2 INVENTORY OF EXISTING TRANSPORTATION SYSTEMS AND CONDITIONS

CHAPTER 2: INVENTORY OF EXISTING TRANSPORTATION SYSTEMS AND CONDITIONS

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Travel within and around the City of SeaTac is served by the existing transportation system, which includes roadways, pedestrian and bicycle facilities, and transit facilities and services. These facilities and services provide for daily travel in and around the City and to and from adjacent communities and the greater Puget Sound region. The existing conditions of the various transportation systems are summarized to provide insights to current issues and constraints to help guide the identification of future potential improvement projects, programs, and policies. Figure 1-1 shows the study area.

The Puget Sound Regional Council (PSRC) data shows that, in 2010, 88 percent of the work trips to and from the City of SeaTac's designated Urban Center were made in automobiles (79 percent drive alone, 9 percent in vehicles with more than one person). The remaining work trips were by transit (9 percent) and walk/bike modes (3 percent).

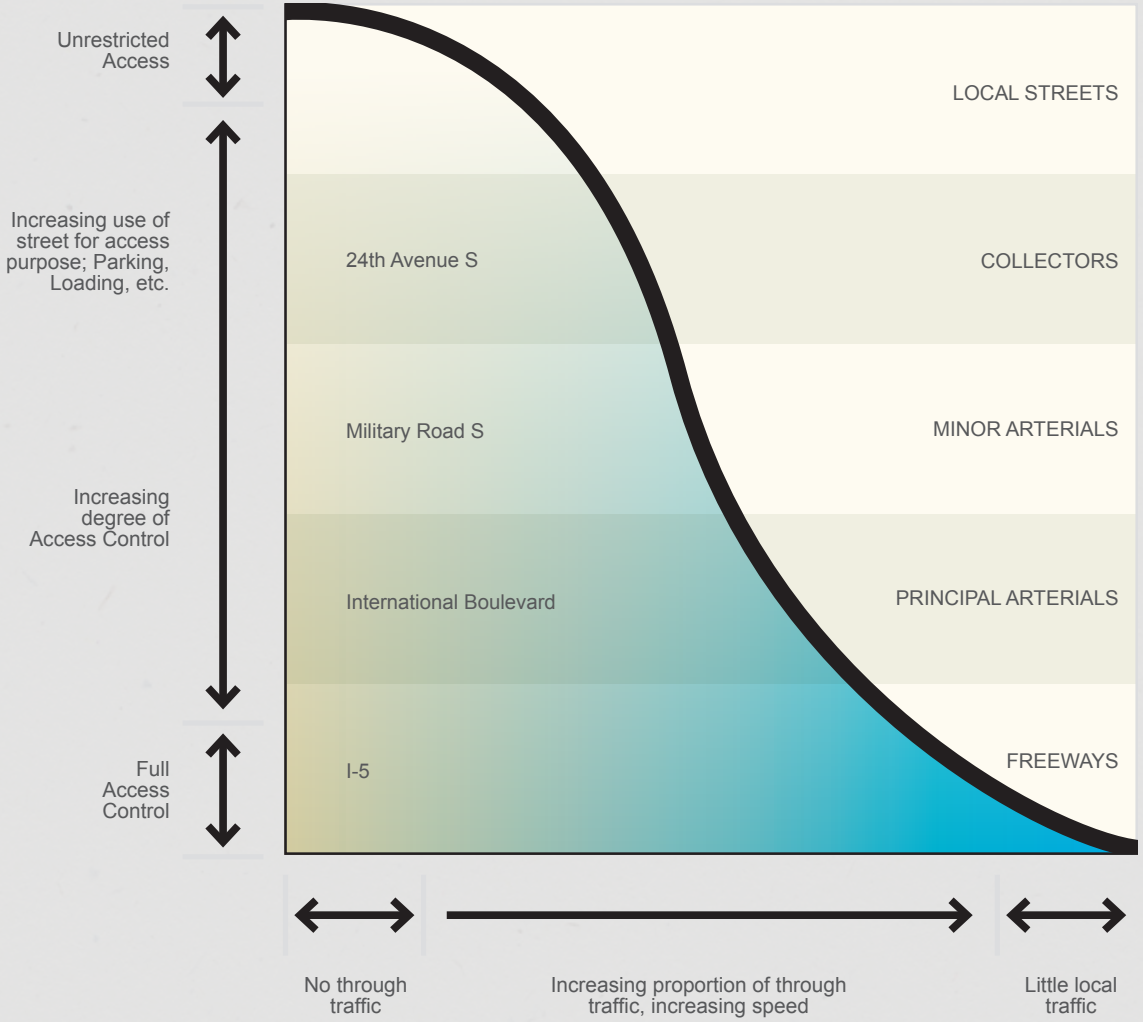
2.1 Roadway System

The roadway system provides the background for travel in and around the City of SeaTac. The roadway system is used by various travel modes – cars, freight, pedestrians, bicyclists, and transit. The roadways are classified in a hierarchy based on the intended purpose and desired service for each facility for the full range of travel modes.

The following summarizes the basic characteristics of state highway arterials and other main roadways, traffic volumes, intersection traffic operations, collision data, and information on the freight system. Summaries of the pedestrian and bicycle systems, and transit system and transportation demand management programs are described in subsequent sections.

2.1.1 Streets & Highways

The City of SeaTac classifies its roadways based on their intended function and projected land uses as principal arterials, minor arterials, collector arterials, and local or private streets. The definitions for the roadway classifications are summarized in Table 4-1 in Chapter 4 (Transportation Systems Plans). In addition, Figure 4-1 in Chapter 4 shows the City's adopted roadway functional classification system.



ROADWAY CLASSIFICATION RELATIONSHIPS BETWEEN MOBILITY AND ACCESS

Freeways

- **Interstate 5 (I-5)** is one of the primary north-south routes within the eastern portion of the SeaTac study area. I-5 is an interstate, limited access freeway under the jurisdiction of the Washington State Department of Transportation (WSDOT). It has four travel general purpose lanes and one high occupancy vehicle (HOV) lane in the northbound direction and five general purpose travel lanes and one HOV lane in the southbound direction near SeaTac. I-5 connects SeaTac north to Seattle and south to Tacoma. Two interchanges directly serve the SeaTac community and are located at S 188th Street/Orilla Road and Military Road S/S 200th Street. I-5 also has an interchange at I-405/SR 518; SR 518 serves the north part of SeaTac.
- **State Route 509 (SR 509)** is another primary north-south state highway located in the western portion of the City. SR 509 is under the jurisdiction of WSDOT. North of S188th Street, SR 509 is a four-lane (two lanes in each direction), limited access freeway. South of S 188th Street, the SR 509 highway designation follows 1st Avenue S to the City of Des Moines. This southern section is generally a two-to-four lane arterial roadway. The WSDOT has plans to extend the limited access freeway between S 188th Street and I-5. The right-of-way is in place for the freeway corridor, but funding is not yet in place. The 2015 State Legislature is considering a legislation that would fund the initial phase of the freeway extension project.

- **State Route 518 (SR 518)** is one of the primary east-west routes within the northern portion of the City of SeaTac. SR 518 is a state highway which has two-to-three travel lanes in each direction, with additional auxiliary lanes at interchanges. SR 518 connects SeaTac east to Burien and west to I-5 and I-405 in Tukwila. Four interchanges serve the SeaTac community. They are located on Des Moines Memorial Drive S, S 154th Street, North Airport Expressway (NAE), and International Boulevard. SR 518 does not directly provide access to businesses or residential but connects users with other principal and minor arterials.
- **North Airport Expressway (NAE)** is a short, north-south limited access freeway under the jurisdiction of the Port of Seattle. It connects the regional highway system to Sea-Tac International Airport. It generally has three-to-five travel lanes in each direction. It is classified as a Port Arterial. NAE is located along the east portion of Sea-Tac International Airport. It connects to the Airport terminal arrivals and departure drives, main parking garage, and cell phone lot. It also has a northbound on-ramp from S 160th Street which serves the Airport Rental Car Facility.

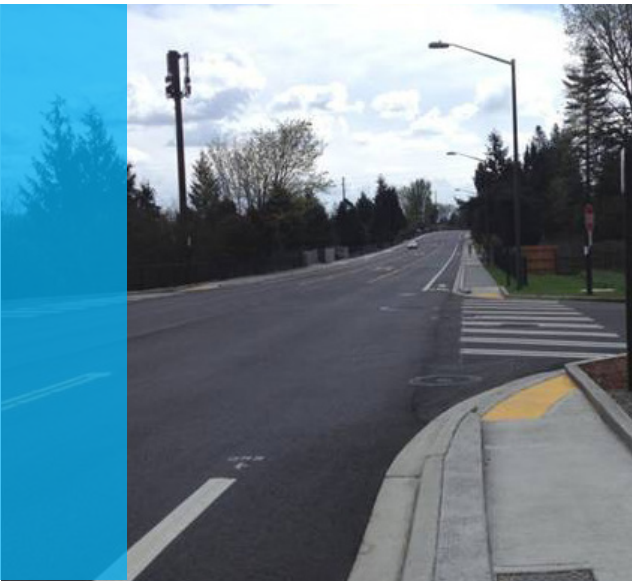
INTERNATIONAL BOULEVARD

North-South Principal and Minor Arterials

- **International Boulevard (SR 99)** is the primary north-south arterial serving SeaTac, including the full length of the City's designated Urban Center. It is part of the SR 99 state highway route which parallels I-5. It is located in the central part of the City, located on the east boundary of Sea-Tac International Airport. It is classified as a principal arterial and has a 40 mph speed limit within the City. It generally has two travel lanes in the northbound direction and two travel lanes and one HOV lane in the southbound direction. Between S 166th Street and SR 518, three lanes are provided in the northbound direction. Additional left and right-turn lanes are provided at major intersections. Right-turn movements from southbound International Boulevard use the HOV lane. A median divides much of International Boulevard; where there is not a center median a two-way, left-turn lane is provided.

  Sidewalks and crosswalks are provided along the portion of International Boulevard located within the City of SeaTac. A pedestrian bridge is also provided across International Boulevard connecting the east side of the street with the Link light rail station and Sea-Tac International Airport on the west side of the arterial. International Boulevard provides access to many amenities in the City of SeaTac including Sea-Tac International Airport, hotels, park-and-fly lots, and car rental agencies. International Boulevard also serves as a route for north-south through traffic through the City since it is a designated state highway.
- **Des Moines Memorial Drive S** is a minor arterial located along the west city limits of SeaTac. Access to SR 518 is provided at a partial interchange on Des Moines Memorial Drive S; the partial interchange only connects Des Moines Memorial Drive S to/from the east. North of S Normandy Road, the west side of the Des Moines Memorial Drive S abuts the City of Burien. At S Normandy Road/S188th Street, Des Moines Memorial Drive S shifts to the east and then continues south to the City of Des Moines. Between S 194th Street and S 208th Street, the west side of the arterial abuts the City of Des Moines. Des Moines Memorial Drive S typically has one travel lane in each direction, with additional turn lanes at several intersections. It has a speed limit of 35 mph. Sidewalks are not provided along most of Des Moines Memorial Drive S; however, the roadway has relatively wide shoulders. The corridor serves a variety of relatively low density residential and commercial developments.

MILITARY ROAD S CONSTRUCTION - BEFORE



MILITARY ROAD S CONSTRUCTION - AFTER

- **Military Road S** has one travel lane in each direction and is classified as a minor arterial. It is located along the east city limits. Military Road S primarily provides connections between local streets, neighborhoods, and has two I-5 access locations. It typically has a posted speed limit of 35 mph. The corridor generally serves residential properties, with some commercial areas near S 152nd Street and S 160th Street. The City recently completed reconstructing and widening the section of Military Road S between S 166th and S 176th Streets. These improvements brought the arterial to current roadway standards with a center two-way left turn lane, bicycle lanes, sidewalks, and drainage. Similar improvements had been constructed between S 176th and S 188th Streets. In other areas of the City, sidewalks and pedestrian/bicycle facilities along Military Road S are provided intermittently. In some locations where sidewalks are not provided wide shoulders are available. Crosswalks are provided at the major intersections along Military Road S.
- **28th Avenue S** was recently re-classified as a principal arterial and has two travel lanes in each direction. It serves as the key roadway in the City's designated Urban Center area south of Sea-Tac Airport. It runs parallel to International Boulevard, connecting S 188th and S 200th Streets. The speed limit is 35 mph and sidewalks are provided along both sides of the roadway. A new Link light rail station is under construction near the intersection of 28th Avenue S/S 200th Street, near Angle Lake. Like other sections of the Link light rail in SeaTac, this extension will have an elevated track. In addition to the future Link light rail station, 28th Avenue S provides access to hotels, airport parking services, and commercial developments. The arterial currently terminates at S 200th Street.

  The City of SeaTac will be extending the arterial to S 208th Street (Des Moines city limits) in the next couple of years. The extension will include facilities for bicyclists and pedestrians. This extension will complete the principal arterial corridor between S 188th Street and S 216th Street in Des Moines to serve existing and planned commercial and office growth. The extension also will be the location for new interchange ramps with the planned extension of the SR 509 freeway between S 188th Street and I-5.The City of Des Moines is in the process of widening its portion of the corridor between S 208th and S 216th Streets five lanes with comparable non-motorized facilities. When complete, the corridor will provide an alternative north-south route to International Boulevard south of the Airport.
- **1st Avenue S** is located west of the SeaTac city limits but connects with many primary east-west routes serving SeaTac. In the City of Burien, 1st Avenue S is a principal arterial with a speed limit of 35 mph. The speed limit is higher outside the City of Burien, at 40 mph north of Burien and 45 mph south of Burien. It has two travel lanes in each direction and a two-way left-turn south of S 140th Street. South of S 174th Street this section of 1st Avenue S is currently designated as SR 509; this

designation as a state highway will be removed upon construction of the planned extension of the SR 509 limited access freeway between S 188th Street and I-5. South of S Normandy Road, 1st Avenue S narrows to one travel lane in each direction. Sidewalks are provided along most of 1st Avenue S south of S 140th Street. Where sidewalks are not available wide shoulders are provided. 1st Avenue S primarily connects neighborhoods with retail areas and local streets.

