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Wellington Hills County Park
Final Traffic Impact Analysis

Prepared for: Bruce Dees & Associates, LLC
Jurisdiction: Snohomish County
PFN: 12-105809 PS

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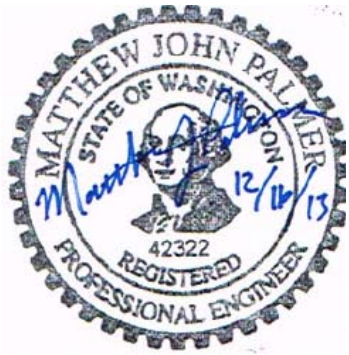

GTC #12-040

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1. EXECUTIVE SUMMARY

The park property is located outside of the UGA along both sides of 240th Street SE, in between Snohomish-Woodinville Road and 75th Avenue SE. The proposed park facility is proposed to have two accesses to 240th Street SE with its main access on the west side as a roundabout. It is proposed to consist of: up to 7 outdoor fields, 5.58 Acres County Park (including: dog park, mountain bike trails, foot trails, play areas, etc.), 42,275 SF of recreational community center, 60,000 SF of indoor mountain biking facility, and the removal of the existing 9-hole golf course. The site will be providing up to 603 parking stalls with full build-out. Phase 1 will provide 525 parking spaces with the 7 fields and county park area. Phase 2 may provide up to an additional 78 parking spaces with the addition of the recreation community center. Actual spaces to be added for Phase 2 will take into account surveys of actual parking demand measured after operation of Phase 1. The traffic analysis was completed for the full build-out per Snohomish County Code UDC 30.66B for the arterial analysis and additional phasing analysis was conducted for the off-site intersections and channelization analysis per county request.

With full build-out the uses are anticipated to generate 1,770.11 new average weekday daily trips (ADT) with 76 new AM peak-hour trips, 249 new PM peak-hour trips, and 275 new Saturday peak-hour of generator trips with the credit for the existing golf course and with full build-out. During events the uses would generate 370 new PM peak-hour trips on weekday and 307 new Saturday peak-hour of generator trips.

Operational arterial concurrency analysis has been performed for the County arterial of 240th Street SE, Sno-Wood Rd to UGA Boundary and 240th Street SE, UGA Boundary to 75th Avenue SE. Additionally, planning concurrency analysis was completed for Snohomish-Woodinville Road from the King County Line to the SR-522 Eastbound Ramps

Also intersection level of service analysis was completed at the following intersections:

- SR-9 at 228th Street SE
- SR-9 at SR-522 Westbound Ramps
- SR-9 at SR-522 Eastbound Ramps
- SR-522 at SR-524
- Woodinville-Snohomish Road at NE 195th Street
- 156th Avenue NE at Woodinville-Duvall Road
- Snohomish-Woodinville Road at 240th Street SE
- 75th Avenue SE at 240th Street SE

The concurrency and level of service analysis results demonstrate that the local county arterial road system will maintain acceptable level of service conditions and concurrency status per code. In addition the City of Woodinville and WSDOT intersections analyzed will meet the respective jurisdictions/agency standards per interlocals or as adopted by local jurisdictions even with the development fully built-out and assuming Event trip generation analysis.

The project will not impact any existing inadequate roadway conditions (IRC) as defined by Snohomish County nor will the additional trips create any.

The park will provide up to two speed humps and a speed table (at 71st Avenue SE) along 240th Street SE, sidewalks or walkways on 240th Street SE from the existing sidewalk near Snohomish-Woodinville road east to 75th Avenue SE (in addition to the paths in the park) during the first phase; and reconstruct Snohomish-Woodinville Road/240th Street signalized intersection to provide an additional westbound right-turn lane, signal phasing and rail crossing improvements before the soccer fields are scheduled for use.

The park in addition to the frontage improvements along 240th Street SE and the offsite walkway/intersection improvements will also pay traffic mitigation fees to the County, WSDOT and Bothell totaling $529,920.42.

2. DEVELOPMENT IDENTIFICATION

Gibson Traffic Consultants, Inc. (GTC) has been retained to provide a Traffic Impact Analysis for the proposed Wellington Hills County Park (PFN: 12-105809 PS) to address the Snohomish County, City of Bothell, City of Woodinville and Washington State Department of Transportation (WSDOT) traffic impacts. GTC is a Snohomish County approved professional traffic engineering consulting firm registered and licensed in the State of Washington.

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Matthew Palmer, responsible for this report and traffic analysis, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of ITE. A traffic scoping meeting was initially held on July 25, 2012 at which time Mark Brown approved the trip distribution and an updated meeting was held on August 14, 2013 with Mark Brown from Snohomish County PDS at which time a critical arterial unit list was provided and the trip distribution went through additional review and approval. A new critical list was obtained on November 12, 2013 which shows there have been no changes to the critical list or additional arterial units to be analyzed. Due to its proximity to the city of Woodinville a meeting and discussions were held with City of Woodinville staff to identify city concerns and provide additional information even though the county does not have an interlocal agreement with the city of Woodinville.

The Wellington Hills County Park is proposed to consist of: up to 7 outdoor fields, 5.58 Acres County Park (including: dog park, mountain bike trails, foot trails, play areas, etc.), 42,275 SF of recreational community center, 60,000 SF of indoor mountain biking facility, and the removal of the existing 9-hole golf course. The site will be providing up to 603 parking stalls with full build-out. Phase 1 will provide 525 parking spaces which will accommodate the maximum potential usage of the 7 fields and county park area. Phase 2 may provide up to an additional 79 parking spaces with the addition of the recreation community center. Note: The outdoor fields can be configured for several different sports such as soccer, baseball, lacrosse, rugby, or pick-up games of any type. The most intense and maximum field usage is 7 soccer fields. The actual parking demand after opening will be monitored to determine how much if any additional parking will be required with subsequent phases.

The park property is located along both sides of 240th Street SE, in between Snohomish-Woodinville Road and 75th Avenue SE. The park facility is proposed to have two accesses to 240th Street SE; the primary full access will have a roundabout at the west end and there would be a secondary gated access that could be opened during high traffic flow periods as determined by the parks department. The development is located within Transportation Service Area (TSA) E. The development is also located outside of the Urban Growth Area (UGA). A site vicinity map has been included in Figure 1.

The roadways in the site vicinity include: 240th Street SE, 75th Avenue SE, and Snohomish-Woodinville Road. The park is located approximately 1.5 miles away from Wellington Elementary School and Leota Junior High School to the southeast and 1.7 miles away from Woodinville High School to the southwest. There are no other significant pedestrian generators in the site vicinity.

240th Street SE is a two-lane urban collector arterial within the UGA west of the site (arterial unit 463 per Snohomish county Public Works designation) and a rural minor collector arterial outside of the UGA along the site frontage (arterial unit 464). The posted speed limit is 25 mph. However, the measured 50th percentile speed shows vehicles are traveling at 31.4 mph in the westbound direction and 32.1 mph in the eastbound direction. There is 19 feet of pavement along the site frontage with no shoulders. The only pedestrian facility is a sidewalk along the north side in the vicinity of Snohomish-Woodinville Road, there are no sidewalks/shoulders/paths in the site vicinity.

75th Avenue SE is a two-lane rural minor collector arterial with 21 feet of pavement and a maximum of a 2-foot shoulder on both sides. The posted speed limit in the vicinity of 240th Street SE is 35 mph. However, the 50th percentile speeds show vehicles traveling at 37.7 mph in the southbound direction and 38.7 mph in the northbound direction.

Snohomish-Woodinville Road is a five-lane urban minor arterial with 65 feet of pavement, a bike lane in each direction, and curb, gutter, sidewalk along the west side of the roadway south of 240th Street SE all the way to the Snohomish-King County Line and pedestrian crossing phases at the intersection of 240th Street SE. The posted speed limit is 35 mph.

With the new park, measures will be constructed to help control/reduce speeds, improve road capacity and improve pedestrian circulation. These measures include: speed humps (up to two), speed table (at 71st Avenue) along 240th Street SE, and dynamic speed feedback signs for southbound 75th Avenue SE and westbound 240th Street SE. The speed feedback sign will be permanent on 75th Avenue SE and temporary on 240th Street SE until the speed humps are in to slow traffic. Also, the County/project will construct sidewalks or walkways on 240th Street from the existing sidewalk near Snohomish-Woodinville road east to 75th Avenue SE in addition to the paths in the park. The Parks department has also been in coordination with the County for the intersection improvement of Snohomish-Woodinville Road/240th Street signal, which will provide east leg widening to provide for an additional westbound turn lane and signal phasing improvements.

The Wellington Hills County Park will not impact any critical arterial units[1] in TSA E with 3 or more directional peak-hour trips. However, the park will impact the following arterial units[2] with 50 or more directional peak-hour trips:

- Arterial Unit #463 – 240th Street SE, Sno-Wood Rd to UGA Boundary (0.21 miles)
- Arterial Unit #464 – 240th Street SE, UGA Boundary to 75th Avenue SE (0.51 miles)

The UGA Boundary is located approximately 0.21 miles east of Snohomish-Woodinville Road. The existing, baseline, and future level of service of these arterials are analyzed within this report. The detail location of the arterial boundary and the arterial unit designation are located in attachment G-1.

Both arterial units are impacted by 50 or more directional trips in both the eastbound and westbound direction, each arterial only has control at the terminus of the arterial unit in one direction. The detailed parameters of the arterial units and UGA boundaries are in attachment G-1. For AU #463 the control is the signalized intersection of Snohomish-Woodinville Road at 240th Street SE and AU #464 is only controlled by the minor leg stop controlled intersection at 75th Avenue SE at 240th Street SE. Typically, the arterial analysis would only be performed for the direction with control delay, which would be the westbound direction for AU #463 and for the eastbound direction of AU #464. However, future arterial analysis with the proposed park was analyzed in both directions due to the proposed access being a roundabout which will add additional control delay to the arterials.

The Wellington Hills County Park will also add 50 or more directional trips to Arterial Unit #211, Snohomish-Woodinville Road from the King County Line to the SR-522 Eastbound Ramps, which was designated at ultimate capacity on June 23, 1997. Analysis of impacts to this arterial unit at ultimate capacity is also included in this report.

Also, WSDOT level of service (LOS) was analyzed for the following intersections:

- SR-9 at 228th Street SE
- SR-9 at SR-522 Westbound Ramps
- SR-9 at SR-522 Eastbound Ramps
- SR-522 at SR-524

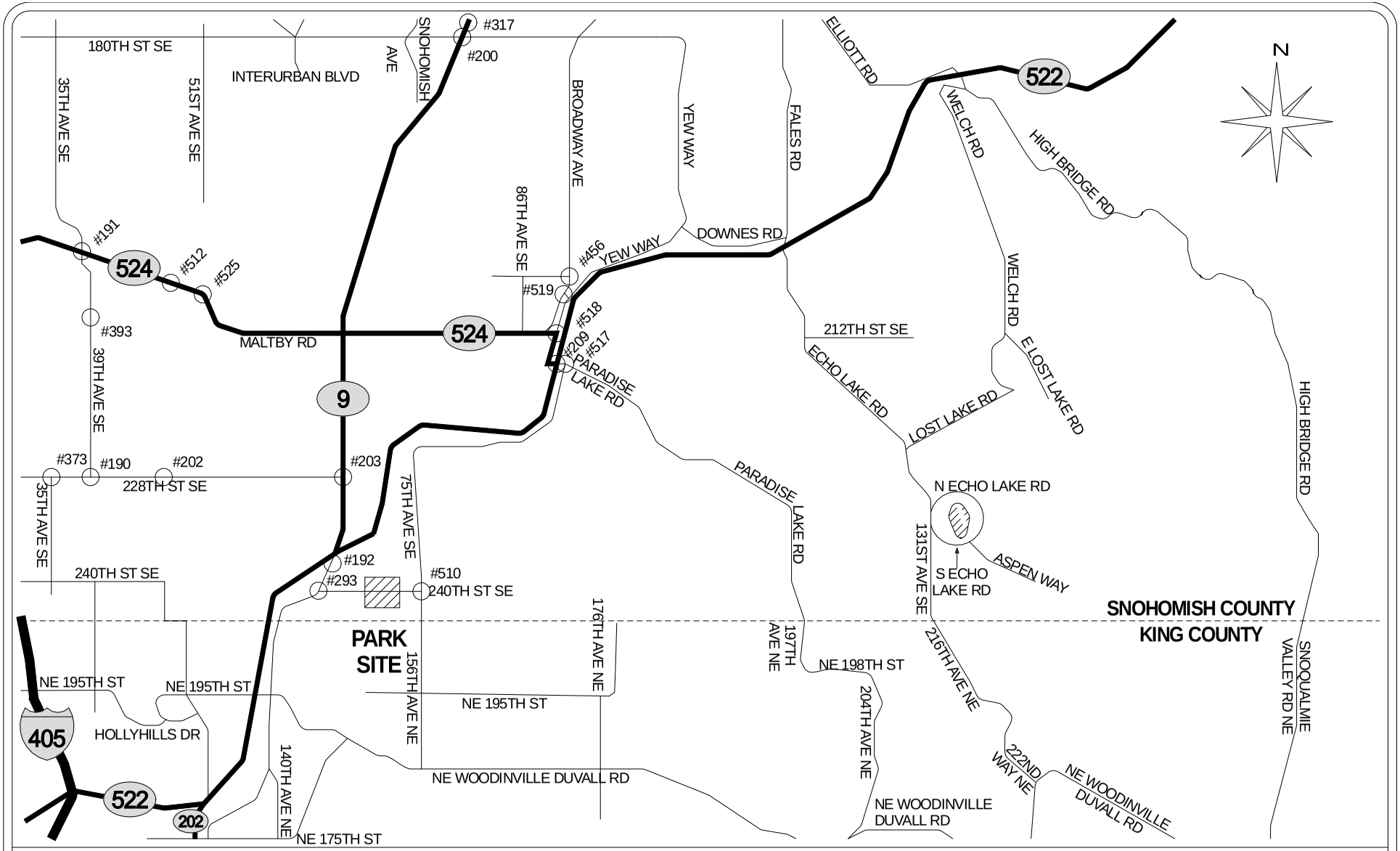
[1] Per DPW 4224 a critical arterial is an arterial unit at risk for concurrency problems and for which forecasts should be required, typically those being monitored or under operational analysis.

[2] Per SCC 30.91A.280 an "arterial unit" means a road, or portion of a road or a system of roads, consistent with the level of service methodology adopted in the county comprehensive plan and consistent with the criteria established by the director of public works, for the purpose of making concurrency determinations.

The City of Woodinville requested the following intersections be analyzed for intersection LOS:

- Woodinville-Snohomish Road at NE 195th Street
- 156th Avenue NE at Woodinville-Duvall Road
- Snohomish-Woodinville Road at 240th Street SE
- 75th Avenue SE at 240th Street SE

SCC 30.66B only requires weekday concurrency analysis. However, due to comments received this TIA has also reviewed some of the intersection and the arterials for Saturday impacts. As weekend analysis is not a requirement, the results of the Saturday analysis is summarized in the body of this report but the details are in the attachments.



GIBSON TRAFFIC CONSULTANTS

TRAFFIC IMPACT STUDY
GTC #12-040

WELLINGTON HILLS COUNTY PARK

SNOHOMISH COUNTY

LEGEND

PARK SITE

KEY INTERSECTION

NOTE: THE URBAN GROWTH AREA (UGA) BOUNDARY AND THE ARTERIAL UNIT NUMBERS ARE SHOWN IN AN ATTACHMENT G-1.

FIGURE 1

SITE VICINITY MAP

3. METHODOLOGY

Trip generation calculations for the Wellington Hills County Park have been performed according to the methodology from Snohomish County Department of Public Works (DPW) Rule 4220, *Presubmittal Conferences and Traffic Studies*. Data contained in the Institute of Transportation Engineers' (ITE) *Trip Generation, 9th Edition (2012)* has been used for the proposed and existing uses, in accordance with DPW Rule 4220. In addition, data collected by GTC for the indoor mountain biking facility and supplemental information for the outdoor fields has been used for the trip generation.

Snohomish County determines whether or not a development is concurrent based on impacts to arterial segments and Inadequate Roadway Conditions (IRC). Developments generating 50 or more peak-hour trips are required to analyze impacts to critical arterial units and arterial units in arrears impacted with 3 or more peak-hour trips in the critical direction. In addition, arterial units and arterials at ultimate capacity impacted with 50 or more directional peak-hour trips are required to be analyzed.

The interlocal agreement between Snohomish County and WSDOT typically requires WSDOT intersections within unincorporated Snohomish County impacted with 10 or more PM peak-hour trips from developments generating more than 50 PM peak-hour trips to be analyzed for existing and future conditions, unless scoped differently with WSDOT. The interlocal agreement also provides for mitigation fees to WSDOT for improvement/collection projects impacted within the development's unincorporated Transportation Service Area (TSA) or based on the area wide mitigation fee.

Congestion at intersections and along arterials is generally measured in terms of level of service (LOS). In accordance with *Highway Capacity Manual 2010 (HCM)* by the Transportation Research Board, road facilities and intersections are rated between LOS A and LOS F, with LOS A being free flow and LOS F being forced flow or over-capacity conditions. The level of service at signalized, roundabout, and all-way stop-controlled intersections is based on the average delay of all approaches. The level of service for two-way stop-controlled intersections is based on average delays for the critical stopped approach. Snohomish County uses the average travel speed to determine the level of service for arterial segments. Geometric characteristics and conflicting traffic movements are taken into consideration when determining level of service values. Additionally, the latest 2010 Highway Capacity manual utilized intersection peak hour factors (PHF) rather than approach which has been utilized here consistent with discussion with public works staff. A summary of the intersection level of service criteria is included in Table 1 and the arterial level of service criteria is included in Table 2.

Table 1: Level of Service Criteria for Intersections

Level of Service [1]	Expected Delay	Intersection Control Delay (Seconds per Vehicle)	
		Unsignalized Intersections	Signalized Intersections
A	Little/No Delay	≤10	≤10
B	Short Delays	>10 and ≤15	>10 and ≤20
C	Average Delays	>15 and ≤25	>20 and ≤35
D	Long Delays	>25 and ≤35	>35 and ≤55
E	Very Long Delays	>35 and ≤50	>55 and ≤80
F	Extreme Delays[2]	>50	>80

Table 2: Level of Service Criteria for Arterials

Level of Service	Average Arterial Speed Rural 2 Eastbound 1 Stop Sign (mph)	Average Arterial Speed Rural 2 Westbound No Stop Sign (mph)	Average Arterial Speed Rural 2 Eastbound 2 Stop Signs (mph)	Average Arterial Speed Rural 2 Westbound 1 Stop Sign (mph)	Average Arterial Speed Urban Class 2 (mph)
A	> 30	> 31	> 29	> 30	> 35
B	> 28	> 30	> 27	> 28	> 28
C	> 26	> 28	> 24	> 25	> 22
D	> 24	> 27	> 22	> 24	> 17
E	> 19	> 22	> 17	> 19	> 13
F	≤ 19	≤ 22	≤ 17	≤ 19	≤ 13

[1] **Source:** *Highway Capacity Manual* 2010.

LOS A: Free-flow traffic conditions, with minimal delay to stopped vehicles (no vehicle is delayed longer than one cycle at signalized intersection).
LOS B: Generally stable traffic flow conditions.
LOS C: Occasional back-ups may develop, but delay to vehicles is short term and still tolerable.
LOS D: During short periods of the peak hour, delays to approaching vehicles may be substantial but are tolerable during times of less demand (i.e. vehicles delayed one cycle or less at signal).
LOS E: Intersections operate at or near capacity, with long queues developing on all approaches and long delays.
LOS F: Jammed conditions on all approaches with excessively long delays and vehicles unable to move at times.

[2] When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection.

The acceptable level of service for Snohomish County urban arterials is LOS E and LOS C for rural arterials. The City of Woodinville and the Washington State Department of Transportation (WSDOT) have adopted LOS E for their intersection level of service standard.

There are four rural arterial level of service criteria; as the criteria changes depending on the number and type of control points along the arterial. Under the existing conservatively ('worst case") analysis conditions; the eastbound stop sign at the intersection of 75th Avenue SE at 240th Street SE only provides control delay to vehicles traveling in the eastbound direction even though the right turn (southbound to westbound movement) potentially reduces the speed criteria, the analysis has taken no credit for that westbound existing delay. With the development a roundabout will be added at the park entrance, again to be conservative this was added only as a stop controlled intersection rather than as a signal which would have provided greater theoretical capacity to the arterial than just a stop sign. In addition the County is considering speed table/speed humps (total of 3-devices) which could add up to an additional 6 seconds of delay apiece for a total of up to 18 seconds based on extensive literature search (analysis indicated delay per device could be as little as 3 seconds but to be conservative we have used 6 seconds per devise). These devices would act similarly to a yield sign controlled intersection in how they would reduce the arterial travel speed and therefore the level of service thresholds could be reduced further; (i.e. theoretical capacity increased); however, no adjustment was made to the level of service thresholds for the speed table/humps, thus modeling the worst case scenario.

The arterial analysis has been performed based on the guidelines of Snohomish County. Arterial travel time data and signal timing data has been obtained to perform the arterial analysis. The arterial has been calibrated by adjusting lost times and link speeds. The length of the arterials was extended to meet the minimum analysis length per their classification: for urban arterials the length should be 1-mile and for a rural arterial the length should be 2-miles.[3]

The intersection of 75th Avenue SE at 240th Street SE is a minor leg stop controlled intersection for the eastbound direction. In order for Synchro arterial analysis to include approach delay at this intersection, the Synchro system must treat this stop controlled intersection as a signal. GTC setup two systems; one with stop controlled intersections and one with signalized intersections. The following standard analysis method was then followed:

1. The existing system was setup with signals to represent the stop-controlled intersection that matched the travel time delay experienced in the travel time survey.
2. Once the simulated signal delay was calibrated to existing field conditions, using no ped phases and adjusting the lost times, the intersection was reanalyzed as a Synchro stop controlled intersection and the approach delay was recorded.

[3] Per DPW 4224.030, level of service on short units will be evaluated on the basis of at least a one-mile section of roadway in the urban area and two-mile section in the rural area wherever possible.

3. Then the baseline volumes were added to the system in the stop controlled scenario and the increase in delay from existing conditions for each of the stop intersection was recorded.
4. The baseline simulated signal scenario was then recalibrated so that the increase in the signal delay matched the increase in the unsignalized delay by adjusting the lost times.

The same analysis method was used to analyze the increase in delay from the baseline conditions to the future with development conditions. This is the standard procedure approved by Jim Bloodgood (County traffic engineer) for arterial analysis studies. In order to account for the roundabout delay in the arterial calculations, the delay for the applicable approach was added to the future intersection delay and then the travel speed was calculated based on the new travel time and distance.

4. TRIP GENERATION

The Wellington Hills County Park is proposed to consist of: up to 7 outdoor fields, 5.58 Acres County Park (open fields, dog park, playground, etc.), 42,275 SF of recreational community center, 60,000 SF of indoor mountain biking facility, replacing the existing 9-hole golf course. All trip generation estimates are based on national statistics for the various uses contained in ITE's *Trip Generation, 9th Edition* with exception of additional data collected for the indoor mountain biking building. The average trip generation rates for the following land uses were used to determine the trip generation: The most intense typical use of the outdoor fields is for 7 typical sized soccer fields even though it can be used for a combination of other sports such as lacrosse, football, or rugby etc. The appropriate ITE land use code (LUC) used for the trip generation is identified below.

- 7 Outdoor Fields – LUC 488
- 5.58 Acres County Park – LUC 412
- 42,275 SF Recreational Community Center – LUC 495
- 60,000 SF Indoor Mountain Biking (IMB) Facility – GTC Trip Generation
- 9-Hole Golf Course (Removed) – LUC 430

Within ITE LUC 488 used to determine the trip generation of the outdoor fields, the description of the land use identifies ancillary amenities that may include trails, activities shelter, aquatic center, picnic grounds, basketball, tennis courts, and a playground. Also land use code 495 for recreational community center also includes outdoor fields. Therefore, by using County Park for the non-active area and not taking any discount for potential combined use trips between uses, GTC is conservatively double counting trips and parking for many of these future ancillary uses.

Table 3: Trip Generation Summary

Land Use	Average Daily Trips	AM Peak-Hour			PM Peak-Hour			Saturday Peak-Hour Generator		
		Inbound	Outbound	Total	Inbound	Outbound	Total	Inbound	Outbound	Total
Outdoor Fields	499.31	5	3	8	83	41	124	102	110	212
County Park	12.72	0	0	0	0	0	0	7	5	12
Rec Com Center	1,429.74	57	30	87	57	59	116	24	21	45
IMB Facility	150.00	0	0	0	23	12	35	23	23	46
Golf Course	-321.66	-15	-4	-19	-13	-13	-26	-20	-21	-41
Total	**1,770.11**	**47**	**29**	**76**	**150**	**99**	**249**	**136**	**138**	**275**

The detailed trip generation calculations have been included in the attachments.

Phase 1 of the park would include only the fields and the county park portions, no buildings other than restrooms and picnic shelters would be built. With credit for the golf course, Phase 1 of the park would generate 190.37 new average daily trips (ADT) with -11 new AM peak-hour trips, 98.12 new PM peak-hour trips, and 183 new Saturday peak-hour of generator trips.

Phase 2 of the project would add the recreational community center to the fields and the county park. With Phase 2 of the park, the park would have a total trip generation of 1,620.11 new average daily trips (ADT) with 76 new AM peak-hour trips, 213.95 new PM peak-hour trips, and 229 new Saturday peak-hour of generator trips.

With the final Phase 3, the indoor mountain bike facility, the entire park is anticipated to generate 1,770.11 new average daily trips (ADT) with 76 AM peak-hour trips, 248.75 PM peak-hour trips, and 275 Saturday peak-hour of generator trips. The trip generation is summarized above in Table 3 for the specific uses.

Based on detailed scoping with the county staff, the ITE data was used for the standard concurrency and intersection analysis. ITE has documented several studies (some of which were conducted in Washington State) and cover typical weekday conditions where a single field is used by multiple teams for practice and includes adjacent playgrounds/trails/basketball courts that may be part of the same outdoor complex. However, at the request of City of Woodinville staff GTC conducted additional local counts and literature research to supplement the ITE data. The result of that local trip generation analysis (which is consistent with ITE) is contained in the attachments as is a summary of the literature search used for the conservative Event analysis which is also contained in the Event section of this report's attachments.

5. TRIP DISTRIBUTION

The distribution of trips generated by the Wellington Hills County Park development was approved by Mark Brown of Snohomish County PDS on July 25, 2012, and was also reviewed by Woodinville Staff. The distribution was based on a breakdown of where the majority of the organized soccer players were coming from (Northshore School District) as well as existing travel patterns to the area and web based directional assistance programs. It was determined that 85% of the site traffic will travel along 240th Street SE to and from the west and 15% to and from the east. The eighty-five percent will split at Snohomish-Woodinville Road with ten percent traveling to/from the south and seventy-five percent to/from the north. This seventy-five percent will further split at SR-522 with forty-five percent to/from the west, twenty percent to/from the north, and ten percent to/from the east. A detailed trip distribution for the full build-out during the AM peak-hour is shown in Figure 2, the PM peak-hour is in Figure 3, and the Saturday peak-hour of generator is in Figure 4.

Snohomish County also requires development volumes at all key intersections impacted with 3 directional peak-hour trips on any approach or departure to be shown in tables and figures for the standard AM and PM peak-hours. The Wellington Hills County Park development will impact 7 key intersections during the AM peak-hour and 18 key intersections during the PM peak-hour. The Snohomish County key intersection figures and tables are included in the attachments. Based on the trip distribution no Snohomish County Inadequate Roadway Conditions (IRC) is impacted with 3 or more peak-hour trips.

6. PARKING GENERATION

The Wellington Hills County Park is proposed to consist of: up to 7 outdoor fields, 5.58 Acres County Park (including: dog park, mountain bike trails, foot trails, play areas, etc.), 42,275 SF of recreational community center, 60,000 SF of indoor mountain biking facility. The site will be providing up to 603 parking stalls with full build-out. Phase 1 will provide 525 parking spaces to accommodate the maximum documented use of the 7 fields and county park area. Phase 2 may provide up to an additional 78 parking spaces with the addition of the recreation community center. Actual spaces to be added for Phase 2 will take into account actual demand measured after operation of Phase 1.

Based on the ITE *Parking Generation, 4th Edition (2010)* a Soccer Complex, may include ancillary amenities as fitness trails, activity shelters, aquatic center, picnic grounds, basketball, tennis courts, and a playground. The average parking supply per ITE is 38 spaces per field (per 12 study sites); however, the 85th percentile parking demand for a Sunday (typically when peak events would occur) is 69.30 vehicles per field. Based on the 7 fields there would be a parking demand of 485 vehicles. However, to accommodate the highest recorded ITE parking demand (assumed as an all-day tournament) the proposal is to provide 75 stalls per field, i.e. 525 parking spaces for the 7 fields.

The highest parking demand rate reported for a Recreation Community Center on a weekend (typically when the field use will be at the highest) is reported as 4.0 vehicles per 1,000 SF; therefore, the 42,275 SF could have an unconstrained peak parking demand of up to 169 parking spaces. Facilities such as this often include outdoor athletic fields/courts which means some double counting when doing calculations for soccer fields and community separately as we have done here. The potential additional parking proposed to be constructed with this phase is 78 additional parking stalls for a total of 603 parking stalls. As stated previously the 525 stalls for the fields accommodated the highest recorded parking demand in ITE which may already include similar building activity as proposed in phase II. It is therefore prudent that once the fields are operational, that actual parking counts would be conducted to determine the true parking demand for the fields during peak and non-peak events to determine how many, if any, additional parking stalls would need to be constructed for the community center. Alternatively, to determine if scheduling restrictions would be needed to moderate the parking demand.

The indoor mountain biking facility is not represented within the ITE Parking Generation book; however, based on discussions with the operator of the facility it is anticipated that the maximum typical use would have 50 vehicles which would account for approximately 50 to 100 participants in the facility. Additional parking counts should be conducted after the community center is operational to see if added parking is need for the mountain bike facility.

In summary if all of the facilities were operating at their highest ITE recorded demand without any crossover use and all peaking at the same time, theoretical parking demand could be as high as 744 parking stalls on a Sunday with concurrent peak events:

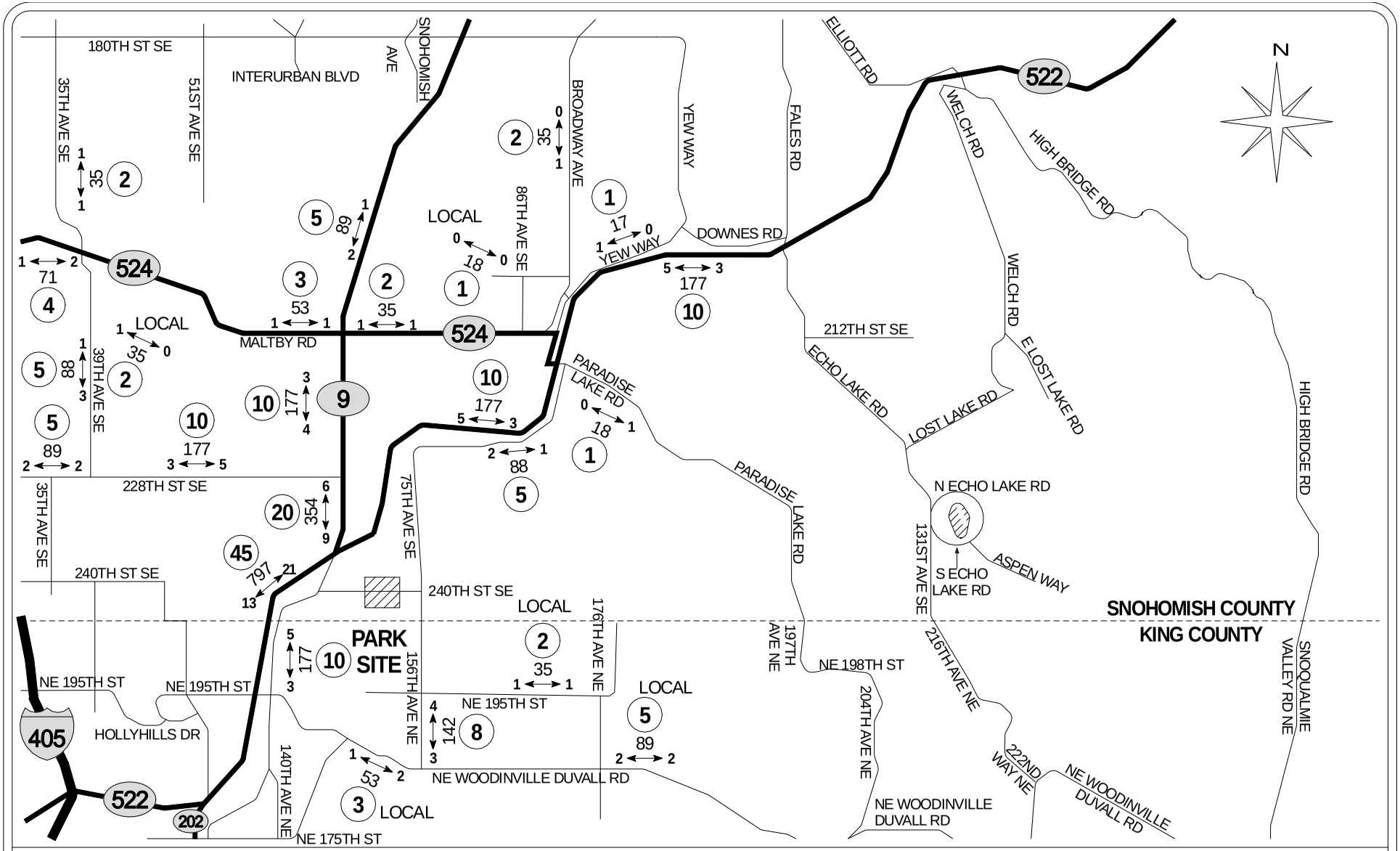
- Soccer Complex – 525 vehicles
- Recreation Community Center – 169 vehicles
- Indoor Mountain Biking – 50 vehicles

However, as Parks Department ultimately manages the organized use of the park, it would not allow use of all facilities at their peak parking demand at the same time. For example, when there is an all-day soccer tournament that may require use of 525 parking spaces, it would not allow high use of the Recreational Community Center. Also, on a typical day there would be crossover use of facilities the more typical parking utilization could be estimated by utilizing the average parking demand documented by ITE for the uses. For the Soccer Complex it would be 38.30 vehicles per field for a parking demand of 268 vehicles. For the Recreational Community Center it would be 3.20 per 1,000 SF or 135 vehicles. And based on the conversation with the indoor mountain biking facility a typical weekday would have half the participants than on weekend for 25 vehicles.

In summary if the facilities are operating under a typical day the average parking demand would be 428 parking stalls:

- Soccer Complex – 268 vehicles
- Recreation Community Center – 135 vehicles
- Indoor Mountain Biking – 25 vehicles

Based on this information the site would have enough parking provided on-site to meet its parking demand. Additional parking demand analysis will be conducted once the fields are operational and then again when the community center becomes operational to ensure adequate parking is added to the site if needed when Phase 2 and 3 are built.



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GTC #12-040

WELLINGTON HILLS COUNTY PARK

SNOHOMISH COUNTY

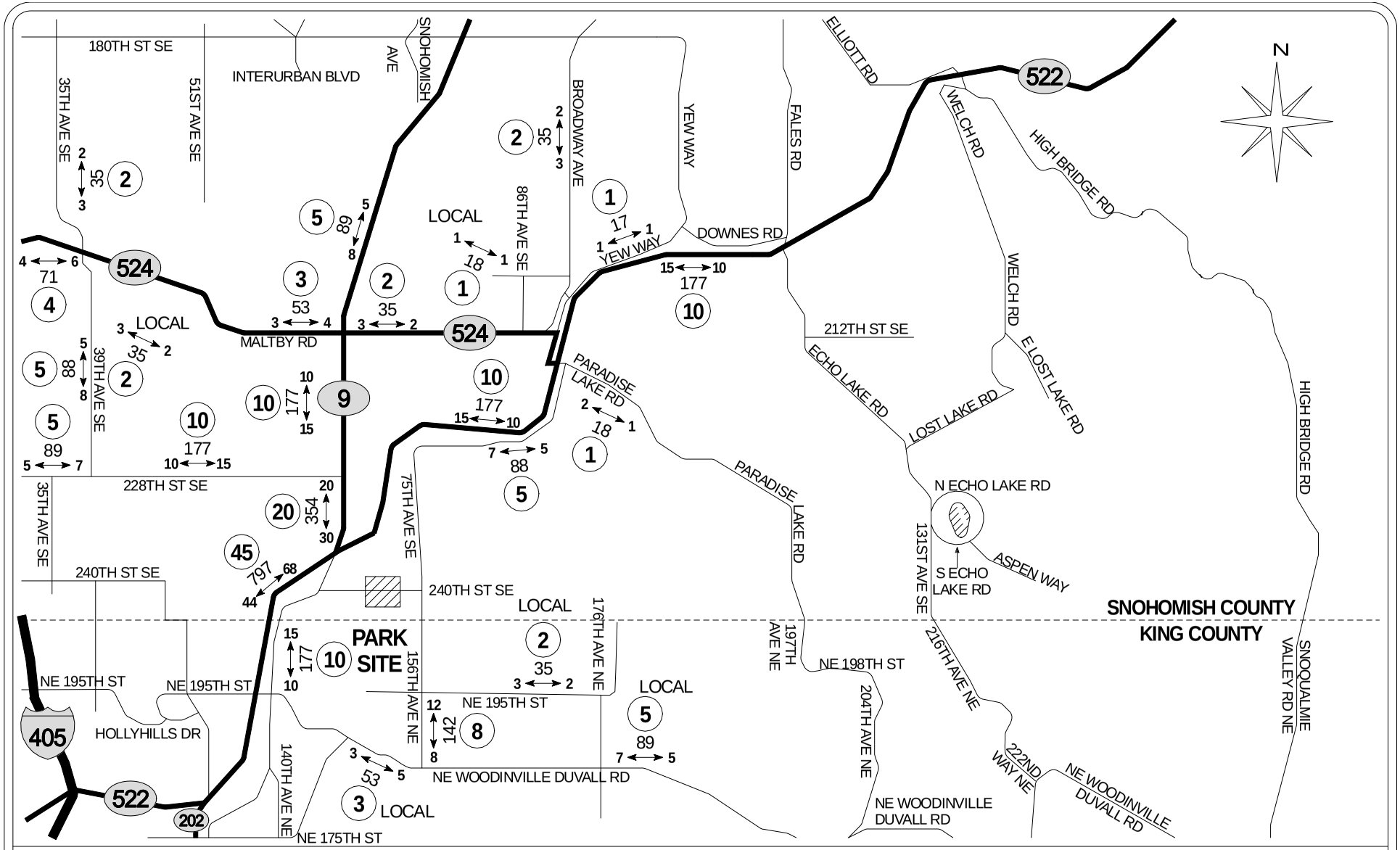
LEGEND

AWDT
AM ↔ PEAK — NEW SITE TRAFFIC (DAILY/PEAK HOUR)

(25) — TRIP DISTRIBUTION %

FIGURE 2

PARK FULL BUILD-OUT TRIP DISTRIBUTION WEEKDAY AM PEAK



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WELLINGTON HILLS COUNTY PARK

SNOHOMISH COUNTY

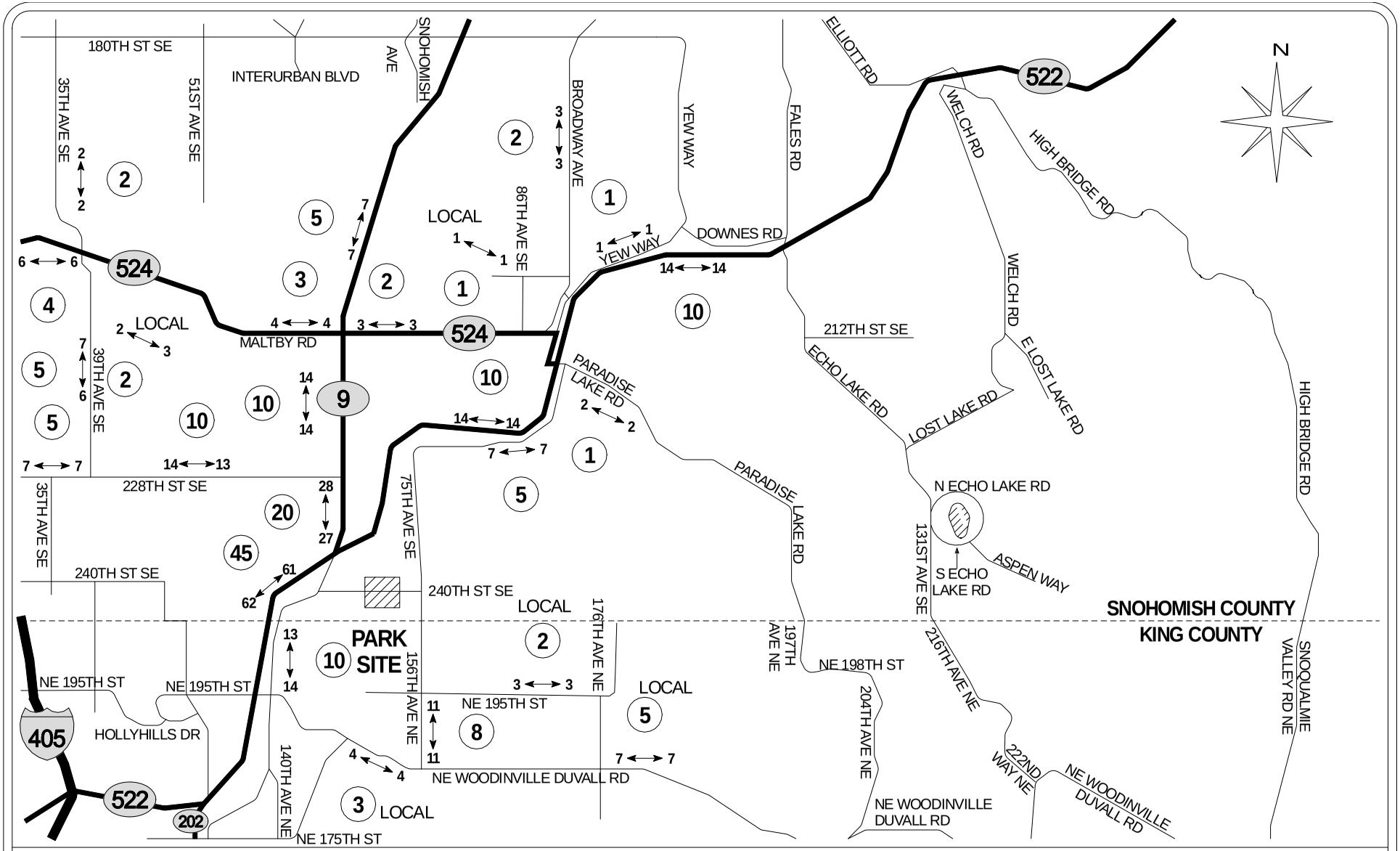
LEGEND

AWDT
PM ◄► PEAK — NEW SITE TRAFFIC (DAILY/PEAK HOUR)

(25) — TRIP DISTRIBUTION %

FIGURE 3

PARK FULL BUILD-OUT TRIP DISTRIBUTION WEEKDAY PM PEAK



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SNOHOMISH COUNTY

LEGEND

SAT ⟷ PEAK — NEW SITE TRAFFIC (PEAK-HOUR GENERATOR)

(25) — TRIP DISTRIBUTION %

FIGURE 4

PARK TRIP DISTRIBUTION SATURDAY PEAK-HOUR

7. ARTERIAL ANALYSIS

The Wellington Hills County Park development generates more than 50 peak-hour trips and is therefore required to analyze impacts to any arterial unit in TSA E impacted with 50 or more directional peak-hour trips. The impacts of the Wellington Hills County Park development on arterials are summarized in Table 4.

Table 4: Impacted Snohomish County Arterial Units

Arterial Unit #	Arterial Unit Description	Critical Movements	
		Peak-Hour	Direction
463	240th Street SE Sno-Wood Rd to UGA Boundary	PM Peak-Hour	Eastbound Westbound
464	240th Street SE UGA Boundary to 75th Avenue SE	PM Peak-Hour	Eastbound Westbound

These Snohomish County arterials have been analyzed for the existing conditions, 2019 baseline conditions and 2019 future conditions with development. The 6-year horizon period is based on Snohomish County's concurrency period.

7.1 Turning Movements

Turning movement volumes have been obtained for the critical intersections along the arterials requiring operational analysis. The intersections analyzed as part of the Snohomish County arterials are summarized in Table 5.

Table 5: Intersections for Analysis

Intersection	Analysis	Snohomish County Arterial #	Snohomish County Key Intersection #
1. Snohomish-Woodinville Rd at 240th Street SE	Snohomish County Arterial	#463	#293
2. 75th Avenue SE at 240th Street SE	Snohomish County Arterial	#464	#510

Data was gathered from Snohomish County and the independent count firm of Traffic Data Gathering (TDG). All of the data used for the arterial level of service has been approved by Jim Bloodgood of Snohomish County. The approval by Jim Bloodgood is included in the attachments. The existing conditions turning movements at the study intersections are shown in Figure 5 for the PM peak-hour.

The 2019 baseline conditions turning movements were calculated by adding Snohomish County pipeline data[4] to the existing turning movements. The pipeline data is dated October 1, 2013.

[4] Per SCC 30.66B.145 pipeline data is an inventory of developments that have been determined concurrent or have pre-application concurrency approval to estimate traffic volumes for forecasting future level of service conditions.

The 2019 baseline turning movements at the study intersections are shown in Figure 5 for the PM peak-hour.

The 2019 future conditions with development turning movements were calculated by adding the development's trips to the 2019 baseline turning movements. The 2019 future conditions with development turning movements are shown in Figure 5 for the PM peak-hour.

7.2 Snohomish County Arterial Analysis

Operational arterial analysis has been performed for the following arterial units:

- Arterial Unit #463 – 240th Street SE, Sno-Wood Rd to UGA Boundary (0.21 miles)
- Arterial Unit #464 – 240th Street SE, UGA Boundary to 75th Avenue SE (0.51 miles)

Both arterial units have been analyzed for the PM peak-hour only.

7.2.1. Arterial Unit #463 – 240th Street SE (Sno-Wood Rd to UGA)

The arterial is not a critical arterial unit during any time period; however, the park will add 50 directional trips in both directions during the PM peak-hour. This section is classified as an Urban Arterial as it is inside of the UGA. The existing travel time data shows that the arterial operates at LOS C with a travel speed of 25.3 mph in the eastbound direction and LOS D (19.5 mph) in the westbound direction. The westbound direction has been calibrated to 19.6 mph, within 0.1 mph, which is an acceptable tolerance (within 1 mph) by Snohomish County. The arterial travel time calibrates the road system to include all existing traffic patterns and signs. The existing regulatory signs are followed by the travel cars. For example the prior advanced stop sign at the rail crossing delay was calibrated into the signal through lost time rather than the use of the No Right-Turn on Red model option as the actual field data delay for the calibration is more representative of actual operations. No calibration was required for the eastbound direction as there are no control intersections adding delay in this direction.

The arterial is anticipated to continue to operate at LOS C in the eastbound direction and LOS D in the westbound direction with a travel speed of 19.4 mph under the 2019 baseline conditions. The addition of the Wellington Hills County Park, roundabout access at the park entrance and speed humps is anticipated to reduce the travel speed to 21.2 mph in the eastbound direction (LOS D) and 18.0 in the westbound direction (LOS D).

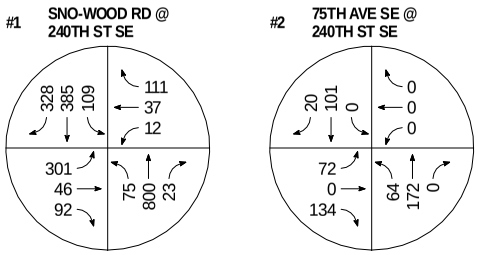
The roundabout analysis was conducted using Sidra Intersection software. In order to calculate the impact to the arterial travel speed, the roundabout approach delay in the eastbound and westbound direction was added to the calculated 2019 Future Conditions with development travel times from Synchro. This gave the new travel time in seconds and knowing the distance for the arterial units (#463 – 1 Mile & #464 – 2 Miles) a new travel speed was calculated which includes the roundabout delay. The same procedure was utilized for adding the speed humps in both directions for both arterials.

The PM peak-hour arterial analysis of the 240th Street SE arterial from Sno-Wood Road to the UGA Boundary, Arterial Unit #463, is summarized in Table 6. Note: The County is also improving the capacity of the Snohomish-Woodinville Way/240th Street SE intersection with an additional westbound turn lane and controlled rail crossing (removing the need to stop at the tracks unless there is a train present) which will also reduce westbound delay. The northbound left-turn will become a protected left-turn while the southbound left-turn may remain a protected/permitted, but may also become protected if monitoring shows there are issues with available gaps. The eastbound and westbound movements will be shared with the eastbound left-turn being a leading left protected/permitted. The improvements to the intersection have been assumed to be made before any trips from the active parts of the park are allowed. The conservative analysis with the southbound left-turn protected only is reported in the arterial level of service tables.

