688	0%	13541 W COTTONWOOD ST	SURPRISE, AZ	85374
49	2695002460	12901 PACIFIC AV S	BREW IT 4U	ESPRESSO SHOP	Commercial	4988.019865	23.989338	0%	3115 N VILLARD ST	TACOMA, WA	98407-3419
50	2695002410	12918 PACIFIC AV S	PARKLAND AUTO CENTER	USED CAR LOTS ONLY RETAIL	Commercial	43397.58156	82.267861	0%	PO BOX 44010	TACOMA, WA	98448-0010

Table B-2. Curbside Alternative – Potential Property Acquisitions (2 of 2)

Count	Parcel Number	Site Address	Business Name (if applicable)	Land Use Description	General Land Use	Total Area of Parcel (SF)	Area of Impact (SF)	Percent of Parcel Impacted	Property Owner Address		
									Street Address	City, State	Zipcode
51	2695002470	12907 TO 12909 PACIFIC AV S	MAREK INSURANCE	OFF INSURANCE REAL ESTATE FINANCE	Commercial	7585.176591	136.233504	2%	PO BOX 44076	TACOMA, WA	98448-0076
52	2695002400	12920 PACIFIC AV S	PARKLAND AUTO CENTER	USED CAR LOTS ONLY RETAIL	Commercial	7518.170648	91.915851	1%	PO BOX 44010	TACOMA, WA	98448-0010
53	2695002270	13006 PACIFIC AV S		USED CAR LOTS ONLY RETAIL	Commercial	712.090838	396.567234	56%	1625 E 72ND ST STE 700-148	TACOMA, WA	98404
54	2695002260	13014 PACIFIC AV S	TOPKICK PAWN SHOP	GEN MERCHANDISE RETAIL TRADE	Commercial	7596.817261	89.707472	1%	1625 E 72ND ST STE 700 PMB 148	TACOMA, WA	98404-5455
55	2695002250	13014 PACIFIC AV S		MISC OFFICE SPACE	Commercial	8256.637319	106.947999	1%	1625 E 72ND ST STE 700 PMB 148	TACOMA, WA	98404-5455
56	7130000071	13802 PACIFIC AV S	KEY BANK	BANKS	Commercial	5764.196261	73.522871	1%	1101 PACIFIC AVE STE A	TACOMA, WA	98402-4396
57	7130000043	13802 PACIFIC AV S	KEY BANK	BANKS	Commercial	54625.61834	118.759413	0%	1101 PACIFIC AVE STE A	TACOMA, WA	98402-4396
58	7130000290	14012 PACIFIC AV S		USED CAR LOTS ONLY RETAIL	Commercial	135189.861	13.738477	0%	1124 112TH ST E	TACOMA, WA	98445-3710
59	7130000260	14012 PACIFIC AV S		BUSINESS SERVICES	Commercial	14510.46368	47.55625	0%	1124 112TH ST E	TACOMA, WA	98445-3710
60	7130000281	14107 C ST S	WILLIAMSBERG COURT APTS	MULTI FAM APTS 5 UNITS OR MORE	Residential	71629.44489	24.090879	0%	14209 PACIFIC AV S STE 44	TACOMA, WA	98444
61	7130000270	14102 TO 14106 PACIFIC AV S		RETAIL STAND ALONE	Commercial	17302.47095	119.609906	1%	30210 110TH PL SE	AUBURN, WA	98092
62	7130000300	14114 PACIFIC AV S		RESTAURANT	Commercial	9401.504896	59.689209	1%	5902 77TH ST W STE B	LAKEWOOD, WA	98499-8589
63	319163008	14122 PACIFIC AV S	LADY LUCK'S STEAKHOUSE & SALOON	RESTAURANT	Commercial	44522.06913	389.539297	1%	5902 77TH ST W STE B	LAKEWOOD, WA	98499-8589
64	319163092	14204 TO 14208 PACIFIC AV S		OFF INSURANCE REAL ESTATE FINANCE	Commercial	23385.30504	627.773905	3%	PO BOX 45168	TACOMA, WA	98448-5168
65	319163091	14212 PACIFIC AV S		MULTI FAM APTS 5 UNITS OR MORE	Residential	33025.05344	56.0819	0%	PO BOX 45168	TACOMA, WA	98448-5168
66	319167018	14216 PACIFIC AV S	NORTHWOOD APTS	MULTI FAM APTS 5 UNITS OR MORE	Residential	115865.5971	443.052342	0%	11916 58TH AVE SW	TACOMA, WA	98499-4948
67	319167017	14218 PACIFIC AV S		COMM VAC LAND	Commercial	25940.10806	66.124512	0%	11916 58TH AVE SW	TACOMA, WA	98499-4948
68	9835000300	14406 PACIFIC AV S	PACIFIC OAK APARTMENTS	MULTI FAM APTS 5 UNITS OR MORE	Residential	27645.14273	1007.59324	4%	4714 BALLARD AVE NW PMB 308	SEATTLE, WA	98107-4850
69	9835000330	14416 TO 14418 PACIFIC AV S	AA-OKAY LOANS	RETAIL STAND ALONE	Commercial	7259.743509	218.605312	3%	14003 MERIDIAN E	PUYALLUP, WA	98373-5618
70	9835000320	14422 PACIFIC AV S	BLITZ	TAVERNS	Commercial	20235.80414	505.908318	3%	PO BOX 731335	PUYALLUP, WA	98373-0080
71	9835000414	14512 PACIFIC AV S	EL PATIO TAQUERIA / GRECO	RESTAURANT	Commercial	31008.34267	425.165318	1%	5902 77TH ST W	LAKEWOOD, WA	98499-8589
72	9835000411	14522 PACIFIC AV S	KENTUCKY FRIED CHICKEN	FAST FOOD	Commercial	30164.2451	167.515026	1%	PO BOX 572530	SALT LAKE CTY, UT	84157-2530
73	319212027	15119 PACIFIC AV S		GAS STATION MINI MART	Commercial	58112.6672	115.292518	0%	PO BOX 1294	OAKLEY, CA	94561
74	319213034	15602 PACIFIC AV S	SPANAWAY GOLF COURSE	GOLF COURSES	Other	6326873.783	1120.247399	0%	9112 LAKEWOOD DR SW STE 121	LAKEWOOD, WA	98499-3998
75	5025003290	16802 TO 16804 PACIFIC AV S		GEN MERCHANDISE RETAIL TRADE	Commercial	6491.131226	160.231421	2%	16822 PACIFIC AVE S	SPANAWAY, WA	98387-8255
76	5025003300	16808 PACIFIC AV S	HI TECH COLLISION	AUTO REPAIR SERVICES	Commercial	33743.66765	131.716565	0%	16822 PACIFIC AVE S	SPANAWAY, WA	98387-8255

Table B-3. Median Alternative – Potential Property Acquisitions (1 of 3)

Appendix B-2
Pacific Avenue | SR 7 High Capacity Transit Feasibility Study
Median Alternative

Count	Parcel Number	Site Address	Business Name (if applicable)	Land Use Description	General Land Use	Total Area of Parcel (SF)	Area of Impact (SF)	Percent of Parcel Impacted	Property Owner Address		
									Street Address	City, State	Zipcode
1	7470021641	3739 PACIFIC AV	WALGREENS	OTHER RETAIL TRADE	Commercial	57912.73275	142.624826	0.25%	PO BOX 1159	DEERFIELD, IL	60015-6002
2	7470023471	3740 PACIFIC AV	JACKSONS	GAS STATION SERV GAR	Commercial	38423.1821	143.824612	0.37%	3450 E COMMERCIAL CT	MERIDIAN, ID	83642-8915
3	7470021770	3801 PACIFIC AV		COMM VAC LAND	Commercial	13891.6986	107.932537	0.78%	PO BOX 8431	HARRISBURG, PA	17105-8431
4	7470023651	3802 PACIFIC AV		NGB COMMUNITY SC	Other	22220.19448	162.615126	0.73%	PO BOX 98922	LAKEWOOD, WA	98496-8922
5	7470021780	3807 PACIFIC AV		COMM VAC LAND	Commercial	13908.23344	60.738366	0.44%	PO BOX 8431	HARRISBURG, PA	17105-8431
6	7470021830	3811 PACIFIC AV		COMM VAC LAND	Commercial	8809.727381	38.741595	0.44%	PO BOX 8431	HARRISBURG, PA	17105-8431
7	7470021790	3815 PACIFIC AV		COMM VAC LAND	Commercial	8790.305769	33.361196	0.38%	PO BOX 8431	HARRISBURG, PA	17105-8431
8	7470021800	3817 PACIFIC AV		COMM VAC LAND	Commercial	16499.97431	2.265013	0.01%	PO BOX 8431	HARRISBURG, PA	17105-8431
9	7470021840	3855 PACIFIC AV		FAST FOOD	Commercial	15251.5277	1.674434	0.01%	32402 58TH AVE S	AUBURN, WA	98001-3871
10	2415000420	4001 TO 5 PACIFIC AV	BAXTER AUTO PARTS	RETAIL STAND ALONE	Commercial	11797.59069	1.287595	0.01%	6859 S EASTERN AVE STE 101	LAS VEGAS, NV	89119
11	7470024101	4058 PACIFIC AV		RETAIL STAND ALONE	Commercial	936.953893	1.780119	0.19%	PO BOX 449	MCKENNA, WA	98558-0449
12	2415000560	4059 PACIFIC AV		SINGLE FAMILY DWELLING	Residential	5746.90222	29.569635	0.51%	1924 BRIDGEPORT WAY W	UNIVERSITY PLACE, W	98466-4820
13	7470024320	201 S 43RD ST		SINGLE FAMILY DWELLING	Residential	4685.426756	92.441152	1.97%	PO BOX 449	MCKENNA, WA	98558-0449
14	2415000570	4065 PACIFIC AV	CONNIES DONUTS & ESPRESSO	ESPRESSO SHOP	Commercial	3685.84396	62.237052	1.69%	4706 51ST STREET CT E	TACOMA, WA	98443-2570
15	7470022380	4301 PACIFIC AV		SINGLE FAMILY DWELLING	Residential	3746.819433	55.59267	1.48%	4301 PACIFIC AVE	TACOMA, WA	98418
16	7470024331	4302 PACIFIC AV	U BETCHA PUB	TAVERNS	Commercial	5156.149553	53.085941	1.03%	4302 PACIFIC AVE	TACOMA, WA	98418-7734
17	7470024332	4306 PACIFIC AV		SINGLE FAMILY DWELLING	Residential	3837.184572	32.792847	0.85%	4306 PACIFIC AVE	TACOMA, WA	98418
18	7470022390	4305 PACIFIC AV		SINGLE FAMILY DWELLING	Residential	4597.450957	36.156378	0.79%	4305 PACIFIC AVE	TACOMA, WA	98418-7735
19	7470022400	4309 PACIFIC AV		SINGLE FAMILY DWELLING	Residential	4597.503515	6.74815	0.15%	4309 PACIFIC AVE	TACOMA, WA	98418-7735
20	7470024340	4312 PACIFIC AV		SINGLE FAMILY DWELLING	Residential	9593.123727	19.990607	0.21%	4312 PACIFIC AVE	TACOMA, WA	98418-7734
21	5620000130	5506 PACIFIC AV	FELINE HYPER THYROID TREATMENT CENTER	GEN MERCHANDISE RETAIL TRADE	Commercial	6380.803267	23.219046	0.36%	7521 172ND ST SW	EDMONDS, WA	98026-5123
22	320212078	5435 PACIFIC AV	COST LESS PRESCRIPTIONS / PO	RETAIL STAND ALONE	Commercial	11831.6931	0.021294	0.00%	7602 N 15TH ST	TACOMA, WA	98406
23	5620000140	5510 TO 5512 PACIFIC AV	BIG JOHNS TROPHIES	OTHER RETAIL TRADE	Commercial	5750.058619	51.116624	0.89%	4117 SOUNDVIEW DR W	UNIVERSITY PLACE, W	98466-1219
24	5620000150	5514 PACIFIC AV		OLDER BUSINESS DIST	Commercial	2875.08829	25.564178	0.89%	10120 22ND AVE E	TACOMA, WA	98445-5441
25	320212068	5525 PACIFIC AV	JACK IN THE BOX	FAST FOOD	Commercial	14178.82626	142.867304	1.01%	9330 BALBOA AVE	SAN DIEGO, CA	92123-1516
26	5620000160	5520 PACIFIC AV	MOUNTAIN TAVERN	TAVERNS	Commercial	9200.625873	83.291187	0.91%	5520 PACIFIC AVE	TACOMA, WA	98408-7641
27	5620000170	5602 PACIFIC AV	WALGREENS	RETAIL STAND ALONE	Commercial	9191.035239	84.05336	0.91%	PO BOX 1159	DEERFIELD, IL	60015-6002
28	5620000180	5608 PACIFIC AV	WALGREENS	RETAIL STAND ALONE	Commercial	2872.345956	21.490648	0.75%	PO BOX 1159	DEERFIELD, IL	60015-6002
29	320213000	5606 PACIFIC AV	OREILLY AUTO PARTS / LA HUERTA 2 MARKET	GEN MERCHANDISE RETAIL TRADE	Commercial	49283.63989	119.365134	0.24%	6850 E GREEN LAKE WAY N STE 201	SEATTLE, WA	98115-5412
30	5620000190	5612 PACIFIC AV	WALGREENS	RETAIL STAND ALONE	Commercial	17809.91931	8.019904	0.05%	PO BOX 1159	DEERFIELD, IL	60015-6002
31	5620000531	6328 PACIFIC AV		SINGLE FAMILY DWELLING	Residential	9087.526699	245.400141	2.70%	6328 PACIFIC AVE	TACOMA, WA	98408-7421
32	320213088	6329 PACIFIC AV	PHILLIPS 76 FOODMART	GAS STATION MINI MART	Commercial	9188.02399	17.182011	0.19%	6329 PACIFIC AVE	TACOMA, WA	98408-7422
33	5620000541	6332 PACIFIC AV		GEN MERCHANDISE RETAIL TRADE	Commercial	15668.94847	923.514996	5.89%	27215 51ST PL S	KENT, WA	98032-6230
34	320213001	6329 PACIFIC AV	PHILLIPS 76 FOODMART	GAS STATION MINI MART	Commercial	10434.57077	96.480723	0.92%	6329 PACIFIC AVE	TACOMA, WA	98408-7422
35	2390000230	6400 PACIFIC AV	WELCHERS GUN SHOP	RETAIL STAND ALONE	Commercial	5752.182473	51.932372	0.90%	1006 32ND STREET CT NW	GIG HARBOR, WA	98335-6872
36	6615001500	6401 PACIFIC AV	NORTHWEST SPAY & NEUTER CENTER	VETERINARIAN SERVICES	Commercial	9370.707061	94.04219	1.00%	6401 PACIFIC AVE	TACOMA, WA	98408-7320
37	2390000240	6408 PACIFIC AV	WELCHERS GUN SHOP	RETAIL STAND ALONE	Commercial	5752.152613	41.956878	0.73%	1006 32ND STREET CT NW	GIG HARBOR, WA	98335-6872
38	2390000250	6410 PACIFIC AV	WELCHERS GUN SHOP	RETAIL STAND ALONE	Commercial	5752.172405	0.643947	0.01%	1006 32ND STREET CT NW	GIG HARBOR, WA	98335-6872
39	6615001510	6401 PACIFIC AV		VETERINARIAN SERVICES	Commercial	18747.51389	37.016854	0.20%	6401 PACIFIC AVE	TACOMA, WA	98408-7320
40	6615001851	7052 PACIFIC AV	THE PUFF & STUFF KRONIC CONNECTION	HORTICULTURAL SPECIALTIES	Commercial	11863.60052	8.382538	0.07%	13696 145TH AV	CLACKAMAS, OR	97015-6240
41	6615001241	7041 PACIFIC AV	RITE AID	OTHER RETAIL TRADE	Commercial	68281.07429	121.596923	0.18%	PO BOX 3165	HARRISBURG, PA	17105-3165
42	6615001840	7056 PACIFIC AV	JIFFY LUBE	MINI LUBE SERVICE	Commercial	12855.12987	129.31367	1.01%	1422 EDINGER AVE STE 150	TUSTIN, CA	92780-6299
43	7850000131	7202 PACIFIC AV	CHECKMATE	RETAIL STAND ALONE	Commercial	7413.217807	1405.4661	18.96%	2838 UMALU PL	KIHEI, HI	96753-8504
44	7850000010	7217 PACIFIC AV	MCDONALDS	FAST FOOD	Commercial	21340.33504	109.557511	0.51%	PO BOX 182571	COLUMBUS, OH	43218-2571
45	7850000221	7210 PACIFIC AV		RESTAURANT	Commercial	14063.97625	2157.828799	15.34%	1014 VINE ST	CINCINNATI, OH	45202
46	7850000041	7250 PACIFIC AV	FRED MEYER #385 72ND & PACIFIC AVE	DISCOUNT STORES	Commercial	519859.082	889.892644	0.17%	1014 VINE ST	CINCINNATI, OH	45202
47	7850000352	7411 PACIFIC AV	AVAMERE HERITAGE REHAB	NURSING CONVALESCENT HOSPITALS	Other	69511.10056	15.901275	0.02%	21001 N TATUM BLVD STE 1630-630	PHOENIX, AZ	85050
48	7850000572	7431 PACIFIC AV		COMM VAC LAND	Commercial	36599.73559	64.631278	0.18%	25117 SW PARKWAY AVE STE F	WILSONVILLE, OR	97070-9697
49	7850000464	7430 PACIFIC AV	PAPA JOHNS PIZZA	FOOD RETAIL TRADE	Commercial	28070.80083	410.370058	1.46%	1014 VINE ST	CINCINNATI, OH	45202