East-West Principal and Minor Arterials

- **S 188th Street** is the primary east-west principal arterial serving SeaTac. It is located along the southern boundary of the Sea-Tac International Airport. It serves as a primary connection between SR 509 to the west and I-5 to the east. It also provides access to several schools, community centers, and residential areas located adjacent to or within the vicinity of the arterial. There are two travel lanes in each direction and a two-way left-turn lane. The two-way left-turn lane is not provided from Des Moines Memorial Drive to Alaska Service Road, including the segment under the Airport runways. S 188th Street has a speed limit of 40 mph west of International Boulevard and 35 mph east of International Boulevard. Sidewalks are provided along S 188th Street with crosswalks at major intersections.

S 188TH STREET BY CHINOOK MIDDLE SCHOOL

- **S 200th Street** is principal arterial located south of S 188th Street. It has one travel lane in each direction west of 26th Avenue S and two travel lanes in each direction east of 26th Avenue S. The east end of S 200th Street connects with an interchange with I-5 at Military Road S. The speed limit along the roadway is 35 mph west of International Boulevard and 25 mph east of International Boulevard. Between Military Road S and just east of International Boulevard, the arterial serves a mix of residential developments. From International Boulevard to 26th Avenue S, commercial developments are the primary land uses. Further west, there are some large areas of vacant or relatively undeveloped properties. The undeveloped properties include the right-of-way for the extension of SR 509 and a portion of Des Moines Creek Park. East of Des Moines Memorial Drive S, the arterial serves single-family residential land uses and other limited developments. Sidewalks are not provided west of 26th Avenue S but are provided along both sides of the roadway east of 26th Avenue S. The extension of the 28th Avenue S corridor will intersect with S 200th Street at 26th Avenue S. The extension of the Link light rail is planned to be served by the new Angle Lake Station near the intersection of S 200th Street at 26th Avenue S. Sound Transit will make improvements to the section of S 200th Street between International Boulevard to west of 26th Avenue S to improve non-motorized facilities and traffic operations and safety.
- **S 128th Street** is a minor arterial located along the north city limits of SeaTac. It has one travel lane in each direction and a 35 mph speed limit. Sidewalks are provided along both sides of the street. S 128th Avenue S primarily connects neighborhoods and local streets and runs adjacent to the northern edge of North SeaTac Park. West of SeaTac the arterial connects with an interchange SR 509.
- **S 156th Way/S 154th Street** is a minor arterial on the north side of Sea-Tac International Airport. One travel lane runs in each direction and the speed limit is 35 mph. Sidewalks are provided along the northern side of the road and bike lanes are provided on both sides of the road. East of 24th Avenue S, the corridor serves a mix of residential developments. West of 24th Avenue S, the arterial provides access to some Airport properties.
- **S 160th Street** is a minor arterial connecting Air Cargo Road on the east side of the Airport with Military Road S east of International Boulevard. This section provides access to

hotels, park-and-fly lots, other commercial uses, and some residential developments. It also provides a primary access to the Airport Rental Car Facility garage located in the northwest quadrant of the intersection of International Boulevard/S 160th Street. There are two travel lanes in each direction with sidewalks provided intermittently along both sides of the roadway. The speed limit is 35 mph. S 160th Street also provides access to eastbound SR 518 via an on-ramp to the NAE.

- **S 170th Street** is located centrally in SeaTac, east of the Sea-Tac International Airport. It is a minor arterial west of International Boulevard with two lanes in each direction and a 35 mph speed limit. This segment connects to Air Cargo Road, the airport cell phone lot, airport parking, hotels, and also connects with NAE.

  Between International Boulevard and Military Road S, S 170th Street is designated as a collector arterial serving mostly residential development, with one lane in each direction and a posted speed limit of 30 mph. S 170th Street is also classified as a minor arterial east of Military Road S connecting with 51st Avenue S and the City of Tukwila. Sidewalks and bicycle lanes are provided east of International Boulevard; west of International Boulevard sidewalks are very limited. Crosswalks are provided at major intersections along the roadway.
- **S 176th Street/S 178th Street** is a minor arterial that connects International Boulevard just east of the Airport to Military Road and Tukwila. There is one travel lane in each direction with a two-way, left-turn lane east of the airport. East of Military Road S the corridor becomes S 178th Street. S 178th Street crosses over I-5 and connects to the south end of the Southcenter regional shopping area. Adjacent land uses include hotels and other commercial developments between International Boulevard and 34th Avenue S, with residential uses east of 34th Avenue S. The speed limit is 30 mph between International Boulevard and Military Road S; and 35 mph east of Military Road S. Sidewalks are not provided west of the airport but are provided along both sides of the roadway east of the airport with crosswalks at major intersections.
- **S 208th Street** a two lane minor arterial located in along the south city limits of SeaTac. It connects the 28th Avenue S/24th Avenue S principal arterial corridor with International Boulevard. It serves office, park-and-fly, and other commercial development. It has a 25 mph speed limit. Sidewalks are limited to newer developments near International Boulevard.
- **S 216th Street** is located in along the south city limits of SeaTac, in Des Moines. It is a minor arterial connecting International Boulevard with Military Road S, including an overcrossing of I-5. Single-family residences are the primary land use along the corridor. There is one travel lane in each direction and a two-way left-turn lane west of I-5. Sidewalks and bicycle lanes are provided along both sides of the roadway west of I-5 with wide shoulders provided east of I-5 within the SeaTac city limits. East of Military Road S the roadway becomes 35th Avenue S (a collector arterial) which winds down to the Kent Valley.

2.1.2 Traffic Volumes

Daily traffic volumes were assembled to provide a general understanding of travel patterns and fluctuation of traffic volumes throughout a typical weekday. In addition PM peak hour volumes were assembled for use in evaluating traffic operations during the weekday commuter time period. The count data were assembled from various data sources. Daily volumes were assembled from:

- The City of SeaTac (2008 to 2013)
- The Port of Seattle (2009 and 2014), and
- WSDOT's Ramp and Roadway Average Daily Volumes Report (2012 or 2013) and WSDOT's 2013 Annual Traffic Report.

PM peak hour volumes were assembled from:

- The City of SeaTac data base (2008 to 2013), from WSDOT in the Ramp and Roadway Report (2012 or 2013), and
- Additional counts conducted in May and June 2014 for the TMP.

Daily Volumes

Average Daily Traffic (ADT) volumes vary throughout the City and are shown in Figure 2-1. State routes within and near the City carry the highest volume of traffic. Within the City, streets connecting to State routes carry the highest traffic volumes while streets connecting neighborhoods, particularly in the north, carry lower volumes of traffic. The following illustrates the range of volumes on area freeways and key arterials. This is followed by a discussion of hourly traffic patterns and truck volumes.

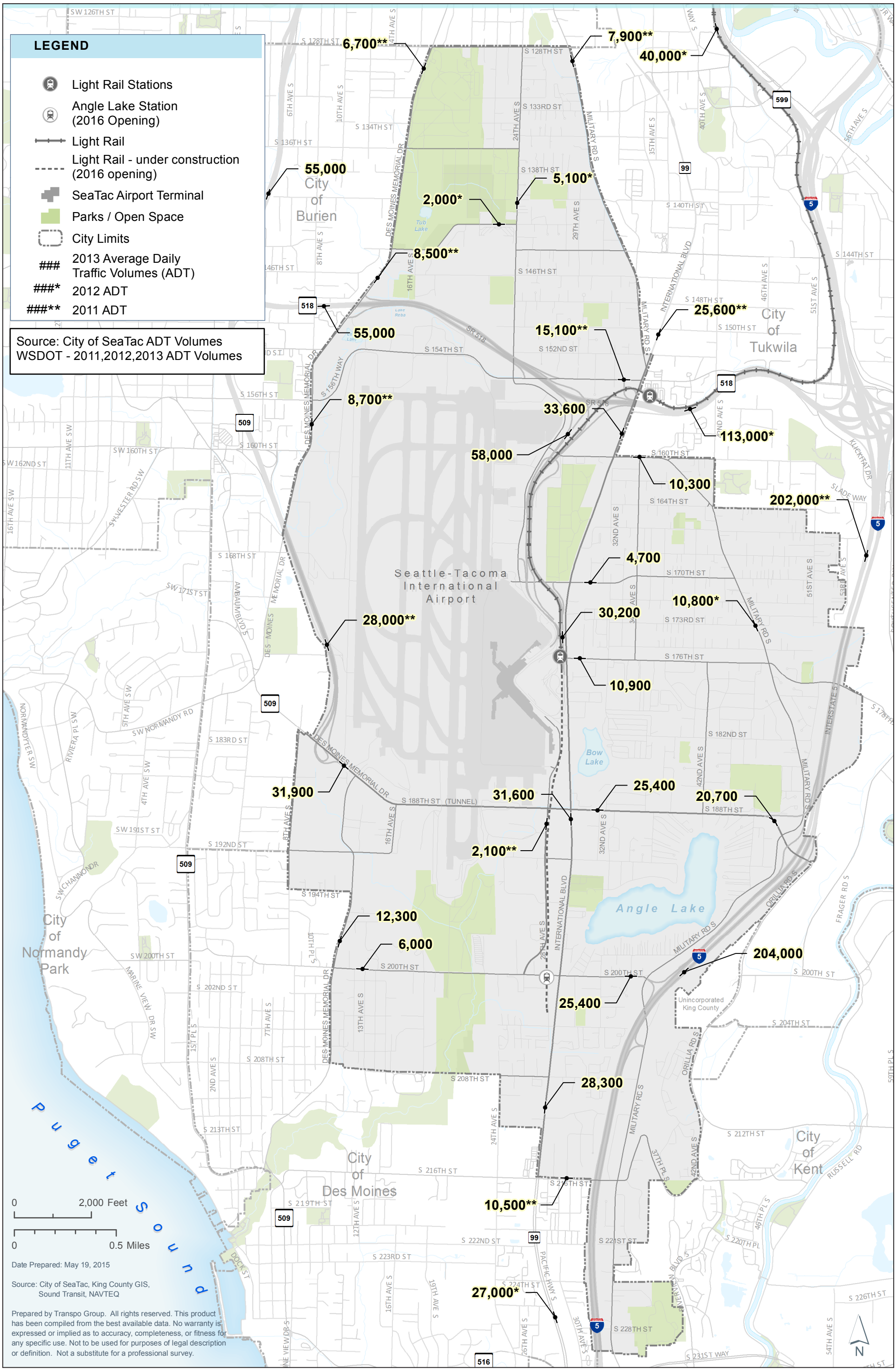


Figure 2-1: Existing Freeway and Key Arterial Volumes

- I-5 (South of I-405 to Military Road) has fairly consistent volumes in the study area, ranging between 202,000 and 204,000 vehicles per day (vpd). These high volumes reflect its function as the primary regional freeway serving the Seattle area and western Washington.
- SR 518 (I-5 to SR 509) has its highest volumes east of International Boulevard at 113,000 vpd. West of the NAE, volumes decrease significantly due to traffic to/from the Airport and I-5 and I-405. Near SR 509 on the west end of the freeway, the volumes are 55,000 vpd which are less than half the volume east of International Boulevard.
- **SR 509** (S 136th Street to S 188th Street) near the north end of the study area has volumes of approximately 55,000 vpd decreasing to 28,000 vpd just north of S 188th Street. This decrease results from the travel patterns to/from SR 518 and also the use of SR 509 between Burien and Seattle.
- **North Airport Expressway** (south of SR 518) carries 58,000 vpd near SR 518, which is a similar volumes as found on SR 509 and SR 518 in the north-west portion of the City. This illustrates the high level of travel generated by the Airport.
- **International Boulevard** (S 150th Street to S 216th Street) volumes in the north part of the City are around 25,600 vpd. The volumes increase to 30,000 to 35,000 vpd between SR 518 and S 200th Street due to the increased traffic associated with local commercial and Airport-related traffic. South of S 200th Street, traffic volumes on International Boulevard decrease back to 28,300 vpd, reflecting lower levels of development and less Airport-related traffic.
- **S 188th Street** (SR 509 to I-5) has its highest volumes (approximately 32,000 vpd) just east of the SR 509 interchange, which is the terminus of the limited access freeway. Between International Boulevard and I-5, traffic volumes on S 188th Street range from 20,000 to over 25,000 vpd.
- **S 200th Street** (Des Moines Memorial Drive S to I-5) has its highest daily traffic volumes in the vicinity of I-5 (25,000 vpd). These are comparable to the daily volumes on the similar segment of S 188th Street. In the vicinity of Des Moines Memorial Drive S, the daily traffic volumes on S 200th Street are much lower at 6,000 vpd, reflecting the lower levels of development in that part of the corridor.
- **Des Moines Memorial Drive S** (within city limits) has relatively low volumes of 7,000 vpd at the north end of the City. South of SR 518, the volumes increase to almost 9,000 vpd; the increase is largely related to travel patterns to/from SR 518 and arterials serving Burien. South of S 188th Street the volumes on Des Moines Memorial Drive S are over 12,000 vpd. The higher volumes on this southern segment reflect the travel patterns associated with the terminus of the SR 509 freeway at S 188th Street. The freeways traffic disperses to S 188th Street, Des Moines Memorial Drive S, and 1st Avenue S.
- **Military Road S** (within city limits) has relatively low volumes of 8,000 vpd at the north end of the City; these volumes are similar to the volumes on Des Moines Memorial Drive S near S 128th Street. Between S 160th and S 188th Streets, traffic volumes on Military Road S increase to over 10,000 vpd, reflecting the more central location, proximity to I-5, and the higher traffic generators found in the Urban Center and adjacent neighborhoods. Between S 188th and S 200th Streets, traffic volumes on Military Road decrease due to the interchanges that provide access with I-5 at both locations. Therefore, this section primarily serves the needs of the adjacent neighborhoods and a limited volume of through traffic. The highest traffic volumes on Military Road S are on the segment south of the northbound ramps at the Military Road S/I-5 interchange. Traffic connecting between S 216th Street and other areas to the south use this segment to access/egress northbound I-5.