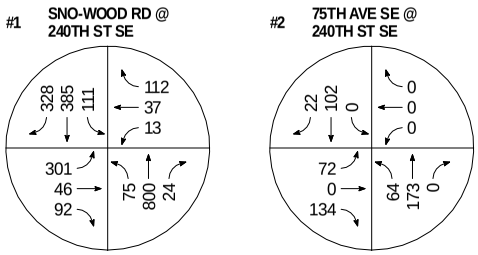
Table 6: Arterial Analysis Summary of Arterial Unit #463 – PM Peak-hour

Arterial	Condition	Direction	Level of Service	Travel Speed
#463 240th Street SE Sno-Wood Road to UGA Boundary Extended to 1 Mile	Travel Time	Eastbound	C	25.3 mph
		Westbound	D	19.5 mph
	Existing Conditions (calibrated)	Eastbound	C	25.3 mph
		Westbound	D	19.6 mph
	2019 Baseline Conditions	Eastbound	C	25.3 mph
		Westbound	D	19.4 mph
	2019 Future Conditions With Full Development	Eastbound	C	25.3 mph
		Westbound	D	20.4 mph
	With Access Roundabout & Speed Humps	Eastbound	D	21.2 mph
		Westbound	D	18.0 mph

The arterial level of service calculations are included in the attachments.

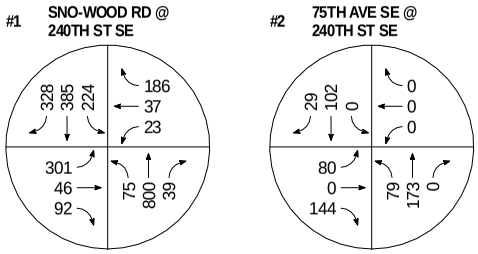


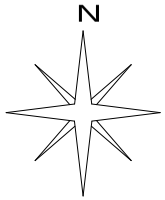
Existing



Baseline 2019

Future 2019 With





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XX → PM PEAK HOUR TURNING MOVEMENT VOLUMES

FIGURE 5

ARTERIAL ANALYSIS TURNING MOVEMENT VOLUMES FULL BUILD-OUT PM PEAK-HOUR

7.2.2. Arterial Unit #464 – 240th Street SE (UGA to 75th Avenue SE)

This section of the 240th Street SE arterial is also not a critical arterial unit during any time period; however, the park will add 50 directional trips in both directions west of the roundabout at the park entrance during the PM peak-hour. Although the development only adds 50 directional trips along a portion of the arterial unit; the entire arterial unit must be analyzed for concurrency. This section is also classified as a Rural Arterial as it is outside of the UGA. The existing travel time data shows that the 240th Street SE arterial operates at LOS A with a travel speed of 31.4 mph in the eastbound direction and LOS A (33.1 mph) in the westbound direction. The eastbound direction has been calibrated to 31.4 mph. No calibration was required for the westbound direction as there are no control intersections adding delay in this direction.

The arterial is anticipated to continue to operate at LOS A in the eastbound direction with a travel speed of 31.4 mph and LOS A in the westbound direction under the 2019 baseline conditions. The addition of the Wellington Hills County Park, roundabout access at the park entrance and speed humps is anticipated to reduce the travel speed to 27.9 mph in the eastbound direction (LOS B) and 29.9 mph in the westbound direction (LOS B).

The PM peak-hour arterial analysis of the 240th Street SE arterial from the UGA Boundary to 75th Avenue SE, Arterial Unit #464, is summarized in Table 7.

Table 7: Arterial Analysis Summary of Arterial Unit #464 – PM Peak-hour

Arterial	Condition	Direction	Level of Service	Travel Speed
#464 240th Street SE UGA Boundary to 75th Avenue SE Extended to 2 Miles	Travel Time	Eastbound	A	31.4 mph
		Westbound	A	33.1 mph
	Existing Conditions (calibrated)	Eastbound	A	31.4 mph
		Westbound	A	33.1 mph
	2019 Baseline Conditions	Eastbound	A	31.4 mph
		Westbound	A	33.1 mph
	2019 Future Conditions with Full Development	Eastbound	A	31.3 mph
		Westbound	A	32.3 mph
	With Access Roundabout & Speed Humps	Eastbound	B	27.9 mph
		Westbound	B	29.9 mph

The arterial level of service calculations are included in the attachments.

7.2.3. Summary of Snohomish County Arterial Analysis

The arterial analysis shows that the study arterials will operate at an acceptable level of service with the Wellington Hills County Park fully built out. For 240th Street SE (Sno-Wood Road to UGA), Arterial Unit #463, there is also an intersection improvement project on the Snohomish County 6-year TIP and the Transportation Needs Report that adds additional channelization to the intersection of Snohomish-Woodinville Road at 240th Street SE. This improvement has been modeled in the arterial/intersection analysis and helps reduce the total intersection delay and delay for westbound vehicles which provides even better arterial travel speed for arterial unit #463.

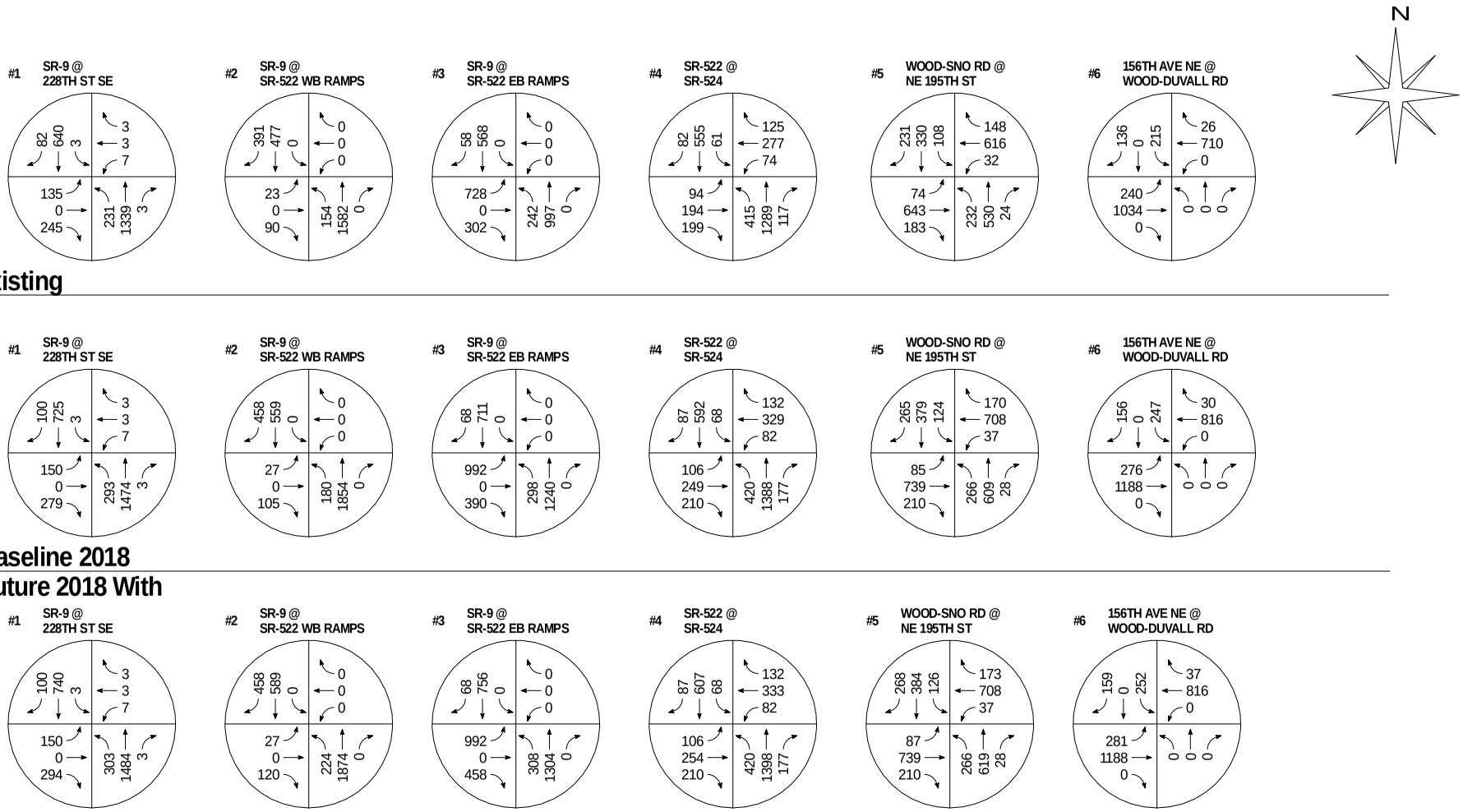
8. INTERSECTION ANALYSIS

8.1 Intersection Volumes

The existing turning movement volumes are based on data obtained from Snohomish County, WSDOT and counts performed by the independent count firms of Traffic Data Gathering (TDG), and All Traffic Data. The existing conditions turning movements at the study intersections are shown in Figure 6 for the PM peak-hour. The Saturday volumes are summarized in Figure 7.

The 2019 baseline conditions turning movements were calculated by adding either Snohomish County pipeline data or an annual compounding growth rate of 2% (consistent with the growth from the pipeline trips) to the existing turning movements. The pipeline data is dated October 1, 2013. The 2019 baseline turning movements at the study intersections are shown in Figure 6 for the PM peak-hour. The Saturday volumes are summarized in Figure 7.

The 2019 future conditions with development turning movements were calculated by adding the development's trips to the 2019 baseline turning movements. The 2019 future conditions with development turning movements are shown in Figure 6 for the PM peak-hour. The Saturday volumes are summarized in Figure 7.



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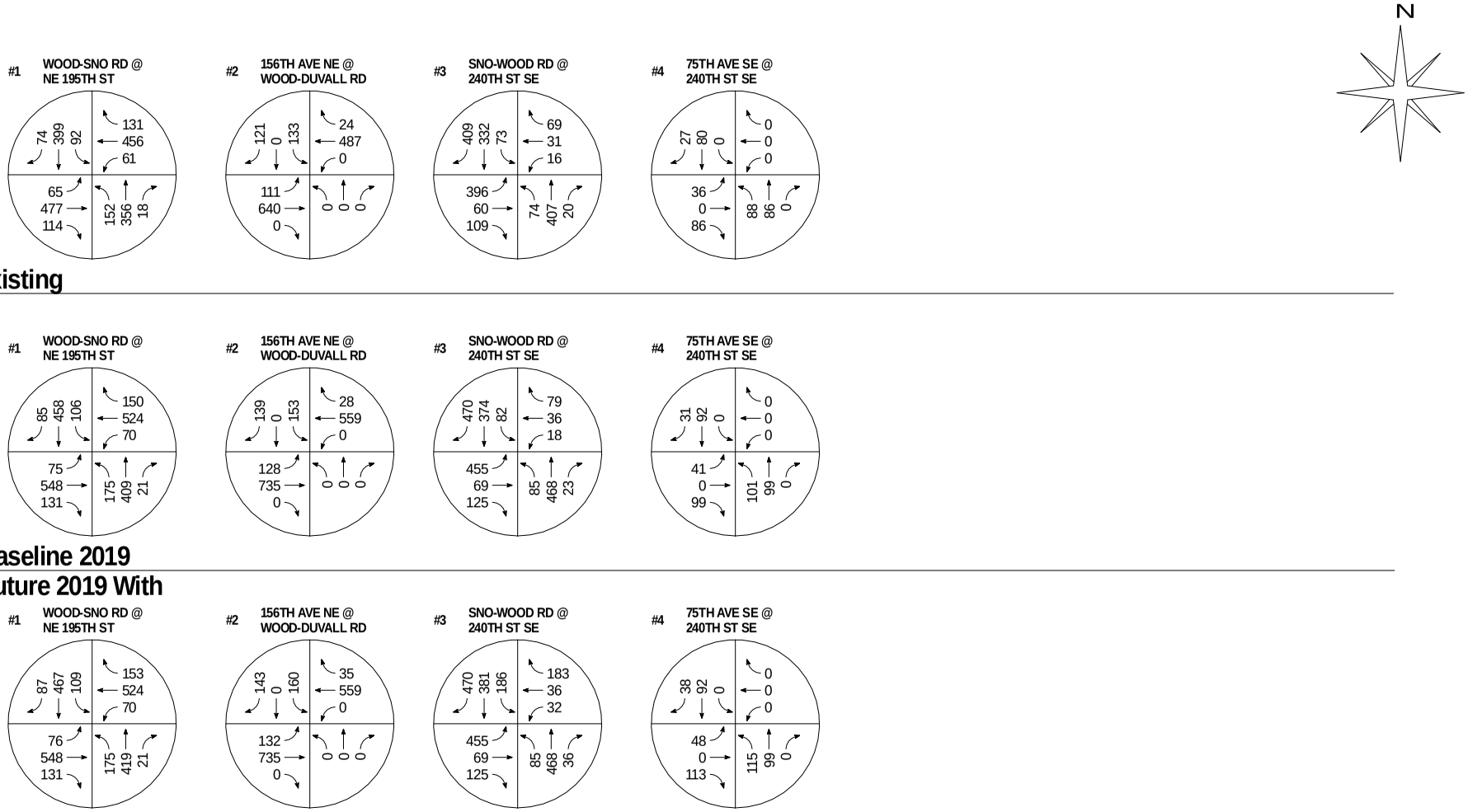
XX → PM PEAK HOUR TURNING MOVEMENT VOLUMES

FIGURE 6

WSDOT & WOODINVILLE TURNING MOVEMENT VOLUMES PM PEAK-HOUR



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XX → SATURDAY PEAK HOUR TURNING MOVEMENT VOLUMES

FIGURE 7

WOODINVILLE & COUNTY TURNING MOVEMENT VOLUMES SATURDAY PEAK-HOUR

8.2 WSDOT Intersection Analysis

The interlocal agreement between Snohomish County and WSDOT typically requires WSDOT intersections within unincorporated Snohomish County impacted with 10 or more PM peak-hour trips from developments generating more than 50 PM peak-hour trips to be analyzed for existing and future conditions, unless scoped differently with WSDOT.

The following intersections in unincorporated Snohomish County have 10 or more PM peak-hour project trips within TSA E and have been analyzed in the report:

1. SR-9 at 228th Street SE
2. SR-9 at SR-522 Westbound Ramps
3. SR-9 at SR-522 Eastbound Ramps
4. SR-522 at SR-524

These intersections have been analyzed for the PM peak-hour. The analysis is summarized in Table 8.

In addition the park would add 10+ trips to the WSDOT intersections of: SR-9 at SR-524 and SR-9 at 180th Street SE; however, analysis at these intersections was not performed as the intersections have been improved to there maximum configuration or is currently being improved by WSDOT with additional northbound/southbound through lanes and increased channelization. Also, appropriate traffic mitigation fees will be assessed through the interlocal agreement.

Table 8: 2019 Future Level of Service Summary –PM Peak-Hour

Intersections	Existing Conditions		2019 Future Conditions			
			without Development		with Development	
	LOS	Delay	LOS	Delay	LOS	Delay
1. SR-9 at 228th Street SE	B	13.5 sec	B	15.3 sec	B	15.6 sec
2. SR-9 at SR-522 Westbound Ramps	A	8.9 sec	B	10.3 sec	B	11.1 sec
3. SR-9 at SR-522 Eastbound Ramps	C	25.4 sec	C	32.7 sec	D	36.0 sec
4. SR-522 at SR-524	D	45.0 sec	E	65.0 sec	E	67.4 sec

It should be noted that the park will be paying the area wide traffic mitigation fee to WSDOT. On the Exhibit C list, WSDOT's collection projects in Snohomish County, the intersection of SR-522 at SR-524 is scheduled for an interchange improvement that would create a diamond interchange and move the intersection of Paradise Lake Road at Bostian Road further to the east.

8.3 City of Woodinville & Snohomish County Intersection Analysis

As the park is located near the Snohomish County/King County line approximately 20% of the parks trips will travel into King County and Woodinville on local roadways. Based on scoping conversations with Tom Hansen, GTC was asked to analyze the following intersections:

1. Woodinville-Snohomish Road at NE 195th Street
2. 156th Avenue NE at Woodinville-Duvall Road
3. Snohomish-Woodinville Road at 240th Street SE
4. 75th Avenue SE at 240th Street SE

These intersections have been analyzed for the PM peak-hour and the Saturday peak-hour of generator. The PM peak-hour analysis is summarized in Table 9 and the Saturday peak-hour of generator is summarized in Table 10.

Table 9: 2019 Future Level of Service Summary – Weekday PM Peak-Hour

Intersections	Existing Conditions		2019 Future PM Conditions			
			without Development		with Development	
	LOS	Delay	LOS	Delay	LOS	Delay
1. Woodinville-Snohomish Road at NE 195th Street	C	32.5 sec	D	40.3 sec	D	40.8 sec
2. 156th Avenue NE at Woodinville-Duvall Road	C	22.6 sec	D	30.1 sec	D	31.2 sec
3. Snohomish-Woodinville Road at 240th Street SE	C	34.6 sec	C	34.9 sec	C	29.0 sec
4. 75th Avenue SE at 240th Street SE	B	12.7 sec	B	12.8 sec	B	13.6 sec

Table 10: 2019 Future Level of Service Summary –Saturday Peak-Hour Generator

Intersections	Existing Conditions		2019 Future Saturday Conditions			
			without Development		with Development	
	LOS	Delay	LOS	Delay	LOS	Delay
1. Woodinville-Snohomish Road at NE 195th Street	C	26.6 sec	C	29.9 sec	C	30.2 sec
2. 156th Avenue NE at Woodinville-Duvall Road	B	14.6 sec	B	15.9 sec	B	16.3 sec
3. Snohomish-Woodinville Road at 240th Street SE	C	30.2 sec	D	36.1 sec	C	31.3 sec
4. 75th Avenue SE at 240th Street SE	B	10.9 sec	B	11.5 sec	B	12.2 sec

8.4 Intersection Analysis Conclusions

All of the WSDOT study intersection will operate at acceptable level of service E or better during the PM peak-hour time period with the proposed park. Both of the City of Woodinville intersections and the Snohomish County intersections will operate at acceptable level of service D or better during the PM peak-hour and the Saturday peak-hour of generator time periods with the proposed park. Note: the intersection of Snohomish-Woodinville Road at 240th Street SE improves with the development due to the intersection improvements, including the westbound right-turn lane.

9. VOLUME ANALYSIS FOR ARTERIAL UNIT AT ULTIMATE CAPACITY

Arterial Unit #211, Snohomish-Woodinville Road from the King County Line to the SR-522 Eastbound Ramps, is currently an arterial unit at ultimate capacity. The arterial unit will be impacted with 50 or more directional peak-hour trips from the additional development of the Wellington Hills County Park. The methodology for determining whether an arterial unit at ultimate capacity requires future operational level of service analysis is defined in Snohomish County Code (SCC) 30.66B.101 and Department of Public Works (DPW) Rule 4224.040(3). In short, the arterial must exceed the road designated as ultimate capacity daily volume thresholds before future operational arterial analysis is required. Seventy percent (0.37 miles) of Snohomish-Woodinville Road is a 3-lane section. The daily volume threshold for a 3-lane urban arterial unit at ultimate capacity is 33,000 daily trips. The remaining thirty percent (0.16 miles) of Snohomish-Woodinville Road is a 5-lane section with additional channelization at major intersections. The daily volume threshold for a 5-lane urban arterial unit at ultimate capacity is 55,000 daily trips.

The existing daily volume along Snohomish-Woodinville Road in the 3-lane section is 13,618 ADT and in the 5-lane section there is 17,448 ADT. The daily volumes are based on weekly data from Snohomish County taken in March and April of 2012.

DPW Rule 4224.040(3) requires the daily volumes on arterial units at ultimate capacity to be a weighted average of the existing plus pipeline volume plus development trips. The pipeline trips were obtained from Snohomish County in October 2013. The pipeline data provides AM peak-hour and PM peak-hour trips along Snohomish-Woodinville Road. Snohomish County uses a factor of 1:12 for the conversion of PM peak-hour trips to average daily trips. The pipeline trips have been determined using the volumes from the intersection of Snohomish-Woodinville Road at 240th Street SE. Based on the pipeline data there were 3 PM trip (36 ADT) north of 240th Street SE and 2 PM trips (24 ADT) to the south of 240th Street SE.

The existing daily volumes, pipeline daily volumes, and development daily trips are added together and a weighted average daily volume is calculated for the roadway, based on the length of each section. The weighted average daily volume with the development is 15,326 ADT which is substantially less than the threshold of 33,000 ADT for a 3-lane urban arterial at ultimate capacity. This indicates that future operational level of service analysis is not required, based on the existing traffic volumes being well within the County limits. The calculation is included in the attachments.

10. QUEUING ANALYSIS FOR SNO-WOOD ROAD AT 240TH STREET SE

Based on preliminary comments GTC conducted extensive queuing analysis for the Sno-wood road in the site vicinity. The queuing was completed by phase and with and without event traffic. The park construction is anticipated to be implemented in three phases.

Phase 1 of the park would include only the fields and the county park portions, no buildings other than restrooms or picnic shelters would be built. With credit for the golf course, Phase 1 of the park would generate 190.37 new average daily trips (ADT) with -11 new AM peak-hour trips, 98.12 new PM peak-hour trips, and 183 new Saturday peak-hour of generator trips.

Phase 2 of the project would add the recreational community center to the fields and the county park. With Phase 2 of the park, the park would have a total trip generation of 1,620.11 average daily trips (ADT) with 76 new AM peak-hour trips, 213.95 new PM peak-hour trips, and 229 new Saturday peak-hour of generator trips.

With the final Phase 3, the indoor mountain bike facility, the entire park is anticipated to generate 1,770.11 average daily trips (ADT) with 76 AM peak-hour trips, 248.75 PM peak-hour trips, and 275 Saturday peak-hour of generator trips. The total trip generation with the final build-out was included in the arterial and intersection level of service presented in the sections above for concurrency.

10.1 Southbound Left-turn Protected/Permissive Phasing at Sno-Wood/240th Street

As Phase 1 will be potentially constructed several years before the rest of the phases it was important to see if it would trigger additional off-site mitigation by itself. Queuing analysis was looked at along Snohomish-Woodinville Road between the intersections of 240th Street SE and the SR-522 Eastbound Ramps, in particular the southbound and northbound left-turn queue lengths. With the anticipated improvements to the intersection of Snohomish-Woodinville Road/240th Street SE (westbound right turn lane, improved rail crossing, and protected northbound left-turn phasing) and the ability for Snohomish County to adjust timings with the improvement the 95th percentile queue length for the southbound left-turn is anticipated to be 84 feet and the northbound left-turn for the SR-522 eastbound ramp would be 281 feet for a combined queue length of 365 feet.

During an event such as a soccer tournament with only Phase 1 built the 95th percentile queue length for the southbound left-turn is anticipated to be 150 feet and the northbound left-turn for the SR-522 eastbound ramp would be 283 feet long for a combined queue length of 433 feet. There is approximately 445 feet of distance between the southbound and northbound left-turn stop bars. Since this is Snohomish County right-of-way the County has the ability to make operational changes to turn pockets to meet demand. The analysis shows that the queuing with only Phase 1 constructed would likely fit within this distance even during events.

Also, on a typical day with no events or soccer tournaments and full build-out of the park the southbound queue length would be 147 feet and the northbound left-turn for the SR-522 eastbound ramp would be 288 feet. The total queue length will full build-out can also be accommodated on a typical day with no events. It should be noted that Snohomish County has a regional trail project planned for the railroad right-of-way on the east side of Snohomish-Woodinville Road that could provide for widening of the road to provide additional queuing if required to accommodate traffic generated by Phase 2 or 3 of the park. This would provide the potential for separate 300 foot southbound and northbound pockets, a 50 foot gap and 100 feet of transition area.

With full build-out and an event/soccer tournament the left-turn queue lengths will exceed the available storage by approximately 165 feet. This should be viewed as a special case that would only occur a few times a year and that would be managed by the Parks Department. This is a commonly accepted situation for large scale events that happing infrequently and is not a significant adverse impact. In addition, with the parking limits discussed earlier in the report, if there is a soccer tournament the recreational community center would not be allowed to operate at full capacity.

10.2 Southbound Left-turn Protected Phasing for Sno-Wood/240th Street

With the increase in left-turn volumes and the amount of through volumes, the southbound left-turn at Sno-Wood/240th Street intersection may be considered for conversion to protected phasing. With southbound left-turn protected the 95th percentile queue length for the southbound left-turn is anticipated to be 168 feet and the northbound left-turn for the SR-522 eastbound ramp would be 281 feet for a combined queue length of 449 feet. There is approximately 445 feet of distance between the southbound and northbound left-turn stop bars; therefore, the 95th percentile queues with the southbound left-turn lane protected will be pushing the ability to fit within the available distance. It is recommended that monitoring of the queue lengths be conducted after Phase 1 is constructed to determine if side-by-side left-turn queue lanes need to be constructed.

11. EVENT ANALYSIS

GTC conducted an additional "worst case" Event (soccer tournament) analysis based on the following trip generation during the PM peak-hour and the Saturday peak-hour of generator. The trip generation numbers are different from the primary analysis. This analysis assumes the soccer fields may be utilized at a higher rate based on additional counts of some Seattle area fields used by organized clubs that show the trip generation peaks as high as 35 trips per field. This rate of use is not expected for these fields but has still been analyzed to account for any special event type of activity. The Event trip generation is summarized below in Table 11.

Table 11: Event Trip Generation Summary

Land Use	Size	Event PM Peak-Hour Trips			Event Saturday Trips		
		Inbound	Outbound	Total	Inbound	Outbound	Total
Outdoor Fields	7 Fields	169	76	245	118	127	245
County Park	5.58 Acres	0	0	0	7	5	12
Recreational Community Center	42,275 SF	57	59	116	24	21	45
Indoor Mountain Biking Facility	60,000 SF	23	12	35	23	23	46
Golf Course (Removed)	-9 Holes	-13	-13	-26	-20	-21	-41
TOTAL		236	134	370	152	155	307

The intersection analysis shows that the study intersections would continue to operate at an acceptable level of service with the Wellington Hills County Park development using the higher trip generation identified above for Event (soccer tournament) worst case analysis. Also, the WSDOT and Woodinville study intersections will operate at acceptable level of service E or better. The detailed analysis of this higher trip generation is included in the attachments even though it's not a typical requirement for County concurrency reports.

The arterial analysis for the Event (soccer tournament) PM peak-hour shows that the level of service with the roundabout at the park entrance, the three speed humps/table and, the intersection improvements to Snohomish-Woodinville Road/240th Street SE will remain at acceptable level of service E or better for the urban section of 240th Street SE (AU #463) and level of service C for the rural section of 240th Street SE (AU #464).

12. TRAFFIC MITIGATION FEES

The Washington Growth Management Act and Revised Code of Washington 82.02.050(2) authorize local jurisdictions to establish proportionate share traffic mitigation fees in order to fund capital facilities, such as roads and intersections. SCC 30.66B applies that authority to developments in order to fund road improvements that would accommodate development.

The development is located in Snohomish County, which assesses Transportation Demand Management and general traffic mitigation fees for new trips generated within the Urban Growth Area (UGA) of unincorporated Snohomish County. Transportation Demand Management can be satisfied through on-site improvement or payment of the Transportation Demand Management mitigation fee. The Snohomish County traffic mitigation fees are assessed regardless of a development's impact.

Snohomish County also has interlocal agreements with the City of Bothell and WSDOT for reciprocal traffic mitigation fees. These traffic mitigation fees are based on the area wide traffic mitigation fee or actual impacts to improvement projects.

12.1 Transportation Demand Management

Developments in Snohomish County and the UGA are required to pay Transportation Demand Management (TDM) mitigation fees or provide on-site measures. Developments are required to pay for 5% of the PM peak-hour trips, but adequate on-site measures can satisfy the 5% TDM mitigation fee. In addition, the development will impact arterial unit #211 – Snohomish-Woodinville Road (King County Line to SR-522 Eastbound Ramps), which is at ultimate capacity. The current mitigation requirement for developments impacting an arterial unit at ultimate capacity is paying TDM fees for 10% of the PM peak-hour trips.

The Wellington Hills County Park commercial development is located in the rural area; however, it will impact an arterial unit at ultimate capacity and is required to provide sufficient transportation demand management (TDM) measures under SCC 30.66B.610-650 to indicate the potential for removing a minimum of ten percent for the development's peak-hour trips from the road system. The site will be providing an on-site TDM plan as well as constructing specific off-site TDM measures which have value equal or greater than the development's TDM obligation as calculated under SCC 30.66B.615. The TDM mitigation fee is $6,500 for 5% of the PM peak-hour trips based on its vested application/approval date. The development generates 248.75 PM peak-hour trips, and would have a TDM obligation of $80,843.75 based on the 5% not satisfied through the on-site TDM site plan; this obligation would be met through the off-site sidewalk along the south side of 240th Street SE from the eastern park boundary to 75th Avenue SE and connection to the sidewalks on Sno-Wood road. The sidewalk/walkway would consist of porous concrete with a minimum width of 5 feet. A summary of the mitigation fees is included in Table 12.

The Wellington Hills County Park will meet the TDM requirements to receive a 10% reduction to mitigation fees to Snohomish County, City of Bothell, and WSDOT.

12.2 Snohomish County

The Wellington Hills County Park development is identified for impact assessment outside the UGA of TSA E, which has commercial traffic mitigation fee of $216 per daily trip. The development will generate 1,770.11 new daily trips and will be required to pay Snohomish County traffic mitigation fees. With the 10% TDM reduction the Snohomish County traffic mitigation fees will be $344,109.38. A summary of the mitigation fees is included in Table 12.

12.3 City of Bothell

The development is located within the CO-5 mitigation subarea, which means the development will impact the City of Bothell streets with 10% of its trips. The City of Bothell's mitigation fees are $5,738 per PM peak-hour trip if the land use is not identified in their mitigation table. The mitigation due to the City of Bothell for 10% of the 248.75 PM peak-hour trips, with a 10% reduction for meeting TDM requirements, is $128,459.48. A summary of the mitigation fees is included in Table 12.

12.4 Washington State Department of Transportation

The development will be required to pay WSDOT mitigation fees based on impacts to WSDOT collection projects or the area wide traffic mitigation fee. The development will impact several collection projects on the WSDOT Exhibit C List and ha elected to pay the area wide mitigation fee of $36/ADT. The development will generate 1,770.11 new daily trips and with the 10% TDM reduction the WSDOT traffic mitigation fees will be $57,351.56. A summary of the mitigation fees is included in Table 12.

12.5 Summary of Traffic Mitigation Fees

The Wellington Hills County Park development will generate 1,770.11 new daily trips and 248.75 new PM peak-hour trips. The site will also satisfy the TDM requirements to receive a 10% reduction in mitigation fees to Snohomish County, City of Bothell, and WSDOT. The development's mitigation fees are summarized in Table 12.

Table 12: Traffic Mitigation Fee Summary

Jurisdiction	Fee per Trip Type	Trip Type	Trips	Total with 10% TDM Reduction
Snohomish County	$216.00	ADT	1,770.11	$344,109.38
City of Bothell CO-5	$5,738.00	10% of PM Peak-Hour	248.75	$128,459.48
WSDOT Area Wide Fee	$36.00	ADT	1,770.11	$57,351.56
TOTAL				**$529,920.42**

The traffic mitigation fees are typically required either at building permit or occupancy. As this is likely to be constructed in different phases the mitigation fee (combined city, county and WSDOT) per individual use is calculated below. Assuming the credit for the golf course is applied as a ratio of trip generation the breakdown in total mitigation fees per field, acres, and the square footages of the buildings would be:

- 7 Outdoor Fields – $18,070.45 per Field
- 5.58 Acres County Park – $577.50 per Acre
- 42,275 SF Recreational Community Center – $8.57 per SF
- 60,000 SF Indoor Mountain Biking Facility – $0.63 per SF

13. CONCLUSIONS

The Wellington Hills County Park is proposed to consist of: 7 outdoor fields, 42,275 SF of recreational community center, 60,000 SF of indoor mountain biking facility, and replacement of the existing 9-hole golf course. The park is located along both sides of 240th Street SE, west of 75th Avenue SE. The park is proposed to have two accesses to 240th Street SE; the primary full access will have a roundabout and there would be a secondary gated access that could be opened during high traffic flow periods (soccer tournaments). The park if fully developed is anticipated to generate 1,770.11 new daily trips and 248.75 new PM peak-hour trips. The total traffic mitigation fees for the development will be $529,920.42.

The analysis for the additional Wellington Hills County Park trips shows that the impacted arterial units impacted with 50 directional peak-hour trips will operate acceptably with the park and the addition of the roundabout. The intersections and arterial units analyzed per Snohomish County UDC.30.66.B, the interlocal agreements as well as at the request of Woodinville using the highest case Event (soccer tournament) traffic volumes for weekday and Saturday report LOS E or better in the urban areas and LOS C or better in the rural areas meeting the WSDOT, City and County standards. Volume analysis has been performed for Snohomish-Woodinville Road, south of SR-522, since it is an arterial unit at ultimate capacity. The volume analysis shows that the daily volumes along the arterial are still within acceptable levels for arterial units at ultimate capacity.

Trip Generation Calculations

Wellington Hills County Park
GTC #12-040

Trip Generation for: Weekday
(a.k.a.): Average Weekday Daily Trips (AWDT)

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Outdoor Fields	7 fields	488	71.33	50%	50%	499.31	0%	0	499	0%	0	0%	0	499	0	0	0	0	250	250
County Park	5.58 Acres	412	2.28	50%	50%	12.72	0%	0	13	0%	0	0%	0	13	0	0	0	0	6	6
Recreational Comm Center	42.275 ksqft	495	33.82	50%	50%	1429.74	0%	0	1430	0%	0	0%	0	1430	0	0	0	0	715	715
Mountain Bike Facility	60.000 ksqft	GTC	2.50	50%	50%	150.00	0%	0	150	0%	0	0%	0	150	0	0	0	0	75	75
Golf Course	-9 holes	430	35.74	50%	50%	-321.66	0%	0	-322	0%	0	0%	0	-322	0	0	0	0	-161	-161
Totals						1770.11		0	1770		0		0	1770	0	0	0	0	885	885
Phase 1: Fields/Park w/ Credit for Golf						190.37		0	190		0		0	190	0	0	0	0	95	95
Phase 2: + Recreational Comm Center						1620.11		0	1620		0		0	1620	0	0	0	0	810	810
Phase 3: + Mountain Bike Facility						1770.11		0	1770		0		0	1770	0	0	0	0	885	885

Wellington Hills County Park
GTC #12-040

Trip Generation for: Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 7 and 9 AM
(a.k.a.): Weekday AM Peak Hour

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Outdoor Fields	7 fields	488	1.12	57%	43%	8	0%	0	8	0%	0	0%	0	8	0	0	0	0	5	3
County Park	5.58 Acres	412	0.02	61%	39%	0	0%	0	0	0%	0	0%	0	0	0	0	0	0	0	0
Recreational Comm Center	42.275 ksqft	495	2.05	66%	34%	87	0%	0	87	0%	0	0%	0	87	0	0	0	0	57	30
Mountain Bike Facility	60.000 ksqft	GTC	0.00	25%	75%	0	0%	0	0	0%	0	0%	0	0	0	0	0	0	0	0
Golf Course	-9 holes	430	2.06	79%	21%	-19	0%	0	-19	0%	0	0%	0	-19	0	0	0	0	-15	-4
Totals						76		0	76		0		0	76	0	0	0	0	47	29
Phase 1: Fields/Park w/ Credit for Golf						-11.00		0	-11		0		0	-11	0	0	0	0	-10	-1
Phase 2: + Recreational Comm Center						76.00		0	76		0		0	76	0	0	0	0	47	29
Phase 3: + Mountain Bike Facility						76.00		0	76		0		0	76	0	0	0	0	47	29

Wellington Hills County Park
GTC #12-040

Trip Generation for: Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 4 and 6 PM
(a.k.a.): Weekday PM Peak Hour

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Outdoor Fields	7 fields	488	17.70	67%	33%	124	0%	0	124	0%	0	0%	0	124	0	0	0	0	83	41
County Park	5.58 Acres	412	0.09	61%	39%	1	0%	0	1	0%	0	0%	0	1	0	0	0	0	0	1
Recreational Comm Center	42.275 ksqft	495	2.74	49%	51%	116	0%	0	116	0%	0	0%	0	116	0	0	0	0	57	59
Mountain Bike Facility	60.000 ksqft	GTC	0.58	67%	33%	35	0%	0	35	0%	0	0%	0	35	0	0	0	0	23	12
Golf Course	-9 holes	430	2.92	51%	49%	-26	0%	0	-26	0%	0	0%	0	-26	0	0	0	0	-13	-13
Totals						248.75		0	249		0		0	249	0	0	0	0	150	99
Phase 1: Fields/Park w/ Credit for Golf						98.12		0	98		0		0	98	0	0	0	0	70	28
Phase 2: + Recreational Comm Center						213.95		0	214		0		0	214	0	0	0	0	127	87
Phase 3: + Mountain Bike Facility						248.75		0	249		0		0	249	0	0	0	0	150	99

Wellington Hills County Park
GTC #12-040

Trip Generation for: Saturday Peak Hour of Generator

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Outdoor Fields	7 fields	488	30.34	48%	52%	212	0%	0	212	0%	0	0%	0	212	0	0	0	0	102	110
County Park	5.58 Acres	412	2.21	57%	43%	12	0%	0	12	0%	0	0%	0	12	0	0	0	0	7	5
Recreational Comm Center	42.275 ksqft	495	1.07	54%	46%	45	0%	0	45	0%	0	0%	0	45	0	0	0	0	24	21
Mountain Bike Facility	60.000 ksqft	GTC	0.77	50%	50%	46	0%	0	46	0%	0	0%	0	46	0	0	0	0	23	23
Golf Course	-9 holes	430	4.59	49%	51%	-41	0%	0	-41	0%	0	0%	0	-41	0	0	0	0	-20	-21
Totals						274.83		0	275		0		0	275	0	0	0	0	136	139
Phase 1: Fields/Park w/ Credit for Golf						183.40		0	183		0		0	183	0	0	0	0	89	94
Phase 2: + Recreational Comm Center						228.63		0	229		0		0	229	0	0	0	0	113	116
Phase 3: + Mountain Bike Facility						274.83		0	275		0		0	275	0	0	0	0	136	139

Wellington Hills County Park
GTC #12-040

AM Version

%	New ADT	New AM Peak Hour Trips In	Out	Total	%	New ADT	New AM Peak Hour Trips In	Out	Total
100%	1770	47	29	76	100%	1770	47	29	76
1%	17.70	0.47	0.29	0.76	51%	902.76	23.97	14.79	38.76
2%	35.40	0.94	0.58	1.52	52%	920.46	24.44	15.08	39.52
3%	53.10	1.41	0.87	2.28	53%	938.16	24.91	15.37	40.28
4%	70.80	1.88	1.16	3.04	54%	955.86	25.38	15.66	41.04
5%	**88.51**	**2.35**	**1.45**	**3.80**	**55%**	**973.56**	**25.85**	**15.95**	**41.80**
6%	106.21	2.82	1.74	4.56	56%	991.26	26.32	16.24	42.56
7%	123.91	3.29	2.03	5.32	57%	1008.96	26.79	16.53	43.32
8%	141.61	3.76	2.32	6.08	58%	1026.66	27.26	16.82	44.08
9%	159.31	4.23	2.61	6.84	59%	1044.36	27.73	17.11	44.84
10%	**177.01**	**4.70**	**2.90**	**7.60**	**60%**	**1062.07**	**28.20**	**17.40**	**45.60**
11%	194.71	5.17	3.19	8.36	61%	1079.77	28.67	17.69	46.36
12%	212.41	5.64	3.48	9.12	62%	1097.47	29.14	17.98	47.12
13%	230.11	6.11	3.77	9.88	63%	1115.17	29.61	18.27	47.88
14%	247.82	6.58	4.06	10.64	64%	1132.87	30.08	18.56	48.64
15%	**265.52**	**7.05**	**4.35**	**11.40**	**65%**	**1150.57**	**30.55**	**18.85**	**49.40**
16%	283.22	7.52	4.64	12.16	66%	1168.27	31.02	19.14	50.16
17%	300.92	7.99	4.93	12.92	67%	1185.97	31.49	19.43	50.92
18%	318.62	8.46	5.22	13.68	68%	1203.67	31.96	19.72	51.68
19%	336.32	8.93	5.51	14.44	69%	1221.38	32.43	20.01	52.44
20%	**354.02**	**9.40**	**5.80**	**15.20**	**70%**	**1239.08**	**32.90**	**20.30**	**53.20**
21%	371.72	9.87	6.09	15.96	71%	1256.78	33.37	20.59	53.96
22%	389.42	10.34	6.38	16.72	72%	1274.48	33.84	20.88	54.72
23%	407.13	10.81	6.67	17.48	73%	1292.18	34.31	21.17	55.48
24%	424.83	11.28	6.96	18.24	74%	1309.88	34.78	21.46	56.24
25%	**442.53**	**11.75**	**7.25**	**19.00**	**75%**	**1327.58**	**35.25**	**21.75**	**57.00**
26%	460.23	12.22	7.54	19.76	76%	1345.28	35.72	22.04	57.76
27%	477.93	12.69	7.83	20.52	77%	1362.98	36.19	22.33	58.52
28%	495.63	13.16	8.12	21.28	78%	1380.69	36.66	22.62	59.28
29%	513.33	13.63	8.41	22.04	79%	1398.39	37.13	22.91	60.04
30%	**531.03**	**14.10**	**8.70**	**22.80**	**80%**	**1416.09**	**37.60**	**23.20**	**60.80**
31%	548.73	14.57	8.99	23.56	81%	1433.79	38.07	23.49	61.56
32%	566.44	15.04	9.28	24.32	82%	1451.49	38.54	23.78	62.32
33%	584.14	15.51	9.57	25.08	83%	1469.19	39.01	24.07	63.08
34%	601.84	15.98	9.86	25.84	84%	1486.89	39.48	24.36	63.84
35%	**619.54**	**16.45**	**10.15**	**26.60**	**85%**	**1504.59**	**39.95**	**24.65**	**64.60**
36%	637.24	16.92	10.44	27.36	86%	1522.29	40.42	24.94	65.36
37%	654.94	17.39	10.73	28.12	87%	1540.00	40.89	25.23	66.12
38%	672.64	17.86	11.02	28.88	88%	1557.70	41.36	25.52	66.88
39%	690.34	18.33	11.31	29.64	89%	1575.40	41.83	25.81	67.64
40%	**708.04**	**18.80**	**11.60**	**30.40**	**90%**	**1593.10**	**42.30**	**26.10**	**68.40**
41%	725.75	19.27	11.89	31.16	91%	1610.80	42.77	26.39	69.16
42%	743.45	19.74	12.18	31.92	92%	1628.50	43.24	26.68	69.92
43%	761.15	20.21	12.47	32.68	93%	1646.20	43.71	26.97	70.68
44%	778.85	20.68	12.76	33.44	94%	1663.90	44.18	27.26	71.44
45%	**796.55**	**21.15**	**13.05**	**34.20**	**95%**	**1681.60**	**44.65**	**27.55**	**72.20**
46%	814.25	21.62	13.34	34.96	96%	1699.31	45.12	27.84	72.96
47%	831.95	22.09	13.63	35.72	97%	1717.01	45.59	28.13	73.72
48%	849.65	22.56	13.92	36.48	98%	1734.71	46.06	28.42	74.48
49%	867.35	23.03	14.21	37.24	99%	1752.41	46.53	28.71	75.24
50%	**885.06**	**23.50**	**14.50**	**38.00**	**100%**	**1770.11**	**47.00**	**29.00**	**76.00**

Wellington Hills County Park
GTC #12-040

PM Version

%	New ADT	New PM Peak Hour Trips In	Out	Total	%	New ADT	New PM Peak Hour Trips In	Out	Total
100%	1770	150	99	249	100%	1770	150	99	249
1%	17.70	1.50	0.99	2.49	51%	902.76	76.50	50.36	126.86
2%	35.40	3.00	1.98	4.98	52%	920.46	78.00	51.35	129.35
3%	53.10	4.50	2.96	7.46	53%	938.16	79.50	52.34	131.84
4%	70.80	6.00	3.95	9.95	54%	955.86	81.00	53.33	134.33
5%	**88.51**	**7.50**	**4.94**	**12.44**	**55%**	**973.56**	**82.50**	**54.31**	**136.81**
6%	106.21	9.00	5.93	14.93	56%	991.26	84.00	55.30	139.30
7%	123.91	10.50	6.91	17.41	57%	1008.96	85.50	56.29	141.79
8%	141.61	12.00	7.90	19.90	58%	1026.66	87.00	57.28	144.28
9%	159.31	13.50	8.89	22.39	59%	1044.36	88.50	58.26	146.76
10%	**177.01**	**15.00**	**9.88**	**24.88**	**60%**	**1062.07**	**90.00**	**59.25**	**149.25**
11%	194.71	16.50	10.86	27.36	61%	1079.77	91.50	60.24	151.74
12%	212.41	18.00	11.85	29.85	62%	1097.47	93.00	61.23	154.23
13%	230.11	19.50	12.84	32.34	63%	1115.17	94.50	62.21	156.71
14%	247.82	21.00	13.83	34.83	64%	1132.87	96.00	63.20	159.20
15%	**265.52**	**22.50**	**14.81**	**37.31**	**65%**	**1150.57**	**97.50**	**64.19**	**161.69**
16%	283.22	24.00	15.80	39.80	66%	1168.27	99.00	65.18	164.18
17%	300.92	25.50	16.79	42.29	67%	1185.97	100.50	66.16	166.66
18%	318.62	27.00	17.78	44.78	68%	1203.67	102.00	67.15	169.15
19%	336.32	28.50	18.76	47.26	69%	1221.38	103.50	68.14	171.64
20%	**354.02**	**30.00**	**19.75**	**49.75**	**70%**	**1239.08**	**105.00**	**69.13**	**174.13**
21%	371.72	31.50	20.74	52.24	71%	1256.78	106.50	70.11	176.61
22%	389.42	33.00	21.73	54.73	72%	1274.48	108.00	71.10	179.10
23%	407.13	34.50	22.71	57.21	73%	1292.18	109.50	72.09	181.59
24%	424.83	36.00	23.70	59.70	74%	1309.88	111.00	73.08	184.08
25%	**442.53**	**37.50**	**24.69**	**62.19**	**75%**	**1327.58**	**112.50**	**74.06**	**186.56**
26%	460.23	39.00	25.68	64.68	76%	1345.28	114.00	75.05	189.05
27%	477.93	40.50	26.66	67.16	77%	1362.98	115.50	76.04	191.54
28%	495.63	42.00	27.65	69.65	78%	1380.69	117.00	77.03	194.03
29%	513.33	43.50	28.64	72.14	79%	1398.39	118.50	78.01	196.51
30%	**531.03**	**45.00**	**29.63**	**74.63**	**80%**	**1416.09**	**120.00**	**79.00**	**199.00**
31%	548.73	46.50	30.61	77.11	81%	1433.79	121.50	79.99	201.49
32%	566.44	48.00	31.60	79.60	82%	1451.49	123.00	80.98	203.98
33%	584.14	49.50	32.59	82.09	83%	1469.19	124.50	81.96	206.46
34%	601.84	51.00	33.58	84.58	84%	1486.89	126.00	82.95	208.95
35%	**619.54**	**52.50**	**34.56**	**87.06**	**85%**	**1504.59**	**127.50**	**83.94**	**211.44**
36%	637.24	54.00	35.55	89.55	86%	1522.29	129.00	84.93	213.93
37%	654.94	55.50	36.54	92.04	87%	1540.00	130.50	85.91	216.41
38%	672.64	57.00	37.53	94.53	88%	1557.70	132.00	86.90	218.90
39%	690.34	58.50	38.51	97.01	89%	1575.40	133.50	87.89	221.39
40%	**708.04**	**60.00**	**39.50**	**99.50**	**90%**	**1593.10**	**135.00**	**88.88**	**223.88**
41%	725.75	61.50	40.49	101.99	91%	1610.80	136.50	89.86	226.36
42%	743.45	63.00	41.48	104.48	92%	1628.50	138.00	90.85	228.85
43%	761.15	64.50	42.46	106.96	93%	1646.20	139.50	91.84	231.34
44%	778.85	66.00	43.45	109.45	94%	1663.90	141.00	92.83	233.83
45%	**796.55**	**67.50**	**44.44**	**111.94**	**95%**	**1681.60**	**142.50**	**93.81**	**236.31**
46%	814.25	69.00	45.43	114.43	96%	1699.31	144.00	94.80	238.80
47%	831.95	70.50	46.41	116.91	97%	1717.01	145.50	95.79	241.29
48%	849.65	72.00	47.40	119.40	98%	1734.71	147.00	96.78	243.78
49%	867.35	73.50	48.39	121.89	99%	1752.41	148.50	97.76	246.26
50%	**885.06**	**75.00**	**49.38**	**124.38**	**100%**	**1770.11**	**150.00**	**98.75**	**248.75**

