City of SeaTac

ADA TRANSITION PLAN

DRAFT

JANUARY 2018

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CITY OF SEATAC

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Executive Summary

This Americans with Disabilities Act Self-Evaluation and Transition Plan establishes the City of SeaTac's ongoing commitment as an all-inclusive community to providing equal access for all, including those with disabilities. In developing this plan, the City of SeaTac has undertaken a comprehensive evaluation of its right-of-way facilities and programs to determine what types of access barriers exist for individuals with disabilities. This plan will be used to help guide future planning and implementation of necessary accessibility improvements.

Both the Self-Assessment and the Transition Plan are required elements of the federally mandated ADA Title II, which requires that government agencies provide equal access to programs and services they offer. While the ADA applies to all aspects of government services, this document focuses exclusively on the public right-of-way which includes sidewalks, curb ramps and pedestrian pushbuttons.

This document summarizes the Self-Assessment, which includes an accessibility assessment of pedestrian facilities as well as practices and procedures which relate to them such as curb ramp design standards. It also contains a Transition Plan, which identifies a schedule for the removal of barriers and identifies how the City will address requests for accommodations in a consistent manner.

The City's objective is to remove high priority structural barriers associated with sidewalks and curb ramps over the next XX years, in association with the Transportation Improvement Program (TIP) projects summarized in the City's Transportation Plan. In addition, the City is committed to ensuring continued ADA compliance for all capital improvement projects, private development, and any other right-of-way construction projects.

1 Introduction

1.1 Plan Requirements

The Americans with Disabilities Act (ADA) was enacted on July 26, 1990, and provides comprehensive civil rights protections to persons with disabilities in the areas of employment, state and local government services, and access to public accommodations, transportation, and telecommunications.

Cities and other government agencies are required to have an ADA self-assessment and transition plan when they grow beyond a threshold of 50 full-time equivalent employees. Accessibility requirements extend to all public facilities. The scope of this plan is focused solely on accessibility within the public right-of-way. Lack of an ADA transition plan can prompt legal action from the Department of Justice, which oversees federal ADA compliance or can result in loss of Federal Highway Administration grants for transportation projects.

There are five titles or parts to the ADA of which Title II is most pertinent to travel within the public right-of-way. Title II of the ADA requires Public Entities to make their existing "programs" accessible "except where to do so would result in a fundamental alteration in the nature of the program or an undue financial and administrative burden." Public rights-of-way are part of the City's program.

This effort was initiated by the City of SeaTac to satisfy the requirements of ADA Title II Part 35, Subpart D – Program Accessibility § 35.150 (d)(3) which states:

The plan shall, at a minimum—

(i) Identify physical obstacles in the public entity's facilities that limit the accessibility of its programs or activities to individuals with disabilities;

(ii) Describe in detail the methods that will be used to make the facilities accessible;

(iii) Specify the schedule for taking the steps necessary to achieve compliance with this section and, if the time period of the transition plan is longer than one year, identify steps that will be taken during each year

(iv) Indicate the official responsible for implementation of the plan.

The US Access Board is an independent federal agency created in 1973 to ensure access to federally funded facilities.

The US Access Board's Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way, or PROWAG, was published for comment in 2011 but has not been adopted. Despite this delay, many cities currently use the 2011 proposed guidelines as their standards. When PROWAG is eventually adopted by United States Department of Justice (USDOJ), it will become an amended section to the 2010 ADA Standards, which is the document in which all federal ADA standards are collectively documented within. The facilities evaluated under this plan were compared to the 2011 PROWAG.

Other City facilities such as buildings, playground and pools are also subject to Title II program accessibility requirements

but are governed under other ADA standards, not the PROWAG.

1.2 Plan Structure

The structure of this plan was organized to closely follow federal ADA transition plan requirements. This includes:

Chapter 2 - Documents self-assessment findings including physical barriers as well as practices or design standards that result in accessibility barriers.

Chapter 3 - Documents public engagement efforts.

Chapter 4 - Describes both programs and mechanisms the City will use to remove accessibility barriers and identifies a number of detailed recommendations the City should implement to remove accessibility barriers moving forward. One of these recommendations includes appointment of an official responsible for implementation of this transition plan.

Chapter 5 - Outlines a schedule for the transition plan, including prioritization of projects, planning level cost estimates and potential funding sources.

Chapter 6 - Provides the City with a location to store important and evolving plan information such as where and how this plan should be accessible, annual performance tracking, identification of the official responsible and other items that will change over time.

Best practices were identified and incorporated throughout the planning process beginning with the Scope of Work. In addition, key best practices are highlighted throughout the document as call-out boxes.

Several appendix items are included separately:

Appendix A – Open House Materials

Appendix B – Barrier Audit

Appendix C – Cost Estimate Backup

Appendix D – Maximum Extent Feasible Documentation Template

Appendix E – Grievance Process

Appendix F – APS Policy

Appendix G – Data Collection Inventory

2 Self-Assessment

Title II of the Americans with Disabilities Act (ADA) requires that jurisdictions evaluate services, programs, policies, and practices to determine whether they are in compliance with the nondiscrimination requirements of the ADA.

This section describes the data collection process and resulting inventory of sidewalk and curb ramp facilities within the City of SeaTac public rights-of-way. To inventory the existing sidewalk and curb ramp facilities in both a cost-effective and accurate way, Transpo Group and City staff worked in coordination throughout the inventory and self-assessment process. The inventory and self-assessment is described in these sections.

2.1 Policy

The City of SeaTac primarily addresses planned pedestrian facilities in the Transportation Element (2015), the Transportation Master Plan (2015), and in the City's Municipal Code. To determine what ADA programs, policies, and practices are currently being implemented, the previously mentioned sources as well as Transportation 2040 (PSRC, 2010) and Countywide Planning Policies (King County, 2012) were reviewed.

2.1.1 Method

The documents mentioned above were reviewed for content involving existing ADA programs, policies, and practices including any PSRC or county requirements that may be in place. ADA-related content was then compiled to see how they compare to one-another. ADA practices and designs are discussed in section 2.2.

2.1.2 Findings

The SeaTac Municipal Code contains one code pertaining to ADA compliance and design. Section 15.465200 states that the City recognizes the need to make reasonable exceptions to its Zoning Code to accommodate special needs of persons with disabilities. Structures may be required to be brought back into compliance with ADA.

Intent to address citywide ADA concerns can also be found in other documents, such as the Transportation Element. Goal 4.4 plans for and develops a system of transportation facilities for all users and all modes including pedestrians, transit users and bicyclists. Policy 4.4C of the Transportation Element specifically states improvements on arterials should include safe and attractive pedestrian facilities and crossings on both sides of the street throughout SeaTac's transportation system. A main goal of the Transportation Element is to provide transportation infrastructure for all modes and users including pedestrians, transit users, and bicyclists.

2.2 Practices and Design Standards

Practices and design standards that meet accessibility standards are essential to ensure new or upgraded pedestrian facilities are accessible and that these upgrades contribute to the removal of accessibility barriers throughout the City. This section summarizes a review of City practices and

design standards for barriers and includes major findings of this work. Complete documentation of this work can be found in Appendix B. The audit was conducted in August of 2017.

2.2.1 Method

The City of SeaTac maintains adopted design standards for pedestrian facilities. These standards are used for City funded projects as well as privately designed and constructed projects within the public right-of-way. Street design standards included in the King County Design and Construction Standards and Figures (2016) and City of SeaTac Addendum to King County's Road Standards (2017) were audited for compliance with ADA guidelines found in Public Rights-of-Way Accessibility Guidelines (US Access Board, 2011), WSDOT Design Manual (WSDOT, 2017), and WSDOT Field Guide for Accessible Public Right-of-Way (WSDOT, 2012).

2.2.2 Findings

As a result of the ADA barrier audit, a number of changes to the current City standards are recommended to comply with ADA requirements. These recommendations are grouped into four categories: Sidewalks, Crosswalks, Curb Ramps, Signals, and Other Pedestrian Areas and can be found in Appendix B.

2.3 Physical Barrier

2.3.1 Data Collection

The self-assessment included a robust data collection effort that included 5 different attributes for sidewalks, 20 attributes for curb ramps, 15 attributes for signal pushbuttons, 3 for crosswalks, and 9 attributes for barriers/hazards. Attributes were collected in the field with a team of two that covered ADA facilities in the City of SeaTac over a ten-week period. The following sections describe the methodology for collecting data for the self-assessment.

2.3.1.1 Field Training

Transpo Group trained IDAX staff to conduct data inventory using Android and iPad tablet units with GIS geodatabase information. Attributes for the City's sidewalks, curb ramps, crosswalks, and signal pushbuttons were collected between August and November 2017.

IDAX staff then conducted field and data collection under supervision to ensure consistent and accurate measurement of sidewalk and curb ramp measurements as well as correct recording of information using a GIS database.

Example of Data collection in the field

2.3.1.2 Process

Data collection staff were provided iPad units with the Collector for ArcGIS application installed, tape measure (to measure sidewalk and curb ramp dimensions), and a smart level to efficiently and accurately measure sidewalk and curb ramp slopes. For sidewalks, cross slopes were measured at each end of the segment and once in the middle. The predominant sidewalk width was recorded for the length of the block from one intersection to the next. In addition, a separate database was developed to inventory specific sidewalk barriers including:

- Horizontal and Vertical Discontinuities
- Fixed, Movable, or Protruding Objects
- Non-Compliant Driveways

Each existing curb ramp or street corner with missing curb ramps were recorded individually. When measures of the same attribute, such as flare slope (typically each ramp has two flares), differed, the worst measure for accessibility was recorded. The physical inventory included;

- over 69 miles of existing sidewalks, paved shoulder walkways, paved separated walkways
- approximately 814 curb ramps
- approximately 346 signal pushbuttons
- approximately 523 crosswalks

2.3.1.3 Quality Control

Pre-planning for the physical inventory effort included the identification of regular quality control and evaluation of the raw data. Initial review of the raw data was provided by Transpo Group. Data discrepancies or errors, including missing data, were identified and coordinated with staff to re-inventory problem areas. As with all manual data collection, a few small inconsistencies occurred during data collection, mainly regarding default values when inputting inventory. Secondary data collection efforts to replace questionable or missing data were conducted and addressed the most significant issues.

2.3.2 Findings

The following sections detail the primary barriers inventoried and analyzed for ADA compliance. The barriers found applied to different features including curb ramps, sidewalks, discontinuities and obstacles in pedestrian routes, and pedestrian pushbuttons. State and Federal regulations dictate that curb ramps and sidewalks be ADA compliant. The result of the inventory analysis showed that the majority of ADA features within the public right-of-way are in need of improvement to meet requirements.

2.3.2.1 Curb Ramps

The majority of the existing curb ramps are non-compliant based on current ADA requirements. The data surveyed for verifying curb ramp compliance was divided into two overarching categories: major non-compliant and minor non-compliant. The findings demonstrated that most of the curb ramps in the city are non-compliant at a level that falls within the major non-compliance classification. Figure 2-1 shows the percentage of non-compliant to

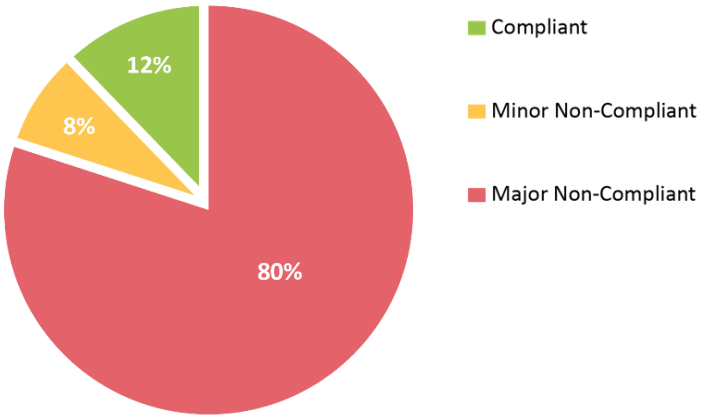


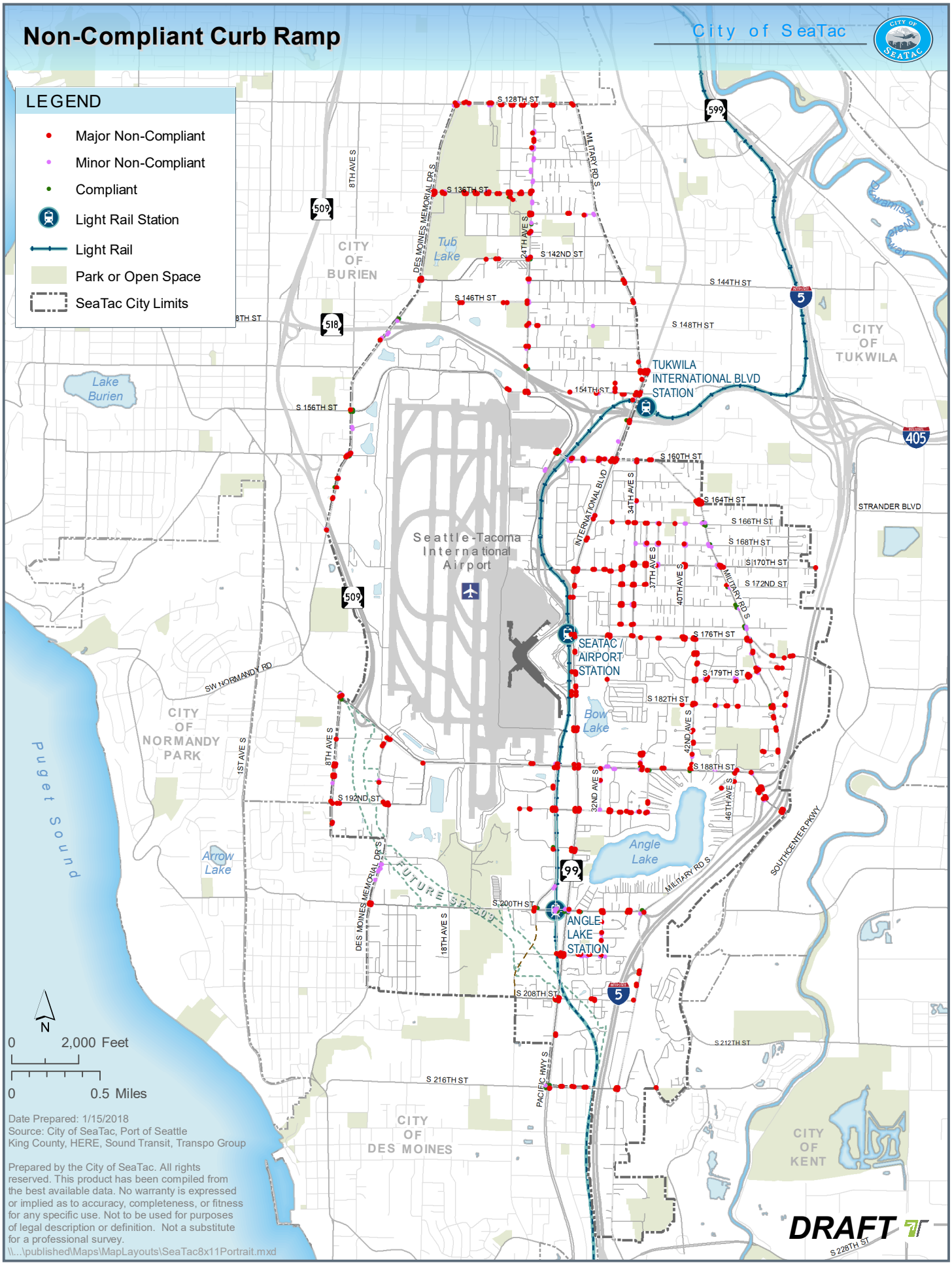
Figure 2-1 Percentage of Major and Minor Non-Compliant Curb Ramps and Compliant Curb Ramps

compliant curb ramps within the City, while Figure 2-2 provides information on where these different levels of compliant curb ramps are located. Major non-compliance is often primarily attributable to three core criteria:

- The ramp width is too narrow (Figure 2-3)
- The ramp running and cross slope are too steep (Figure 2-4 and 2-5)
- Asphalt or other type of material are used in lieu of a concrete curb ramp or a ramp is missing (Figure 2-6)

Non-Compliant Curb Ramp

City of SeaTac



Date Prepared: 1/15/2018
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King County, HERE, Sound Transit, Transpo Group