Most other streets within the City typically carry 15,000 or fewer vehicles per day (vpd). City streets with10,000 to 15,000 vpd include S 216th Street near Military Road S, S 176th

Existing traffic volumes on the City's arterials range from below 5,000 to over 30,000 vehicles per day. Daily traffic volumes on the freeways serving the City range from about 30,000 to over 200,000 vehicles per day.

Street east of International Boulevard, Military Road S near S 176th Street, and S 154th Street east of International Boulevard. These roadways serve are classified as minor arterials and are intended to carry moderate levels of traffic volumes. S 176th Street and S 216th Street include crossings of I-5, while S 154th Street is part of the SR 518/SR 99 interchange

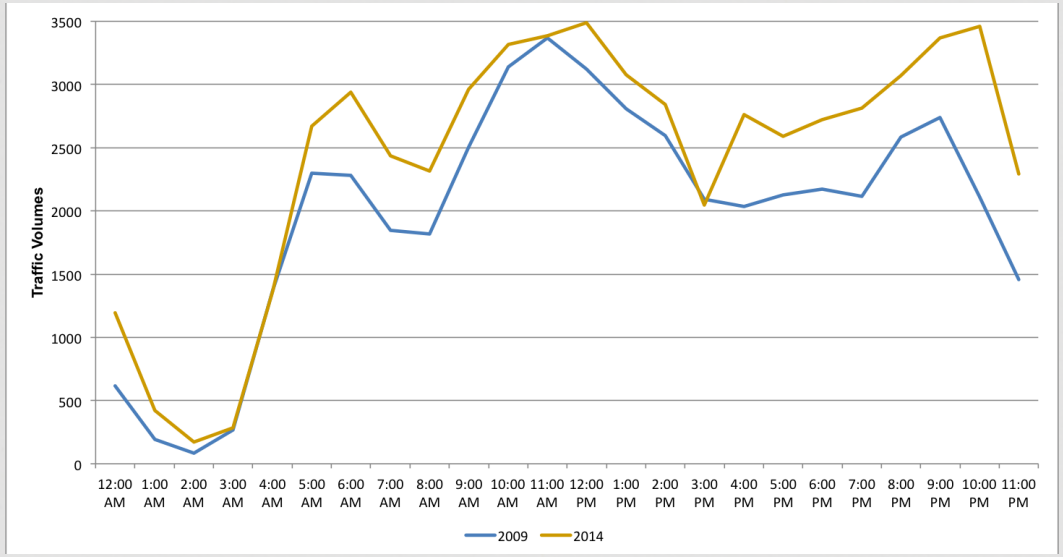
Collector arterials which serve local neighborhoods serve approximately 5,000 vpd or less. These include 24th Avenue S with 5,100 vpd, S 142nd Street with 2,000 vpd, and S 170th Street with 4,700 vpd.

Hourly Variations. Historical hourly traffic volumes were compared to current hourly traffic volumes at various locations within the City. Data for the 4 to 5 year period between 2008/2009 and 2012/2013 were reviewed for several locations throughout the City. Hourly volume graphs for locations around the City are presented in the Supporting Materials documents. The volumes on the various roadways are consistent with the roadway classifications. Lesser volumes are seen on collector arterials (24th Avenue S), slightly higher volumes are found on minor arterials (S 176th Street and Des Moines Memorial Drive S), and the highest volumes are on principal arterials (International Boulevard and S 188th Street).

In most locations, the 2012/2013 volumes are very similar to or are slightly lower than the historical volumes. The most notable differences occur along S 188th Street east of International Boulevard and west of Military Road S. Near International Boulevard the volumes increased whereas near Military Road S the volumes have decreased. When comparing 2013 volumes between the two intersections there is not as much difference – average daily traffic totals are approximately 25,400 near International Boulevard and 20,700 near Military Road S. The increased PM peak hour traffic volumes on S 188th Street near International Boulevard appear to be related to local traffic patterns near the intersection and not general traffic growth over the past several years.

In most cases, the two peak commuting hours (AM and PM) show up as peaks on the volume graphs, with the PM peak hour being the higher of the two peaks, which is typical of suburban areas such as SeaTac. The most prominent exception to this pattern is found on NAE south of SR 518 (see chart). On the NAE there are distinct peak traffic periods; however, the highest peak occurs during the mid-day period between 11 am and 1 pm. The morning traffic on NAE peaks around 6 am. Another peak occurs near 9 or 10 pm. These peak periods are different than the normal weekday peak hours during commuting hours (6-8 am and 4-6 pm). These correlate with peak travel times at Sea-Tac International Airport.

Other streets, such as S 160th Street (west of International Boulevard) and 24th Avenue S



Typical Weekly Traffic Volumes on
North Airport Expressway South of SR 518

(north of S 154th Street) show pretty flat hourly profiles, with no distinct peak hours. These appear to relate to Airport related activities, such as the rental car facility located at S 160th Street/ International Boulevard. The Airport employee parking lot and Boeing Spares site located north of the Airport affect the hourly traffic patterns on 24th Avenue S.

Truck Volumes. Daily truck traffic on arterials and collector streets in the City is roughly between 20 percent and 30 percent of the total daily volumes. The highest percentage of truck traffic is around Sea-Tac International Airport, with truck traffic representing 35 percent of daily vehicle traffic. Truck volumes are discussed more thoroughly in a later section. These data include all sizes of trucks, from semis to trucks that are used for delivery services such as UPS or FedEx. Larger trucks (with a higher number of axles) typically represent one to two percent of the daily traffic volumes on arterials in the City.

Along International Boulevard there are typically between 6,000 and 9,000 trucks per day. North of S 188th Street, there are more trucks traveling in the northbound direction. Between S 188th and S 208th Streets, there is a higher volume of trucks in the southbound direction on a typical weekday. Near S 208th Street the northbound/southbound split of daily truck traffic is about equal.

PM Peak Hour Volumes

As noted above, the time of day with the highest amount of traffic is typically the weekday PM peak commute period. This time period accounts for trips related to commuting, shopping, and other day-to-day trips, and usually occurs between 4 pm and 6 pm, Monday through Friday. Volumes during the PM peak hour typically account for between 7 and 11 percent of the total daily traffic on City of SeaTac roadways. PM peak hour traffic volumes were counted at several intersections within the City during May and June of 2014. Historical volumes for previous years were provided by the City of SeaTac. The 2014 PM peak hour counts collected as part of the TMP are included in the Supporting Materials. Figure 2-2 shows PM peak hour directional volumes along City roadways.

As would be expected, the highest volumes during the PM peak hour are along I-5. There are around 15,000 vehicles during the PM peak hour, with 60 percent of the traffic heading southbound. SR 518 has just over 5,000 vehicles during the PM peak hour; however, the traffic is fairly evenly split between eastbound and westbound directions.

The NAE carries approximately 2,600 vehicles per hour (vph) during the PM peak hour, which is one of the higher volumes for the PM peak hour within the City. As previously discussed, the traffic volumes on the NAE occur around noon on a typical weekday and not during the weekday commuter period. This is due to the nature of traffic traveling to and from the Airport, which is controlled by flight departure and arrival times. There are two peak travel hours along NAE that have volumes of approximately 3,500 vph. These hours are at 12 pm and 10 pm. The directional

AIR CARGO AREA OF SEA-TAC

DELIVERY TRUCK IN SEATAC

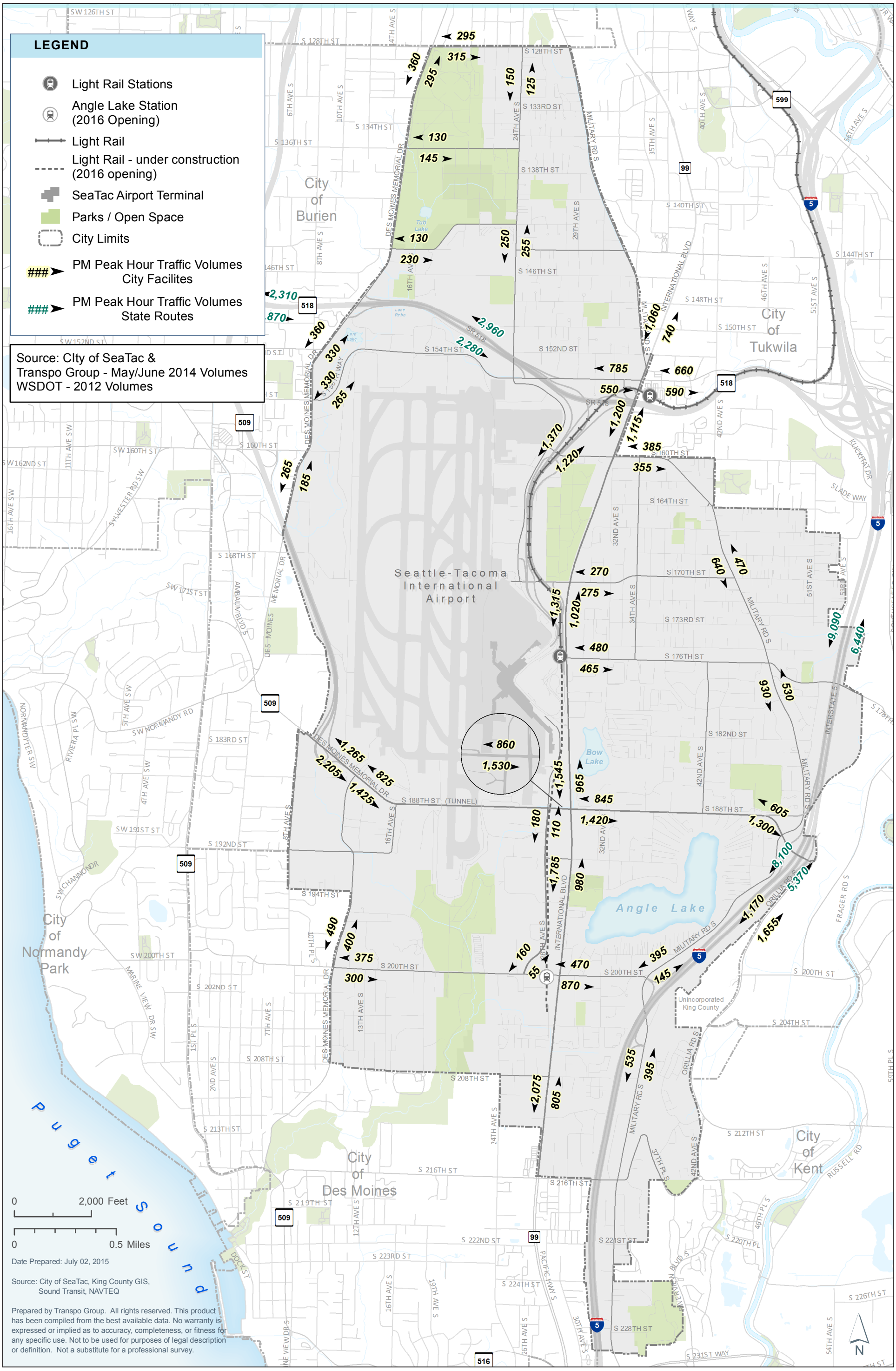


Figure 2-2: 2014 PM Peak Hour Directional Volumes

splits at 12 pm is 50/50 northbound and southbound. The late night peak traffic volumes have 55 percent in the northbound direction (exiting the Airport) and 45 percent southbound. Volumes along NAE stay above 2,200 throughout the day, except during the very early morning hours of 12 am to 5 am. In the morning hours starting around 3 am, 60 to 65 percent of the traffic is traveling southbound to the Airport, while in the afternoon and evening hours the southbound traffic towards the Airport represents between 40 to 50 percent of the total volumes.

International Boulevard provides the main north-south route through the City, which accounts for the higher PM peak hour volumes when compared to other City roadways. Two-way PM peak hour volumes on International Boulevard range from 2,300 vph between SR 518 and S 188th Street. South of S 188th Street weekday PM peak hour volumes on international Boulevard increase to 2,700 to 2,900 vph. In the vicinity of SR 518 the PM peak hour northbound/southbound traffic volumes are fairly equal. This reflects the inbound residential trips, the outbound employee traffic, and the balanced Airport traffic patterns. Adjacent to the Sea-Tac International Airport terminal southbound traffic accounts for 60 percent of the traffic, increasing to 70 percent south of S 208th Street. The higher percentage of southbound traffic south of S 208th Street is more typical of suburban travel patterns.

The primary east-west arterial through the City is S 188th Street. The highest volumes on a City street during the PM peak hour occur on S 188th Street near SR 509, which carries approximately 3,500 vph during the PM peak hour. Nearly 65 percent of those vehicles are traveling in the eastbound direction. The overall volumes decrease east of Des Moines Memorial Drive S. This reflects the traffic exiting the SR 509 freeway turning south to Des Moines Memorial Drive S. The volumes on S 188th Street further decrease east of International Boulevard, where they total roughly 2,200 vph and decrease to 1,900 vph at Military Road S at the east city limits. Approximately two-thirds of the PM peak hour traffic on S 188th Street east of International Boulevard is in the eastbound direction which is consistent with employees leaving the office or similar developments.