Wellington Hills County Park
GTC #12-040

Saturday PHG

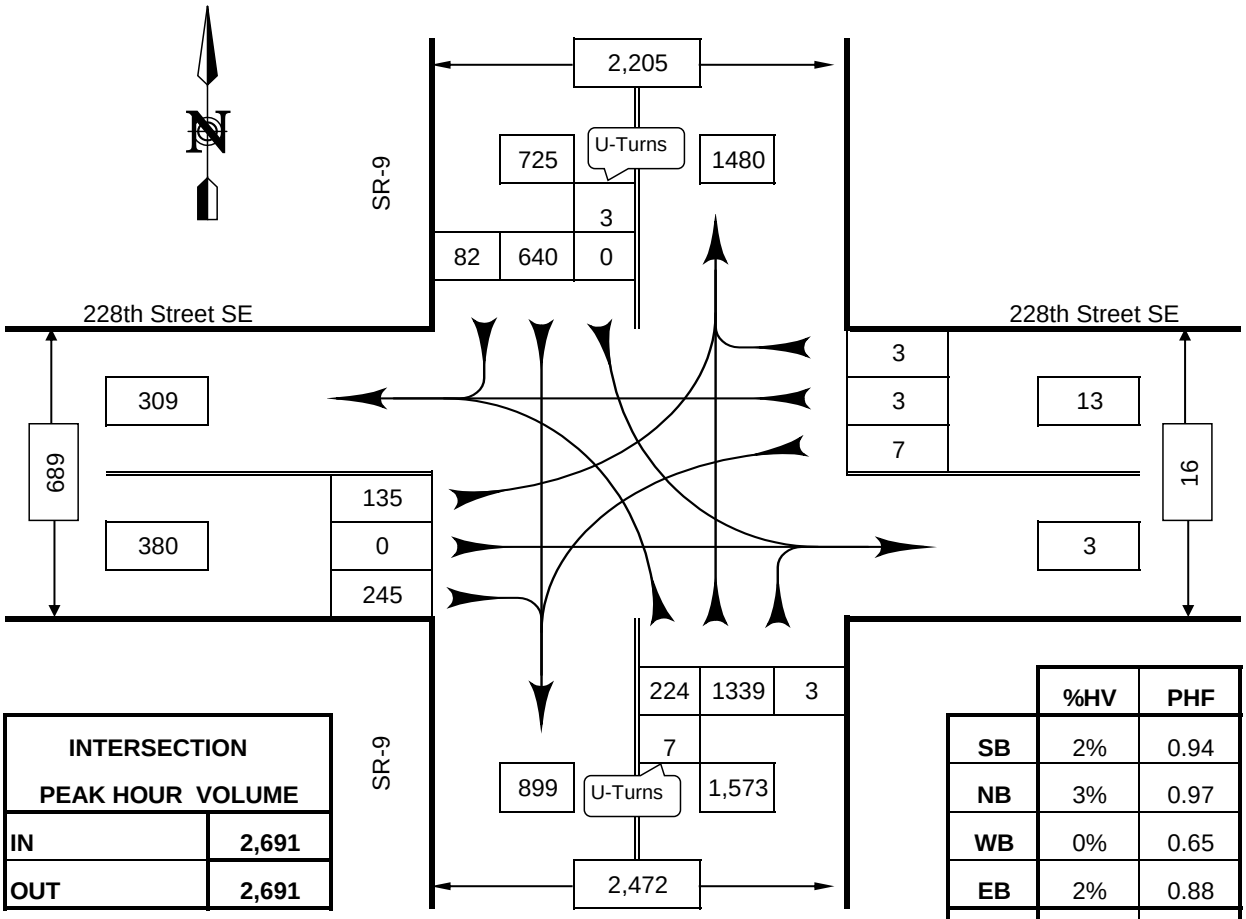
%	New ADT	New Saturday PHG In	New Saturday PHG Out	New Saturday PHG Total	%	New ADT	New Saturday PHG In	New Saturday PHG Out	New Saturday PHG Total
100%	0	136	139	275	100%	0	136	139	275
1%	0.00	1.36	1.39	2.75	51%	0.00	69.36	70.80	140.16
2%	0.00	2.72	2.78	5.50	52%	0.00	70.72	72.19	142.91
3%	0.00	4.08	4.16	8.24	53%	0.00	72.08	73.58	145.66
4%	0.00	5.44	5.55	10.99	54%	0.00	73.44	74.97	148.41
5%	**0.00**	**6.80**	**6.94**	**13.74**	**55%**	**0.00**	**74.80**	**76.36**	**151.16**
6%	0.00	8.16	8.33	16.49	56%	0.00	76.16	77.74	153.90
7%	0.00	9.52	9.72	19.24	57%	0.00	77.52	79.13	156.65
8%	0.00	10.88	11.11	21.99	58%	0.00	78.88	80.52	159.40
9%	0.00	12.24	12.49	24.73	59%	0.00	80.24	81.91	162.15
10%	**0.00**	**13.60**	**13.88**	**27.48**	**60%**	**0.00**	**81.60**	**83.30**	**164.90**
11%	0.00	14.96	15.27	30.23	61%	0.00	82.96	84.69	167.65
12%	0.00	16.32	16.66	32.98	62%	0.00	84.32	86.07	170.39
13%	0.00	17.68	18.05	35.73	63%	0.00	85.68	87.46	173.14
14%	0.00	19.04	19.44	38.48	64%	0.00	87.04	88.85	175.89
15%	**0.00**	**20.40**	**20.82**	**41.22**	**65%**	**0.00**	**88.40**	**90.24**	**178.64**
16%	0.00	21.76	22.21	43.97	66%	0.00	89.76	91.63	181.39
17%	0.00	23.12	23.60	46.72	67%	0.00	91.12	93.02	184.14
18%	0.00	24.48	24.99	49.47	68%	0.00	92.48	94.40	186.88
19%	0.00	25.84	26.38	52.22	69%	0.00	93.84	95.79	189.63
20%	**0.00**	**27.20**	**27.77**	**54.97**	**70%**	**0.00**	**95.20**	**97.18**	**192.38**
21%	0.00	28.56	29.15	57.71	71%	0.00	96.56	98.57	195.13
22%	0.00	29.92	30.54	60.46	72%	0.00	97.92	99.96	197.88
23%	0.00	31.28	31.93	63.21	73%	0.00	99.28	101.35	200.63
24%	0.00	32.64	33.32	65.96	74%	0.00	100.64	102.73	203.37
25%	**0.00**	**34.00**	**34.71**	**68.71**	**75%**	**0.00**	**102.00**	**104.12**	**206.12**
26%	0.00	35.36	36.10	71.46	76%	0.00	103.36	105.51	208.87
27%	0.00	36.72	37.48	74.20	77%	0.00	104.72	106.90	211.62
28%	0.00	38.08	38.87	76.95	78%	0.00	106.08	108.29	214.37
29%	0.00	39.44	40.26	79.70	79%	0.00	107.44	109.68	217.12
30%	**0.00**	**40.80**	**41.65**	**82.45**	**80%**	**0.00**	**108.80**	**111.06**	**219.86**
31%	0.00	42.16	43.04	85.20	81%	0.00	110.16	112.45	222.61
32%	0.00	43.52	44.43	87.95	82%	0.00	111.52	113.84	225.36
33%	0.00	44.88	45.81	90.69	83%	0.00	112.88	115.23	228.11
34%	0.00	46.24	47.20	93.44	84%	0.00	114.24	116.62	230.86
35%	**0.00**	**47.60**	**48.59**	**96.19**	**85%**	**0.00**	**115.60**	**118.01**	**233.61**
36%	0.00	48.96	49.98	98.94	86%	0.00	116.96	119.39	236.35
37%	0.00	50.32	51.37	101.69	87%	0.00	118.32	120.78	239.10
38%	0.00	51.68	52.76	104.44	88%	0.00	119.68	122.17	241.85
39%	0.00	53.04	54.14	107.18	89%	0.00	121.04	123.56	244.60
40%	**0.00**	**54.40**	**55.53**	**109.93**	**90%**	**0.00**	**122.40**	**124.95**	**247.35**
41%	0.00	55.76	56.92	112.68	91%	0.00	123.76	126.34	250.10
42%	0.00	57.12	58.31	115.43	92%	0.00	125.12	127.72	252.84
43%	0.00	58.48	59.70	118.18	93%	0.00	126.48	129.11	255.59
44%	0.00	59.84	61.09	120.93	94%	0.00	127.84	130.50	258.34
45%	**0.00**	**61.20**	**62.47**	**123.67**	**95%**	**0.00**	**129.20**	**131.89**	**261.09**
46%	0.00	62.56	63.86	126.42	96%	0.00	130.56	133.28	263.84
47%	0.00	63.92	65.25	129.17	97%	0.00	131.92	134.67	266.59
48%	0.00	65.28	66.64	131.92	98%	0.00	133.28	136.05	269.33
49%	0.00	66.64	68.03	134.67	99%	0.00	134.64	137.44	272.08
50%	**0.00**	**68.00**	**69.42**	**137.42**	**100%**	**0.00**	**136.00**	**138.83**	**274.83**

PM Peak-Hour Counts

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

PM PEAK HOUR FROM: 4:45 PM TO 5:45 PM



INTERSECTION PEAK HOUR VOLUME	
IN	2,691
OUT	2,691

	%HV	PHF
SB	2%	0.94
NB	3%	0.97
WB	0%	0.65
EB	2%	0.88
INTRS.	3%	0.96

HV = Heavy Vehicle
PHF = Peak Hour Factor

SR-9 @ 228th Street SE

Snohomish County, WA

COUNTED BY: CN

REDUCED BY: CN

DATE: 4/15/2011

DATE OF COUNT: Thu. 3/17/11

TIME OF COUNT: 4:00 - 6:00 PM

WEATHER: Overcast

TRAFFIC DATA GATHERING

LOCATION:	**SR-9 @ 228th Street SE**	**DATE OF COUNT:**	**Thu. 3/17/11**	**COUNTED BY:**	**CN**
	Snohomish County, WA	**TIME OF COUNT:**	**4:00 - 6:00 PM**	**WEATHER:**	**Overcast**

TIME INTERVAL ENDING	FROM NORTH ON SR-9					FROM SOUTH ON SR-9					FROM EAST ON 228th Street SE				FROM WEST ON 228th Street SE				INTERVAL TOTALS
AT	HV	U	Left	Thru	Right	HV	U	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
04:15 PM	9	2	2	145	28	21	2	71	296	2	0	19	5	4	5	41	0	56	**673**
04:30 PM	13	1	0	153	20	18	3	56	346	0	0	10	0	4	0	50	0	20	**663**
04:45 PM	8	1	0	151	16	15	6	54	282	1	0	1	1	3	2	9	0	74	**599**
05:00 PM	2	0	0	152	14	13	2	55	339	0	0	3	1	1	0	36	0	56	**659**
05:15 PM	5	2	0	154	21	13	3	59	303	2	0	3	1	1	1	29	0	62	**640**
05:30 PM	3	1	0	166	25	10	2	50	355	0	0	1	1	1	1	34	0	55	**691**
05:45 PM	7	0	0	168	22	12	0	60	342	1	0	0	0	0	6	36	0	72	**701**
06:00 PM	11	1	0	153	15	9	1	40	321	0	0	0	0	0	2	19	0	61	**611**
PEAK HOUR TOTALS	**17**	**3**	**0**	**640**	**82**	**48**	**7**	**224**	**1339**	**3**	**0**	**7**	**3**	**3**	**8**	**135**	**0**	**245**	**INTERSECTION**
ALL MOVEMENTS	**725**					**1573**					**13**				**380**				**2691**
% HV	**2%**					**3%**					**0%**				**2%**				**3%**
PEAK HOUR FACTOR	**0.94**					**0.97**					**0.65**				**0.88**				**0.96**

U = U-Turn

HV = Heavy Vehicle

PHF = Peak Hour Factor

PM PEAK HOUR: **4:45** **TO** **5:45** **PM**

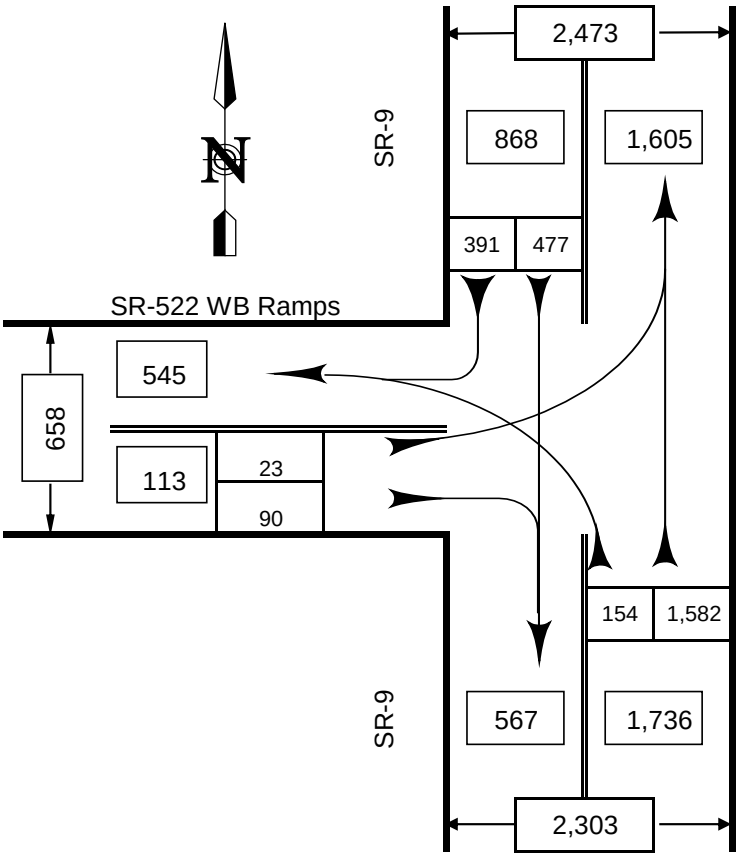
REDUCED BY: CN

DATE OF REDUCTION: 4/15/2011

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

4:00 - 6:00 PM PEAK HOUR: 4:30 PM TO 5:30 PM



	TRKS	PHF
SB	2%	0.91
NB	3%	0.94
WB	#N/A	#N/A
EB	4%	0.72
INTRS.	3%	0.92

HV = Heavy Vehicles

PHF = Peak Hour Factor

INTERSECTION PEAK HOUR VOLUME	
IN	2,717
OUT	2,717

SR-9 @ SR-522 WB Ramp

Snohomish County, WA

COUNTED BY:	JH	DATE OF COUNT:	Thu. 3/17/11
REDUCED BY:	CN	TIME OF COUNT:	4:00 - 6:00 PM
DATE OF REDUCTION:	Thu. 3/17/11	WEATHER:	Overcast

TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: SR-9 @ SR-522 WB Ramp
Snohomish County, WA

DATE OF COUNT: Thu. 3/17/11
TIME OF COUNT: 4:00 - 6:00 PM

COUNTED BY: JH
WEATHER: Overcast

TIME INTERVAL ENDING AT	FROM NORTH ON SR-9				FROM SOUTH ON SR-9				FROM EAST ON				FROM WEST ON SR-522 WB Ramps				INTERVAL TOTALS
	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	HV	Left	Thru	Right	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
04:15 PM	7	0	103	128	21	38	347	0	0	0	0	0	0	1	0	20	**637**
04:30 PM	5	0	102	92	23	41	383	0	0	0	0	0	1	7	0	18	**643**
04:45 PM	6	0	121	97	16	36	388	0	0	0	0	0	2	5	0	25	**672**
05:00 PM	3	0	141	97	16	35	429	0	0	0	0	0	1	4	0	35	**741**
05:15 PM	1	0	103	91	13	51	360	0	0	0	0	0	0	5	0	15	**625**
05:30 PM	5	0	112	106	12	32	405	0	0	0	0	0	2	9	0	15	**679**
05:45 PM	5	0	113	98	6	32	395	0	0	0	0	0	0	2	0	15	**655**
06:00 PM	13	0	140	102	12	44	421	0	0	0	0	0	0	3	0	18	**728**
PEAK HOUR TOTALS	**15**	**0**	**477**	**391**	**57**	**154**	**1582**	**0**	**0**	**0**	**0**	**0**	**5**	**23**	**0**	**90**	**INTERSECTION**
ALL MOVEMENTS	**868**				**1736**				**0**				**113**				**2717**
% HV	**2%**				**3%**				**#N/A**				**4%**				**3%**
PEAK HOUR FACTOR	**0.91**				**0.94**				**#N/A**				**0.72**				**0.92**

HV = Heavy Vehicles
PHF = Peak Hour Factor

4:00 - 6:00 PM PEAK HOUR: **4:30 PM TO 5:30 PM**

REDUCED BY: CN

DATE OF REDUCTION: 3/17/2011

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 52213923
LOCATION : SR 522 EB RAMPS
JCT : SR 9
MILEPOST : 14.09

PAGE: 1
FILE: 52214093

Movements by: Primary

DATE: 6/01/11

Time Begin	From South RT	From South THRU	From South LT	From West RT	From West THRU	From West LT	From North RT	From North THRU	From North LT	From East RT	From East THRU	From East LT	Vehicle Total
4:00 PM	0	216	74	88	0	167	12	136	0	0	0	0	693
4:15	0	243	63	82	0	151	15	138	0	0	0	0	692
4:30	0	229	62	84	0	173	17	127	0	0	0	0	692
4:45	0	271	67	71	0	190	11	162	0	0	0	0	772
HR TOTAL	0	959	266	325	0	681	55	563	0	0	0	0	2849
5:00 PM	0	227	65	77	0	182	17	139	0	0	0	0	707
5:15	0	270	48	70	0	183	13	140	0	0	0	0	724
5:30	0	200	43	75	0	176	10	132	0	0	0	0	636
5:45	0	221	61	67	0	195	12	145	0	0	0	0	701
HR TOTAL	0	918	217	289	0	736	52	556	0	0	0	0	2768
DAY TOTAL	0	1877	483	614	0	1417	107	1119	0	0	0	0	5617

PEAK PERIOD ANALYSIS FOR THE PERIOD: 4:00 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES Right	VOLUMES Thru	VOLUMES Left	VOLUMES Total	PERCENTS Right	PERCENTS Thru	PERCENTS Left
South	4:30 PM	0.92	0	997	242	1239	0	80	20
West	4:30 PM	0.99	302	0	728	1030	29	0	71
North	4:15 PM	0.90	60	566	0	626	10	90	0
East	4:15 PM	0.00	0	0	0	0	0	0	0

Entire Intersection

South	4:30 PM	0.92	0	997	242	1239	0	80	20
West		0.99	302	0	728	1030	29	0	71
North		0.90	58	568	0	626	9	91	0
East		0.00	0	0	0	0	0	0	0

SNOHOMISH COUNTY TRAFFIC OPERATIONS
3000 Rockefeller Ave
Everett, WA 98201

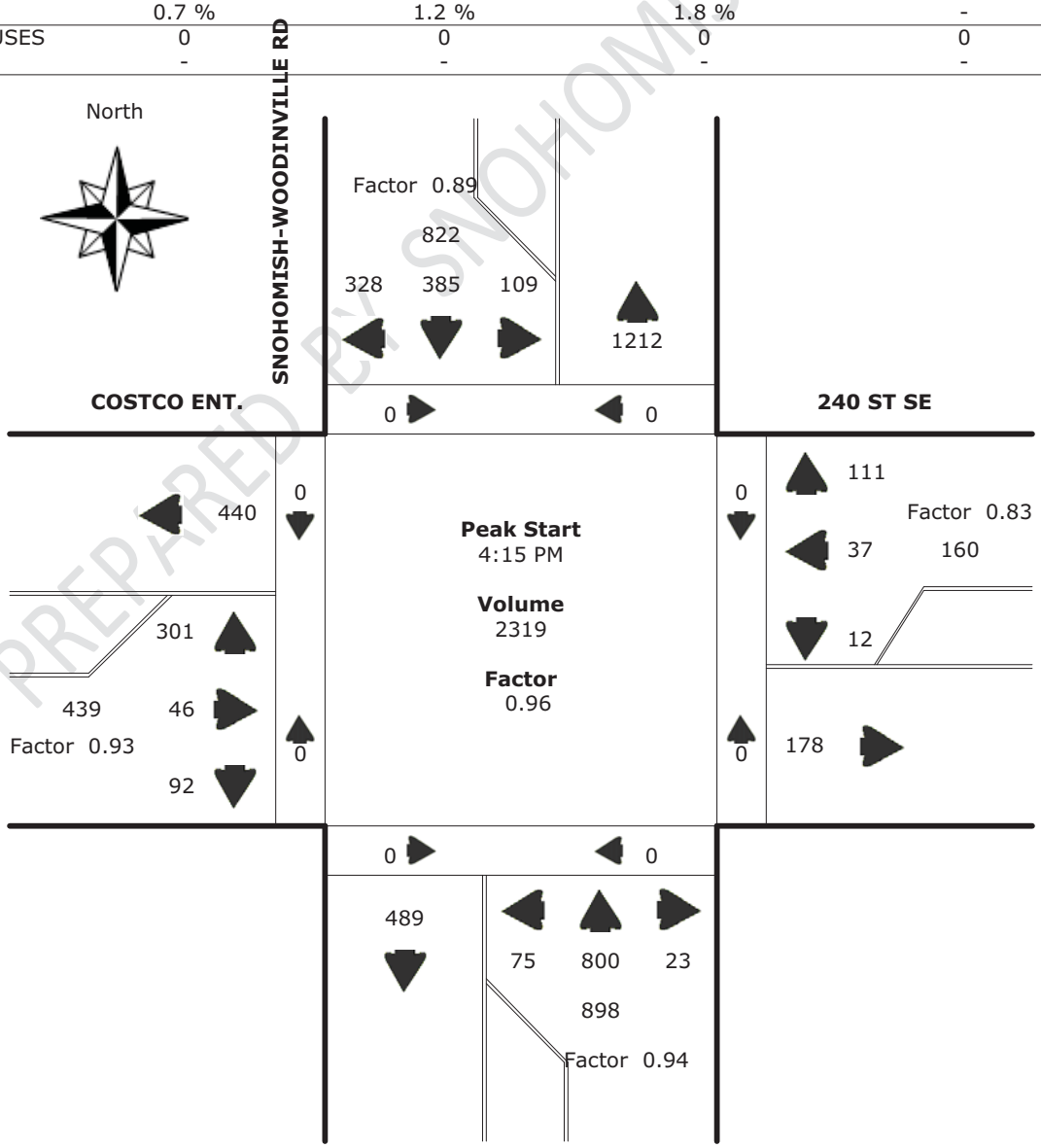
LOCATION: SNOHOMISH-WOODINVILLE RD
REQUESTOR: J BLOODGOOD

Site: 20050@0.45
Date: 3/22/2012
Thursday

Intersection Peak Hour

Location SNOHOMISH-WOODINVILLE RD at 240 ST SE / COSTCO ENTRANCE
Weather DRY
File Number 03221221pA876K293
Counted By RP
Prepared By BB

	North	East	South	West
Total	2034	338	1387	879
Est. ADT	20340	3380	13870	8790
AUTOS	789 96.0 %	154 96.2 %	857 95.4 %	437 99.5 %
LT TRKS	27 3.3 %	4 2.5 %	25 2.8 %	2 0.5 %
HVY TRKS	6 0.7 %	2 1.2 %	16 1.8 %	0 -
BUSES	0 -	0 -	0 -	0 -



PREPARED BY SNOHOMISH COUNTY

SNOHOMISH COUNTY TRAFFIC OPERATIONS
3000 Rockefeller Ave
Everett, WA 98201

LOCATION: 75 AVE SE @ 240 ST SE
REQUESTOR: J BLOODGOOD

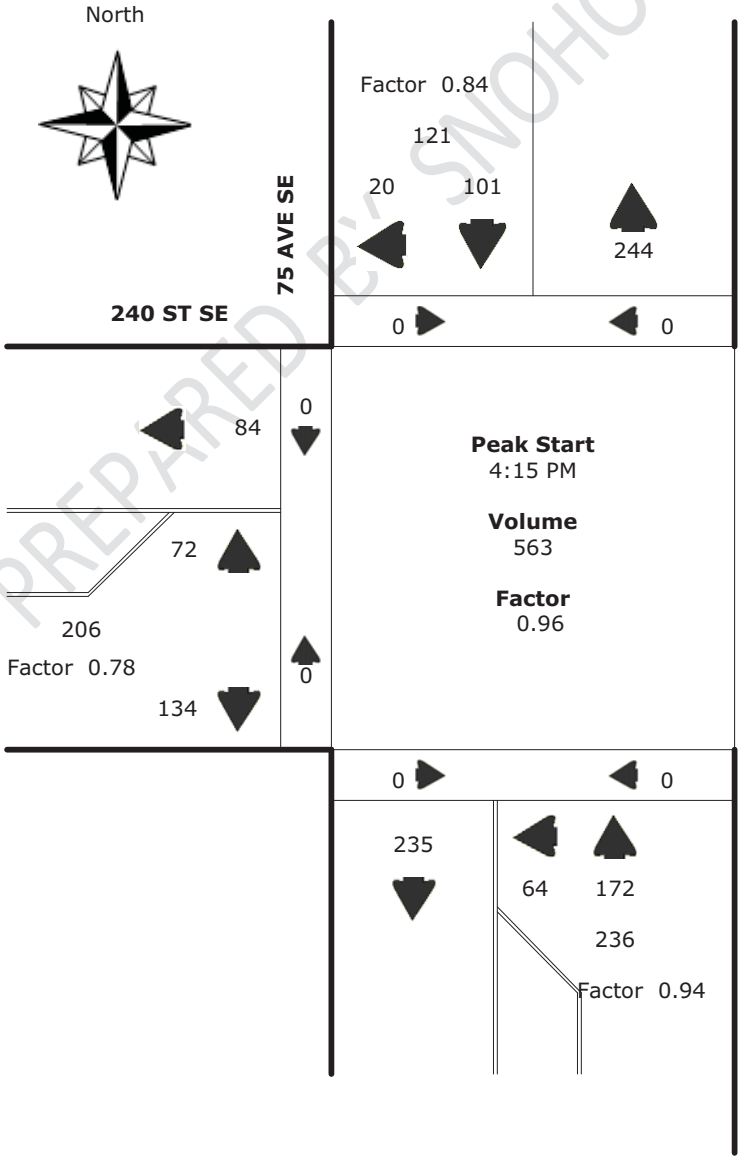
Site: 20100@3.574
Date: 3/27/2012
Tuesday

Intersection Peak Hour

Location 75 AVE SE at 240 ST SE
Weather DRY
File Number 03271219pA419K510

Counted By SR
Prepared By BB

	North	East	South	West
Total	365	-	471	290
Est. ADT	3650	-	4710	2900
AUTOS	121	-	228	197
	100.0 %	-	96.6 %	95.6 %
LT TRKS	0	-	8	7
	-	-	3.4 %	3.4 %
HVY TRKS	0	-	0	1
	-	-	-	0.5 %
BUSES	0	-	0	1
	-	-	-	0.5 %

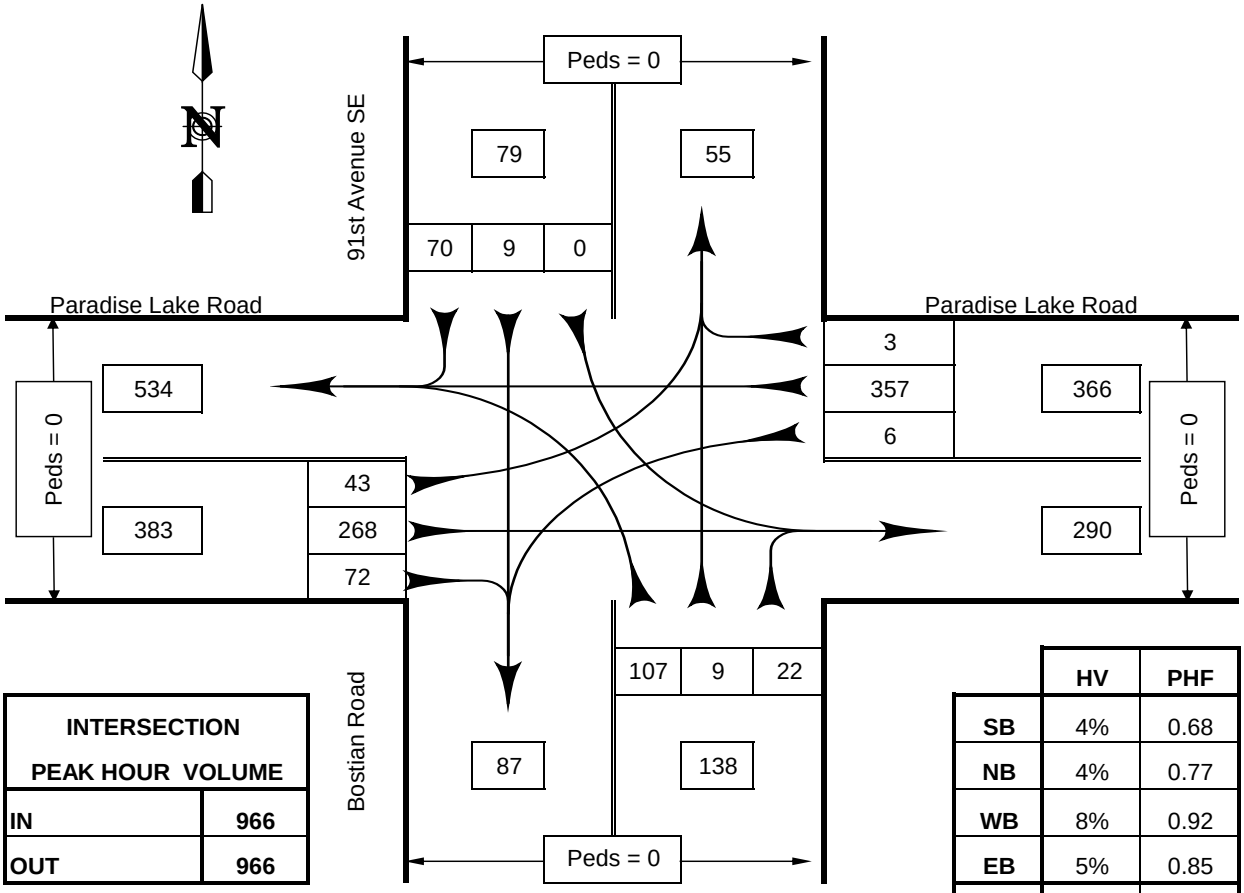


PREPARED BY SNOHOMISH COUNTY

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

4:00 - 6:00 PM PEAK HOUR: 4:15 PM TO 5:15 PM



INTERSECTION PEAK HOUR VOLUME	
IN	966
OUT	966

	HV	PHF
SB	4%	0.68
NB	4%	0.77
WB	8%	0.92
EB	5%	0.85
INTRS.	6%	0.97

HV = Heavy Vehicles
PHF = Peak Hour Factor

Bostian Road @ Paradise Lake Road

Snohomish County, WA

COUNTED BY: RH

REDUCED BY: CN

DATE: Wed. 6/13/12

DATE OF COUNT: Wed. 6/13/12

TIME OF COUNT: 4:00 - 6:00 PM

WEATHER: Overcast

TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: Bostian Road @ Paradise Lake Road
Snohomish County, WA

DATE OF COUNT: Wed. 6/13/12
TIME OF COUNT: 4:00 - 6:00 PM

COUNTED BY: RH
WEATHER: Overcast

TIME INTERVAL ENDING AT	FROM NORTH ON 91st Avenue SE					FROM SOUTH ON Bostian Road					FROM EAST ON Paradise Lake Road					FROM WEST ON Paradise Lake Road					INTERVAL TOTALS
	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	1	13	0	0	25	1	3	0	9	8	105	0	0	2	7	55	21	239
04:30 PM	0	1	0	2	27	0	1	27	2	5	0	12	1	96	0	0	2	13	59	16	248
04:45 PM	0	0	0	0	20	0	2	25	1	5	0	9	2	98	0	0	3	13	63	13	240
05:00 PM	0	2	0	2	17	0	0	24	1	3	0	6	3	88	0	0	9	9	67	18	232
05:15 PM	0	0	0	5	6	0	3	31	5	9	0	4	0	75	3	0	6	8	79	25	246
05:30 PM	0	0	0	3	17	0	0	31	3	12	0	3	3	77	0	0	3	17	61	9	233
05:45 PM	0	0	1	2	22	0	0	33	2	2	0	7	1	73	1	0	3	12	66	25	240
06:00 PM	0	1	0	2	17	0	3	25	2	7	0	1	3	82	0	0	4	19	62	27	246
PEAK HOUR TOTALS	0	3	0	9	70	0	6	107	9	22	0	31	6	357	3	0	20	43	268	72	INTERSECTION
ALL MOVEMENTS	79					138					366					383					966
% HV	4%					4%					8%					5%					6%
PEAK HOUR FACTOR	0.68					0.77					0.92					0.85					0.97

PHF = Peak Hour Factor

4:00 - 6:00 PM PEAK HOUR: 4:15 PM TO 5:15 PM

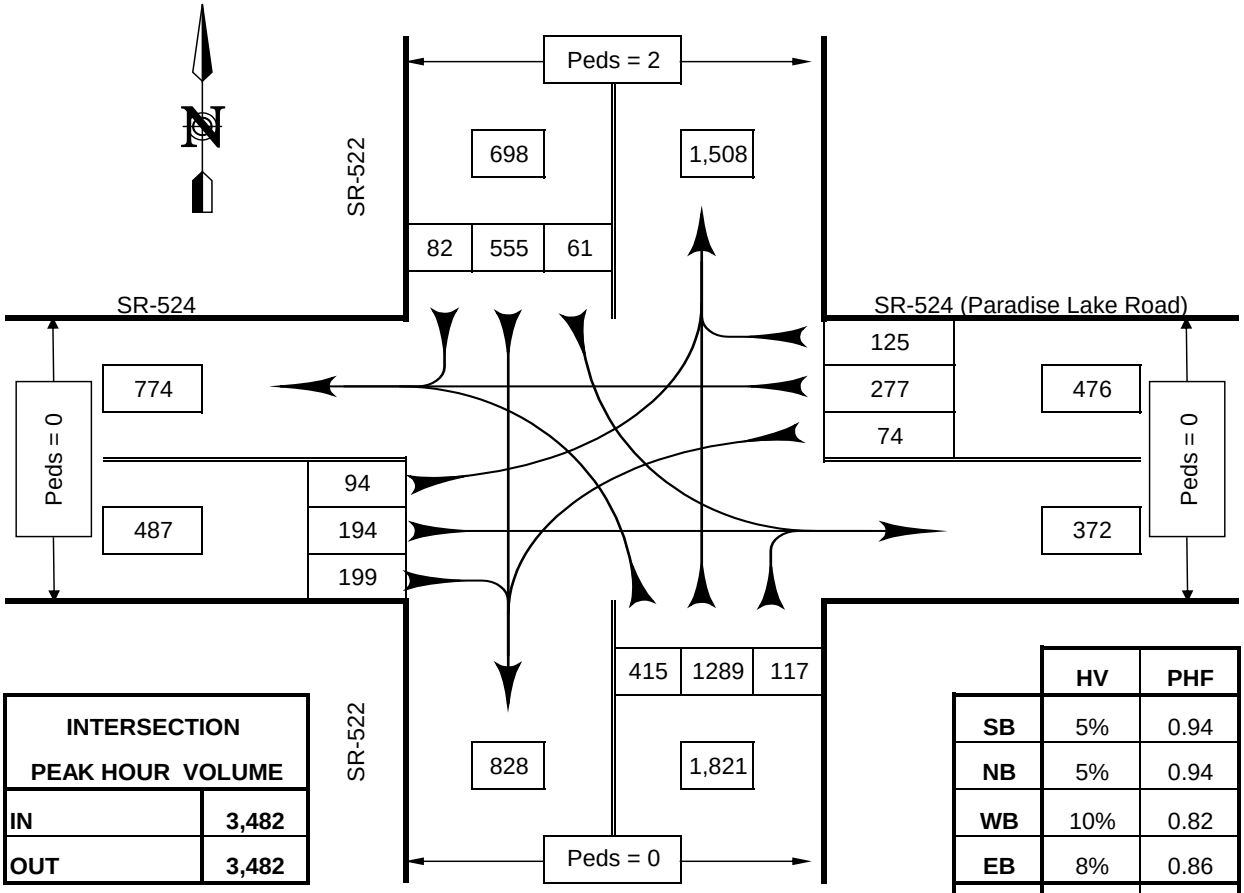
REDUCED BY: CN

DATE OF REDUCTION: 6/13/2012

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

4:00 - 6:00 PM PEAK HOUR: 4:30 PM TO 5:30 PM



INTERSECTION PEAK HOUR VOLUME	
IN	3,482
OUT	3,482

	HV	PHF
SB	5%	0.94
NB	5%	0.94
WB	10%	0.82
EB	8%	0.86
INTRS.	6%	0.92

HV = Heavy Vehicles
PHF = Peak Hour Factor

SR-524 (Paradise Lake Road) @ SR-522

Snohomish County, WA

COUNTED BY: CN/RN

REDUCED BY: CN

DATE: Fri. 6/29/12

DATE OF COUNT: Thu. 6/28/12

TIME OF COUNT: 4:00 - 6:00 PM

WEATHER: Overcast

TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: SR-524 (Paradise Lake Road) @ SR-522
Snohomish County, WA

DATE OF COUNT: Thu. 6/28/12
TIME OF COUNT: 4:00 - 6:00 PM

COUNTED BY: CN/RN
WEATHER: Overcast

TIME INTERVAL ENDING	FROM NORTH ON SR-522					FROM SOUTH ON SR-522					FROM EAST ON SR-524 (Paradise Lake Road)					FROM WEST ON SR-524					INTERVAL TOTALS
AT	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	16	13	109	24	0	21	58	299	24	0	23	15	90	30	0	9	25	53	48	788
04:30 PM	0	8	16	142	24	0	28	97	315	35	0	14	15	97	28	0	9	28	50	47	894
04:45 PM	0	8	13	140	21	0	26	100	339	44	0	13	18	84	44	0	12	18	57	66	944
05:00 PM	0	8	11	131	17	0	19	85	300	26	0	10	15	55	21	0	8	19	33	57	770
05:15 PM	2	11	18	138	29	0	24	135	315	21	0	8	18	68	27	0	6	24	44	31	868
05:30 PM	0	8	19	146	15	0	13	95	335	26	0	15	23	70	33	0	11	33	60	45	900
05:45 PM	0	6	15	108	14	0	16	101	318	36	0	9	15	66	30	0	6	6	30	40	779
06:00 PM	0	9	15	163	23	0	16	80	278	29	0	1	11	40	29	0	4	15	21	25	729
PEAK HOUR TOTALS	2	35	61	555	82	0	82	415	1289	117	0	46	74	277	125	0	37	94	194	199	INTERSECTION
ALL MOVEMENTS	698					1821					476					487					3482
% HV	5%					5%					10%					8%					6%
PEAK HOUR FACTOR	0.94					0.94					0.82					0.86					0.92

PHF = Peak Hour Factor

4:00 - 6:00 PM PEAK HOUR: 4:30 PM TO 5:30 PM

REDUCED BY: CN

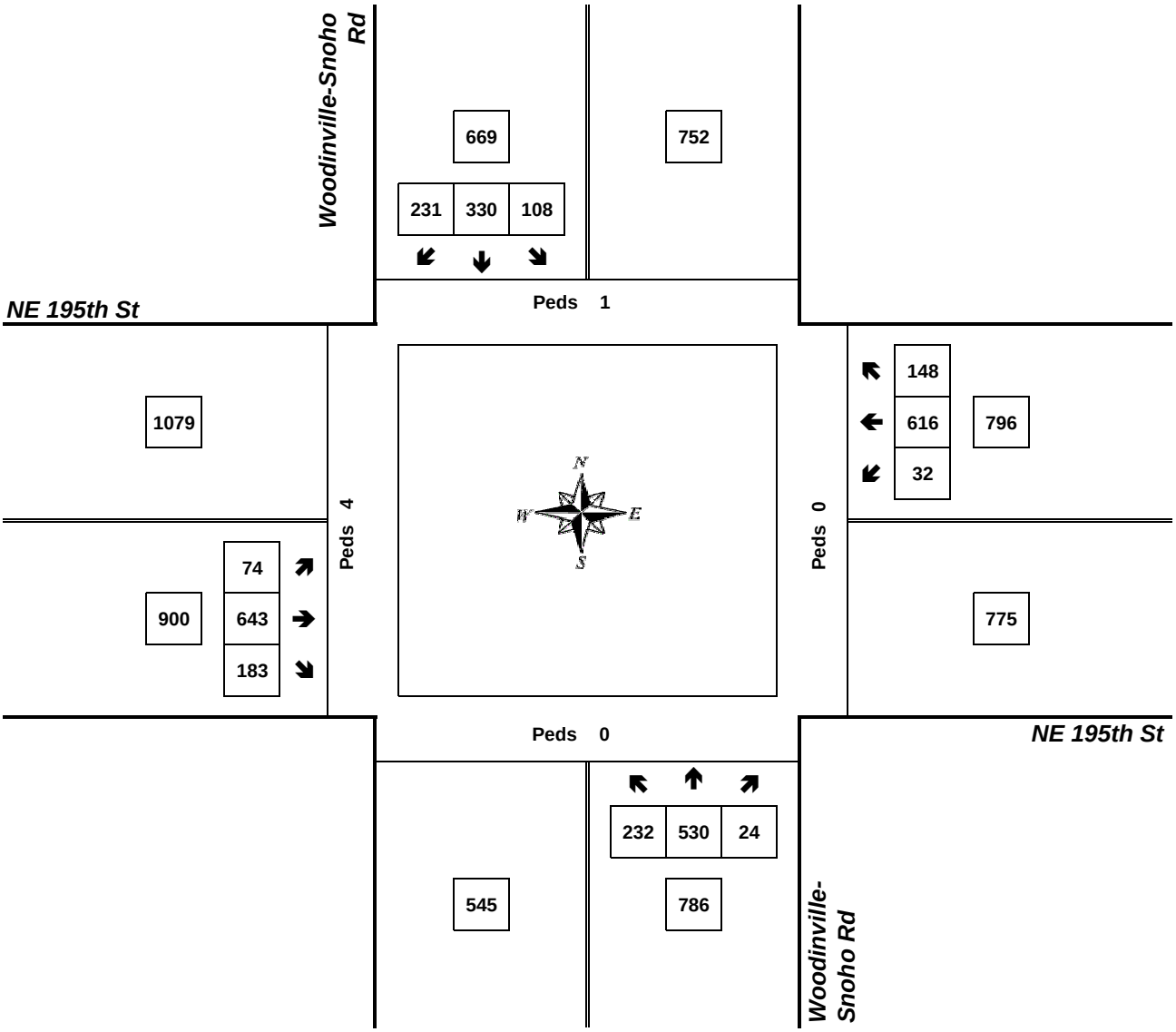
DATE OF REDUCTION: 6/29/2012

Peak Hour Summary

Mark Skaggs
(206) 251-0300

Woodinville-Snoho Rd & NE 195th St

4:30 PM to 5:30 PM
Tuesday, March 27, 2012

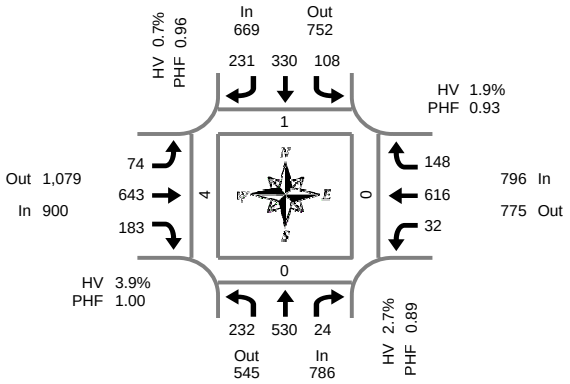


Approach	PHF	HV%	Volume
EB	1.00	3.9%	900
WB	0.93	1.9%	796
NB	0.89	2.7%	786
SB	0.96	0.7%	669
Intersection	0.97	2.4%	3,151

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

Mark Skaggs
(206) 251-0300



Peak Hour Summary
4:30 PM to 5:30 PM

Woodinville-Snoho Rd & NE 195th St

Tuesday, March 27, 2012
4:00 PM to 6:00 PM

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Woodinville-Snoho Rd				Southbound Woodinville-Snoho Rd				Eastbound NE 195th St				Westbound NE 195th St				Interval Total	Pedestrians Crosswalk			
	L	T	R	HV	L	T	R	HV	L	T	R	HV	L	T	R	HV		North	South	East	West
4:00 PM	48	129	7	7	21	97	51	4	24	157	48	13	6	154	24	16	766	0	0	2	0
4:15 PM	44	101	5	11	22	92	68	5	17	140	50	7	7	143	26	8	715	0	0	0	0
4:30 PM	46	122	6	4	18	83	70	2	23	166	36	14	7	150	47	4	774	0	0	0	1
4:45 PM	71	141	10	7	37	86	47	1	20	153	51	9	10	154	28	4	808	1	0	0	2
5:00 PM	63	127	2	2	26	86	63	1	13	161	51	7	8	173	32	2	805	0	0	0	1
5:15 PM	52	140	6	8	27	75	51	1	18	163	45	5	7	139	41	5	764	0	0	0	0
5:30 PM	49	144	4	2	29	95	43	1	18	139	48	7	7	134	36	1	746	0	0	0	1
5:45 PM	47	150	10	8	22	98	31	1	9	184	46	6	3	123	31	2	754	0	0	1	0
Total Survey	420	1,054	50	49	202	712	424	16	142	1,263	375	68	55	1,170	265	42	6,132	1	0	3	5

Peak Hour Summary
4:30 PM to 5:30 PM

By Approach	Northbound Woodinville-Snoho Rd				Southbound Woodinville-Snoho Rd				Eastbound NE 195th St				Westbound NE 195th St				Total	Pedestrians Crosswalk			
	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total	HV	In	Out	Total	HV		North	South	East	West
Volume	786	545	1,331	21	669	752	1,421	5	900	1,079	1,979	35	796	775	1,571	15	3,151	1	0	0	4
%HV	2.7%				0.7%				3.9%				1.9%				2.4%				
PHF	0.89				0.96				1.00				0.93				0.97				

By Movement	Northbound Woodinville-Snoho Rd				Southbound Woodinville-Snoho Rd				Eastbound NE 195th St				Westbound NE 195th St				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	232	530	24	786	108	330	231	669	74	643	183	900	32	616	148	796	3,151
PHF	0.82	0.94	0.60	0.89	0.73	0.96	0.83	0.96	0.80	0.97	0.90	1.00	0.80	0.89	0.79	0.93	0.97

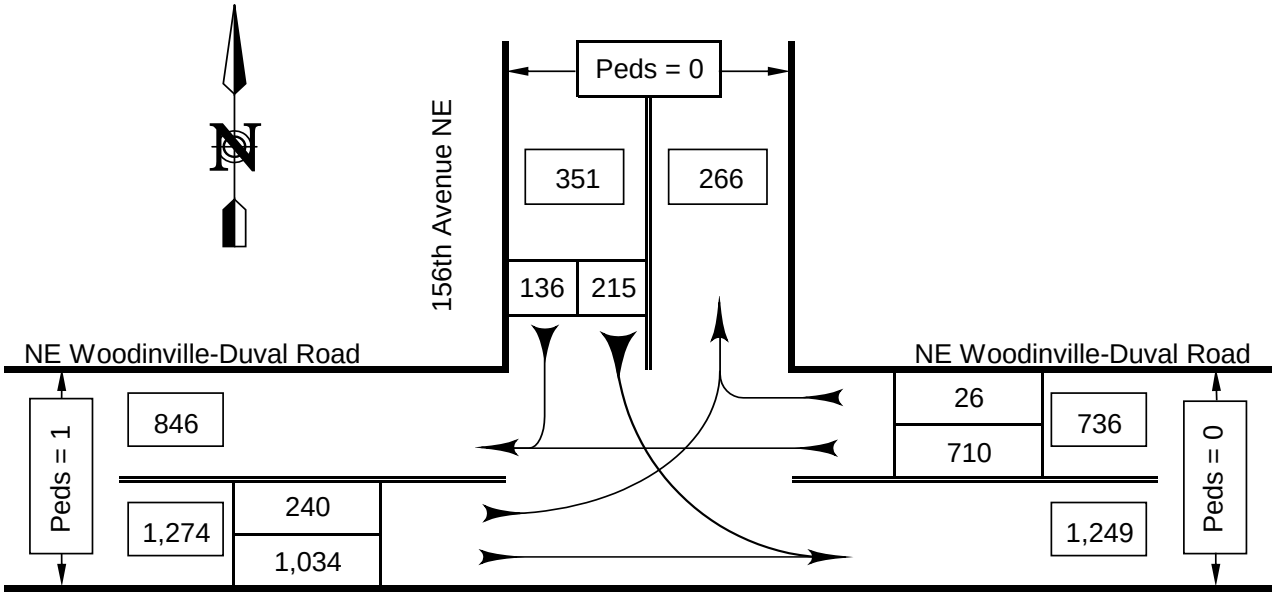
Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Woodinville-Snoho Rd				Southbound Woodinville-Snoho Rd				Eastbound NE 195th St				Westbound NE 195th St				Interval Total	Pedestrians Crosswalk			
	L	T	R	HV	L	T	R	HV	L	T	R	HV	L	T	R	HV		North	South	East	West
4:00 PM	209	493	28	29	98	358	236	12	84	616	185	43	30	601	125	32	3,063	1	0	2	3
4:15 PM	224	491	23	24	103	347	248	9	73	620	188	37	32	620	133	18	3,102	1	0	0	4
4:30 PM	232	530	24	21	108	330	231	5	74	643	183	35	32	616	148	15	3,151	1	0	0	4
4:45 PM	235	552	22	19	119	342	204	4	69	616	195	28	32	600	137	12	3,123	1	0	0	4
5:00 PM	211	561	22	20	104	354	188	4	58	647	190	25	25	569	140	10	3,069	0	0	1	2