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FIGURE 2-2

Curb Ramp Width

City of SeaTac

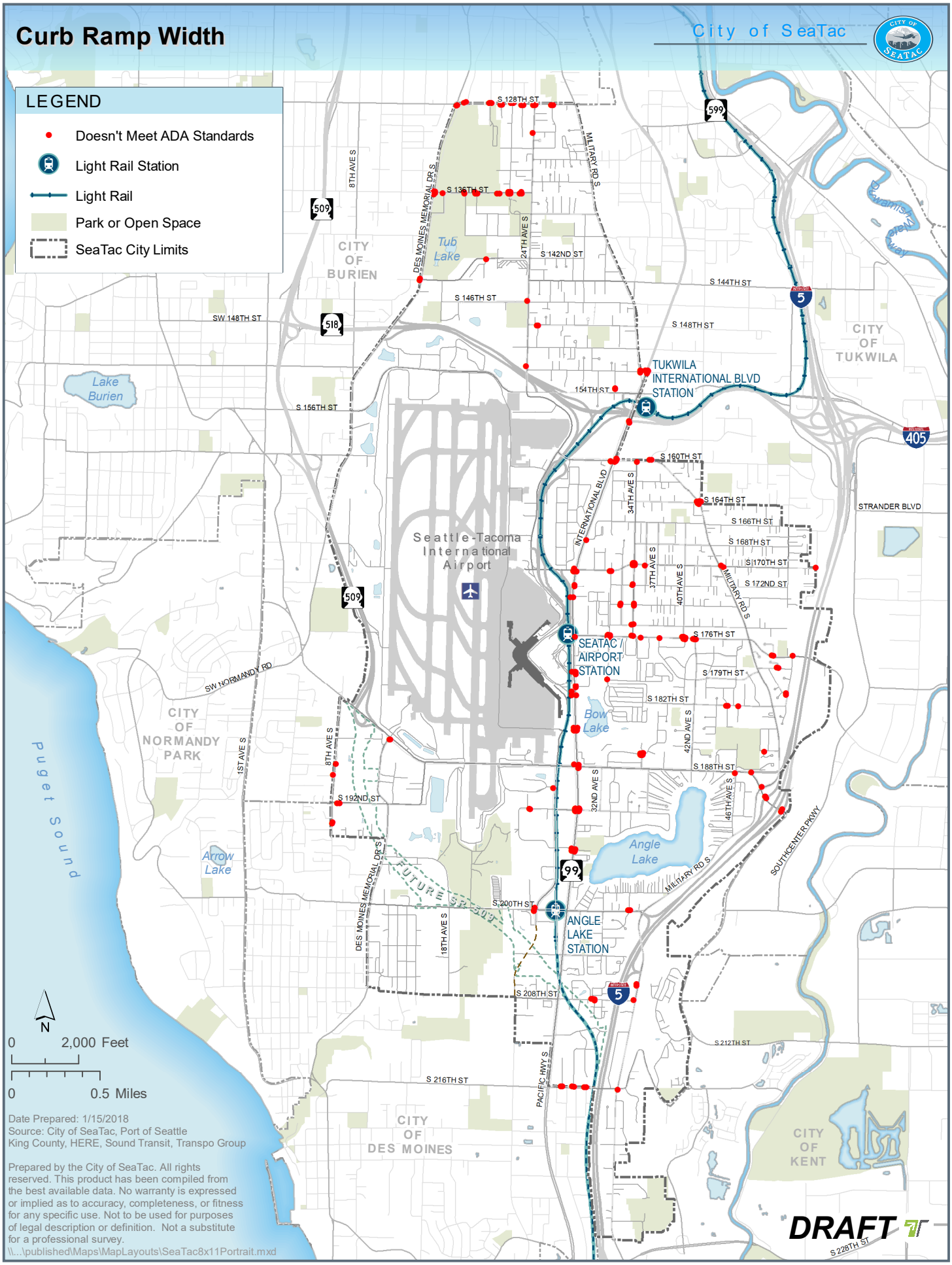

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FIGURE 2-3

Curb Ramp Running Slope

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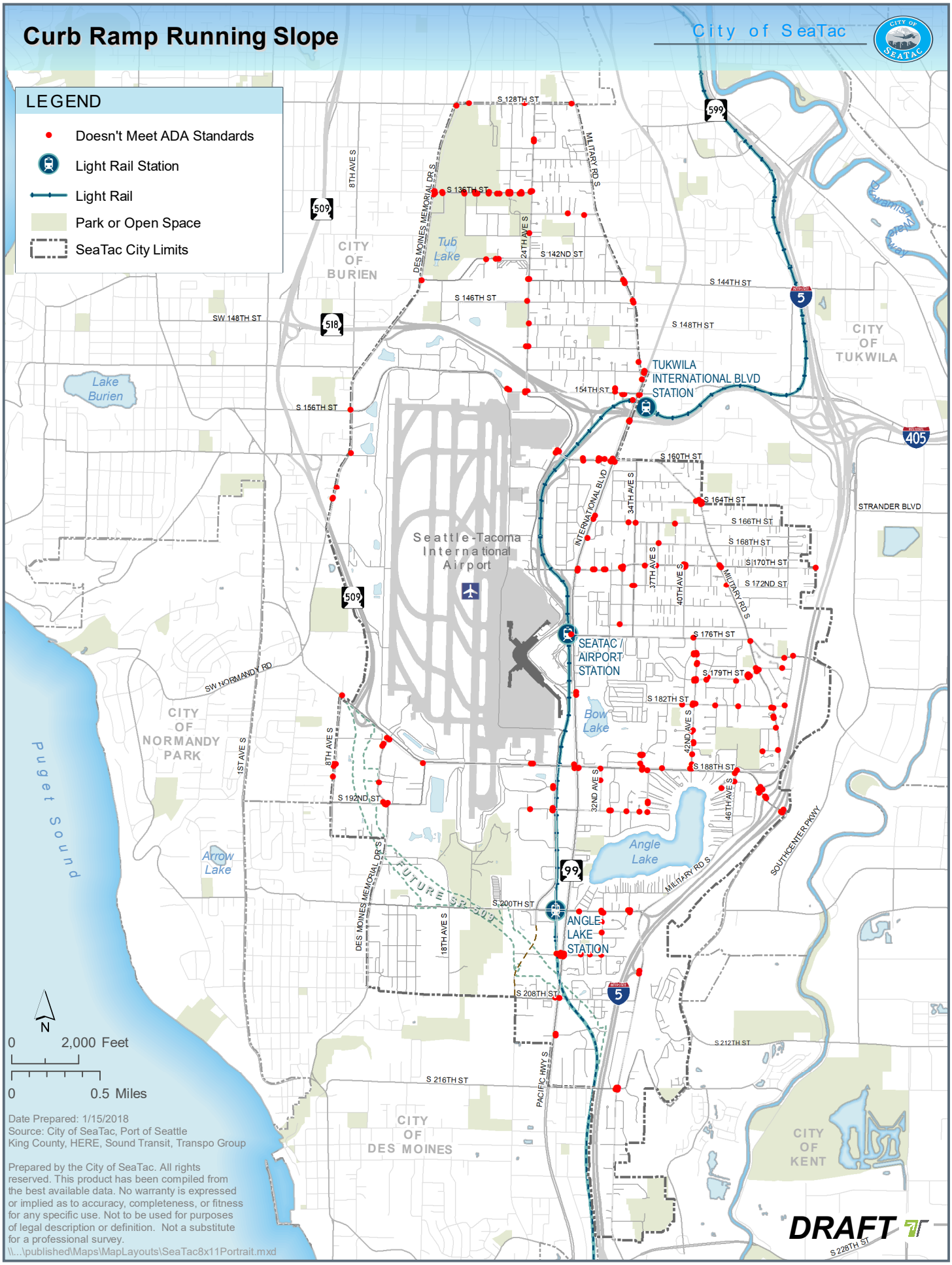

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FIGURE 2-4

Curb Ramp Cross Slope

City of SeaTac

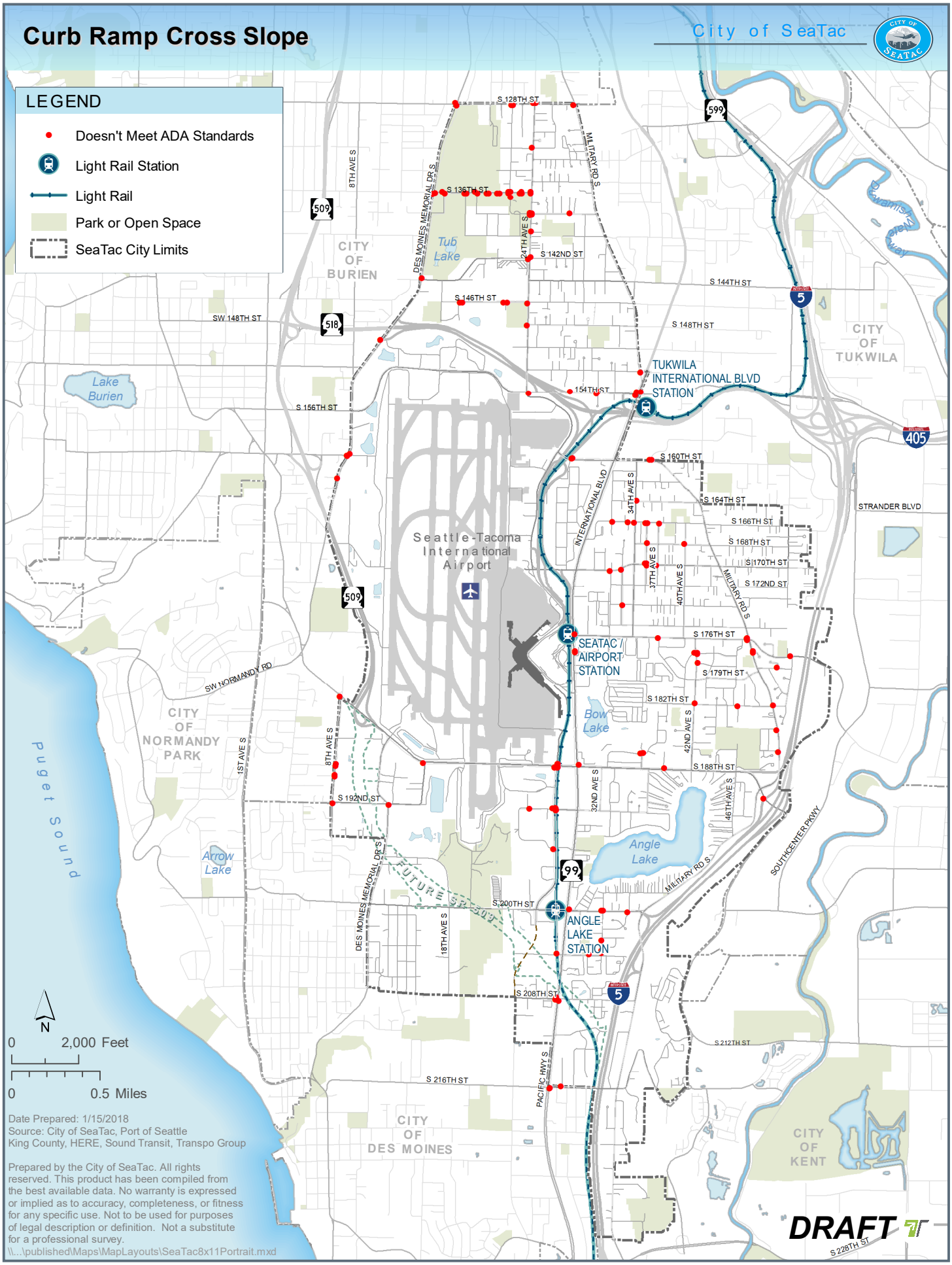

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FIGURE 2-5

Curb Ramp without Receiving Ramp

City of SeaTac

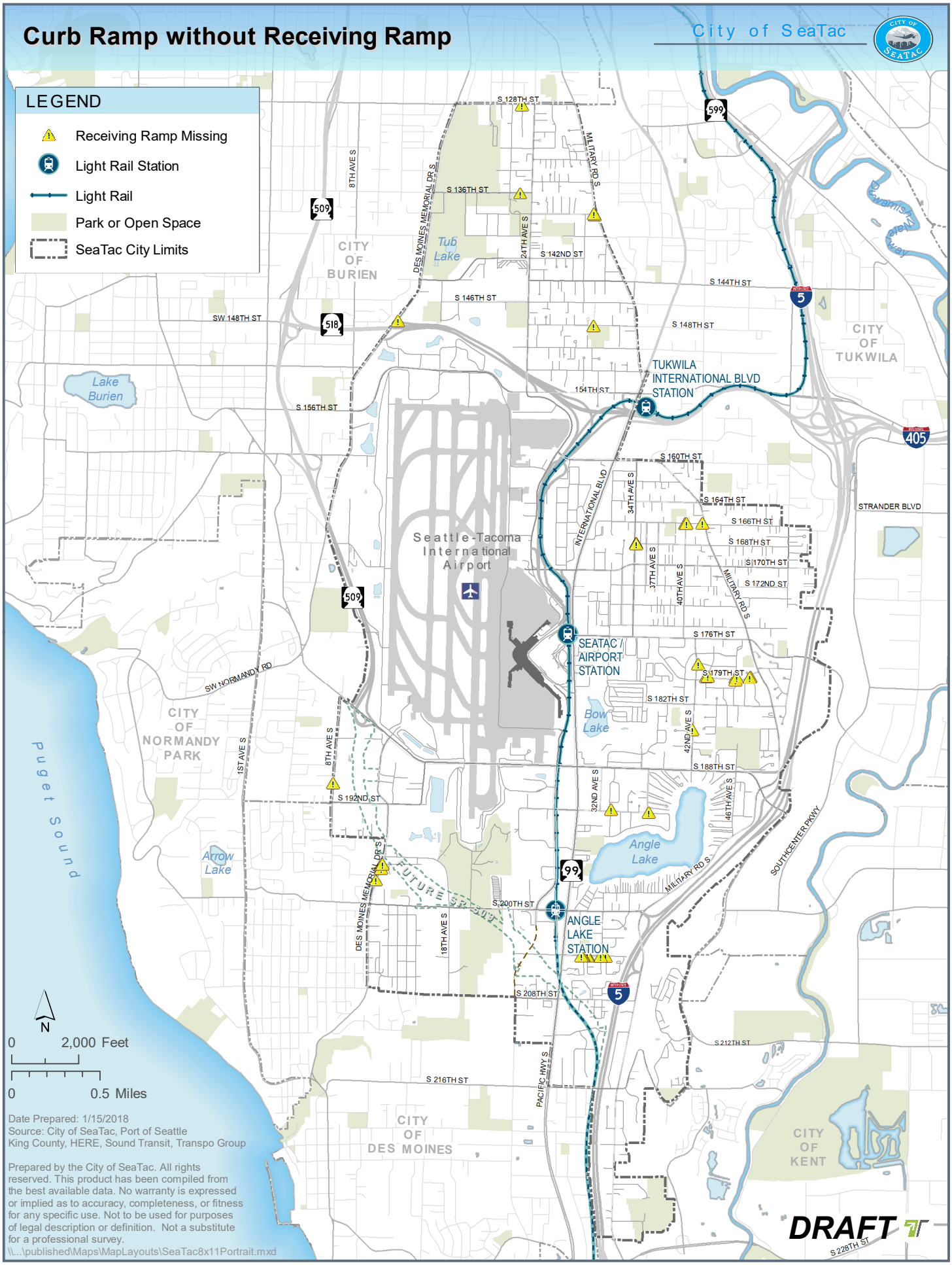

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FIGURE 2-6

2.3.2.2 Sidewalks

Several miles of sidewalks in the City of SeaTac are non-compliant based on ADA requirements. Non-compliance is often primarily attributable to:

- The sidewalk width is too narrow (Figure 2-8)
- The cross slope of the sidewalk is too steep (Figure 2-9)
- The sidewalk has fixed/non-fixed barriers and other discontinuities that impede required usable pedestrian space (Figure 2-10)
- Non-compliant driveways intersect the sidewalk (Figure 2-11)

Figure 2-7 demonstrates the percentage of compliant and non-compliant sidewalk segments throughout the City. Sidewalk segments that have at least one of the following conditions, two or three non-compliant cross slopes, inadequate width, poor surface condition, or asphalt surface material, fell into the major non-compliant category. All other sidewalks that had a non-compliant issue not in the major non-compliant list were considered minor non-compliant.

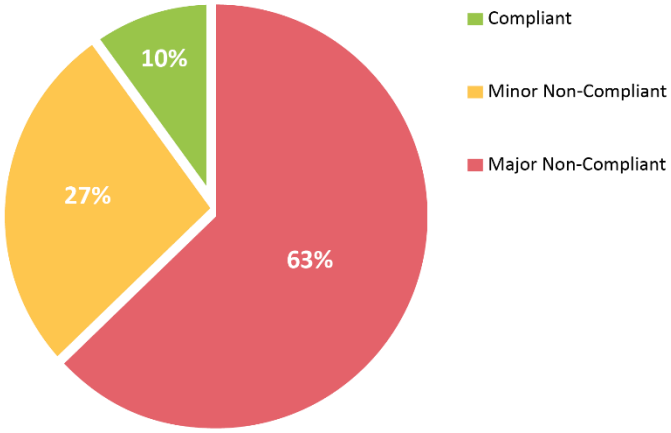

Figure 2-7 Percentage of Major and Minor Non-Compliant Sidewalks Segments and Compliant Sidewalk Segments