Other higher-volume roadways have similar directional splits with the higher volume of traffic in the southbound or eastbound direction. S 200th Street has a 65 eastbound/35 westbound PM peak hour traffic split near Military Road S. Approximately 60 percent of the PM peak hour traffic on Des Moines Memorial Drive S near S 160th Street is in the southbound direction. Traffic volumes on Military Road S near S 170th Street and in the vicinity of the I-5 northbound ramps show the same predominately southbound traffic patterns. These are typical of suburban travel patterns in south King County.

Lower volume roadways in the City were observed to most typically have a 50/50 split during the PM peak hour. Examples of this are 24th Avenue S near S 146th Street, S 170th Street east of International Boulevard, and S 128th Street near Des Moines Memorial Drive.

2.1.3 Traffic Operations

Traffic operations analyses provide a quantitative method for evaluating how the transportation system is functioning. It is applied to existing and forecast conditions to assist in identifying issues and potential improvement options. The traffic operations are reported for weekday PM peak hour conditions, which typically represent the worst peak hour of daily traffic within the City.

Level of Service (LOS) Standards

Level of service is a measure of the quality of traffic flow and operations. It can be described in terms of speeds, travel times, delays, convenience, interruptions, and comfort. The *Highway Capacity Manual* (HCM) (Transportation Research Board, 2010), provides methodologies for evaluation level of service (LOS) for transportation facilities and services. The HCM criteria range from LOS A indicating free-flow conditions with minimal delays, to LOS F indicating extreme congestion and long vehicle delays. The Supporting Materials provides a more detailed explanation of the HCM level of service definitions.

LOS standards for intersections and roadways have previously been established by the City. The current LOS standards were reassessed in the update of the 2015 Transportation Element (TE). To establish a baseline condition for that review, existing traffic operations were compared to the City's prior adopted LOS standards. The City's LOS standards are based on weekday PM peak hour conditions and are as follows:

- LOS E or better for principal or minor arterials
- LOS D or better on collector arterials and lower classification streets.

The LOS E criteria on principal and minor arterials are meant to encourage the use of alternative transportation modes. In addition, the adopted LOS E standard takes into account the limitations on improving roadways and intersections, especially prior to the planned extension of the SR 509 freeway. The LOS D criteria on collector arterials and lower classification streets are intended to discourage use of those roadways by through traffic.

Using state and regional guidance, the City allows exceptions to the LOS E standard along principal and minor arterials if future improvements are included in the City's adopted TE (and this associated TMP) and regional transportation plans. Exceptions to the LOS standards should be reflective of acceptable traffic engineering methodologies. The City also provides exceptions where the City determines improvements beyond those identified in the TE and TMP are not desirable, feasible, or cost-effective.

The Transportation Element recognizes needed exceptions to the level of service policy (LOS E standard) for principal and minor arterial intersections at the following locations:

- S 188th Street/International Boulevard
- S 200th Street/International Boulevard
- S 170th Street/International Boulevard
- SR 518 Westbound Off-ramp/ S 154th Street

WSDOT LOS Standards

Three state freeway routes serve the City of SeaTac: I-5 to the east, SR 518 in the north, and SR 509 to the east. All three state routes are designated as a Highway of Statewide Significance (HSS). The WSDOT has adopted LOS D or better for HSS facilities in urban areas and LOS C or better for HSS facilities in rural areas. The City of SeaTac is considered an urban area and thus all three of these HSS freeways serving SeaTac have an LOS D standard.

In addition, International Boulevard is an arterial state highway (SR 99). SR 99 in the City of SeaTac is defined by PSRC as a Tier 1 regionally significant state highway. Tier 1 regionally significant highways have a standard of "LOS E-mitigated", meaning that congestion should be mitigated through transit, transportation demand management, or other means. This standard is consistent with the City's exceptions to the LOS E standard on principal and minor arterials.

In addition, the existing arterial segment of SR 509 (1st Avenue S) west of SeaTac also is classified as a Tier 1 regionally significant state highway. Therefore, its LOS standard is also set at LOS E-mitigated.

City of Burien LOS Standards

The City of Burien's LOS standards vary by facility type and location. For roadways within its Urban Center, the standard is LOS E. For roadways designated as auto/truck priority routes, the standard is LOS D. For all other roadways, the standard is LOS C. The roadways classified as auto/truck priority routes that are near the City of SeaTac are SR 509, 1st Avenue S, Military Road S, Des Moines Memorial Drive S between the northern city limits and SW 160th Street, SW 128th St between Ambaum Boulevard SW and the eastern city limits, SW 148th Street between Ambaum Boulevard SW and SR 518, and S 160th Street from Des Moines Memorial Drive to Sylvester Road SW.

City of Des Moines LOS Standards

The City of Des Moines has an adopted LOS standard based on the AM or PM peak hour of LOS D or better. Exceptions to this standard are selected intersections along major arterials and in the Marina District, which have a standard of LOS E or F. In addition, the City of Des Moines requires all signalized intersections with a 120 second cycle length to operate with a volume-to-capacity (v/c) ratio of 1.0 or less, with the exception of the Kent-Des Moines Road/Pacific Highway S intersection which is permitted to operate with a maximum v/c ratio of 1.2 using a 150 second cycle length.

City of Kent LOS Standards

The City of Kent evaluates LOS by roadway corridor, by calculating seconds of delay for key corridor intersections and developing a corridor-wide average based on a weighting of the corridor intersection volumes. For signalized intersections, the average delay of all approaches of the intersection is weighted by the total PM peak hour volume entering the intersection; for unsignalized intersections, the delay is based on the worst individual movement or approach and weighted by the volume of that same movement or approach. The LOS standard for the corridors is LOS E, with two exceptions that allow LOS F.

One exception is Pacific Highway S (SR 99) which is adjacent to SeaTac and the other is within Downtown Kent.

City of Tukwila LOS Standards

The City of Tukwila LOS standards vary both by location and by the function of the surrounding areas. For corridors in the Southcenter area the standard is LOS E, except for along Strander Boulevard and a portion of Andover Park E which both have a standard of LOS F but are not to exceed an average delay of 120 seconds per vehicle. Non-residential arterial intersection has a standard of LOS E and minor and collector streets in residential areas have a standard of LOS D.

Intersection Levels of Service and Operations Issues

The following section reviews the methodology used in evaluating LOS and details the existing LOS by intersection. Most of the intersections analyzed are signalized intersections. Figure 4-1 in Chapter 4 shows the locations of the signalized intersections in the City of SeaTac. International Boulevard has 17 signalized intersections with in the City, which makes it the most signalized corridor in the City of SeaTac. S 188th Street has 9 signalized intersections, Des Moines Memorial Drive S has 8 signalized intersections, and Military Road has 7 signalized intersections and 2 flashing crosswalks or flashing beacon systems.

Level of Service Methodology

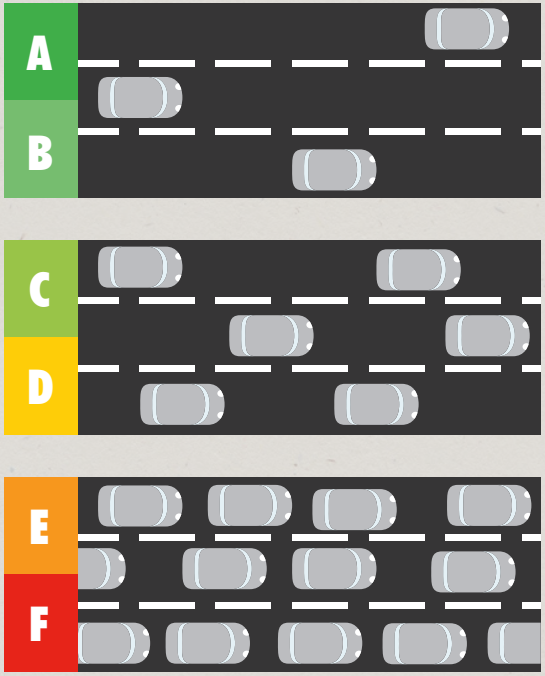
The operational characteristics of an intersection are determined by calculating the intersection level of service (LOS). For signalized locations, LOS is measured in average delay per vehicle and is reported for the intersections as a whole. At side-street stop-controlled intersections, LOS is measured in average delay per vehicle during the peak hour of traffic and is reported for the worst operating approach of the intersection.

Weekday PM peak hour traffic operations for existing conditions were evaluated at major intersections in the City of SeaTac using the Synchro 8 software program, based on the procedures identified in the *Highway Capacity Manual* (HCM) (2000). The HCM 2000 methodology was used due to signal timings at City intersections which cannot be readily coded using the HCM 2010 methodology.

Existing (2014) Intersection Levels of Service

Figure 2-3 and Table 2-1 summarizes the 2014 PM peak hour intersection LOS and control type for each of the study intersections. The Synchro files for the existing LOS analyses are available in electronic format in the Supported Materials.

Level of Service Standards



LOS	CONTROL DELAY (per Vehicle)	DESCRIPTION
A	10	Free flow
B	>10-20	Stable flow (slight delays)
C	>20-25	Stable flow (acceptable delay)
D	>35-55	Approaching unstable flow (tolerable delay, occasional wait through more than one signal)
E	>55-80	Unstable flow (intolerable delay)
F	>80	Forced flow (jammed)

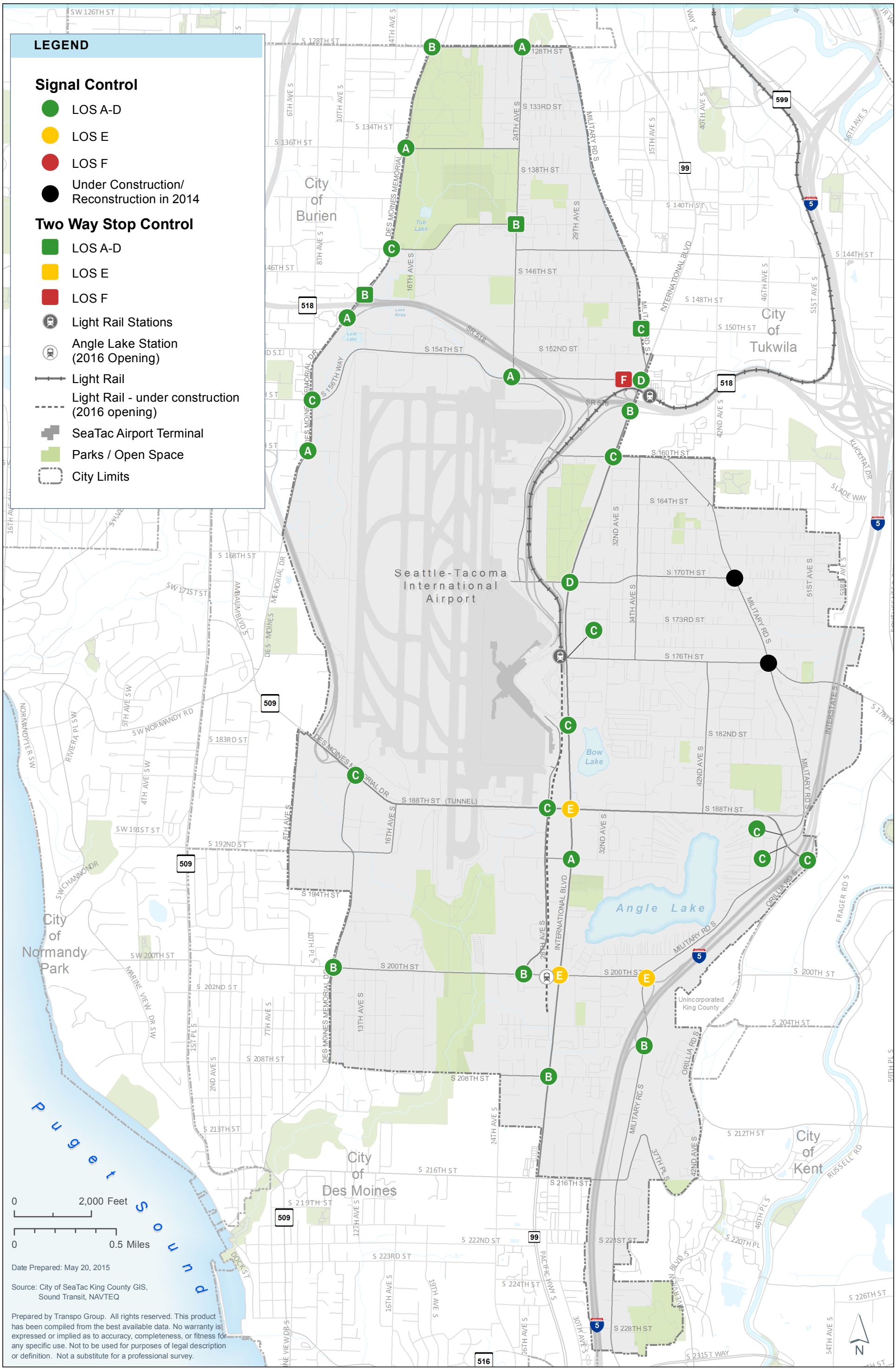


Figure 2-3: Existing (2014) Intersection PM Peak Hour Levels of Service

Table 2-1: Existing (2014) Weekday Peak Hour Intersection LOS Summary (HCM 2000)