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

4:00 - 6:00 PM PEAK HOUR: 5:00 PM TO 6:00 PM



INTERSECTION PEAK HOUR VOLUME	
IN	2,361
OUT	2,361

	HV	PHF
SB	1%	0.90
NB	#N/A	#N/A
WB	2%	0.97
EB	1%	0.93
INTRS.	1%	0.95

HV = Heavy Vehicles
PHF = Peak Hour Factor

156th Avenue NE @ NE Woodinville-Duvall Road

Woodinville, WA

COUNTED BY:	SN	DATE OF COUNT:	Tue. 8/21/12
REDUCED BY:	CN	TIME OF COUNT:	4:00 - 6:00 PM
DATE OF REDUCTION:	Wed. 8/22/12	WEATHER:	Sunny

TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: 156th Avenue NE @ NE Woodinville-Duvall Road
Woodinville, WA

DATE OF COUNT: Tue. 8/21/12
TIME OF COUNT: 4:00 - 6:00 PM

COUNTED BY: SN
WEATHER: Sunny

TIME INTERVAL ENDING	FROM NORTH ON 156th Avenue NE					FROM SOUTH ON					FROM EAST ON NE Woodinville-Duval Road					FROM WEST ON NE Woodinville-Duval Road					INTERVAL TOTALS
AT	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
04:15 PM	0	3	31	0	28	0	0	0	0	0	0	5	0	157	7	0	5	65	207	0	**495**
04:30 PM	0	3	48	0	36	0	0	0	0	0	0	10	0	180	5	1	12	44	242	0	**555**
04:45 PM	0	1	40	0	50	0	0	0	0	0	0	7	0	185	2	0	13	51	232	0	**560**
05:00 PM	0	2	44	0	32	0	0	0	0	0	0	5	0	187	5	0	3	65	215	0	**548**
05:15 PM	0	0	62	0	35	0	0	0	0	0	0	7	0	164	8	1	6	55	230	0	**554**
05:30 PM	0	0	54	0	39	0	0	0	0	0	0	1	0	185	4	0	5	65	276	0	**623**
05:45 PM	0	2	53	0	31	0	0	0	0	0	0	5	0	179	10	0	3	55	270	0	**598**
06:00 PM	0	1	46	0	31	0	0	0	0	0	0	2	0	182	4	0	3	65	258	0	**586**
PEAK HOUR TOTALS	**0**	**3**	**215**	**0**	**136**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**710**	**26**	**1**	**17**	**240**	**1034**	**0**	**INTERSECTION**
ALL MOVEMENTS	**351**					**0**					**736**					**1274**					**2361**
% HV	**1%**					**#N/A**					**2%**					**1%**					**1%**
PEAK HOUR FACTOR	**0.90**					**#N/A**					**0.97**					**0.93**					**0.95**

PHF = Peak Hour Factor

4:00 - 6:00 PM PEAK HOUR: **5:00 PM TO 6:00 PM**

REDUCED BY: CN

DATE OF REDUCTION: 8/22/2012

Saturday Peak-Hour Counts

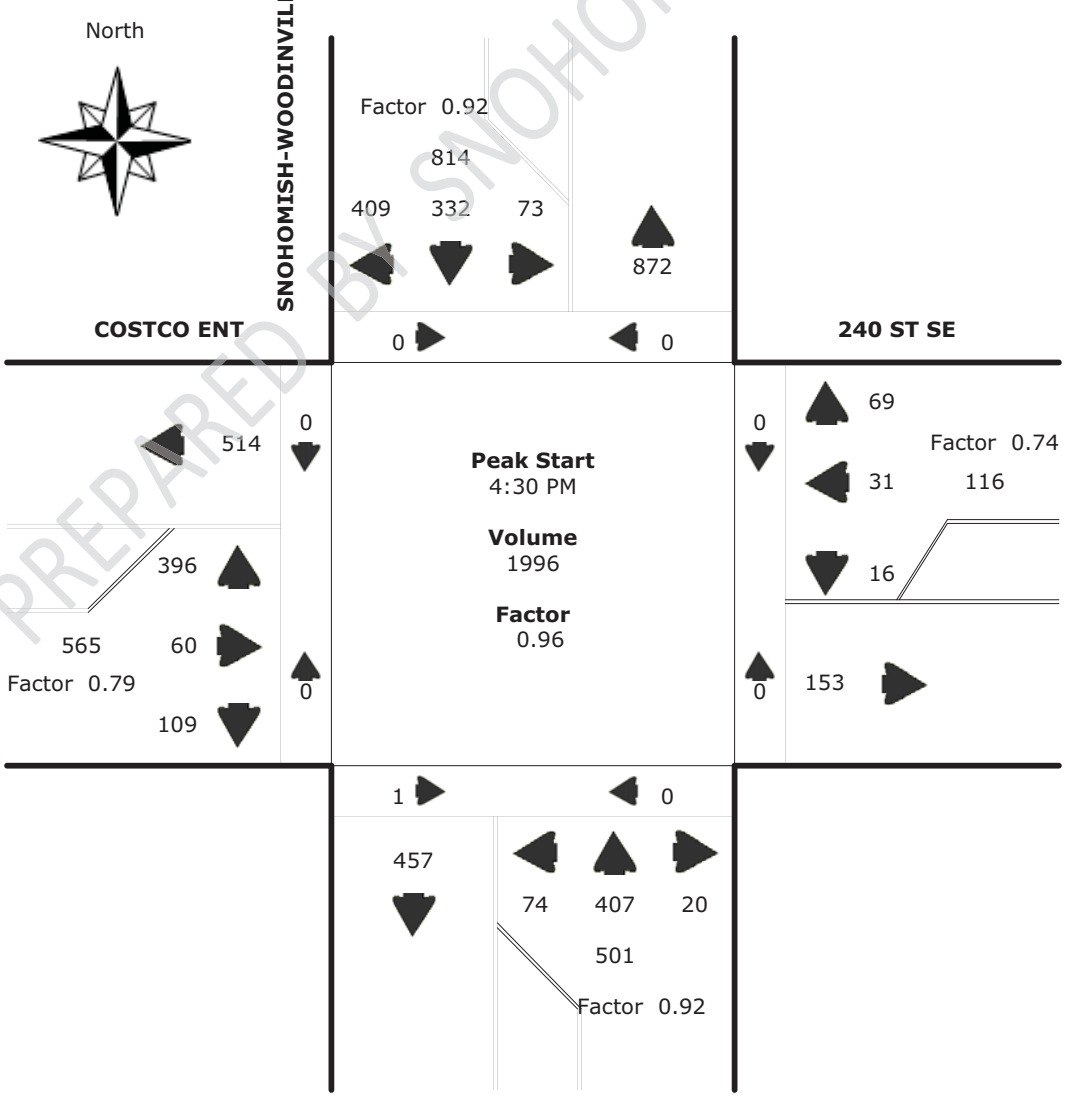
Snohomish County Traffic Operations
3000 Rockefeller Ave
Everett, WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD @ 240 ST SE / COSTCO ENT. Site: 20050@0.45
REQUESTOR: J BLOODGOOD Date: 4/14/2012
Saturday

Intersection Peak Hour

Location SNOHOMISH-WOODINVILLE RD at 240 ST SE / COSTCO ENT
Weather DRY **Counted By** SR
File Number 04141219pA876K293 **Prepared By** BB

	North	East	South	West
Total	1686	269	958	1079
Est. ADT	16860	2690	9580	10790
AUTOS	809 99.4 %	115 99.1 %	495 98.8 %	564 99.8 %
LT TRKS	3 0.4 %	1 0.9 %	5 1.0 %	1 0.2 %
HVY TRKS	2 0.2 %	0 -	1 0.2 %	0 -
BUSES	0 -	0 -	0 -	0 -

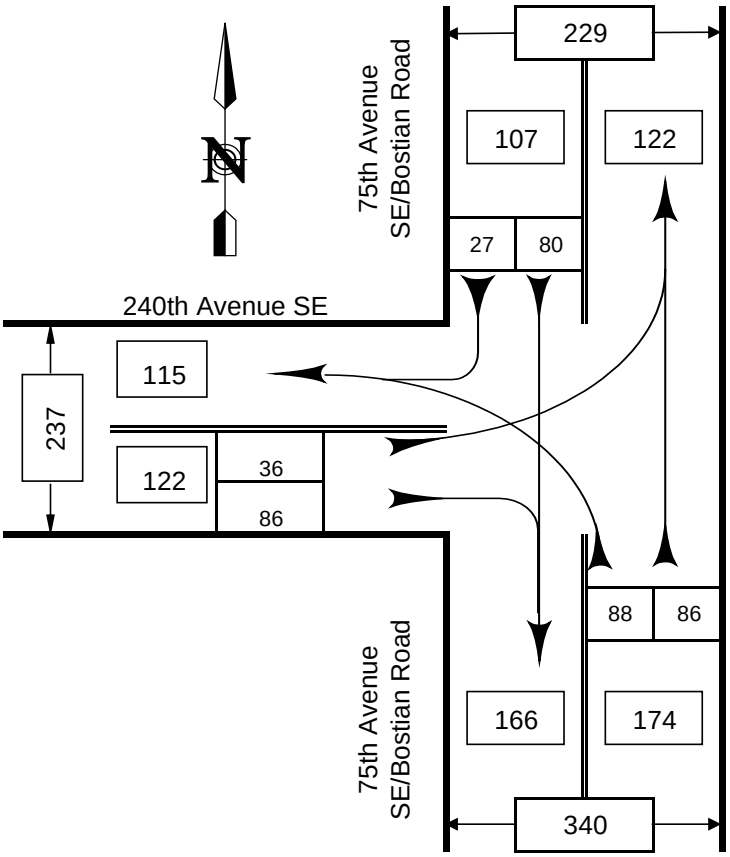


PREPARED BY SNOHOMISH COUNTY

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

3:30 - 5:30 PM PEAK HOUR: 4:00 PM TO 5:00 PM



	TRKS	PHF
SB	1%	0.81
NB	0%	0.81
WB	#N/A	#N/A
EB	2%	0.80
INTRS.	1%	0.88

HV = Heavy Vehicles

PHF = Peak Hour Factor

INTERSECTION PEAK HOUR VOLUME	
IN	**403**
OUT	**403**

240th Street SE @ 75th Avenue SE/Bostian Road

Snohomish County, WA

COUNTED BY:	CN	DATE OF COUNT:	Sat. 6/23/12
REDUCED BY:	CN	TIME OF COUNT:	3:30 - 5:30 PM
DATE OF REDUCTION:	Sat. 6/23/12	WEATHER:	Rainy

TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: 240th Street SE @ 75th Avenue SE/Bostian Road
Snohomish County, WA

DATE OF COUNT: Sat. 6/23/12
TIME OF COUNT: 3:30 - 5:30 PM

COUNTED BY: CN
WEATHER: Rainy

TIME INTERVAL ENDING	FROM NORTH ON 75th Avenue SE/Bostian Road					FROM SOUTH ON 75th Avenue SE/Bostian Road					FROM EAST ON					FROM WEST ON 240th Avenue SE					INTERVAL TOTALS
AT	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:45 PM	0	0	0	18	8	0	0	16	16	0	0	0	0	0	0	0	0	7	0	17	**82**
04:00 PM	0	0	0	24	8	0	1	14	20	0	0	0	0	0	0	0	1	12	0	15	**93**
04:15 PM	0	0	0	16	5	0	0	25	17	0	0	0	0	0	0	0	1	7	0	31	**101**
04:30 PM	0	0	0	23	6	0	0	14	15	0	0	0	0	0	0	0	0	10	0	19	**87**
04:45 PM	0	0	0	17	7	0	0	28	21	0	0	0	0	0	0	0	1	9	0	18	**100**
05:00 PM	0	1	0	24	9	0	0	21	33	0	0	0	0	0	0	0	0	10	0	18	**115**
05:15 PM	0	0	0	20	6	0	1	6	20	0	0	0	0	0	0	0	2	8	0	17	**77**
05:30 PM	0	2	0	15	9	0	1	16	19	0	0	0	0	0	0	0	1	11	0	16	**86**
PEAK HOUR TOTALS	**0**	**1**	**0**	**80**	**27**	**0**	**0**	**88**	**86**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**36**	**0**	**86**	**INTERSECTION**
ALL MOVEMENTS	**107**					**174**					**0**					**122**					**403**
% HV	**1%**					**0%**					**#N/A**					**2%**					**1%**
PEAK HOUR FACTOR	**0.81**					**0.81**					**#N/A**					**0.80**					**0.88**

PHF = Peak Hour Factor

3:30 - 5:30 PM PEAK HOUR: **4:00 PM TO 5:00 PM**

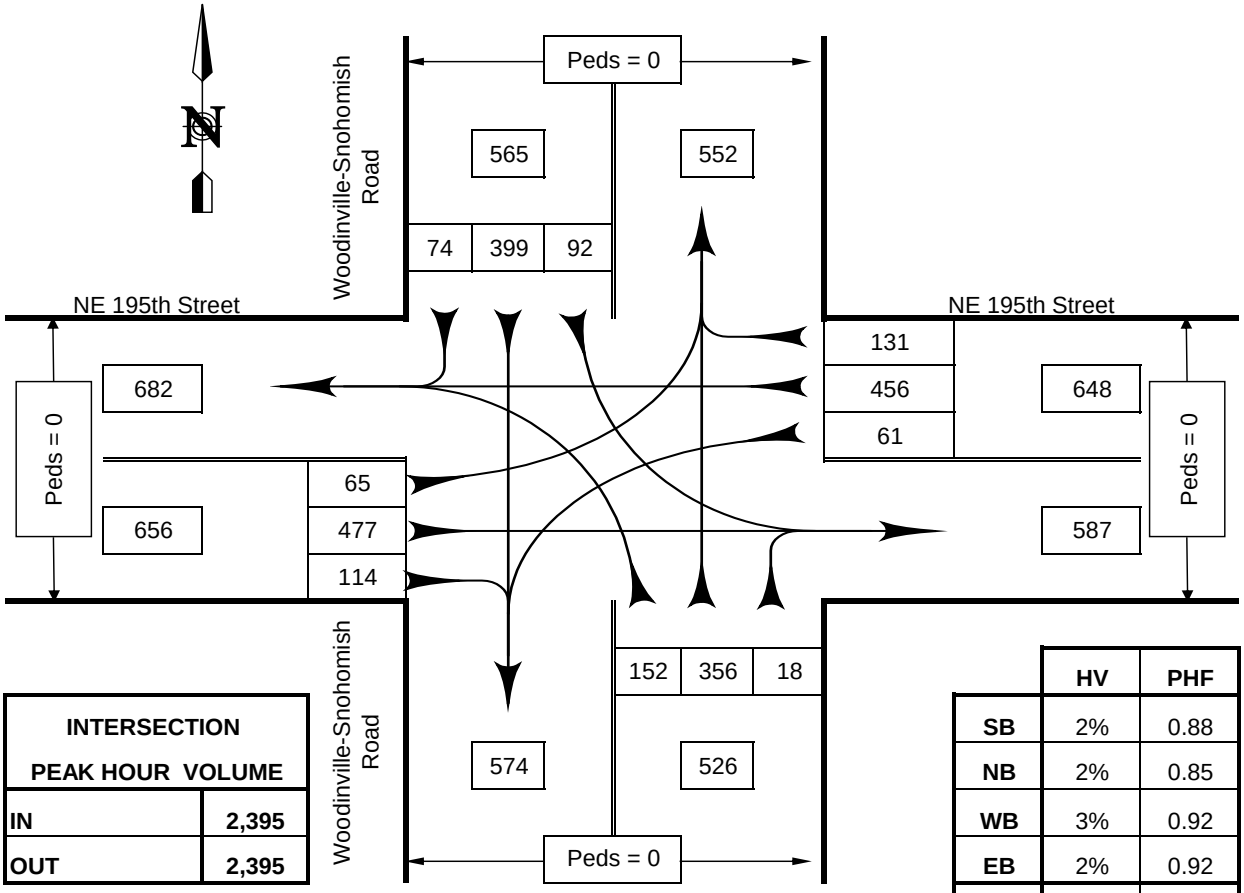
REDUCED BY: CN

DATE OF REDUCTION: 6/23/2012

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

3:30 - 5:30 PM PEAK HOUR: 3:45 PM TO 4:45 PM



INTERSECTION PEAK HOUR VOLUME	
IN	2,395
OUT	2,395

	HV	PHF
SB	2%	0.88
NB	2%	0.85
WB	3%	0.92
EB	2%	0.92
INTRS.	2%	0.96

HV = Heavy Vehicles
PHF = Peak Hour Factor

Woodinville-Snohomish Road @ NE 195th Street

Woodinville, WA

COUNTED BY: RH

REDUCED BY: CN

DATE: Sun. 8/19/12

DATE OF COUNT: Sat. 8/18/12

TIME OF COUNT: 3:30 - 5:30 PM

WEATHER: Sunny

TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: Woodinville-Snohomish Road @ NE 195th Street
Woodinville, WA

DATE OF COUNT: Sat. 8/18/12
TIME OF COUNT: 3:30 - 5:30 PM

COUNTED BY: RH
WEATHER: Sunny

TIME INTERVAL ENDING AT	FROM NORTH ON Woodinville-Snohomish Road					FROM SOUTH ON Woodinville-Snohomish Road					FROM EAST ON NE 195th Street					FROM WEST ON NE 195th Street					INTERVAL TOTALS
	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03:45 PM	0	3	22	84	13	0	2	36	102	3	0	3	17	99	17	0	5	12	107	22	**534**
04:00 PM	0	5	14	111	22	0	1	40	89	7	0	6	17	113	37	0	5	12	100	30	**592**
04:15 PM	0	3	25	98	21	0	7	63	85	6	0	7	8	106	33	0	4	19	116	28	**608**
04:30 PM	0	1	18	80	15	0	0	14	93	2	0	7	8	132	36	0	6	20	128	24	**570**
04:45 PM	0	1	35	110	16	0	5	35	89	3	0	0	28	105	25	0	1	14	133	32	**625**
05:00 PM	0	3	31	95	17	0	0	25	87	6	0	7	5	91	12	0	9	7	140	35	**551**
05:15 PM	0	1	27	78	23	0	1	31	81	1	0	3	15	118	42	0	10	13	118	29	**576**
05:30 PM	0	1	27	66	19	0	2	27	65	3	0	2	6	103	29	0	6	23	109	28	**505**
PEAK HOUR TOTALS	**0**	**10**	**92**	**399**	**74**	**0**	**13**	**152**	**356**	**18**	**0**	**20**	**61**	**456**	**131**	**0**	**16**	**65**	**477**	**114**	**INTERSECTION**
ALL MOVEMENTS	**565**					**526**					**648**					**656**					**2395**
% HV	**2%**					**2%**					**3%**					**2%**					**2%**
PEAK HOUR FACTOR	**0.88**					**0.85**					**0.92**					**0.92**					**0.96**

PHF = Peak Hour Factor

3:30 - 5:30 PM PEAK HOUR: **3:45 PM TO 4:45 PM**

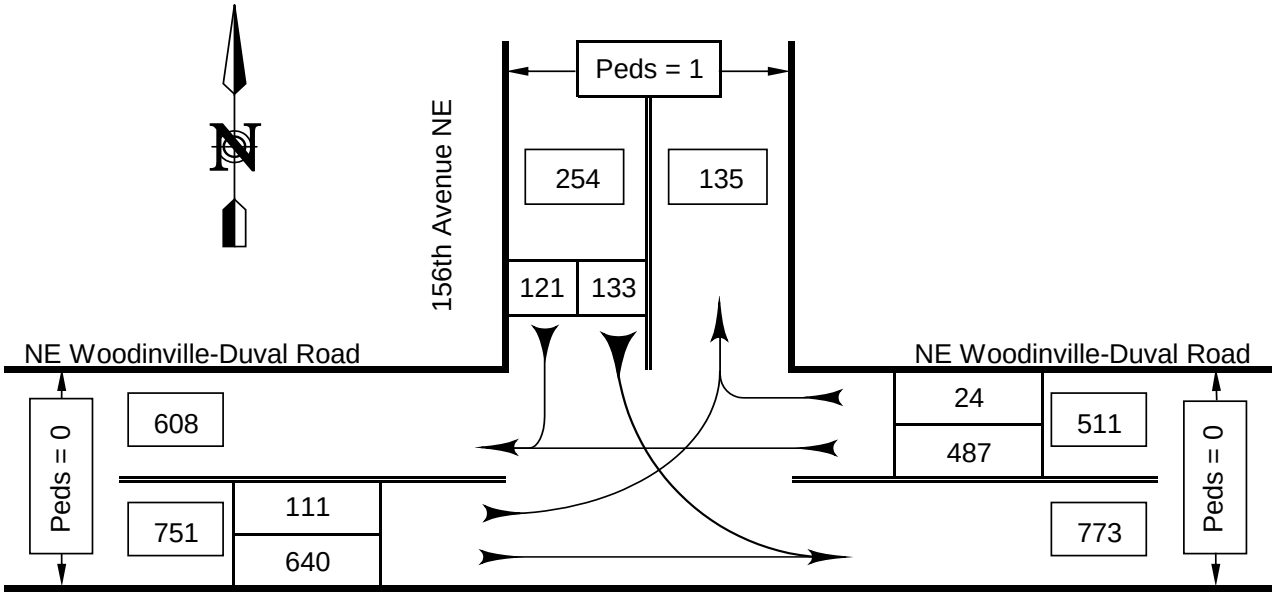
REDUCED BY: CN

DATE OF REDUCTION: 8/19/2012

TRAFFIC DATA GATHERING

TURNING MOVEMENTS DIAGRAM

3:30 - 5:30 PM PEAK HOUR: 4:15 PM TO 5:15 PM



INTERSECTION PEAK HOUR VOLUME	
IN	1,516
OUT	1,516

	HV	PHF
SB	3%	0.77
NB	#N/A	#N/A
WB	2%	0.93
EB	2%	0.95
INTRS.	2%	0.99

HV = Heavy Vehicles
PHF = Peak Hour Factor

156th Avenue NE @ NE Woodinville-Duvall Road

Woodinville, WA

COUNTED BY:	RN	DATE OF COUNT:	Sat. 8/25/12
REDUCED BY:	CN	TIME OF COUNT:	3:30 - 5:30 PM
DATE OF REDUCTION:	Mon. 8/27/12	WEATHER:	Sunny

TRAFFIC DATA GATHERING

INTERSECTION TURNING MOVEMENTS REDUCTION SHEET

LOCATION: 156th Avenue NE @ NE Woodinville-Duvall Road
Woodinville, WA

DATE OF COUNT: Sat. 8/25/12
TIME OF COUNT: 3:30 - 5:30 PM

COUNTED BY: RN
WEATHER: Sunny

TIME INTERVAL ENDING AT	FROM NORTH ON 156th Avenue NE					FROM SOUTH ON					FROM EAST ON NE Woodinville-Duval Road					FROM WEST ON NE Woodinville-Duval Road					INTERVAL TOTALS
	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	Peds	HV	Left	Thru	Right	
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	2	32	0	28	0	0	0	0	0	0	0	0	133	8	0	1	31	126	0	358
04:00 PM	0	3	36	0	20	0	0	0	0	0	0	4	0	126	12	0	1	23	155	0	372
04:15 PM	1	2	16	0	13	0	0	0	0	0	0	0	0	116	4	0	7	33	145	0	327
04:30 PM	1	2	42	0	29	0	0	0	0	0	0	3	0	125	8	0	3	25	144	0	373
04:45 PM	0	1	30	0	27	0	0	0	0	0	0	1	0	125	3	0	4	23	175	0	383
05:00 PM	0	2	16	0	28	0	0	0	0	0	0	2	0	133	5	0	3	27	170	0	379
05:15 PM	0	2	45	0	37	0	0	0	0	0	0	2	0	104	8	0	2	36	151	0	381
05:30 PM	0	0	26	0	14	0	0	0	0	0	0	6	0	118	6	0	6	54	125	0	343
PEAK HOUR TOTALS	1	7	133	0	121	0	0	0	0	0	0	8	0	487	24	0	12	111	640	0	INTERSECTION
ALL MOVEMENTS	254					0					511					751					1516
% HV	3%					#N/A					2%					2%					2%
PEAK HOUR FACTOR	0.77					#N/A					0.93					0.95					0.99

PHF = Peak Hour Factor

3:30 - 5:30 PM PEAK HOUR: 4:15 PM TO 5:15 PM

REDUCED BY: CN

DATE OF REDUCTION: 8/27/2012

Pipeline Data

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Key Intersection #: 192 N-S Road Name SNOHOMISH WOODINVIL E-W Road Name SR 522 Count Date: 2/20/2003 ADT File #: 129

Predicted Volumes AM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Baker Tanks	05129069	Baker Tanks	0%	8	0	0	0	0	0	0	2	0	0	0	0	10
Bear Creek I	04110355	Bear Creek I (see 02107117)	0%	4	0	0	0	0	0	0	0	0	0	0	0	4
Bear Creek II	04109468	Bear Creek II	0%	3	0	0	0	0	0	0	0	0	0	0	0	3
Bear Creek Motors	00106765	Bear Creek Motors	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookside Estates	03109049	Brookside Estates	100%	3	0	0	0	0	0	0	0	0	0	0	0	3
Camden Meadows DUP	04108695	Camden Meadows (see 0310198	100%	3	0	0	0	0	0	0	0	0	0	0	0	3
Canton Ridge	09101020	Canton Ridge	0%	2	0	0	0	0	0	0	1	0	0	1	0	4
Costco	03111038	Costco	100%	0	0	0	0	0	0	3	10	0	0	0	0	13
Cox/Emr	05120466	Cox/Emr	69%	0	0	0	0	0	0	0	1	0	0	1	2	4
Creekstone	04120938	Creekstone	0%	6	0	0	0	0	0	0	0	0	0	0	0	6
Highbridge Estates	05122348	Highbridge Estates	0%	0	1	0	0	1	0	0	0	0	0	0	0	2
Jewell Addition	05128235	Jewell Addition	0%	2	0	0	0	0	0	0	2	0	0	7	0	11
Kensington Park	06103915	Kensington Park	100%	3	0	0	0	0	0	0	0	0	0	0	0	3
King's Corner	06129913	King's Corner	0%	3	0	0	0	0	0	0	0	0	0	0	0	3
Laurelcrest	04118048	Laurelcrest	100%	3	0	0	0	0	0	0	0	0	0	0	0	3
Luschenshire Park	96103582	Luschenshire Park	100%	0	0	0	0	0	0	0	2	0	0	4	0	6
Meadowbrooke	04111643	Meadowbrooke	100%	3	0	0	0	0	0	0	0	0	0	0	0	3
Myers Assemblage	04110993	Myers Assemblage	100%	4	0	0	0	0	0	0	0	0	0	0	0	4
Nelson Johnson 201 IP	05126355	Nelson Johnson 201 IP	100%	0	0	0	0	0	0	0	12	0	0	3	0	15
Olson Addition	07101438	Olson Addition	0%	2	0	0	0	0	0	0	0	0	0	3	0	5
Osborne L28-1 LLC	04111258	Osborne L28-1 LLC	100%	3	0	0	0	0	0	0	0	0	0	0	0	3
Project Andrea	09105107	Project Andrea	0%	2	0	0	0	0	0	0	1	0	0	1	1	5
PSM Properties LLC	04121720	PSM Properties LLC	100%	0	0	0	0	0	0	0	4	0	0	1	0	5
Restaurant Depot	09100204	Restaurant Depot	0%	4	0	0	0	0	0	0	1	0	0	1	1	7
Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	2	0	0	0	0	0	0	2	0	0	25	4	33
Snohomish Cascade Secto	02105329	Snohomish Cascade Sector 7	100%	2	0	0	0	0	0	0	1	0	0	3	0	6
Sommerwood	04116395	Sommerwood	100%	3	0	0	0	0	0	0	0	0	0	0	0	3
Sutherland L101-1	04120529	Sutherland L101-1	0%	3	0	0	0	0	0	0	0	0	0	0	0	3
Tambark Village Estates	04109214	Tambark Village Estates	100%	4	0	0	0	0	0	0	0	0	0	0	0	4
Timber Creek Ranch	06131306	Timber Creek Ranch	0%	1	0	0	0	0	1	0	0	0	1	1	3	7
Underwood Gartland 9	05126772	Underwood Gartland 9	100%	0	0	5	0	0	0	0	0	0	0	3	0	8
Village At Outcrop Creek	98116556	Village At Outcrop Creek	100%	0	0	0	0	0	0	0	2	0	0	7	0	9
Wellington Hills Bldg A	02103063	Wellington Hills Bldg A & B	100%	0	0	30	0	0	0	4	13	0	0	48	0	95
Woodinville Church of C	05116815	Woodinville Church of Christ	0%	0	0	2	0	0	0	0	1	0	0	1	0	4
Woodinville II Opus	00105784	Woodinville II Opus	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals Trips		73	1	37	0	1	1	7	55	0	1	110	11	

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Predicted Volumes PM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Back and Beyond	05117306	Back and Beyond	0%	3	0	0	0	0	0	0	0	0	0	1	0	4
Baker Tanks	05129069	Baker Tanks	0%	2	0	0	0	0	0	0	0	0	0	2	1	5
Bear Creek I	04110355	Bear Creek I (see 02107117)	0%	13	0	0	0	0	0	0	0	0	0	0	0	13
Bear Creek II	04109468	Bear Creek II	0%	10	0	0	0	0	0	0	0	0	0	0	0	10
Bear Creek Motors	00106765	Bear Creek Motors	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Boggs Assemblage	04119730	Boggs Assemblage	0%	3	0	0	0	0	0	0	0	0	0	0	0	3
Brookfield Lane	04116315	Brookfield Lane	76%	3	0	0	0	0	0	0	0	0	0	0	0	3
Brookside Estates	03109049	Brookside Estates	100%	10	0	0	0	0	0	0	0	0	0	0	0	10
Bruner Addition	05128303	Bruner Addition	84%	3	0	0	0	0	0	0	0	0	0	0	0	3
Camden Meadows DUP	04108695	Camden Meadows (see 0310198	100%	9	0	0	0	0	0	0	0	0	0	0	0	9
Canton Ridge	09101020	Canton Ridge	0%	8	0	0	0	0	0	0	1	0	0	1	0	10
Costco	03111038	Costco	100%	0	0	79	0	0	0	35	117	0	0	88	0	319
Creekstone	04120938	Creekstone	0%	21	0	0	0	0	0	0	0	0	0	0	0	21
Fransson Farms	04110091	Fransson Farms	0%	5	0	0	0	0	0	0	0	0	0	0	0	5
Hampton Court Estates	04113131	Hampton Court Estates	100%	3	0	0	0	0	0	0	0	0	0	0	0	3
Highbridge Estates	05122348	Highbridge Estates	0%	0	1	0	0	1	0	0	0	0	0	0	0	2
Jewell Addition	05128235	Jewell Addition	0%	7	0	0	0	0	0	0	8	0	0	4	0	19
Kensington Park	06103915	Kensington Park	100%	6	0	0	0	0	0	0	0	0	0	0	0	6
King's Corner	06129913	King's Corner	0%	11	0	0	0	0	0	0	0	0	0	0	0	11
King's Corner III	07111503	King's Corner III	0%	3	0	0	0	0	0	0	0	0	0	0	0	3
Laurelcrest	04118048	Laurelcrest	100%	11	0	0	0	0	0	0	0	0	0	0	0	11
Lidera	07101452	Lidera	0%	4	0	0	0	0	0	0	2	0	0	1	0	7
Luschenshire Park	96103582	Luschenshire Park	100%	0	0	0	0	0	0	0	4	0	0	3	0	7
Meadowbrooke	04111643	Meadowbrooke	100%	7	0	0	0	0	0	0	0	0	0	0	0	7
Myers Assemblage	04110993	Myers Assemblage	100%	12	0	0	0	0	0	0	0	0	0	0	0	12
Nelson Johnson 201 IP	05126355	Nelson Johnson 201 IP	100%	0	0	0	0	0	0	0	3	0	0	12	0	15
Olson Addition	07101438	Olson Addition	0%	7	0	0	0	0	0	0	2	0	0	2	0	11
Osborne L28-1 LLC	04111258	Osborne L28-1 LLC	100%	12	0	0	0	0	0	0	0	0	0	0	0	12
Pasadera L16	04115895	Pasadera L16	100%	10	0	0	0	0	0	0	0	0	0	0	0	10
Peterson Meadows	97106337	Peterson Meadows	100%	2	0	0	0	0	0	0	2	0	0	0	0	4
Pioneer Heights	06129012	Pioneer Heights	100%	4	0	0	0	0	0	0	0	0	0	0	0	4
Lake Cassidy/Stafford Ho	03103758	Preserve at Lake Cassidy	100%	3	0	0	0	0	0	0	0	0	0	0	0	3
Project Andrea	09105107	Project Andrea	0%	4	0	0	0	0	0	0	2	0	0	2	2	10
PSM Properties LLC	04121720	PSM Properties LLC	100%	0	0	0	0	0	0	0	2	0	0	3	0	5
Restaurant Depot	09100204	Restaurant Depot	0%	5	0	0	0	0	0	0	1	0	0	1	1	8
Rijo Athletic Training Ce	10107234	Rijo Athletic Training Center	0%	2	0	0	0	0	0	0	2	0	0	1	0	5
Sinclair Woods	05128884	Sinclair Woods	100%	7	0	0	0	0	0	0	0	0	0	0	0	7
Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	1	0	0	0	0	0	0	8	0	0	3	0	12

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Snohomish Cascade Secto	02105329	Snohomish Cascade Sector 7	100%	4	0	0	0	0	0	0	3	0	0	2	0	9
Sommerwood	04116395	Sommerwood	100%	9	0	0	0	0	0	0	0	0	0	0	0	9
Sunset Meadows Est. Div	03110945	Sunset Meadows Est. Div III	100%	4	0	0	0	0	0	0	0	0	0	0	0	4
Sutherland L101-1	04120529	Sutherland L101-1	0%	11	0	0	0	0	0	0	0	0	0	0	0	11
Tambark Estates	98109480	Tambark Estates	100%	0	0	0	0	0	0	0	4	0	0	0	3	7
Tambark Village Estates	04109214	Tambark Village Estates	100%	14	0	0	0	0	0	0	0	0	0	0	0	14
Timber Creek Ranch	06131306	Timber Creek Ranch	0%	3	0	0	0	0	2	0	1	0	0	1	2	9
Underwood Gartland 9	05126772	Underwood Gartland 9	100%	0	0	0	0	0	0	3	11	0	0	0	0	14
Village At Outcrop Creek	98116556	Village At Outcrop Creek	100%	1	0	0	0	0	0	0	8	0	0	3	1	13
Waterford Ranch	04118104	Waterford Ranch	100%	4	0	0	0	0	0	0	0	0	0	0	0	4
Wellington Hills Bldg A	02103063	Wellington Hills Bldg A & B	100%	0	0	8	0	0	0	18	60	0	0	13	0	99
Woodcress	04100068	Woodcress	100%	3	0	0	0	0	0	0	2	0	0	0	0	5
Woodinville II Opus	00105784	Woodinville II Opus	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals Trips		264	1	87	0	1	2	56	243	0	0	143	10	

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Key Intersection #: 200 N-S Road Name SR 9 E-W Road Name 180 ST SE Count Date: 8/9/2011 ADT File #: 118

Predicted Volumes AM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Autumn Grove - Also see	06103214	Autumn Grove	0%	1	1	1	0	0	0	1	0	0	0	0	0	4
Bear Creek I	04110355	Bear Creek I (see 02107117)	0%	4	4	4	0	1	0	1	0	0	0	0	1	15
Bear Creek II	04109468	Bear Creek II	0%	3	4	3	0	1	0	1	0	0	0	0	1	13
Boggs Assemblage	04119730	Boggs Assemblage	0%	0	0	0	0	0	0	0	1	0	0	3	0	4
Brookside Estates	03109049	Brookside Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Bruner Addition	05128303	Bruner Addition	84%	1	1	1	0	0	0	0	0	0	0	0	1	4
Camden Meadows DUP	04108695	Camden Meadows (see 0310198	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Canton Ridge	09101020	Canton Ridge	0%	3	2	3	0	1	0	1	0	0	0	0	1	11
Canyon Creek Church	12106831	Canyon Creek Church	0%	1	0	0	0	0	1	0	2	0	0	1	1	6
Cathcart Corner	05117951	Cathcart Corner	50%	1	0	0	0	0	1	0	3	0	1	2	1	9
Clearview Shopping Cent	07110948	Clearview Shopping Center	0%	0	5	0	0	17	0	0	0	0	0	0	0	22
Creekstone	04120938	Creekstone	0%	7	6	7	0	2	0	2	0	0	0	0	2	26
Esplanade @ Mill Creek	02107877	Esplanade @ Mill Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Fernwood Hills	03101937	Fernwood Hills	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Fransson Farms	04110091	Fransson Farms	0%	0	0	0	0	0	0	0	2	0	0	5	0	7
Glengarry	98105816	Glengarry	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Heritage Hagen 1	06103099	Heritage Hagen 1	0%	0	0	0	0	0	0	0	1	0	0	2	1	4
Heritage Hagen 2	06103204	Heritage Hagen 2	0%	0	0	0	0	0	0	0	1	0	0	2	1	4
Heritage Hagen 3	06103206	Heritage Hagen 3	0%	0	0	0	0	0	0	0	1	0	0	2	1	4
Heritage Paterson 1	05125681	Heritage Paterson 1	0%	0	0	0	0	0	0	0	1	0	0	2	1	4
Heritage Paterson 2	05127877	Heritage Paterson 2	0%	0	0	0	0	0	0	0	1	0	0	2	1	4
Jewell Addition	05128235	Jewell Addition	0%	7	4	0	0	1	0	0	0	0	0	0	2	14
Kensington Park	06103915	Kensington Park	100%	2	3	2	0	0	0	1	0	0	0	0	1	9
King's Corner	06129913	King's Corner	0%	4	3	4	0	1	0	1	0	0	0	0	1	14
Kingsridge	98101933	Kingsridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Laurelcrest	04118048	Laurelcrest	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Lidera	07101452	Lidera	0%	3	1	0	0	1	0	0	0	0	0	0	1	6
Lincolnsire	05120365	Lincolnshire	88%	0	0	0	0	0	0	0	2	1	0	1	0	4
Lobo Ridge	96102249	Lobo Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Luschenshire Park	96103582	Luschenshire Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
McKinney Heights	02106838	McKinney Heights	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Meadowbrooke	04111643	Meadowbrooke	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mill Pointe Apartments	99105422	Mill Pointe Apartments	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Myers Assemblage	04110993	Myers Assemblage	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Natural Concepts Nursery	04109591	Natural Concepts Nursery	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Nelson Johnson 201 IP	05126355	Nelson Johnson 201 IP	100%	0	0	0	0	0	0	0	0	0	0	0	0	0

Northshore School Distric	13105912	Northshore School District High	0%	0	0	0	5	0	0	0	0	2	0	0	0	7
Olson Addition	07101438	Olson Addition	0%	5	3	2	0	1	0	1	0	0	0	0	1	13
Osborne L28-1 LLC	04111258	Osborne L28-1 LLC	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Osborne Shopping Center	05124945	Osborne Shopping Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Outlook Ridge	02109328	Outlook Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacific Center	04118722	Pacific Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasadera L16	04115895	Pasadera L16	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Peterson Meadows	97106337	Peterson Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Scandia Business Park	10103573	Scandia Business Park	0%	0	0	1	0	0	0	0	1	0	0	2	0	4
Shaunessy	02101830	Shaunessy	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sierra Ridge	02109844	Sierra Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade Secto	02105329	Snohomish Cascade Sector 7	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish County DPW	05100812	Snohomish County DPW Cathca	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish School Distric	05118947	Snohomish School District #201	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sommerwood	04116395	Sommerwood	100%	3	3	3	0	1	0	2	0	0	0	0	1	13
Sunset Meadows Est. Div	03110945	Sunset Meadows Est. Div III	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunset Meadows Estates	02108624	Sunset Meadows Estates Divisio	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sutherland L101-1	04120529	Sutherland L101-1	0%	0	0	0	0	0	0	0	3	0	0	10	0	13
Tambark Estates	98109480	Tambark Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Tambark Village Estates	04109214	Tambark Village Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Timber Creek Ranch	06131306	Timber Creek Ranch	0%	5	4	0	0	1	0	0	0	0	0	0	2	12
Triple L Ranch	07110925	Triple L Ranch	0%	0	0	0	0	0	0	0	1	0	0	2	1	4
Village At Outcrop Creek	98116556	Village At Outcrop Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Waterford Ranch	04118104	Waterford Ranch	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Wellington Hills Bldg A	02103063	Wellington Hills Bldg A & B	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Woodcress	04100068	Woodcress	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals Trips		50	44	31	5	28	2	11	20	3	1	36	23	

Predicted Volumes PM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Appletree Blk 2 Div 3	97109528	Appletree Blk 2 Div 3	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Autumn Grove - Also see	06103214	Autumn Grove	0%	1	0	1	0	1	0	1	0	0	0	0	1	5
Bear Creek I	04110355	Bear Creek I (see 02107117)	0%	3	2	3	0	5	0	4	0	0	0	0	4	21
Bear Creek II	04109468	Bear Creek II	0%	2	3	2	0	3	0	4	0	0	0	0	4	18
Boggs Assemblage	04119730	Boggs Assemblage	0%	0	0	0	0	0	0	0	3	0	0	2	0	5
Brookside Estates	03109049	Brookside Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Bruner Addition	05128303	Bruner Addition	84%	1	0	1	0	2	0	1	0	0	0	0	1	6
Camden Meadows DUP	04108695	Camden Meadows (see 0310198	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Canton Ridge	09101020	Canton Ridge	0%	2	2	1	0	2	0	3	0	0	0	0	3	13

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Canyon Creek Church	12106831	Canyon Creek Church	0%	1	0	0	0	0	1	0	1	0	1	1	1	6
Cathcart Center	06127296	Cathcart Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Cathcart Corner	05117951	Cathcart Corner	50%	1	0	0	0	0	1	0	2	0	1	2	1	8
Clearview Shopping Cent	07110948	Clearview Shopping Center	0%	0	20	0	0	11	0	0	0	0	0	0	0	31
Creekstone	04120938	Creekstone	0%	4	5	4	0	7	0	8	0	0	0	0	8	36
Esplanade @ Mill Creek	02107877	Esplanade @ Mill Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Fernwood Hills	03101937	Fernwood Hills	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Foxglove Meadow	03109385	Foxglove Meadow	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Fransson Farms	04110091	Fransson Farms	0%	0	0	0	0	0	0	0	5	0	0	4	0	9
Glengarry	98105816	Glengarry	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Heritage Hagen 1	06103099	Heritage Hagen 1	0%	1	0	0	0	0	0	0	2	0	1	1	0	5
Heritage Hagen 2	06103204	Heritage Hagen 2	0%	0	0	0	0	0	1	0	2	0	0	1	1	5
Heritage Hagen 3	06103206	Heritage Hagen 3	0%	0	0	0	0	0	1	0	2	0	0	1	1	5
Heritage Paterson 1	05125681	Heritage Paterson 1	0%	1	0	0	0	0	0	0	2	0	1	1	0	5
Heritage Paterson 2	05127877	Heritage Paterson 2	0%	1	0	0	0	0	0	0	2	0	1	1	0	5
Jewell Addition	05128235	Jewell Addition	0%	4	3	0	0	4	0	0	0	0	0	0	8	19
Kensington Park	06103915	Kensington Park	100%	2	2	1	0	3	0	3	0	0	0	0	2	13
King's Corner	06129913	King's Corner	0%	1	2	2	0	3	0	4	0	0	0	0	4	16
King's Corner III	07111503	King's Corner III	0%	0	0	1	0	1	0	1	0	0	0	0	1	4
Kingsridge	98101933	Kingsridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Laurelcrest	04118048	Laurelcrest	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Lidera	07101452	Lidera	0%	2	1	0	0	1	0	0	0	0	0	0	4	8
Lincolnsire	05120365	Lincolnshire	88%	0	0	1	0	0	0	0	1	1	0	2	0	5
Luschenshire Park	96103582	Luschenshire Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
McKinney Heights	02106838	McKinney Heights	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Meadowbrooke	04111643	Meadowbrooke	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Myers Assemblage	04110993	Myers Assemblage	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Natural Concepts Nursery	04109591	Natural Concepts Nursery	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Nelson Johnson 201 IP	05126355	Nelson Johnson 201 IP	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Olson Addition	07101438	Olson Addition	0%	3	1	2	0	3	0	3	0	0	0	0	5	17
Osborne L28-1 LLC	04111258	Osborne L28-1 LLC	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Outlook Ridge	02109328	Outlook Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacific Center	04118722	Pacific Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasadera L16	04115895	Pasadera L16	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Peterson Meadows	97106337	Peterson Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pioneer Heights	06129012	Pioneer Heights	100%	2	0	0	0	1	0	0	0	0	0	0	2	5
Lake Cassidy/Stafford Ho	03103758	Preserve at Lake Cassidy	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Scandia Business Park	10103573	Scandia Business Park	0%	0	0	0	0	0	0	2	2	0	0	1	0	5
Shaunessy	02101830	Shaunessy	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sierra Ridge	02109844	Sierra Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade Secto	02105329	Snohomish Cascade Sector 7	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish County DPW	05100812	Snohomish County DPW Cathca	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish School Distric	05118947	Snohomish School District #201	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sommerwood	04116395	Sommerwood	100%	2	2	3	0	3	0	3	0	0	0	0	3	16
Sunset Meadows Est. Div	03110945	Sunset Meadows Est. Div III	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunset Meadows Estates	02108825	Sunset Meadows Estates Div 2	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunset Meadows Estates	02108624	Sunset Meadows Estates Divisio	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sutherland L101-1	04120529	Sutherland L101-1	0%	0	0	0	0	0	0	0	11	0	0	6	0	17
Tambark Estates	98109480	Tambark Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Tambark Village Estates	04109214	Tambark Village Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Timber Creek Ranch	06131306	Timber Creek Ranch	0%	3	3	0	0	4	0	0	0	0	0	0	6	16
Triple L Ranch	07110925	Triple L Ranch	0%	1	0	0	0	0	0	0	2	0	0	2	0	5
Village At Outcrop Creek	98116556	Village At Outcrop Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Village At Websters Pond	98108094	Village At Websters Pond	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Waterford Ranch	04118104	Waterford Ranch	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Wellington Hills Bldg A	02103063	Wellington Hills Bldg A & B	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Woodcress	04100068	Woodcress	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals Trips		38	46	22	0	54	4	37	37	1	5	25	60	

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Key Intersection #: 203 N-S Road Name SR 9 E-W Road Name 228 ST SE Count Date: 4/12/2011 ADT File #: 203

Predicted Volumes AM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Aristata	06128287	Aristata	0%	1	0	1	0	0	0	1	0	0	0	0	0	3
Baker Tanks	05129069	Baker Tanks	0%	0	0	1	0	0	0	0	1	0	0	4	0	6
Bear Creek I	04110355	Bear Creek I (see 02107117)	0%	0	0	2	0	0	0	1	3	0	0	10	0	16
Bear Creek II	04109468	Bear Creek II	0%	0	0	2	0	0	0	1	2	0	0	7	0	12
Beaumont	05123119	Beaumont	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Bellemont Crossing Div 1	02102305	Bellemont Crossing Div 1-4	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Bellemont Heights	04115805	Bellemont Heights	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Boggs Assemblage	04119730	Boggs Assemblage	0%	0	0	0	0	0	0	0	1	0	0	3	0	4
Brookside Estates	03109049	Brookside Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Bruner Addition	05128303	Bruner Addition	84%	0	0	1	0	0	0	0	1	0	0	2	0	4
Camden Meadows DUP	04108695	Camden Meadows (see 0310198	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Canton Ridge	09101020	Canton Ridge	0%	0	0	2	0	0	0	1	2	0	0	6	0	11
Costco	03111038	Costco	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Cox/Emr	05120466	Cox/Emr	69%	1	0	3	0	0	0	1	0	0	0	0	0	5
Creekstone	04120938	Creekstone	0%	0	0	4	0	0	0	1	5	0	0	16	0	26
Esplanade @ Mill Creek	02107877	Esplanade @ Mill Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Fransson Farms	04110091	Fransson Farms	0%	0	0	0	0	0	0	0	2	0	0	5	0	7
Hampton Court Estates	04113131	Hampton Court Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawthorne Station	03110040	Hawthorne Station	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Heights at Bellemont	05124798	Heights at Bellemont	51%	1	0	1	0	0	0	1	0	0	0	0	1	4
Jewell Addition	05128235	Jewell Addition	0%	0	0	7	0	0	0	2	2	0	0	7	0	18
Kensington Park	06103915	Kensington Park	100%	0	0	1	0	0	0	1	2	0	0	4	0	8
King's Corner	06129913	King's Corner	0%	0	0	3	0	0	0	0	3	0	0	9	0	15
King's Corner III	07111503	King's Corner III	0%	0	0	1	0	0	0	0	1	0	0	2	0	4
Laurelcrest	04118048	Laurelcrest	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Lidera	07101452	Lidera	0%	0	0	1	0	0	0	1	1	0	0	3	0	6
Lincolnsire	05120365	Lincolnshire	88%	0	0	0	0	0	0	0	1	0	0	2	1	4
Luschenshire Park	96103582	Luschenshire Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
McKinney Heights	02106838	McKinney Heights	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Meadowbrooke	04111643	Meadowbrooke	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Mill Pointe Apartments	99105422	Mill Pointe Apartments	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Myers Assemblage	04110993	Myers Assemblage	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Nelson Johnson 201 IP	05126355	Nelson Johnson 201 IP	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Nelson Meadow	05127253	Nelson Meadow	0%	1	0	2	0	0	1	0	0	0	0	0	0	4
Olson Addition	07101438	Olson Addition	0%	0	0	4	0	0	0	1	1	0	0	6	0	12
Osborne L28-1 LLC	04111258	Osborne L28-1 LLC	100%	0	0	0	0	0	0	0	0	0	0	0	0	0