Sidewalk Width

City of SeaTac

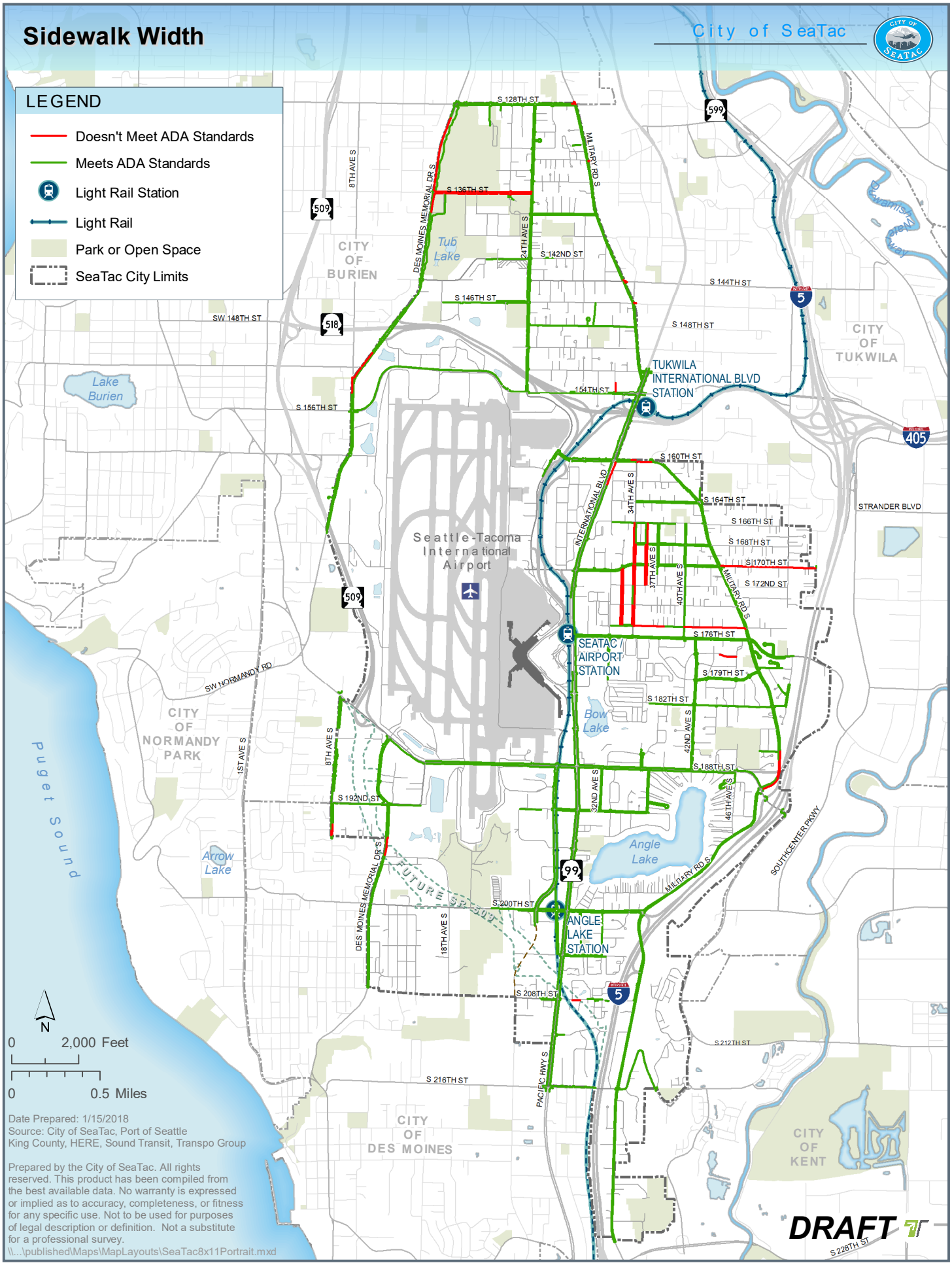

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FIGURE 2-8

Sidewalk Cross Slope

City of SeaTac

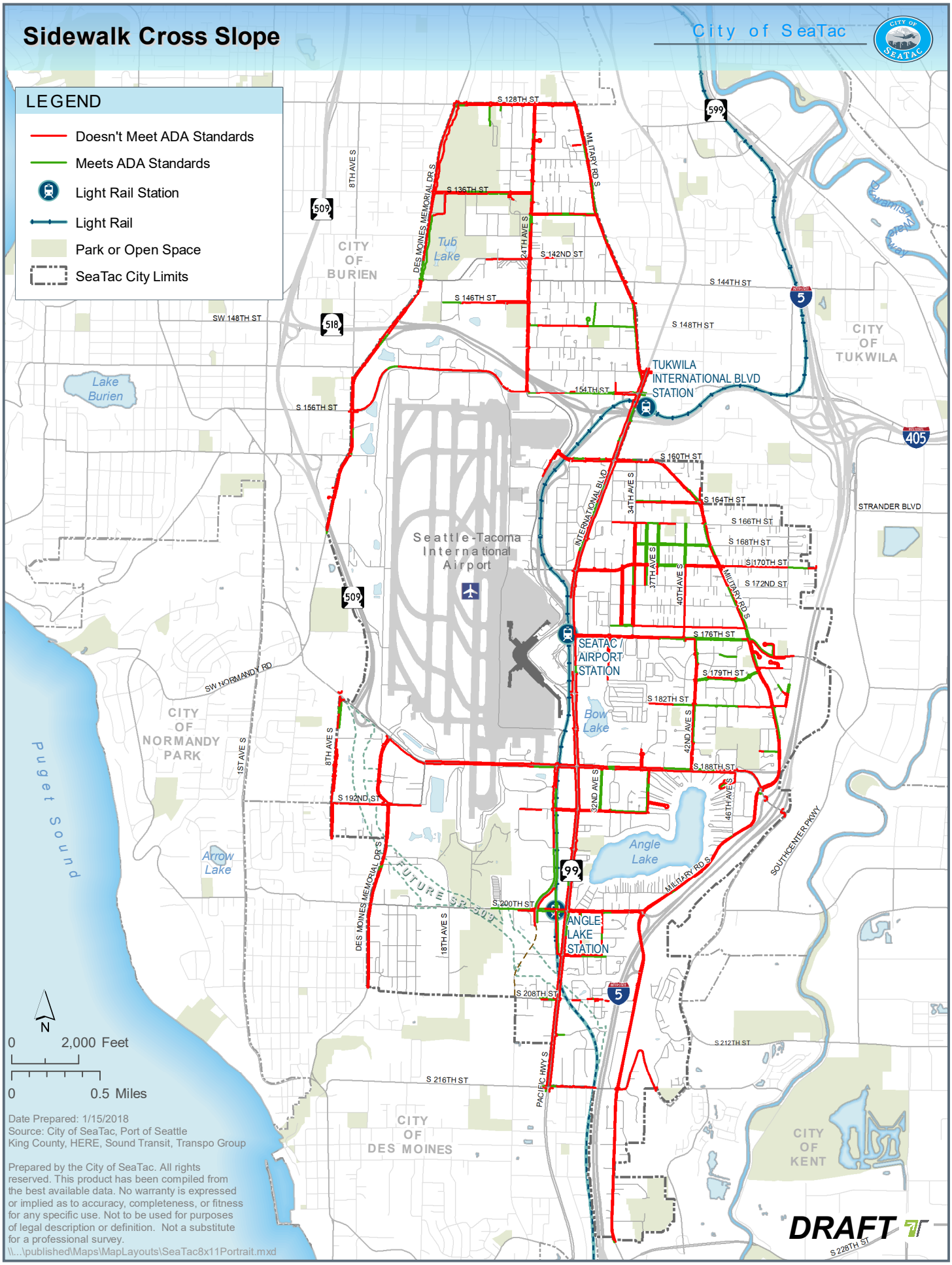

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FIGURE 2-9

Sidewalk Barriers

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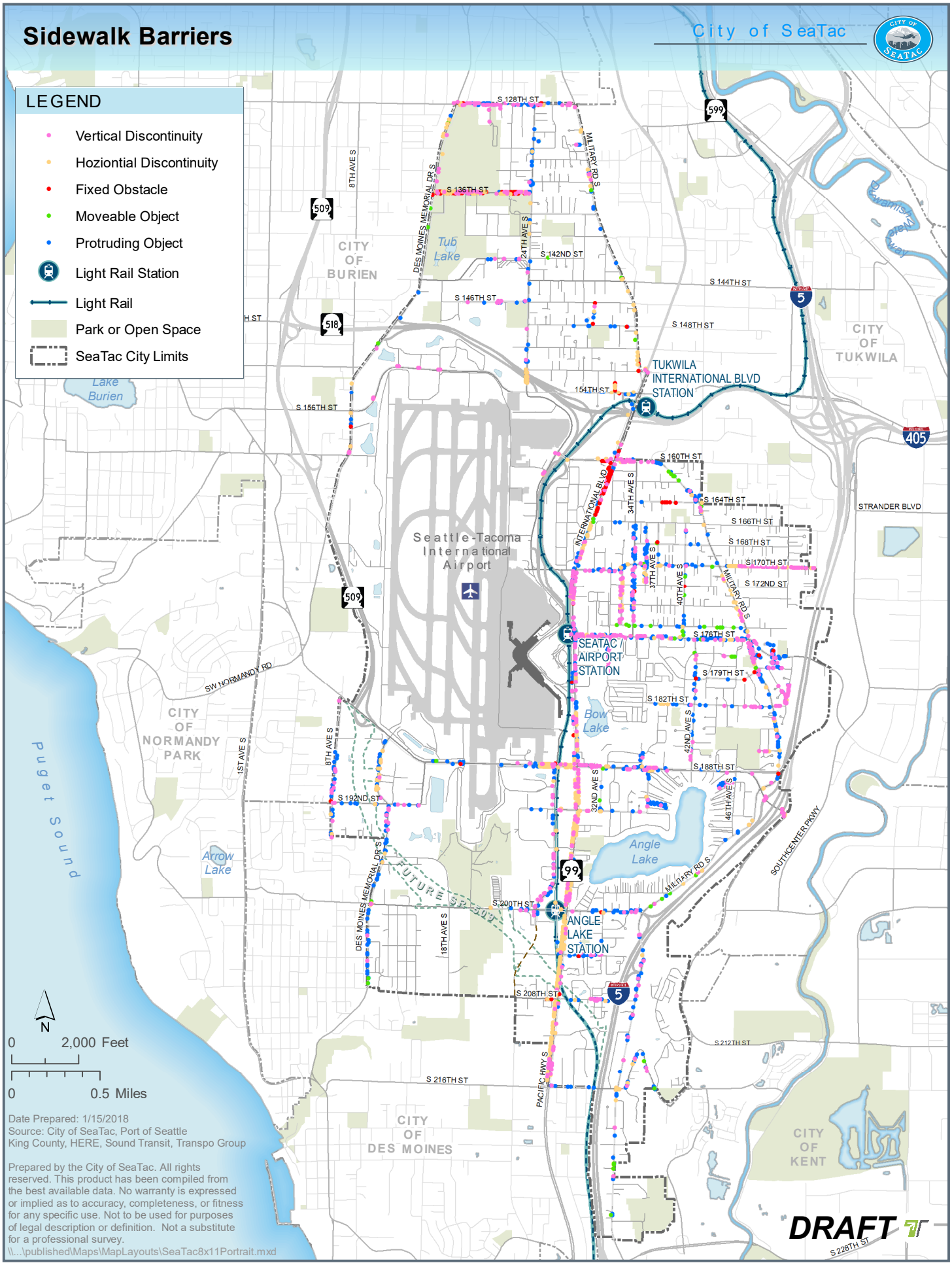

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FIGURE 2-10

Non-Compliant Driveways along Sidewalk

City of SeaTac

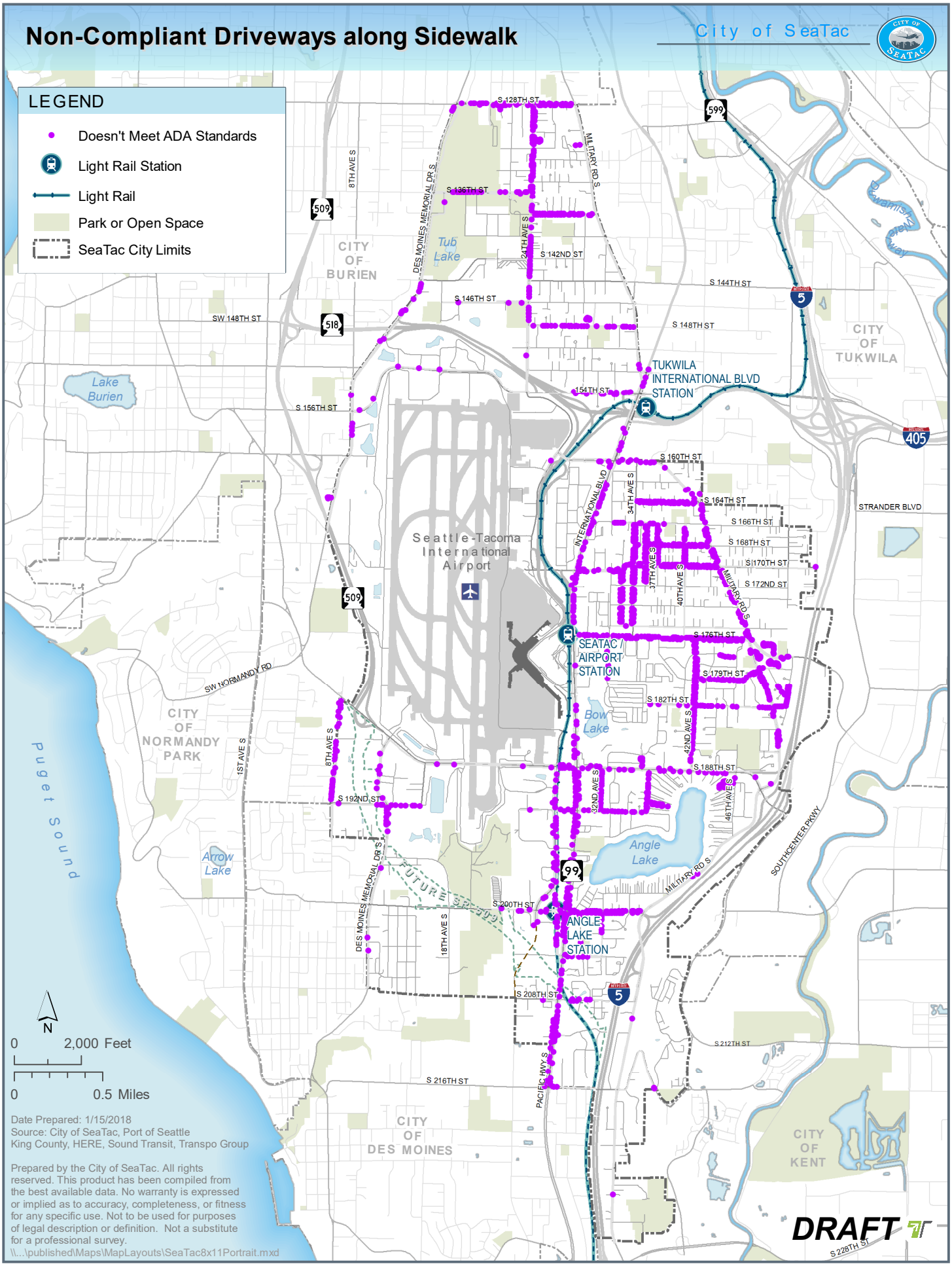

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FIGURE 2-11

2.3.2.3 Signal Pushbuttons

Accessible Pedestrian Signals (APS) and Pushbuttons is an integrated system that communicates to pedestrians in a visual, audible, and vibrotactile manner. Almost all the City's pushbuttons were found to be of the non-APS style and therefore do not meet current ADA requirements as shown in Figure 2-12. The requirement to use APS-style pushbuttons is relatively new and the lack of compliance is due to the crossing having not been upgraded since the requirement was put into place.

An APS policy was developed as part of this transition plan and is included in Appendix F.

Signal Push Buttons: APS and Non-APS

City of SeaTac

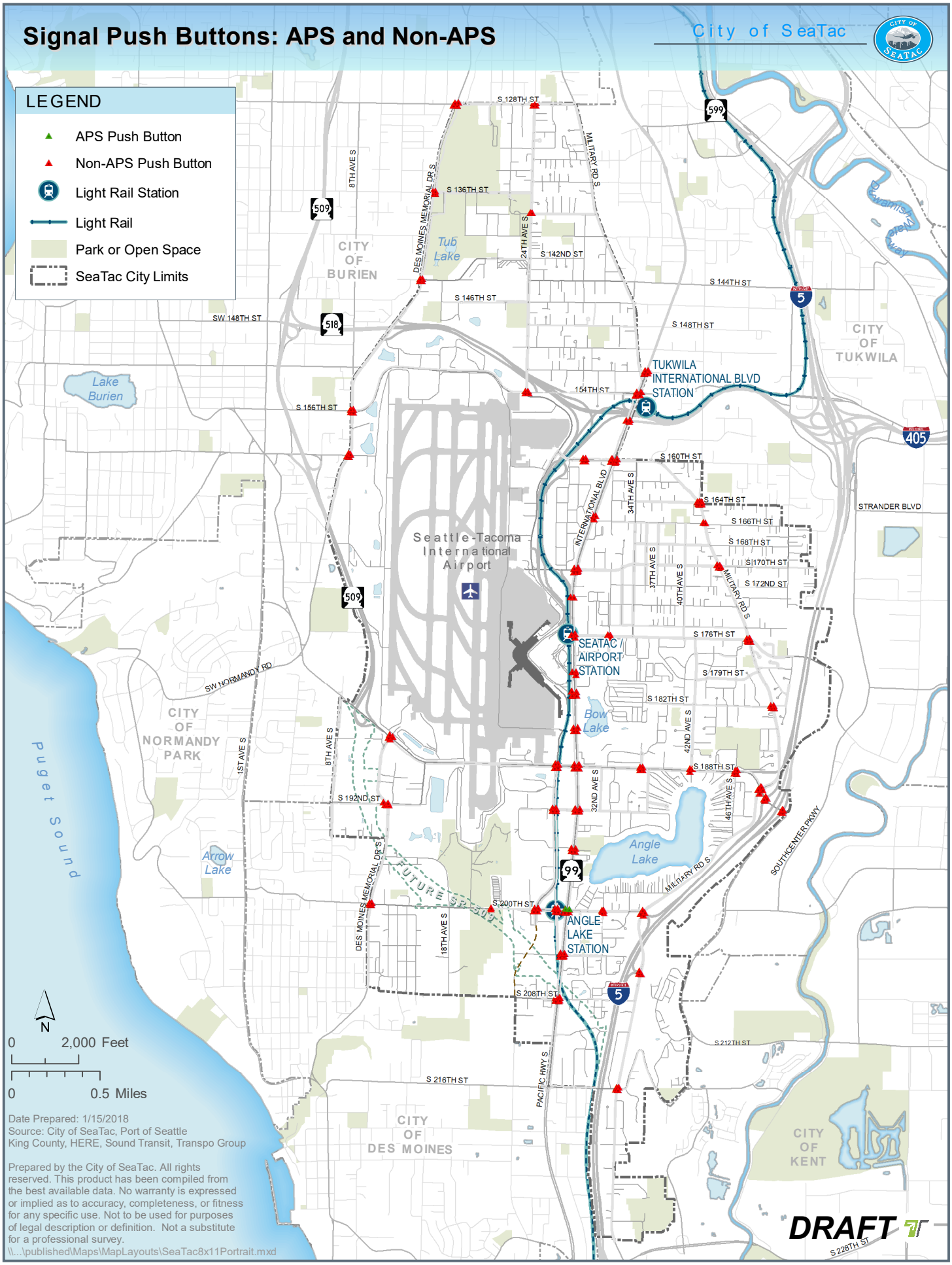

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FIGURE 2-12

3 Stakeholder Engagement

Public and stakeholder input is an essential element in the transition plan development and self-evaluation processes. ADA implementing regulations require public entities to provide an opportunity to interested persons, including individuals with disabilities or organizations representing individuals with disabilities, to participate in the self-evaluation process and development of the transition plan by submitting comments (28 CFR 35.105(b) and 28 CFR 35.150(d)(1)). There were three primary goals for the public outreach activities prior to adopting the plan:

- Meet Title II requirements for public comment opportunity.
- Inform the public about the City's plan and processes regarding removal of barriers to accessibility within the right-of-way. Provide information to assist interested parties to understand the issues faced by the City, alternatives considered and planned actions.
- Obtain public comment to identify any errors or gaps in the proposed accessibility transition plan for the public rights of way, specifically on prioritization and grievance processes.

3.1 Engagement Methods

3.1.1 Open House

To be Completed

3.1.2 Project Website and E-mail address

The City of SeaTac developed a project website: http://www.ci.seatac.wa.us/government/city-departments/public-works/ada-transition-plan for easy on-line access to project information and ways to provide feedback.

3.2 Meeting ADA Standards

Per 28 CFR 35.150(d)(1), public involvement is required as follows: A public entity shall provide an opportunity to interested persons, including individuals with disabilities or organizations representing individuals with disabilities, to participate in the development of the transition plan by submitting comments. A copy of the transition plan shall be made available for public inspection.

The Draft City of SeaTac Transition Plan was made available for public review and comment for a period beginning (TBD) and ending (TBD). A link to the draft plan was provided on the City's project website.

Title VI Nondiscrimination Law

Title VI of the Civil Rights Act of 1964 is a Federal statute and provides that no person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance. This includes matters related to language access or limited English proficient (LEP) persons.

The City of SeaTac ADA Transition Plan public participation process included translation service upon request for open house materials, draft plan and open house. Additionally, the open house was specifically held at City Hall because the building is accessible.

4 Barrier Removal

Removal of accessibility barriers within the public right-of-way is the primary purpose of ADA transition plans. The following section documents the primary methods of barrier removal and contains recommended changes to city policies, practices and design standards to comply with state and federal requirements related to ADA accessibility in the public right-of-way.

4.1 Barrier Removal Methods

The City currently uses a number of methods to remove accessibility barriers in the public right-of-way and has the potential to add more options to increase the rate of barrier removal. The methods being used currently range from stand-alone projects, removal of barriers as part of other City roadway projects and removal of barriers by development. In order for these methods to be effective, City practice and design standards must comply with federal ADA guidance. If standards are not updated, new or reconstructed pedestrian facilities may not be constructed to accessibility standards, requiring costly revision, and increasing the duration it will take the City to remove accessibility barriers.

4.1.1 Capital Projects

The Capital Improvement Program (CIP) defines projects and shows identifies funding for the City's capital projects including street improvements ranging from minor street widening to street extension projects. A variety of short and long-range plans, studies and individual requests help identify projects which are then included and prioritized. The City of SeaTac updates its CIP annually and coordinates with other jurisdictions, WSDOT, and the community at-large with regards to timing and project priorities.

Pedestrian improvements (new or replacement) are often included as a component of these projects. With this transition plan, accessibility barriers are now easier to identify and include in CIP projects.

4.1.2 Annual Street Overlays & Preservation Program

The Annual Street Overlays & Preservation Program is a program that is used to preserve and enhance the City's existing and planned transportation system. The program provides the City with a systematic approach for evaluating arterials and local roadways for pavement conditions, signage, sight distance restrictions, and other similar issues. Frequently, as a portion of these projects, pedestrian facilities are revisited and improved to current standards.

4.1.3 Sidewalks Program

The Sidewalk Program is a program run by the City's Sidewalk Committee. The program is used to maintain and enhance pedestrian routes in the City. This program provides an opportunity to select projects not typically covered by the capital improvement program. The committee identifies locations without existing sidewalks and locations that are in need of reconstruction. With this program, the City can fill in missing gaps in sidewalks or pathways that are needed to provide a continuous route to parks, commercial areas, and other pedestrian destinations.

The program can also be used to construct ADA ramps, school routes, or other projects to improve existing sidewalks.

4.1.4 Neighborhood Multi-Modal Transportation Improvement Program

The Neighborhood Multi-Modal Transportation Improvement Program initiates annual projects identified in the City's Transportation Master Plan to assist with the Safe and Complete Streets Plan. Within the plan, projects are selected based on the goal of constructing new and maintain existing pedestrian and bicycle facilities on non-arterial streets. These projects range from construction of new shared bikeways to reconstructing roadways with pedestrian and/or bicycle friendly features.

4.1.5 Traffic Signal Upgrades

The City upgrades existing traffic signals for a variety of reasons, often with the goal of reducing vehicle congestion. When these upgrades occur, the City has the opportunity to ensure that push buttons and pedestrian signals meet current accessibility standards including button location and position, non-visual format of indicating "WALK" and "DON'T WALK" using audible tones, and vibrotactile surfaces.

4.1.6 Utility Upgrades or Repairs

Utility upgrades or repairs to water, sewer, communication, or electrical systems can impact the pedestrian network. The City should work internally and with utility partners to ensure that pedestrian facilities are rebuilt to be ADA compliant if altered by projects.

4.1.7 Private Development

Even with a variety of City funded accessibility improvements, it will take many years to remove accessibility barriers or remove sidewalk gaps. Redevelopment of properties such as construction of new housing or commercial buildings or major remodels can provide a valuable boost to barrier removal efforts. Updating the City's design standards for frontage improvements will help insure facilities built by private development are accessible.