Table B-4. Median Alternative – Potential Property Acquisitions (2 of 3)

Count	Parcel Number	Site Address	Business Name (if applicable)	Land Use Description	General Land Use	Total Area of Parcel (SF)	Area of Impact (SF)	Percent of Parcel Impacted	Property Owner Address		
									Street Address	City, State	Zipcode
50	7850000530	7447 PACIFIC AV	ZURICH HOUSE TOWNHOMES	MULTI FAM APTS 5 UNITS OR MORE	Residential	46181.10048	154.597356	0.33%	3110 JUDSON ST PMB 248	GIG HARBOR, WA	98335
51	7850000473	7448 PACIFIC AV	VACANT PAD SITE	OTHER RETAIL TRADE	Commercial	32102.82475	1287.086788	4.01%	1014 VINE ST	CINCINNATI, OH	45202
52	7850000720	7602 PACIFIC AV		SINGLE FAMILY DWELLING	Residential	10661.15786	647.307156	6.07%	7809 PACIFIC AVE	TACOMA, WA	98408-7028
53	7850000660	7603 PACIFIC AV	MADRONA APARTMENTS	MULTI FAM APTS 5 UNITS OR MORE	Residential	34784.45088	169.944851	0.49%	#78 5950 OAKDALE RD	BURNABY, BC	V5H 4R5
54	7850000710	7608 PACIFIC AV		SINGLE FAMILY DWELLING	Residential	15129.01472	738.588069	4.88%	13512 30TH AVE E	TACOMA, WA	98446-1808
55	7850000630	7613 PACIFIC AV	PACIFIC MANOR APARTMENTS	MULTI FAM APTS 5 UNITS OR MORE	Residential	16272.11319	93.065611	0.57%	PO BOX 44609	TACOMA, WA	98448-0609
56	7850000650	7611 PACIFIC AV	PACIFIC MANOR APARTMENTS	MULTI FAM APTS 5 UNITS OR MORE	Residential	17620.26131	110.744573	0.63%	PO BOX 44609	TACOMA, WA	98448-0609
57	7850000690	7616 PACIFIC AV		SINGLE FAMILY DWELLING	Residential	9861.495531	94.361451	0.96%	PO BOX 99867	LAKEWOOD, WA	98496-0867
58	7850000996	7637 PACIFIC AV BLDG A-F	MACINTOSH COURT APARTMENTS	MULTI FAM APTS 5 UNITS OR MORE	Residential	84187.1209	655.481359	0.78%	7809 PACIFIC AVE	TACOMA, WA	98408-7028
59	7850001011	XXX PACIFIC AV	ROYAL PACIFIC II	UNKNOWN	Other	40597.25032	1215.171388	2.99%	UNKNOWN PARTY ADDRESS	UNKNOWN CITY, WA	
60	7850000931	7642 PACIFIC AV	ROE INSURANCE / FARMERS INSURANCE / APARTM	MISC OFFICE SPACE	Commercial	16292.57531	468.652126	2.88%	7642 PACIFIC AVE STE B	TACOMA, WA	98408-7051
61	7850001113	7803 PACIFIC AV UNIT A-C	PACIFIC PROFESSIONAL CENTER	PROFESSIONAL SERVICES	Commercial	6720.601666	1262.944779	18.79%	5403 ORCA PL NE	TACOMA, WA	98422-4505
62	7680000010	7656 PACIFIC AV		SINGLE FAMILY DWELLING	Residential	10890.28782	978.194265	8.98%	7656 PACIFIC AVE	TACOMA, WA	98408-7013
63	7850001114	7817 PACIFIC AV	PACIFIC PROFESSIONAL CENTER	PROFESSIONAL SERVICES	Commercial	6713.029158	1231.440997	18.34%	8704 RAINIER AVE S	SEATTLE, WA	98118-4927
64	7850001101	XXX PACIFIC AV	ROYAL PACIFIC I	UNKNOWN	Other	72697.69424	761.703088	1.05%	UNKNOWN PARTY ADDRESS	UNKNOWN CITY, WA	
65	7680000121	REFERENCE		UNKNOWN	Other	38580.81276	148.672516	0.39%	UNKNOWN PARTY ADDRESS	UNKNOWN CITY, WA	
66	6835000020	8219 PACIFIC AV	BUDDYS HOME FURNISHINGS	GEN MERCHANDISE RETAIL TRADE	Commercial	27548.90294	97.936577	0.36%	4705 S APOPKA VINELAND RD STE 210	ORLANDO, FL	32819
67	6835000062	8225 PACIFIC AV	PAPA MURPHYS	FAST FOOD	Commercial	11019.30694	99.322292	0.90%	5304 AMBRIDGE DR	CALABASAS, CA	91301-2304
68	2915000520	8238 PACIFIC AV	COLUMBIA STATE BANK	BANKS	Commercial	5656.819599	0.542073	0.01%	PO BOX 2156 MS 3300	TACOMA, WA	98401
69	6835000063	8247 PACIFIC AV		GAS STATION MINI MART	Commercial	20965.95636	200.422163	0.96%	PO BOX 941709	HOUSTON, TX	77094-9935
70	2915000531	201 S 84TH ST	COLUMBIA STATE BANK	BANKS	Commercial	9328.139357	9.54907	0.10%	PO BOX 2156 MS 3300	TACOMA, WA	98401
71	4533000011	8402 PACIFIC AV	KEY BANK	BANKS	Commercial	37359.97209	72.118104	0.19%	1101 PACIFIC AVE STE A	TACOMA, WA	98402-4396
72	320332191	8403 PACIFIC AV	WALGREENS	RETAIL STAND ALONE	Commercial	63758.26598	29.714236	0.05%	300 WILMOT RD	DEERFIELD, IL	60015-4614
73	320333240	8833 PACIFIC AV	PACIFIC MANOR OFFICES	MISC OFFICE SPACE	Commercial	30710.71562	14.067265	0.05%	2214 S 308TH ST	FEDERAL WAY, WA	98003-4823
74	320333032	8820 PACIFIC AV	WESTWOOD SQUARE APARTMENTS	MULTI FAM APTS 5 UNITS OR MORE	Residential	68677.78491	224.731802	0.33%	1928 E 56TH ST	TACOMA, WA	98404
75	320333265	8843 PACIFIC AV	HONG KONG RESTAURANT	RESTAURANT	Commercial	26030.5866	634.839679	2.44%	6117 N 24TH ST	TACOMA, WA	98406-2506
76	320333002	8849 PACIFIC AV	ATTORNEYS OFFICE	MISC OFFICE SPACE	Commercial	15262.86693	1098.919097	7.20%	8849 PACIFIC AVE STE A	TACOMA, WA	98444-6474
77	320337015	8844 PACIFIC AV	CASH AMERICA PAWN	NGB COMMUNITY SC	Other	29840.61607	1947.137273	6.53%	528 10TH ST	SANTA MONICA, CA	90402-2818
78	320333287	9001 PACIFIC AV	NORTHWEST DOOR	CONTRACTOR SERVICES	Commercial	106586.4995	1998.994816	1.88%	1752 NW MARKET ST PMB 552	SEATTLE, WA	98107
79	320333214	9002 PACIFIC AV	ANANUAC	RESTAURANT	Commercial	42945.71485	421.681124	0.98%	9002 PACIFIC AVE	TACOMA, WA	98444-6232
80	320333280	9415 PACIFIC AV	EHLI AUCTIONS	USED CAR LOTS ONLY RETAIL	Commercial	39924.44296	75.444194	0.19%	13410 THOMAS ROAD KP N	GIG HARBOR, WA	98329-5802
81	320333021	9446 PACIFIC AV	PACIFIC AUTO AIR / M & M AUTO SALES	REPAIR SERVICES	Commercial	8975.258409	5.666993	0.06%	9442 PACIFIC AV E	TACOMA, WA	98444
82	320333223	9448 PACIFIC AV	PACIFIC AUTO AIR / M & M AUTO SALES	REPAIR SERVICES	Commercial	11342.82229	222.045825	1.96%	12302 137TH AVE E	PUYALLUP, WA	98374-4531
83	320333146	9433 PACIFIC AV	NAPA AUTO PARTS	AUTO ACCESSORIES RETAIL	Commercial	19586.267	683.984236	3.49%	PO BOX 44250	TACOMA, WA	98448-0250
84	320333222	9450 PACIFIC AV	11-Jul	CONVEN STORE MAY HAVE GAS	Commercial	12178.83428	458.227683	3.76%	PO BOX 711	DALLAS, TX	75221-0711
85	319046005	9601 PACIFIC AV S	U-HAUL	MINI WAREHOUSING	Commercial	18529.55945	6.257252	0.03%	PO BOX 29046	PHOENIX, AZ	85038-9046
86	319042088	9602 PACIFIC AV	KARHU'S KARS	USED CAR LOTS ONLY RETAIL	Commercial	16010.17796	6.747443	0.04%	9402 E D ST	TACOMA, WA	98445-2144
87	3810000291	10004 PACIFIC AV		ESPRESSO SHOP	Commercial	7455.898139	0.408037	0.01%	2605 N STARR ST	TACOMA, WA	98403-2938
88	3810000200	10005 PACIFIC AV	BLACKSTAR BAR AND GRILL PARKING LOT	SPORTS BAR REST LARGER TAV	Commercial	20394.93353	1.312305	0.01%	6424 AVONDALE RD SW	LAKEWOOD, WA	98499-1719
89	3810000361	10116 PACIFIC AV		COMM VAC LAND	Commercial	37428.5609	123.882074	0.33%	2 BRIDLE WAY	FORT LEE, NJ	07024-6313
90	3810000371	10122 PACIFIC AV	CASCADE CUSTOM JEWELERS	OTHER RETAIL TRADE	Commercial	10912.04488	220.419662	2.02%	10122 PACIFIC AVE S	TACOMA, WA	98444-6549
91	3810000380	10202 PACIFIC AV S	PACIFIC BUSINESS PARK	MISC OFFICE SPACE	Commercial	19953.36738	150.758236	0.76%	6524 CROMWELL BEACH DR NW	GIG HARBOR, WA	98335-7513
92	4745000010	10202 PACIFIC AV S	PACIFIC BUSINESS PARK	MISC OFFICE SPACE	Commercial	11720.40225	15.469924	0.13%	6524 CROMWELL BEACH DR NW	GIG HARBOR, WA	98335-7513
93	4745000293	REFERENCE		UNKNOWN	Other	83648.49313	28.330404	0.03%	REFERENCE	TACOMA, WA	
94	4745001021	10656 PACIFIC AV	JACK IN THE BOX	FAST FOOD	Commercial	34655.4362	24.269737	0.07%	9330 BALBOA AVE	SAN DIEGO, CA	92123-1516
95	6620000101	10707 PACIFIC AV		GEN MERCHANDISE RETAIL TRADE	Commercial	84442.76566	107.464098	0.13%	PO BOX 2602	SEATTLE, WA	98111-2602
96	4745001162	10716 PACIFIC AV	SHELL	GAS STATION MINI MART	Commercial	41008.66753	1994.387009	4.86%	3450 E COMMERCIAL CT	MERIDIAN, ID	83642-8915
97	319043109	10802 PACIFIC AV S	DENNYS	RESTAURANT	Commercial	34458.73125	1452.213832	4.21%	1 CENTERPOINTE DR STE 400	LA PALMA, CA	90623-2530
98	319043133	11012 PACIFIC AV S		FAST FOOD	Commercial	52941.30929	726.100294	1.37%	PO BOX 98356	LAKEWOOD, WA	98496
99	319043080	11024 PACIFIC AV S	TRACY & TRACY ATTORNEY AT LAW	PROFESSIONAL SERVICES	Commercial	7123.652125	706.410714	9.92%	11024 PACIFIC AVE S	TACOMA, WA	98444-5738
100	319043113	11102 PACIFIC AV S		NGB COMMUNITY SC	Other	95546.81452	2467.505346	2.58%	11027 NE 116TH ST	KIRKLAND, WA	98034-7015
101	319043010	111 112TH ST S	CASH & CARRY UNITED GROCERS	FOOD RETAIL TRADE	Commercial	117314.0762	6.287847	0.01%	185 NW SPANISH RIVER BLVD STE 100	BOCA RATON, FL	33431-4230

Table B-5. Median Alternative – Potential Property Acquisitions (3 of 3)