Outlook Ridge	02109328	Outlook Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasadera L16	04115895	Pasadera L16	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Peterson Meadows	97106337	Peterson Meadows	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Porter's Landing	05100987	Porter's Landing	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
PSM Properties LLC	04121720	PSM Properties LLC	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve at Canyon Park	10107154	Reserve at Canyon Park	0%	2	0	2	0	0	0	0	0	0	0	0	1	5
Restaurant Depot	09100204	Restaurant Depot	0%	0	0	0	0	0	0	0	3	0	0	3	0	6
Shaunessy	02101830	Shaunessy	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sierra Ridge	02109844	Sierra Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sinclair Woods	05128884	Sinclair Woods	100%	3	0	6	0	0	0	2	0	0	0	0	2	13
Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade Secto	02105329	Snohomish Cascade Sector 7	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish School Distric	05118947	Snohomish School District #201	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sommerwood	04116395	Sommerwood	100%	0	0	2	0	0	0	1	3	0	0	6	0	12
Sunset Meadows Est. Div	03110945	Sunset Meadows Est. Div III	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sutherland L101-1	04120529	Sutherland L101-1	0%	0	0	0	0	0	0	0	3	0	0	10	0	13
Sutherland Park	05126053	Sutherland Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Talasera	07100489	Talasera	0%	2	0	3	0	0	0	2	0	0	0	0	2	9
Tambark Village Estates	04109214	Tambark Village Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Timber Creek Ranch	06131306	Timber Creek Ranch	0%	0	0	0	0	0	0	0	2	0	0	5	0	7
Village At Outcrop Creek	98116556	Village At Outcrop Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Waterford Ranch	04118104	Waterford Ranch	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Wellington Hills Bldg A	02103063	Wellington Hills Bldg A & B	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Westlake Heights	05128186	Westlake Heights	0%	1	0	2	0	0	0	0	0	0	0	0	1	4
Woodcress	04100068	Woodcress	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals Trips		12	0	51	0	0	1	17	39	0	0	110	8	

Predicted Volumes PM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Aristata	06128287	Aristata	0%	1	0	1	0	0	0	1	0	0	0	0	1	4
Back and Beyond	05117306	Back and Beyond	0%	0	0	1	0	0	0	1	2	0	0	1	0	5
Baker Tanks	05129069	Baker Tanks	0%	0	0	0	0	0	0	1	5	0	0	1	0	7
Bear Creek I	04110355	Bear Creek I (see 02107117)	0%	0	0	1	0	0	0	2	11	0	0	7	0	21
Bear Creek II	04109468	Bear Creek II	0%	0	0	1	0	0	0	2	8	0	0	5	0	16
Beaumont	05123119	Beaumont	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Bellemont Crossing Div 1	02102305	Bellemont Crossing Div 1-4	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Bellemont Heights	04115805	Bellemont Heights	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Boggs Assemblage	04119730	Boggs Assemblage	0%	0	0	0	0	0	0	0	3	0	0	2	0	5
Brookfield Lane	04116315	Brookfield Lane	76%	0	0	0	0	0	0	1	2	0	0	1	0	4
Brookside Estates	03109049	Brookside Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Bruner Addition	05128303	Bruner Addition	84%	0	0	0	0	0	0	1	2	0	0	2	0	5
Camden Meadows DUP	04108695	Camden Meadows (see 0310198	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Canton Ridge	09101020	Canton Ridge	0%	0	0	1	0	0	0	2	7	0	0	3	0	13
Costco	03111038	Costco	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Cox/Emr	05120466	Cox/Emr	69%	1	0	2	0	0	0	3	0	0	0	0	2	8
Creekstone	04120938	Creekstone	0%	0	0	3	0	0	0	4	18	0	0	10	0	35
Esplanade @ Mill Creek	02107877	Esplanade @ Mill Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Fransson Farms	04110091	Fransson Farms	0%	0	0	0	0	0	0	0	5	0	0	4	0	9
Hampton Court Estates	04113131	Hampton Court Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Hawthorne Station	03110040	Hawthorne Station	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Heights at Bellemont	05124798	Heights at Bellemont	51%	1	0	1	0	0	0	1	0	0	0	0	1	4
Jewell Addition	05128235	Jewell Addition	0%	0	0	4	0	0	0	8	7	0	0	5	0	24
Kensington Park	06103915	Kensington Park	100%	0	0	0	0	0	0	2	5	0	0	3	0	10
King's Corner	06129913	King's Corner	0%	0	0	0	0	0	0	3	8	0	0	6	0	17
King's Corner III	07111503	King's Corner III	0%	0	0	0	0	0	0	1	2	0	0	2	0	5
Laurelcrest	04118048	Laurelcrest	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Lidera	07101452	Lidera	0%	0	0	1	0	0	0	2	4	0	0	2	0	9
Lincolnsire	05120365	Lincolnshire	88%	1	0	0	0	0	0	0	2	0	0	2	0	5
Luschenshire Park	96103582	Luschenshire Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
McKinney Heights	02106838	McKinney Heights	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Meadowbrooke	04111643	Meadowbrooke	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Myers Assemblage	04110993	Myers Assemblage	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Nelson Johnson 201 IP	05126355	Nelson Johnson 201 IP	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Nelson Meadow	05127253	Nelson Meadow	0%	0	0	2	0	0	0	3	0	0	0	0	1	6
Olson Addition	07101438	Olson Addition	0%	0	0	3	0	0	0	4	5	0	0	3	0	15
Osborne L28-1 LLC	04111258	Osborne L28-1 LLC	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Outlook Ridge	02109328	Outlook Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pasadera L16	04115895	Pasadera L16	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pioneer Heights	06129012	Pioneer Heights	100%	0	0	1	0	0	0	0	1	0	0	2	0	4
Pioneer Heights	06129012	Pioneer Heights	100%	0	0	1	0	0	0	1	3	0	0	1	0	6
Porter's Landing	05100987	Porter's Landing	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Lake Cassidy/Stafford Ho	03103758	Preserve at Lake Cassidy	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Andrea	09105107	Project Andrea	0%	0	0	1	0	0	0	1	2	0	0	2	0	6
PSM Properties LLC	04121720	PSM Properties LLC	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Reserve at Canyon Park	10107154	Reserve at Canyon Park	0%	2	0	1	0	0	0	2	0	0	0	0	2	7
Restaurant Depot	09100204	Restaurant Depot	0%	0	0	0	0	0	0	0	2	0	0	3	0	5
Rijo Athletic Training Ce	10107234	Rijo Athletic Training Center	0%	3	0	0	0	0	0	0	4	0	0	3	2	12
Shaunessy	02101830	Shaunessy	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sierra Hills	13100808	Sierra Hills	0%	0	0	1	0	0	0	1	0	0	0	0	2	4
Sierra Ridge	02109844	Sierra Ridge	100%	0	0	0	0	0	0	0	0	0	0	0	0	0

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Sinclair Woods	05128884	Sinclair Woods	100%	3	0	4	0	0	0	7	0	0	0	0	3	17
Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade Secto	02105329	Snohomish Cascade Sector 7	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sommerwood	04116395	Sommerwood	100%	0	0	1	0	0	0	2	8	0	0	5	0	16
Sunset Meadows Est. Div	03110945	Sunset Meadows Est. Div III	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sutherland L101-1	04120529	Sutherland L101-1	0%	0	0	0	0	0	0	0	11	0	0	6	0	17
Sutherland Park	05126053	Sutherland Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Talasera	07100489	Talasera	0%	2	0	2	0	0	0	3	0	0	0	0	2	9
Tambark Estates	98109480	Tambark Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Tambark Village Estates	04109214	Tambark Village Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Timber Creek Ranch	06131306	Timber Creek Ranch	0%	0	0	0	0	0	0	0	6	0	0	3	0	9
Underwood Gartland 9	05126772	Underwood Gartland 9	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Village At Outcrop Creek	98116556	Village At Outcrop Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Waterford Ranch	04118104	Waterford Ranch	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Wellington Hills Bldg A	02103063	Wellington Hills Bldg A & B	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Westlake Heights	05128186	Westlake Heights	0%	1	0	1	0	0	0	2	0	0	0	0	2	6
Woodcress	04100068	Woodcress	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Yorkshire	05126766	Yorkshire	0%	0	0	0	0	0	0	1	2	0	0	1	0	4
		Totals Trips		15	0	34	0	0	0	62	135	0	0	85	18	

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Key Intersection #: 209 N-S Road Name SR 522 E-W Road Name PARADISE LK RD Count Date: 9/23/2008 ADT File #: 209

Predicted Volumes AM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Arbors at Echo Falls	08103337	Arbors at Echo Falls	0%	1	0	0	0	0	0	0	1	0	1	3	0	6
Bear Creek I	04110355	Bear Creek I (see 02107117)	0%	0	4	0	0	1	0	0	0	0	0	0	0	5
Bear Creek II	04109468	Bear Creek II	0%	0	4	0	0	1	0	0	0	0	0	0	0	5
Brian's Song	09101719	Brian's Song	0%	0	0	0	0	0	0	0	1	0	0	4	0	5
Brookside Estates	03109049	Brookside Estates	100%	0	4	0	0	1	0	0	0	0	0	0	0	5
Calvert Eco Park	10107092	Calvert Eco Park	0%	1	2	4	0	0	0	0	0	0	0	0	0	7
Camden Meadows DUP	04108695	Camden Meadows (see 0310198	100%	0	3	0	0	1	0	0	0	0	0	0	0	4
Clearview Shopping Cent	07110948	Clearview Shopping Center	0%	0	5	0	0	17	0	0	0	0	0	0	0	22
Costco	03111038	Costco	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Creekstone	04120938	Creekstone	0%	0	6	0	0	2	0	0	0	0	0	0	0	8
CT Sales	04115902	CT Sales	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
CT Sales	06129492	CT Sales	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Echo Falls Estates	99100800	Echo Falls Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Echo Lake Estates	03102386	Echo Lake Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Hidden Ridge II	05125314	Hidden Ridge II	0%	0	0	0	0	0	0	0	2	0	0	6	0	8
King's Corner	06129913	King's Corner	0%	0	4	0	0	0	0	0	0	0	0	0	0	4
LDK Associates	09103891	LDK Associates	0%	0	0	0	0	0	3	0	0	0	0	0	0	3
Maltby Christian Assembl	00101117	Maltby Christian Assembly	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Maltby Elementary Schoo	03105773	Maltby Elementary School	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Menzel Lake Estates	05126317	Menzel Lake Estates	0%	0	0	0	0	0	0	0	1	0	0	3	0	4
Nelson Johnson 201 IP	05126355	Nelson Johnson 201 IP	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacific Land Enterprises	10107142	Pacific Land Enterprises	0%	0	0	0	0	1	0	2	0	0	0	0	1	4
Panther Lake Ridge	04112029	Panther Lake Ridge	0%	0	0	0	0	0	0	0	1	0	0	3	0	4
PSM Properties LLC	04121720	PSM Properties LLC	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Quinn's Crossing	05100897	Quinn's Crossing	0%	1	0	0	0	0	0	0	4	0	2	11	4	22
Scandia Business Park	10103573	Scandia Business Park	0%	0	0	0	53	0	0	0	3	0	0	13	0	69
Shaunessy	02101830	Shaunessy	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Siler Place	96106255	Siler Place	0%	0	0	0	0	0	1	0	1	0	1	3	0	6
Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sommerwood	04116395	Sommerwood	100%	0	3	0	0	1	0	0	0	0	0	0	0	4
Storm Lake Heights	9102083	Storm Lake Heights	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Tambark Village Estates	04109214	Tambark Village Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Trombley Ridge	06100498	Trombley Ridge	0%	0	0	0	0	0	0	0	1	0	0	4	0	5
Valley Supply	06126854	Valley Supply	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Waste Management NW	08106048	Waste Management NW	0%	0	0	0	0	3	0	7	0	0	0	0	2	12
Wellington Hills Bldg A	02103063	Wellington Hills Bldg A & B	100%	0	0	3	3	0	0	1	3	1	0	12	0	23

Westlake Heights	05128186	Westlake Heights	0%	0	9	0	0	27	2	0	0	0	1	0	0	39
Wild Sky Division 2	06126793	Wild Sky Division 2	0%	0	0	0	0	0	0	0	1	0	0	3	0	4
Wild Sky Ridge Div 1	05120870	Wild Sky Ridge Div 1	0%	0	0	0	0	0	0	0	2	0	0	5	0	7
Wolford Recycling	03101953	Wolford Recycling	100%	3	1	5	0	1	0	4	0	0	0	0	3	17
Woodinville Church of C	05116815	Woodinville Church of Christ	0%	0	0	0	1	1	1	0	0	1	2	0	0	6
		Totals Trips		6	45	12	57	57	7	14	21	2	7	70	10	

Predicted Volumes PM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Arbors at Echo Falls	08103337	Arbors at Echo Falls	0%	1	0	0	0	0	0	0	4	0	1	2	0	8
Bear Creek I	04110355	Bear Creek I (see 02107117)	0%	0	2	0	0	4	0	0	0	0	0	0	0	6
Bear Creek II	04109468	Bear Creek II	0%	0	2	0	0	3	0	0	0	0	0	0	0	5
Brian's Song	09101719	Brian's Song	0%	0	0	0	0	0	0	0	3	0	0	3	0	6
Brookside Estates	03109049	Brookside Estates	100%	0	2	0	0	4	0	0	0	0	0	0	0	6
Camden Meadows DUP	04108695	Camden Meadows (see 0310198	100%	0	2	0	0	3	0	0	0	0	0	0	0	5
Clearview Shopping Cent	07110948	Clearview Shopping Center	0%	0	3	0	0	5	0	0	0	0	0	0	0	8
Costco	03111038	Costco	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Creekstone	04120938	Creekstone	0%	0	5	0	0	8	0	0	0	0	0	0	0	13
CT Sales	04115902	CT Sales	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
CT Sales	06129492	CT Sales	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Echo Falls Estates	99100800	Echo Falls Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Echo Lake Estates	03102386	Echo Lake Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Estates at Hidden Creek	99101006	Estates at Hidden Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Hidden Ridge II	05125314	Hidden Ridge II	0%	0	0	0	0	0	0	0	7	0	0	4	0	11
Highbridge Estates	05122348	Highbridge Estates	0%	1	0	0	0	0	0	0	1	0	0	1	1	4
King's Corner	06129913	King's Corner	0%	0	1	0	0	4	0	0	0	0	0	0	0	5
LDK Associates	09103891	LDK Associates	0%	0	0	0	0	0	1	0	0	0	3	0	0	4
Maltby Christian Assembl	00101117	Maltby Christian Assembly	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Maltby Elementary Schoo	03105773	Maltby Elementary School	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Menzel Lake Estates	05126317	Menzel Lake Estates	0%	0	0	0	0	0	0	0	3	0	0	2	0	5
Menzel Lake Estates Nort	06103514	Menzel Lake Estates North	0%	0	0	0	0	0	0	0	3	0	0	1	0	4
Nelson Johnson 201 IP	05126355	Nelson Johnson 201 IP	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacific Land Enterprises	10107142	Pacific Land Enterprises	0%	1	1	2	0	0	0	0	0	0	0	0	0	4
Panther Lake Ridge	04112029	Panther Lake Ridge	0%	0	0	0	0	0	0	0	3	0	0	2	0	5
PSM Properties LLC	04121720	PSM Properties LLC	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Quinn's Crossing	05100897	Quinn's Crossing	0%	5	0	0	0	0	2	0	12	0	1	7	3	30
Scandia Business Park	10103573	Scandia Business Park	0%	0	0	0	6	0	0	0	35	56	0	3	0	100
Shaunessy	02101830	Shaunessy	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Siler Place	96106255	Siler Place	0%	0	0	0	0	0	1	0	4	0	0	2	0	7
Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Snoqualmie Gourmet Ice	04114812	Snoqualmie Gourmet Ice Cream	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Sommerwood	04116395	Sommerwood	100%	0	3	0	0	3	0	0	0	0	0	0	0	6
Storm Lake Heights	9102083	Storm Lake Heights	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Tambark Village Estates	04109214	Tambark Village Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Trombley Ridge	06100498	Trombley Ridge	0%	0	0	0	0	0	0	0	4	0	0	2	0	6
Underwood Gartland 9	05126772	Underwood Gartland 9	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Valley Supply	06126854	Valley Supply	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Waste Management NW	08106048	Waste Management NW	0%	2	2	6	0	0	0	0	0	0	0	0	0	10
Wellington Hills Bldg A	02103063	Wellington Hills Bldg A & B	100%	0	0	1	1	0	0	3	12	3	0	3	0	23
Westlake Heights	05128186	Westlake Heights	0%	0	31	0	0	18	1	0	0	0	2	0	0	52
Wild Sky Division 2	06126793	Wild Sky Division 2	0%	0	0	0	0	0	0	0	3	0	0	2	0	5
Wild Sky Ridge Div 1	05120870	Wild Sky Ridge Div 1	0%	0	0	0	0	0	0	0	5	0	0	3	0	8
Wolf Crest Estates	96107776	Wolf Crest Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Wolford Recycling	03101953	Wolford Recycling	100%	2	1	2	0	0	0	2	0	0	0	0	1	8
Woodinville Church of C	05116815	Woodinville Church of Christ	0%	0	0	0	1	0	2	0	0	1	0	0	0	4
		Totals Trips		12	55	11	8	52	7	5	99	60	7	37	5	

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Key Intersection #: 293 N-S Road Name SNO-WOOD ROAD E-W Road Name 240 ST SE Count Date: 3/21/2012 ADT File #: 293

Predicted Volumes AM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Costco	03111038	Costco	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Luschenshire Park	96103582	Luschenshire Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
PSM Properties LLC	04121720	PSM Properties LLC	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade Secto	02105329	Snohomish Cascade Sector 7	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Underwood Gartland 9	05126772	Underwood Gartland 9	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Village At Outcrop Creek	98116556	Village At Outcrop Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Wellington Hills Bldg A	02103063	Wellington Hills Bldg A & B	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Woodinville Church of C	05116815	Woodinville Church of Christ	0%	0	0	0	1	0	1	0	0	1	3	0	0	6
Woodinville II Opus	00105784	Woodinville II Opus	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
		Totals Trips		0	0	0	1	0	1	0	0	1	3	0	0	

Predicted Volumes PM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Costco	03111038	Costco	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Luschenshire Park	96103582	Luschenshire Park	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
PSM Properties LLC	04121720	PSM Properties LLC	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Rockport/Bean Property	03109953	Rockport	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade S8	97110077	Snohomish Cascade S8	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Snohomish Cascade Secto	02105329	Snohomish Cascade Sector 7	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Tambark Estates	98109480	Tambark Estates	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Underwood Gartland 9	05126772	Underwood Gartland 9	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Village At Outcrop Creek	98116556	Village At Outcrop Creek	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Wellington Hills Bldg A	02103063	Wellington Hills Bldg A & B	100%	0	0	0	0	0	0	0	0	0	0	0	0	0
Woodinville Church of C	05116815	Woodinville Church of Christ	0%	0	0	0	1	0	1	0	0	1	2	0	0	5
		Totals Trips		0	0	0	1	0	1	0	0	1	2	0	0	

Snopipe2000 - Pipeline Forecast Report for Key Intersections

Key Intersection #: 510 N-S Road Name 75 AVE SE E-W Road Name 240 ST SE Count Date: 3/22/2012 ADT File #: 510

Predicted Volumes AM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Woodinville Church of C	05116815	Woodinville Church of Christ	0%	4	0	0	0	0	0	0	1	0	0	1	2	8
		Totals Trips		4	0	0	0	0	0	0	1	0	0	1	2	

Predicted Volumes PM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
Woodinville Church of C	05116815	Woodinville Church of Christ	0%	3	0	0	0	0	0	0	1	0	0	1	2	7
		Totals Trips		3	0	0	0	0	0	0	1	0	0	1	2	

Key Intersection #: 517 N-S Road Name 91 AVE SE E-W Road Name PARADISE LAKE RD Count Date: 6/12/2008 ADT File #: 517

Predicted Volumes AM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
King's Corner	06129913	King's Corner	0%	0	4	0	0	0	0	0	0	0	0	0	0	4
LDK Associates	09103891	LDK Associates	0%	0	0	0	0	0	0	2	0	0	0	0	1	3
Scandia Business Park	10103573	Scandia Business Park	0%	1	0	5	0	6	0	40	0	0	0	0	7	59
		Totals Trips		1	4	5	0	6	0	42	0	0	0	0	8	

Predicted Volumes PM

Sub Dev. Name	PFN #	Project Name	% Occupied	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	Total
King's Corner	06129913	King's Corner	0%	0	1	0	0	4	0	0	0	0	0	0	0	5
LDK Associates	09103891	LDK Associates	0%	1	0	2	0	0	0	1	0	0	0	0	0	4
Scandia Business Park	10103573	Scandia Business Park	0%	7	6	43	0	0	0	5	0	0	0	0	1	62
		Totals Trips		8	7	45	0	4	0	6	0	0	0	0	1	

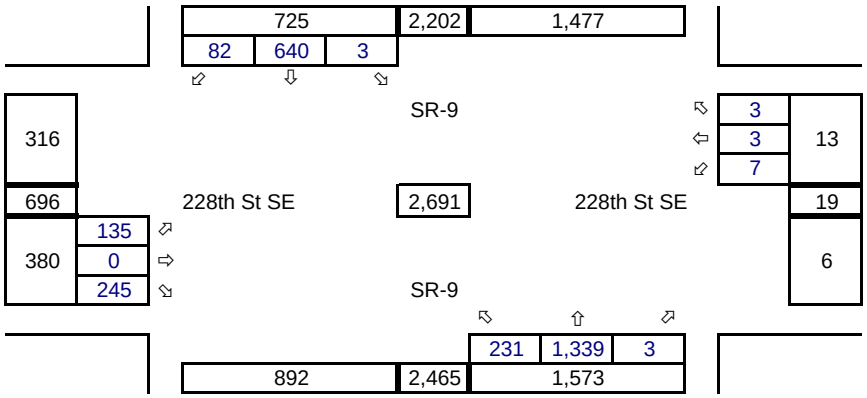
PM Turning Movement Volumes

Synchro ID: 1

Existing
Average Weekday
PM Peak Hour

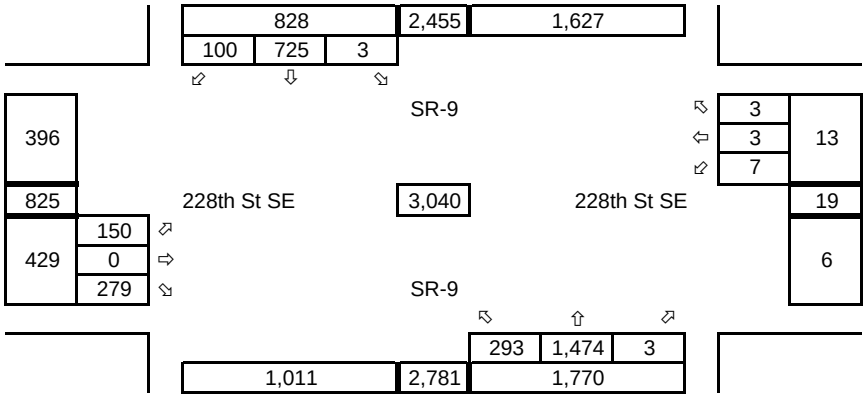
Year: **3/17/11**

Data Source: TDG

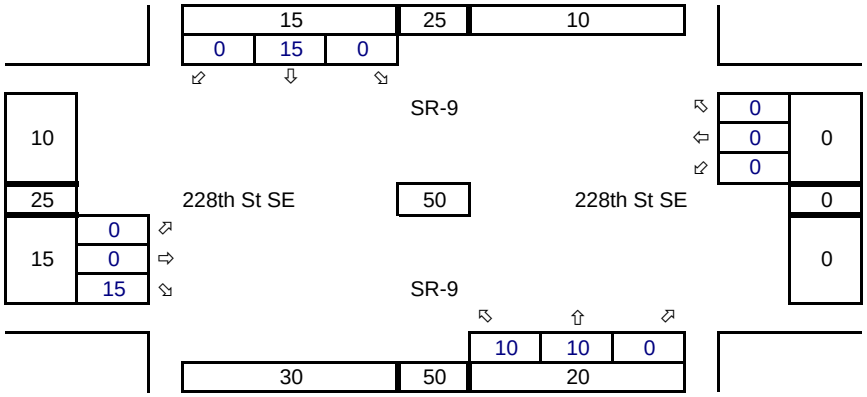


Future without Project
Average Weekday
PM Peak Hour

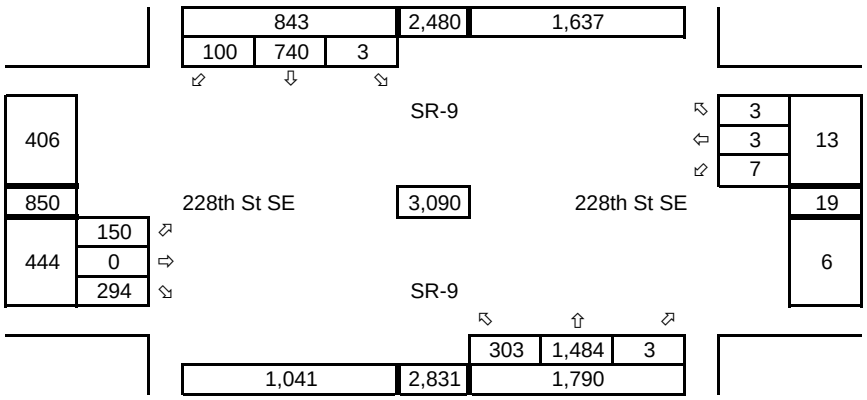
Year: 2019
Growth Rate = 0.0%
Years of Growth = 8
Total Growth = 1.0000



Total Project Trips
Average Weekday
PM Peak Hour

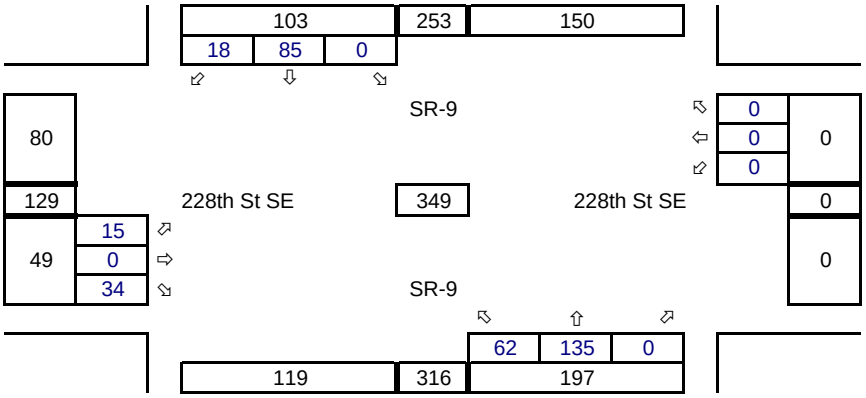


Future with Project
Average Weekday
PM Peak Hour

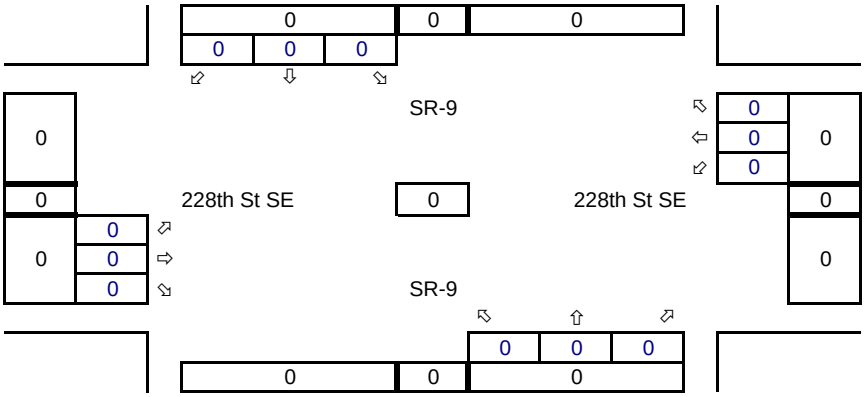


Total Pipeline Project Trips
Average Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Average Weekday
PM Peak Hour

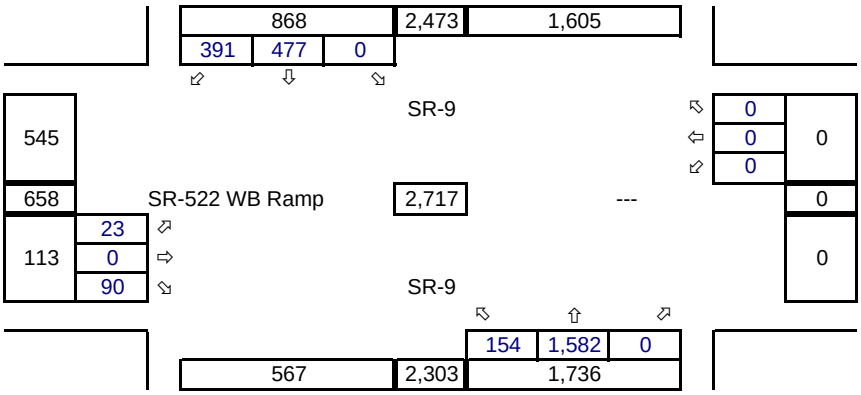


Synchro ID: 2

Existing
Average Weekday
PM Peak Hour

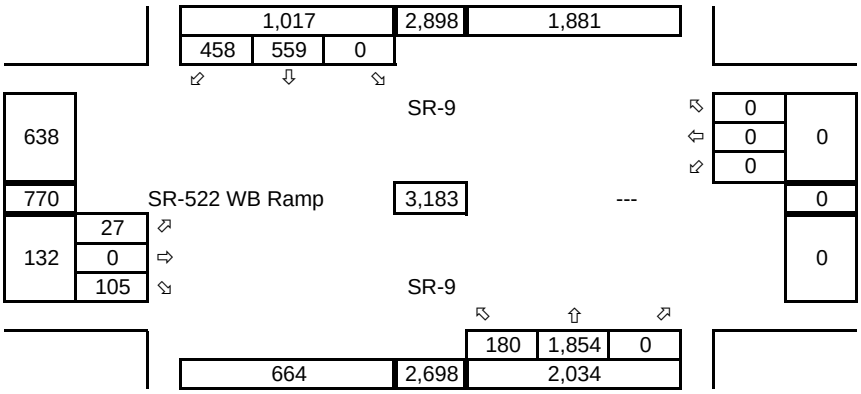
Year: **3/17/11**

Data Source: TDG

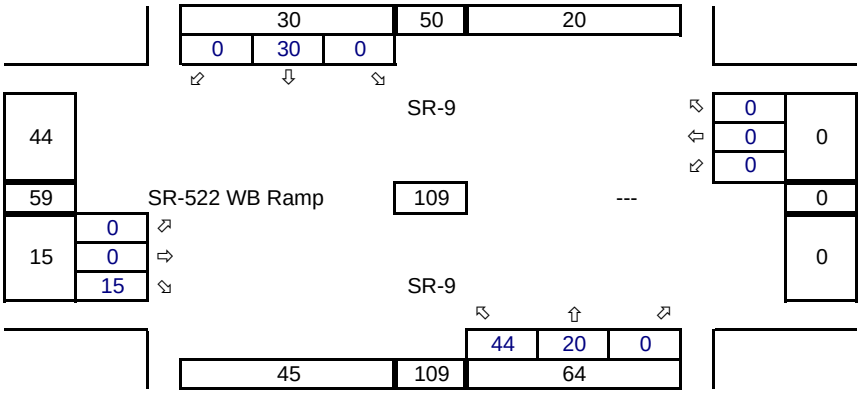


Future without Project
Average Weekday
PM Peak Hour

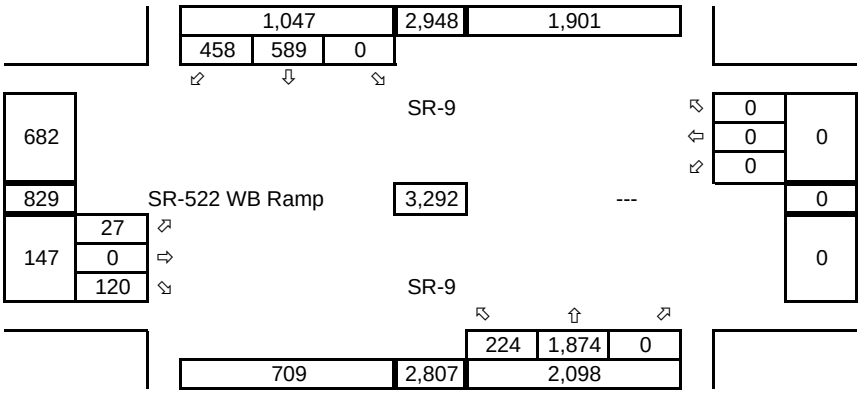
Year: 2019
Growth Rate = 2.0%
Years of Growth = 8
Total Growth = 1.1717



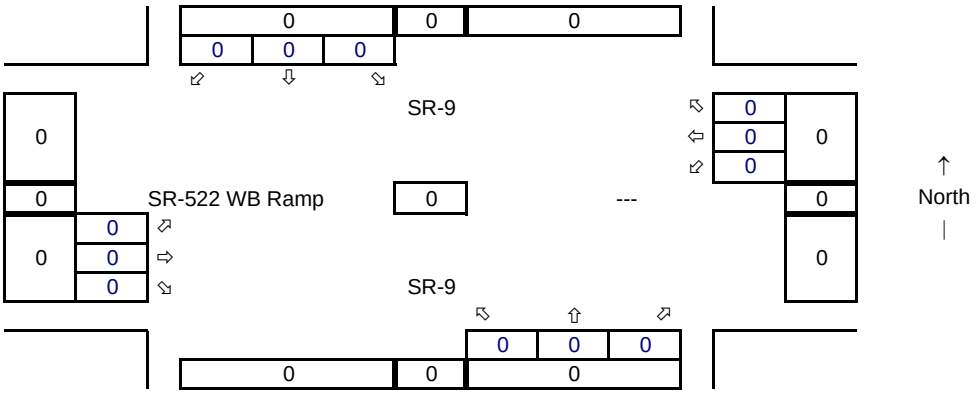
Total Project Trips
Average Weekday
PM Peak Hour



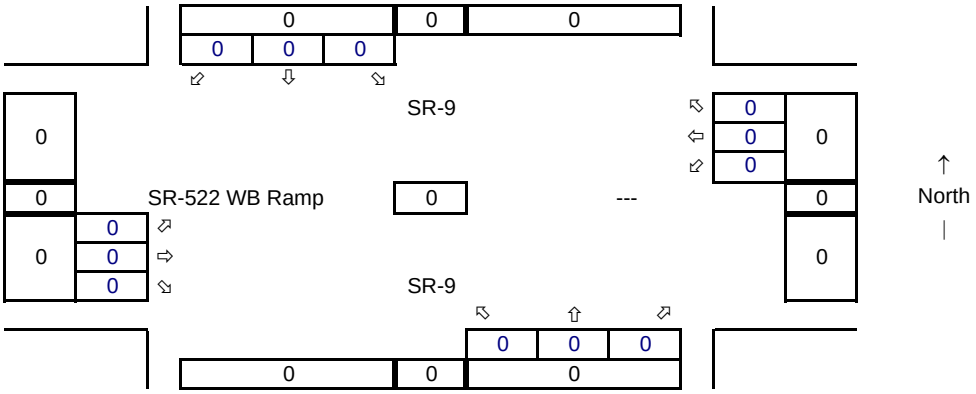
Future with Project
Average Weekday
PM Peak Hour



Total Pipeline Project Trips
Average Weekday
PM Peak Hour



Pass-By Project Trips
Average Weekday
PM Peak Hour

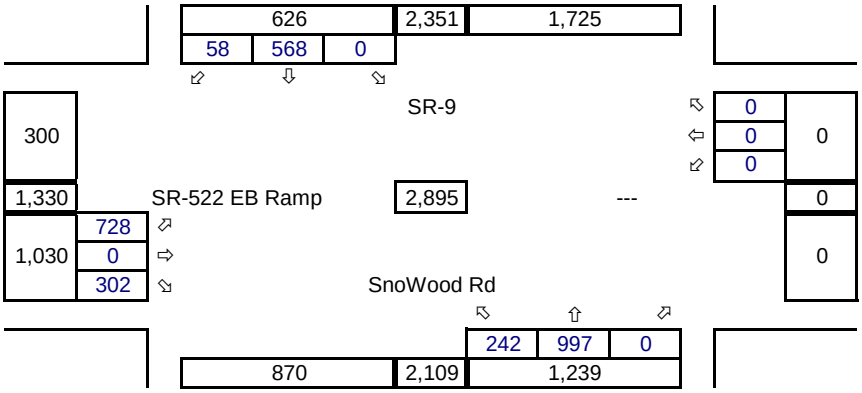


Synchro ID: 3

Existing
Average Weekday
PM Peak Hour

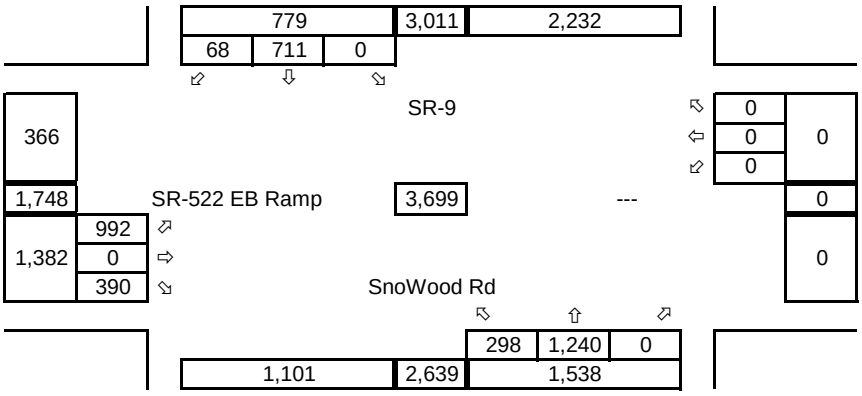
Year: **6/1/11**

Data Source: WSDOT

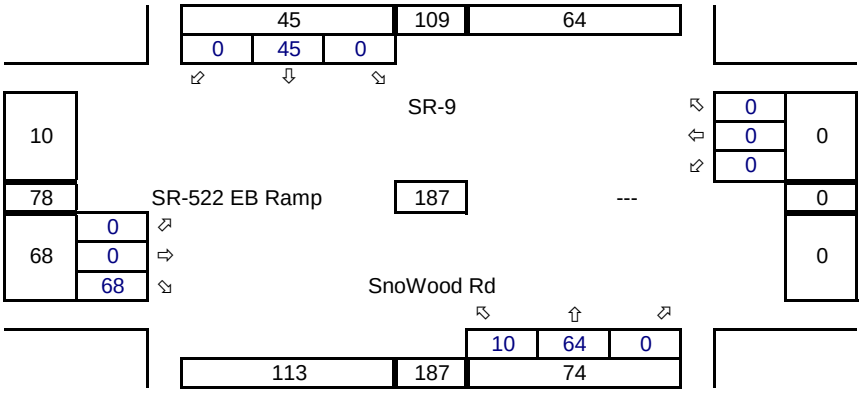


Future without Project
Average Weekday
PM Peak Hour

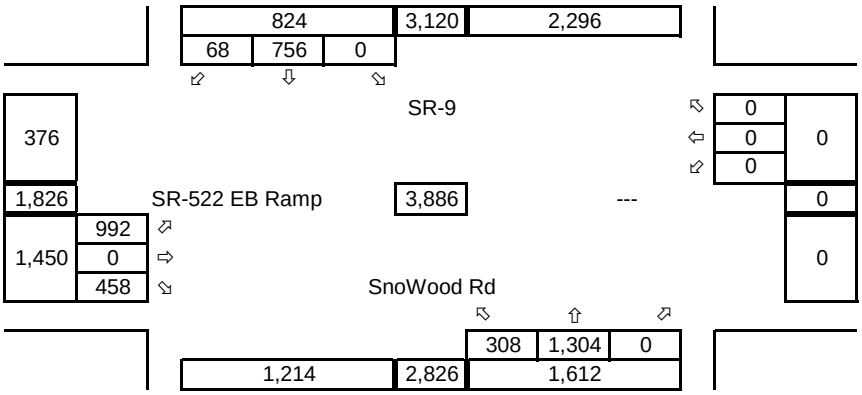
Year: 2019
Growth Rate = 0.0%
Years of Growth = 8
Total Growth = 1.0000



Total Project Trips
Average Weekday
PM Peak Hour

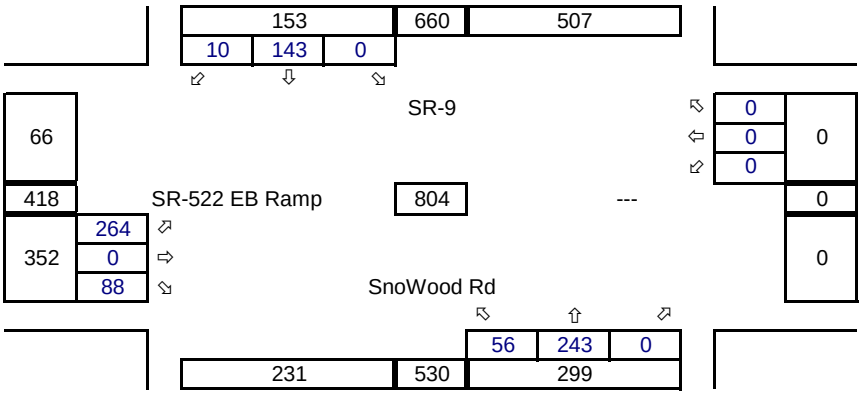


Future with Project
Average Weekday
PM Peak Hour



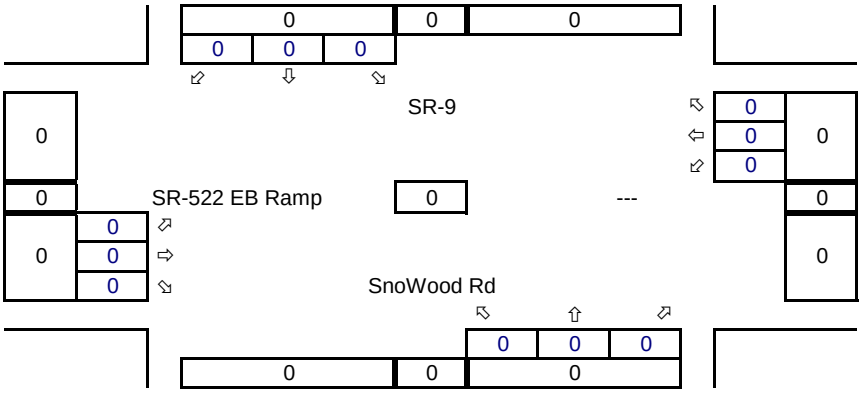
Total Pipeline Project Trips
Average Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



North

Pass-By Project Trips
Average Weekday
PM Peak Hour



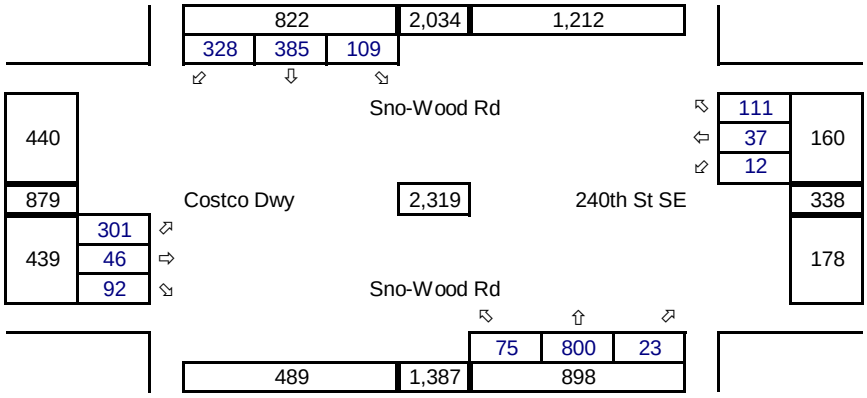
North

Synchro ID: 4

Existing
Average Weekday
PM Peak Hour

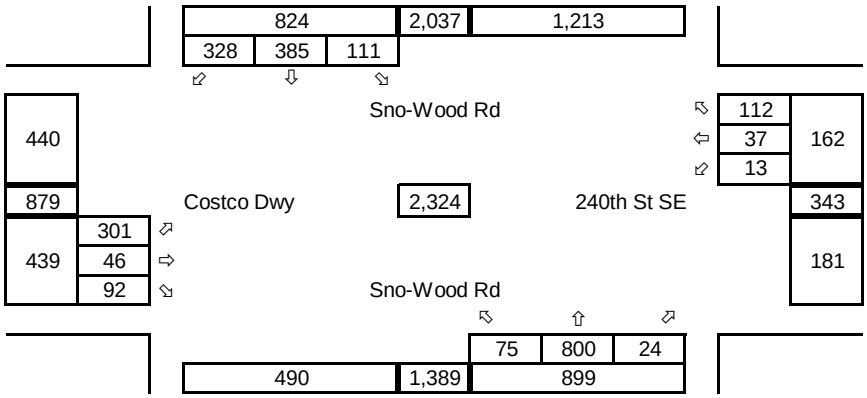
Year: **3/22/12**

Data Source: Sno County

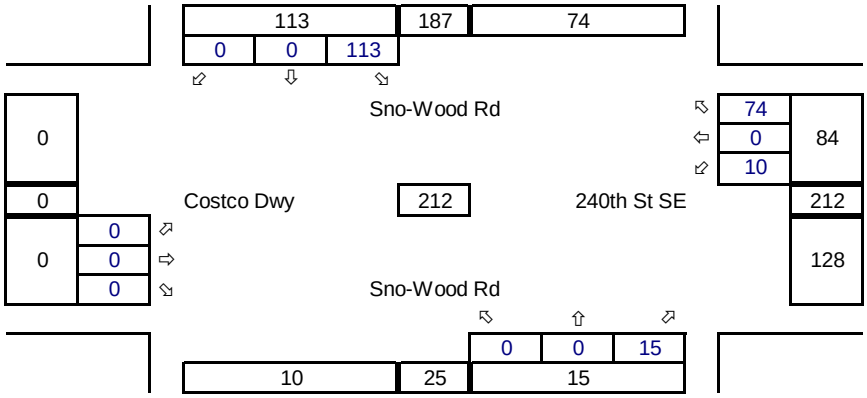


Future without Project
Average Weekday
PM Peak Hour

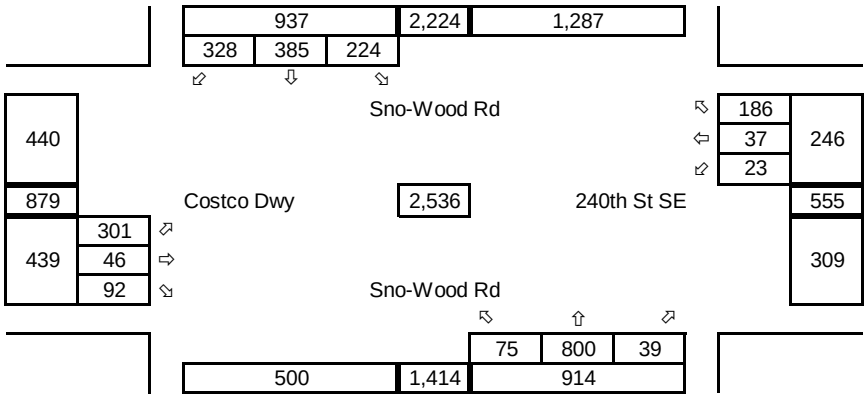
Year: 2019
Growth Rate = 0.0%
Years of Growth = 7
Total Growth = 1.0000