4.2 Barrier Removal Recommendations

An assessment of City policies, practices and design standards, as documented in Chapter 2, was conducted to understand the process that results in barriers to accessibility in the public right-of-way. This assessment was informed through a review of adopted City plans, field observations, discussions with City staff and a detailed design audit (see Appendix B).

The recommendations included below were developed in response to this assessment and have been written in such a way that recommended actions are clearly identified and progress on each specific recommendation can be easily tracked and updated.

Recommendation 1:
Updated City design standards to match the PROWAG guidance

Status: Underway
A detailed audit of City design standards using the Proposed Accessible Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG), WSDOT Design Manual (July 2013) and WSDOT Field Guide (2012) was conducted to inform Chapter 2. This audit, which is included in Appendix B, recommends a number of specific changes to the City's Design Guidelines including additional construction tolerances or more details defining maximum slopes. Recommendations for the design of sidewalks, crosswalks, curb ramps,

signals and other areas such a work zones are also identified. The City should update the City of SeaTac Addendum to King County Road Standards and work with King County to adjust County standards to meet PROWAG standards.

Recommendation 2:
Identify an official responsible for Transition Plan implementation within the Public Works Department

Status: TBD
The XYZ has been identified as the official responsible (see Section 6.1 for more information). This position, often referred to as the "ADA Coordinator", is one of the four major federal requirements for every ADA transition plan. The ADA Coordinator is responsible for facilitating city transition planning such as responding to grievance requests.

Recommendation 3:
Adopt a Citywide APS policy

Status: Pending
Accessible Pedestrian Signal (APS) policies serve as a means for cities to be consistent with ADA requirements at traffic signals. The APS policy covers the location and means of communication for APS devices that "communicate information about pedestrian timing in nonvisual formats such as audible tones, verbal messages, and/or vibrating surfaces" (MUTCD). The recommended APS policy is included in Appendix F.

Recommendation 4:
Educate City staff, consultants, and contractors on PROWAG standards

Status: On-going
Transition plans are often a learning experience for City staff, consultants, and contractors alike since they change existing practices and expectations. The City should use updates to the City's design standards as an opportunity to teach and learn about accessibility and the barriers that those with limited mobility or sight experience when traveling in the City's public right-of-way. Education can take many forms from review of updated design standards with key individuals such as field inspectors and contractors, development and review of City specific design standards or checklists with City engineers, or training from groups that serve those with disabilities.

Recommendation 5:
Clarify and enforce requirements around accessibility through construction zones

Status: On-going

Work zones should provide the same level of accessibility as permanent pedestrian facilities covered by ADA requirements. Pedestrian accessibility must be maintained in areas of street construction and maintenance. SeaTac should review standards and policies to ensure that alternative walking routes are secured within designated work zones.

Recommendations 6:
Develop a standard grievance process for barriers in the public right-of-way

Status: Underway
Public entities subject to Title II of the ADA are required to adopt and publish a grievance procedure as part of their transition plan. A grievance process allows community members to formally report denial of access to a City facility, program, or activity on the basis of disability. It is recommended that the City of SeaTac adopt a grievance process that is easy to initiate, transparent and responsive.

A process like this could include a two-step approach to comply with the requirement for grievance procedures. The first step of the process would be to file a "Request for

Service" and the second step to file for a "Grievance".

A Request for Service allows the public to request accommodations or barrier removal. A request should be possible in-person, by telephone, by mail, or via e-mail and should be recorded in the Public Work' Maintenance Management System (MMS). Information on how to file this should be easily accessible. The recording of the request is critical for recordkeeping and to evaluate the Department's response to ADA-related requests.

The second step, a Grievance, is used to report denial of access to a City facility, activity, or program. A Request for Service should be required prior to submitting a grievance. The City should then acknowledge, review the filing, and respond within a set number of days upon receipt. A clear process for appeal of a Grievance decision should be communicated if a denial is issues.

Recommendation 7:
Develop a consistent and centralized MEF documentation database

Status: Underway
Maximum extent feasible (MEF) is policy that dictates that alterations to the public right-of-way that could affect the usability of a facility must be made in an accessible manner to the maximum extent feasible. ADA Standards for Accessible Design (2010) dictates that:

> *Each facility or part of a facility altered by, on behalf of, or for the use of a public entity in a manner that affects or could affect the usability of the facility or part of the facility shall, to the maximum extent feasible, be altered in such manner that the altered portion of the facility is readily accessible to and usable by individuals with disabilities, if the alteration was commenced after January 26, 1992.*

The City of SeaTac should adopt a MEF documentation process and standard template for the documentation of maximum extent feasible when addressing new or altered construction. This documentation should be stored in a centralized location and be linked to the City's GIS ADA self-assessment database to ensure consistency of data.

Consolidation of past MEF records into this data is also recommended to allow the City to identify if pedestrian facilities in the GIS self-assessment were subject to an MEF, and should therefore be removed from the City's list of barriers. A template example has been provided in Appendix D.

Recommendation 8:
Develop performance measures and processes to track removal of barriers

Status: Pending
The primary purpose of an ADA transition plan is to develop a plan for removal of accessibility barriers. In order to show progress towards this requirement, the City should develop a process of tracking barrier removal on a year by year basis. It is recommended that the City actively updated the GIS ADA self-assessment database developed for this plan, tracking how and when ADA barriers are removed. This data can be used to provide annual updates on progress and demonstrate to the public as well as federal regulators that the City is making progress to meet Title II requirements.

Recommendation 9:
Begin to work on other Title II

required elements such as public buildings and parks

Status: Pending
Title II, "protects qualified individuals with disabilities from discrimination on the basis of disability in services, programs, and activities provided by State and local government entities." and extends beyond accessibility within the public right-of-way.

The City should develop a plan for meeting other Title II requirements such as removal of barriers in public buildings, programs and parks.

5 Implementation

5.1 Approach

Development of an implementation plan and transition schedule included three steps once the Citywide barrier assessment was complete. First, all pedestrian facilities with an identified barrier were prioritized based on two factors, the severity of the barrier and the proximity that facility to public destinations. Next, a planning level cost estimate was developed to provide an estimate of the financial resources needed to remove all barriers. Finally, a schedule was developed based on the annual financial resources the City Council has allocated to barrier removal. The following chapter describes these steps in more detail.

5.2 Prioritization

To focus City efforts toward facilities that pose the largest barrier within the public right-of-way, an analysis of the accessibility of each pedestrian facility and its proximity to public destinations such as schools, libraries, parks, transit, and city buildings was completed. The result of this analysis is a prioritized list of projects, with the highest benefit projects identified for removal first.

To complete this assessment, a multi-criteria analysis was conducted to determine which facilities do not meet existing sidewalks and curb ramp standards. Each attribute collected in the field was compared against PROWAG requirements as outlined in Chapter 2.

If the facility does not meet PROWAG criteria or is located near public destinations, points were assigned, with the number of points dependent on the relative importance or proximity. Sidewalks or curb ramps with poor PROWAG compliance and a number of proximate destinations received a high score and are prioritized for removal while PROWAG compliant ramps far from public destinations have a score of zero. Missing sidewalks or curb ramps were assigned the greatest number of points.

5.2.1 Accessibility Index Score

A number of criteria were used to establish the extent to which each pedestrian facility did or did not present a barrier to accessible mobility. Table 5-1 shows these criteria, the threshold used to identify them as a barrier, and the score used to indicate the severity of each barrier relative to each other.

Facilities with a higher Accessibility Index Score (AIS) presented a large accessibility barrier and are shown in Figures 5-1 and 5-2 as red dots or lines. Facilities with fewer or no barriers are shown as green.

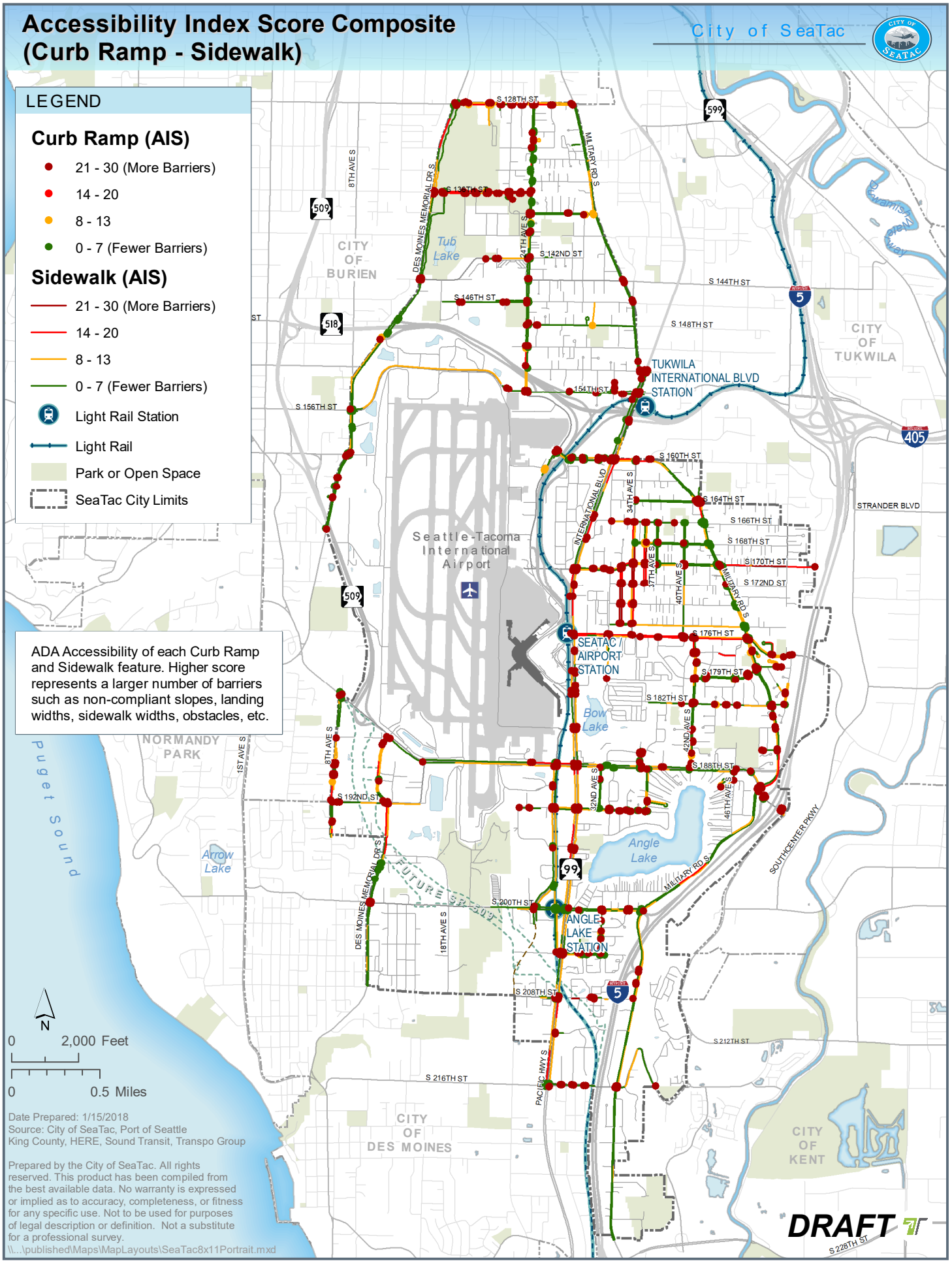
Table 5-1 Accessibility Index Score Value

ACCESSIBILITY INDEX SCORE	CRITERIA	THRESHOLD	SCORE
Sidewalks	Width	< 48 inches	5
	Cross Slope	> 2%	4
	Condition	< Average	3
	Vertical Discontinuity	> ¼ inch	4
	Horizontal Discontinuity	> ½ inch	3
	Fixed Obstacles	Present	3
	Moveable Obstacles	Present	3
	Protruding Obstacles	Present	3
	Non-Compliant Driveways	Present	3
	Maximum Sidewalk (AIS) Score		30
Curb Ramps (Max. Score)	Ramp Width	< 48 inches	30
	Ramp Running Slope	> 8.3% or >5% (Blended)	30
	Ramp Cross Slope	> 2%	30
	Asphalt or Other Type	Non-Compliant Type	30
Curb Ramps	Accessible Path	No	2
	Turning Space	None or <4ft x 4ft	5
	Turning Space Cross Slope	>2%	3
	Flare Slope	>10%	2
	Receiving Ramp	No	2
	Truncated Domes (DWS)	No	3
	Truncated Domes (DWS Placement)	Other than Back of Curb	1
	Truncated Domes (DWS Depth)	<2 feet	1
	Truncated Domes (DWS Width)	Less than Full Width	1
	Grade Break	Not Concurrent	2
	Counter Slope	> 2%	2
	Lip	> ¼ inch	2
	End in Crosswalk	No	2
	Roadway Clear Space	<4ft x 4ft	2
	Maximum Curb Ramp (AIS) Score		3

Signal Pushbuttons	Pushbutton less than 10 feet from crosswalk	No	2
	Pushbutton less than 5 feet from the extension of the crosswalk line	No	2
	Pushbutton Force more than 5 pounds	No	2
	Pushbutton provide vibratory feedback when pushed	No	2
	Pushbutton size meets minimum 2-inch diameter with visual contrast from housing	No	2
	Distance between pushbuttons on the same corner greater than 10 feet	No	2
	Reach depth from pushbutton to the landing is less than 10 inches	No	2
	Mounting height of pushbutton from landing area is between 42 inches and 48 inches	No	2
	Directional arrow on pushbutton face, housing or mounting & pushbutton with parallel orientation to crosswalk direction	No	2
	Level clear space provided at pushbutton (min. 30"X48") landing area provided with less than a 2% cross slope in any direction	No	2
	Audible indication of WALK interval in tone	No	2
	Audible indication of WALK interval in speech	No	2
	Locator Tone and Tactile Arrow provided	No	2
	Locator tone operates during DON'T WALK and flashing DON'T WALK intervals	No	2
	APS	No	2
	Maximum Signal Pushbutton (AIS) Score		30

Accessibility Index Score Composite (Curb Ramp - Sidewalk)

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
King County, HERE, Sound Transit, Transpo Group

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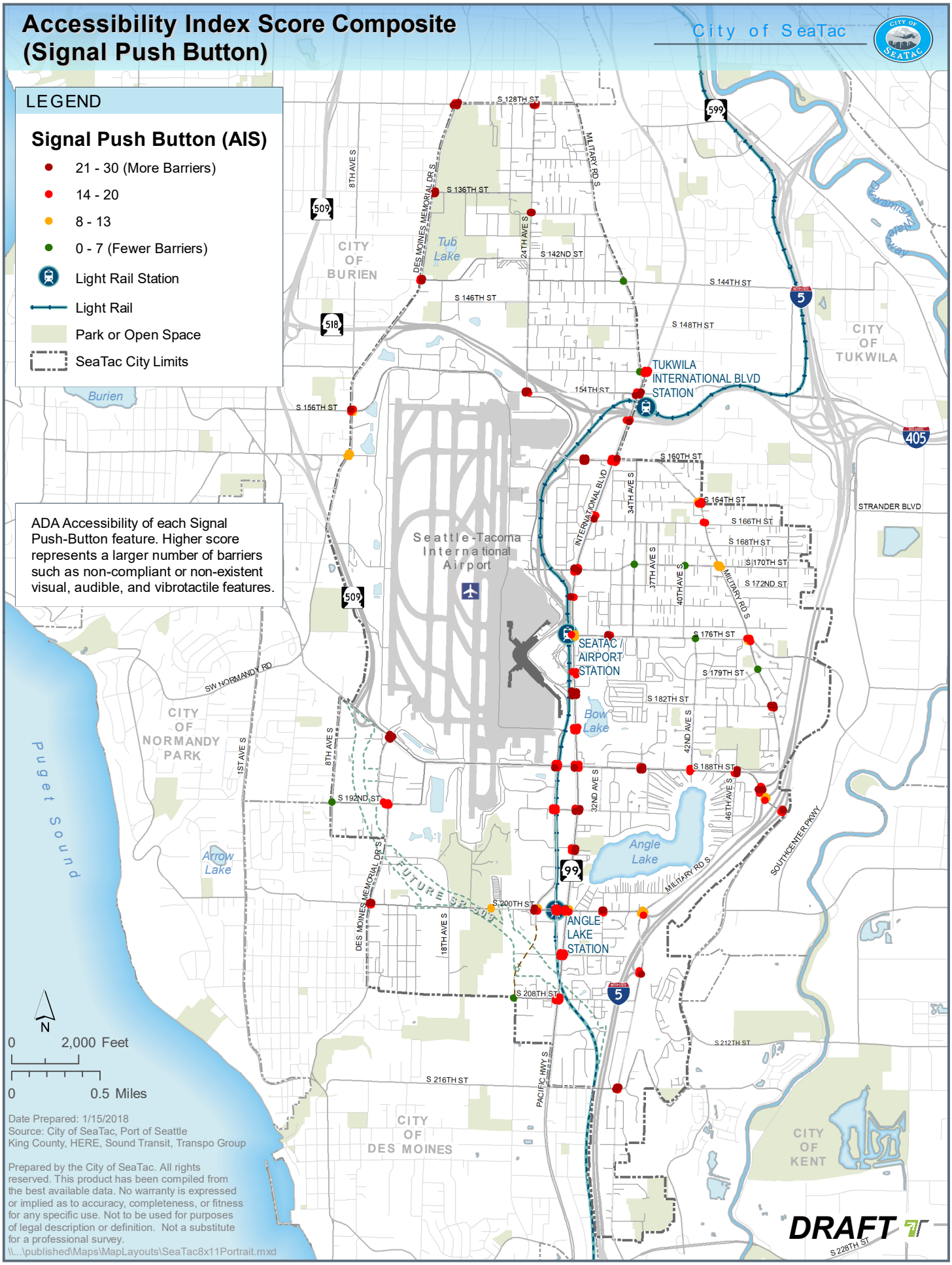
FIGURE 5-1

Accessibility Index Score Composite (Signal Push Button)

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
King County, HERE, Sound Transit, Transpo Group

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FIGURE 5-2

5.2.2 Location Index Score

Similarly, a number of destinations were used to identify high priority pedestrian facilities within the City. This was done by identifying public destinations such as public buildings, transit and parks and identifying pedestrian facilities within close proximity of one or more of these destinations.

Pedestrian facilities within the identified proximity were assigned points based on each destination they were close to, as shown in Table 5-2. This measure was called the Location Index Score.

Table 5-2 Location Index Score Value

LOCATION CRITERIA	RATING CRITERIA	POSSIBLE SCORE
Schools		
Proximity to Schools	Within ⅛-mile radius of school	5
Walk-To-School Route	Within safe routes to school zone	5
Parks	Within ⅛-mile radius of park	5
Transit		
High Capacity Transit	Within ⅛-mile of high capacity transit	5
Transit Bus Stops	Within ⅛-mile of transit stop	5
Traffic Signal/Roundabout	Within ⅛-mile of signal or roundabout	5
Public Buildings	Within ⅛-mile of location	5
Downtown / Urban / Commercial Business Centers	Within ¼-mile radius of Downtown, Urban and Commercial Business Center Zoning	5
Community Defined Destinations	Within ⅛-mile of location	5
TOTAL LOCATION INDEX SCORE (LIS)		40

Figures 5-3 through 5-6 show the results of the Location Index Scoring. Darker locations indicate areas with a high concentration of pedestrian destinations while lighter areas represent areas with a low concentration of these destinations.