INTERSECTION	TRAFFIC CONTROL	EXISTING		
		LOS[1]	Delay[2]	VC[3]WM[4]
International Boulevard/S 182nd Street (Arrivals Drive)	Signalized	C	20	0.53
International Boulevard/S 188th Street	Signalized	E	68	0.97
International Boulevard/S 192nd Street	Signalized	A	10	0.51
International Boulevard/S 200th Street	Signalized	E	58	0.92
International Boulevard/S 208th Street	Signalized	B	18	0.72
International Boulevard/S 154th Street (Southcenter Boulevard)	Signalized	D	46	0.74
International Boulevard/SR 518 EB On-Ramp	Signalized	B	11	0.61
International Boulevard/S 160th Street	Signalized	C	28	0.47
International Boulevard/S 170th Street	Signalized	D	43	0.63
International Boulevard/S 176th Street	Signalized	C	28	0.52
Des Moines Memorial Drive S/S 188th Street	Signalized	C	27	0.83
Des Moines Memorial Drive S/S 200th Street	Signalized	B	18	0.81
Des Moines Memorial Drive S/S 128th Street	Signalized	B	19	0.44
Des Moines Memorial Drive S/S 136th Street	Signalized	A	8	0.43
Des Moines Memorial Drive S/S 144th Street	Signalized	C	23	0.57
Des Moines Memorial Drive S/SR 518 WB Off-Ramp	Two-Way Stop	B	14	WB
Des Moines Memorial Drive S/SR 518 EB On-Ramp	Signalized	A	8	0.33
Des Moines Memorial Drive S/S 156th Way	Signalized	C	33	0.43
Des Moines Memorial Drive S/S 160th Street	Signalized	A	8	0.58
Military Road S/S 170th Street	Under Construction[5]	-	-	-
Military Road S/S 176th Street	Under Construction[5]	-	-	-
Military Road S/I-5 SB Ramps (S 200th Street)	Signalized	E	56	0.81
Military Road S/I-5 NB Ramps	Signalized	B	18	0.68
Military Road S/S 150th Street	Two-Way Stop	C	19	EB
Military Road S/S 188th Street	Signalized	C	30	0.66
24th Avenue S/128th Street	Signalized	A	7	0.35
24th Avenue S/S 142nd Street	Two-Way Stop	B	14	WB
24th Avenue S/S 154th Street	Signalized	A	9	0.50
26th Avenue S/S 200th Street	Signalized	B	15	0.50
28th Avenue S/S 188th Street	Signalized	C	30	0.61
I-5 NB Ramps/S 188th Street	Signalized	C	35	0.88
I-5 SB Ramps/S 188th Street	Signalized	C	34	0.83
SR 518 WB Off-Ramp/S 154th Street	Two-Way Stop	F	69	NB

Four intersections in the City operated at LOS E or F in 2014, signifying congested traffic conditions. All of these intersections are located either along International Boulevard (SR 99) or at a freeway interchange ramp. The only intersection exceeding the applicable LOS standards is SR 518 westbound off-ramp/S 154th Street intersection, which currently operates at LOS F. The poor LOS at this unsignalized intersection is for the north-to-west left-turn movement.

1. Level of Service (A – F) as defined by the Highway Capacity Manual (TRB, 2000)
2. Average delay per vehicle in seconds.
3. Volume-to-capacity (V/C) ratio reported for signalized intersections.
4. Worst Movement (WM) for stop controlled intersections.
5. Military Road S intersections with S 170th Street and S 176th Street were under construction at the time of this report. The intersections will be analyzed under future conditions.

Four intersecitons in the City operate at LOS E or F, signifying congested traffic conditions. The four intersections are:

- **International Boulevard/S 188th Street.** This signalized intersection has the highest volume of traffic in the City of SeaTac, with nearly 5,000 vph during the PM peak hour (2014 traffic counts). International Boulevard serves as the primary north-south arterial, while S 188th Street is the main east-west arterial south of Sea-Tac Airport. S 188th Street also connects with the south end of the existing SR 509 freeway and has an interchange with I-5. This intersection is located in a high demand, high volume area which results in congestion. In addition, there are many left-turn movements which require green signal time to process, which results in longer delays for through traffic. The City's prior Transportation Element notes that the planned extension of the SR 509 freeway between S 188th Street and I-5 would greatly reduce forecast traffic at this intersection. *Additional widening of the intersection is not planned or desired due to impacts on adjacent businesses and non-motorized travel near this key junction.*
- International Boulevard/S 200th Street. This intersection is another high volume intersection south of Sea-Tac Airport. In 2014, this signalized intersection carried almost 4,200 vph during the weekday PM peak hour. S 200th Street also connects with an interchange with I-5. It located near many access points to various amenities including parking-and-fly lots, hotels, and restaurants. The planned extension of the SR 509 freeway will help improve traffic operations at this intersection.
- **Military Road S/I-5 SB Ramps (S 200th Street).** This intersection is part of the I-5 southbound on and off-ramps and is controlled by a traffic signal. S 200th Street is a principal arterial and Military Road S is classified as a minor arterial. Military Road S only has one travel lane in each direction, with additional turn lanes at the intersection. Sound Transit is working with the City and WSDOT to construct improvements at this intersection as part of the extension of the Link light rail to S 200th Street. As with the above two intersections, the SR 509 freeway extension has been identified in prior plans to reduce traffic congestion at this I-5 interchange ramp intersection.
- **SR 518 Westbound Off-ramp/ S 154th Street.** This unsignalized intersection serves the SR 518 westbound off-ramps and is two-way stop controlled. This intersection is located near International Boulevard and the Tukwila International Boulevard Link light rail station. The poor level of service primarily associated with the north-to-west left turn movement. This left-turn from SR 518 accounts for approximately 10 percent of the total traffic using the intersection (based on 2014 weekday PM peak hour traffic counts).

The intersections along Military Road S at S 170th Street and S 176th Street were under construction at the time the analysis was conducted. They are shown on Figure 2-3 as a placeholder for future conditions analysis, presented in Chapter 3.

Two intersections currently operate at LOS D, approaching congested conditions. The intersections approaching congested conditions are the International Boulevard/S 154th Street and International Boulevard/S 170th Street intersections, which both are controlled by traffic signals.

Traffic Queues

The analysis shows that a majority of intersections in the City operate within the LOS standard during the weekday PM peak hour. However, the operational analysis can underestimate the full traffic demands at some locations due to congestion and the inability for some intersections to process the vehicular demands during peak periods, resulting in traffic queues backing to adjacent intersections. For example, the 28th Avenue S/S 188th Street intersection

The planned extension of the SR 509 freeway will help improve traffic operations at intersections along International Boulevard.

experiences long eastbound queues, and westbound queues which are metered by the congestion at the traffic signal at the International Boulevard/S 188th Street intersection. During peak periods, congestion occurs in the vicinity of the I-5 interchange at S 188th Street and Military Road S as well as along the principal arterials serving the City.

Many intersections along International Boulevard experience long or metered queues. Metered queues are due to the proximity to other signalized intersections. Long queues are also present along S 188th Street at major intersections.

There is a southbound High Occupancy Vehicle (HOV) lane along International Boulevard from S 160th Street to the south city limits. This HOV restriction in this lane helps reduce delays for buses, shuttles and other HOVs.

TRAFFIC QUEUES

2.1.4 Traffic Safety

An analysis of traffic safety was conducted on major roadways and intersections within the City of SeaTac. Historical collision data along all major roadways were provided by the WSDOT for the three-year period from 2011 to 2013, which were the latest full years of data available at the time the TMP analysis was initiated in 2014. Figure 2-4 shows the location of fatality collisions, collisions involving pedestrians and bicyclists, and intersections and roadway segments with higher numbers of collisions, which are summarized below. The Supporting Materials documents include full summaries of the collision data.

The initial analysis focused on accidents resulting in fatalities or involving pedestrians or bicycles. Additional analyses reviewed collisions at intersections and along roadway segments. Almost 2,000 collisions were reported in the City during the three year analyses period, or 650 per year. Over 1,200 of the collisions occurred at intersections and 750 between intersections, along roadway segments. Approximately 16 percent of the collisions were classified as "driver inattention." Another 6 percent were classified as "driver impairment" (drugs, alcohol, or medication). Five traffic fatalities were reported in the City of SeaTac during the 2011-2013 analyses period. In addition, 68 total collisions involved pedestrians or bicyclists. Of the 68 total collisions involving bicycles or pedestrians, 1 was along I-5 and the remaining 67 were reported along City streets, intersections, or various airport locations.

Collision Severity

The severity of the collisions is summarized by year and intersection or roadway segment in Table 2-2.

As shown in Table 2-2 approximately 10 percent (122) of the recorded collisions during that three year period resulted in injuries at

Table 2-2: Collision Severity Summary for Intersections and Segments (2011-2013)

YEAR	NO INJURY	POSSIBLE INJURY	INJURY	FATALITY	UNKNOWN	TOTAL
Intersection Summary						
2011	240	102	40	1	3	386
2012	252	97	49	1	4	403
2013	285	105	33	0	4	427
Total	**777**	**304**	**122**	**2**	**11**	**1,216**
Roadway Segment Summary						
2011	180	43	26	0	6	255
2012	182	45	26	1	12	266
2013	162	32	22	1	12	229
Total	**524**	**120**	**74**	**2**	**30**	**750**

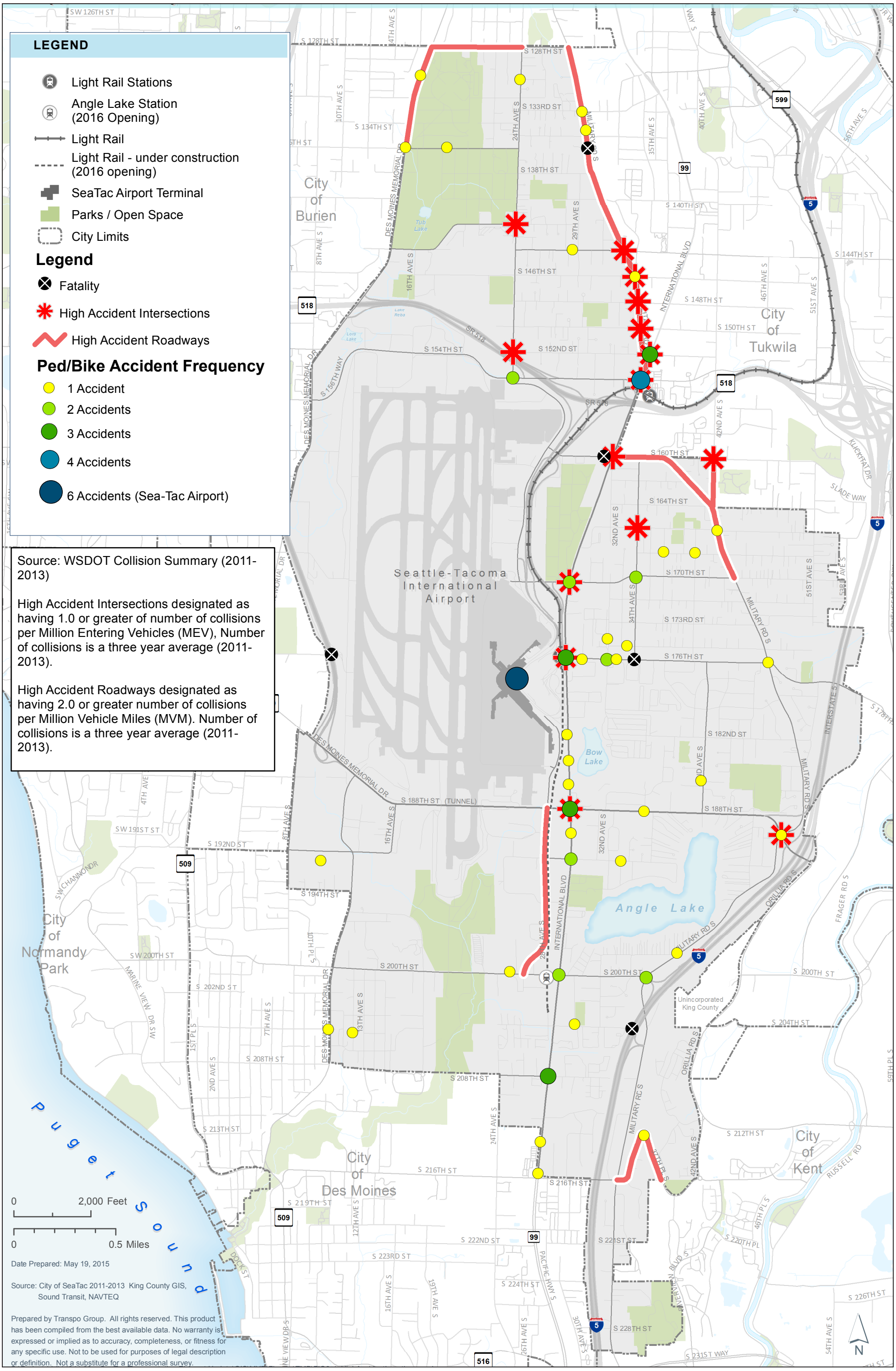


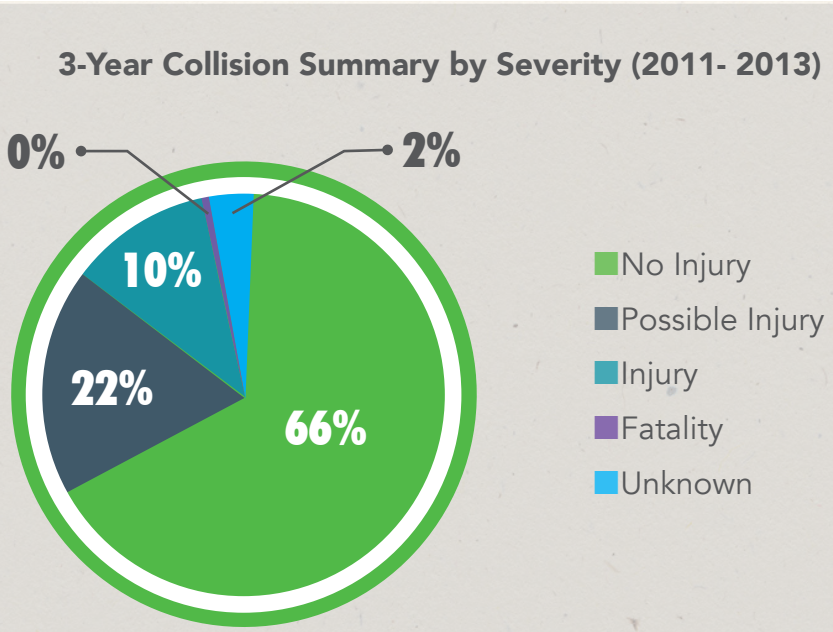
Figure 2-4: High Accident Locations (2011-2013)

intersections and approximately 10 percent (74) of the recorded collisions resulted in injuries on roadway segments. Approximately 25 percent (304) of the collisions at intersections resulted in possible injury and approximately 16 percent (120) collisions on roadway segments resulted in possible injury. The remaining 64 percent (788) of recorded collisions resulted in no injury or was not stated at intersections. 74 percent (554) of recorded collisions on roadway segments resulted in no injury or was not stated.