Total Project Trips
Average Weekday
PM Peak Hour

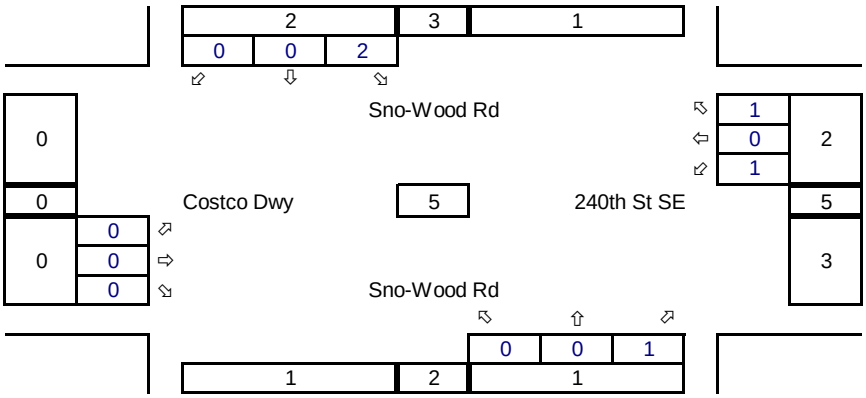


Future with Project
Average Weekday
PM Peak Hour

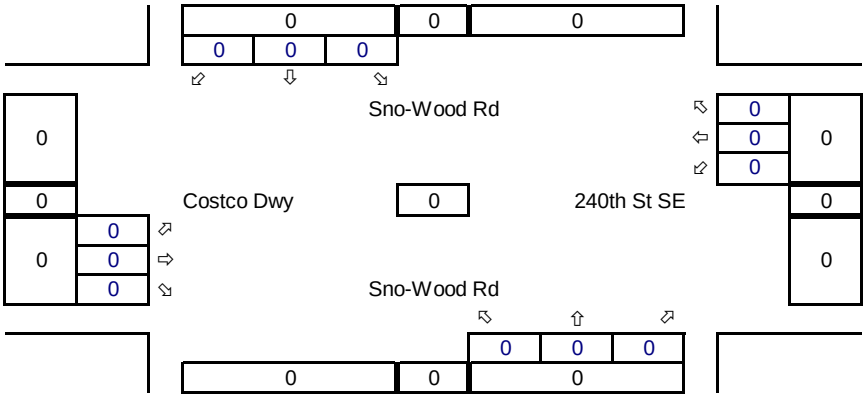


Total Pipeline Project Trips
Average Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Average Weekday
PM Peak Hour

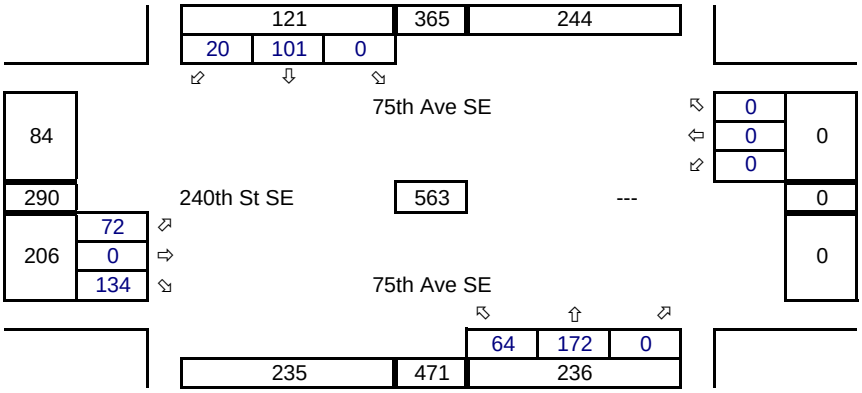


Synchro ID: 5

Existing
Average Weekday
PM Peak Hour

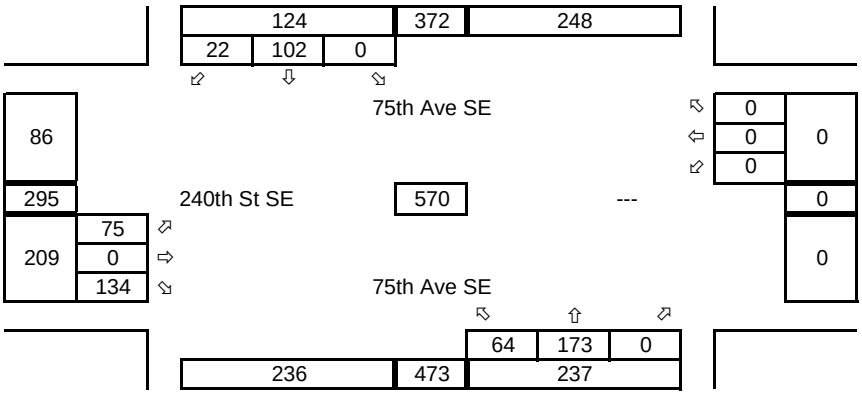
Year: **3/27/12**

Data Source: Sno County

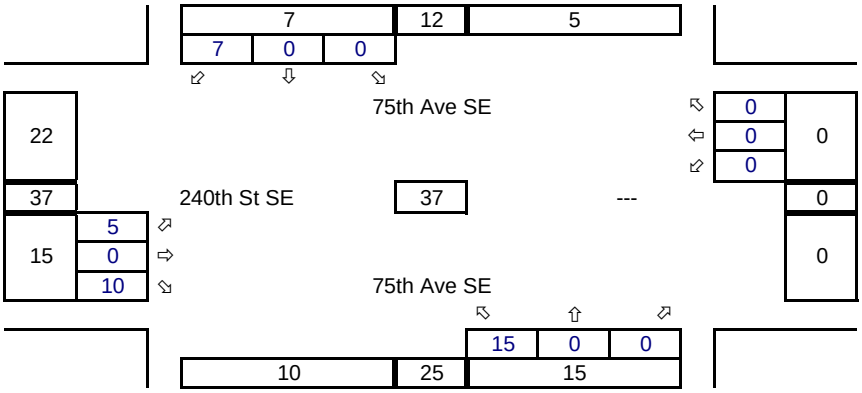


Future without Project
Average Weekday
PM Peak Hour

Year: 2019
Growth Rate = 0.0%
Years of Growth = 7
Total Growth = 1.0000



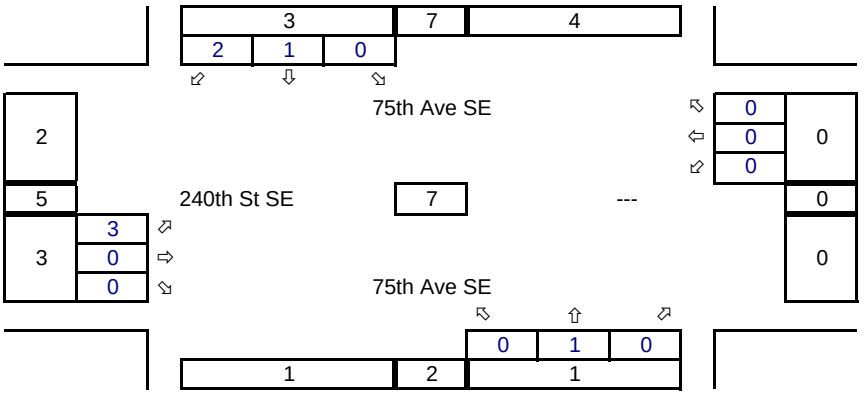
Total Project Trips
Average Weekday
PM Peak Hour



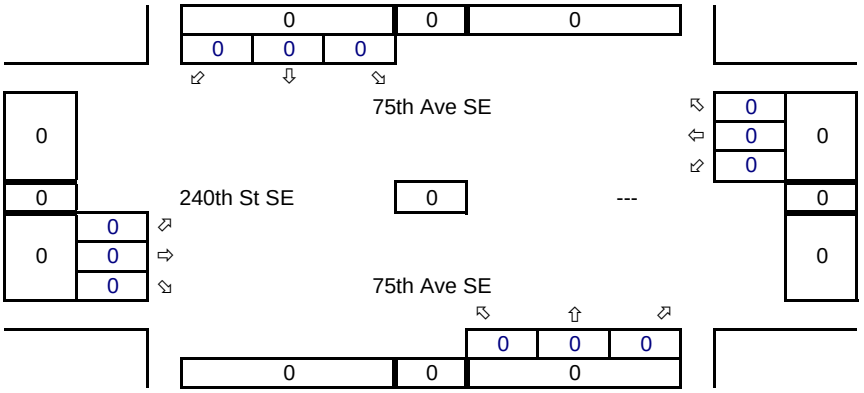
Future with Project
Average Weekday
PM Peak Hour

Total Pipeline Project Trips
Average Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Average Weekday
PM Peak Hour

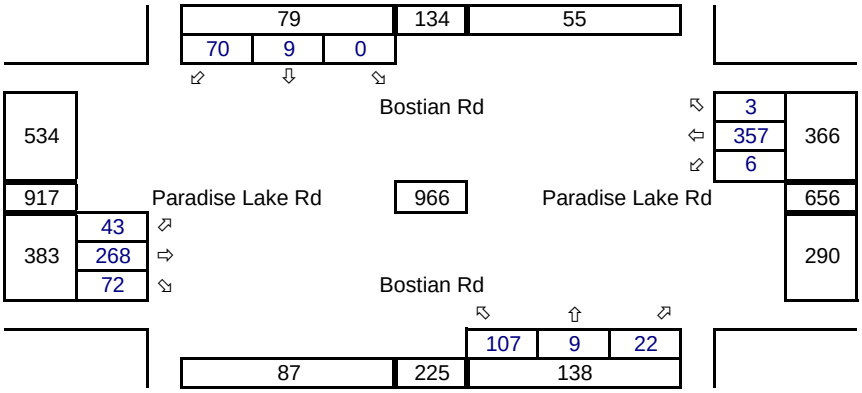


Synchro ID: 6

Existing
Average Weekday
PM Peak Hour

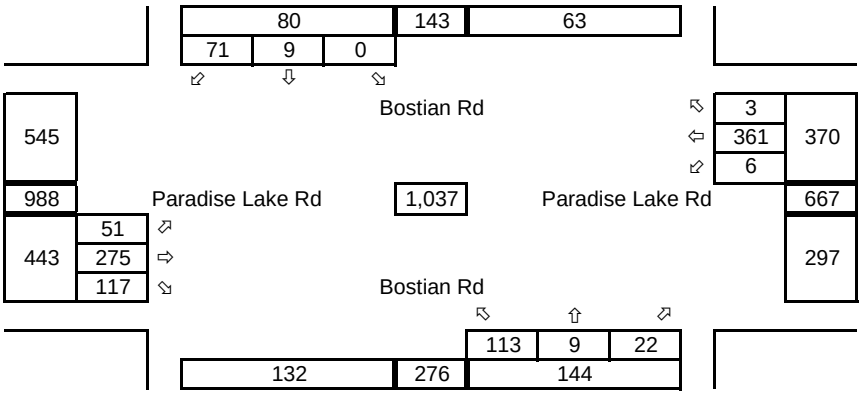
Year: **6/13/12**

Data Source: TDG

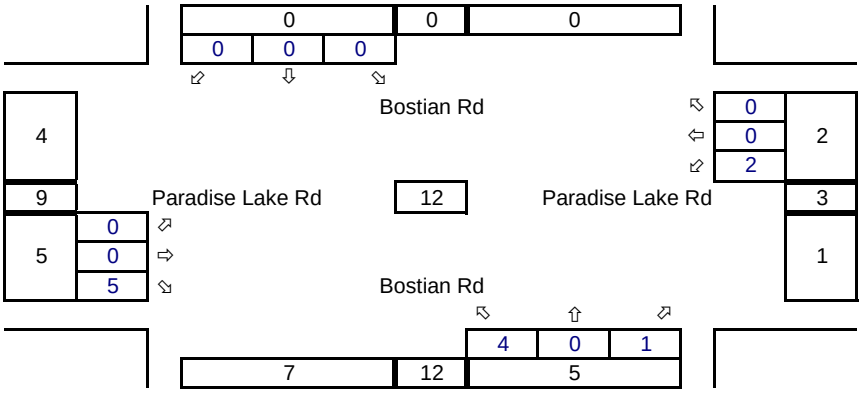


Future without Project
Average Weekday
PM Peak Hour

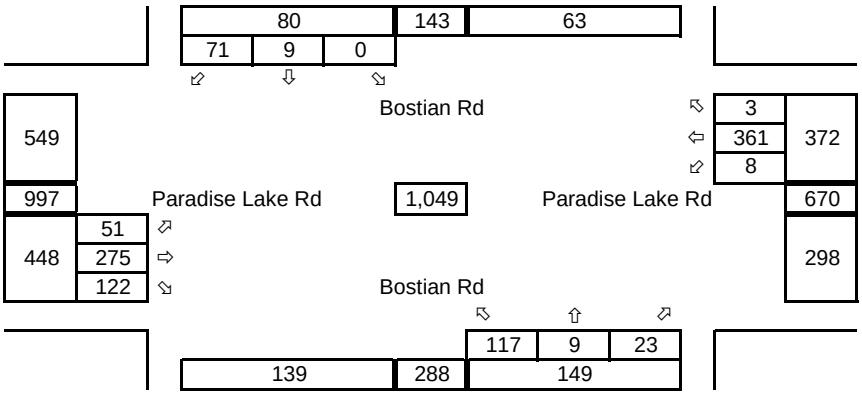
Year: 2019
Growth Rate = 0.0%
Years of Growth = 7
Total Growth = 1.0000



Total Project Trips
Average Weekday
PM Peak Hour

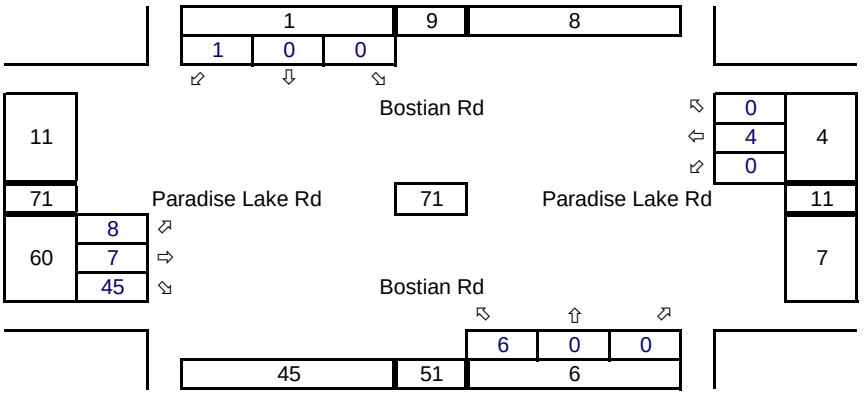


Future with Project
Average Weekday
PM Peak Hour

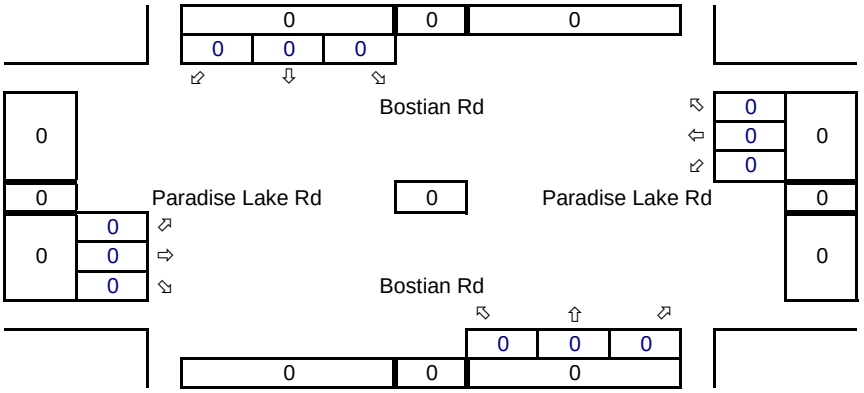


Total Pipeline Project Trips
Average Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Average Weekday
PM Peak Hour

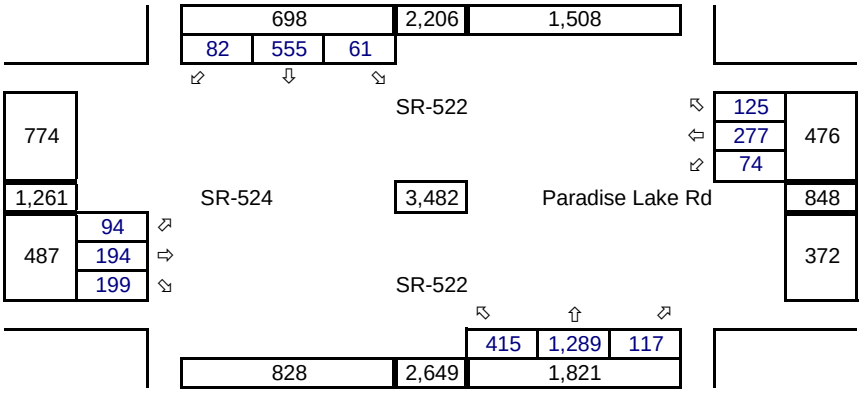


Synchro ID: 7

Existing
Average Weekday
PM Peak Hour

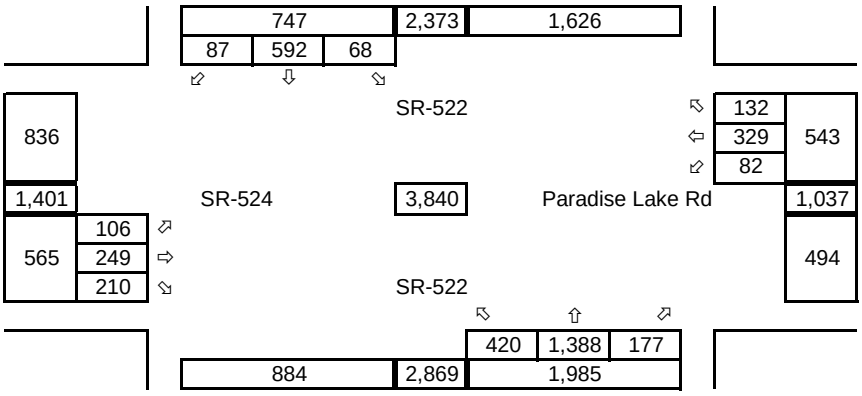
Year: **6/28/12**

Data Source: TDG

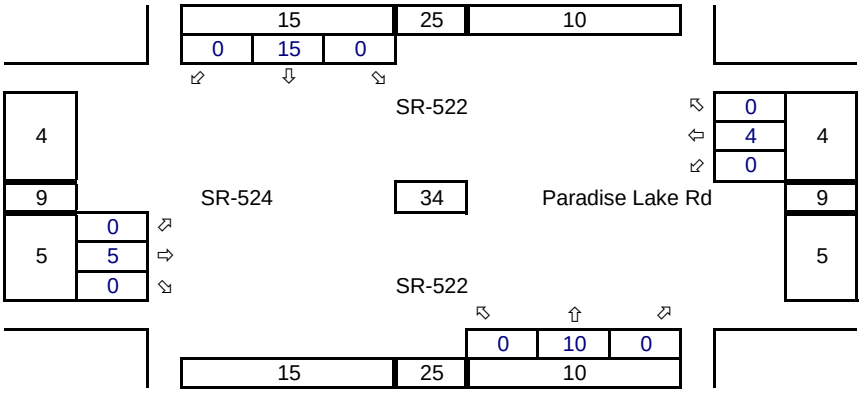


Future without Project
Average Weekday
PM Peak Hour

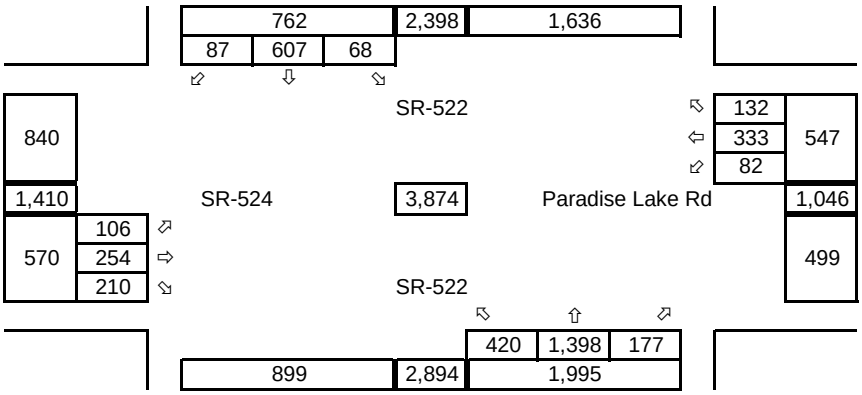
Year: 2019
Growth Rate = 0.0%
Years of Growth = 7
Total Growth = 1.0000



Total Project Trips
Average Weekday
PM Peak Hour

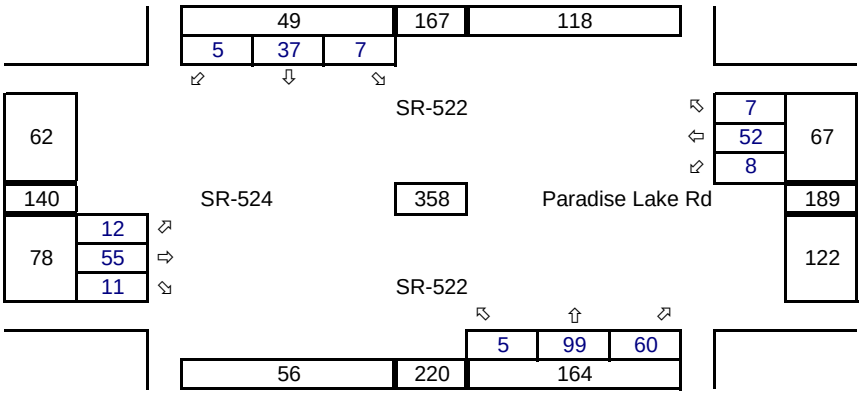


Future with Project
Average Weekday
PM Peak Hour

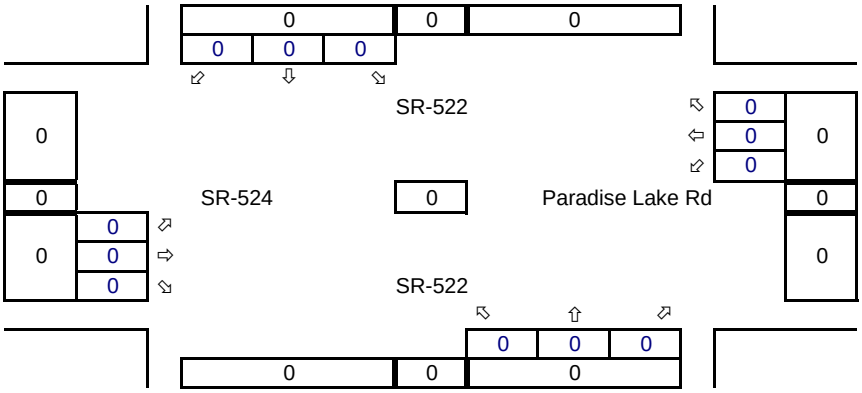


Total Pipeline Project Trips
Average Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Average Weekday
PM Peak Hour

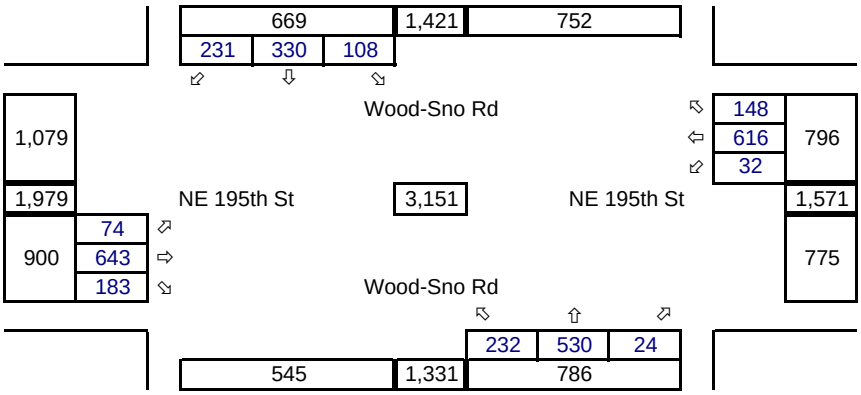


Synchro ID: 8

Existing
Average Weekday
PM Peak Hour

Year: **3/27/12**

Data Source: ATD

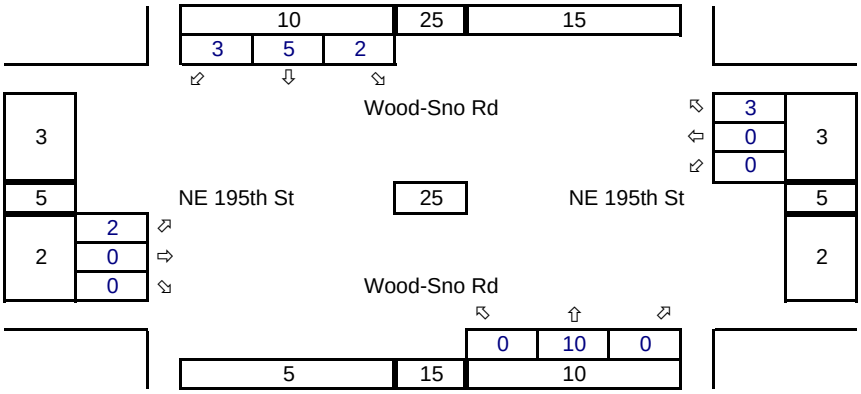


Future without Project
Average Weekday
PM Peak Hour

Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487

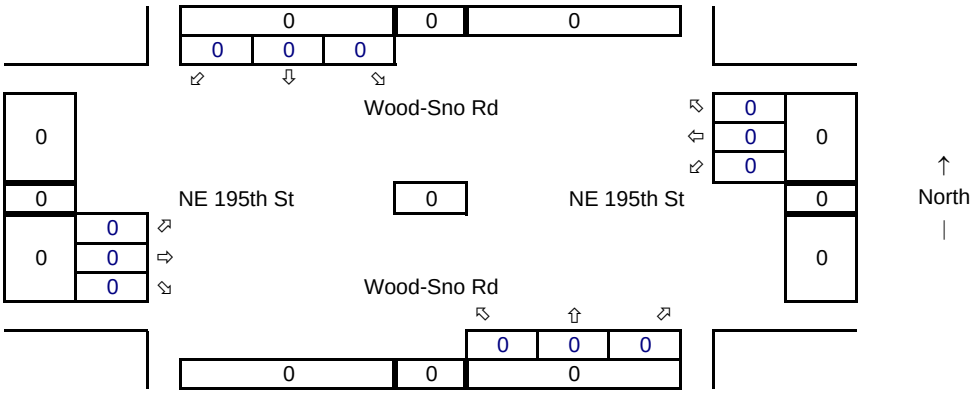
Total Project Trips
Average Weekday
PM Peak Hour

Based on Existing
Intersection Splits

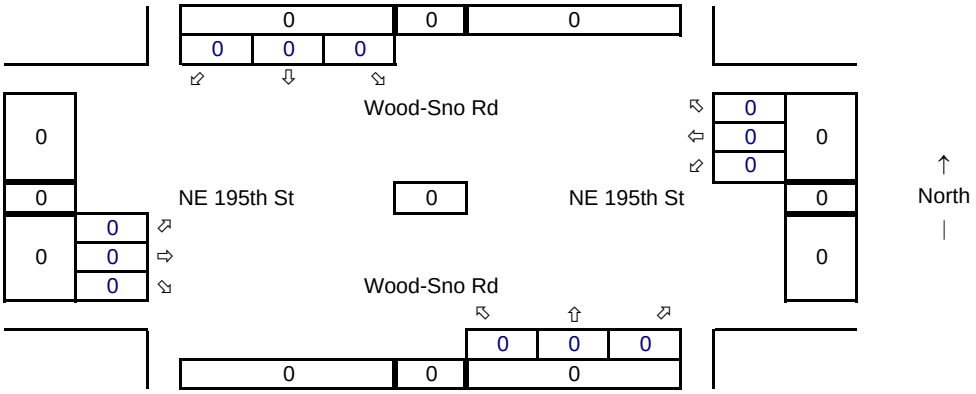


Future with Project
Average Weekday
PM Peak Hour

Total Pipeline Project Trips
Average Weekday
PM Peak Hour



Pass-By Project Trips
Average Weekday
PM Peak Hour

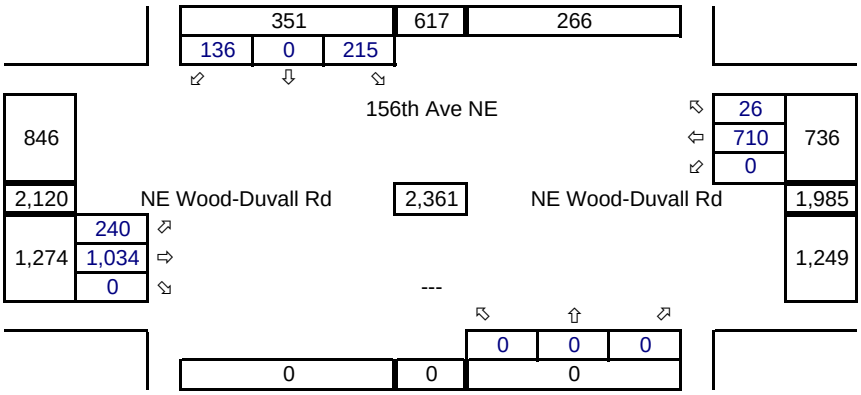


Synchro ID: 9

Existing
Average Weekday
PM Peak Hour

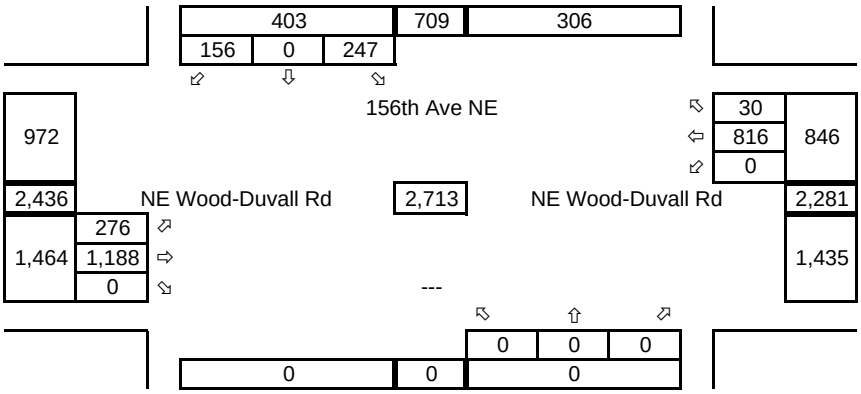
Year: **8/21/12**

Data Source: TDG

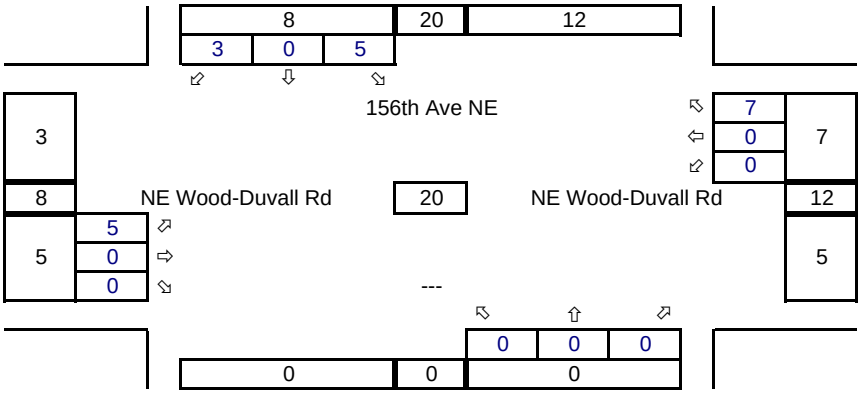


Future without Project
Average Weekday
PM Peak Hour

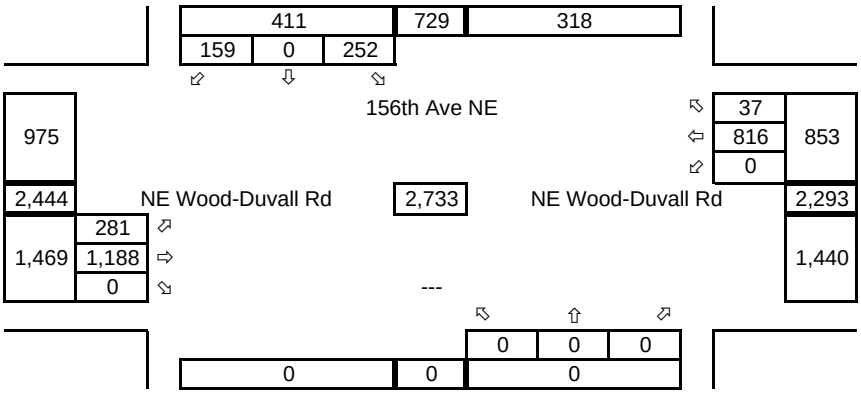
Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487



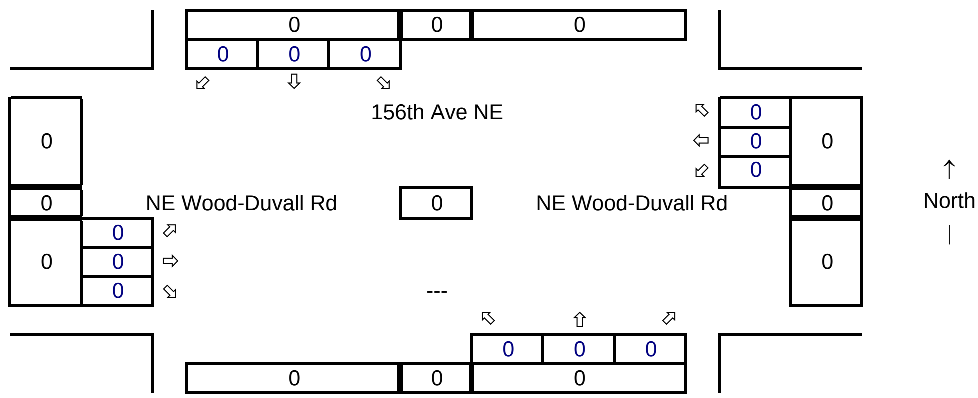
Total Project Trips
Average Weekday
PM Peak Hour



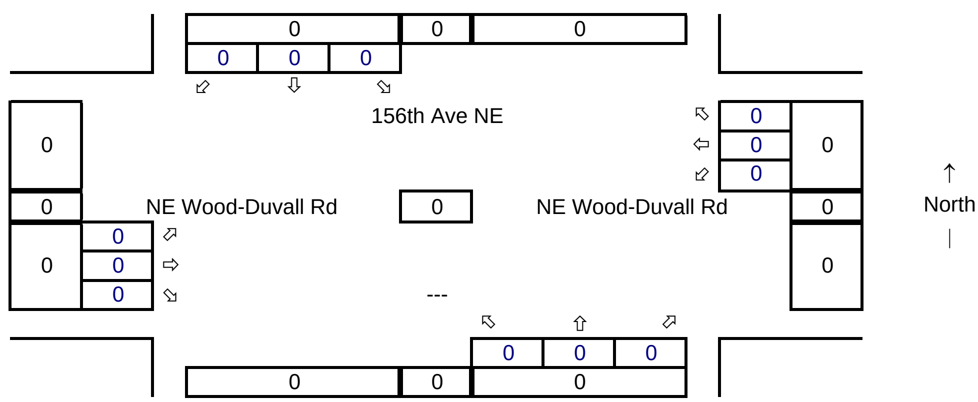
Future with Project
Average Weekday
PM Peak Hour



Total Pipeline Project Trips
Average Weekday
PM Peak Hour



Pass-By Project Trips
Average Weekday
PM Peak Hour



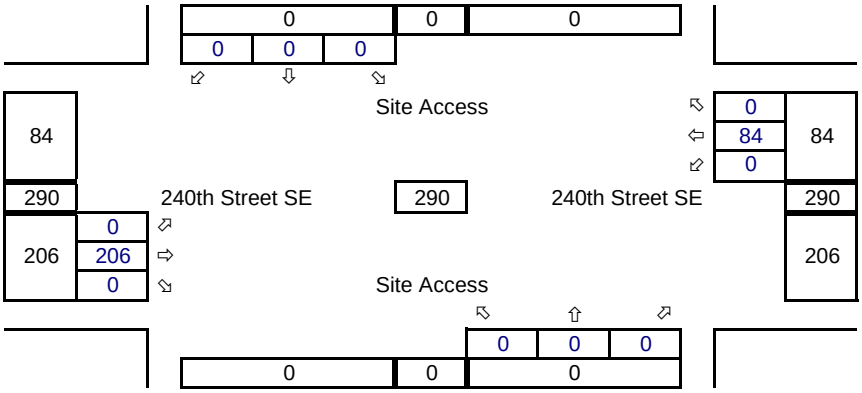
Synchro ID: 10

Existing
Average Weekday
PM Peak Hour

Year: **3/27/12**

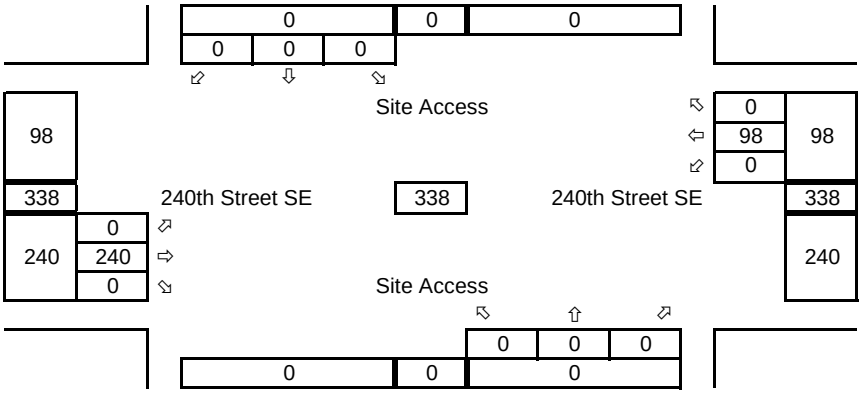
Data Source: Sno County

Extrapolated from:
75th Ave SE at 240th St SE



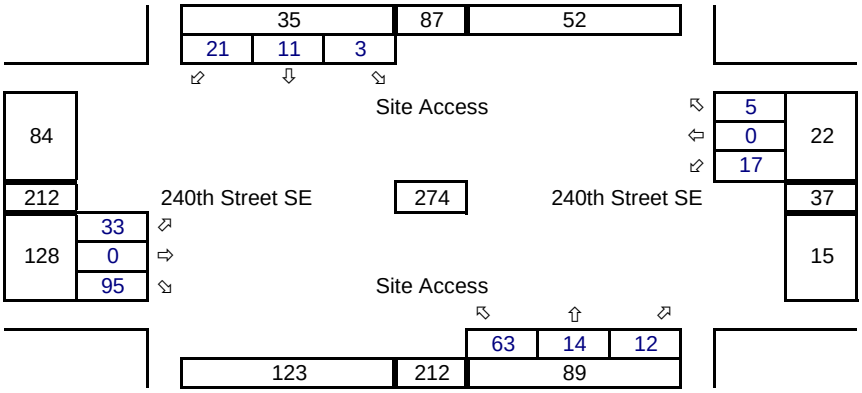
Future without Project
Average Weekday
PM Peak Hour

Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487

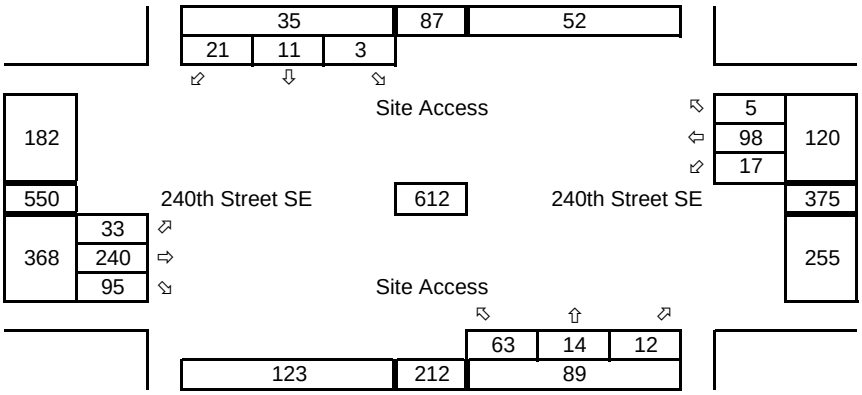


Total Project Trips
Average Weekday
PM Peak Hour

Dummy Trips Golf
Northbound 14
Southbound 11

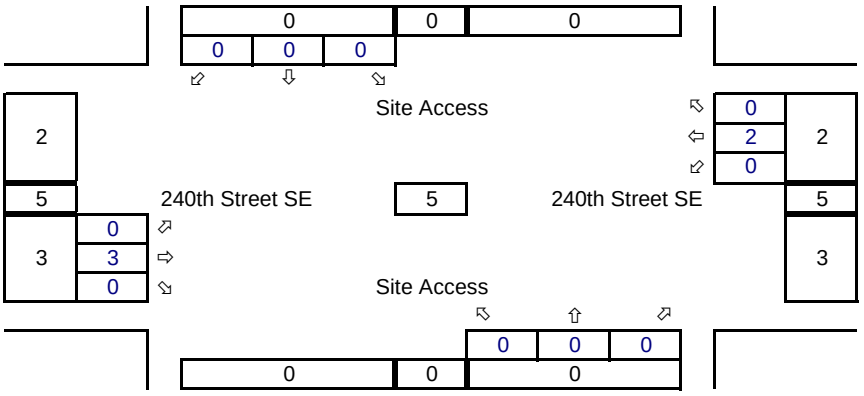


Future with Project
Average Weekday
PM Peak Hour

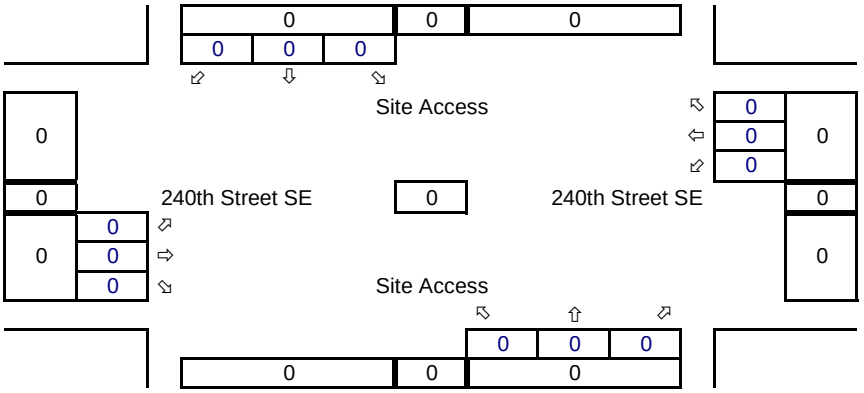


Total Pipeline Project Trips
Average Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Average Weekday
PM Peak Hour



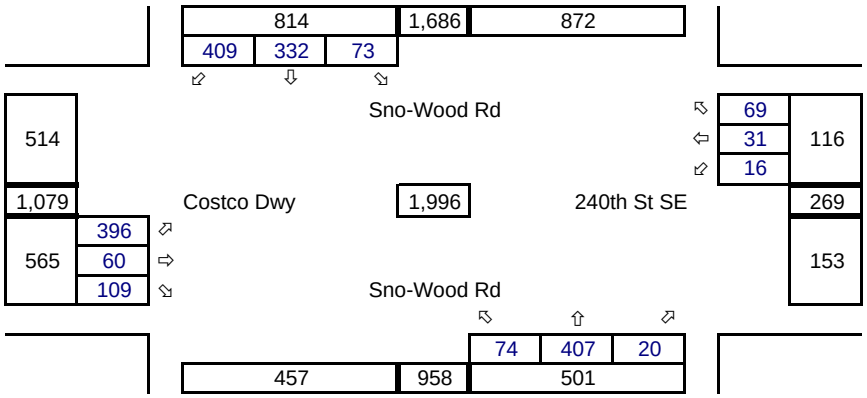
Saturday Turning Movement Volumes

Synchro ID: 4

Existing
Average Saturday
PM Peak Hour

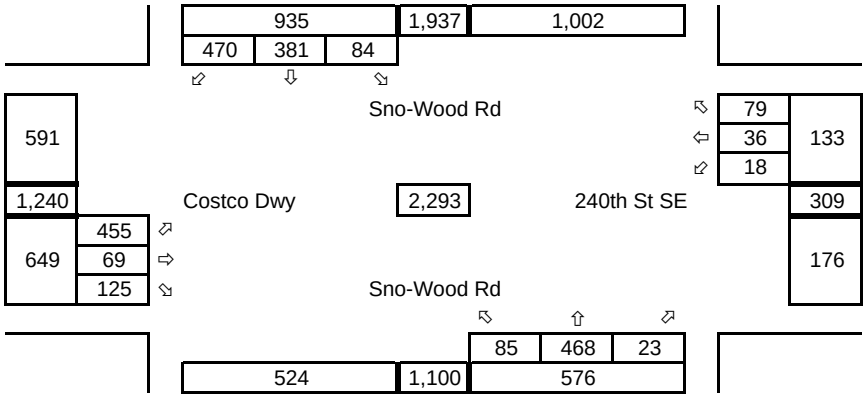
Year: **4/14/12**

Data Source: Sno County

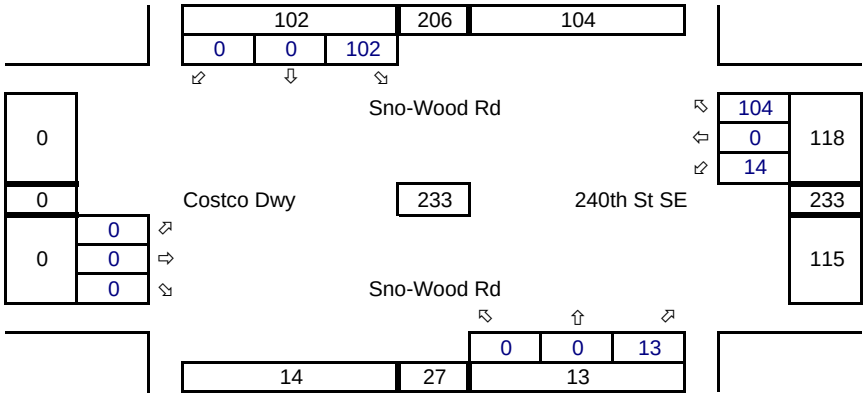


Future without Project
Average Saturday
PM Peak Hour

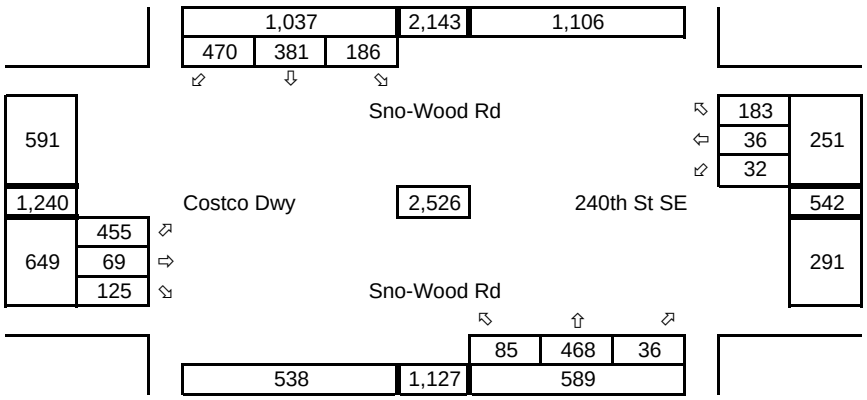
Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487



Total Project Trips
Average Saturday
PM Peak Hour



Future with Project
Average Saturday
PM Peak Hour

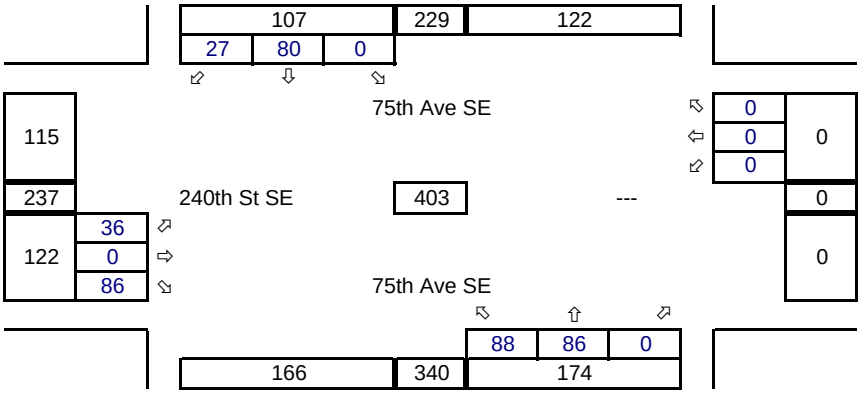


Synchro ID: 5

Existing
Average Saturday
PM Peak Hour

Year: **6/23/12**

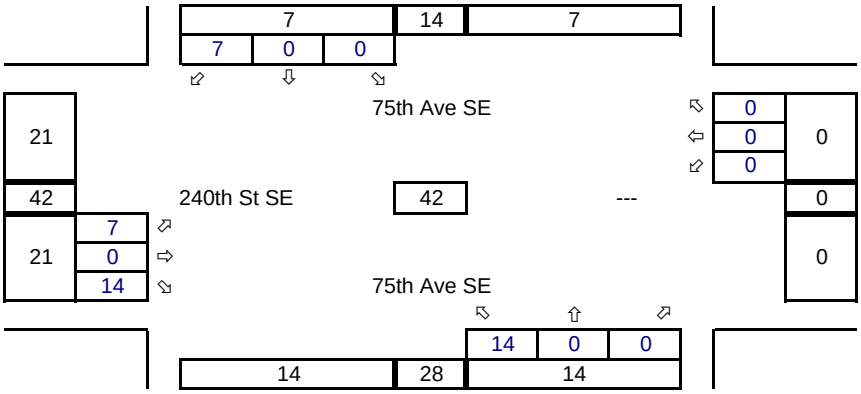
Data Source: TDG



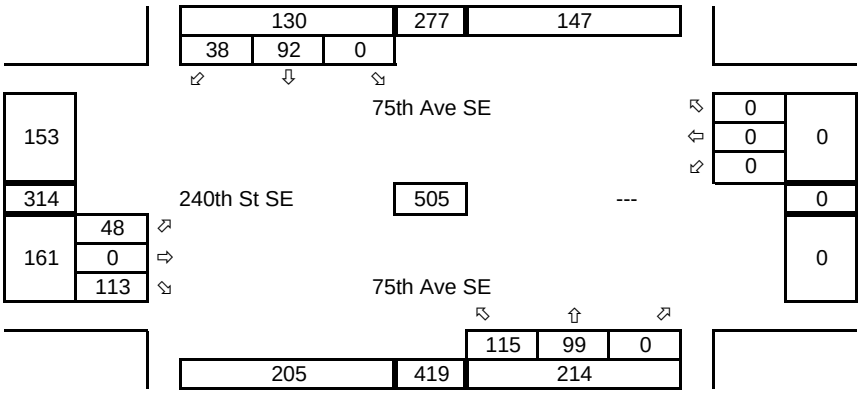
Future without Project
Average Saturday
PM Peak Hour

Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487

Total Project Trips
Average Saturday
PM Peak Hour



Future with Project
Average Saturday
PM Peak Hour

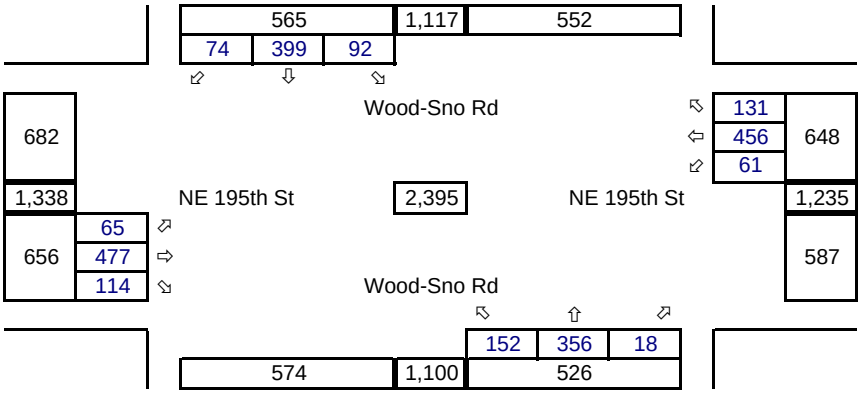


Synchro ID: 8

Existing
Average Saturday
PM Peak Hour

Year: **8/18/12**

Data Source: TDG

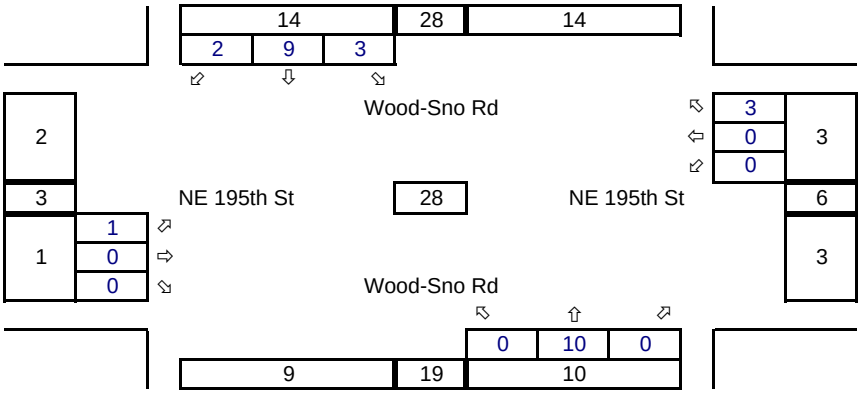


Future without Project
Average Saturday
PM Peak Hour

Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487

Total Project Trips
Average Saturday
PM Peak Hour

Based on Existing
Intersection Splits



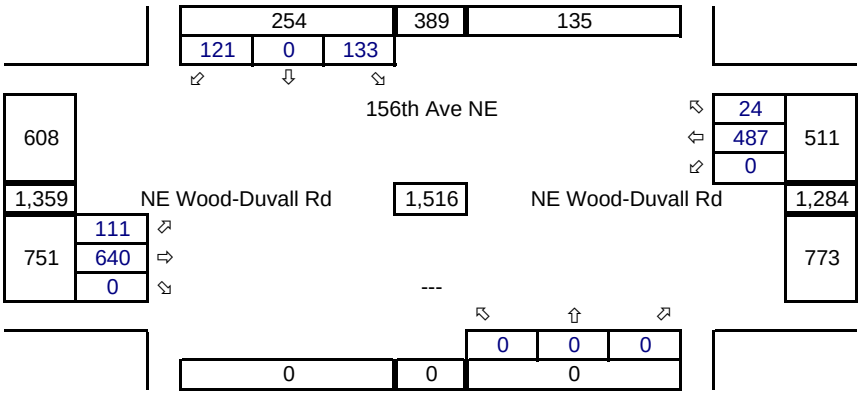
Future with Project
Average Saturday
PM Peak Hour

Synchro ID: 9

Existing
Average Saturday
PM Peak Hour

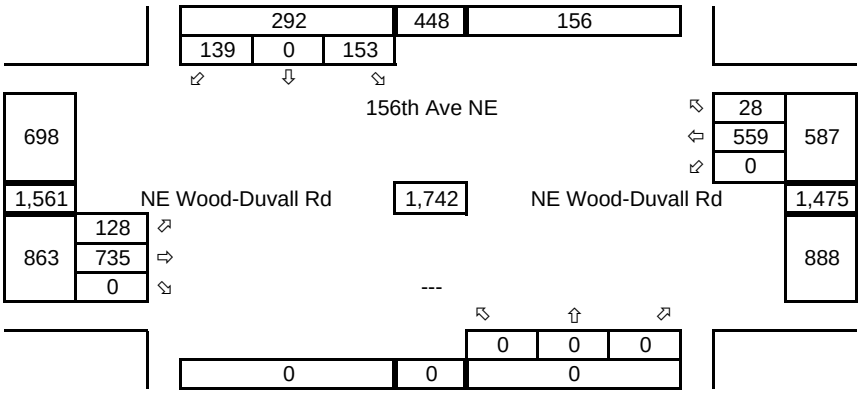
Year: **8/25/12**

Data Source: TDG

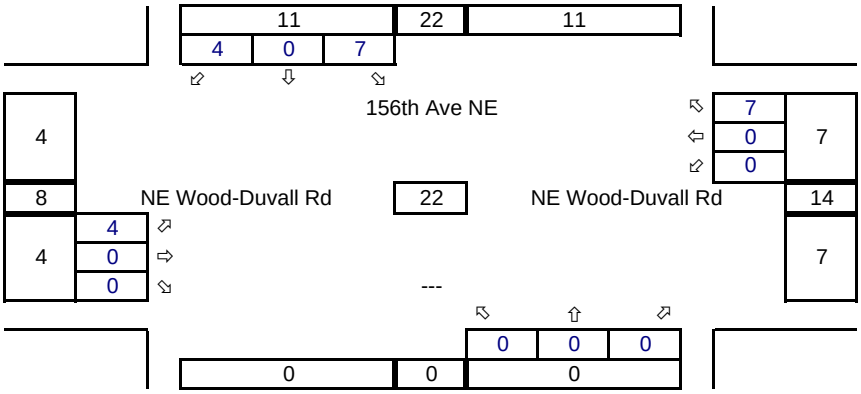


Future without Project
Average Saturday
PM Peak Hour

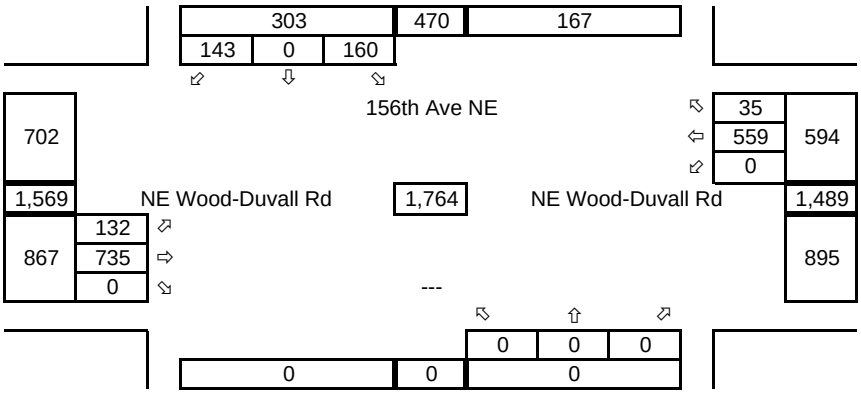
Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487



Total Project Trips
Average Saturday
PM Peak Hour



Future with Project
Average Saturday
PM Peak Hour



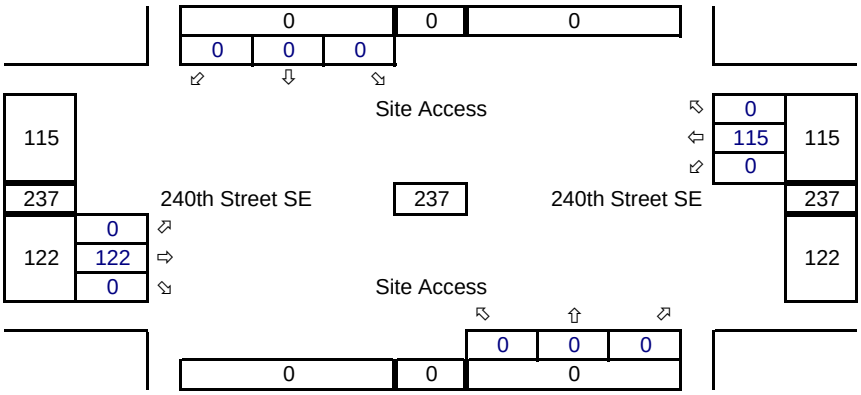
Synchro ID: 10

Existing
Average Saturday
PM Peak Hour

Year: **3/27/12**

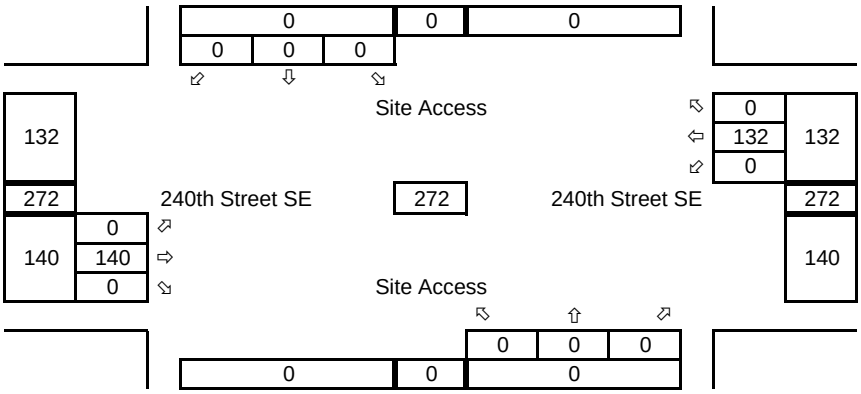
Data Source: Sno County

Extrapolated from:
75th Ave SE at 240th St SE



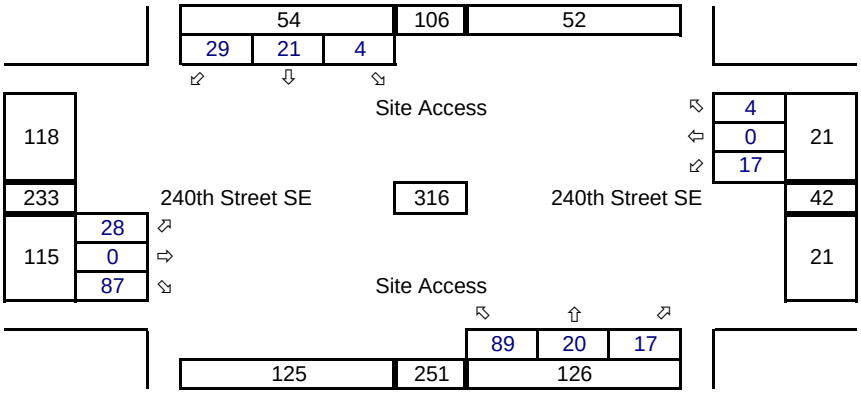
Future without Project
Average Saturday
PM Peak Hour

Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487

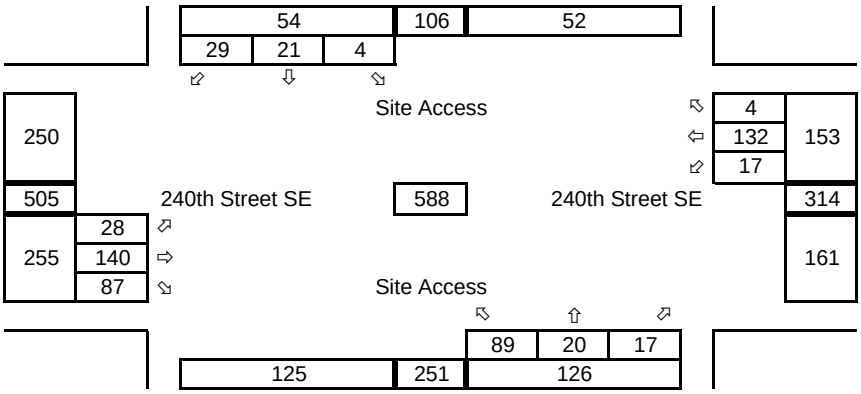


Total Project Trips
Average Saturday
PM Peak Hour

Dummy Trips Golf
Northbound 20
Southbound 21



Future with Project
Average Saturday
PM Peak Hour



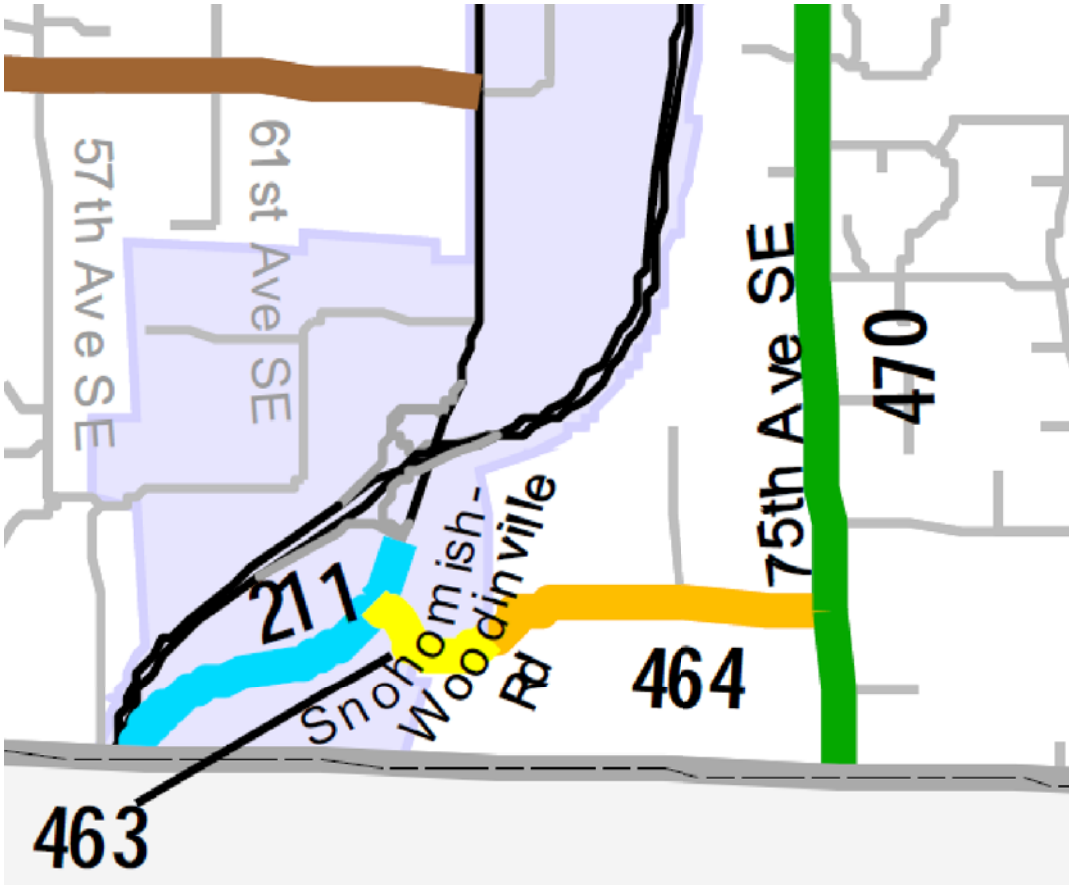
Existing Arterial Travel Times

Snohomish County Arterial Units

0 1 2 3 4 5 Miles

Key to Features:

TSA Boundaries
Arterial Roads
County Roads
City Boundaries
Incorporated Cities
Urban Growth Areas
Waterbodies
Proposed Arterial Units (Various Colors)



COMPUTATION OF ARTERIAL LEVEL-OF-SERVICE WORK SHEET

ARTERIAL UNIT # : 463
AU Name : 240th Street SE
From : SR-9
To : 75th Avenue SE (Bostian Road)

CATEGORY : 1 - URBAN **CLASS** 2

DATE : 6/13/2012

DIRECTION : EB PM
PEAK HOUR IS: 05:11 - 06:01 RUNS 7 - 12

PREPARED BY: SN
CHECKED BY: CN

LOS		AVG TRAVEL SPEED (MPH)
A	>	35
B	>	28
C	>	22
D	>	17
E	>	13
F	<=	13

CROSS STREET	SEGMT DIST. B/W (FT)	M.P. Acc. (MILE)	RUN #7 TRAVEL Acc. B/W (SEC)	RUN #7 DELAY (SEC)	RUN #8 TRAVEL Acc. B/W (SEC)	RUN #8 DELAY (SEC)	RUN #9 TRAVEL Acc. B/W (SEC)	RUN #9 DELAY (SEC)	RUN #10 TRAVEL Acc. B/W (SEC)	RUN #10 DELAY (SEC)	RUN #11 TRAVEL Acc. B/W (SEC)	RUN #11 DELAY (SEC)	RUN #12 TRAVEL Acc. B/W (SEC)	RUN #12 DELAY (SEC)	AVG. TRAVEL TIME B/W (SEC)	AVG. I/S DELAY (SEC)	AVG. RUNNING TIME B/W (SEC)	AVG. ART'L SPEED (MPH)	AVG. ART'L "LOS"
1: SR-9	1109	0.000	0 35		0 37		0 35		0 32		0 35		0 35		35		35		
2: 0.21 miles e/o SR-9	2693	0.210	35 78	0	37 76	0	35 79	0	32 79	0	35 75	0	35 84	0	79	0	74		
3: 75th venue SE (Bostian Road)	1478	0.720	113 33	5	113 35	3	114 26	5	111 25	3	110 27	3	119 27	7	29	4	29		
4: Extra run time to extend Urban Arterial to 1 Mile	0	1.000	146 0	0	148 0	0	140 0	0	136 0	0	137 0	0	146 0	0	0	0	0		
5	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
6	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
7	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
8	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
9	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
10	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
11		0.000	0	0	0	0	0	0	0	0	0	0	0	0		0			
TOTAL :	5280	**1.000**	146	5	148	3	140	5	136	3	137	3	146	7	142	4	138	**25.32**	**C**

COMPUTATION OF ARTERIAL LEVEL-OF-SERVICE WORK SHEET

ARTERIAL UNIT # : 463
AU Name : 240th Street SE
From : 75th Avenue SE (Bostian Road)
To : SR-9

CATEGORY : 1 - URBAN **CLASS** 2

DATE : 6/13/2012

DIRECTION : WB PM
PEAK HOUR IS: 04:30 - 05:25 RUNS 3 - 8

PREPARED BY: SN
CHECKED BY: CN

LOS		AVG TRAVEL SPEED (MPH)
A	>	35
B	>	28
C	>	22
D	>	17
E	>	13
F	<=	13

CROSS STREET	SEGMT DIST. B/W (FT)	M.P. Acc. (MILE)	RUN #3 TRAVEL Acc. B/W (SEC)	RUN #3 DELAY (SEC)	RUN #4 TRAVEL Acc. B/W (SEC)	RUN #4 DELAY (SEC)	RUN #5 TRAVEL Acc. B/W (SEC)	RUN #5 DELAY (SEC)	RUN #6 TRAVEL Acc. B/W (SEC)	RUN #6 DELAY (SEC)	RUN #7 TRAVEL Acc. B/W (SEC)	RUN #7 DELAY (SEC)	RUN #8 TRAVEL Acc. B/W (SEC)	RUN #8 DELAY (SEC)	AVG. TRAVEL TIME B/W (SEC)	AVG. I/S DELAY (SEC)	AVG. RUNNING TIME B/W (SEC)	AVG. ART'L SPEED (MPH)	AVG. ART'L "LOS"
1: 75th Avenue SE (Bostian Road)	2693	0.000	0 69		0 74		0 68		0 72		0 66		0 70		70		69		
2: 0.21 miles e/o SR-9	1109	0.510	69 121	0	74 123	6	68 57	0	72 95	0	66 99	0	70 41	0	89	1	28		
3: SR-9	1478	0.720	190 23	95	197 24	93	125 30	31	167 24	66	165 23	72	111 27	12	25	62	25		
4: Extra run time to extend Urban Arterial to 1 Mile	0	1.000	213 0	0	221 0	0	155 0	0	191 0	0	188 0	0	138 0	0	0	0	0		
5	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
6	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
7	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
8	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
9	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
10	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
11		0.000	0	0	0	0	0	0	0	0	0	0	0	0		0			
TOTAL :	5280	1.000	213	95	221	99	155	31	191	66	188	72	138	12	184	63	122	19.53	D

COMPUTATION OF ARTERIAL LEVEL-OF-SERVICE WORK SHEET

ARTERIAL UNIT # : 464
AU Name : 240th Street SE
From : SR-9
To : 75th Avenue SE (Bostian Road)

CATEGORY : 2 - RURAL

DATE : 6/13/2012

DIRECTION : EB PM
PEAK HOUR IS: 05:11 - 06:01 RUNS 7 - 12

PREPARED BY: SN
CHECKED BY: CN

LOS		AVG TRAVEL SPEED (MPH)
A	>	30
B	>	28
C	>	26
D	>	24
E	>	19
F	<=	19

FREE FLOW SPEED (MPH): 37
NUMBER OF SIGNAL: 0
NUMBER OF STOP SIGN: 1

CROSS STREET	SEGMT DIST. B/W (FT)	M.P. Acc. (MILE)	RUN #7 TRAVEL Acc. B/W (SEC)	RUN #7 DELAY (SEC)	RUN #8 TRAVEL Acc. B/W (SEC)	RUN #8 DELAY (SEC)	RUN #9 TRAVEL Acc. B/W (SEC)	RUN #9 DELAY (SEC)	RUN #10 TRAVEL Acc. B/W (SEC)	RUN #10 DELAY (SEC)	RUN #11 TRAVEL Acc. B/W (SEC)	RUN #11 DELAY (SEC)	RUN #12 TRAVEL Acc. B/W (SEC)	RUN #12 DELAY (SEC)	AVG. TRAVEL TIME B/W (SEC)	AVG. I/S DELAY (SEC)	AVG. RUNNING TIME B/W (SEC)	AVG. ART'L SPEED (MPH)	AVG. ART'L "LOS"
1: SR-9	0	0.000	0 0		0 0		0 0		0 0		0 0		0 0		0		0		
2: 0.21 miles e/o SR-9	2693	0.000	0 78	0	0 76	0	0 79	0	0 79	0	0 75	0	0 84	0	79	0	74		
3: 75th venue SE (Bostian Road)	7867	0.510	78 150	5	76 157	3	79 147	5	79 148	3	75 152	3	84 151	7	151	4	151		
4: Extra run time to extend Rural Arterial to 2 Miles	0	2.000	228 0	0	233 0	0	226 0	0	227 0	0	227 0	0	235 0	0	0	0	0		
5	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
6	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
7	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
8	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
9	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
10	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
11		0.000	0	0	0	0	0	0	0	0	0	0	0	0		0			
TOTAL :	10560	2.000	228	5	233	3	226	5	227	3	227	3	235	7	229	4	225	31.40	A

COMPUTATION OF ARTERIAL LEVEL-OF-SERVICE WORK SHEET

ARTERIAL UNIT # : 464
AU Name : 240th Street SE
From : 75th Avenue SE (Bostian Road)
To : SR-9

CATEGORY : 2 - RURAL

DATE : 6/13/2012

DIRECTION : WB PM
PEAK HOUR IS: 04:30 - 05:25 RUNS 3 - 8

PREPARED BY: SN
CHECKED BY: CN

LOS		AVG TRAVEL SPEED (MPH)
A	>	30
B	>	28
C	>	25
D	>	24
E	>	19
F	<=	19

FREE FLOW SPEED (MPH): 36
NUMBER OF SIGNAL: 0
NUMBER OF STOP SIGN: 1

CROSS STREET	SEGMT DIST. B/W (FT)	M.P. Acc. (MILE)	RUN #3 TRAVEL Acc. B/W (SEC)	RUN #3 DELAY (SEC)	RUN #4 TRAVEL Acc. B/W (SEC)	RUN #4 DELAY (SEC)	RUN #5 TRAVEL Acc. B/W (SEC)	RUN #5 DELAY (SEC)	RUN #6 TRAVEL Acc. B/W (SEC)	RUN #6 DELAY (SEC)	RUN #7 TRAVEL Acc. B/W (SEC)	RUN #7 DELAY (SEC)	RUN #8 TRAVEL Acc. B/W (SEC)	RUN #8 DELAY (SEC)	AVG. TRAVEL TIME B/W (SEC)	AVG. I/S DELAY (SEC)	AVG. RUNNING TIME B/W (SEC)	AVG. ART'L SPEED (MPH)	AVG. ART'L "LOS"
1: 75th Avenue SE (Bostian Road)	2693	0.000	0 69		0 74		0 68		0 72		0 66		0 70		70		69		
2: 0.21 miles e/o SR-9	7867	0.510	69 147	0	74 149	6	68 152	0	72 143	0	66 146	0	70 146	0	147	1	147		
3: Extra run time to extend Rural Arterial to 2 Miles	0	2.000	216 0	0	223 0	0	220 0	0	215 0	0	212 0	0	216 0	0	0	0	0		
4:	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
5	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
6	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
7	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
8	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
9	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
10	0	0.000	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	0	0	0		
11		0.000	0	0	0	0	0	0	0	0	0	0	0	0		0			
TOTAL :	10560	**2.000**	216	0	223	6	220	0	215	0	212	0	216	0	217	1	216	**33.18**	**A**

G-5

Signal Timing Data

INTERSECTION: 116 Snowood & 240th St SE

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **134**

N/S Street Name: **Snowood**
E/W Street Name: **240th St SE**

Last Database Change: **1/10/2012 11:34**

Change Record					
Change	By	Date	Change	By	Date

Notes: ***Phase 2 is northbound. Phases 1, 5, and 7 are prot/perm. Phase 4 is eastbound. Phase 3 is for track clearance only.***

INCREASED YELLOW + ALL RED FOR ALL PHASES + ALL PHASE BANKS 4-B 1/10/12

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	1	<C/0+0+0>
Zone Number	1	<C/0+0+1>
Area Number	1	<C/0+0+2>
Area Address	116	<C/0+0+3>
QuicNet Channel	P:8001:50.46.87.	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	0	<F/1+0+E>
Red Revert	2.5	<F/1+0+F>
All Red Start	3.0	<F/1+C+0>

Start / Revert Times

Exclusive Walk	0	<F/1+0+0>
Exclusive FDW	0	<F/1+0+1>
All Red Clear	0.0	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	0
1	Ped FDW	0	12	0	18	0	14	0	0
2	Min Green	5	7	5	5	5	7	5	5
3	Type 3 Disconnect	0	20	0	0	0	20	0	0
4	Added per Vehicle	0.0	2.5	0.0	0.0	0.0	2.5	0.0	0.0
5	Veh Extension	2.0	3.0	2.5	2.0	2.0	3.0	2.0	3.0
6	Max Gap	2.0	5.0	3.0	3.0	2.0	5.0	3.0	3.0
7	Min Gap	2.0	1.0	0.5	0.5	2.0	1.0	1.0	3.0
8	Max Limit	10	28	20	20	10	28	10	20
9	Max Limit 2	20	58	30	50	20	58	40	50
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.5	4.0	3.5	4.5	3.5	4.0	3.5	4.5
F	Red Clear	1.0	1.2	1.0	1.2	1.0	1.2	1.0	1.2

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	5
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	5
View EV Delay	---
View EV Clear	---
View RR Delay	---
View RR Clear	---

Preempt Timing

Row		F
0	Permit	12345678
1	Red Lock	_____
2	Yellow Lock	_____8
3	Min Recall	_____
4	Ped Recall	_____
5	*View Set Peds*	-----
6	Rest In Walk	_____
7	Red Rest	_____
8	Dual Entry	_2_4_6_8
9	Max Recall	_____
A	Soft Recall	_2___6__
B	Max 2	_____
C	Cond. Service	_____
D	Man Cntrl Calls	_____
E	Yellow Start	_2___6__
F	First Phases	___4__7_

Phase Functions <C+0+F=1>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ---->								
0	Load Switch Number	9	11	12	1	4	8	0	0
1	Veh Set 1 - Phases	6	2	8	1	4	8		
2	Veh Set 2 - Phases	6					8		
3	Veh Set 3 - Phases								
4	Neg Veh Phases	345 78	1 34 78		234 78	123 56	12 567		
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	7.0	7.0	0.0	0.0
E	Yellow Change	4.0	4.0	3.0	3.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

	C
EV-A	0
EV-B	0
EV-C	0
EV-D	0
RR-1 *	- - -
RR-2 *	- - -
SE-1	0
SE-2	0

Preempt Priority
<C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	3 8
2	RR-2 Clear Phases	3 8
3	RR-2 Limited Service	2 4567
4	Prot / Perm Phases	3
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	2 5
B	EV-B Phases	4 7
C	EV-C Phases	1 6
D	EV-D Phases	3 8
E	Extra 1 Config. Bits	1 3 5
F	IC Select (Interconnect)	2

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	
Ped for 2P Output	2
Ped for 6P Output	6
Ped for 4P Output	4
Ped for 8P Output	
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	3 7
Extra 2 Config. Bits	4

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	2 6
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12 45678
Start-up Ped Calls	2 4 6

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2
Phase 1	5
Phase 2	17
Phase 3	5
Phase 4	24
Phase 5	5
Phase 6	20
Phase 7	5
Phase 8	5

Coordination Transition Minimums
<C+0+C=5>

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ---->										
0	Cycle Length	0	0	0	0	0	0	0	0	0	0
1	Phase 1 - ForceOff	0	0	0	0	0	0	0	0	0	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	0	0	0	0	0	0	0	0	0	3
4	Phase 4 - ForceOff	0	0	0	0	0	0	0	0	0	4
5	Phase 5 - ForceOff	0	0	0	0	0	0	0	0	0	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	0	0	0	0	0	0	0	0	0	7
8	Phase 8 - ForceOff	0	0	0	0	0	0	0	0	0	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	15	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

	E	Row
		0
Plan 1 - Sync	_2__6__	1
Plan 2 - Sync	_2__6__	2
Plan 3 - Sync	_2__6__	3
Plan 4 - Sync	_2__6__	4
Plan 5 - Sync	_2__6__	5
Plan 6 - Sync	_2__6__	6
Plan 7 - Sync	_2__6__	7
Plan 8 - Sync	_2__6__	8
Plan 9 - Sync	_2__6__	9
NEMA Sync	_____	A
NEMA Hold	_____	B
		C
		D
Coord Extra	_2_____	E
		F

Sync Phases <C+0+C=1>

Row											Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	6
7											7
8	Pretimed Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	8
9	Max Recall	_____	_____	_____	_____	_____	_____	_____	_____	_____	9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	C
D	Perm 2 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	D
E	Perm 3 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	E
F	Perm 3 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	F

Coordination - Bank 2 <C+0+C=2>

	F	Row
Free Lag	_2_4_6_8	0
Plan 1 - Lag	_2_4_6_8	1
Plan 2 - Lag	_2_4_6_8	2
Plan 3 - Lag	_2_4_6_8	3
Plan 4 - Lag	_2_4_6_8	4
Plan 5 - Lag	_2_4_6_8	5
Plan 6 - Lag	_2_4_6_8	6
Plan 7 - Lag	_2_4_6_8	7
Plan 8 - Lag	_2_4_6_8	8
Plan 9 - Lag	_2_4_6_8	9
External Lag	_____	A
		B
		C
		D
		E
		F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	242	Max 2	200	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	100	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	100	System Det 3	63	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	205	OR-5 (a)	38	System Det 4	76	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	54	OR-5 (b)	38	System Det 5	47	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	210	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	212	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	210	System Det 7	64	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	77	Plan 8	0	Man. Advance	0	NOT-1	232	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	54	NOT-2	233	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	231	Force A (nema)	0	DELAY-A	0	Phase Bank 2	201	OR-1 (a)	100	AND-1 (a)	234	A
B	OR-7 (d)	0	AND-4 (b)	84	Force B (nema)	0	DELAY-B	0	Phase Bank 3	202	OR-1 (b)	84	AND-1 (b)	83	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	210	OR-2 (a)	38	AND-2 (a)	231	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	93	AND-2 (b)	93	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	207	OR-3 (a)	0	AND-3 (a)	235	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	91	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	231	Free	0	NOT-1	234	TOD Out 1	200	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	232	TOD Out 2	201	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	233	TOD Out 3	202	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	16	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	99	TOD Out 6	205	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	32	TOD Out 7	0	Flash (7-Wire)	101	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	235	TOD Out 8	207	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	212	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	89	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	98	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	37	NAND-3	242	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	90	NAND-4	0	RR-2	210	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	0
1	Ped FDW	0	12	0	18	0	14	0	0
2	Min Green	5	7	5	5	5	7	5	5
3	Type 3 Disconnect	0	20	0	0	0	20	0	0
4	Added per Vehicle	0.0	2.5	0.0	0.0	0.0	2.5	0.0	0.0
5	Veh Extension	2.0	4.0	2.5	2.5	2.0	4.0	2.0	2.5
6	Max Gap	2.0	5.0	3.0	3.0	2.0	5.0	3.0	3.0
7	Min Gap	2.0	1.0	0.5	0.5	2.0	1.0	0.5	0.5
8	Max Limit	10	40	20	30	10	40	10	20
9	Max Limit 2	20	50	30	40	20	50	20	30
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.5	4.0	3.5	4.5	3.5	4.0	3.5	4.5
F	Red Clear	1.0	1.2	1.0	1.2	1.0	1.2	1.0	1.2

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases	_____	<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	0	<C/5+2+A>
Begin Week	0	<C/5+2+B>
End Month	0	<C/5+2+C>
End Week	0	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	0
1	Ped FDW	0	12	0	18	0	14	0	0
2	Min Green	5	7	5	5	5	7	5	5
3	Type 3 Disconnect	0	20	0	0	0	20	0	0
4	Added per Vehicle	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	2.0	5.0	3.0	3.0	2.0	5.0	3.0	3.0
7	Min Gap	2.0	1.0	0.5	0.5	2.0	1.0	0.5	0.5
8	Max Limit	10	40	20	30	10	40	10	20
9	Max Limit 2	20	50	30	40	20	50	20	30
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.5	4.0	3.5	4.5	3.5	4.0	3.5	4.5
F	Red Clear	1.0	1.2	1.0	1.2	1.0	1.2	1.0	1.2

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	---	---	---	---	---
Phase 1	0	0	0	0	0.0
Phase 2	20	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	20	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Row	Detector Name	C1 Pin Number (0)	Attributes (1)	Phase(s) (2)	Assign (3)	Delay (1)	Carry-over (3)
0		39	5_7_	2	123 8	0.0	0.0
1		40	67_	6	123 8	0.0	1.0
2		41	5_7_	4	123 8	0.0	0.0
3		42	5_7_	8	123 8	0.0	0.0
4		43		2	123	0.0	0.0
5		44	5_7_	6	123 8	0.0	0.0
6		45		4	123	0.0	0.0
7		46		8	123	0.0	0.0
8		47	5_7_	2	123 8	0.0	1.3
9		48	5_7_	6	123 8	0.0	1.5
A		49		4	123	0.0	0.0
B		50		8	123	0.0	0.0
C		55	5_7_	5	1_3 8	0.0	0.0
D		56	5_7_	1	1_3 8	0.0	0.0
E		57	5_7_	7_	123 8	0.0	0.0
F		58		3	123	0.0	0.0

Column Numbers ----> 0 1 2 3 | 1 3

Row	Detector Name	C1 Pin Number (4)	Attributes (5)	Phase(s) (6)	Assign (7)	Delay (2)	Carry-over (4)
0		55	5_7_	5	2	5.0	0.0
1		56	5_7_	1	2	5.0	0.0
2		61	5	7_	123 8	0.0	1.0
3		62		3	123	0.0	0.0
4		63	45_7_	2	123 8	0.0	1.3
5		64	45_7_	6	123 8	0.0	1.5
6		65	5	4	123 8	0.0	2.0
7		66	7_	8	123 8	10.0	0.0
8		67	2	2	123	0.0	0.0
9		68	2	6	123	0.0	0.0
A		69	2	4	123	0.0	0.0
B		70	2	8	123	0.0	0.0
C		76	45_7_	2	123 8	0.0	1.3
D		77	45_7_	6	123 8	0.0	1.5
E		78		4	123	0.0	0.0
F		79		8	123	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ---->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	83	0	0	0	91	0	0	0	4
Overlap Green	93	84	0	0	0	0	0	0	5
Overlap Yellow	38	100	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	30	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	20	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1		1
Output Port 2		2
Output Port 3		3
Output Port 4		4
Output Port 5		5
Output Port 6		6
Output Port 7		7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm	67_	<C/5+F+0>

Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	00 : 01	E	A	1234567
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct	Day of Week	Column 4 Phases/Bits
00 : 01	E	1234567	1__4__78
06 : 00	F	1234567	1_____
21 : 00	F	1234567	_____6_8
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct	Holiday Type	Column 4 Phases/Bits
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		
00 : 00	0		

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	
00 : 00	0	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1 <C+0+E=27>

Notes:

0 <E/27+5+F>

Limited Service Interval

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2 <C+0+E=28>

Notes:

0 <E/28+5+F>

Limited Service Interval

Min Time (seconds)	0	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	255	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Pri. Channel	1234	<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds)	0	<F/1+A+D>

Bus Delay

Max Time (seconds)	0	<F/1+A+E>

Max Early Green

Max Time (seconds)	0	<F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	
1	00 : 00	0	0	
2	00 : 00	0	0	
3	00 : 00	0	0	
4	00 : 00	0	0	
5	00 : 00	0	0	
6	00 : 00	0	0	
7	00 : 00	0	0	
8	00 : 00	0	0	
9	00 : 00	0	0	
A	00 : 00	0	0	
B	00 : 00	0	0	
C	00 : 00	0	0	
D	00 : 00	0	0	
E	00 : 00	0	0	
F	00 : 00	0	0	

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)
Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

INTERSECTION: Wood-Sno & NE 195th St (Type170)

Group Assignment: **NONE**
Field Master Assignment: **NONE**
System Reference Number: **182**

N/S Street Name: **Woodinville Snohomish Road**
E/W Street Name: **NE 195th St**

Last Database Change: **1/11/2012 14:41**

Change Record					
Change	By	Date	Change	By	Date

Notes: ***This is the program for a temporary 170 controller at the intersection.***

Phase 2 is EB. Phase 8 is NB. All left turn phases are prot/perm. RR-2 is used for Railroad Preemption.

Manual Plan
0 = Automatic
1-9 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	**1**	<C/0+0+0>
Zone Number	**1**	<C/0+0+1>
Area Number	**1**	<C/0+0+2>
Area Address	**222**	<C/0+0+3>
QuicNet Channel	**0**	(QuicNet)

Communication Addresses

Manual Plan		<C/0+A+1>
Manual Offset		<C/0+B+1>

Manual Selection

Flash Start	**0**	<F/1+0+E>
Red Revert	**5.0**	<F/1+0+F>
All Red Start	**5.0**	<F/1+C+0>

Start / Revert Times

Exclusive Walk	**0**	<F/1+0+0>
Exclusive FDW	**0**	<F/1+0+1>
All Red Clear	**0.0**	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable Outputs at E/127+A+E & F)

Row	Column Numbers ---->	Phase 1	2	3	4	5	6	7	8
	Phase Names ----->								
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	18	0	16	0	18	0	16
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	0	0	0	0	0	0	0
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.8	3.8	3.5	3.5	3.8	3.8	3.5	3.5
F	Red Clear	1.8	1.8	2.3	2.3	1.8	1.8	2.3	2.3

Phase Timing - Bank 1 <C+0+F=1>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing <C+0+F=1>

	E
RR-1 Delay	0
RR-1 Clear	0
EV-A Delay	0
EV-A Clear	1
EV-B Delay	0
EV-B Clear	1
EV-C Delay	0
EV-C Clear	1
EV-D Delay	0
EV-D Clear	1
RR-2 Delay	0
RR-2 Clear	5
View EV Delay	- - -
View EV Clear	- - -
View RR Delay	- - -
View RR Clear	- - -

Preempt Timing

	F	Row
Permit	**12345678**	0
Red Lock	_____	1
Yellow Lock	_____	2
Min Recall	_____	3
Ped Recall	_____	4
View Set Peds	**- - - - -**	5
Rest In Walk	_____	6
Red Rest	_____	7
Dual Entry	**_2_4_6_8**	8
Max Recall	_____	9
Soft Recall	**_2___6__**	A
Max 2	_____	B
Cond. Service	_____	C
Man Cntrl Calls	_____	D
Yellow Start	**___4___8**	E
First Phases	**_2___6__**	F

Phase Functions <C+0+F=1>

Row	Column Numbers ---->	Overlap 1	2	3	4	5	6	7	8
	Overlap Name ----->								
0	Load Switch Number	0	0	0	0	0	0	0	0
1	Veh Set 1 - Phases								
2	Veh Set 2 - Phases								
3	Veh Set 3 - Phases								
4	Neg Veh Phases								
5	Neg Ped Phases								
6	Green Omit Phases								
7	Green Clear Omit Phs.								
8									
9									
A									
B									
C									
D	Green Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
F	Red Clear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlap Assignments <C+0+E=29>

Extra 1 Flags
1 = TBC Type 1
2 = NEMA Ext. Coord
3 = Auto Daylight Savings
4 = Solid FDW on EV
5 = Extended Status
6 = International Ped
7 = Flash - Clear Outputs
8 = Split Ring

Extra 2 Flags
1 = AWB During Initial
2 = LMU Installed
3 = Disable Min Walk
4 = QuicNet/4 System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

	C
EV-A	0
EV-B	0
EV-C	0
EV-D	0
RR-1 *	- - -
RR-2 *	- - -
SE-1	0
SE-2	0

Preempt Priority
<C+0+E=125>
(* RR-1 is always Highest, and RR-2 is always Second Highest)

Row	Column Numbers ---->	E
0	Exclusive Phases	
1	RR-1 Clear Phases	
2	RR-2 Clear Phases	1____6__
3	RR-2 Limited Service	__345__8
4	Prot / Perm Phases	1_3_5_7_
5	Flash to PE Circuits	
6	Flash Entry Phases	
7	Disable Yellow Range	
8	Disable Ovp Yel Range	
9	Overlap Yellow Flash	
A	EV-A Phases	_2__5___
B	EV-B Phases	___4__7_
C	EV-C Phases	1____6__
D	EV-D Phases	__3____8
E	Extra 1 Config. Bits	1_3_5___
F	IC Select (Interconnect)	_2_____

Configuration <C+0+E=125>

	F
Ext. Permit 1 Phases	
Ext. Permit 2 Phases	
Exclusive Ped Assign	
Preempt Non-Lock	
Ped for 2P Output	_2_____
Ped for 6P Output	_____6__
Ped for 4P Output	___4____
Ped for 8P Output	_____8
Yellow Flash Phases	
Low Priority A Phases	
Low Priority B Phases	
Low Priority C Phases	
Low Priority D Phases	
Restricted Phases	
Extra 2 Config. Bits	___4____

Configuration <C+0+E=125>

	F
Fast Green Flash Phase	
Green Flash Phases	
Flashing Walk Phases	
Guaranteed Passage	
Simultaneous Gap Term	
Sequential Timing	
Advance Walk Phases	
Delay Walk Phases	
External Recall	
Start-up Overlap Green	
Max Extension	
Inhibit Ped Reservice	
Semi-Actuated	
Start-up Overlap Yellow	
Start-up Vehicle Calls	12345678
Start-up Ped Calls	12345678

Specials <C+0+F=2>

Flash to PE & PE Non-Lock
1 = EV A 5 = RR 1
2 = EV B 6 = RR 2
3 = EV C 7 = SE 1
4 = EV D 8 = SE 2

IC Select Flags
1 =
2 = Modem
3 = 7-Wire Slave
4 = Flash / Free
5 =
6 = Simplex Master
7 = 7-Wire Master
8 = Offset Interrupter

	2
Phase 1	5
Phase 2	5
Phase 3	5
Phase 4	5
Phase 5	5
Phase 6	5
Phase 7	5
Phase 8	5

Coordination Transition Minimums
<C+0+C=5>

Coord Extra
1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Row	Column Numbers ---->	Plan 1	2	3	4	5	6	7	8	9	Row
	Plan Name ----->										
0	Cycle Length	100	100	100	100	100	100	100	100	100	0
1	Phase 1 - ForceOff	55	55	55	55	55	55	55	55	55	1
2	Phase 2 - ForceOff	0	0	0	0	0	0	0	0	0	2
3	Phase 3 - ForceOff	20	20	20	20	20	20	20	20	20	3
4	Phase 4 - ForceOff	40	40	40	40	40	40	40	40	40	4
5	Phase 5 - ForceOff	55	55	55	55	55	55	55	55	55	5
6	Phase 6 - ForceOff	0	0	0	0	0	0	0	0	0	6
7	Phase 7 - ForceOff	20	20	20	20	20	20	20	20	20	7
8	Phase 8 - ForceOff	40	40	40	40	40	40	40	40	40	8
9	Ring Offset	0	0	0	0	0	0	0	0	0	9
A	Offset 1	0	0	0	0	0	0	0	0	0	A
B	Offset 2	0	0	0	0	0	0	0	0	0	B
C	Offset 3	0	0	0	0	0	0	0	0	0	C
D	Perm 1 - End	15	15	15	15	15	15	15	15	15	D
E	Hold Release	255	255	255	255	255	255	255	255	255	E
F	Zone Offset	0	0	0	0	0	0	0	0	0	F

Coordination - Bank 1 <C+0+C=1>

	E	Row
		0
Plan 1 - Sync	_2___6__	1
Plan 2 - Sync	_2___6__	2
Plan 3 - Sync	_2___6__	3
Plan 4 - Sync	_2___6__	4
Plan 5 - Sync	_2___6__	5
Plan 6 - Sync	_2___6__	6
Plan 7 - Sync	_2___6__	7
Plan 8 - Sync	_2___6__	8
Plan 9 - Sync	_2___6__	9
NEMA Sync	_____	A
NEMA Hold	_____	B
		C
		D
Coord Extra	_____	E
		F

Sync Phases <C+0+C=1>

Row											Row
0	Ped Adjustment	0	0	0	0	0	0	0	0	0	0
1	Perm 2 - Start	0	0	0	0	0	0	0	0	0	1
2	Perm 2 - End	0	0	0	0	0	0	0	0	0	2
3	Perm 3 - Start	0	0	0	0	0	0	0	0	0	3
4	Perm 3 - End	0	0	0	0	0	0	0	0	0	4
5	Reservice Time	0	0	0	0	0	0	0	0	0	5
6	Reservice Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	6
7											7
8	Pretimed Phases	_____	_____	_____	_____	_____	_____	_____	_____	_____	8
9	Max Recall	_____	_____	_____	_____	_____	_____	_____	_____	_____	9
A	Perm 1 Veh Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	A
B	Perm 1 Ped Phase	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	B
C	Perm 2 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	C
D	Perm 2 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	D
E	Perm 3 Veh Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	E
F	Perm 3 Ped Phase	_____	_____	_____	_____	_____	_____	_____	_____	_____	F

Coordination - Bank 2 <C+0+C=2>

	F	Row
Free Lag	_2_4_6_8	0
Plan 1 - Lag	_2_4_6_8	1
Plan 2 - Lag	_2_4_6_8	2
Plan 3 - Lag	_2_4_6_8	3
Plan 4 - Lag	_2_4_6_8	4
Plan 5 - Lag	_2_4_6_8	5
Plan 6 - Lag	_2_4_6_8	6
Plan 7 - Lag	_2_4_6_8	7
Plan 8 - Lag	_2_4_6_8	8
Plan 9 - Lag	_2_4_6_8	9
External Lag	_____	A
		B
		C
		D
		E
		F

Lag Phases <C+0+C=1>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Spec. Funct. 1	0	NOT-3	242	Max 2	200	Pretimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0	0
1	Spec. Funct. 2	0	NOT-4	0	System Det 1	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71	1
2	Spec. Funct. 3	0	OR-4 (a)	0	System Det 2	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72	2
3	Spec. Funct. 4	0	OR-4 (b)	0	System Det 3	0	Plan 3	0	Reserved	0	Offset 2 (7-Wire)	0	EV-C	73	3
4	NAND-3 (a)	205	OR-5 (a)	0	System Det 4	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74	4
5	NAND-3 (b)	54	OR-5 (b)	0	System Det 5	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51	5
6	NAND-4 (a)	0	OR-6 (a)	0	System Det 6	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	212	RR-2	52	6
7	NAND-4 (b)	0	OR-6 (b)	0	System Det 7	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0	7
8	OR-7 (a)	0	Fig 3 Diamond	0	System Det 8	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0	8
9	OR-7 (b)	0	Fig 4 Diamond	0	Max Inhibit (nema)	0	Plan 9	0	External Alarm	54	NOT-2	0	External Lag	0	9
A	OR-7 (c)	0	AND-4 (a)	0	Force A (nema)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0	A
B	OR-7 (d)	0	AND-4 (b)	0	Force B (nema)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0	B
C	OR-8 (a)	0	NAND-1 (a)	0	C.N.A. (nema)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0	C
D	OR-8 (b)	0	NAND-1 (b)	0	Hold (nema)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0	D
E	OR-8 (c)	0	NAND-2 (a)	0	Max Recall	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0	E
F	OR-8 (d)	0	NAND-2 (b)	0	Min Recall	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0	F

Assignable Inputs <C+0+E=126>

Row	Column 9		Column A		Column B		Column C		Column D		Column E		Column F		Row
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	200	Dial 2 (7-Wire)	0	0
1	Phase ON - 2	0	Sp Evnt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0	1
2	Phase ON - 3	0	Sp Evnt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0	2
3	Phase ON - 4	0	Sp Evnt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0	3
4	Phase ON - 5	0	Sp Evnt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0	4
5	Phase ON - 6	0	Sp Evnt Out 5	0			Plan 5	0	AND-2	0	TOD Out 6	205	Free (7-Wire)	0	5
6	Phase ON - 7	0	Sp Evnt Out 6	0			Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	101	6
7	Phase ON - 8	0	Sp Evnt Out 7	0			Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0	7
8	Ph. Check - 1	0	Sp Evnt Out 8	0	NOT-3	212	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0	8
9	Ph. Check - 2	0			NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0	9
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0	A
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0	B
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	242	RR-1	0	DELAY-C	0			C
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0			D
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0			E
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0			F

Assignable Outputs <C+0+E=127>

Row	Column Numbers ----> / Phase Names ---->	Phase 1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 2 <C+0+F=2>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Transition Type
0.X = Shortway
1.X = Lengthen
X.1 thru X.4 = Number of cycles when lengthing

Transition Type	0.3	<C/5+1+9>

TBC Transition

Lag Hold Phases	_____	<C/5+1+A>

Coordinated Lag Hold Phases

Sync Output Time	0.0	<C/5+1+C>

7-Wire Master

Daylight Savings Date
If set to all zeros, standard dates will be used.