Location Index Score Composite (Curb Ramp - Sidewalk)

City of SeaTac

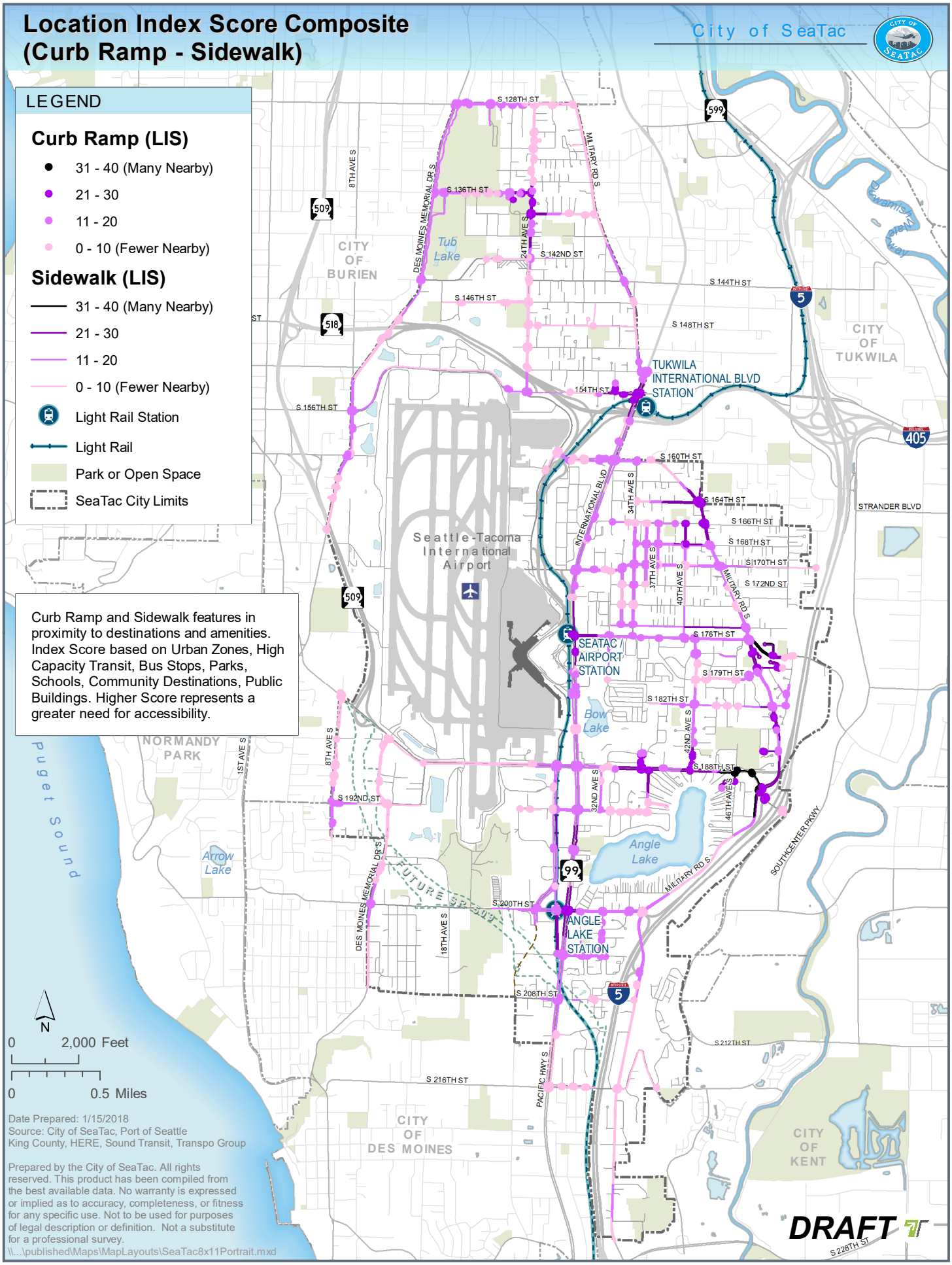

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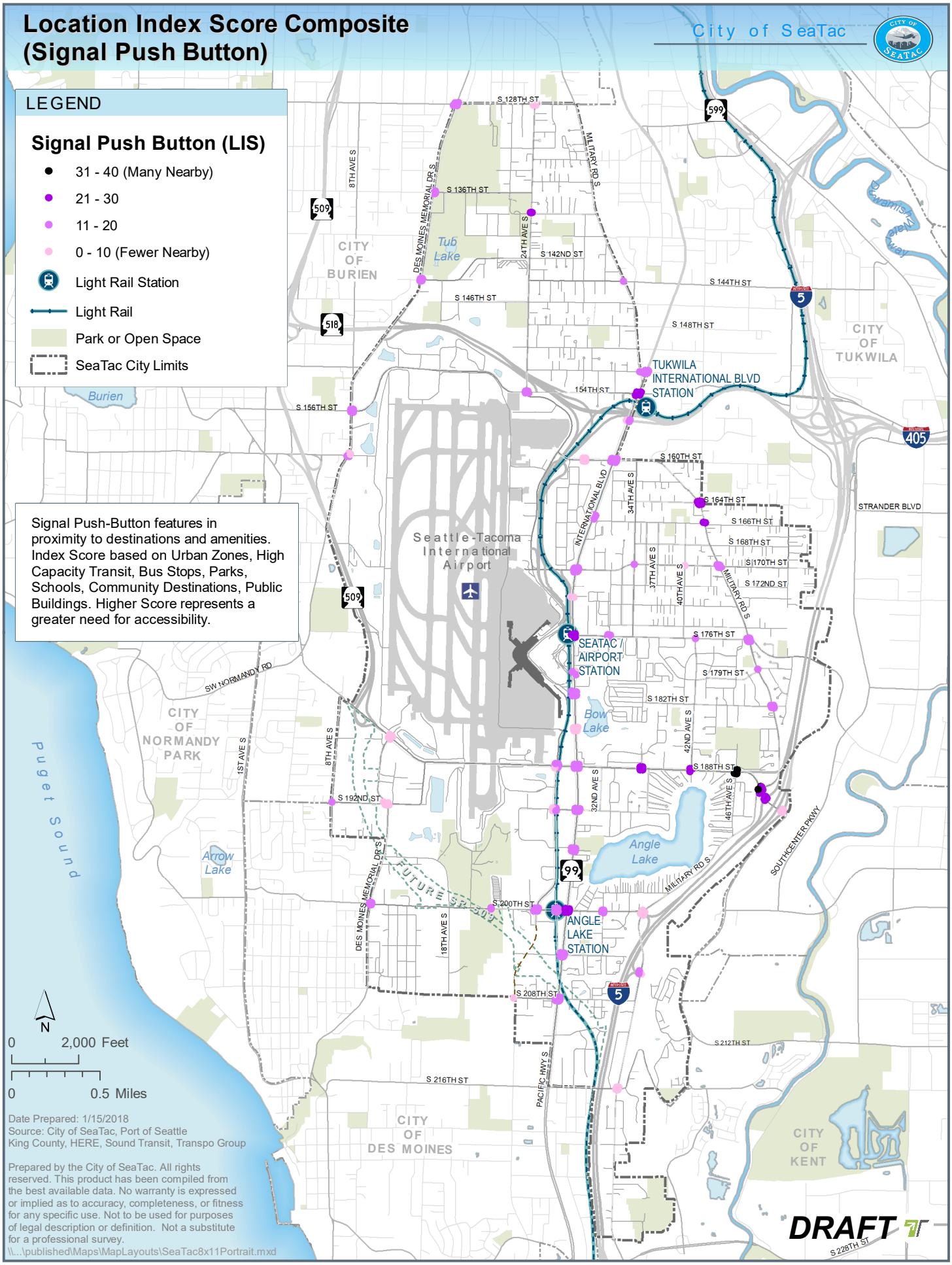
FIGURE 5-3

Location Index Score Composite (Signal Push Button)

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
King County, HERE, Sound Transit, Transpo Group

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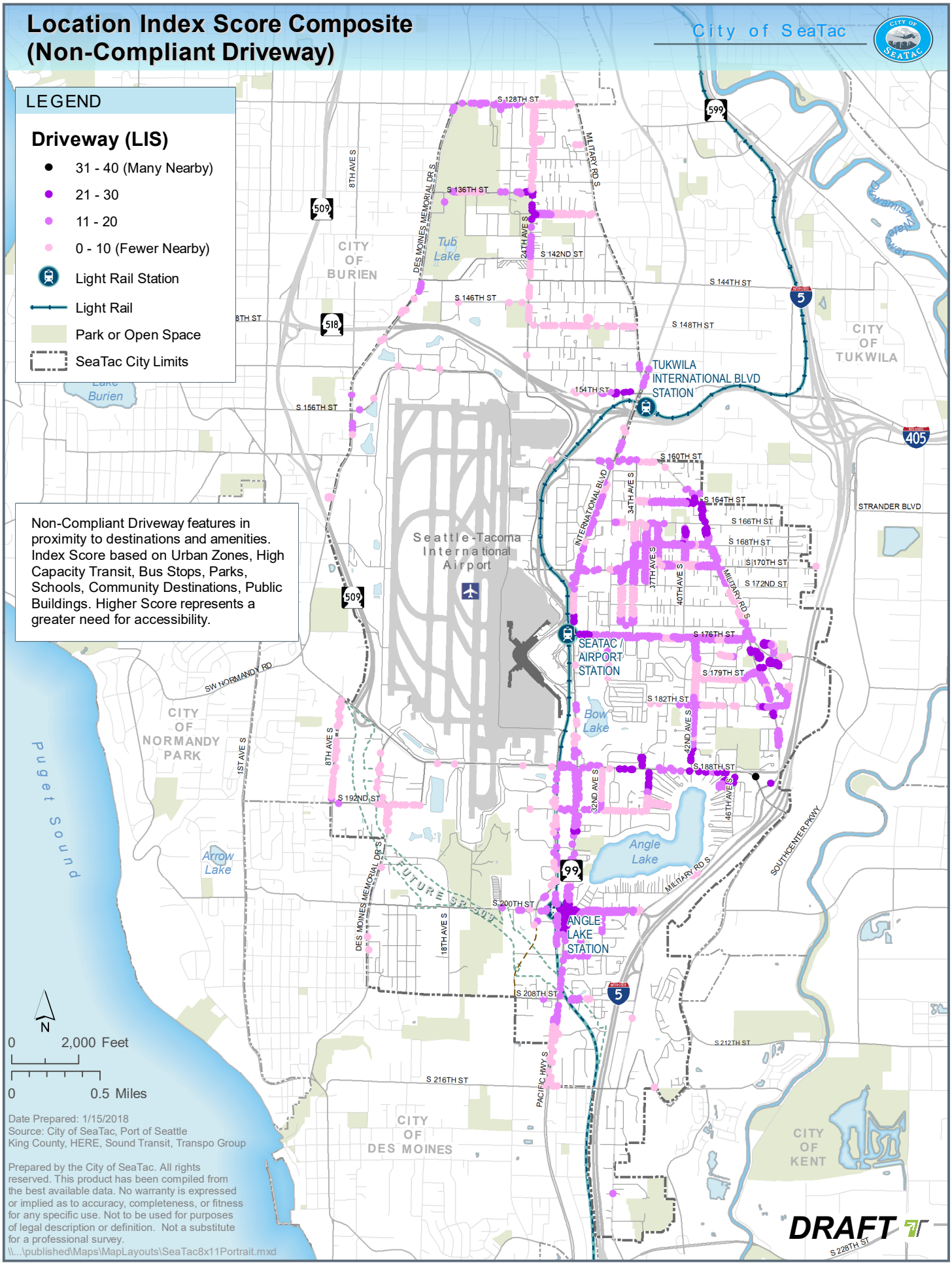
FIGURE 5-4

Location Index Score Composite (Non-Compliant Driveway)

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
King County, HERE, Sound Transit, Transpo Group

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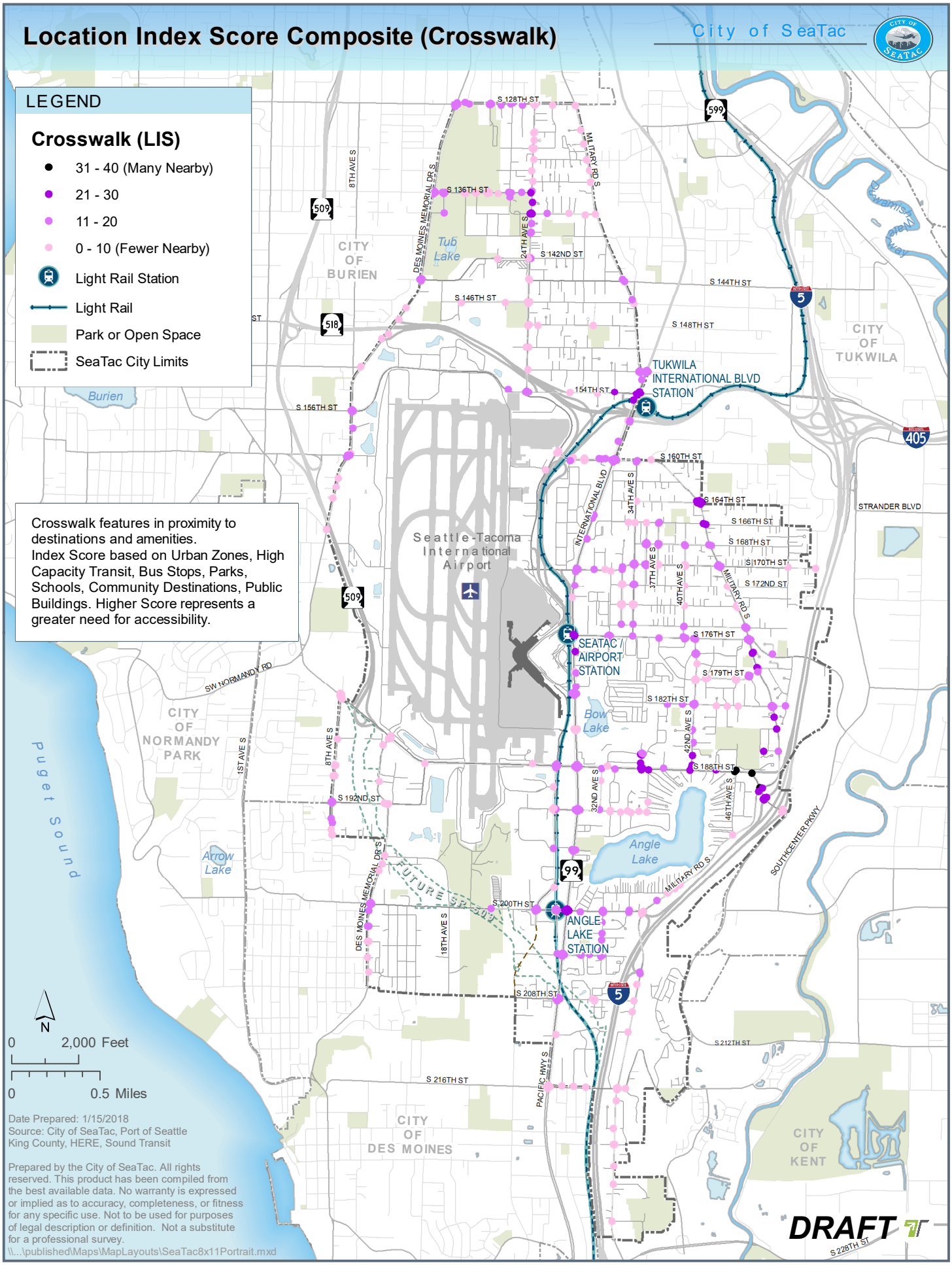
FIGURE 5-5

Location Index Score Composite (Crosswalk)

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
King County, HERE, Sound Transit

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FIGURE 5-6

5.2.3 Barrier Removal Priorities

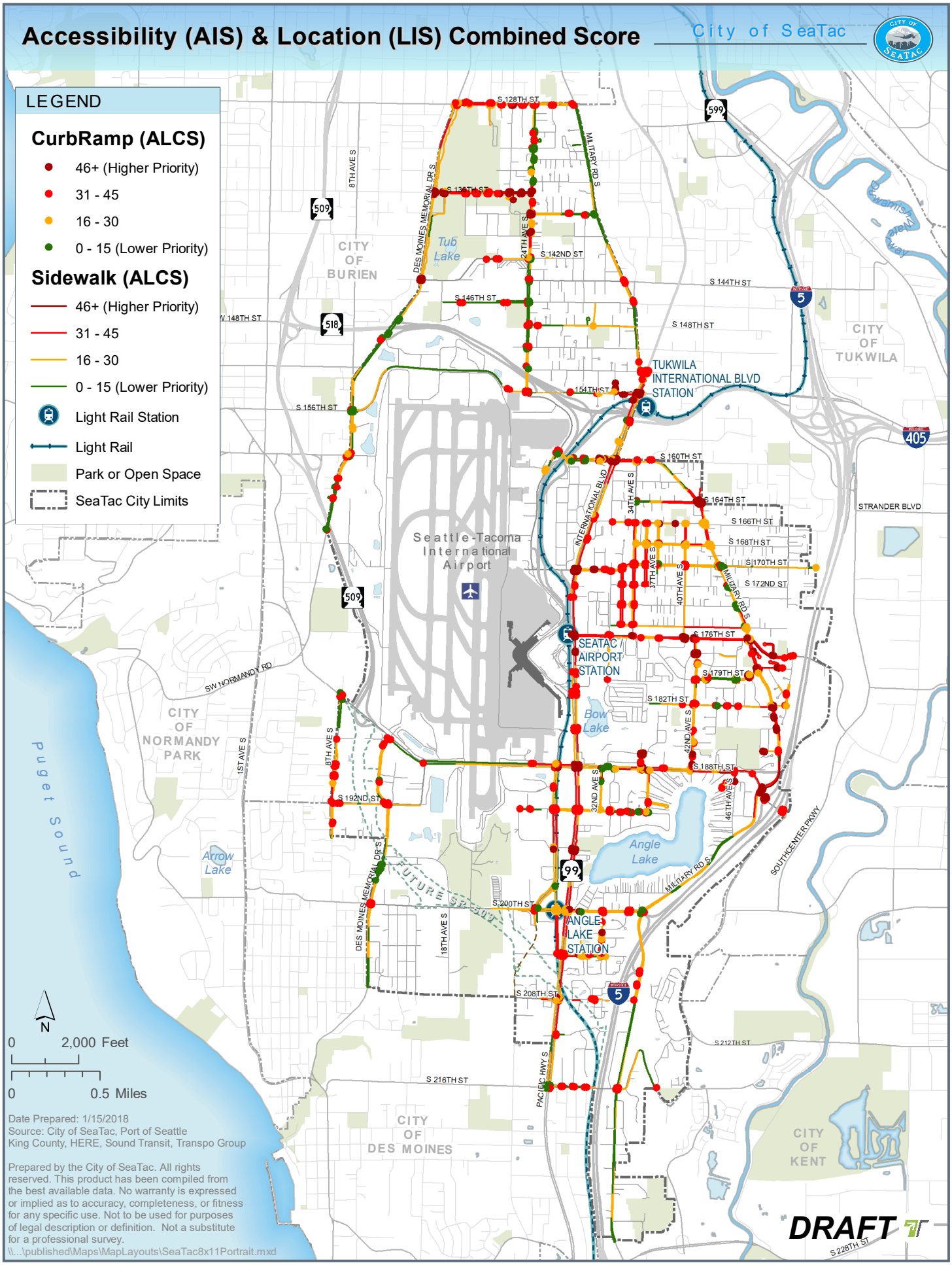
By combining the Accessibility Index Score and Location Index Score together, a Composite Index Score was developed. Together, these measures prioritize barrier removal at locations where pedestrian facilities present a barrier and where pedestrians would be expected.

Facilities with the highest score should be addressed first (46+ points) and represent facilities that present a clear physical barrier and are in high-demand areas. Facilities with lower scores should be address last (0 to 15 points), have minor barriers, and are in locations where pedestrian demand would be expected to be lower. These scores are relative, comparing one facility to the other. The ranges for medium and high priority were defined based on review of the identified barriers and assessment of the relative barrier they present. It should be noted that while some barriers have a lower priority, they still should be removed.