Count	Parcel Number	Site Address	Business Name (if applicable)	Land Use Description	General Land Use	Total Area of Parcel (SF)	Area of Impact (SF)	Percent of Parcel Impacted	Property Owner Address		
									Street Address	City, State	Zipcode
102	319043141	11111 PACIFIC AV S	LAKEWOOD FORD USED CAR SALES	USED CAR LOTS ONLY RETAIL	Commercial	28218.73189	186.228082	0.66%	7230 HIGHLANDS DR NE	OLYMPIA, WA	98516-2134
103	319043055	11118 PACIFIC AV	SHAMROCK TAVERN	TAVERNS	Commercial	5087.184052	332.385455	6.53%	11118 PACIFIC AVE	TACOMA, WA	98444
104	319043019	11122 PACIFIC AV S	PARKLAND SLEEP CENTER	APPAREL ACCSSRS RETAIL	Commercial	8215.142041	525.572318	6.40%	1635 E PORTLAND AVE	TACOMA, WA	98421-2802
105	319092061	11202 PACIFIC AV S	AUTOZONE	AUTO ACCESSORIES RETAIL	Commercial	37244.20116	773.999742	2.08%	123 S FRONT ST DEPT 8088	MEMPHIS, TN	38103-3607
106	9375000202	11205 PACIFIC AV		BANKS	Commercial	59560.29836	626.776005	1.05%	PO BOX 2609	CARLSBAD, CA	92018-2609
107	319093002	214 121ST ST S	PLU EAST CAMPUS	UNIVERSITY/COLLEGES	Other	40145.16517	722.092361	1.80%	12180 PARK AVE S	TACOMA, WA	98447-0014
108	319093019	12105 PACIFIC AV S	WALGREENS	OTHER RETAIL TRADE	Commercial	67029.48984	728.984418	1.09%	3000 WILMONT RD MS3101	DEERFIELD, IL	60015
109	319093032	12151 PACIFIC AV S	LIEUS RESTAURANT	RESTAURANT	Commercial	30816.76651	636.573739	2.07%	12151 PACIFIC AVE S	TACOMA, WA	98444-5124
110	6762002513	12154 PACIFIC AV S		FAST FOOD	Commercial	11772.05335	556.448438	4.73%	1401 S 93RD ST	TACOMA, WA	98444-4252
111	319093077	12155 PACIFIC AV	BASKIN ROBBINS ICE CREAM	FAST FOOD	Commercial	10164.78478	156.453753	1.54%	12155 PACIFIC AVE S	TACOMA, WA	98444-5124
112	6762002491	12166 PACIFIC AV S		MISC OFFICE SPACE	Commercial	10383.11863	144.300177	1.39%	215 GARFIELD ST S	TACOMA, WA	98444-5154
113	319097001	12161 PACIFIC AV S	CAFE ELITE	ESPRESSO SHOP	Commercial	18665.0771	81.106576	0.43%	PO BOX 1145	SPANAWAY, WA	98387
114	319093055	12169 PACIFIC AV S	MATTRESS RANCH	OLDER BUSINESS DIST	Commercial	2981.537315	14.793404	0.50%	12151 PACIFIC AVE S	TACOMA, WA	98444-5124
115	319093031	12169 PACIFIC AV S	MATTRESS RANCH	OTHER RETAIL TRADE	Commercial	13287.05016	67.172394	0.51%	12151 PACIFIC AVE S	TACOMA, WA	98444-5124
116	319093041	12173 PACIFIC AV S	MATTRESS RANCH	OLDER BUSINESS DIST	Commercial	7016.659211	37.054501	0.53%	12151 PACIFIC AVE S	TACOMA, WA	98444-5124
117	6762002300	208 GARFIELD ST S	GARFIELD COMMONS	GEN MERCHANDISE RETAIL TRADE	Commercial	32023.36335	179.972119	0.56%	2001 WESTERN AV SE STE 330	SEATTLE, WA	98121
118	319093044	12201 PACIFIC AV S	PARKLAND PLAZA	MISC OFFICE SPACE	Commercial	30340.72006	30.439608	0.10%	PO BOX 45367	TACOMA, WA	98448-5367
119	6762002161	12212 PACIFIC AV S		GEN MERCHANDISE RETAIL TRADE	Commercial	25568.86743	24.924615	0.10%	PO BOX 98210	LAKEWOOD, WA	98496-8210
120	7130000071	13802 PACIFIC AV S	KEY BANK	BANKS	Commercial	5764.196261	73.522871	1.28%	1101 PACIFIC AVE STE A	TACOMA, WA	98402-4396
121	7130000043	13802 PACIFIC AV S	KEY BANK	BANKS	Commercial	54625.61834	118.759413	0.22%	1101 PACIFIC AVE STE A	TACOMA, WA	98402-4396
122	7130000290	14012 PACIFIC AV S		USED CAR LOTS ONLY RETAIL	Commercial	135189.861	13.738477	0.01%	1124 112TH ST E	TACOMA, WA	98445-3710
123	7130000260	14012 PACIFIC AV S		BUSINESS SERVICES	Commercial	14510.46368	47.55625	0.33%	1124 112TH ST E	TACOMA, WA	98445-3710
124	7130000281	14107 C ST S	WILLIAMSBERG COURT APTS	MULTI FAM APTS 5 UNITS OR MORE	Residential	71629.44489	24.090879	0.03%	14209 PACIFIC AV S STE 44	TACOMA, WA	98444
125	7130000270	14102 TO 14106 PACIFIC AV S		RETAIL STAND ALONE	Commercial	17302.47096	119.609906	0.69%	30210 110TH PL SE	AUBURN, WA	98092
126	7130000300	14114 PACIFIC AV S		RESTAURANT	Commercial	9401.504896	59.689209	0.63%	5902 77TH ST W STE B	LAKEWOOD, WA	98499-8589
127	319163008	14122 PACIFIC AV S	LADY LUCK'S STEAKHOUSE & SALOON	RESTAURANT	Commercial	44522.06913	389.539297	0.87%	5902 77TH ST W STE B	LAKEWOOD, WA	98499-8589
128	319163092	14204 TO 14208 PACIFIC AV S		OFF INSURANCE REAL ESTATE FINANCE	Commercial	23385.30504	627.773905	2.68%	PO BOX 45168	TACOMA, WA	98448-5168
129	319163091	14212 PACIFIC AV S		MULTI FAM APTS 5 UNITS OR MORE	Residential	33025.05344	56.0819	0.17%	PO BOX 45168	TACOMA, WA	98448-5168
130	319167018	14216 PACIFIC AV S	NORTHWOOD APTS	MULTI FAM APTS 5 UNITS OR MORE	Residential	115865.5971	443.052342	0.38%	11916 58TH AVE SW	TACOMA, WA	98499-4948
131	319167017	14218 PACIFIC AV S		COMM VAC LAND	Commercial	25940.10806	66.789187	0.26%	11916 58TH AVE SW	TACOMA, WA	98499-4948
132	9835000300	14406 PACIFIC AV S	PACIFIC OAK APARTMENTS	MULTI FAM APTS 5 UNITS OR MORE	Residential	27645.14273	1068.034561	3.86%	4714 BALLARD AVE NW PMB 308	SEATTLE, WA	98107-4850
133	9835000330	14416 TO 14418 PACIFIC AV S	AA-OKAY LOANS	RETAIL STAND ALONE	Commercial	7259.74351	236.482165	3.26%	14003 MERIDIAN E	PUYALLUP, WA	98373-5618
134	9835000320	14422 PACIFIC AV S	BLITZ	TAVERNS	Commercial	20235.80414	559.66326	2.77%	PO BOX 731335	PUYALLUP, WA	98373-0080
135	9835000414	14512 PACIFIC AV S	EL PATIO TAQUERIA / GRECO	RESTAURANT	Commercial	31008.34267	501.737284	1.62%	5902 77TH ST W	LAKEWOOD, WA	98499-8589
136	9835000411	14522 PACIFIC AV S	KENTUCKY FRIED CHICKEN	FAST FOOD	Commercial	30164.2451	196.793811	0.65%	PO BOX 572530	SALT LAKE CTY, UT	84157-2530
137	319212027	15119 PACIFIC AV S		GAS STATION MINI MART	Commercial	58112.6672	115.292518	0.20%	PO BOX 1294	OAKLEY, CA	94561
138	319213034	15602 PACIFIC AV S	SPANAWAY GOLF COURSE	GOLF COURSES	Other	6326873.783	1120.247333	0.02%	9112 LAKEWOOD DR SW STE 121	LAKEWOOD, WA	98499-3998
139	5025003290	16802 TO 16804 PACIFIC AV S		GEN MERCHANDISE RETAIL TRADE	Commercial	6491.131226	160.231421	2.47%	16822 PACIFIC AVE S	SPANAWAY, WA	98387-8255
140	5025003300	16808 PACIFIC AV S	HI TECH COLLISION	AUTO REPAIR SERVICES	Commercial	33743.66765	131.716565	0.39%	16822 PACIFIC AVE S	SPANAWAY, WA	98387-8255

Table B-6. Layover Options – Potential Property Acquisitions (1 of 1)

Appendix B-3
Pacific Avenue | SR 7 High Capacity Transit Feasibility Study
Transit Layover Options

Option	Parcel Number	Site Address	Business Name (if applicable)	Land Use Description	General Land Use	Total Area of Parcel (SF)	Area of Impact (SF)	Percent of Parcel Impacted	Property Owner Address		
									Street Address	City, State	Zipcode
Option 1	5002710040	20307 MOUNTAIN HWY E		COMM VAC LAND	Commercial	29272.3	29537.5	100.9%	PO BOX 8050	BENTONVILLE, AR	72712-8055
Option 2	5002710050	20329 MOUNTAIN HWY E	WALMART	DISCOUNT STORES	Commercial	66415.9	8247.5	12.4%	PO BOX 8050	BENTONVILLE, AR	72712-8055
Option 2	5002710060	20307 MOUNTAIN HWY E	WALMART	DISCOUNT STORES	Commercial	1017962.4	58978.8	5.8%	PO BOX 8050	BENTONVILLE, AR	72712-8055

APPENDIX C: STAKEHOLDER OUTREACH

Table C-1. Completed and Future Planned Stakeholder Outreach Activities (1 of 4)

Pacific Avenue | SR 7 Corridor HCT Feasiblity Study & BRT Project - Stakeholder Outreach: 2017

Date	Event Name	Location	Type	Additional Information or Comments	Study Team Attendance
6/8/2017	Pierce County Planning for Growth & Development Community Plan Update	Spanaway Elementary School	Open House	Provided Fact Sheet to attendees, available for questions, also brought study area (map) presentation board	Darin Stavish, Jeff Mann, Shawn Phelps
6/12/2017	Pierce County Planning for Growth & Development Community Plan Update	Pierce County Library Administration Building (Tacoma)	Open House	Provided Fact Sheet to attendees, available for questions, also brought study area (map) presentation board	Darin Stavish, Jeff Mann, Shawn Phelps
6/27/2017	City of Tacoma Council Meeting	Tacoma Municipal Building	Study Session	Presented HCT Study Purpose and Need, provided Fact Sheet to attendees, took questions	Darin Stavish, Alex Fastle, Dan Pike
7/18/2017	Pacific Avenue Business District Meeting	Moore Library (Tacoma)	Roundtable Format	Presented information on open houses in September and November, provided Fact Sheet to attendees, took questions	Darin Stavish
9/5/2017	Spring Hill Safe Streets	Home of Lennie Long (Tacoma)	Roundtable Format	Presented information on open houses in September and November, provided Fact Sheet to attendees, took questions	Darin Stavish
9/7/2017	Tacoma TV CityLine Program	Tacoma	On Air (Televised)	Introducing the study to the public and encouraging them to attend an open house or visit the wesbite for more information, including Virtual Open House availability	Darin Stavish, Rebecca Japhet
9/13/2017	Open House #1	UW-Tacoma	Open House		Darin Stavish, Jason Kennedy, Jay Peterson, Stef Viggiano, Lesley Maurer, Shawn Phelps
9/13/2017	New Tacoma Neighborhood Council	People's Center (Tacoma)	Meeting	Presented information on open houses in September and November, provided rack card to attendees, took questions, referred to website	Penny Grellier (PT's Business Partnership Administrator)
9/14/2017	Open House #2	Pacific Lutheran University	Open House		Darin Stavish, Peter Stackpole, Jay Peterson, Stef Viggiano, Larissa King-Rawlins, Jeff Mann
9/18/2017	Eastside Neighborhood Council	Eastside Neighborhood Council	Meeting	Presented information on open houses in September and November, provided rack card to attendees, took questions, referred to website	Penny Grellier (PT's Business Partnership Administrator)
9/19/2017	Open House #3	Stewart Middle School	Open House		Darin Stavish, Jason Kennedy, Jay Peterson, Chris Wellander, Lesley Maurer, Shawn Phelps
9/20/2017	Open House #4	Spanaway Elementary School	Open House		Darin Stavish, Jason Kennedy, Sue Dreier, Alex Mather, Jay Peterson, Chris Wellander, Larissa King-Rawlins, Jeff Mann
10/2/2017	Livable City Year Project Initiation	UW-Tacoma	Classroom	Discussed study's purpose and objectives. Planning and Urban Design (Master's) students evaluating the Pacific Avenue corridor from S. 38th to S. 56th Streets for infill and transit-supportive development over Fall 2017 semester	Darin Stavish, Stephen Atkinson, Jennifer Kammerzell
10/9/2017	Pierce County Council Study Session	Tacoma	Presentation and QA	Briefed Pierce County Council members on the study's purpose, goals and objectives, secured funding, explained BRT mode (the most likely LPA), and took follow-up questions from the members	Max Henkle, Darin Stavish
10/18/2017	Tacoma Transportation Commission	Tacoma	Presentation and QA	Briefed new group of City's Transportation Commission members on the study's purpose, goals and objectives, secured funding, explained BRT mode (the most likely LPA), and took follow-up questions from the members	Darin Stavish, Jennifer Kammerzell
10/19/2017	Downtown: On the Go! Link & Drink	Harmon Brewery Restaurant (Tacoma)	Informational (PT) Table	Handed out rack cards advertising the November open houses along with Fact Sheets. This is an annual event designed to introduce the public to downtown Tacoma transit modes and options; both current and future	Darin Stavish, Janine Robinson
11/9/2017	Tacoma TV CityLine Program	Tacoma	On Air (Televised)	Introducing the initial corridor BRT concepts to the public and encouraging them to attend an open house or visit the wesbite for more information, including Virtual Open House availability	Max Henkle, Rebecca Japhet
11/9/2017	Tacoma Dome District Meeting	Tacoma	Presentation and QA	Presented information on open houses in November, provided Fact Sheet, took questions, referred to website including Virtual Open House availability	Janine Robinson
11/13/2017	Pierce Transit Board of Commissioners Meeting	Lakewood	Presentation and QA	Presented information on status of study plus second round of open houses this week, provided Fact Sheet, took questions, referred to website including Virtual Open House availability	Darin Stavish
11/14/2017	Open House #5	UW-Tacoma	Open House		Darin Stavish, Max Henkle, Jay Peterson, Stef Viggiano, Larissa King-Rawlins
11/15/2017	Open House #6	Pacific Lutheran University (Parkland)	Open House		Darin Stavish, Jay Peterson, Jason Kennedy, Chris Wellender, Larissa King-Rawlins, Jeff Mann
11/16/2017	Open House #7	Stewart Middle School (Tacoma)	Open House		Darin Stavish, Jason Kennedy, Jay Peterson, Chris Wellander, Lesley Maurer
11/16/2017	Open House #8	Spanaway Elementary School	Open House		Darin Stavish, Peter Stackpole, Stef Viggiano, Larissa King-Rawlins, Jeff Mann

Table C-1. Completed and Future Planned Stakeholder Outreach Activities (2 of 4)

Pacific Avenue | SR 7 Corridor HCT Feasiblity Study & BRT Project - Stakeholder Outreach: 2018