Of the collisions that resulted in an evident injury, 24 of the 40 (60 percent) occurred at intersections on International Boulevard, and 11 (28 percent) occurred at intersections along Military Road S. Similarly, 9 of a total 14 (64 percent) of collisions that resulted in serious injury occurred at intersections along International Boulevard.

Fatalities

During the three-year study period (2011-2013), five fatal traffic accidents occurred in the study area. Some were on City streets and others on the freeways serving the City. One of the fatality collisions occurred in 2011 at the intersection of the temporary SR 509 off-ramp for runway reconstruction. The fatal accident was the result of a vehicle colliding with a concrete barrier/ Jersey barrier. Two fatality collisions occurred in 2012, one at the intersection of 34th Avenue S and S 176th Street. The fatal accident was the result of a vehicle colliding with a utility pole. The other 2012 accident occurred on S 160th Street approximately 156 feet west of International Boulevard at a driveway. The fatal accident was a result of a vehicle not granting right-of-way to a motorcycle. The other two collisions resulting in fatalities occurred in 2013. One was on I-5, south of S 200th Street. The collision involved a truck trailer colliding with a pedestrian. The other 2013 fatality resulted from a head-on collision on Military Road S approximately 100 feet south of S 135th Street.

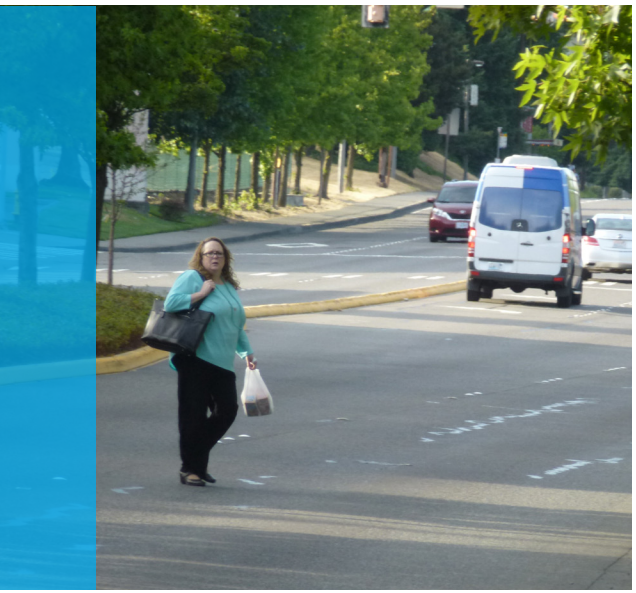


Pedestrian & Bicycle Collisions

As previously mentioned, 67 bicycle or pedestrian collisions were reported. Of these collisions 42 occurred at intersections and 25 occurred on roadway segments. Of the 42 collisions involving pedestrians and bicyclists at intersections, 22 occurred along International Boulevard, 3 occurred on Des Moines Memorial Drive, and 4 on Military Road S. The remaining pedestrian and bicycle collisions occurred at a variety of locations throughout the study area. The locations of the bicycle and pedestrian collisions are shown on Figure 2-4.

Out of the 67 bicycle or pedestrian collisions, 22 occurred when a vehicle failed to yield right-of-way to the pedestrian. Other collisions involving pedestrians or bicyclists were the result of drivers of vehicles disregarding traffic lights, driver inattention, and exceeding safe residential speeds. Two non-motorized collisions resulted from pedestrians or bicyclists not granting right-of-way to the vehicle and two others were drug or alcohol related. The remaining 38 collisions either did not report a cause or the cause was listed as "other". Of the bicycle or pedestrian collisions 27 occurred at night.

Some of the highest locations for pedestrian or bicycle collisions were at intersections with or along International Boulevard. A total of 28 bicycle or pedestrian collisions are associated with International Boulevard. As previously mentioned International Boulevard is one of the major north-south arterials in SeaTac and typically has a 5 to 6-lane cross section with sidewalks and



JAYWALKER ON INTERNATIONAL BOULEVARD

no bicycle facilities. Additionally, there left and right-turn lanes at most of the major intersections along International Boulevard. Of the 28 collisions that occurred along or at intersections with International Boulevard 18 involved vehicles making left or right turns, and 10 resulted from the vehicle failing to yield to the right-of-way to the pedestrian or inattention by the driver. There are lots of potential distractions along this section of International Boulevard and the areas serves lots of people associated with the Airport, hotels, or other destinations that are not very familiar with SeaTac which may factor into the relatively high number of non-motorized collisions in this area.

Another higher concentration of bicycle or pedestrian collisions is found along Military Road S just north of SR 518. Of the 6 non-motorized collisions, 4 resulted from the vehicle failing to yield to the right-of-way to the pedestrian or bicyclists.

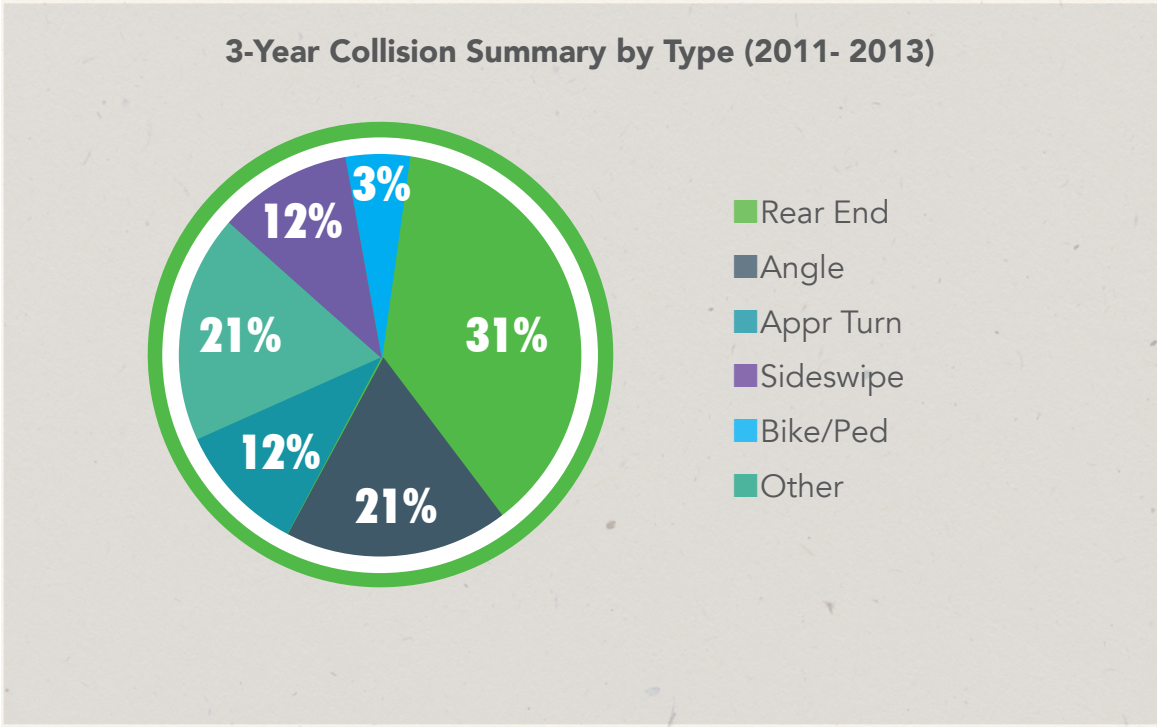
Six pedestrian collisions occurred at various airline check-in or departure locations at the arrival or departure roadways at the Seattle-Tacoma International Airport terminal. Typically these collisions occurred during the day and were recorded as drivers failing to yield to the right-of-way to the pedestrian or inattention by the driver.

Collision Type

Rear-end accidents were the predominant type of collision (609 of the total 1,966). This represents approximately 31 percent of the total collisions within the study area. Approximately 410 (24percent) of the 1,216 traffic accidents recorded at intersections were rear-end collisions. Of the collisions occurring along roadway segments (not at an intersection), approximately 27 percent were recorded as rear-end crashes. Rear-end collisions are typically the predominate type of collision at signalized intersections as drivers may need to rapidly alter vehicle speeds while approaching an intersection in response to traffic signal changes (e.g. green to yellow or yellow to red) or to turn onto the intersecting roadway.

Angle collisions were the second highest type of collision with 402 of the total 1,966 collisions, or approximately 20 percent. Angle collisions also represent the second highest number of intersection collisions with 343 (28 percent) and the fourth highest number of roadway segment collisions with 59 (8 percent). Angle collisions typically occur at roadway or driveway intersections where drivers have to correctly judge whether to enter onto the intersecting roadway.

Approach turns represent the third largest category of crashes at with 240 of the 1,966 total



collisions. Approach turns also represent the third highest number of intersection collisions with 196 (16 percent). Similar to angle collisions, turn related collisions typically occur at roadway or driveway intersections where drivers have to correctly judge whether to cross intersecting roadway traffic.

Sideswipe collisions account for 227 of the total collisions during the three year study period. The majority (124 collisions) of these occur along roadway segments, the third highest type of collisions on roadway segments. Sideswipe collisions typically occur when vehicles are attempting to change lanes without first ensuring the adjacent lane is clear. More sideswipe type collisions can occur in areas where more lane changes are necessary as drivers find their way through a roadway network.

In total, rear-end, angle, sideswipe, and turn related collisions represent 1,478 of the 1,966 collisions, or 75 percent. They account for 428 of the 750 roadway segment collisions (57 percent) and 1,050 of the 1,216 intersection related collisions (86 percent).

There also were 44 head-on collisions recorded, 67 bicycle or pedestrian related collisions, 233 fixed object collisions, 79 parking related collisions, and 75 other or non-designated collisions. Fixed object collisions were the second highest type of collision along roadway segments with 150 of a total 750 or 20 percent of collisions. Two rear-end collisions at intersections on International Boulevard were the result of improper U-turns

High Collision Locations

Figure 2-4 shows the locations of the high collision intersections and roadway segments. Table 2-3 summarizes the average number of collisions at major intersections and roadway segments. To provide meaningful comparisons, accidents along intersections are summarized by number of collisions per million entering vehicles (MEV) and roadway segments are typically analyzed in terms of collisions per million vehicle miles (MVM) traveled. Intersections with a collision rate of 1.0 collisions/MEV were considered locations for further review. This is consistent with thresholds in other communities in the Puget Sound Region. For roadway segments, a rate of 2.0 or greater collisions/MVM was utilized based on the 2013 Washington State Annual Collision Summary. The WSDOT summary data showed that the average collisions per million vehicle miles traveled for King County was 2.17.

As shown in Table 2-3, there are 15 intersections with a collision rate of 1.0 or higher, and 9 roadway segments with a rate of 2.0 or more collisions/MVM. The two intersections with the highest collision rates are both two-way stop controlled intersections located in residential areas with relatively low volumes. The intersection with the third highest collision rate is located just north of the Sea-Tac International Airport Rental Car Facility. Of the 15 intersections with the highest collision rates, 6 are located along International Boulevard near the airport. More detailed information regarding collision types for the high collision rate intersections is listed below:

- **34th Avenue S/S 166th Street**. Angle type collisions were the highest reported type of collision at this intersection. Of the 11 reported collisions, 10 were angle type collisions. There was also one pedestrian or bicycle collision reported at this location.
- **42nd Avenue S/S 160th Street.** Angle type collisions were the highest reported type of collision at this intersection. Of the 9 reported collisions, 6 were angle type collisions.
- **International Boulevard/S 152ndStreet.** Rear-end and sideswipe collisions were the highest reported collision type with 6 and 5

67 Bicycle or Pedestrian-related collisions were recorded in a 3-year period.

Table 2-3: Summary of High Collision Locations (2011-2013)

LOCATION	ANNUAL AVERAGE	COLLISIONS PER MEV[1]
Intersections		
34th Avenue S/S 166th Street[3]	3.67	5.02
42nd Avenue S/S 160th Street[3]	3.00	2.05
International Boulevard (SR 99)/S 152nd Street	5.67	1.89
International Boulevard (SR 99)/S 160th Street	15.33	1.46
24th Avenue S/S 152nd Street[3]	3.67	1.45
24th Avenue S/S 142nd Street	3.00	1.40
Military Road S/S 188th Street	14.00	1.39
Military Road S/S 148th Street[3]	4.00	1.35
International Boulevard (SR 99)/S 188th Street	24.00	1.33
International Boulevard (SR 99)/S 154th Street (Southcenter Boulevard)	15.67	1.32
International Boulevard (SR 99)/S 176th Street	12.67	1.29
Military Road S/S 144th Street[3]	3.67	1.24
International Boulevard (SR 99)/S 170th Street	13.00	1.21
Military Road S/S 146th Street[3]	3.33	1.13
Military Road S/S 150th Street[3]	3.00	1.01
LOCATION	**ANNUAL AVERAGE**	**COLLISIONS PER MVM[2]**
Roadway Segments		
37th Place S (Military Road and S 216th Street)[3]	4.00	8.15
42nd Avenue S (S 160th Street and S 164th Street)[3]	2.00	7.94
International Boulevard (S152nd Street and S 154th Street)	3.33	3.90
Military Road S/S160th Street (International Boulevard and S 170th Street)	13.00	3.47
Military Road S (S 144th Street and S 152nd Street)[3]	4.33	2.92
Des Moines Memorial Drive S (S 128th Street and S 136th Street)	3.00	2.68
S 128th Street (Des Moines Memorial Drive and 24th Avenue S)	2.33	2.63
28th Avenue S (S 188th Street and S 200th Street)	2.00	2.52
Military Road S (128th Street S and S 144th Street)[3]	6.00	2.26

1. MEV = Million Entering Vehicles
2. MVM = Million Vehicle Miles Traveled
3. Rates Volumes estimated based on surrounding intersection volumes or previous counts.

reported, respectively. Additionally, 1 bicycle or pedestrian collision occurred in each of the study years (2011-2013).