Figures 5-7 through 5-8 show the combined scores.

Accessibility (AIS) & Location (LIS) Combined Score

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
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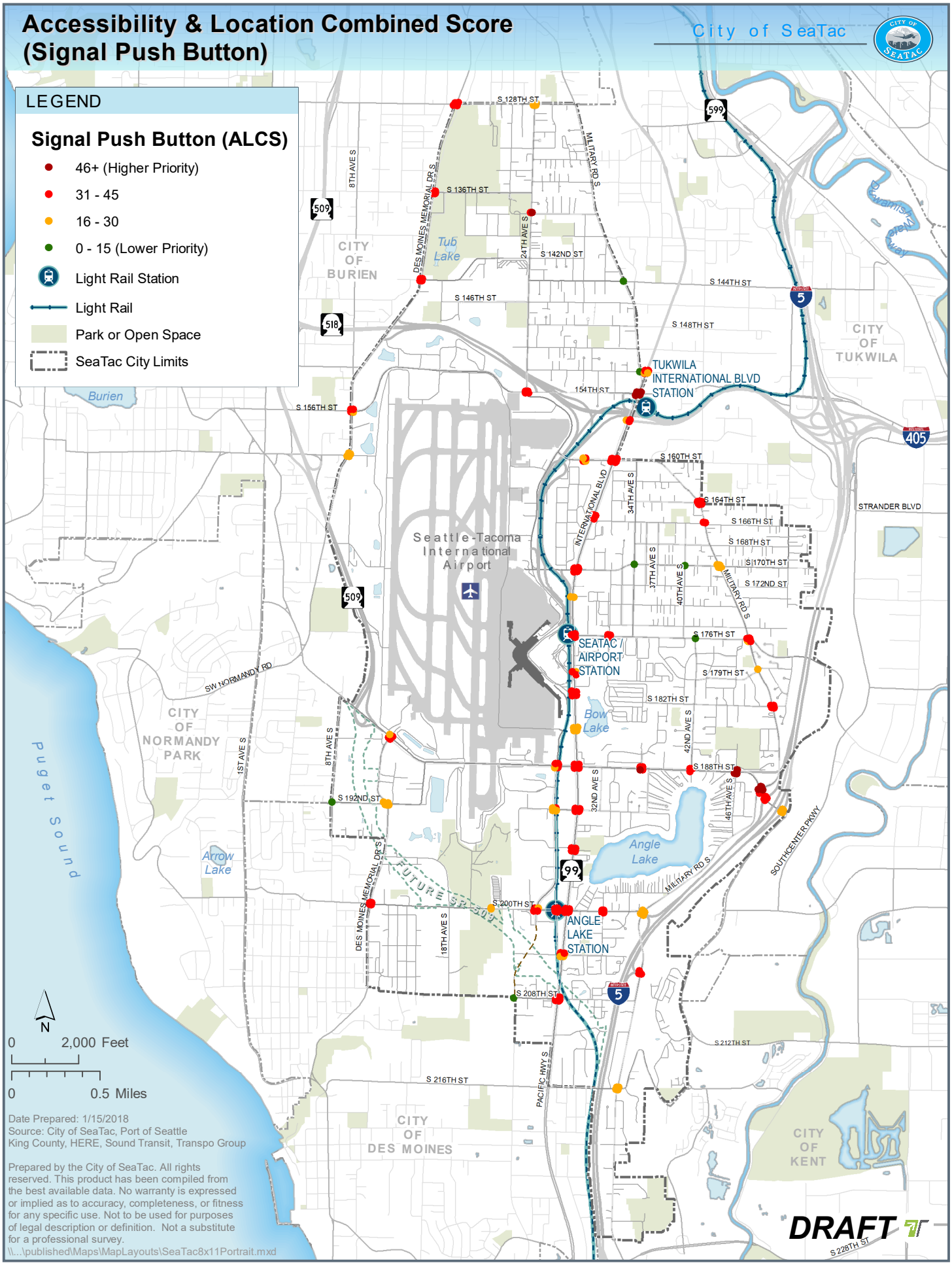
FIGURE 5-7

Accessibility & Location Combined Score (Signal Push Button)

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
King County, HERE, Sound Transit, Transpo Group

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FIGURE 5-8

5.3 Transition Plan Cost and Schedule

A key requirement of an ADA Transition Plan is development of a schedule which shows how long it will take the City to remove accessibility barriers. Understanding the financial resources needed to remove accessibility barriers is essential for developing such a schedule.

5.3.1 Process

Unit costs were developed to address ADA barriers described in Chapter 2. The unit costs were developed using recent bid tabulations and assuming a typical cost of replacement for each ADA barrier.

A final cost estimate was determined using information from the data inventory and calculated using current year construction costs. The cost estimates are meant to assist in determining a schedule for the completion of the barrier removal process as a tool to help the City plan funding for the full removal of barriers over a number of years.

5.3.2 Cost Estimate Assumptions

Planning level cost estimates were determined using data gathered during the inventory process and unit costs. Sidewalk and curb ramp ADA deficiencies were totaled using their respective unit – linear feet for sidewalks, and number of facilities for curb ramps.

To avoid overestimation of non-compliant facilities, assumptions were made when necessary to address the reasonableness of the unit cost and the quantities for each item. These assumptions are detailed in Appendix C. Other factors such as contingency, design, mobilization and traffic control were added to the barrier removal cost subtotal. Right-of-way and any other right-of-way associated costs were not captured in the cost estimation.

It is also important to note that the physical possibility of removal for each ADA barrier was not considered in developing the planning level cost estimate. It is likely that a significant portion of the ADA barriers cannot be fully removed but only improved to the maximum extent feasible due to existing roadway grades, geometry and other physical factors.

5.3.3 Planning Level Cost Estimate

The planning level cost estimate to remove all identified barriers is $20,256,000 (in 2018). This overall cost includes construction, design, mobilization, contingency and other construction related contingencies. Table 5-3 shows a summary of each activity associated with barrier removal and the applicable cost of removing the specified amount of deficiencies. Non-compliant sidewalks represent the largest overall cost, followed by non-compliant curb ramps and driveways.

Table 5-3 – Planning Level Cost Estimate

ADA DEFICIENCY	IMPROVEMENT TYPES	TOTAL QUANTITY	TOTAL PRICE
Sidewalks			
Non-Compliant Sidewalk	Reconstruct existing sidewalk or paved shoulder walkway	234,800 LF	$8,687,600
Non-Compliant Driveway	New driveway with sidewalk	953	$1,143,600
		Subtotal	*$9,832,000*
Maintenance/Miscellaneous			
Non-Compliant Vertical Discontinuity	Sidewalk grinding (10 LF of sidewalk)	492	$123,000
Non-Compliant Horizontal Discontinuity	Sidewalk crack sealing/grouting	671	$167,800
Fixed Obstacles	Relocation of obstacles including utility pole, mailbox, tree trunk, etc.	349	$1,047,000
Moveable Obstacles	Relocation of obstacles including tree/bush (prunable), message boards, parked cars, etc.	82	$16,400
Protruding Obstacles	Relocation of obstacles including of bush/tree, signs, awnings etc.	923	$461,500
		Subtotal	*$1,816,000*
Curb Ramps			
Curb Ramps without Detectable Warning Surface (DWS) or DWS is Non-Compliant	Curb ramp improvement (install/replace detectable warning surface)	18	$7,200
Crossings Missing Receiving Curb Ramps and Locations with Non-Compliant Surface Types	New curb ramp	50	$125,000
Substandard or Missing Ramp Landings	Curb ramp improvement (upgrade/install top landing)	62	$12,400
Non-Compliant Ramp (running slope, cross slope, ramp width, etc.)	Curb ramp improvement (reconstruct existing ramp)	622	$1,654,600
		Subtotal	*$1,800,000*
Pushbuttons			
Locations with Non-APS Pushbuttons and/or Pushbutton are Located Incorrectly	Install new pole and pushbutton	318	$795,000
Pushbutton is Substandard (pushbutton less than 2", no tactile arrow, no vibration, non-APS but located correctly, etc.)	Install new pushbutton	20	$20,000
		Subtotal	*$815,000*
		Total	**$14,263,000**
		Contingency@ 10%	*$1,427,000*
		Design @ 12%	*$1,712,000*
		Mobilization @8%	*$1,142,000*
		TESC + Traffic Control @ 12%	*$1,712,000*
		TOTAL 2018 DOLLARS	**$20,256,000**

As described in Section 4.1, The City has a variety of funding programs that contribute to ADA barrier removal. This includes Capital Projects and the Sidewalks Program. The required funding for transportation projects within the next 6 years has been identified by the City. The approximate proportion of predicted funding for capital projects and sidewalks program projects that would remove ADA barriers are summarized in Table 5-4 below. In addition, the City also has funding to remove ADA barriers through their regular maintenance work and Annual Street Overlay & Preservation Program. It is estimated that the current funding available for ADA barrier removal is $2,306,000 over the next 6 years.

Table 5-4 –CIP, Sidewalks Program, Regular Maintenance Funding Allocation 2018-2023

	TRANSPORTATION IMPROVEMENT PROGRAM	ANNUAL STREET OVERLAY & PRESERVATION PROGRAM	NEIGHTBORHOOD MULTI-MODAL TRANSPORTATION IMPROVEMENT PROGRAM	SIDEWALKS PROGRAM	REGULAR MAINTENANCE
Available Barrier Removal Funds	$190,000 in next 6 years	$46,000 / year	$400,000 in next 6 years	$190,000 / year	$50,000 / year

5.3.4 Schedule

Based upon the self-assessment, planning-level cost estimates, and existing funding programs, a schedule for barrier removal was developed. Table 5-5 below summarizes the total amount of funding required to remove all barriers based on different durations. These quantities do not take into account funding that is already allocated to barrier removal. For example, if $1,351,000 were invested per year to remove ADA barriers, it would require approximately 15 years to complete this transition. The schedule can be accelerated if the City budgets more for barrier removal or other funding sources are leveraged to remove barriers faster.

Table 5-5 ADA Barrier Removal Schedule

TRANSITION DURATION	10 YEARS	15 YEARS	20 YEARS
Annual Investment Needed	$2,026,000	$1,351,000	$1,013,000

6 Current Practices

This chapter documents key pieces of information which are critical for ongoing plan implementation. This information is likely to change over the lifetime of the plan such as the official responsible for plan oversight or progress report on barrier removal. This section is meant to act as a "living document" which should be updated to represent current practices or information.

This section is updated as of: November 2017

6.1 Official Responsible

- Official Responsible - Name, Title
- Mailing Address -
- Phone Number -
- Email -

6.2 Current Grievance Process

- See Appendix E

6.3 Maximum Extent Feasible Database and Process

- See Appendix D

6.4 APS Policy

- See Appendix F

6.5 Accessibility of ADA Transition Plan Information

To be finalized upon adoption of the plan.

6.6 Barrier Removal Performance Monitoring

The plan is currently less than a year old so it represents the most recent available data.

Appendix A – Open House Materials

Appendix B – Design Audit

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WHAT TRANSPORTATION CAN BE.

TECHNICAL MEMORANDUM

Date:	January 15, 2018	**TG:**	1.16267.00
To:	Janet Meyer, City of SeaTac		
From:	Ryan Peterson, PE, PTOE, Transpo Group		
cc:			
Subject:	Barrier Removal (Task 4) Audit Findings and Recommendations – City of SeaTac ADA Transition Plan		

The City of SeaTac maintains approved design standards for pedestrian facilities. These design standards are used for City funded projects as well as privately designed and constructed projects within public right-of-way. This memorandum describes design guidelines that meet the requirements of the Americans with Disabilities Act (ADA), common accessibility design issues, and references to specific design guidelines. The audit of the City's street design standards summarized herein included King County 2016 Design and Construction Standards-Figures (King County, 2016), 2016 Road Design and Construction Standards (King County, November 2016), and City of SeaTac Addendum to King County Road Standards (City of SeaTac, January 1, 2017),

Design Guidelines

There are several key design measurements that ADA design guidelines address. These measures are used because they are important to the accessibility and safety of the facility. When pedestrian facility designs cannot be constructed to full design requirements, they should be built to conform to the maximum extent feasible. When this arises, the City should identify the location this occurs, provide justification, and document for future reference. The phrase 'to the maximum extent feasible' is defined in the U.S. Department of Justice title III regulation at 28 CFR 36.402 Alterations as applying when:

> "…the nature of an existing facility makes it virtually impossible to comply fully with applicable accessibility standards through a planned alteration. In these circumstances, the alteration shall provide the maximum physical accessibility feasible. Any altered features of the facility that can be made accessible shall be made accessible. If providing accessibility in conformance with this section to individuals with certain disabilities (e.g., those who use wheelchairs) would not be feasible, the facility shall be made accessible to persons with other types of disabilities (e.g., those who use crutches, those who have impaired vision or hearing, or those who have other impairments)."

Several guidelines and references are available to assist the City of SeaTac in adhering to accessible design standards based on the needs for various projects. There are many opportunities to improve pedestrian conditions by identifying areas of need and establishing the appropriate accessibility design requirements.

Public Rights-of-Way Accessibility Guidelines (PROWAG) (July 2011)
The United States Access Board is the rule making body that guides ADA compliance across the US. Since the late 2000's the US Access Board has been in the process of updating its *Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way*. This guidance, with the most current version as of July 26, 2011, is the definitive resource on accessible design of pedestrian facilities in the public right of way.

This guide focuses on accessibility of sidewalks, curb ramps and in the soon to be released versions address shared-use trails. The guideline covers legislative background, administration requirement, and design requirements. The US Access Board PROWAG should be used to confirm that City design standards conform to ADA design requirements.

WSDOT Design Manual (July 2017)
This manual includes pedestrian facility guidelines under Chapter 1510 that follow the guidance in PROWAG. The design manual is intended to guide practitioners implementing construction projects to the best practices and statewide standards for design. *WSDOT Standard Plans: Section F* accompanies the design manual and includes the details of many pedestrian facilities including sidewalks, curb ramps, crossings, pushbuttons, and other facilities.

WSDOT Field Guide for Accessible Public Right of Way (2012)
To ensure that pedestrian facilities are built in compliance with PROWAG standards WSDOT has also developed a *Field Guide for Accessible Public Right of Way 2012 Edition*. This guide provides a detailed checklist to assist field inspectors. This checklist helps to clarify requirements from the City Engineer all the way down to construction field crews, reducing confusion and possibly costly mistakes.

Design Requirements

Recommended actions are included where necessary to meet national and state ADA design guidelines.

Sidewalks

Sidewalks are generally defined as the portion of the pedestrian system from the edge of the roadway (back of curb) to the edge of right-of-way, generally along the sides of streets, between street corners.

Design Element	Requirement	Review / Recommendations
Sidewalk Width	Minimum clear width is 4 feet excluding the curb; however, on pedestrian routes less than 5 feet wide, passing space of 5 feet by 5 feet is required every 200 feet (PROWAG R302.3 and R302.4, WSDOT Design Manual 1510.07(1)(a)).	Typical sidewalk is 5 feet wide (City of SeaTac, Parallel Curb Ramp Detail). King County minimum 4 feet (Figures 2-002 through 2-007). Include minimum 4ft sidewalk width on all sidewalk details.
Sidewalk Grade	The grade of pedestrian access routes shall be 5 percent maximum. In cases where sidewalk is located along roadway with a higher grade, the sidewalk grade shall not exceed general grade of adjacent roadway (PROWAG R302.5).	Include 5 percent maximum running grade on sidewalk details. Update King County Figure 3-018 to include maximum slope.
Cross Slope	The cross slope of pedestrian access routes shall be 2 percent maximum (PROWAG R302.6).	2 percent maximum slope in sidewalks adjacent to roadways (King County Figures 2-002, 2-003, 2-005, 2-006, 2-007, 2-010). Include cross slope of 2 percent maximum for sidewalk for King County Figures 3-011, 3-012, 3-013, and 3-014.
Post-Mounted Objects	Where objects are mounted on free-standing posts or pylons and the objects are 2.25 feet	Add addendum showing sign mounting height with vertical

	minimum and 6.7 feet maximum above the finish surface, the objects shall overhang pedestrian circulation paths 4 inches maximum measured horizontally from the post or pylon base (PROWAG R402.3).	obstructions between 2.25 and 6.7 feet overhanging pedestrian circulation path maximum 4 inches.
Protrusion Limits	Objects with leading edges more than 2.25 feet and not more than 6.7 feet above the finish surface shall protrude 4 inches maximum horizontally into pedestrian circulation paths (PROWAG R402.2).	Brush less than 12-inch height and less than 1/2 inch in diameter may extend into trailway (King County Figure 3-018). Add addendum that shows protruding objects between 2.25 and 6.7 feet high may extend maximum 4 inches into pedestrian pathway.
Vertical Surface Discontinuities	Vertical surface discontinuities shall be 1/2 inch maximum. Vertical surface discontinuities between 1/4 inch and 1/2 inch shall be with a slope not steeper than 50 percent (PROWAG R302.7.2).	Contraction joint depths minimum of 1" (City of SeaTac Vertical Curb & Sidewalk Detail).
Horizontal Openings	Horizontal openings in gratings and joints shall not permit passage of a sphere greater than 1/2 inch in diameter (PROWAG R302.7.3).	3/8" expansion joint width and 1/8" to 1/4" contraction joint width (City of SeaTac Parallel Curb Ramp Detail).

Crosswalks

Crosswalks are part of the pedestrian access routes at intersections, midblock crossings, and pedestrian refuge islands. These are important connections across streets to enable pedestrians to travel from one side to the other.

Design Element	Requirement	Review / Recommendations
Crosswalk Width	Marked crosswalks may range from 6 to 10 feet depending on the application, but wider crosswalks are typically preferred.	The width of crosswalks shall be 10 feet (King County Figure 4-001, 4-002).

Curb Ramps

Curb ramps are the immediate junctions between the sidewalk and street crosswalk. Perpendicular and diagonal curb ramps have a running slope that cuts through the curb at right angles, while parallel curb ramps have a running slope that is in-line with the sidewalks. Combination ramps include elements of both parallel and perpendicular curb ramps.

Design Element	Requirement	Review / Recommendations
Ramp Width	The clear width of ramp runs (excluding any flared sides), blended transitions, and turning spaces shall be 4 feet minimum (PROWAG R304.5.1).	Perpendicular ramps are 4 feet wide. (King County Figure 3-011). Parallel ramps are 5 feet wide (City of SeaTac Parallel Curb Ramp).

Running Slope	The running slope of the curb ramp shall be 5 percent minimum and 8.3 percent maximum, but shall not require the ramp length to exceed 15 feet (PROWAG R304.2.2 & R304.3.2). A design slope of 7.5 percent to allow for construction tolerances is recommended by WSDOT.	Curb ramps shall have a maximum grade of 8.0 percent (City of SeaTac Parallel Curb Ramp). Provide recommendation of a grade of 7.5 percent or flatter to allow for construction tolerances for curb ramps in addition to maximum grade. Add minimum slope of 5 percent.
Cross Slope	Curb ramp, blended transition, and turning space shall have a 2 percent maximum cross slope (PROWAG R304.5.3).	Maximum cross slope in landing is 1.5 percent (City of SeaTac Parallel Curb Ramp). Include maximum cross slope of 2 percent in ramps. Update King County Figure 3-012 and 3-015.
Flared Sides	Where a pedestrian circulation path crosses the curb ramp, flared sides shall be sloped 10 percent maximum, measured parallel to curb line (PROWAG R304.2.3).	10 percent maximum slope for flared sides (King County Figure 3-011).
Direction	The running slope of the [perpendicular] curb ramp shall cut through or shall be built up to the curb at right angles or shall meet the gutter grade break at right angles where the curb is curved (PROWAG 304.2.2).	Ramp center line shall be perpendicular to or radial to curb returns (King County Figures 3-011, 3-012, 3-015).
Counter Slope	The counter slope of the gutter or street at the foot of curb ramp runs, blended transitions, and turning spaces shall be 5 percent maximum (PROWAG R304.5.4).	5 percent gutter slope for vertical curb (City of SeaTac Cement Concrete Vertical Curb & Gutter). Add 5 percent maximum slope for gutter counter slope at ramp transitions.
Grade Breaks	Grade breaks at the top and bottom of curb ramps shall always be perpendicular to the direction of the ramp run (PROWAG R304.5.2).	Grade breaks should occur over the entire length of the surface, and the two adjacent surface planes shall be flush (City of SeaTac Parallel Curb Ramp detail). Ensure grade breaks at top and bottom of ramp are perpendicular to the running slope.