Date	Event Name	Location	Type	Additional Information or Comments	Study Team Attendance
2/8/2018	Tacoma Dome District Business Owners	Tacoma	Presentation and Discussion	Informal discussion with a handful of local business owners	Darin Stavish, Janine Robinson
2/10/2018	Tacoma Metro Parks Environmental Learning Center	Tacoma	Open House	Manned PT information booth, then scheduled to speak on the study for a half-hour, including a QA session afterwards	Darin Stavish
2/22/2018	Pierce Transit CTAG	Lakewood	Presentation and Discussion	Advised CTAG they need to appoint a new member to the TAC to replace Chris Karnes	Darin Stavish
2/21/2018	Tacoma Transportation Commission	Tacoma	Presentation and Discussion	They asked to have us present again in April, once the runningways and stations are determined by segment with the City of Tacoma limits	Darin Stavish, Alex Mather
2/27/2018	Step it Up Walkability Team (with Downtown: On the Go!)	Tacoma	Presentation and Discussion	Looking to schedule a walking tour and sidewalks audit this summer in the corridor. Advised that it's a great way to include LEP and transit-dependent populations too, especially if a light lunch were provided.	Darin Stavish
3/19/2018	Downtown: On the Go! Transportation Advocacy Day	Tacoma - Courthouse Square	Presentation and Discussion	At roundtable break-out session (table) regarding transit and transportation in Tacoma	Rebecca Japhet
3/21/2018	Parkland-Spanaway-Midland LUAC Study Session	Tacoma	Presentation and Discussion	Updated Pierce County planning partners on the project and inviting them to next week's open houses	Darin Stavish
3/22/2018	Tacoma Dome District Business Owners	Tacoma	Presentation and Discussion	Showing design (roll plots) of proposed access and circulation to/from/around Tacoma Dome Station to local business owners, residents, and key stakeholders	Darin Stavish, Peter Stackpole, Mazadur Hossain
3/27/2018	Open House #9	Spanaway Middle School	Open House		Darin Stavish,Max Henkle, Peter Stackpole, Alex Mather, Ryan Wheaton, Jay Peterson, Rebecca Japhet, Stef Viggiano, Chris Wellander, Lesley Maurer, Larissa King-Rawlins, Jeff Mann, Shawn Phelps
3/28/2018	Open House #10	Garfield Book Company (Parkland)	Open House		
3/29/2018	Open House #11	UW-Tacoma	Open House		
3/29/2018	Pierce Transit Board of Commissioners' Retreat	Lakewood	Presentation and Discussion	Asked for concurrence on project team's recommendation to terminate in Downtown Tacoma, as orginally planned. Also briefed BoC on FTA Entry Into Project Development and Small Starts funding criteria.	Darin Stavish, Stef Viggiano
4/2/18	Pierce County Council	Tacoma	Presentation and QA Session	Also met individually with Councilmembers Roach, Richardson, and McCune. BRT tour being with Community Transit on 5/18.	Darin Stavish, Alex Mather, Ryan Wheaton
4/17/18	Tacoma City Council	Tacoma	Presentation and QA Session	Asked to be involved in further outreach activities.	Alex Mather, Ryan Wheaton
4/18/18	Tacoma Transportation Commission	Tacoma	Presentation and Discussion	Project update, including further describing running way options and the LPA design process. Asked to measure proposed station distances and show current R1 boardings at each location. Suggestion is we may be proposing BRT stops too close together outside (south of) of downtown Tacoma.	Darin Stavish, Ryan Wheaton
5/3/18	Sound Transit - Citizen Oversight Panel	Seattle	Presentation and QA Session	First time presenting to this group, per ST's request.	Darin Stavish, Eric Chipps, Chris Wellander
5/3/18	Parkland-Spanaway Kiwanas Club Luncheon	Tacoma	Presentation and QA Session	Asked for a follow-up presentation once the LPA is available for public review and comment. Will invite other civic organizations from the area too.	Darin Stavish
5/10/18	Tacoma Dome District Business Owners	Tacoma	Showed recommended routing alternative to serve TDS	Attendees unhappy with this recommendation, even though it's clearly shown in the City's South Downtown Subarea Plan (p.160). Need follow-up meeting ASAP with City and WSP Traffic Engineers depicting new sidewalk widths and any bicycle lanes, if part of this design concept. Although they've stated they want all HCT buses off of Puyallup Avenue eventually as part of a pedestrian and bicycle oriented redesign (i.e., much more calm).	Darin Stavish, Pat Beard & Kristen Ely (City of Tacoma)
5/10/18	Tacoma School Board	Tacoma	Presentation and QA Session		Alex Mather

Table C-1. Completed and Future Planned Stakeholder Outreach Activities (3 of 4)

COUNT	MEETING	LOCATION	DATE	TYPE
1	Pacific Avenue/SR 7 Corridor HCT Study & BRT Project - TAC Meeting #7	Rainier Room (3701 96th ST SW, Lakewood 98499)	5/30/2018	Meeting
2	Pierce Transit Board Meeting - BRT Update	3701 96th ST SW	6/11/2018	Meeting
3	Dome District Meeting	Classics Cafe by Pacific Grill	6/14/2018	Presentation
4	BRT City of Tacoma Neighborhood Outreach	COT (747 Market St, Tacoma)	6/18/2018	Presentation
5	City of Tacoma Study Session	COT (747 Market St, Tacoma)	6/19/2018	Meeting
6	Central Pierce Fire & Rescue - BRT Presentation/Pat Donvan	Central Pierce Fire & Rescue (17520 22nd AVE E, Tacoma 98445)	6/20/2018	Presentation
7	City of Tacoma Transportation Commission	COT (747 Market ST, Tacoma)	6/20/2018	Meeting
8	Pierce County BRT Informal Meeting	Pierce County Annex (2401 S 35th St, Tacoma 98409)	6/22/2018	Meeting
9	Pierce County Council Study Session	Pierce County (930 Tacoma Ave, Tacoma)	6/25/2018	Meeting
10	ST/PT Capital Projects Communications & Outreach Discussion	Sound Transit (401 S Jackson, Seattle)	6/25/2018	Meeting
11	Hillside Development Council Meeting	Johnstone Supply (2134 Tacoma Ave S)	6/27/2018	Presentation
12	Dome District Pre-Meeting	COT	7/3/2018	Meeting
13	Pierce Transit Board Meeting - Adopt LPA	Rainier Room (3701 96th ST SW, Lakewood 98499)	7/9/2018	Meeting
14	Dome District Meeting w/COT regarding Puyallup Ave	Greater Tacoma Convention Center (1500 Commerce St, Tacoma 98402)	7/10/2018	Meeting w/Q&A
15	New Tacoma Neighborhood Council	People's Center (1602 MLK Jr. Way)	7/11/2018	Presentation/Brochures
16	Pierce County BRT Station Locations (PALS Conference Room F)	Pierce County Annex (2401 S 35th ST, Tacoma)	7/11/2018	Meeting
17	BRT Meeting with COT	City of Tacoma - Municipal Bldg	7/12/2018	Meeting
18	BRT Corridor Coordination - WSDOT	WSDOT (5720 Capitol Blvd S, Tumwater)	7/12/2018	Meeting
19	Tacoma Pride Street Festival	Pacific Ave between 7th & 9th	7/14/2018	Booth/Brochures
20	South End Neighborhood Council	Tacoma Fire Station 8 (4911 South Alaska St, Tacoma, 98408)	7/16/2018	Presentation/Brochures
21	Internal BRT Meeting - ADA & Travel Training Staff Meeting	Conference Room 210	7/17/2018	Presentation/Q&A
22	Ride Route 1 - Customer Outreach	Route 1	7/17/2018	Brochures
23	Dome District - Informal Lunch	Puyallup Ave	7/18/2018	Meeting
24	Pacific Ave/SR 7 HCT Study & BRT Project TAC Meeting	3701 96th ST SW, Lakewood	7/18/2018	Meeting
25	Ride Route 1 - Customer Outreach	Route 1	7/19/2018	Brochures
26	Ride Route 1 - Customer Outreach	Route 1	7/20/2018	Brochures
27	Edgewood Picnic	Edgemont Park (11001 24th ST E, Edgewood)	7/21/2018	Booth/Brochures
28	BRT - Rotary Club of Tacoma #8	Landmark Temple Theatre (47 S Helens Ave, Tacoma 98402)	7/23/2018	Presentation/Brochures
29	Eastside Farmers Market	35th & McKinley	7/24/2018	Booth/Brochures
30	Ride Route 1 - Customer Outreach	Route 1	7/25/2018	Brochures
31	Hillside Development Council Meeting	Johnstone Supply, 2134 Tacoma Avenue South	7/25/2018	Presentation/Brochures
32	BRT Outreach at Transit Centers	Tacoma Mall, TCC, & Lakewood Towne Center	7/26/2018	Brochures
33	Ethnic Fest	Wright Park Arboretum (316 S G St, Tacoma 98405)	7/28/2018	Booth/Brochures
34	Travel Tacoma - BRT Update Presentation to Team	1516 Commerce St, Tacoma	7/30/2018	Presentation/Brochures
35	Transit Center Outreach - TDS & Commerce	TDS & Commerce	7/31/2018	Brochures
36	RAMP - Small Business Roundtable	Clarion Inn (6802 Tacoma Mall Blvd, Tacoma 98409)	8/1/2018	Presentation/Brochures
37	Downtown on the Go - Scavenger Hunt	Pacific Ave	8/1/2018	Booth/Brochures
38	Tacoma Broadway Farmer's Market	902 Market St, Tacoma 98402	8/2/2018	Booth/Brochures
39	Proctor Arts Fest & Car Show	North 26th & Proctor St, Tacoma	8/4/2018	Booth/Brochures
40	Eastside Farmers Market	35th & McKinley	8/7/2018	Booth/Brochures
41	Parkland-Spanaway Rotary	Paradise Lanes Entertainment Center (12505 Pacific Ave S)	8/7/2018	Presentation/Brochures
42	BRT Outreach - Door Knocking w/City of Tacoma	26th ST, Tacoma	8/8/2018	Brochures
43	Dome Business District Meeting	Classics Cafe by Pacific Grill - LeMay America's Car Museum	8/9/2018	Meeting/Q&A
44	BRT Outreach - Door Knocking w/City of Tacoma	38th ST, Tacoma	8/9/2018	Brochures
45	BRT Outreach at Transit Centers	Tacoma Dome Station	8/9/2018	Brochures

Table C-1. Completed and Future Planned Stakeholder Outreach Activities (4 of 4)

COUNT	MEETING	LOCATION	DATE	TYPE
46	Summer Bash	The Center at Norpoint	8/10/2018	Booth/Brochures
47	TACID Meeting	6315 S 19th ST, Tacoma 98466	8/15/2018	Presentation/Brochures
48	Internal BRT Meeting	TDS - Customer Service	8/16/2018	Meeting/Q&A
49	BRT Outreach at Transit Centers	TDS & Commerce	8/16/2018	Brochures
50	McKinley Hill Street Fair	Tacoma Dome at 35th & Mckinley Ave	8/18/2018	Booth/Brochures
51	Eastside Neighborhood Council	Stewart Heigh Park Bldg (402 E 56th St, Tacoma 98404)	8/20/2018	Update/Brochures
52	South End Neighborhood Council	Tacoma Fire Station 8 (4911 South Alaska St, Tacoma, 98408)	8/20/2018	Update/Brochures
53	Tacoma Pierce County Chamber - Government Affairs Committee	US Bank Community Room (950 Pacific Ave, STE 300, Tacoma 98402)	8/20/2018	Update/Brochures
54	Eastside Farmers Market	35th & McKinley	8/21/2018	Booth/Brochures
55	Ride Route 1 - Customer Outreach	Route 1	8/21/2018	Brochures
56	BRT Outreach - Door Knocking w/City of Tacoma	72nd ST, Tacoma	8/23/2018	Brochures
57	CTAG - BRT Update	Rainier Room	8/23/2018	Presentation/Brochures
58	Annual Barley & Berries Bash	Foss Waterway Seaport	8/23/2018	Booth/Brochures
59	Hilltop Latino Street Fair	9th - 13th ST & MLK Jr Way, Tacoma 98405	8/25/2018	Booth/Brochures
60	Eastside Farmers Market	35th & McKinley	8/28/2018	Booth/Brochures
61	Ride Route 1 - Customer Outreach	Route 1	8/28/2018	Brochures
62	Tacoma Broadway Farmer's Market	902 Market St, Tacoma 98402	8/30/2018	Booth/Brochures
63	Ride Route 1 - Customer Outreach	Route 1	9/4/2018	Brochures
64	Touch-A-Truck	Sprinker Recreation Center (14824 C ST S, Tacoma 98444)	9/8/2018	Booth/Brochures
65	Downtown to Defiance - Sunday Parkways	N 51st St to TDS	9/9/2018	Booth/Brochures
66	BRT Open House	Parkland/Spanaway Library (13718 Pacific Ave S, Tacoma 98444)	9/10/2018	Meeting/Q&A
67	BRT Open House	UW Tacoma - William W. Phillip Hall – Jane Thompson Russell Student Commons	9/12/2018	Meeting/Q&A
68	Tacoma Broadway Farmer's Market	902 Market St, Tacoma 98402	9/13/2018	Booth/Brochures
69	Downtown on the Go Board Meeting	Downtown Tacoma	9/13/2018	Presentation/Brochures
70	BRT Open House	Fern Hill Library (765 S 84th St, Tacoma 98444)	9/18/2018	Meeting/Q&A
71	BRT Open House	Moore Library (215 S 56th ST, Tacoma, 98408)	9/19/2018	Meeting/Q&A
72	Downtown on the Go - Parking Day	Pacific Ave	9/21/2018	Booth/Brochures
73	BRT Open House	Sprinker Recreation Center - Rainier Room (14824 C St S, Ste 107, Tacoma 98444)	9/25/2018	Meeting/Q&A
74	BRT Open House	Pacific Lutheran University – Anderson University Center Room 133	9/27/2018	Meeting/Q&A
75	Tacoma Broadway Farmer's Market	902 Market St, Tacoma 98402	10/4/2018	Booth/Brochures
76	Fife Harvest Festival	Fife	10/6/2018	Booth/Brochures
77	Truck & Tractor Day	Lakewood	10/13/2018	Booth/Brochures
78	Tacoma Broadway Farmer's Market	902 Market St, Tacoma 98402	10/25/2018	Booth/Brochures

APPENDIX D: HISTORIC AND ARCHAEOLOGICAL RESOURCES

Table D-1. Historic-period Architectural Resources within the APE

Station Location	Tax Lot ID	Address	Build Date	NRHP and WHR Status	City of Tacoma Registry	APE (Curbside, Median, or Both)
S 9th St.	2009050010	901–909 Broadway	1917; 1919	Individually listed in NRHP (1976); Old City Hall Historic District (contributing)	Yes; individually	Both
S 9th St.	2009050020	911–913 Broadway	1919	—	—	Both
S 9th St.	2009040011	902 Pacific Ave.	1970	—	—	Both
S 9th St.	2007040140	745 Commerce St.	1925	In the Old City Hall Historic District (contributing)	Yes; as part of a district	Both
S 9th St.	2007050150	773 Broadway St.	1924	In the Old City Hall Historic District (contributing)	Yes; as part of a district	Both
S 13th St.	2011070054	1149 Market St.	1951	—	—	Median
S 19th St.	2017080090	1742 Market St.	1919	—	—	Both
S 19th St.	2019080010	1902 Market St.	1919	—	—	Both
S 19th St.	2019080030	1914 Market St.	1919	—	—	Both
S 19th St.	2019070030	1918–1926 Jefferson Ave.	1918	In the Union Depot/Warehouse Historic District (non-contributing)	Yes; as part of a district	Both
S 19th St.	2019070020	1910–1914 Jefferson Ave.	1918	In the Union Depot/Warehouse Historic District (contributing)	Yes; as part of a district	Both

Station Location	Tax Lot ID	Address	Build Date	NRHP and WHR Status	City of Tacoma Registry	APE (Curbside, Median, or Both)
S 19th St.	2019070010	1904 Jefferson/1901 Marke Ave.	1918	In the Union Depot/Warehouse Historic District (contributing)	Yes; as part of a district	Both
S 23rd St.	2021070010	2101 Jefferson Ave.	1919; 1976	—	—	Both
S 23rd St.	2805000020	2316 Jefferson Ave.	1890	—	—	Both
S 23rd St.	2805000030	2324 Jefferson Ave.	1929	—	—	Both
S 23rd St.	2023080010	Jefferson Ave.	1970	—	—	Both
E G St.	2074280010	704 Puyallup Ave.	1965	—	—	Curbside
E G St.	2075270010	725 E 25th St.	1918	Not eligible (2014)	Yes; individually	Curbside
E G St.	2075240013	602 E 25th St.	1956	—	—	Curbside
E G St.	2074250010	603–605 Puyallup Ave.	1950	—	—	Median
S 28th St.	2077130053	2725 Pacific Ave.	1950	—	—	Both
S 28th St.	2077120030	2718 Pacific Ave.	1946; 1977	—	—	Both
S 28th St.	2078130020	2817 Pacific Ave.	1926; 1980	—	—	Both
S 34th St.	2084130030	3319 Pacific Ave.	1911	—	—	Both
S 34th St.	2084130010	3317 Pacific Ave.	1948	—	—	Both
S 34th St.	2084110030	201 S 34th St.	1963	—	—	Both
S 34th St.	2084120010	3402 Pacific Ave.	1964	—	—	Both
S 34th St.	2084140010	3401 Pacific Ave.	1925	—	—	Both
S 43rd St.	2415000570	4065 Pacific Ave.	1926	—	—	Both
S 43rd St.	2415000560	4059 Pacific Ave.	1921	—	—	Both
S 43rd St.	7470024320	201 S 43rd St.	1922; 1951	—	—	Both
S 43rd St.	7470024331	4302 Pacific Ave.	1932; 1970	—	—	Both
S 43rd St.	7470024332	4306 Pacific Ave.	1925	—	—	Both
S 43rd St.	7470024340	4312 Pacific Ave.	1929	—	—	Both