- **International Boulevard/S 160th Street.** The predominate type of collision were rear-ends with 24 of a total 46 collisions, or approximately 52 percent.
- **24th Avenue S/S 142nd Street.** Angle collisions were the highest collision type with 8 of a total 9 collisions or 89 percent.
- **24th Avenue S/S 152nd Street.** Angle type collisions were also the highest type of collision reported at this intersection along 24th Avenue Nine out of a total 11 reported collisions were angle type collisions.
- **Military Road S/S 188th Street.** Rear-end collisions were the highest reported collisions with 24 of a total 42 collisions, or 57 percent at this intersection. One pedestrian or bicycle collision was reported at this intersection. This intersection has lower volumes than other intersections with collision rates over 1.0 per MEV.
- **International Boulevard/S 188th Street.** Rear-end collisions represent 34 of a total 72 collisions (47 percent), and three pedestrian or bicycle collisions were reported at this intersection. This intersection is congested and operates at LOS E during the weekday PM peak hour. In addition, traffic queues can develop resulting in traffic safety issues. As discussed above, there are lots of potential distractions and out-of-area travelers that may not be familiar with this part of the City.

S

FGTS Roadway Classification

The FGTS classifies roadways using five freight tonnage classifications, T-1 through T-5. Routes classified as T-1 or T-2 are considered strategic freight corridors and are given priority for receiving FMSIB funding. The classifications are as follows:

T-1 over 10,000,000 annual gross tonnages (over approximately 800 trucks per day).

T-2 4,000,000 to 10,000,000 annual gross tonnage (approximately 320 to 800 trucks per day).

T-3 300,000 to 4,000,000 annual gross tonnage (approximately 24 to 320 trucks per day).

T-4 100,000 to 300,000 annual gross tonnage (approximately 8 to 24 trucks per day).

T-5 Over 20,000 gross tonnage in a 60 day period and less than 100,000 annual gross tonnage.

- **International Boulevard/S 176th Street.** Approach turns and rear-end collisions were the predominate type of collision with 13 of a total 38 collisions (34 percent) each, and there were three pedestrian or bicycle collisions reported at this intersection.
- **International Boulevard/S 170th Street.** One pedestrian or bicycle collision was reported at this intersection, and rear-ends were the most common type of collision with 23 of a total 39 collisions (59 percent). This is an intersection with moderate congestion and dual turn lanes.

Of the roadway segments, collisions primarily occurred on Military Road S, International Boulevard and Des Moines Memorial Drive S. These roads are principal or minor arterials and experience higher volumes then other roads.

2.1.5 Freight System

The movement of freight is a major issue for the City of SeaTac due to not only the businesses within the City, but also freight associated with Sea-Tac International Airport. The Washington State Freight and Goods Transportation System (FGTS) is used to classify state highways, county roads, and city streets according to average annual gross truck tonnage they carry as directed by RCW 47.05.021. The FGTS is primarily used to establish funding eligibility for the Freight Mobility Strategic Investment Board (FMSIB) grants. In addition, it also supports designations of HSS (Highway of Statewide Significance) corridors, pavement upgrades, traffic congestion management, and other state investment decisions.

A map of the City's truck routes is shown in Figure 4-2 in Chapter 4 – Transportation Systems Plans.

Within the City of SeaTac the following roadways are classified as T-1:

- International Boulevard (SR 518 to Military Road S) and
- I-5 (through all of SeaTac).

The following roadways are classified as T-2:

- International Boulevard (SR 518 to S 216th Street),
- SR 509 (Des Moines Memorial Drive S to S 188th Street),
- S 188th Street (Des Moines Memorial Drive S to I-5), and
- SR 518 Eastbound (Des Moines Memorial Drive S to International Boulevard).

Several roadways in the City are classified as T-3 roadways but are not designated truck routes. These roadways are:

- S 128th Street (Des Moines Memorial Drive S to Military Road S),
- S 136th Street (Des Moines Memorial Drive S to 24th Avenue S),
- 24th Avene S (S 128th Street to S 146th Street),
- Military Road S (S 128th Street to International Boulevard), and
- 42nd Avenue S (S 176th Street to S 288th Street).

ARRIVALS AT SEA-TAC INTERNATIONAL AIRPORT

2.2 Sea-Tac International Airport

Sea-Tac International Airport is located within the City of SeaTac and is operated by the Port of Seattle. It is a large contributor to both freight traffic and personal vehicle traffic within the City of SeaTac.

In 2013, the facility served over 34,700,000 air passengers and supported over 292,000 metric tons of air cargo. Looking closer at the freight operations, in May 2014 the total amount of air cargo for the month was 25,565 metric tons, which when compared to 22,891 metric tons in May 2013, is over an 11 percent increase.

2.3 Rail Crossings

There are no railroads located within the City of SeaTac. Sound Transit's Link light rail serves the City of SeaTac with an elevated track. Therefore, there are no at-grade rail crossings. More discussion of Link light rail can be found in section 2.5.

2.4 Non-Motorized Transportation Systems

The non-motorized transportation systems in SeaTac are comprised of facilities that promote mobility without the aid of motorized vehicles. A well-established system encourages healthy recreational activities, reduces travel demand on City roadways, and enhances safety within a livable community. Pedestrian and bicycle facilities also provide access to/from transit stops. Good transit access can increase the use of non-auto travel modes.

In January 2012, the City of SeaTac's Safe and Complete Streets Plan (S&CSP) was completed. The S&CSP is a long-range plan with the goal for developing SeaTac's pedestrian and bicycle facilities through the year 2040. The S&CSP provides a thorough analysis of the existing bicycle and pedestrian facilities. The S&CSP was used as the primary basis for the pedestrian and bicycle systems plans presented in Chapter 4 of the TMP, and in the Comprehensive Plan's Transportation Element. The original S&CSP and a summary of changes that resulted from the 2015 TE and TMP are provided in the Supporting Materials documents.

2.4.1 Pedestrian Facilities

Since incorporation, the City has constructed over 30 miles of new sidewalks as part of roadway projects or standalone sidewalk projects. This compares with less than 11 miles of sidewalks before incorporation. Over the past several years, the City has targeted specific funding toward improving pedestrian and bicycle facilities on local neighborhood streets. As part of this annual sidewalk program, the City completed improvements on S 179th Street, S 168th Street, 42nd Avenue S, and others. The City has funded construction on other corridors including improvements along 37th and 40th Avenues S. However, the funding source for this program is coming to a close. As discussed in Chapter 5, the City can consider other sources of funding to continue or expand the neighborhood sidewalk program.

Sidewalks are located on many of the principal arterials, major arterials, and collector arterials. However, gaps in the pedestrian facilities reduce the connectivity between various subareas of the City. Figure 4-3 in the Transportation Systems Plans chapter shows locations of existing sidewalks and how they fit into the long range vision for pedestrian facilities in the City. Additional detail on the types of existing pedestrian facilities is included in the S&CSP included in the Supporting Materials documents.

There are five types of pedestrian facilities in the City:

- **Paved separated walkway**: a paved path parallel to the roadway but separated from it with either a planter strip or other infrastructure.
- **Paved shoulder walkway**: a paved path that is extended from the roadway pavement to provide room to walk. Pedestrians would be traveling next to traveling vehicles.
- **Sidewalk**: a raised paved path that is separated by height from traveling vehicles.
- **Multi-use trail**: a paved trail which, similar to a paved separated walkway is typically separated from the roadways. It can but does not always travel parallel to roadways.

PEDESTRIAN BRIDGE AT S 176TH STREET AND INTERNATIONAL BOULEVARD

- **Park circulation trail**: a paved trail solely within parks.

There are also multi-use trails along the northwestern city limits and park circulation trails in three of SeaTac's parks.

In addition to the trails and walkways, the City has a pedestrian signal on International Boulevard south of S 171st Street, as well as rapid flashing beacons at the following locations:

- 24th Avenue S at S 138th Street,
- Military Road S at S 166th Street, and
- Military Road S at S 179th Street.

A pedestrian bridge over International Boulevard connects the east side of the street with the SeaTac/Airport LINK station and Airport terminal on the west side of International Boulevard. This reduces the need for pedestrians to cross International Boulevard to connect between bus stops, residential areas, businesses with the Link light rail or Airport terminal. As previously mentioned, 22 of the 24 pedestrian and bicycle collisions that happened at intersections during 2011-2013 occurred on International Boulevard; this indicates pedestrian and bicycle safety on International Boulevard warrants additional focus.

Within parts of the City, pedestrians need to walk on roadway shoulders in areas where sidewalks are not provided. This results in less separation between pedestrians and vehicles, which can pose safety issues and reduce the likelihood for pedestrian travel in the City.

Pedestrian routes within close proximity to school zones are vitally important to the pedestrian network for a variety of reasons: school children are often unsupervised and are unfamiliar with driving regulations and stopping speeds, peak hours of school traffic (especially the am peak) often coincide with typical peak hour drive times for non-school related activities, neighborhoods surrounding school zones were often established prior to school construction and are not designed to accommodate pedestrians, and many schools lack a coordinated plan to separate walking trips from driving trips.

Key areas with missing or otherwise deficient pedestrian facilities are typically on residential or non-arterial neighborhood streets. Designated walk-to-school routes have several routes with adequate sidewalks or walkways on the roadway, mostly along arterial roadways. The school with the most routes without pedestrian facilities is Bow Lake School; while designated routes have sidewalks or walkways on the arterials and along S 182nd Street, there are no pedestrian facilities on the local streets identified as routes. Walk-to-school routes were one of the factors in developing the pedestrian systems plan, discussed in Chapter 4. The plan helps address these issues to make a more complete walk-to-school network for students.

A high level review of the pedestrian volumes indicates that during the weekday PM peak hour, the highest pedestrian volumes are located along International Boulevard. Patterns indicate that people are walking along International Boulevard in a higher concentration near the Sea-Tac International Airport and the Link light rail station. International Boulevard/S 154th Street

intersection had the highest observed number of pedestrian crossings at the intersection during the PM peak hour, with over 130 pedestrians during the PM peak hour. Other intersections with high pedestrian volumes were International Boulevard/ S 176th Street and International Boulevard/S 188th Street, with both having over 100 pedestrians cross the intersection during the PM peak hour.

DES MOINES CREEK TRAIL

2.4.2 Bicycle Facilities

Bicycle facilities in the City of SeaTac consist of both on-street and off-street facilities. Designated bike lanes are located along the following facilities:

- S 156th Way/S 154th Street from Des Moines Memorial Drive S to International Boulevard,
- Des Moines Memorial Drive S from S 128th Street to S 156th Way,
- S 136th Street from Des Moines Memorial Drive S to 24th Avenue S,
- S 170th Street from International Boulevard to Military Road S, and
- Military Road S from S 176th Street to S 186th Street.

Along the remaining principal, minor, and collector arterials, shared bicycle facilities are available. Additional information on existing Bicycle facilities and gaps in the system are found in the Supporting Materials documents, including the S&CSP.

Much like the pedestrian network, bicycle facilities are missing on non-arterial neighborhood streets. Figure 4-4 in the Chapter 4 – Transportation Systems Plans shows the existing bicycle facilities in the context of the long-range plan for the City's bicycle network.

Bike lockers and bike racks are also provided at the Sea-Tac International Airport Station on International Boulevard and S 176th Street. Approximately 24 bike lockers are provided.

A high level review of the bicycle volumes indicates that during the weekday PM peak hour, the highest bicycle volumes are located along principal and minor arterials throughout the City with no established pattern. These volumes are relatively low, with less than five bicycles traveling in a particular direction through any one intersection.

Key gaps in the system were identified in the S&CSP. These gaps occur:

- East to west between 24th Avenue S and Military Road S in the northern portion of the City,
- North to south between roughly S 160th Street and S 188th Street,
- East to west between Military Road S and the east city Limits,
- East to west between 42nd Avenue S and Military Road S,
- Along S 188th Street between 24th Avenue S and Military Road S,
- North to south between approximately Des Moines Memorial Drive S and S 208th Street,
- Along S 200th Street between the west city limits and the I-5 Ramps, and
- Both east to west and north to south in the area south of S 200th Street down to S 216th Street and from Des Moines Creek to I-5.

2.5 Transit and Transportation Demand Management

Both transit and Transportation Demand Management (TDM) programs contribute to the reduction of single-occupancy vehicles using the roadway system, helping alleviate congestion. The existing transit system is discussed first, followed by the City of SeaTac's Commute Trip Reduction (CTR) plan.

