



The applicable traffic control type has also been provided for each study area intersection that was counted. All intersections/ramp terminals counted in the City of Tacoma, WA are shown below in **Table 2**.

**Table 2: Study Area Intersections – Tacoma, WA**

Area	No.	Intersection	Control Type	Area
City of Tacoma	F	11	South 74 <sup>th</sup> Street/South Tacoma Way	Signalized
	G	12	South 60th Street/South Washington Street	Sign-controlled
		13	South 60th Street/South Adams Street	Sign-controlled
		14	South 60th Street/South Tacoma Way	Signalized
		H	15	South 56th Street/South Washington Street
	H	16	South 56th Street/South Adams Street/South Burlington Way	Sign-controlled
		17	South 56th Street/South Tacoma Way	Signalized
		18	South 56th Street/South Puget Sound Avenue	Signalized
	I	19	South 50th Street/South Adams Street	Sign-controlled
		20	South 50th Street/South Burlington Way	Sign-controlled
	J	21	South 35th Street/South Tacoma Way	Signalized
		22	South 35th Street/South Lawrence Street	Sign-controlled
	K	23	South Pine Street/South Tacoma Way	Signalized
		24	South Pine Street/South Center Street	Signalized
	L1	25	South Wilkeson Street/South Tacoma Way	Sign-controlled
		26	South Wilkeson Street/South Center Street	Signalized
	L2	27	South Alaska Street/South Tacoma Way	Sign-controlled
		28	South Alaska Street/South Center Street	Sign-controlled
	L3	29	South Chandler Street/South Tacoma Way	Sign-controlled
		30	South Chandler Street/South Center Street	Sign-controlled
	M	31	South C Street/South Tacoma Way	Sign-controlled
		32	South C Street/South 25 <sup>th</sup> Street	Sign-controlled
	N1	33	East C Street/East 26 <sup>th</sup> Street	Sign-controlled
		37	Parking Lot Entrance between E.25 <sup>th</sup> and E.26 <sup>th</sup> on East C	Sign-controlled
		34	East C Street/East 25 <sup>th</sup> Street	Signalized
	N2	35	East D Street/East 26 <sup>th</sup> Street	Signalized
		36	East D Street/East 25 <sup>th</sup> Street	Signalized
		38	Parking Lot Entrance between E.25 <sup>th</sup> and E.26 <sup>th</sup> on East D	Sign-controlled

## 2. Methodologies

### 2.1. Data Collection

Data Collection Units with video cameras were used to collect intersection turning movement counts and peak hour queue lengths for this study. For each area/crossing, the traffic counts and queue lengths were collected on the same day. The data collection time periods for each study area intersection were:

- 2 Hour AM Peak Period (7:00 AM - 9:00 AM)
- 2 Hour PM Peak Period (4:00 PM - 6:00 PM)

Along Bridgeport Way, at Pacific Highway SR-99 and the I-5 ramp terminals, the data collection time period was extended one hour during the AM peak period:

- 3 Hour AM Peak Period (6:00 AM - 9:00 AM)

Manual queue length observations were made at the locations where cameras were not able to fully observe queued traffic. Manual queue length observations covered two hours in both the AM and PM peak hour periods.

The Data Collection Plan that was developed to communicate and coordinate with the sub-consultant for this data collection effort is presented in **Appendix A**.

Geometry of the individual intersections in the study area is provided in **Appendix B**. Please note that the commercially available aerial imagery used for Appendix B does not reflect the recent upgrades in channelization as part of Sound Transit's two ongoing projects, the M Street -to-Lakewood and D-to-M Streets projects. These changes have generally been limited to addition of new median islands and refreshed striping to deter motorists from evading crossing gates. Crossing gates have been, or will be installed at each location, and some traffic signals have been added. In general, however, the lane configurations have not changed (with the possible exception of the intersection of South 35<sup>th</sup> and South Lawrence Streets, where South Lawrence Street has become a "right-in, right-out" street).

Raw traffic volume data collected in the field can be found in **Appendix C**.

**We are asking for WSDOT's agreement that these volumes can be used for existing year traffic simulations.**

### 2.2. Data Processing

Intersection turning movement counts collected in the field have been summarized per time period for each intersection. Two-vehicle class (Passenger Car and Truck) traffic volumes have been aggregated into 15-minute intervals along with pedestrian and bike counts.

The peak hour volumes for each intersection within a sub-area were balanced and will be used to model intersection and rail-crossing operations as a result of the Point Defiance Bypass. The balancing process employed the higher values of the unbalanced counts and these higher values were used to make proportional changes to balance the peak hour traffic volumes. Balanced AM and PM peak hour volumes for each intersection within the study area are provided in **Appendix D**.

Queue lengths were aggregated into 2-minute intervals and will be correlated with intersection operations during the simulation calibration process. This memo does not include aggregated queue length summaries. The raw queue length data collection sheets and videos will be provided when existing condition simulation models are refined as part of the subsequent existing conditions simulation submittal.