Station Location	Tax Lot ID	Address	Build Date	NRHP and WHR Status	City of Tacoma Registry	APE (Curbside, Median, or Both)
S 43rd St.	7470022400	4309 Pacific Ave.	1922; 1932	—	—	Both
S 43rd St.	7470022390	4305 Pacific Ave.	1921	—	—	Both
S 43rd St.	7470022380	4301 Pacific Ave.	1923	—	—	Both
S 43rd St.	7470024101	4058 Pacific Ave.	1931	—	—	Both
S 50th St.	6805000810	4845 Pacific Ave.	1940	—	—	Both
S 50th St.	6805000910	4848 Pacific Ave.	1931	—	—	Both
S 50th St.	320212004	5010 Pacific Ave.	1924; 2016	Surveyed, eligibility not determined (2009)	Yes	Both
S 50th St.	6805000790	4837 Pacific Ave.	1925	—	—	Median
S 50th St.	6805000890	4840 Pacific Ave.	1931	—	—	Median
S 56th St.	5620000160	5520 Pacific Ave.	1939	—	—	Both
S 56th St.	320213000	5606 Pacific Ave.	1952	—	—	Both
S 56th St.	320212078	5453 Pacific Ave.	1945	—	—	Both
S 64th St.	320213001; 0320213088	6329 Pacific Ave.	1958	—	—	Both
S 64th St.	2390000230	6400 Pacific Ave.	1946; 1960	—	—	Both
S 64th St.	2390000260	6414 S Pacific Ave.	1920	—	—	Curbside
S 72nd St.	6615001851	7052 Pacific Ave.	1947	—	—	Curbside
S 78th St.	7680000010	7656 Pacific Ave.	1926; 1971	—	—	Both
S 78th St.	7325310010	7823–7825 Pacific Ave.	1962	—	—	Both
S 78th St.	7850000931	7642 Pacific Ave.	1959; 1970	—	—	Median
S 78th St.	7850001011	7645 Pacific Ave.	1966	—	—	Median
S 84th St.	6835000063	8247 Pacific Ave.	1967	—	—	Both
S 84th St.	4533000011	8402 Pacific Ave.	1956	—	—	Both

Station Location	Tax Lot ID	Address	Build Date	NRHP and WHR Status	City of Tacoma Registry	APE (Curbside, Median, or Both)
S 84th St.	2915000501	8234–8236 Pacific Ave.	1946; 1980	—	—	Curbside
S 84th St.	4533000050	8416 Pacific Ave.	1940	—	—	Both
Pacific St. and approx. S 90th St.	320333265	8843 Pacific Ave.	1971	—	—	Both
Pacific St. and approx. S 90th St.	320333002	8849 Pacific Ave.	1945; 1978	—	—	Both
Pacific St. and approx. S 90th St.	320333287	9001 Pacific Ave.	1948; 1968	—	—	Both
Pacific St. and approx. S 90th St.	320333032	8820 Pacific Ave.	1966	—	—	Both
96th St. S	319042088	9602 Pacific Ave.	1967	—	—	Both
96th St. S	319042036	9614 Pacific Ave.	1961	—	—	Both
Pacific St. and approx. 101st St. S	319042042	10111 Pacific Ave. S	1960	—	—	Both
Pacific St. and approx. 101st St. S	3810000371; 3810000372	10122 Pacific Ave.	1960	—	—	Both
Pacific St. and approx. 101st St. S	319042104	10209 Pacific Ave. S	1963; 1979	—	—	Both

Station Location	Tax Lot ID	Address	Build Date	NRHP and WHR Status	City of Tacoma Registry	APE (Curbside, Median, or Both)
Pacific St. and approx. 101st St. S	319042038	10121 Pacific Ave. S	1964	—	—	Both
108th St. S	6620000101	10707 Pacific Ave.	1956	—	—	Both
108th St. S	319043109	10802 Pacific Ave. S	1971	—	—	Both
108th St. S	319047001	10805 Pacific Ave. S	1944	—	—	Both
112th St. S	319043141	11111 Pacific Ave. S	1944	—	—	Both
112th St. S	319043055	11118 Pacific Ave.	1930	—	—	Both
112th St. S	319043019	11122 Pacific Ave. S	1929	—	—	Both
112th St. S	319043010	111 112th St. S	1965	—	—	Both
112th St. S	4525000010	11214–11216 Pacific Ave. S	1950	—	—	Both
112th St. S	9375000202	11205 Pacific Ave.	1969	Surveyed, eligibility not determined (2003)	—	Both
Garfield St. S	319093002; 6762002501	214 121st St. S[3]	1908	Eligible (WDOT 1999); Undetermined by DAHP	—	Median
Garfield St. S	319093077	12155 Pacific Ave.	1972	—	—	Median
Garfield St. S	319093032	12151 Pacific Ave. S	1966	—	—	Median
Garfield St. S	319093044	12201 Pacific Ave. S	1969	—	—	Curbside

[3] This is recorded as 12102 Pacific St. in WISAARD.

Station Location	Tax Lot ID	Address	Build Date	NRHP and WHR Status	City of Tacoma Registry	APE (Curbside, Median, or Both)
Garfield St. S	319093041; 0319093031	12173 Pacific Ave. S; 12169 Pacific Ave. S	1946	—	—	Curbside
Tule Lake Rd. S	2695002560	13001–13005 Pacific Ave. S	1961	—	—	Both
Tule Lake Rd. S	2695002470	12907–12909 Pacific Ave. S	1958	—	—	Both
Tule Lake Rd. S	2695002460	12901 Pacific Ave. S	1949	—	—	Both
Tule Lake Rd. S	2695002260	13014 Pacific Ave.	1946	—	—	Both
Tule Lake Rd. S	2695002570	13021 Pacific Ave.	1961	—	—	Both
138th St. S	319163072	13720 Pacific Ave. S	1969	—	—	Both
138th St. S	7130000110	13819 Pacific Ave. S	1961; 2000	—	—	Both
138th St. S	319163066	13723 Pacific Ave. S	1972	—	—	Both
138th St. S	319163067	13721 Pacific Ave. S	1973	—	—	Both
138th St. S	319163068	13719 Pacific Ave. S	1972; 1995; 2004	—	—	Both
138th St. S	7130000110	13819 Pacific Ave.	1961; 2000	—	—	Both
146th St. S	9830000101	14606 Pacific Ave. S	1960	—	—	Both
Military Rd. S; 159th St. S/160th St. S	319213034	15602 Pacific Ave. S	1966; 1970; 1986	—	—	Both

Station Location	Tax Lot ID	Address	Build Date	NRHP and WHR Status	City of Tacoma Registry	APE (Curbside, Median, or Both)
159th St. S/160th St. S	5025002551	15902 Pacific Ave. S	1957; 1985	—	—	Both
159th St. S/160th St. S	5025002430	16003 Pacific Ave. S	1964; 1964	—	—	Both
168th St. S	5025001870	16701 Pacific Ave. S	1939	—	—	Both
168th St. S	5025003290	16802–16804 Pacific Ave. S	1956	—	—	Both
168th St. S	5025003421	16822 Pacific Ave. S	1971; 2000	—	—	Both
176th St. S	5025001341	17519 Pacific Ave.	1971	—	—	Both
184th St. S	4660000282	18310 1st Avct. S	1950	—	—	Both
196th St. E	318041040	19708 Mountain Hwy. E	1947; 1970	—	—	Both

Table D-2. Previous cultural resource studies within 0.5 mi of the area of direct disturbance for the curbside and median stations (Studies overlapping stations highlighted in gray)

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
9th and Commerce St.	*Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma*	LeTourneau 2002	0.4 mi S	No
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.2 mi W	No
	Results of an Archaeological Survey of the Petrich Marine Dock Property, Tacoma	Becker 2006	0.4 mi E	No
	DRAFT: Archaeological Assessment of the Thea Foss Waterway Public Esplanade, East 13th Street to Thea's Park	White and Hudson 2006	0.3 mi E	No
	Archaeological Assessment of Site 4, Thea Foss Waterway, Tacoma	Baldwin 2006	0.5 mi S	No
	Letter to City of Tacoma Regarding Phase I Cultural Resources Assessment for ConocoPhillips's Tacoma Terminal Seawall Repair Project	Chatters 2006	0.3 mi NE	No
	Historic Resources Report Thea Foss Waterway Public Esplanade, East 13th Street to East 4th Street	Exeltech 2006	0.2 mi E	No
	Archaeological and Historical Investigations of the Urban Waters Site, Tacoma, Washington	Daugherty and Kirk 2007	0.3 mi E	No
	Cultural Resources Assessment for the Center for Urban Waters Project, Tacoma	Berger 2008	0.3 mi NE	No
	Tacoma Post Office Court and Customs House Historic Structures Report	Artifacts 2009	0.2 mi S	No
	Cultural Resources Assessment for the Murray Morgan Bridge Rehabilitation Project, Tacoma, Washington	Hartmann 2010	0.4 mi SE	No
	FCC Form 621 Wright Park #WA651	Pinyerd 2012	0.4 mi N	No
	Bates Tech College #SE03XC276 1101 S Yakima Ave, Tacoma	Pinyerd 2013	0.4 mi SW	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Cultural Resource Survey: Proposed Roof-Top Antenna Modification Site Name: TAC Wheeler - AWS, Tacoma	Baker and McReynolds 2014	0.1 mi E	No
13th St. NB	*Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma*	LeTourneau 2002	0.1 mi E	No
	Cultural Resources Investigations of the Pacific Plaza Property within the Downtown Redevelopments Streetscape Improvement Project	Weaver 2004	0.1 mi SE	No
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.1 mi W	No
	Results of an Archaeological Survey of the Petrich Marine Dock Property, Tacoma	Becker 2006	0.4 mi E	No
	DRAFT: Archaeological Assessment of the Thea Foss Waterway Public Esplanade, East 13th Street to Thea's Park	White and Hudson 2006	0.3 mi NE	No
	Historic Resources Report Thea Foss Waterway Public Esplanade, East 13th Street to East 4th Street	Exeltech 2006	0.3 mi NE	No
	Archaeological Assessment of Site 4, Thea Foss Waterway, Tacoma	Baldwin 2006	0.2 mi SE	No
	Tacoma Post Office Court and Customs House Historic Structures Report	Artifacts 2009	0.3 mi NE	No
	Cultural Resources Assessment for the Murray Morgan Bridge Rehabilitation Project, Tacoma, Washington	Berger and Hartmann 2010	0.3 mi NE	No
	Historic Properties Survey of Foss Waterway (Tacoma Paper and Stationery Building) Telecome Installation 1721-35 Jefferson Ave., Tacoma	Askin 2013	0.2 mi S	No
	Cultural Resource Survey: Proposed Roof-Top Antenna Modification Site Name: TAC Wheeler - AWS, Tacoma	Baker and McReynolds 2014	0.4 mi NE	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
13th St. SB	*Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma*	LeTourneau 2002	0.1 mi E	No
	Cultural Resources Investigations of the Pacific Plaza Property within the Downtown Redevelopments Streetscape Improvement Project	Weaver 2004	0.1 mi SE	No
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.1 mi W	No
	Results of an Archaeological Survey of the Petrich Marine Dock Property, Tacoma	Becker 2006	0.4 mi E	No
	DRAFT: Archaeological Assessment of the Thea Foss Waterway Public Esplanade, East 13th Street to Thea's Park	White and Hudson 2006	0.3 mi NE	No
	Historic Resources Report Thea Foss Waterway Public Esplanade, East 13th Street to East 4th Street	Exeltech 2006	0.3 mi NE	No
	Archaeological Assessment of Site 4, Thea Foss Waterway, Tacoma	Baldwin 2006	0.2 mi SE	No
	Tacoma Post Office Court and Customs House Historic Structures Report	Artifacts 2009	0.3 mi NE	No
	Cultural Resources Assessment for the Murray Morgan Bridge Rehabilitation Project, Tacoma, Washington	Berger and Hartmann 2010	0.3 mi NE	No
	Historic Properties Survey of Foss Waterway (Tacoma Paper and Stationery Building) Telecome Installation 1721-35 Jefferson Ave., Tacoma	Askin 2013	0.2 mi S	No
	Cultural Resource Survey: Proposed Roof-Top Antenna Modification Site Name: TAC Wheeler - AWS, Tacoma	Baker and McReynolds 2014	0.4 mi NE	No
15th St. NB	*Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma*	LeTourneau 2002	0.1 mi E	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	0.4 mi SE	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Cultural Resources Investigations of the Pacific Plaza Property within the Downtown Redevelopments Streetscape Improvement Project	Weaver 2004	0.1 mi SE	No
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.1 mi W	No
	Results of an Archaeological Survey of the Petrich Marine Dock Property, Tacoma	Becker 2006	0.4 mi E	No
	Cultural Resources Assessment for Thea Foss Waterway Site 1 Project	Chambers and Schumacher 2006	0.4 mi SE	No
	DRAFT: Archaeological Assessment of the Thea Foss Waterway Public Esplanade, East 13th Street to Thea's Park	White and Hudson 2006	0.3 mi NE	No
	Historic Resources Report Thea Foss Waterway Public Esplanade, East 13th Street to East 4th Street	Exeltech 2006	0.3 mi NE	No
	Archaeological Assessment of Site 4, Thea Foss Waterway, Tacoma	Baldwin 2006	0.2 mi SE	No
	Historic Properties Investigation for the Shaub-Ellison Parcel Brownfield's Cleanup Project on the University of Washington-Tacoma Campus, City of Tacoma	Kent and Kelly 2006	0.3 mi SE	No
	Tacoma Post Office Court and Customs House Historic Structures Report	Artifacts 2009	0.3 mi NE	No
	Cultural Resources Assessment for the Murray Morgan Bridge Rehabilitation Project, Tacoma, Washington	Berger and Hartmann 2010	0.3 mi NE	No
	Historic Properties Survey of Foss Waterway (Tacoma Paper and Stationery Building) Telecome Installation 1721-35 Jefferson Ave., Tacoma	Askin 2013	0.2 mi S	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Cultural Resource Survey: Proposed Roof-Top Antenna Modification Site Name: TAC Wheeler - AWS, Tacoma	Baker and McReynolds 2014	0.4 mi NE	No
15th St. SB	*Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma*	LeTourneau 2002	0.1 mi E	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	0.4 mi SE	No
	Cultural Resources Investigations of the Pacific Plaza Property within the Downtown Redevelopments Streetscape Improvement Project	Weaver 2004	0.1 mi SE	No
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.1 mi W	No
	Results of an Archaeological Survey of the Petrich Marine Dock Property, Tacoma;	Becker 2006	0.4 mi E	No
	Cultural Resources Assessment for Thea Foss Waterway Site 1 Project	Chambers and Schumacher 2006	0.4 mi SE	No
	DRAFT: Archaeological Assessment of the Thea Foss Waterway Public Esplanade, East 13th Street to Thea's Park	White and Hudson 2006	0.3 mi NE	No
	Historic Resources Report Thea Foss Waterway Public Esplanade, East 13th Street to East 4th Street	Exeltech 2006	0.3 mi NE	No
	Archaeological Assessment of Site 4, Thea Foss Waterway, Tacoma	Baldwin 2006	0.2 mi SE	No
	Historic Properties Investigation for the Shaub-Ellison Parcel Brownfield's Cleanup Project on the University of Washington-Tacoma Campus, City of Tacoma	Kent and Kelly 2006	0.3 mi SE	No
	Tacoma Post Office Court and Customs House Historic Structures Report	Artifacts 2009	0.3 mi NE	No
	Cultural Resources Assessment for the Murray Morgan Bridge	Berger and Hartmann 2010	0.3 mi NE	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Rehabilitation Project, Tacoma, Washington			
	Historic Properties Survey of Foss Waterway (Tacoma Paper and Stationery Building) Telecome Installation 1721-35 Jefferson Ave., Tacoma	Askin 2013	0.2 mi S	No
	Cultural Resource Survey: Proposed Roof-Top Antenna Modification Site Name: TAC Wheeler - AWS, Tacoma	Baker and McReynolds 2014	0.4 mi NE	No
19th St. NB	*Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma*	LeTourneau 2002	0.3 mi N	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	0.2 mi SE	No
	Cultural Resources Investigations of the Pacific Plaza Property within the Downtown Redevelopments Streetscape Improvement Project	Weaver 2004	0.2 mi NE	No
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.1 mi W	No
	Archaeological Assessment of Site 4, Thea Foss Waterway, Tacoma	Baldwin 2006	0.3 mi NE	No
	Cultural Resources Assessment for Thea Foss Waterway Site 1 Project	Chambers and Schumacher 2006	0.3 mi E	No
	Historic Properties Investigation for the Shaub-Ellison Parcel Brownfield's Cleanup Project on the University of Washington-Tacoma Campus, City of Tacoma	Kent and Kelly 2006	<0.1 mi E	No
	Historic Resources Report Thea Foss Waterway Public Esplanade, East 13th Street to East 4th Street	Exeltech 2006	0.5 mi NE	No
	Results of Archaeological Monitoring for Sound Transit's Sounder Commuter Rail D-to-M Streets Track and Signal Project, Tacoma	Shong and Undem 2013	0.5 mi S	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Historic Properties Survey of Foss Waterway (Tacoma Paper and Stationery Building) Telecome Installation 1721-35 Jefferson Ave., Tacoma	Askin 2013	Within area of direct disturbance	Both
19th St. SB	*Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma*	LeTourneau 2002	0.3 mi N	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	0.2 mi SE	No
	Cultural Resources Investigations of the Pacific Plaza Property within the Downtown Redevelopments Streetscape Improvement Project	Weaver 2004	0.2 mi NE	No
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004;	Eysaman 2004	0.1 mi W	No
	Archaeological Assessment of Site 4, Thea Foss Waterway, Tacoma	Baldwin 2006	0.3 mi NE	No
	Cultural Resources Assessment for Thea Foss Waterway Site 1 Project	Chambers and Schumacher 2006	0.3 mi E	No
	Historic Properties Investigation for the Shaub-Ellison Parcel Brownfield's Cleanup Project on the University of Washington-Tacoma Campus, City of Tacoma	Kent and Kelly 2006	<0.1 mi E	No
	Historic Resources Report Thea Foss Waterway Public Esplanade, East 13th Street to East 4th Street	Exeltech 2006	0.5 mi NE	No
	Results of Archaeological Monitoring for Sound Transit's Sounder Commuter Rail D-to-M Streets Track and Signal Project, Tacoma	Shong and Undem 2013	0.5 mi S	No
	Historic Properties Survey of Foss Waterway (Tacoma Paper and Stationery Building) Telecome Installation 1721-35 Jefferson Ave., Tacoma	Askin 2013	Within area of direct disturbance	Both