2.5.1 Transit Facilities & Services

The City of SeaTac is served by two transit agencies, King County Metro and Sound Transit. In 2015, King County Metro operated ten transit routes serving the City, including two Bus Rapid Transit (BRT) routes, and Sound Transit operates two routes in and through the City of SeaTac. Sound Transit also operates the Link light rail system serving SeaTac. Table 2-4 summarizes service characteristics of the individual routes. It also provides the 2014 average weekday ridership, where applicable, as reported in the King County Metro Spring 2014 Service Guidelines Report. Figure 2-5 shows the existing (2015) transit facilities and routes.

Sound Transit

In 2015, Sound Transit operated two express routes with services in the City of SeaTac, both which provide all-day service on weekdays and weekends. Route 574 is an express route and provides service between SeaTac, Tacoma, and Lakewood. Service is provided approximately 30 to 60 minutes. Route 560 is an express route and provides service between Bellevue, Renton,

Table 2-4: Transit Service Routes (2015)

ROUTE NUMBER	ROUTE DESCRIPTION	WEEKDAY SERVICE	WEEKEND SERVICE	2014 AVERAGE WEEKDAY RIDERSHIP[1]
Metro Routes				
121	Downtown Seattle to Burien, Highline Community College	Peak	None	900
122	Downtown Seattle to Burien, Highline Community College	Peak	None	500
124	Downtown Seattle to Tukwila	All Day	All Day	3,400
128	Southcenter to West Seattle	All Day	All Day	4,400
132	Downtown Seattle to Burien	All Day	All Day	3,000
156	Southcenter to Des Moines, Highline College	All Day	All Day	1,200
166	Kent to Burien	All Day	All Day	2,200
180	Kent, SE Auburn to Kent, Sea-Tac, Burien	All Day	All Day	5,000
A-Line	Tukwila to Federal Way	All Day BRT[3]	All Day BRT[3]	10,100
F-Line	Renton to Burien	All Day BRT[3]	All Day BRT[3]	n/a[2]
Sound Transit Routes				
560	Bellevue to West Seattle	All Day	All Day	n/a[2]
574	Lakewood to Sea-Tac Int'l Airport	All Day	All Day	n/a[2]

1. Ridership numbers as reported in the King County Metro 2014 Service Guidelines Report.
2. Routes 560 and 574 are Sound Transit routes that were not measured by King County Metro; F-Line ridership numbers were not provided in the report.
3. BRT is Bus Rapid Transit, also referred to as Rapid Ride. These buses run on a more frequent schedule than regular transit service.

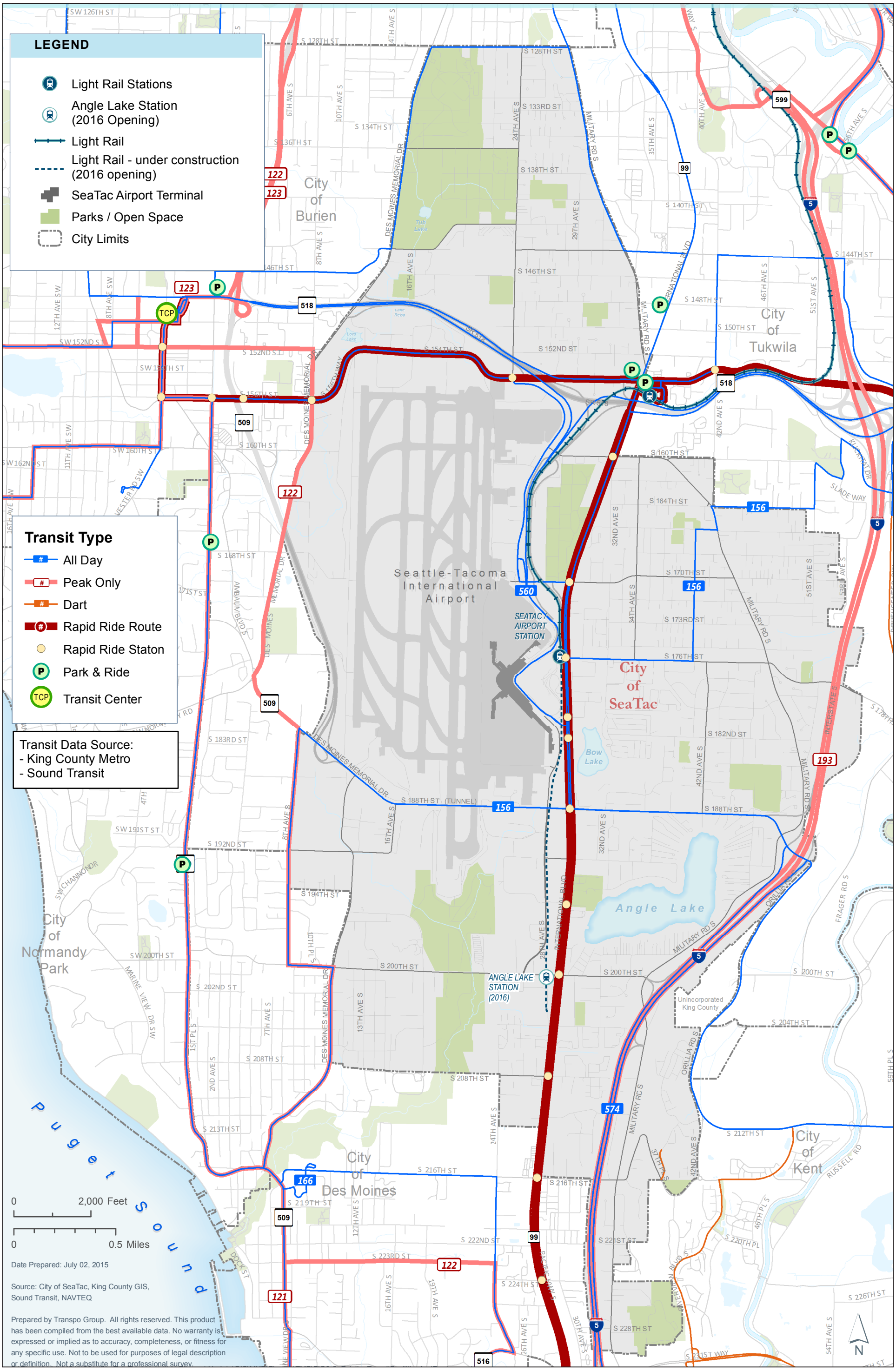


Figure 2-5: Existing (2015) Transit Facilities and Routes

SeaTac, Burien, and White Center. Service is provided approximately 30 minutes.

Sound Transit also operates the Central Link light rail which operates between downtown Seattle and Sea-Tac International Airport. Travel time is approximately 40 minutes and train frequencies are approximately every 8 to 20 minutes throughout the day. More frequent train arrivals occur during the peak hours.

There are two existing light rail stations within the City, plus another one scheduled to be completed in 2016. At the Tukwila International Boulevard Station 600 parking stalls are available; however the lot is usually filled to 90% or more capacity by 9:00am on weekdays. The SeaTac/ Airport Station does not provide parking and instead has a small drop off lot. The future Angle Lake Station will have a parking garage, with 1,050 stalls planned.

Sound Transit reports total number of boardings for each route in their Service Delivery Quarterly Performance Report. For 2014 Quarter 1, Route 560 had 133,478 total boardings and Route 574 had 185,192 total boardings. The Central Link light rail had 2,351,389 total boardings in Quarter 1, with an average weekday ridership of 29,919. Average weekday ridership was not provided for Routes 560 and 574 in the report.

King County Metro

Routes 121 and 122 serve downtown Seattle and northeastern parts of the City of SeaTac. Service is provided with approximately 30 minute headways; these are the only route serving the City that operate only during peak hours with no service provided on the weekend. Route 124 runs between SeaTac and Downtown Seattle with headways varying between 15 and 30 minutes. Route 128 runs from West Seattle, through White Center to Tukwila/Southcenter Mall; it provides service roughly every 30 minutes. Route 132 operates between Burien on the west side of SeaTac and Downtown Seattle; the route has roughly 30 minute headways. Route 156 provides service between Tukwila, Sea-Tac Airport, and Des Moines with service every 30 minutes. Route 166 operates between Burien (along 1st Avenue S just west of SeaTac) through Des Moines to Kent with roughly 30 minute headways on the weekdays and Saturdays and hour headways on Sundays. Route 180 runs through SeaTac between Kent, Auburn, and Kent with service approximately every 30 minutes.

The RapidRide A Line bus rapid transit (BRT) operates between SeaTac and Federal Way along International Boulevard/Pacific Highway S and has headways of approximately 10 to 15 minutes. The RapidRide F Line BRT operates between Renton and Burien, running along S 154th Street and through Downtown Renton; service headways are every 15 to 30 minutes. For all routes, bus stops are primarily located along principal and minor arterials.

King County Metro also operates transit services such as vanpool, vanshare, and paratransit transit services. Vanpool is a program where people who live in the same area and work in the same area commute together in a van provided, for a fee, by

LIGHT RAIL STATION AT SEATAC

KING COUNTY METRO TRANSIT TO AIRPORT

King County Metro. Vanshare is for commuters to share a ride, in a van provided for a fee by King County Metro, between either home or work and an alternative transit service such as a ferry terminal or rail station. Paratransit services are for those who disabilities prevent them from utilizing accessible, non-commuter, fixed route service. The service is by application only.

Park-and-Ride Lots/Park & Fly Lots

In 2014, three park-and-ride lots were located within or just outside of the City of SeaTac. The lot inside the City, called the SeaTac Center Garage, is near the northwest corner of the intersection of International Boulevard/ S 154th Street. It is a leased garage with 62 parking spaces and an 89 percent utilization in Quarter 4 of 2014 (utilization from the KC Metro Park-and-Ride Utilization Report, Fourth Quarter 2014). Park-and-ride lots located just outside of the City include the previously-mentioned Tukwila International Boulevard Station, which is on the southwest corner of the intersection of International Boulevard/ S 154th Street, and a leased lot from a church near the intersection of International Boulevard/S 148th Street. Tukwila Station has 600 parking spaces with 98 percent utilization in the 4th quarter of 2014 and the church lot has 28 parking spaces and 24 percent utilization.

Other park-and-ride lots further from the City of SeaTac include the Burien Transit Center and the Kent/Des Moines park-and-ride. The Burien Transit Center is located in downtown Burien near 1st Avenue S. It has 488 parking spaces with 70 percent utilization reported in the 4th Quarter of 2014. The Kent/Des Moines park-and-ride has 370 parking spaces with 92 percent utilization in the last quarter of 2014, as well as a freeway station for transit easy access on and off the freeway.

The City of SeaTac is unique in that there are a number of commercial parking lots utilized for longer-term airport parking than the daily commuter park-and-ride lots. These lots are called park-and-fly lots, and are used by airport travelers. Several lots are located along International Boulevard, with some located a block or two off International Boulevard both north and south of the Airport. Most, if not all, of these lots provide free 24-hour shuttle service to the airport.

Another unique lot is the one adjacent to the Central Link light rail SeaTac/Airport Station. This lot is a drop off lot, also known as a kiss-and-ride lot. The lot is signed for 15 minute parking and has less than ten designated stalls. The purpose is for drivers to drop off a passenger and then drive away; the passenger can then either walk or use a form of transit to travel to their destination. There is no short- or long-term parking provided in this lot as it is intended for drop off use only.

PARK AND FLY LOT IN SEATAC

2.5.2 Transportation Demand Management

To help manage the transportation demand to and from SeaTac, the City has a Commute Trip Reduction Plan (CTR, July 2007). This plan was updated in 2015, though the main document was not updated. The original 2007 plan identifies seventeen major work sites within the City, the majority of which are located near the Sea-Tac International Airport and/or along International Boulevard. The existing (2007) conditions of these sites are described, as well as their existing and planned transit facilities and services. The plan reviews the many Comprehensive Plan policies which support the reduction of commute trips. The update complies with the recent changes to the Washington Administrative Code (WAC) regarding new statewide minimum programs goals and targets for local jurisdictions, as well the newly defined performance criteria of Non Drive Alone Travel (NDAT).

The City's updated CTR identifies goals for the different criteria involved: Non Drive Alone Travel will be increased to 34.9 percent, Vehicle Miles Traveled (VMT) per employee at major work sites will be decreased to 11.89, and Greenhouse Gases (GHG) by CTR commuters will also be decreased to 11.89. Listed strategies to achieve these goals include increasing the use of transit, vanpool, and carpool user, instituting biking and walking programs, and telecommuting. The last section of the document identifies funding sources to help implement the Plan, such as federal funds, the WSDOT CTR grant, and employer contributions. The 2015 TE includes policies and programs to help achieve those goals.

2.6 Parking

On-street and off-street parking is available throughout the City of SeaTac. While all parking was not inventoried, a specific area of concern of the City's was looked at in closer detail. Parking observations were done in the general area between 32nd Avenue S and 40th Avenue S east to west, and between S 160th Street and S 176th Street north to south. These observations were conducted on a weekday morning between 6:00 am and 9:00 am, a time period which accounts for peak commuting hours and is also one of the peak travel times for Sea-Tac International Airport.

The areas with the most observed parked cars were along the following roadways:

- S 175th Street between 32nd Avenue S and 34th Avenue S,
- S 173rd Street between 33rd Avenue S and 34th Avenue S,
- 33rd Avenue between S 175th Street and S 172nd Street, and
- 34th Avenue S between S 176th Street and S 173rd Street.

Along these roadways cars were often tightly parked parallel to the roadway, and in some cases were parked illegally, either in areas not zoned for parking or less than five feet from a driveway. Additionally, buckets and cones were located in that area to keep vehicles from parking along roadways in certain spots.

In the rest of the area, cars were parked sporadically along the roadways. The exception to this was near McMicken Heights Elementary School, where toward the end of the observation time period parked cars were accumulating along the roadways. This coincides with the school's start time of 8:40 am

PARKING ON A NEIGHBORHOOD STREET