Clear Space & Turning Space	Beyond the bottom grade break, a clear space of 4 feet minimum by 4 feet minimum shall be provided within the width of the pedestrian street crossing and wholly outside the parallel vehicle travel lane (PROWAG R304.5.5). A turning space 4 feet minimum by 4 feet minimum shall be provided at the bottom of the [parallel] curb ramp and shall be permitted to overlap other turning spaces and clear spaces. If the turning space is constrained on 2 or more sides, the turning space shall be 4 feet minimum by 5 feet. The 5 feet dimension shall be provided in the direction of the pedestrian street crossing. (PROWAG R304.3.1). A turning space 4 feet minimum by 4 feet minimum shall be provided at the top of the [perpendicular] curb ramp and shall be permitted to overlap other turning spaces and clear spaces. Where the turning space is constrained at the back-of-sidewalk, the turning space shall be 4 feet minimum by 5 feet minimum. The 5 feet dimension shall be provided in the direction of the ramp run (PROWAG R304.2.1)	King County Figure 3-015, require a minimum 4 feet by 5 feet turning area behind ramps constrained at back of sidewalk. A minimum of 4 feet by 4 feet area should be provided that is clear of obstacles adjacent to bottom grade break of ramp and clear area is within crosswalk (marked or unmarked). Increase area to 4 feet by 5 feet when constrained on 2 or more sides.
Detectable Warning Surfaces	Detectable warning surfaces shall extend 2 feet minimum in the direction of pedestrian travel. At curb ramps and blended transitions, detectable warning surfaces shall extend the full width of the ramp run (PROWAG R305.1.4). Detectable warning surfaces shall contrast visually with adjacent gutter, street, or highway (PROWAG R305.1.3). The truncated domes shall have a base diameter of 0.9 inch minimum and 1.4 inch maximum, a top diameter of 50 percent of the base diameter minimum and 65 percent of the base diameter maximum, and a height of 0.2 inch (PROWAG R305.1.1). The truncated domes shall have a center-to-center spacing of 1.6 inch minimum and 2.4 inch maximum, and a base-to-base spacing of 0.65 inch minimum, measured between the most adjacent domes (PROWAG R305.1.2).	Detectable warning devices are needed for 2 feet in direction of ramp (King County Figures 3-011, 3-012, 4-002). Size and spacing of truncated domes should meet minimums and maximums (as described). Detectable warning required for full width of ramp. Detectable warning required on both sides of refuge median when median is at least 6 feet in width. Color shall be consistent throughout City.
Receiving Ramp	The pedestrian access route shall connect departure and arrival sidewalks (PROWAG R204.3). A curb ramp, blended transition, or a combination of curb ramps and blended transitions complying with R304 shall connect the pedestrian access routes at each pedestrian street crossing (PROWAG R207.1).	Ramps shall be constructed at corresponding sidewalk locations on opposite side of streets when ramps are constructed on one side of street (King County Figure 3-015).

Signals

Signals are important connections in the pedestrian network that provide crossings at intersections for all roadway users. Where pedestrian signals are provided at pedestrian street crossings, they

shall include accessible pedestrian signals and pedestrian pushbuttons complying with sections 4E.08 through 4E.13 of the MUTCD (PROWAG R209.1).

Design Element	Requirement	Review / Recommendations
Accessible Pedestrian Signals and Pedestrian Pushbuttons	An accessible pedestrian signal and pedestrian pushbutton, an integrated device that communicates information about the WALK and DON'T WALK intervals at signalized intersections in non-visual formats (i.e., audible tones and vibrotactile surfaces), is required for pedestrians who are blind or have low vision (PROWAG R209).	Add reference to WSDOT design manual and MUTCD Chapter 4E when designing accessible pedestrian signals and pushbuttons.
Pedestrian Crossing Times	All pedestrian signal phase timing shall comply with section 4E.06 of the MUTCD (incorporated by reference, see R104.2 and shall be based on a pedestrian clearance time that is calculated using a pedestrian walking speed of 1.1 m/s (3.5 ft/s) or less (PROWAG R306.2).	Ensure MUTCD is followed for pedestrian crossing timing.

Other Pedestrian Areas

Other pedestrian areas include transit stops and work zones. Transit provides a critical lifeline of access and independence for those with limited mobility or vision. Transit stops have additional width requirements for boarding and alighting passengers, and work zones should provide the same level of accessibility as permanent pedestrian facilities.

Design Element	Requirement	Review / Recommendations
Transit Stops	Boarding and alighting areas shall provide a clear length of 8 feet minimum, measured perpendicular to the curb or street or highway edge, and a clear width of 5 feet minimum, measured parallel to the street or highway (PROWAG R308.1.1). Parallel to the street or highway, the grade of boarding and alighting areas shall be the same as the street or highway, the grade of boarding and alighting areas shall not be steeper than 2 percent (PROWAG R308.1.1.2). Boarding and alighting areas shall meet other accessibility and local transit guidelines.	Ensure landing areas accessing transit services are 8 feet measured perpendicular to the curb and 5 feet wide, and have a maximum cross slope of 2 percent.
Alternate Pedestrian Access Route	When a pedestrian circulation path is temporarily closed by construction, alterations, maintenance operations, or other conditions, an alternate pedestrian access route shall be provided. Where provided, pedestrian barricades and channelization devices shall comply with MUTCD (PROWAG R205).	Require alternate pedestrian routes whenever pedestrian route is closed or altered due to construction, alterations, maintenance, etc. Ensure WSDOT design manual is followed in work zones.
Driveway Crossings	Sidewalk or ramp cross slope has a 2 percent maximum (WSDOT Design Manual 1510.08(2)).	Cross slope on sidewalks and ramps within driveways shall be 2 percent (King County Figure 3-004, 3-005, 3-006, 3-007). Show cross slope of 2 percent as a maximum, and include cross slope

		on Figures 3-008, 3-009. Update King County Road Standards 3.01.4 to state areas where driveway slope exceeds 2 percent cannot be included as part of pedestrian traveled way.
Stairway Risers and Treads	Risers shall be 4 inches high minimum and 7 inches high maximum. Treads shall be 11 inches deep minimum (PROWAG R408.2).	Risers shall have a height of 5 inches minimum and 7.5 inches maximum. Treads shall be 11 inches minimum and 12 inches maximum deep. (King County Figure 5-007). Ensure maximum riser height is 7 inches.
Handrails	Ramp runs with a rise greater than 6 inches shall have handrails Edge protection shall be provided on each side of ramp runs and ramp landings (PROWAG 409.1).	Handrails necessary for concrete steps (King County Figure 5-007). Update Figure 5-007 to include handrail requirement when to existing handrail detail for all ramp runs with greater than 6 inch rise.
Handrail Extension on Stairways	At the top of a stair flight, handrails shall extend horizontally above the landing for 1-foot minimum beginning directly above the first riser nosing (PROWAG R409.10.2). At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance at least equal to one tread depth beyond the last riser nosing (PROWAG R409.10.3).	23-inch horizontal railing at top and bottom of stairs (King County Figure 5-007). Ensure there is a 1-foot minimum handrail extension at top of stairways and extension at least equal to depth of one tread at the bottom of the stairway.
Handrail Cross Section	Handrail gripping surfaces with a circular cross section shall have an outside diameter of 1.25 inch minimum and 2 inches maximum (PROWAG R409.7.1). Handrail gripping surfaces with a non-circular cross section shall have a perimeter dimension of 4 in minimum and 6.25 inch maximum, and a cross-section dimension of 2.25 inch maximum (PROWAG R409.7.2).	Gripping handrail 1-inch diameter (King County Figure 5-007). Ensure handrail diameter 1.25 inches to 2 inches maximum.

Conclusions

Recommendations from the sidewalks, crosswalks, curb ramps, signals, and the other pedestrian area design elements may be added to SeaTac standards in the form of a revision to an existing standard detail, an additional standard detail, or a revision/addition to the City of SeaTac Addendum to Road Standards.

Consider updating the general format of the City of SeaTac Addendum to Road Standards for increased comprehension. A few recommendations:

- Re-order information to keep related topics together
- Update detail title blocks to be more representative of their content
- Update City specific details to improve readability

Appendix C – Cost Estimate Backup

transpogroup

Engineer's Opinion of Probable Cost
PROJECT NAME: SeaTac ADA Transition Plan
JOB NUMBER: 1.16267.00
PREPARED BY: MRW
CHECKED BY:

NOTE: This cost estimate is planning level in nature. It should be considered preliminary and for planning purposes only. It specifically excludes right-of-way acquisition and all associated costs. Potential items such as retaining walls, earthwork, etc., are assumed to be included in the planning level estimate contingency unless otherwise indicated.
When features require multiple improvements, the cost of the smaller component is included in the larger task. (i.e. detectable warning surface is included with curb ramp reconstruction.)

Citywide ADA Improvement Cost

Item No.	ADA Deficiency	Improvement Type	Quantity	Unit	Unit Price	Total Price
		Sidewalk Improvements				
1	Non-compliant sidewalk	Reconstruct existing sidewalk/paved shoulder walkway	234,800	LF	$37	$8,687,600
2	Non-compliant driveway	New driveway with sidewalk	953	EA	$1,200	$1,143,600
					Subtotal	**$ 9,832,000**
		Maintenance/Miscellaneous				
3	Non-compliant vertical discontinuity	Sidewalk grinding (10 LF of sidewalk)	492	EA	$250	$123,000
4	Non-compliant horizontal discontinuity	Sidewalk crack sealing/grouting	671	EA	$250	$167,800
5	Fixed Obstacles	Relocation of obstacles including utility pole, mailbox, tree trunk, etc.	349	EA	$3,000	$1,047,000
6	Moveable Obstacles	Relocation of obstacles including tree/bush (prunable), message boards, parked cars, etc.	82	EA	$200	$16,400
7	Protruding Obstacles	Relocation of obstacles including of bush/tree, signs, awnings etc.	923	EA	$500	$461,500
					Subtotal	**$ 1,816,000**
		Curb Ramp Improvements				
8	Curb ramps without detectable warning surface (DWS), non-compliant DWS placement, non-compliant DWS depth, or non-compliant DWS Width	Curb ramp improvement (install/replace detectable warning surface)	18	EA	$400	$7,200
9	Crossings missing receiving curb ramps and locations with non standard surface types	New curb ramp	50	EA	$2,500	$125,000
10	Substandard or missing ramp landings	Curb ramp improvement (upgrade/install top landing)	62	EA	$200	$12,400
11	Non-compliant ramp (running slope, cross slope, ramp width, etc.)	Curb ramp improvement (reconstruct existing ramp)	622	EA	$2,660	$1,654,600
					Subtotal	**$ 1,800,000**
		Pushbutton Improvements				
12	Locations with non-APS pushbuttons and/or pushbutton are located incorrectly.	Install new pole and pushbutton.	318	EA	$2,500	$795,000
13	Pushbutton is substandard (pushbutton less than 2", no tactile arrow, no vibration, non-APS but located correctly, etc.)	Install new pushbutton.	20	EA	$1,000	$20,000
					Subtotal	**$ 815,000**
					Grand total	**$ 14,263,000**
					Contingency @ 10%	**$ 1,427,000**
					Design @ 12%	**$ 1,712,000**
					Mobilization @ 8%	**$ 1,142,000**
					TESC + Traffic Control @ 12%	**$ 1,712,000**
Total					**2017 Dollars**	**$ 20,256,000**

Annual Investment	$	2,026,000
Transition Years		**10**
Annual Investment	$	1,351,000
Transition Years		**15**
Annual Investment	$	1,013,000
Transition Years		**20**

Appendix D – Design Audit

MEF Template

Project Description

Highway Parameters

- Design Matrix:
- Highway Classification:
- Design Class:
- Design Speed/Posted Speed:
- Design Year ADT:
- Truck Percentage:
- Access Control:

Existing Pedestrian Facilities – general description (for new construction projects include a summary of the project pedestrian study)

Pedestrian Design Standards – cover the following subjects

- Discuss the criteria that apply to the pedestrian elements on the project that will be built to the Maximum Extent Feasible
- Include reference(s) to the appropriate DM section(s) [including revision date]

Alternative(s) analysis - needed for new construction projects only

Proposal – cover the following subjects

- What features will remain that meet guidelines
- What features are being built to guidelines
- What is being built to the maximum extent feasible

Justification

- Discussion of what constraints/challenges there are to meet full design level
- See worksheet

Additional Benefits – new construction projects

Attachments

MEF Template – Alteration Project Example

Project Description

This Alteration project will mill & fill SR "A" (from edge line to edge line) with 0.15' HMA (Class 1/2" PG 64-22) from MP 4.03 to 4.45 and from MP 4.71 to 6.89. This project will overlay the roadway (from edge of pavement to edge of pavement) with 0.20' HMA (Class 1/2" PG 64-22) from MP 4.45 to 4.71. There is no proposed paving on the County Roads.

Highway Parameters

- Design Matrix: 5-1 (HMA/PCCP)
- Highway Classification: Non-NHS, U-1, Urban Principal Arterial.
- Funding Program: P1 – Paving
- Posted/Design Speed: Mainline - 55/60 mph
- Average Daily Traffic: 25,000 (per Project Definition)
- Truck %: 9% (per Traffic Operations)
- Access Management Classification: Currently classified as Managed Access Class 3. On Master Plan for Modified Limited Access

Existing Pedestrian Facilities

There are five curb ramps and eight sidewalk ramps (from sidewalk to shoulder) located along SR "A" within the paving limits of this project. All five curb ramps and seven of the eight sidewalk ramps do not meet current ADA standards. One sidewalk ramp is located north of the "X" Street intersection (east side – E1, meets guidelines) at the north end of the sidewalk.

There are curb ramps and sidewalk ramps located at the four corners of the "Y" Avenue signalized intersection. Pedestrians can cross this intersection via six curb ramps and four marked crosswalks.

There are curb ramps and sidewalk ramps located at the southwest and northwest corners of the "Z" Way signalized tee intersection. Pedestrians can cross this intersection via three curb ramps and two marked crosswalks. There is one unmarked crossing on SR "A" located at the north side of this intersection. The unmarked crossing meets ADA standards, but the curb ramp located at the west side of the unmarked crossing does not meet ADA standards. This curb ramp is for the marked crosswalk on "Z" Way, is outside of our paving limits, and will not be addressed.

Pedestrian Design Standards

Curb Ramps – Landing, DM Section 1510.09(2)(d), July 2011

The running and cross slopes of a curb ramp landing shall be 2% maximum.

This also implies that the gutter slope adjacent to a curb ramp landing shall be 2% maximum.

Proposal

Curb Ramps and Ramps (from sidewalk to shoulder)

North of the "X" Street intersection (west side - W4)

This sidewalk ramp will be upgraded to meet WSDOT standards.

"Y" Avenue Intersection

Three of the four proposed curb ramps and all four proposed sidewalk ramps at the "Y" Avenue intersection meet current WSDOT standards. Proposed curb ramp "Y" Avenue SW2, located at the southwest corner, is designed to the maximum extent feasible.

Proposed curb ramp "Y" Avenue SW2 will maintain its current landing location to accommodate two crosswalks. All curb ramp elements will meet current WSDOT standards, except for the proposed gutter slope (4.4%) and landing cross slope (5.0%). These two elements will maintain the existing gutter slope >2%.

"Z" Way Intersection

The two proposed sidewalk ramps at the "Z" Way intersection meet current WSDOT standards. Proposed curb ramp "Z" Way SW2, located at the southwest corner, is designed to the maximum extent feasible.

Proposed curb ramp "Z" Way SW2 will maintain its current landing location to minimize the gutter slope and landing cross slope. All curb ramp elements will meet current WSDOT standards, except for the proposed gutter slope (7.4%) and landing cross slope (7.9%). These two elements will maintain the existing gutter slope >2%.

Justification

To construct the curb ramps to be 100% compliant would require re-profiling the existing roadway. This type of major reconstruction is not feasible in this type of Alteration project.

To construct the curb ramps while maintaining the existing profile of the roadway would require rebuilding the roadway adjacent to the proposed curb ramps. The rebuilt roadway would not eliminate the transition from the 2% cross slope of the curb ramps as it matches into the steeper cross slopes of the existing crosswalks but would simply move the transition further into the active traveled roadway. The result would be a grade change transition within the driving lane that would be undesirable.

Attachments

Vicinity Map

Spreadsheet

Curb Ramp Geometrics

Plan Sheets

Appendix E - Grievance Process

Appendix F - APS Policy

City of Duvall Policy for Installation of Accessible Pedestrian Signals and Pushbuttons

Intent:

It is the City's intention to be consistent with the most current version of the Public Right of Way Access Guidelines (PROWAG) in the provision of and location of accessible pedestrian signals and pushbuttons[1] (APS) at traffic signals. Further guidance is available in 28 CFR Part 26 and MUTCD section 4E.09.

Purpose:

The purpose of this policy is to establish a reasonable and consistent policy for installing APS.

Scope[2]:

1. *Requests*: Requests for APS signals from the public will be responded in a timely manner[3] and the consideration for installation will be done in accordance with applicable sections of the ADA.
2. *New construction*: New construction of traffic signal projects requires installation of APS and associated accessible features when pedestrian signals are installed.
3. *Curb ramp replacement at traffic signals*: Altering or replacing curb ramps does not require installation of APS unless the curb ramp cannot be altered or replaced without the alteration, installation or replacement of any pole to which a pedestrian push button is attached. Then, installation of APS on poles in accessible locations is required (see 5. below).
4. *Minor work and routine maintenance at traffic signals:* Projects, including but not limited to: emergency repairs[4], signal timing adjustments (including signal phasing or coordination changes), vehicular detection installation and repairs, installation and repair of CCTV or other cameras, vehicular signal head upgrades and repairs, and repair of pedestrian detection do not require installation of APS and associated accessible features.

   Signal controller software upgrades and repairs and/or cabinet upgrades and repairs that do not alter the operation or display of pedestrian signals do not require installation of APS and associated accessible features.