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
23rd St. NB	*Sound Transit Lakewood-to-Tacoma Commuter Rail and SR-512 Park-and-Ride Expansion Project Draft EIS, Cultural/Historical Resources Technical Report*	Reanier 1999	0.3 mi S	No
	Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma	LeTourneau 2002	0.5 mi N	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	0.2 mi E	No
	Cultural Resources Investigations of the Pacific Plaza Property within the Downtown Redevelopments Streetscape Improvement Project	Weaver 2004	0.4 mi N	No
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.1 mi W	No
	Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park	Eysaman 2005	0.3 mi S	No
	Historic Properties Investigation for the Shaub-Ellison Parcel Brownfield's Cleanup Project on the University of Washington-Tacoma Campus, City of Tacoma	Kent and Kelly 2006	0.3 mi NE	No
	Cultural Resources Assessment for Thea Foss Waterway Site 1 Project	Chambers and Schumacher 2006	0.3 mi E	No
	Cultural Resources Assessment for the LeMay Automobile Museum, Tacoma	White 2007	0.4 mi SE	No
	Tacoma/ Pierce County HOV Program I-5 M Street to Portland Avenue- HOV I-5: I-5 Portland Avenue to Port of Tacoma Road - Southbound HOV, I-5 Portland Avenue to Port of Tacoma Road- Northbound HOV Historic, Cultural and Archaeological Resources Discipline Rprt	Sharpe et al. 2009	0.3 mi S	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Federal Railroad Administration WSDOT Point Defiance Bypass Project Environmental Assessment, Section 106 Survey Report Historic, Cultural, and Archaeological Resources/ Discipline Report	Van Galder et al. 2012	0.2 mi S	No
	Results of Archaeological Monitoring for Sound Transit's Sounder Commuter Rail D-to-M Streets Track and Signal Project, Tacoma	Shong and Undem 2013	0.2 mi S	No
	Historic Properties Survey of Foss Waterway (Tacoma Paper and Stationery Building) Telecome Installation 1721-35 Jefferson Ave., Tacoma;	Askin 2013	0.2 mi N	No
23rd St. NB	*Sound Transit Lakewood-to-Tacoma Commuter Rail and SR-512 Park-and-Ride Expansion Project Draft EIS, Cultural/Historical Resources Technical Report*	Reanier 1999	0.3 mi S	No
	Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma	LeTourneau 2002	0.5 mi N	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	0.2 mi E	No
	Cultural Resources Investigations of the Pacific Plaza Property within the Downtown Redevelopments Streetscape Improvement Project	Weaver 2004	0.4 mi N	No
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.1 mi W	No
	Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park	Eysaman 2005	0.3 mi S	No
	Historic Properties Investigation for the Shaub-Ellison Parcel Brownfield's Cleanup Project on the University of Washington-Tacoma Campus, City of Tacoma	Kent and Kelly 2006	0.3 mi NE	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Cultural Resources Assessment for Thea Foss Waterway Site 1 Project	Chambers and Schumacher 2006	0.3 mi E	No
	Cultural Resources Assessment for the LeMay Automobile Museum, Tacoma	White 2007	0.4 mi SE	No
	Tacoma/ Pierce County HOV Program I-5 M Street to Portland Avenue- HOV I-5: I-5 Portland Avenue to Port of Tacoma Road - Southbound HOV, I-5 Portland Avenue to Port of Tacoma Road- Northbound HOV Historic, Cultural and Archaeological Resources Discipline Rprt	Sharpe et al. 2009	0.3 mi S	No
	Federal Railroad Administration WSDOT Point Defiance Bypass Project Environmental Assessment, Section 106 Survey Report Historic, Cultural, and Archaeological Resources/ Discipline Report	Van Galder et al. 2012	0.2 mi S	No
	Results of Archaeological Monitoring for Sound Transit's Sounder Commuter Rail D-to-M Streets Track and Signal Project, Tacoma	Shong and Undem 2013	0.2 mi S	No
	Historic Properties Survey of Foss Waterway (Tacoma Paper and Stationery Building) Telecome Installation 1721-35 Jefferson Ave., Tacoma;	Askin 2013	0.2 mi N	No
25th St. NB	*RTA Lakewood-to-Tacoma Commuter Rail Project, Tacoma Dome, South Tacoma, and Lakewood Sections, Cultural Resource Assessment*	Forsman et al. 1998	0.3 mi E	No
	Sound Transit Lakewood-to-Tacoma Commuter Rail and SR-512 Park-and-Ride Expansion Project Draft	Reanier 1999	0.2 mi S	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	EIS, Cultural/Historical Resources Technical Report			
	Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma	LeTourneau 2002	<0.1 mi N	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	Within area of direct disturbance	Curbside
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.2 mi W	No
	Cultural Resources Assessment for the I-5 High Occupancy Vehicle Project, Addendum Considering Historic Properties	Weaver 2004	0.4 mi S	No
	Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park	Eysaman 2005	0.3 mi S	No
	Historic Properties Investigation for the Shaub-Ellison Parcel Brownfield's Cleanup Project on the University of Washington-Tacoma Campus, City of Tacoma	Kent and Kelly 2006	0.4 mi N	No
	Cultural Resources Assessment for Thea Foss Waterway Site 1 Project	Chambers and Schumacher 2006	0.3 mi NE	No
	Cultural Resources Assessment for the LeMay Automobile Museum, Tacoma	White 2007	0.3 mi SE	No
	Tacoma/ Pierce County HOV Program I-5 M Street to Portland Avenue- HOV I-5: I-5 Portland Avenue to Port of Tacoma Road - Southbound HOV, I-5 Portland Avenue to Port of Tacoma Road- Northbound HOV Historic, Cultural and Archaeological Resources Discipline Rprt	Sharpe et al. 2009	0.2 mi SE	No
	Memo to Lauren Smith RE: Tacoma Trestle Replacement	Merrill and Johnson 2012	0.4 mi E	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Federal Railroad Administration WSDOT Point Defiance Bypass Project Environmental Assessment, Section 106 Survey Report Historic, Cultural, and Archaeological Resources/ Discipline Report	Van Galder et al. 2012	0.1 mi S	No
	Results of Archaeological Monitoring for Sound Transit's Sounder Commuter Rail D-to-M Streets Track and Signal Project, Tacoma	Shong and Undem 2013	<0.1 mi S	No
	Historic Properties Survey of Foss Waterway (Tacoma Paper and Stationery Building) Telecome Installation 1721-35 Jefferson Ave., Tacoma	Askin 2013	0.4 mi N	No
	Geotechnical and Archaeological Bore Monitoring Report for Tacoma Trestle Track and Signal Project	Stevenson et al. 2015	0.3 mi E	No
	Addendum to: Geotechnical and Archaeological Bore Monitoring Report for Tacoma Trestle Track and Signal Project	Herbel and Stevenson 2015	0.3 mi E	No
	Letter to Allyson Brooks RE: Point Defiance Bypass Rails Project, Archaeological Monitoring of Geotechnical Investigation for the Proposed Amtrak Station Relocation to Freighthouse Square, Main Platform Improvements and New Second Platform	Littauer 2015	0.3 mi E	No
25th St. NB	*RTA Lakewood-to-Tacoma Commuter Rail Project, Tacoma Dome, South Tacoma, and Lakewood Sections, Cultural Resource Assessment*	Forsman et al. 1998	0.3 mi E	No
	Sound Transit Lakewood-to-Tacoma Commuter Rail and SR-512 Park-and-Ride Expansion Project Draft EIS, Cultural/Historical Resources Technical Report	Reanier 1999	0.2 mi S	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma	LeTourneau 2002	<0.1 mi N	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	Within area of direct disturbance	Curbside
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.2 m W	No
	Cultural Resources Assessment for the I-5 High Occupancy Vehicle Project, Addendum Considering Historic Properties	Weaver 2004	0.4 mi S	No
	Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park	Eysaman 2005	0.3 mi S	No
	Historic Properties Investigation for the Shaub-Ellison Parcel Brownfield's Cleanup Project on the University of Washington-Tacoma Campus, City of Tacoma	Kent and Kelly 2006	0.4 mi N	No
	Cultural Resources Assessment for Thea Foss Waterway Site 1 Project;	Chambers and Schumacher 2006	0.3 mi NE	No
	Cultural Resources Assessment for the LeMay Automobile Museum, Tacoma	White 2007	0.3 mi SE	No
	Tacoma/ Pierce County HOV Program I-5 M Street to Portland Avenue- HOV I-5: I-5 Portland Avenue to Port of Tacoma Road - Southbound HOV, I-5 Portland Avenue to Port of Tacoma Road- Northbound HOV Historic, Cultural and Archaeological Resources Discipline Rprt	Sharpe et al. 2009	0.2 mi SE	No
	Memo to Lauren Smith RE: Tacoma Trestle Replacement	Merrill and Johnson 2012	0.4 mi E	No
	Federal Railroad Administration WSDOT Point Defiance Bypass	Van Galder et al. 2012	0.1 mi S	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Project Environmental Assessment, Section 106 Survey Report Historic, Cultural, and Archaeological Resources/ Discipline Report			
	Results of Archaeological Monitoring for Sound Transit's Sounder Commuter Rail D-to-M Streets Track and Signal Project, Tacoma	Shong and Undem 2013	<0.1 mi S	No
	Historic Properties Survey of Foss Waterway (Tacoma Paper and Stationery Building) Telecome Installation 1721-35 Jefferson Ave., Tacoma	Askin 2013	0.4 mi N	No
	Geotechnical and Archaeological Bore Monitoring Report for Tacoma Trestle Track and Signal Project	Stevenson et al. 2015	0.3 mi E	No
	Addendum to: Geotechnical and Archaeological Bore Monitoring Report for Tacoma Trestle Track and Signal Project	Herbel and Stevenson 2015	0.3 mi E	No
	Letter to Allyson Brooks RE: Point Defiance Bypass Rails Project, Archaeological Monitoring of Geotechnical Investigation for the Proposed Amtrak Station Relocation to Freighthouse Square, Main Platform Improvements and New Second Platform	Littauer 2015	0.3 mi E	No
G St. NB	*RTA Lakewood-to-Tacoma Commuter Rail Project, Tacoma Dome, South Tacoma, and Lakewood Sections, Cultural Resource Assessment*	Forsman et al. 1998	<0.1 mi S	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	Within area of direct disturbance	Curbside
	Cultural Resources Assessment for Thea Foss Waterway Site 1 Project	Chambers and Schumacher 2006	0.4 mi E	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Cultural Resources Assessment for the LeMay Automobile Museum, Tacoma	White 2007	0.3 mi SW	No
	Tacoma/ Pierce County HOV Program I-5 M Street to Portland Avenue- HOV I-5: I-5 Portland Avenue to Port of Tacoma Road - Southbound HOV, I-5 Portland Avenue to Port of Tacoma Road- Northbound HOV Historic, Cultural and Archaeological Resources Discipline Rprt	Sharpe et al. 2009	0.1 mi S	No
	Federal Railroad Administration WSDOT Point Defiance Bypass Project Environmental Assessment, Section 106 Survey Report Historic, Cultural, and Archaeological Resources/ Discipline Report	Van Galder et al. 2012	0.1 mi S	No
	Memo to Lauren Smith RE: Tacoma Trestle Replacement	Merrill and Johnson 2012	<0.1 mi S	No
	Cultural Resources Assessment for the Cardlock Fuel Facility	Moreno and Rooke 2012	0.4 mi E	No
	Results of Archaeological Monitoring for Sound Transit's Sounder Commuter Rail D-to-M Streets Track and Signal Project, Tacoma	Shong and Undem 2013	0.4 mi W	No
	Geotechnical and Archaeological Bore Monitoring Report for Tacoma Trestle Track and Signal Project	Stevenson et al. 2015	<0.1 mi S	No
	Addendum to: Geotechnical and Archaeological Bore Monitoring Report for Tacoma Trestle Track and Signal Project	Herbel and Stevenson 2015	<0.1 mi S	No
	Letter to Allyson Brooks RE: Point Defiance Bypass Rails Project, Archaeological Monitoring of Geotechnical Investigation for the Proposed Amtrak Station Relocation to Freighthouse Square,	Littauer 2015	0.1 mi S	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Main Platform Improvements and New Second Platform			
G St. SB	*RTA Lakewood-to-Tacoma Commuter Rail Project, Tacoma Dome, South Tacoma, and Lakewood Sections, Cultural Resource Assessment*	Forsman et al. 1998	<0.1 mi S	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	Within area of direct disturbance	Curbside
	Cultural Resources Assessment for Thea Foss Waterway Site 1 Project	Chambers and Schumacher 2006	0.4 mi E	No
	Cultural Resources Assessment for the LeMay Automobile Museum, Tacoma	White 2007	0.3 mi SW	No
	Tacoma/ Pierce County HOV Program I-5 M Street to Portland Avenue- HOV I-5: I-5 Portland Avenue to Port of Tacoma Road - Southbound HOV, I-5 Portland Avenue to Port of Tacoma Road- Northbound HOV Historic, Cultural and Archaeological Resources Discipline Rprt	Sharpe et al. 2009	0.1 mi S	No
	Federal Railroad Administration WSDOT Point Defiance Bypass Project Environmental Assessment, Section 106 Survey Report Historic, Cultural, and Archaeological Resources/ Discipline Report	Van Galder et al. 2012	0.1 mi S	No
	Memo to Lauren Smith RE: Tacoma Trestle Replacement	Merrill and Johnson 2012	<0.1 mi S	No
	Cultural Resources Assessment for the Cardlock Fuel Facility	Moreno and Rooke 2012	0.4 mi E	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Results of Archaeological Monitoring for Sound Transit's Sounder Commuter Rail D-to-M Streets Track and Signal Project, Tacoma	Shong and Undem 2013	0.4 mi W	No
	Geotechnical and Archaeological Bore Monitoring Report for Tacoma Trestle Track and Signal Project	Stevenson et al. 2015	<0.1 mi S	No
	Addendum to: Geotechnical and Archaeological Bore Monitoring Report for Tacoma Trestle Track and Signal Project	Herbel and Stevenson 2015	<0.1 mi S	No
	Letter to Allyson Brooks RE: Point Defiance Bypass Rails Project, Archaeological Monitoring of Geotechnical Investigation for the Proposed Amtrak Station Relocation to Freighthouse Square, Main Platform Improvements and New Second Platform	Littauer 2015	0.1 mi S	No
Puyallup Ave. and G St.	*RTA Lakewood-to-Tacoma Commuter Rail Project, Tacoma Dome, South Tacoma, and Lakewood Sections, Cultural Resource Assessment*	Forsman et al. 1998	0.4 mi NE	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	Within area of direct disturbance	Median
	Cultural Resources Assessment for Thea Foss Waterway Site 1 Project	Chambers and Schumacher 2006	0.4 mi E	No
	Cultural Resources Assessment for the LeMay Automobile Museum, Tacoma	White 2007	0.3 mi SW	No
	Tacoma/ Pierce County HOV Program I-5 M Street to Portland Avenue- HOV I-5: I-5 Portland Avenue to Port of Tacoma Road - Southbound HOV, I-5 Portland	Sharpe et al. 2009	0.1 mi S	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Avenue to Port of Tacoma Road-Northbound HOV Historic, Cultural and Archaeological Resources Discipline Rprt			
	Federal Railroad Administration WSDOT Point Defiance Bypass Project Environmental Assessment, Section 106 Survey Report Historic, Cultural, and Archaeological Resources/ Discipline Report	Van Galder et al. 2012	0.1 mi S	No
	Memo to Lauren Smith RE: Tacoma Trestle Replacement	Merrill and Johnson 2012	<0.1 mi S	No
	Cultural Resources Assessment for the Cardlock Fuel Facility	Moreno and Rooke 2012	0.4 mi E	No
	Results of Archaeological Monitoring for Sound Transit's Sounder Commuter Rail D-to-M Streets Track and Signal Project, Tacoma	Shong and Undem 2013	0.4 mi W	No
	Geotechnical and Archaeological Bore Monitoring Report for Tacoma Trestle Track and Signal Project	Stevenson et al. 2015	<0.1 mi S	No
	Addendum to: Geotechnical and Archaeological Bore Monitoring Report for Tacoma Trestle Track and Signal Project	Herbel and Stevenson 2015	<0.1 mi S	No
	Letter to Allyson Brooks RE: Point Defiance Bypass Rails Project, Archaeological Monitoring of Geotechnical Investigation for the Proposed Amtrak Station Relocation to Freighthouse Square, Main Platform Improvements and New Second Platform	Littauer 2015	0.1 mi S	No
S 28th St. NB	*RTA Lakewood-to-Tacoma Commuter Rail Project, Tacoma Dome, South Tacoma, and Lakewood Sections, Cultural Resource Assessment*	Forsman et al. 1998	0.4 mi NE	No
	Sound Transit Lakewood-to-Tacoma Commuter Rail and SR-512 Park-	Reanier 1999	<0.1 mi N	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	and-Ride Expansion Project Draft EIS, Cultural/Historical Resources Technical Report			
	Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma	LeTourneau 2001	0.2 mi N	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	0.2 mi N	No
	Cultural Resources Assessment for the I-5 High Occupancy Vehicle Project, Addendum Considering Historic Properties	Weaver 2004	0.2 mi SW	No
	Cultural Resources Clearance Survey SR 5 HOV Lane Construction 48th Street to Pacific Avenue	Kopperl 2004	0.3 mi SW	No
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.2 m W	No
	Cultural Resources Assessment for the LeMay Automobile Museum, Tacoma	White 2007	0.2 mi E	No
	Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park	Eysaman 2005	<0.1 mi S	No
	Tacoma/ Pierce County HOV Program I-5 M Street to Portland Avenue- HOV I-5: I-5 Portland Avenue to Port of Tacoma Road - Southbound HOV, I-5 Portland Avenue to Port of Tacoma Road- Northbound HOV Historic, Cultural and Archaeological Resources Discipline Rprt	Sharpe et al. 2009	Within area of direct disturbance	Both
	Memo to Lauren Smith RE: Tacoma Trestle Replacement	Merrill and Johnson 2012	0.2 mi W	No
	Federal Railroad Administration WSDOT Point Defiance Bypass Project Environmental Assessment, Section 106 Survey Report Historic, Cultural, and Archaeological Resources/ Discipline Report	Van Galder et al. 2012	0.1 mi N	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Results of Archaeological Monitoring for Sound Transit's Sounder Commuter Rail D-to-M Streets Track and Signal Project, Tacoma	Shong and Undem 2013	<0.1 mi N	No
	Letter to Allyson Brooks RE: Point Defiance Bypass Rails Project, Archaeological Monitoring of Geotechnical Investigation for the Proposed Amtrak Station Relocation to Freighthouse Square, Main Platform Improvements and New Second Platform	Littauer 2015	0.3 mi NE	No
S 28th St. SB	*RTA Lakewood-to-Tacoma Commuter Rail Project, Tacoma Dome, South Tacoma, and Lakewood Sections, Cultural Resource Assessment*	Forsman et al. 1998	0.4 mi NE	No
	Sound Transit Lakewood-to-Tacoma Commuter Rail and SR-512 Park-and-Ride Expansion Project Draft EIS, Cultural/Historical Resources Technical Report	Reanier 1999	<0.1 mi N	No
	Results of Archaeological Monitoring For Tacoma Link Light Rail, City of Tacoma	LeTourneau 2001	0.2 mi N	No
	Cultural Resource Survey Report, D Street, Tacoma	Grulich and Clio 2003	0.2 mi N	No
	Cultural Resources Assessment for the I-5 High Occupancy Vehicle Project, Addendum Considering Historic Properties	Weaver 2004	0.2 mi SW	No
	Cultural Resources Clearance Survey SR 5 HOV Lane Construction 48th Street to Pacific Avenue	Kopperl 2004	0.3 mi SW	No
	Survey and Inventory in the Hilltop Area of Tacoma Update 2004	Eysaman 2004	0.2 m W	No
	Cultural Resources Assessment for the LeMay Automobile Museum, Tacoma	White 2007	0.2 mi E	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park	Eysaman 2005	<0.1 mi S	No
	Tacoma/ Pierce County HOV Program I-5 M Street to Portland Avenue- HOV I-5: I-5 Portland Avenue to Port of Tacoma Road - Southbound HOV, I-5 Portland Avenue to Port of Tacoma Road- Northbound HOV Historic, Cultural and Archaeological Resources Discipline Rprt	Sharpe et al. 2009	Within area of direct disturbance	Both
	Memo to Lauren Smith RE: Tacoma Trestle Replacement	Merrill and Johnson 2012	0.2 mi W	No
	Federal Railroad Administration WSDOT Point Defiance Bypass Project Environmental Assessment, Section 106 Survey Report Historic, Cultural, and Archaeological Resources/ Discipline Report	Van Galder et al. 2012	0.1 mi N	No
	Results of Archaeological Monitoring for Sound Transit's Sounder Commuter Rail D-to-M Streets Track and Signal Project, Tacoma	Shong and Undem 2013	<0.1 mi N	No
	Letter to Allyson Brooks RE: Point Defiance Bypass Rails Project, Archaeological Monitoring of Geotechnical Investigation for the Proposed Amtrak Station Relocation to Freighthouse Square, Main Platform Improvements and New Second Platform	Littauer 2015	0.3 mi NE	No
S 34th St. NB	*Sound Transit Lakewood-to-Tacoma Commuter Rail and SR-512 Park-and-Ride Expansion Project Draft EIS, Cultural/Historical Resources Technical Report*	Reanier 1999	<0.1 mi NW	No
	Cultural Resources Assessment for the I-5 High Occupancy Vehicle	Weaver 2004	0.3 mi NW	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Project, Addendum Considering Historic Properties			
	Cultural Resources Clearance Survey SR 5 HOV Lane Construction 48th Street to Pacific Avenue	Kopperl 2004	0.3 mi NW	No
	Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park	Eysaman 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the LeMay Automobile Museum, Tacoma	White 2007	0.4 mi NE	No
	Tacoma/ Pierce County HOV Program I-5 M Street to Portland Avenue- HOV I-5: I-5 Portland Avenue to Port of Tacoma Road - Southbound HOV, I-5 Portland Avenue to Port of Tacoma Road- Northbound HOV Historic, Cultural and Archaeological Resources Discipline Rprt	Sharpe et al. 2009	0.1 mi N	No
	Federal Railroad Administration WSDOT Point Defiance Bypass Project Environmental Assessment, Section 106 Survey Report Historic, Cultural, and Archaeological Resources/ Discipline Report	Van Galder et al. 2012	0.4 mi NW	No
S 34th St. SB	*Sound Transit Lakewood-to-Tacoma Commuter Rail and SR-512 Park-and-Ride Expansion Project Draft EIS, Cultural/Historical Resources Technical Report*	Reanier 1999	<0.1 mi NW	No
	Cultural Resources Assessment for the I-5 High Occupancy Vehicle Project, Addendum Considering Historic Properties	Weaver 2004	0.3 mi NW	No
	Cultural Resources Clearance Survey SR 5 HOV Lane Construction 48th Street to Pacific Avenue	Kopperl 2004	0.3 mi NW	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park	Eysaman 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the LeMay Automobile Museum, Tacoma	White 2007	0.4 mi NE	No
	Tacoma/ Pierce County HOV Program I-5 M Street to Portland Avenue- HOV I-5: I-5 Portland Avenue to Port of Tacoma Road - Southbound HOV, I-5 Portland Avenue to Port of Tacoma Road- Northbound HOV Historic, Cultural and Archaeological Resources Discipline Rprt	Sharpe et al. 2009	0.1 mi N	No
	Federal Railroad Administration WSDOT Point Defiance Bypass Project Environmental Assessment, Section 106 Survey Report Historic, Cultural, and Archaeological Resources/ Discipline Report	Van Galder et al. 2012	0.4 mi NW	No
S 38th St. NB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
S 38th St. SB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
S 43rd St. NB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
S 43rd St. SB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
S 50th St. NB	*Reconnaissance Level Survey Update of South Tacoma,*	Eysaman 2005	Within area of direct disturbance	Both

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Edison/Excelsior and the South End, Fern Hill and Lincoln Park			
S 50th St. SB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
S 56th St. NB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
S 56th St. SB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
S 64th St. NB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
S 64th St. SB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
S 72nd St. NB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
S 72nd St. SB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
Spooner St. NB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
Spooner St. SB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
S 84th St. NB	*Reconnaissance Level Survey Update of South Tacoma,*	Eysaman 2005	Within area of direct disturbance	Both

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Edison/Excelsior and the South End, Fern Hill and Lincoln Park			
S 84th St. SB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
8800 Pacific Ave. NB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
	Cultural Resources Investigations of Proposed TAC Fern Hill - New Build (EnSite #25140) Telecommunications Tower Project Area, in Tacoma	McClure-Cannon et al. 2015	0.2 mi SE	No
8800 Pacific Ave. SB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
	Cultural Resources Investigations of Proposed TAC Fern Hill - New Build (EnSite #25140) Telecommunications Tower Project Area, in Tacoma	McClure-Cannon et al. 2015	0.2 mi SE	No
S 96th St. NB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both
	Results of a Cultural Resources Inventory of the TA3315 Tacoma 96th and Yakima Cell Site (Trileaf #610412), Tacoma	Finley 2014	0.4 mi W	No
	Cultural Resources Investigations of Proposed TAC Fern Hill - New Build (EnSite #25140) Telecommunications Tower Project Area, in Tacoma	McClure-Cannon et al. 2015	0.1 mi NE	No
S 96th St. SB	*Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park*	Eysaman 2005	Within area of direct disturbance	Both