5. *Other traffic signal projects*: For traffic signal improvement projects that are not new construction, minor work and routine maintenance or curb ramp replacement projects:
   a. Where the project scope, includes the alteration, installation or replacement of any pole to which a pedestrian push button is attached, installation of APS on poles in accessible locations is required. Relocation of poles may be required to achieve accessibility. Construction or alteration of curb ramps is not required.
   b. Where the project scope, does not include the alteration, installation or replacement of any pole to which a pedestrian push button is attached, installation of APS at existing push button locations is required. Relocation of poles, construction or alteration of curb ramps, etc. is not required.
   c. Signal controller software upgrades and repairs and/or cabinet upgrades and repairs that alter the operation or display of pedestrian signals require installation

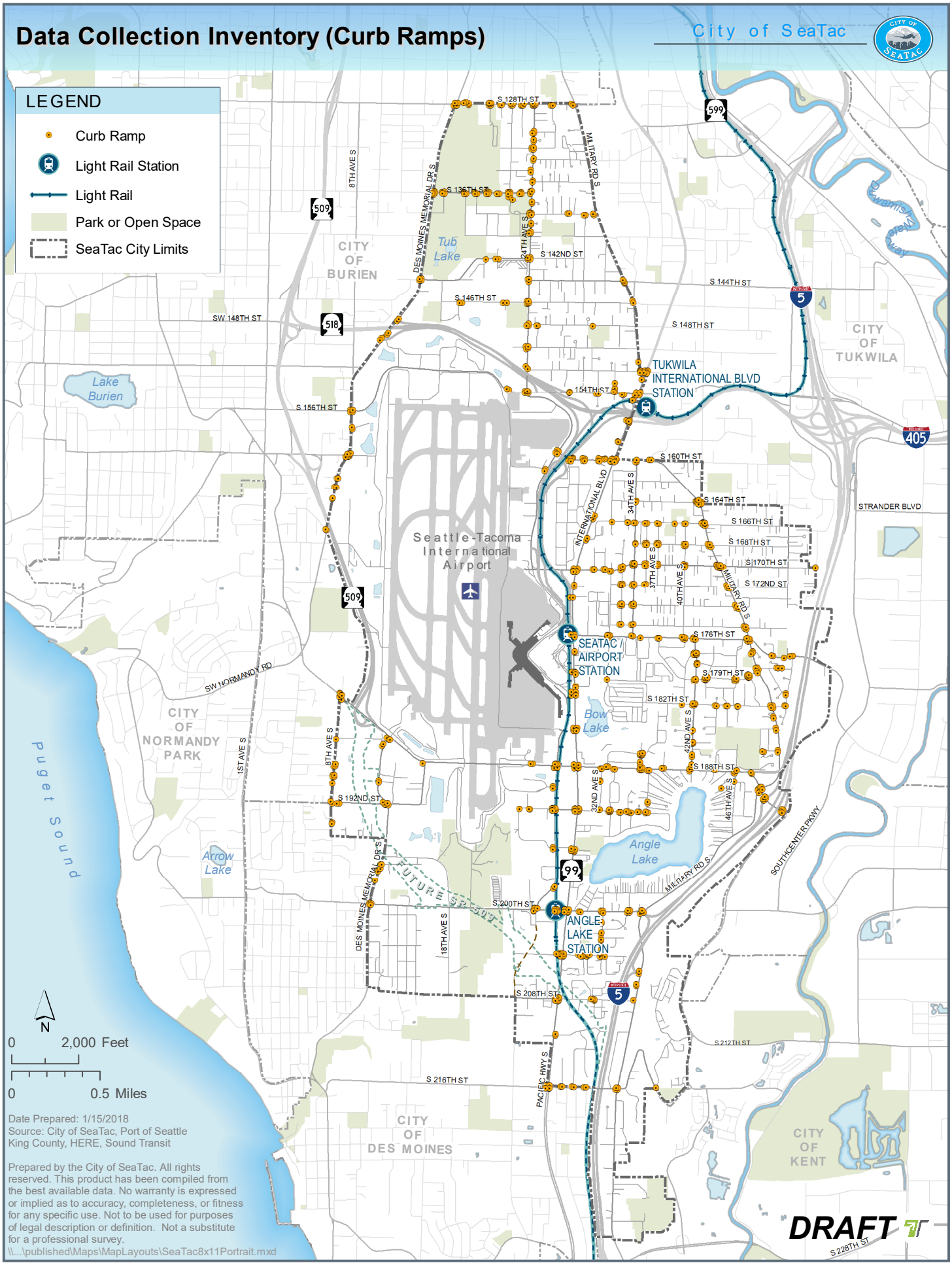
of APS at existing push button locations. Relocation of poles, construction or alteration of curb ramps, etc. is not required.

d. Adding or revising pedestrian signal heads or pedestrian detectors require installation of APS at existing push button locations. Relocation of poles, construction or alteration of curb ramps, etc. is not required.
e. In addition to the areas above, APS will be install through fulfillment of the city's obligations to complete its ADA Transition Plan.

Appendix G – Data Collection Inventory

Data Collection Inventory (Curb Ramps)

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
King County, HERE, Sound Transit

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DRAFT

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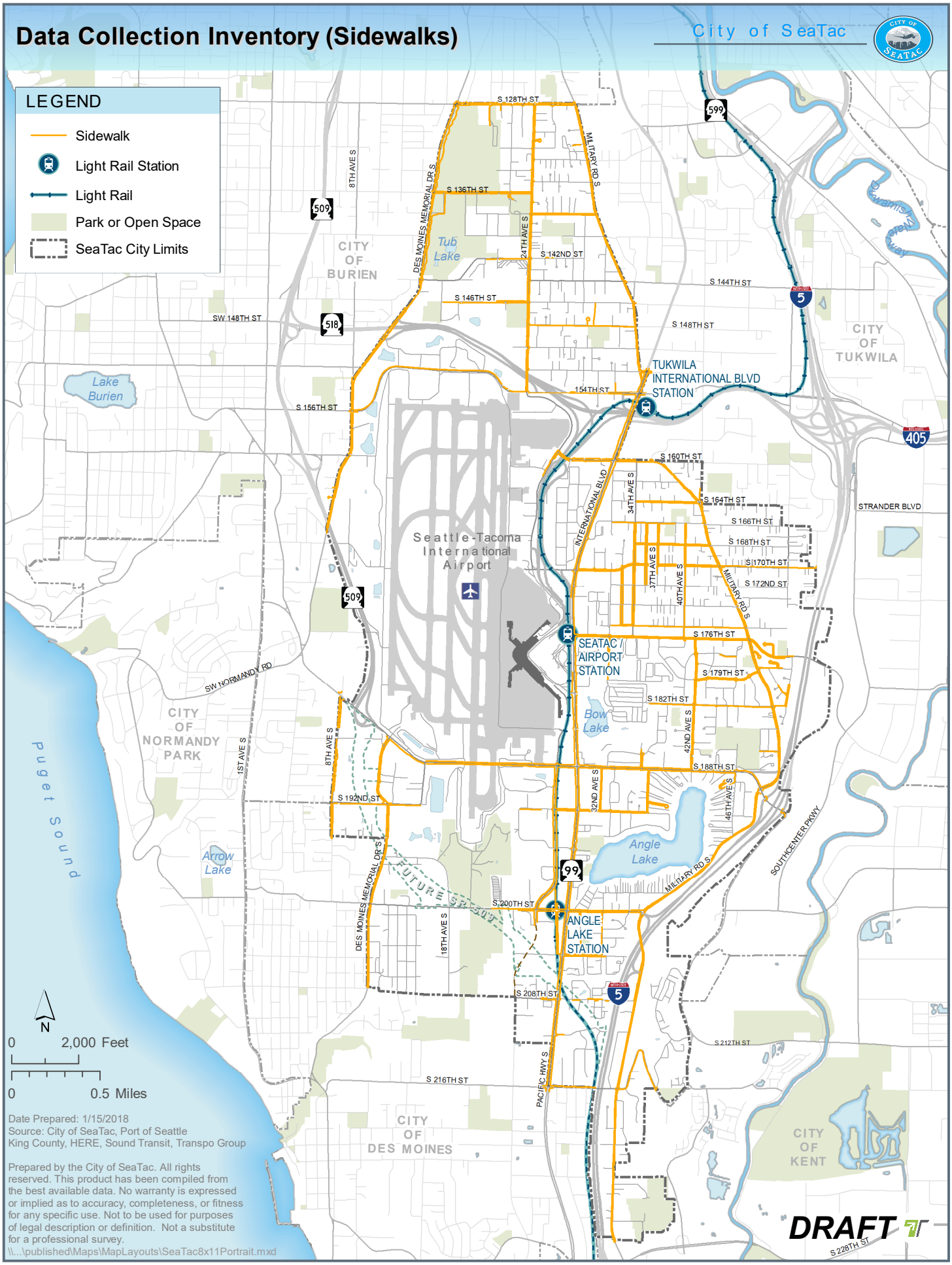
FIGURE I-1

Data Collection Inventory (Sidewalks)

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
King County, HERE, Sound Transit, Transpo Group

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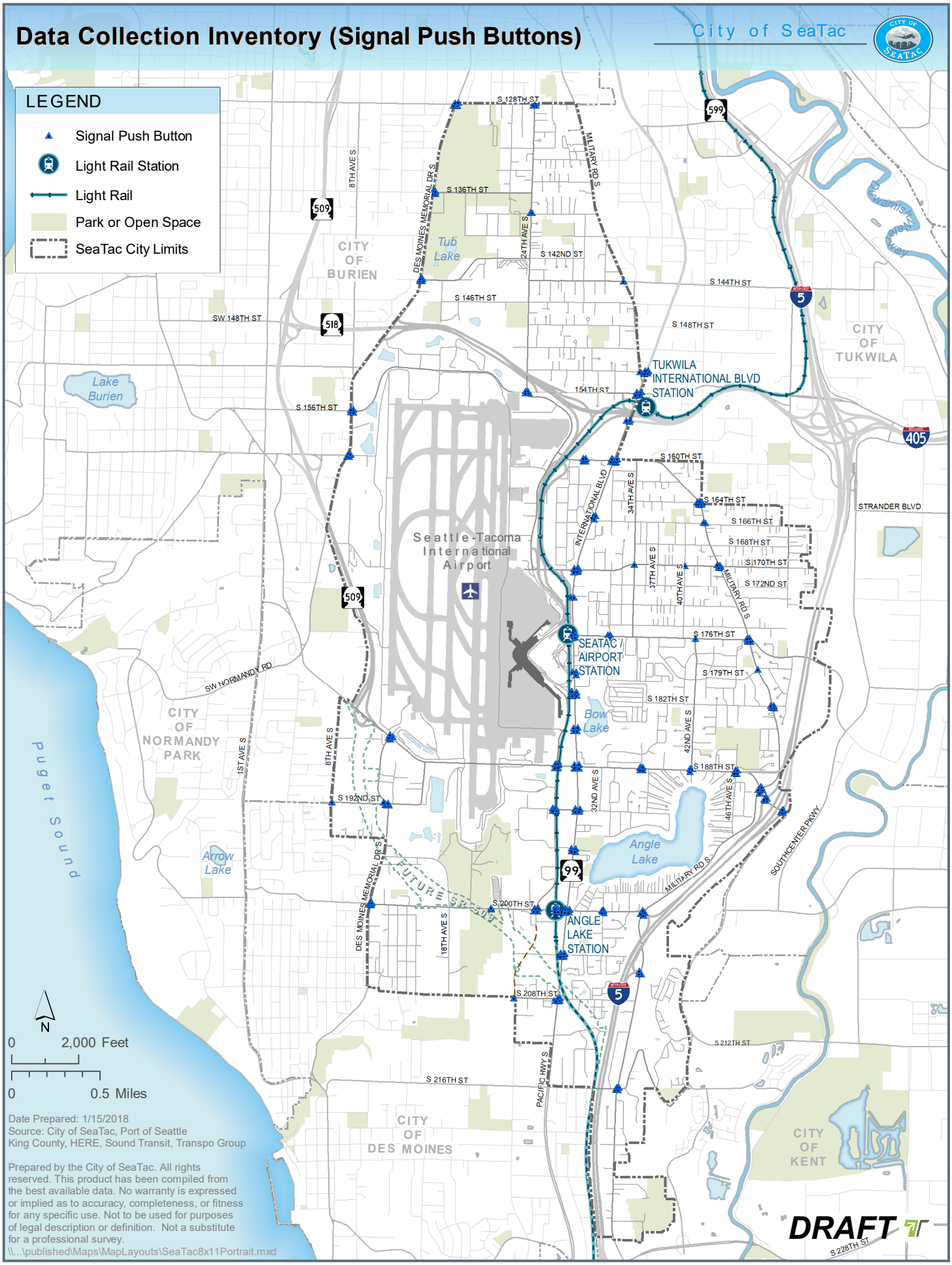
FIGURE I-2

Data Collection Inventory (Signal Push Buttons)

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
King County, HERE, Sound Transit, Transpo Group

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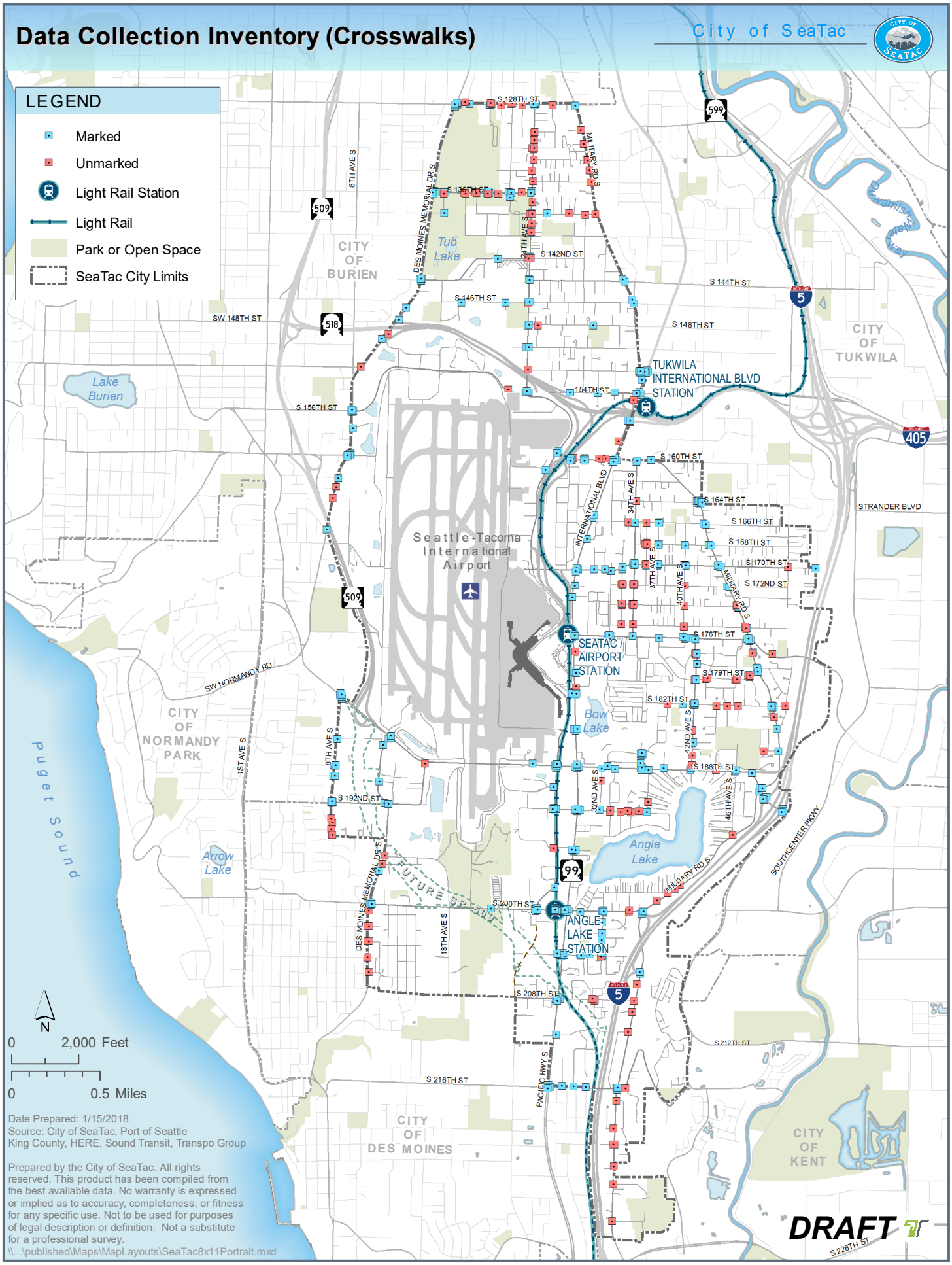
FIGURE I-3

Data Collection Inventory (Crosswalks)

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
King County, HERE, Sound Transit, Transpo Group

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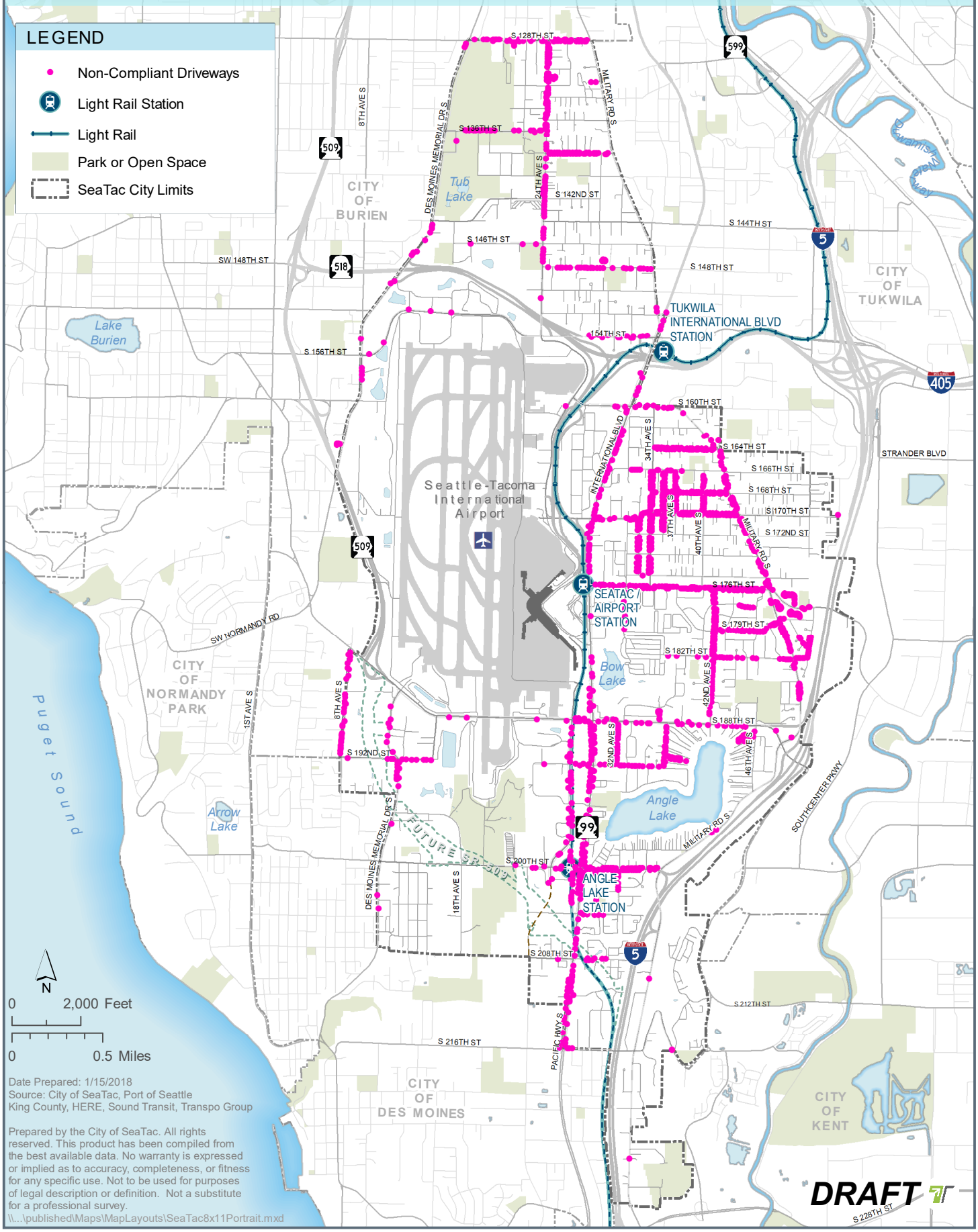
FIGURE I-4

Data Collection Inventory (Non-Compliant Driveways)

City of SeaTac



Date Prepared: 1/15/2018
Source: City of SeaTac, Port of Seattle
King County, HERE, Sound Transit, Transpo Group

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FIGURE I-5