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Results of a Cultural Resources Inventory of the TA3315 Tacoma 96th and Yakima Cell Site (Trileaf #610412), Tacoma	Finley 2014	0.4 mi W	No
	Cultural Resources Investigations of Proposed TAC Fern Hill - New Build (EnSite #25140) Telecommunications Tower Project Area, in Tacoma	McClure-Cannon et al. 2015	0.1 mi NE	No
10100 Pacific Ave. NB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	0.4 mi S	No
	Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park	Eysaman 2005	0.1 mi N	No
10100 Pacific Ave. NB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	0.4 mi S	No
	Reconnaissance Level Survey Update of South Tacoma, Edison/Excelsior and the South End, Fern Hill and Lincoln Park	Eysaman 2005	0.1 mi N	No
108th St. NB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	0.1 mi S	No
	Cultural Resource Assessment of the 'A' Street Improvement Project, CRP 5423	Amell 2012	0.3 mi SE	No
108th St. SB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	0.1 mi S	No
	Cultural Resource Assessment of the 'A' Street Improvement Project, CRP 5423	Amell 2012	0.3 mi SE	No
112th St. NB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resource Assessment of the 'A' Street Improvement Project, CRP 5423	Amell 2012	<0.1 mi E	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
112th St. SB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Overlaps with station APE	Both
	Cultural Resource Assessment of the 'A' Street Improvement Project, CRP 5423	Amell 2012	<0.1 mi E	No
Garfield St. NB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	Pacific Lutheran University: Historic Resource Inventory - Volume I and Master Plan and Landscape Inventory - Volume II	Heritage Research Associates 2010	Within area of direct disturbance	Curbside
Garfield St. SB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	Pacific Lutheran University: Historic Resource Inventory - Volume I and Master Plan and Landscape Inventory - Volume II	Heritage Research Associates 2010	Within area of direct disturbance	Curbside
Tule Lake Rd. NB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	FINAL: Cultural Resource Assessment, Phases 2 and 3, Clover Creek Habitat/Floodplain Restoration Plan (D183-006), Phases 2-5: Brookdale Golf Course to Confluence with North Fork Clover Creek	Pierce County and Jones and Stokes 2006	0.3 mi SE	No
	Cultural Resources Survey Report, Clover Creek Outfall Retrofit (D283)	Cooper et al. 2007	0.4 mi E	No
	Pacific Lutheran University: Historic Resource Inventory - Volume I and Master Plan and Landscape Inventory - Volume II	Heritage Research Associates 2010	0.3 mi NW	No
Tule Lake Rd. SB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	FINAL: Cultural Resource Assessment, Phases 2 and 3, Clover	Pierce County and Jones	0.3 mi SE	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Creek Habitat/Floodplain Restoration Plan (D183-006), Phases 2-5: Brookdale Golf Course to Confluence with North Fork Clover Creek	and Stokes 2006		
	Cultural Resources Survey Report, Clover Creek Outfall Retrofit (D283)	Cooper et al. 2007	0.4 mi E	No
	Pacific Lutheran University: Historic Resource Inventory - Volume I and Master Plan and Landscape Inventory - Volume II	Heritage Research Associates 2010	0.3 mi NW	No
138th St. NB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	FINAL: Cultural Resource Assessment, Phases 2 and 3, Clover Creek Habitat/Floodplain Restoration Plan (D183-006), Phases 2-5: Brookdale Golf Course to Confluence with North Fork Clover Creek	Pierce County and Jones and Stokes 2006	0.2 mi E	No
	Cultural Resources Survey Report, Clover Creek Outfall Retrofit (D283)	Cooper et al. 2007	0.5 mi NE	No
138th St. SB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	FINAL: Cultural Resource Assessment, Phases 2 and 3, Clover Creek Habitat/Floodplain Restoration Plan (D183-006), Phases 2-5: Brookdale Golf Course to Confluence with North Fork Clover Creek	Pierce County and Jones and Stokes 2006	0.2 mi E	No
	Cultural Resources Survey Report, Clover Creek Outfall Retrofit (D283)	Cooper et al. 2007	0.5 mi NE	No
146th St. NB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the Spanaway Park Renovation and	Berger 2007	0.5 mi SW	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Maintenance, Phase 1 Project, Spanaway			
146th St. SB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the Spanaway Park Renovation and Maintenance, Phase 1 Project, Spanaway	Berger 2007	0.5 mi SW	No
Military Rd. NB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the Spanaway Park Renovation and Maintenance, Phase 1 Project, Spanaway	Berger 2007	0.5 mi W	No
Military Rd. SB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the Spanaway Park Renovation and Maintenance, Phase 1 Project, Spanaway	Berger 2007	0.5 mi W	No
159th St. NB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the Spanaway Park Renovation and Maintenance, Phase 1 Project, Spanaway	Berger 2007	0.4 mi W	No
159th St. SB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the Spanaway Park Renovation and Maintenance, Phase 1 Project, Spanaway	Berger 2007	0.4 mi W	No
168th St. NB	*Letter to Pat Baughman Regarding Archaeological Survey and Assessment of Spanaway Loop Road Extension Project*	Hicks 2003	0.5 mi S	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the SR 704 Cross-Base Highway Project 1: Spanaway Loop Road to SR 7	Earley and Morrison 2007	0.5 mi S	No
168th St. SB	*Letter to Pat Baughman Regarding Archaeological Survey and Assessment of Spanaway Loop Road Extension Project*	Hicks 2003	0.5 mi S	No
	Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the SR 704 Cross-Base Highway Project 1: Spanaway Loop Road to SR 7	Earley and Morrison 2007	0.5 mi S	No
176th St. NB	*Letter to Pat Baughman Regarding Archaeological Survey and Assessment of Spanaway Loop Road Extension Project*	Hicks 2003	<0.1 mi S	No
	Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Survey for 176th Street East Corridor Improvements (Pierce County Road Projects 5387, 5471, 5472, 5536, 5537, 5723)	Schumacher 2008	0.3 mi E	No
	Cultural Resources Assessment for the SR 704 Cross-Base Highway Project 1: Spanaway Loop Road to SR 7	Earley and Morrison 2007	<0.1 mi S	No
	Archaeological Site Verification of 55 Sites and Isolates on Joint Base Lewis-McChord	Ragsdale et al. 2012	0.3 mi SW	No
176th St. NB	*Letter to Pat Baughman Regarding Archaeological Survey and Assessment of Spanaway Loop Road Extension Project*	Hicks 2003	<0.1 mi S	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Survey for 176th Street East Corridor Improvements (Pierce County Road Projects 5387, 5471, 5472, 5536, 5537, 5723)	Schumacher 2008	0.3 mi E	No
	Cultural Resources Assessment for the SR 704 Cross-Base Highway Project 1: Spanaway Loop Road to SR 7	Earley and Morrison 2007	<0.1 mi S	No
	Archaeological Site Verification of 55 Sites and Isolates on Joint Base Lewis-McChord	Ragsdale et al. 2012	0.3 mi SW	No
184th St. NB	*Letter to Pat Baughman Regarding Archaeological Survey and Assessment of Spanaway Loop Road Extension Project*	Hicks 2003	0.5 mi N	No
	Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the SR 704 Cross-Base Highway Project 1: Spanaway Loop Road to SR 7	Earley and Morrison 2007	0.3 mi N	No
	Archaeological Site Verification of 55 Sites and Isolates on Joint Base Lewis-McChord	Ragsdale et al. 2012	0.3 mi W	No
184th St. SB	*Letter to Pat Baughman Regarding Archaeological Survey and Assessment of Spanaway Loop Road Extension Project*	Hicks 2003	0.5 mi N	No
	Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project	Hamilton 2005	Within area of direct disturbance	Both
	Cultural Resources Assessment for the SR 704 Cross-Base Highway Project 1: Spanaway Loop Road to SR 7	Earley and Morrison 2007	0.3 mi N	No

Location of Station, Northbound (NB) or Southbound (SB)	Studies within 0.5 mile	Reference	Distance (Mile (mi)) and Direction (N, S, W, E. etc)	Overlap with APE (Curbside, Median, or Both)
	Archaeological Site Verification of 55 Sites and Isolates on Joint Base Lewis-McChord	Ragdsdale et al. 2012	0.3 mi W	No
19100 Pacific Ave. NB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	0.1 mi N	No
19100 Pacific Ave. SB	*Cultural Resource Assessment for the SR 7, SR 507, to SR 512 - Safety Project*	Hamilton 2005	0.1 mi N	No
Pirnie Rd. NB	None	-	-	-
Pirnie Rd. SB	None	-	-	-
8th Ave. NB	*Archaeological Site Verification of 55 Sites and Isolates on Joint Base Lewis-McChord*	Ragsdale et al. 2012	0.4 mi SW	No
8th Ave. SB	*Archaeological Site Verification of 55 Sites and Isolates on Joint Base Lewis-McChord*	Ragsdale et al. 2012	0.4 mi SW	No

Table D-3. *Archaeological Sites within 0.5 mile of Area of Direct Disturbance for Proposed BRT Stations*

Location of Station, Northbound (NB) or Southbound (SB)	Archaeological Sites within 0.5 mile	Distance (Mile (mi)) and Direction (N, S, E, W, etc) from direct effects APE	NRHP eligibility
9th and Commerce St.	45PI80; Petroglyph	0.2 mi N	Unevaluated
	45PI221; Historic-period building	0.4 mi N	Listed in the NRHP
	45PI283; Historic-period bridge	0.4 mi N	Unevaluated
	45PI708; Historic-period privy	0.4 mi S	Unevaluated
15th St. NB	45PI265; Historic-period buildings	0.1 mi SE	Unevaluated
	45PI491; Historic-period gas station	0.1 mi SE	Determined eligible
	45PI707; Historic-period debris layer	0.1 mi S	Unevaluated
	45PI708; Historic-period privy	0.1 mi E	Unevaluated
	45PI709; Historic-period privy	0.1 mi S	Unevaluated
15th St. SB	45PI265; Historic-period buildings	0.1 mi SE	Unevaluated
	45PI491; Historic-period gas station	0.1 mi SE	Determined eligible
	45PI707; Historic-period debris layer	0.1 mi S	Unevaluated
	45PI708; Historic-period privy	0.1 mi E	Unevaluated
	45PI709; Historic-period privy	0.1 mi S	Unevaluated
19th St. NB	45PI265; Historic-period buildings	<0.1 mi E	Unevaluated
	45PI491; Historic-period gas station	0.2 mi N	Determined eligible
	45PI707; Historic-period debris layer	0.2 mi N	Unevaluated
	45PI708; Historic-period privy	0.3 mi N	Unevaluated
	45PI709; Historic-period privy	0.2 mi N	Unevaluated

Location of Station, Northbound (NB) or Southbound (SB)	Archaeological Sites within 0.5 mile	Distance (Mile (mi)) and Direction (N, S, E, W, etc) from direct effects APE	NRHP eligibility
	45PI1291; Historic-period debris scatter	0.5 mi S	Determined not eligible
	45PI1292; Trestle segments	0.5 mi S	Determined not eligible
19th St. SB	45PI265; Historic-period buildings	<0.1 mi E	Unevaluated
	45PI491; Historic-period gas station	0.2 mi N	Determined eligible
	45PI707; Historic-period debris layer	0.2 mi N	Unevaluated
	45PI708; Historic-period privy	0.3 mi N	Unevaluated
	45PI709; Historic-period privy	0.2 mi N	Unevaluated
	45PI1291; Historic-period debris scatter	0.5 mi S	Determined not eligible
	45PI1292; Trestle segments	0.5 mi S	Determined not eligible
23rd St. NB	45PI265; Historic-period buildings	0.1 mi N	Unevaluated
	45PI491; Historic-period gas station	0.5 mi N	Determined eligible
	45PI707; Historic-period debris layer	0.5 mi N	Unevaluated
	45PI709; Historic-period privy	0.5 mi N	Unevaluated
	45PI1291; Historic-period debris scatter	0.3 mi SE	Determined not eligible
	45PI1292; Trestle segments	0.3 mi SE	Determined not eligible
23rd St. SB	45PI265; Historic-period buildings	0.1 mi N	Unevaluated
	45PI491; Historic-period gas station	0.5 mi N	Determined eligible
	45PI707; Historic-period debris layer	0.5 mi N	Unevaluated

Location of Station, Northbound (NB) or Southbound (SB)	Archaeological Sites within 0.5 mile	Distance (Mile (mi)) and Direction (N, S, E, W, etc) from direct effects APE	NRHP eligibility
	45PI709; Historic-period privy	0.5 mi N	Unevaluated
	45PI1291; Historic-period debris scatter	0.3 mi SE	Determined not eligible
	45PI1292; Trestle segments	0.3 mi SE	Determined not eligible
25th St. NB	45PI265; Historic-period buildings	0.2 mi N	Unevaluated
	45PI1291; Historic-period debris scatter	<0.1 mi S	Determined not eligible
	45PI1292; Trestle segments	<0.1 mi S	Determined not eligible
	45PI1348; Historic-period residential structure, privy	0.3 mi S	Unevaluated
	45PI1349; Historic-period residential structure, privy	0.3 mi S	Unevaluated
G St. NB	45PI743; Historic-period structure, tunnel	0.3 mi SE	Unevaluated
	45PI1292; Trestle segments	0.5 mi W	Determined not eligible
	45PI1327; Precontact camp	0.2 mi SE	Determined eligible
G St. SB	45PI743; Historic-period structure, tunnel	0.3 mi SE	Unevaluated
	45PI1292; Trestle segments	0.5 mi W	Determined not eligible

Location of Station, Northbound (NB) or Southbound (SB)	Archaeological Sites within 0.5 mile	Distance (Mile (mi)) and Direction (N, S, E, W, etc) from direct effects APE	NRHP eligibility
	45PI1327; Precontact camp	0.2 mi SE	Determined eligible
S 28th St. NB	45PI1291; Historic-period debris scatter	< 0.1 mi N	Determined not eligible
	45PI1292; Trestle segments	< 0.1 mi N	Determined not eligible
	45PI1348; Historic-period residential structure, privy	< 0.1 mi S	Unevaluated
	45PI1349; Historic-period residential structure, privy	< 0.1 mi S	Unevaluated
S 28th St. SB	45PI1291; Historic-period debris scatter	< 0.1 mi N	Determined not eligible
	45PI1292; Trestle segments	< 0.1 mi N	Determined not eligible
	45PI1348; Historic-period residential structure, privy	< 0.1 mi S	Unevaluated
	45PI1349; Historic-period residential structure, privy	< 0.1 mi S	Unevaluated
S 34th St. NB	45PI258; Historic-period structure, bridge	0.2 mi E	Unevaluated
	45PI1291; Historic-period debris scatter	0.4 mi N	Determined not eligible
	45PI1292; Trestle segments	0.4 mi N	Determined not eligible
	45PI1348; Historic-period residential structure, privy	0.3 mi N	Unevaluated

Location of Station, Northbound (NB) or Southbound (SB)	Archaeological Sites within 0.5 mile	Distance (Mile (mi)) and Direction (N, S, E, W, etc) from direct effects APE	NRHP eligibility
	45PI1349; Historic-period residential structure, privy	0.3 mi N	Unevaluated
S 34th St. SB	45PI258; Historic-period structure, bridge	0.2 mi E	Unevaluated
	45PI1291; Historic-period debris scatter	0.4 mi N	Determined not eligible
	45PI1292; Trestle segments	0.4 mi N	Determined not eligible
	45PI1348; Historic-period residential structure, privy	0.3 mi N	Unevaluated
	45PI1349; Historic-period residential structure, privy	0.3 mi N	Unevaluated
S 38th St. NB	None; Closest 45PI258; Historic-period structure, bridge	0.6 mi NE	Unevaluated
S 38th St. SB	None; Closest 45PI258; Historic-period structure, bridge	0.6 mi NE	Unevaluated
S 43rd St. NB	None within 1 mi	-	-
S 43rd St. SB	None within 1 mi	-	-
S 50th St. NB	None within 1 mi	-	-
S 50th St. SB	None within 1 mi	-	-
S 56th St. NB	None within 1 mi	-	-
S 56th St. SB	None within 1 mi	-	-
S 64th St. NB	None within 1 mi	-	-
S 64th St. SB	None within 1 mi	-	-
S 72nd St. NB	None within 1 mi	-	-
S 72nd St. SB	None within 1 mi	-	-
Spooner St. NB	None within 1 mi	-	-
Spooner St. SB	None within 1 mi	-	-

Location of Station, Northbound (NB) or Southbound (SB)	Archaeological Sites within 0.5 mile	Distance (Mile (mi)) and Direction (N, S, E, W, etc) from direct effects APE	NRHP eligibility
S 84th St. NB	None within 1 mi	-	-
S 84th St. SB	None within 1 mi	-	-
8800 Pacific Ave. NB	None within 1 mi	-	-
8800 Pacific Ave. SB	None within 1 mi	-	-
S 96th St. NB	None within 1 mi	-	-
S 96th St. SB	None within 1 mi	-	-
10100 Pacific Ave. NB	None within 1 mi	-	-
10100 Pacific Ave. SB	None within 1 mi	-	-
108th St. NB	None within 1 mi	-	-
108th St. SB	None within 1 mi	-	-
112th St. NB	None within 1 mi	-	-
112th St. SB	None within 1 mi	-	-
Garfield St. NB	None within 1 mi	-	-
Garfield St. SB	None within 1 mi	-	-
Tule Lake Rd. NB	None within 1 mi	-	-
Tule Lake Rd. SB	None within 1 mi	-	-
138th St. NB	None- Closest is 45PI780; historic-period debris scatter	0.6 mi SE	Unevaluated
138th St. SB	None- Closest is 45PI780; historic-period debris scatter	0.6 mi SE	Unevaluated
146th St. NB	45PI780; Historic-period debris scatter	0.5 mi E	Unevaluated
146th St. SB	45PI780; Historic-period debris scatter	0.5 mi E	Unevaluated
Military Rd. NB	None- Closest is 45PI780; historic-period debris scatter	0.7 mi NE	Unevaluated
Military Rd. SB	None- Closest is 45PI780; historic-period debris scatter	0.7 mi NE	Unevaluated
159th St. NB	None within 1 mi	-	-

Location of Station, Northbound (NB) or Southbound (SB)	Archaeological Sites within 0.5 mile	Distance (Mile (mi)) and Direction (N, S, E, W, etc) from direct effects APE	NRHP eligibility
159th St. SB	None within 1 mi	-	-
168th St. NB	None within 1 mi	-	-
168th St. SB	None within 1 mi	-	-
176th St. NB	45PI553; Historic-period homestead with orchard	0.4 mi SW	Determined eligible
176th St. SB	45PI553; Historic-period homestead with orchard	0.4 mi SW	Determined eligible
184th St. NB	45PI553; Historic-period homestead with orchard	0.3 mi W	Determined eligible
184th St. SB	45PI553; Historic-period homestead with orchard	0.3 mi W	Determined eligible
19100 Pacific Ave. NB	45PI206; Historic-period farmstead/orchard	0.1 mi SW	Unevaluated
19100 Pacific Ave. SB	45PI206; Historic-period farmstead/orchard	0.1 mi SW	Unevaluated
Pirnie Rd. NB	45PI206; Historic-period farmstead/orchard	0.5 mi NW	Unevaluated
Pirnie Rd. SB	45PI206; Historic-period farmstead/orchard	0.5 mi NW	Unevaluated
8th Ave. NB	45PI548; Historic-period homestead	0.5 mi SW	Unevaluated
8th Ave. SB	45PI548; Historic-period homestead	0.5 mi SW	Unevaluated