Begin Month	0	<C/5+2+A>
Begin Week	0	<C/5+2+B>
End Month	0	<C/5+2+C>
End Week	0	<C/5+2+D>

Daylight Savings Time

Time B4 Yellow	0.0	<F/1+C+E>
Phase Number	0	<F/1+C+F>

Advance Warning Beacon - Sign 1

Time B4 Yellow	0.0	<F/1+D+E>
Phase Number	0	<F/1+D+F>

Advance Warning Beacon - Sign 2

Long Failure	0.7	<F/1+0+6>
Short Failure	0.7	<F/1+0+7>

Power Cycle Correction (Default = 0.7)

Row		1	2	3	4	5	6	7	8
0	Ped Walk	0	7	0	7	0	7	0	7
1	Ped FDW	0	15	0	15	0	15	0	15
2	Min Green	4	7	4	4	4	7	4	4
3	Type 3 Disconnect	0	20	0	20	0	20	0	20
4	Added per Vehicle	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
5	Veh Extension	2.0	4.0	2.0	2.5	2.0	4.0	2.0	2.5
6	Max Gap	3.0	6.0	3.0	3.0	3.0	6.0	3.0	3.0
7	Min Gap	0.5	2.0	0.5	1.5	0.5	2.0	0.5	1.5
8	Max Limit	20	30	20	25	20	30	20	25
9	Max Limit 2	30	50	30	40	30	50	30	40
A	Adv. / Delay Walk	0	0	0	0	0	0	0	0
B	PE Min Ped FDW	7	7	7	7	7	7	7	7
C	Cond Serv Check	10	10	10	10	10	10	10	10
D	Reduce Every	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
E	Yellow Change	3.0	4.0	3.0	3.0	3.0	4.0	3.0	3.0
F	Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Phase Timing - Bank 3 <C+0+F=3>

	9	A	B	C	D
	- - -	- - -	- - -	- - -	- - -
Phase 1	0	0	0	0	0.0
Phase 2	0	0	0	0	0.0
Phase 3	0	0	0	0	0.0
Phase 4	0	0	0	0	0.0
Phase 5	0	0	0	0	0.0
Phase 6	0	0	0	0	0.0
Phase 7	0	0	0	0	0.0
Phase 8	0	0	0	0	0.0
Max Initial					
Alternate Walk					
Alternate FDW					
Alternate Initial					
Alternate Extension					

Alternate Timing

Row	Detector Name	0 C1 Pin Number	1 Attributes	2 Phase(s)	3 Assign	1 Delay	3 Carry-over
0		39	___45_7_	_2_____	123____8	0.0	0.0
1		40	___45_7_	_____6__	123____8	0.0	0.0
2		41	___45_7_	___4____	123____8	0.0	0.0
3		42	___45_7_	_____8	123____8	0.0	0.0
4		43	___45_7_	_2_____	123____8	0.0	0.0
5		44	___45_7_	_____6__	123____8	0.0	0.0
6		45	___45_7_	___4____	123____8	0.0	0.0
7		46	___45_7_	_____8	123____8	0.0	0.0
8		47	_____67_	_2_____	123____8	0.0	0.0
9		48	_____67_	_____6__	123____8	0.0	0.0
A		49	_____67_	___4____	123____8	0.0	0.0
B		50	_____67_	_____8	123____8	0.0	0.0
C		55	___45_7_	____5___	123____8	0.0	0.0
D		56	___45_7_	1_____	123____8	0.0	0.0
E		57	___45_7_	_____7_	123____8	0.0	0.0
F		58	___45_7_	__3_____	123____8	0.0	0.0

Detector Assignments <C+0+E=126> <C+0+D=0>

Row	Detector Name	4 C1 Pin Number	5 Attributes	6 Phase(s)	7 Assign	2 Delay	4 Carry-over
0		59	___45_7_	____5___	123____8	0.0	0.0
1		60	___45_7_	1_____	123____8	0.0	0.0
2		61	___45_7_	_____7_	123____8	0.0	0.0
3		62	___45_7_	__3_____	123____8	0.0	0.0
4		63	___45_7_	_2_____	123____8	0.0	0.0
5		64	___45_7_	_____6__	123____8	0.0	0.0
6		65	___45_7_	___4____	123____8	0.0	0.0
7		66	___45_7_	_____8	123____8	0.0	0.0
8		67	_2_____	_2_____	123____8	0.0	0.0
9		68	_2_____	_____6__	123____8	0.0	0.0
A		69	_2_____	___4____	123____8	0.0	0.0
B		70	_2_____	_____8	123____8	0.0	0.0
C		76	___45_7_	_2_____	123____8	0.0	0.0
D		77	___45_7_	_____6__	123____8	0.0	0.0
E		78	___45_7_	___4____	123____8	0.0	0.0
F		79	___45_7_	_____8	123____8	0.0	0.0

Detector Attributes
1 = Full Time Delay
2 = Ped Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

Det. Assignments
1 = Det. Set 1
2 = Det. Set 2
3 = Det. Set 3
4 =
5 =
6 = Failure - Min Recall
7 = Failure - Max Recall
8 = Report on Failure

Column Numbers ---->	Ped / Phase / Overlap 1	2	3	4	5	6	7	8	Row
Walk	0	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0	1
Phase Green	0	0	0	0	0	0	0	0	2
Phase Yellow	0	0	0	0	0	0	0	0	3
Phase Red	0	0	0	0	0	0	0	0	4
Overlap Green	0	0	0	0	0	0	0	0	5
Overlap Yellow	0	0	0	0	0	0	0	0	6
Overlap Red	0	0	0	0	0	0	0	0	7

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>

Enable Redirection
(Enable Redirection = 30)

Max OFF (minutes)	255	<D/0+0+1>
Max ON (minutes)	7	<D/0+0+2>

Detector Failure Monitor

	D	Row
		0
Output Port 1	_____	1
Output Port 2	_____	2
Output Port 3	_____	3
Output Port 4	_____	4
Output Port 5	_____	5
Output Port 6	_____	6
Output Port 7	_____	7

Dimming <C+0+E=125>

	D
Number of Digits	0
1 st Digit	0
2 ed Digit	0
3 ed Digit	0
4 th Digit	0
5 th Digit	0
6 th Digit	0
7 th Digit	0
8 th Digit	0
9 th Digit	0
10 th Digit	0
11 th Digit	0
12 th Digit	0
13 th Digit	0
14 th Digit	0
15 th Digit	0

<C+0+C=5>

Dial-Back Telephone Number

Disable Alarms
1 = Stop Time
2 = Flash Sense
3 = Keyboard Entry
4 = Manual Plan
5 = Police Control
6 = External Alarm
7 = Detector Failure
8 =

	B	Row
DELAY-A	0	A
DELAY-B	0	B
DELAY-C	0	C
DELAY-D	0	D
DELAY-E	0	E
DELAY-F	0	F

Delay Logic Times
<C+0+D=0> (seconds)

Omit Alarm	_____	<C/5+F+0>

Disable Alarm Reporting

Time	0	<C/5+C+0>

Redial Time (minutes)
(View Redial Timer at E/2+D+6)

Row	Time	Plan	Offset	Day of Week
0	00 : 01	E	A	1234567
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.1>
(Bank 1)

Time	Funct.	Day of Week	Column 4 Phases/Bits
00 : 01	E	1234567	1_____78
06 : 00	F	1234567	1_____
21 : 00	F	1234567	_____6__
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

TOD Function <C+0+7=0.1> <C+0+E=27>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.1>
(Bank 1)

T.O.D. Functions
0 =
1 = Red Lock
2 = Yellow Lock
3 = Veh Min Recall
4 = Ped Recall
5 =
6 = Rest In Walk
7 = Red Rest
8 = Double Entry
9 = Veh Max Recall
A = Veh Soft Recall
B = Maximum 2
C = Conditional Service
D = Free Lag Phases
E = Bit 1 - Local Override
Bit 4 - Disable Detector OFF Monitor
Bit 5 - Disable Low Priority Preempt
Bit 7 - Detector Count Monitor
Bit 8 - Real Time Split Monitor
F = Output Bits 1 thru 8

Plan Select
1 thru 9 = Coordination Plan 1 thru 9
14 or E = Free
15 or F = Flash

Offset Select
A = Offset A
B = Offset B
C = Offset C

Month Select
1 = January
2 = February
3 = March
4 = April
5 = May
6 = June
7 = July
8 = August
9 = September
A = October
B = November
C = December

Row	Time	Plan	Offset	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

TOD Coordination <C+0+9=0.2>
(Bank 2)

Time	Funct.	Holiday Type	Column 4 Phases/Bits
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____
00 : 00	0	_____	_____

Holiday TOD Function <C+0+7=0.2> <C+0+E=28>

Day	Year	Month	Holiday Type
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____
00	00	0	_____

Holiday Dates <C+0+8=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____
00 : 00	0	0	_____

Holiday Events <C+0+9=1.2>
(Bank 2)

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/27+5+F>

Limited Service Interval

Special Event Schedule -- Table 1 <C+0+E=27>

Row	6 Clear	7 Time	8 Ped Call	9 Hold	A Advance	B Force Off	C Vehicle Call	D Permit Phases	E Ped Omit	F Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Notes:

0 <E/28+5+F>

Limited Service Interval

Special Event Schedule -- Table 2 <C+0+E=28>

Min Time (seconds)	4	<F/1+0+8>

Min Green Before PE Force Off

Max Time (minutes)	2	<F/1+0+9>

Max Preempt Time Before Failure

Min Time (seconds)	0	<F/1+0+A>

Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Pri. Channel	_____	<E/125+C+8>

Disable Low Priority Channel

Low Priority
1 = Channel A
2 = Channel B
3 = Channel C
4 = Channel D

Delay Time (seconds)	0	<F/1+A+D>

Bus Delay

Max Time (seconds)	0	<F/1+A+E>

Max Early Green

Max Time (seconds)	0	<F/1+A+F>

Max Green Extension

Row	Time	Headway	Direction	Day of Week
0	00 : 00	0	0	_____
1	00 : 00	0	0	_____
2	00 : 00	0	0	_____
3	00 : 00	0	0	_____
4	00 : 00	0	0	_____
5	00 : 00	0	0	_____
6	00 : 00	0	0	_____
7	00 : 00	0	0	_____
8	00 : 00	0	0	_____
9	00 : 00	0	0	_____
A	00 : 00	0	0	_____
B	00 : 00	0	0	_____
C	00 : 00	0	0	_____
D	00 : 00	0	0	_____
E	00 : 00	0	0	_____
F	00 : 00	0	0	_____

Headway <C+0+9=2.1>

Headway Time
(minutes)
1 thru 9 = 1 thru 9
A = 10
B = 11
C = 12
D = 13
E = 14
F = 15

Low Priority Preemption (Bus Priority)

Only available with *Program 233RV2.B* (and above)

Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

Timing

Signal No.:	Intersection #:	Intersection Location:
CW0009	02-18	156 AVE NE & WOOD-DUVALL RD

PM: QU3 | Tech Number: 644 | Controller Type: TMP-390 J9

Controller Sequence: | TOD: YES | SYSTEM: | SYS Number:

Phase	1	2	3	4	5	6	7	8
Direction		EB		SB	EBLT	WB		
Min		5		5	5	5		
Gap		2		2	2	2		
Walk				7		7		
DW				9		15		
Max I		60		30	20	60		
Max II		40		30	20	40		
Max III								
Amber		4.0		4.0	4.0	4.0		
All Red		2.0		2.0	2.0	2.0		
Recall		SOFT				SOFT		
Mem		NL		NL	NL	NL		
Det Delay				5				
Pro/Per-AB								
Flash		R		R	R	R		
Startup								
TBR								
TTR								
Min Gap								
Cond Serv								
Dual Entry								
XWalk DX		37		51		57		
% Grade								
Speed		40		35		40		

Startup All Red: | Startup Flash: | TSP: | TOD PTRN:

INFO:

Comments:
12/15/03 - MADE TIMING CHANGES FOR SYNCRONIZATION PER FAY SCHAFI
03/11/04 - UPDATED TIMING SHEET
03/03/05 - VERIFIED TIMING SHEET
06/09/08 - VERIFIED TIMING SHEET
02/16/10 - CHANGED ALL RED TIME TO 2.0 SEC AS PER WOODIVILLE PUBLIC WORKS DIR.
03/02/11 - VERIFIED TIMING SHEET

	ASSIGNMENT	DELAY
AUX DET1:		
AUX DET2:		
AUX DET3:		
AUX DET4:	4	10
AUX DET5:	2	TYPE 4 DISC
AUX DET6:	6	
AUX DET7:		
AUX DET8:		

EVP1:	
EVP2:	2&5
EVP3:	6
EVP4:	4
EVP5:	
EVP6:	
OVLAP A:	
OVLAP B:	
OVLAP C:	
OVLAP D:	

EVRG1:	
EVRG2:	
EVRG3:	
EVRG4:	
EVRG5:	
EVRG6:	

DateLastChanged: 03/11/2004

Print Date: 3/2/2011

TRACONEX TMP390 DATA BASE REPORTER FILE C:\390J\WD156.I11
==========

SYSTEM # 11 WDSYS Drop Name: WOOD/DUVAL & 156 AVE Drop # 1
This report printed: 15:16:29 02-02-2004

TRACONEX TMP390 DATA BASE REPORTER FILE C:\390J\WD156.I11

SYSTEM # 11 WDSYS Drop Name: WOOD/DUVAL & 156 AVE Drop # 1
This report printed: 15:16:12 02-02-2004

(3)390 MODE, PAGE 0, PHASES 1 TO 8 - PHASE TIMING

MNEM		PH 1	2-EB	PH 3	4-SB	5-EBLTpp	6-WB	PH 7	PH 8	Ped Timing
MIN	MINIMUM GREEN INTERVAL	0	5	0	5	5	5	0	0	
WLK	WALK INTERVAL	0	0	0	7	0	7	0	6	
WCL	PEDESTRIAN CLEARANCE	0	0	0	9	0	15	0	10	
PSG	PASSAGE TIME (PRESET GAP)	6.0	2.0	6.0	2.0	2.0	2.0	6.0	6.0	
MX1	MAXIMUM GREEN NO. 1	30	60	30	30	20	60	30	30	
MX2	MAXIMUM GREEN NO. 2	40	40	40	30	20	40	40	40	
YEL	YELLOW CLEARANCE	3.0	4.0	3.0	4.0	4.0	4.0	3.0	3.0	
RED	ALL RED CLEARANCE	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
RRT	RED REVERT MIN TIME	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
ABA	ACTUATIONS BEFORE ADDED INITIAL	2	2	2	2	2	2	2	2	
S/A	SECS PER ACTUATION ADDED INITIAL	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
MXI	MAXIMUM ADDED INITIAL TIME	6	6	6	6	6	6	6	6	
TBR	TIME BEFORE REDUCTION	6	6	6	6	6	6	6	6	
TTR	TIME TO REDUCE TO MINIMUM GAP	20	20	20	20	20	20	20	20	
MNG	MINIMUM GAP	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
CMN	CONDITIONAL MINIMUM	6	6	6	6	6	6	6	6	

(12)CRD, PAGES 1 TO 6, PHASE 0 - DIAL PARAMETERS

MNEM		DIAL 1	DIAL 2	DIAL 3	DIAL 4	DIAL 5	DIAL 6
CYC	CYCLE LENGTH	100	100	120	100	110	120
OF1	OFFSET 1	~~51~~ 71	97	112	20	1	105
OF2	OFFSET 2	0	0	0	52	1	1
OF3	OFFSET 3	0	0	0	10	6	112
OF4	OFFSET 4	0	0	0	0	0	0
OF5	OFFSET 5	0	0	0	0	0	0
SHK	MAXIMUM SHRINKAGE PER CYCLE	10	10	10	10	10	10
EXP	MAXIMUM EXPANSION PER CYCLE	15	15	15	15	15	15
YLD	YIELD PERIOD	0	0	0	0	0	0
SEQ	PHASE SEQUENCE - PAGE 2-16 OF MANUAL	0	0	0	0	0	0
MSG	MAIN STREET GREEN COORD PHASES(1 PER RING)	..6...2.	..6...2.	..6...2.	..6...2.	..6...2.	..6...2.

(13)CRD, PAGES 1 TO 6, PHASES 1 TO 3 - SPLIT DIVISIONS

MNEM		1)1	1)2	1)3	2)1	2)2	2)3	3)1	3)2	3)3	4)1	4)2	4)3	5)1	5)2	5)3	6)1	6)2	6)3
SD1	PHASE 1 SPLIT DIVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SD2	PHASE 2 SPLIT DIVISION	70	70	70	78	78	78	92	92	92	65	65	65	65	65	65	75	75	75
SD3	PHASE 3 SPLIT DIVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SD4	PHASE 4 SPLIT DIVISION	30	30	30	22	22	22	28	28	28	35	35	35	45	45	45	45	45	45
SD5	PHASE 5 SPLIT DIVISION	15	15	15	20	20	20	25	25	25	0	0	0	0	0	0	0	0	0
SD6	PHASE 6 SPLIT DIVISION	55	55	55	58	58	58	67	67	67	65	65	65	65	65	65	75	75	75
SD7	PHASE 7 SPLIT DIVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SD8	PHASE 8 SPLIT DIVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(16)TOD, PAGE 1, PHASE 0 - PLANS 1 THROUGH 6

MNEMS		PLAN 1	PLAN 2	PLAN 3	PLAN 4	PLAN 5	PLAN 6
NUM	NUMBER OF THIS PLAN	1	2	3	4	5	6
YR	YEAR THIS PLAN CAN FIRST BE EFFECTIVE	4	4	4	4	4	4
MON	MONTH THIS PLAN FIRST BE EFFECTIVE	2	2	2	2	2	2
DOM	DAY OF MONTH PLAN FIRST EFFECTIVE	4	4	4	4	4	4
HR	HOUR OF DAY PLAN FIRST EFFECTIVE	6	9	9	15	15	19
MIN	MINUTE THIS PLAN FIRST EFFECTIVE	0	0	5	0	5	30
TYP	TYPE OF PLAN - MANUAL PAGE 4-2	8	8	8	8	8	8
F/C	FREE/COORDINATED - 1=COORDINATED	1	0	1	0	1	0
MDT	1=CNA1 2=CNA2 3=WRM 4=DSA 5678 SEE MANUAL	.....3..	.....	.....3..	.....	.....3..	.....
DAL	DIAL	1	0	2	0	3	0
OFF	OFFSET	1	0	1	0	1	0
SPL	SPLIT	1	0	1	0	1	0
S/F	SEMI/FULLY ACTUATED - 1=FULLY ACTUATED	0	0	0	0	0	0
FLA	PROGRAMMED FLASH - 1=ENABLED	0	0	0	0	0	0
SPF	SPECIAL FUNCTION	.....	.....	.....	.....	.....	.....
DIM	DIMMING ENABLE	0	0	0	0	0	0
MNR	MINIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
MXR	MAXIMUM RECALL PHASES	.....	.....	.....	.....	.....	.....
PDR	PEDESTRIAN RECALL	..K....	.....	..K....	.....	..K....	.....
MX2	SELECT MAX 2 OPTION	.....	.....	.....	.....	.....	.....
DEN	DENSITY - USE VOL DENSITY CALC	.....	.....	.....	.....	.....	.....
SEQ	PHASE SEQUENCE. MANUAL TABLE 2-16.	0	0	0	0	0	0
CSV	CONDITIONAL SERVICE	.....	.....	.....	.....	.....	.....
RRD	REST IN RED	.....	.....	.....	.....	.....	.....
OMT	PHASE OMIT	.....	.....	.....	.....	.....	.....
OMP	PEDESTRIAN OMIT	.....	.....	.....	.....	.....	.....
OMR	OMIT RED CLEAR	.....	.....	.....	.....	.....	.....

3-7-08
Removed Ped Recall during crd.
Walk Resy Modifer still on.
Kim

Existing Conditions Peak-Hour LOS Calculations

Arterial Level of Service: WB AU 463 - 240th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-9	IV	29	124.3	59.8	184.1	1.00	19.6	B
Total	IV		124.3	59.8	184.1	1.00	19.6	B

Arterial Level of Service: EB AU 464 - 240th St SE

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
75th Ave SE	III	32	225.0	4.1	229.1	2.00	31.4	A
Total	III		225.0	4.1	229.1	2.00	31.4	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	72	134	64	172	101	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.94	0.94	0.84	0.84
Hourly flow rate (vph)	92	172	68	183	120	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	451	132	144			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	451	132	144			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	83	81	95			
cM capacity (veh/h)	535	912	1432			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	264	251	144
Volume Left	92	68	0
Volume Right	172	0	24
cSH	732	1432	1700
Volume to Capacity	0.36	0.05	0.08
Queue Length 95th (ft)	41	4	0
Control Delay (s)	12.7	2.4	0.0
Lane LOS	B	A	
Approach Delay (s)	12.7	2.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		

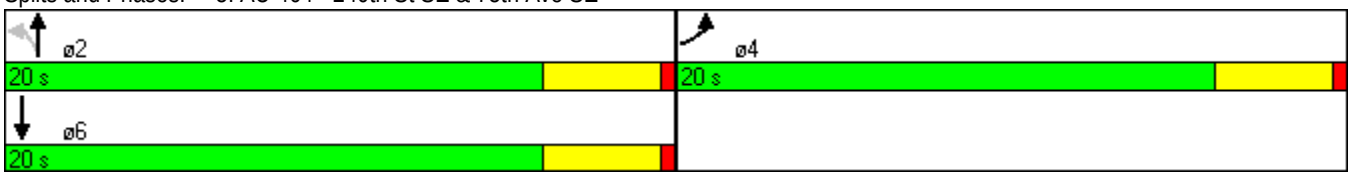
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	72	134	64	172	101	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.912				0.978	
Flt Protected	0.983			0.987		
Satd. Flow (prot)	1638	0	0	1821	1822	0
Flt Permitted	0.983			0.897		
Satd. Flow (perm)	1638	0	0	1655	1822	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	172				24	
Link Speed (mph)	32			30	30	
Link Distance (ft)	10560			1218	4530	
Travel Time (s)	225.0			27.7	103.0	
Peak Hour Factor	0.78	0.78	0.94	0.94	0.84	0.84
Heavy Vehicles (%)	4%	4%	3%	3%	2%	2%
Adj. Flow (vph)	92	172	68	183	120	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	264	0	0	251	144	0
Number of Detectors	1		1	2	2	
Detector Template	Left		Left	Thru	Thru	
Leading Detector (ft)	20		20	100	100	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	20		20	6	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	20.0		20.0	20.0	20.0	
Total Split (s)	20.0	0.0	20.0	20.0	20.0	0.0
Total Split (%)	50.0%	0.0%	50.0%	50.0%	50.0%	0.0%
Maximum Green (s)	16.0		16.0	16.0	16.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	-2.4	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	1.6	4.0	4.0	4.0	4.0	4.0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		Min	Min	Min	
Walk Time (s)	5.0		5.0	5.0	5.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	10.0			14.4	14.4	
Actuated g/C Ratio	0.37			0.53	0.53	
v/c Ratio	0.37			0.28	0.15	
Control Delay	4.1			6.9	5.3	
Queue Delay	0.0			0.0	0.0	
Total Delay	4.1			6.9	5.3	
LOS	A			A	A	
Approach Delay	4.1			6.9	5.3	
Approach LOS	A			A	A	
Queue Length 50th (ft)	6			18	8	
Queue Length 95th (ft)	25			59	28	
Internal Link Dist (ft)	10480			1138	4450	
Turn Bay Length (ft)						
Base Capacity (vph)	1180			1106	1225	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.22			0.23	0.12	

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 27.1
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.37
Intersection Signal Delay: 5.4 — Intersection LOS: A
Intersection Capacity Utilization 41.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: AU 464 - 240th St SE & 75th Ave SE



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	301	46	92	12	37	111	75	800	23	109	385	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	100		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.900			0.906			0.996			0.931	
Flt Protected	0.950				0.996		0.950			0.950		
Satd. Flow (prot)	1736	1644	0	0	1698	0	1736	3457	0	1736	3232	0
Flt Permitted	0.443				0.967		0.235			0.134		
Satd. Flow (perm)	809	1644	0	0	*1170	0	429	3457	0	245	3232	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		77			58			2			118	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		269			193			180			585	
Travel Time (s)		6.1			4.4			4.1			13.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	314	48	96	12	39	116	78	833	24	114	401	342
Shared Lane Traffic (%)												
Lane Group Flow (vph)	314	144	0	0	167	0	78	857	0	114	743	0
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	7.0		5.0	7.0	
Minimum Split (s)	9.5	30.7		20.0	20.0		9.5	24.2		9.5	26.2	
Total Split (s)	44.5	55.7	0.0	55.7	55.7	0.0	24.5	63.2	0.0	24.5	63.2	0.0
Total Split (%)	23.7%	29.6%	0.0%	29.6%	29.6%	0.0%	13.0%	33.6%	0.0%	13.0%	33.6%	0.0%
Maximum Green (s)	40.0	50.0		50.0	50.0		20.0	58.0		20.0	58.0	
Yellow Time (s)	3.5	4.5		4.5	4.5		3.5	4.0		3.5	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.0	1.2		1.2	1.2		1.0	1.2		1.0	1.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	2.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.7	4.0	5.7	8.2	7.0	4.5	5.2	4.0	4.5	5.2	4.0
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	3.0		2.0	3.0	
Minimum Gap (s)	1.0	0.5		3.0	3.0		2.0	1.0		2.0	1.0	
Time Before Reduce (s)	10.0	10.0		0.0	0.0		0.0	20.0		0.0	20.0	
Time To Reduce (s)	10.0	15.0		0.0	0.0		0.0	20.0		0.0	20.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		18.0						12.0			14.0	
Pedestrian Calls (#/hr)		0						0			0	
Act Effct Green (s)	51.0	49.7			14.6		42.1	33.0		44.4	36.5	
Actuated g/C Ratio	0.47	0.46			0.14		0.39	0.31		0.41	0.34	
v/c Ratio	0.51	0.18			0.80		0.29	0.81		0.51	0.63	
Control Delay	22.4	9.7			59.8		24.1	43.3		29.5	30.6	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	22.4	9.7			59.8		24.1	43.3		29.5	30.6	
LOS	C	A			E		C	D		C	C	
Approach Delay		18.4			59.8			41.7			30.5	
Approach LOS		B			E			D			C	
Queue Length 50th (ft)	128	24			71		30	277		45	194	
Queue Length 95th (ft)	266	77			191		79	488		110	354	
Internal Link Dist (ft)		189			113			100			505	
Turn Bay Length (ft)	100						100			100		
Base Capacity (vph)	775	1418			584		448	1996		404	1915	
Starvation Cap Reductn	0	0			0		0	0		0	34	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.41	0.10			0.29		0.17	0.43		0.28	0.40	

Intersection Summary

Area Type: Other
Cycle Length: 187.9
Actuated Cycle Length: 108.1
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 34.6 Intersection LOS: C
Intersection Capacity Utilization 74.7% ICU Level of Service D
Analysis Period (min) 15
* User Entered Value

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	0	245	7	3	3	231	1339	3	3	640	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		70	0		0	350		0	200		140
Storage Lanes	1		0	0		0	2		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Frt		0.850			0.969							0.850
Flt Protected	0.950				0.974		0.950			0.950		
Satd. Flow (prot)	1752	1568	0	0	1741	0	3400	3505	0	1752	3505	1568
Flt Permitted	0.667						0.950			0.950		
Satd. Flow (perm)	1230	1568	0	0	1787	0	3400	3505	0	1752	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		424			3							62
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4236			427			1702			5221	
Travel Time (s)		96.3			9.7			38.7			118.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	141	0	255	7	3	3	241	1395	3	3	667	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	141	255	0	0	13	0	241	1398	0	3	667	85
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt			pm+pt			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	8.0	21.0		8.0	47.0		8.0	33.0		8.0	41.0	41.0
Total Split (s)	15.0	35.0	0.0	15.0	47.0	0.0	25.0	75.0	0.0	25.0	75.0	75.0
Total Split (%)	9.3%	21.6%	0.0%	9.3%	29.0%	0.0%	15.4%	46.3%	0.0%	15.4%	46.3%	46.3%
Maximum Green (s)	10.0	30.0		10.0	42.0		20.0	69.0		20.0	69.0	69.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	5.0		4.0	5.0	5.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	6.0	4.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5		2.0	2.5		2.0	4.5		2.0	4.5	4.5
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)					7.0			7.0			7.0	7.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)					35.0			20.0			28.0	28.0
Pedestrian Calls (#/hr)					0			0			0	0
Act Effct Green (s)	11.7	11.7			5.9		11.1	50.4		5.0	35.3	35.3
Actuated g/C Ratio	0.16	0.16			0.08		0.15	0.67		0.07	0.47	0.47
v/c Ratio	0.54	0.42			0.09		0.48	0.60		0.03	0.41	0.11
Control Delay	41.3	2.2			38.5		36.6	8.9		44.7	13.7	5.1
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	41.3	2.2			38.5		36.6	8.9		44.7	13.7	5.1
LOS	D	A			D		D	A		D	B	A
Approach Delay		16.1			38.5			13.0			12.8	
Approach LOS		B			D			B			B	
Queue Length 50th (ft)	55	0			4		47	127		1	91	5
Queue Length 95th (ft)	153	0			28		126	389		12	182	32
Internal Link Dist (ft)		4156			347			1622			5141	
Turn Bay Length (ft)	300						350			200		140
Base Capacity (vph)	276	1108			1069		968	3128		499	3128	1406
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.51	0.23			0.01		0.25	0.45		0.01	0.21	0.06

Intersection Summary

Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 75.2
Natural Cycle: 105
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 13.5 Intersection LOS: B
Intersection Capacity Utilization 68.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: 228th St SE & SR-9

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Volume (vph)	23	90	154	1582	0	477	391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	450		155		0
Storage Lanes	1	1	1		1		1
Taper Length (ft)	25	25	25		25		25
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	1.00
Frt		0.850					0.850
Flt Protected	0.950		0.950				
Satd. Flow (prot)	1752	1568	1752	3505	1845	3505	1568
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1752	1568	1752	3505	1845	3505	1568
Right Turn on Red		Yes					Yes
Satd. Flow (RTOR)		98					425
Link Speed (mph)	30			30		30	
Link Distance (ft)	299			650		714	
Travel Time (s)	6.8			14.8		16.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	25	98	167	1720	0	518	425
Shared Lane Traffic (%)							
Lane Group Flow (vph)	25	98	167	1720	0	518	425
Enter Blocked Intersection	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	R NA	Left	Right
Median Width(ft)	12			12		12	
Link Offset(ft)	0			0		0	
Crosswalk Width(ft)	16			16		16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15		9		9
Turn Type		Perm	Prot		Prot		Perm
Protected Phases	4		5	2	1	6	
Permitted Phases		4					6
Detector Phase	4	4	5	2	1	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	3.0	10.0	3.0	10.0	10.0
Minimum Split (s)	20.0	20.0	8.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	25.0	70.0	10.0	55.0	55.0
Total Split (%)	20.0%	20.0%	25.0%	70.0%	10.0%	55.0%	55.0%
Maximum Green (s)	15.0	15.0	20.4	64.7	5.4	49.7	49.7
Yellow Time (s)	4.0	4.0	3.6	4.3	3.6	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.6	5.3	4.6	5.3	5.3
Lead/Lag			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	2.0	4.0	2.0	4.0	4.0
Recall Mode	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	7.6	7.6	13.9	85.4		65.8	65.8

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Actuated g/C Ratio	0.08	0.08	0.14	0.85		0.66	0.66
v/c Ratio	0.19	0.47	0.69	0.57		0.22	0.36
Control Delay	45.8	16.6	56.0	5.1		8.5	2.0
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	45.8	16.6	56.0	5.1		8.5	2.0
LOS	D	B	E	A		A	A
Approach Delay	22.6			9.6		5.5	
Approach LOS	C			A		A	
Queue Length 50th (ft)	15	0	97	252		66	0
Queue Length 95th (ft)	41	48	179	280		115	41
Internal Link Dist (ft)	219			570		634	
Turn Bay Length (ft)	100		450				
Base Capacity (vph)	263	319	357	2992		2307	1177
Starvation Cap Reductn	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0		0	0
Reduced v/c Ratio	0.10	0.31	0.47	0.57		0.22	0.36

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 8.9 Intersection LOS: A
Intersection Capacity Utilization 63.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: SR-522 WB Ramp & SR-9

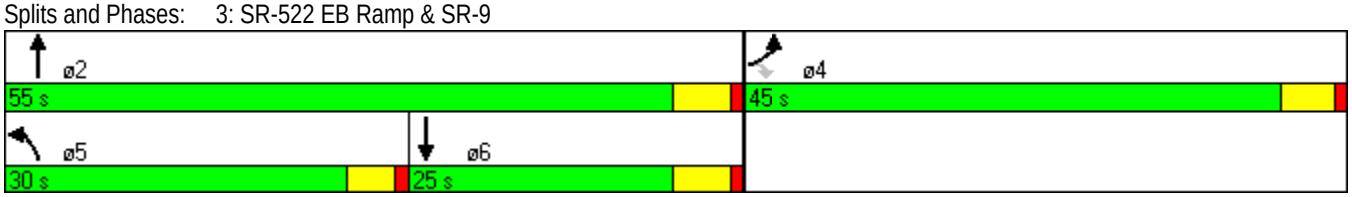
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	728	302	242	997	568	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	260	250			0
Storage Lanes	2	1	1			0
Taper Length (ft)	25	25	25			25
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.986	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3490	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3490	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		321			10	
Link Speed (mph)	30			30	30	
Link Distance (ft)	725			585	374	
Travel Time (s)	16.5			13.3	8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	774	321	257	1061	604	62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	774	321	257	1061	666	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	3.0	10.0	10.0	
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	45.0	45.0	30.0	55.0	25.0	0.0
Total Split (%)	45.0%	45.0%	30.0%	55.0%	25.0%	0.0%
Maximum Green (s)	40.0	40.0	25.4	49.7	19.7	
Yellow Time (s)	4.0	4.0	3.6	4.3	4.3	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.6	5.3	5.3	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.5	3.5	2.0	4.0	4.0	
Recall Mode	None	None	None	C-Min	C-Min	
Act Effct Green (s)	30.7	30.7	18.8	59.0	35.6	
Actuated g/C Ratio	0.31	0.31	0.19	0.59	0.36	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.73	0.45	0.77	0.51	0.53	
Control Delay	35.0	4.8	53.6	13.9	31.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	35.0	4.8	53.6	13.9	31.6	
LOS	D	A	D	B	C	
Approach Delay	26.1			21.7	31.6	
Approach LOS	C			C	C	
Queue Length 50th (ft)	225	0	157	195	118	
Queue Length 95th (ft)	262	54	226	294	#291	
Internal Link Dist (ft)	645			505	294	
Turn Bay Length (ft)		260	250			
Base Capacity (vph)	1373	826	450	2088	1248	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.56	0.39	0.57	0.51	0.53	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 25.4 Intersection LOS: C
Intersection Capacity Utilization 64.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: SR-522 EB Ramp & SR-9



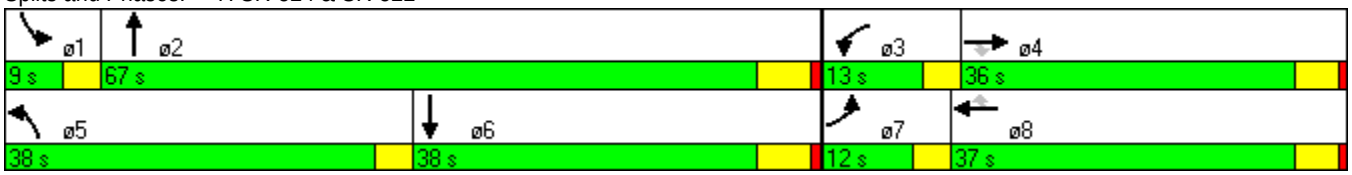
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	194	199	74	277	125	415	1289	117	61	555	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		150	450		0	270		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.988			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1703	3365	0	1703	3341	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1703	3365	0	1703	3341	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			216			118		11			13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		374			300			708			666	
Travel Time (s)		8.5			6.8			16.1			15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Adj. Flow (vph)	102	211	216	80	301	136	451	1401	127	66	603	89
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	211	216	80	301	136	451	1528	0	66	692	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	8.0	20.0	20.0	8.0	37.0	37.0	8.0	31.0		8.0	31.0	
Total Split (s)	12.0	36.0	36.0	13.0	37.0	37.0	38.0	67.0	0.0	9.0	38.0	0.0
Total Split (%)	9.6%	28.8%	28.8%	10.4%	29.6%	29.6%	30.4%	53.6%	0.0%	7.2%	30.4%	0.0%
Maximum Green (s)	8.4	31.0	31.0	9.4	32.0	32.0	34.4	61.0		5.4	32.0	
Yellow Time (s)	3.6	4.0	4.0	3.6	4.0	4.0	3.6	5.0		3.6	5.0	
All-Red Time (s)	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.6	5.0	5.0	3.6	5.0	5.0	3.6	6.0	4.0	3.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	3.5	3.5	2.5	3.5	3.5	3.0	4.5		3.0	4.5	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)					7.0	7.0		7.0			7.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)					25.0	25.0		18.0			18.0	
Pedestrian Calls (#/hr)					0	0		0			0	
Act Effct Green (s)	8.4	27.1	27.1	8.6	25.1	25.1	33.5	59.9		5.4	31.9	
Actuated g/C Ratio	0.07	0.23	0.23	0.07	0.21	0.21	0.29	0.51		0.05	0.27	
v/c Ratio	0.83	0.51	0.42	0.64	0.78	0.32	0.93	0.89		0.84	0.75	
Control Delay	101.3	45.3	7.5	77.3	58.5	11.2	68.1	33.7		120.6	45.4	
Queue Delay	0.0	0.0	0.0	0.0	6.7	0.3	0.0	0.0		0.0	0.0	
Total Delay	101.3	45.3	7.5	77.3	65.2	11.5	68.1	33.7		120.6	45.4	
LOS	F	D	A	E	E	B	E	C		F	D	
Approach Delay		40.7			52.9			41.5			51.9	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	79	146	0	61	219	11	336	530		51	253	
Queue Length 95th (ft)	#193	225	62	#133	320	63	#571	#761		#147	346	
Internal Link Dist (ft)		294			220			628			586	
Turn Bay Length (ft)	100		140	100		150	450			270		
Base Capacity (vph)	123	476	564	137	492	504	502	1766		79	926	
Starvation Cap Reductn	0	0	0	0	142	102	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.83	0.44	0.38	0.58	0.86	0.34	0.90	0.87		0.84	0.75	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 117.1
Natural Cycle: 105
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 45.0 Intersection LOS: D
Intersection Capacity Utilization 78.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: SR-524 & SR-522



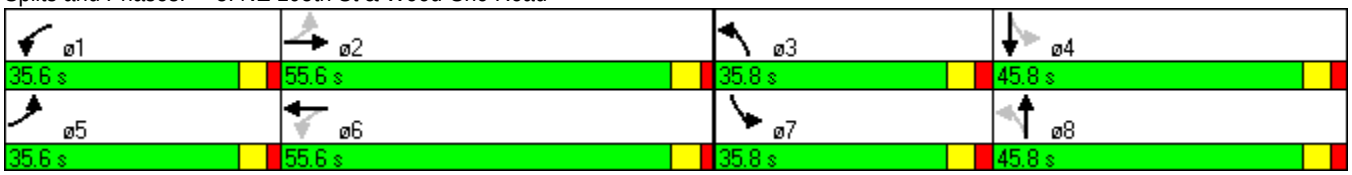
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	643	183	32	616	148	232	530	24	108	330	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	125		0	110		0	110		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.967			0.971			0.993			0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3422	0	1770	3437	0	1770	3514	0	1770	3320	0
Flt Permitted	0.189			0.213			0.202			0.350		
Satd. Flow (perm)	352	3422	0	397	3437	0	376	3514	0	652	3320	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			17			2			95	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			424			458			622	
Travel Time (s)		6.5			9.6			10.4			14.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	76	663	189	33	635	153	239	546	25	111	340	238
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	852	0	33	788	0	239	571	0	111	578	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	7.0		4.0	7.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.6	30.6		9.6	30.6		9.8	28.8		9.8	28.8	
Total Split (s)	35.6	55.6	0.0	35.6	55.6	0.0	35.8	45.8	0.0	35.8	45.8	0.0
Total Split (%)	20.6%	32.2%	0.0%	20.6%	32.2%	0.0%	20.7%	26.5%	0.0%	20.7%	26.5%	0.0%
Maximum Green (s)	30.0	50.0		30.0	50.0		30.0	40.0		30.0	40.0	
Yellow Time (s)	3.8	3.8		3.8	3.8		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.8	1.8		1.8	1.8		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.8	5.8	4.0	5.8	5.8	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	4.0		2.0	4.0		2.0	2.5		2.0	2.5	
Minimum Gap (s)	0.5	2.0		0.5	2.0		0.5	1.5		0.5	1.5	
Time Before Reduce (s)	10.0	20.0		10.0	20.0		10.0	5.0		10.0	5.0	
Time To Reduce (s)	15.0	20.0		15.0	20.0		15.0	10.0		15.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		18.0			18.0			16.0			16.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	42.8	37.9		38.1	33.5		41.6	27.5		33.2	23.0	
Actuated g/C Ratio	0.43	0.38		0.38	0.33		0.41	0.27		0.33	0.23	
v/c Ratio	0.28	0.65		0.14	0.68		0.67	0.59		0.34	0.69	
Control Delay	20.7	30.0		19.5	33.7		30.0	35.7		23.3	36.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.7	30.0		19.5	33.7		30.0	35.7		23.3	36.4	
LOS	C	C		B	C		C	D		C	D	
Approach Delay		29.3			33.1			34.0			34.3	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	27	241		11	226		99	167		42	151	
Queue Length 95th (ft)	69	406		36	385		198	283		97	277	
Internal Link Dist (ft)		208			344			378			542	
Turn Bay Length (ft)	100			125			110			110		
Base Capacity (vph)	620	1853		627	1852		616	1527		650	1480	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.12	0.46		0.05	0.43		0.39	0.37		0.17	0.39	

Intersection Summary

Area Type: Other
Cycle Length: 172.8
Actuated Cycle Length: 100.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 32.5 Intersection LOS: C
Intersection Capacity Utilization 75.3% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 8: NE 195th St & Wood-Sno Road



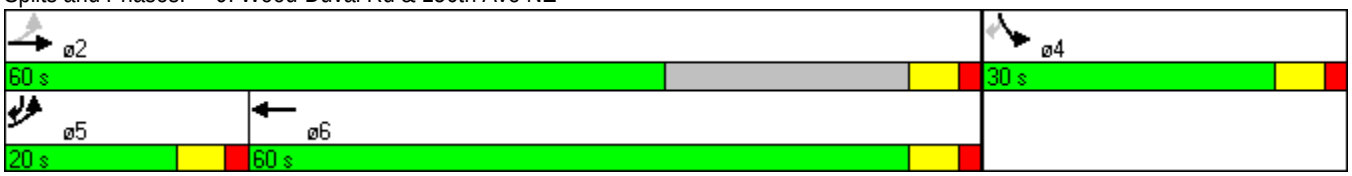
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	240	1034	710	26	215	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	235			0	90	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.995			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	1872	0	1787	1599
Flt Permitted	0.093				0.950	
Satd. Flow (perm)	175	3574	1872	0	1787	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			2			143
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	688		815	
Travel Time (s)		13.5	15.6		18.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	253	1088	747	27	226	143
Shared Lane Traffic (%)						
Lane Group Flow (vph)	253	1088	774	0	226	143
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt					pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2					4
Detector Phase	5	2	6		4	5
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	22.0	24.0		24.0	11.0
Total Split (s)	20.0	60.0	60.0	0.0	30.0	20.0
Total Split (%)	18.2%	54.5%	54.5%	0.0%	27.3%	18.2%
Maximum Green (s)	14.0	54.0	54.0		24.0	14.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Min	Min		Min	None
Walk Time (s)			7.0		7.0	
Flash Dont Walk (s)			11.0		11.0	
Pedestrian Calls (#/hr)			0		0	
Act Effct Green (s)	62.4	62.4	42.6		17.0	36.8
Actuated g/C Ratio	0.68	0.68	0.46		0.18	0.40
v/c Ratio	0.71	0.45	0.89		0.68	0.20
Control Delay	31.2	7.7	36.6		48.3	4.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	31.2	7.7	36.6		48.3	4.4
LOS	C	A	D		D	A
Approach Delay		12.1	36.6		31.3	
Approach LOS		B	D		C	
Queue Length 50th (ft)	82	136	401		131	0
Queue Length 95th (ft)	#225	213	#662		225	38
Internal Link Dist (ft)		513	608		735	
Turn Bay Length (ft)	235				90	
Base Capacity (vph)	374	2883	1146		486	741
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.68	0.38	0.68		0.47	0.19

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 91.9
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 22.6 Intersection LOS: C
Intersection Capacity Utilization 79.2% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Wood-Duval Rd & 156th Ave NE



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	396	60	109	16	31	69	74	407	20	73	332	409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	100		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.903			0.920			0.993			0.917	
Flt Protected	0.950				0.993		0.950			0.950		
Satd. Flow (prot)	1736	1650	0	0	1669	0	1736	3447	0	1736	3183	0
Flt Permitted	0.567				0.916		0.150			0.411		
Satd. Flow (perm)	1036	1650	0	0	*1170	0	274	3447	0	751	3183	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		71			38			3			171	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		269			193			180			585	
Travel Time (s)		6.1			4.4			4.1			13.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	412	62	114	17	32	72	77	424	21	76	346	426
Shared Lane Traffic (%)												
Lane Group Flow (vph)	412	176	0	0	121	0	77	445	0	76	772	0
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	7.0		5.0	7.0	
Minimum Split (s)	9.5	30.7		20.0	20.0		9.5	24.2		9.5	26.2	
Total Split (s)	44.5	55.7	0.0	55.7	55.7	0.0	24.5	63.2	0.0	24.5	63.2	0.0
Total Split (%)	23.7%	29.6%	0.0%	29.6%	29.6%	0.0%	13.0%	33.6%	0.0%	13.0%	33.6%	0.0%
Maximum Green (s)	40.0	50.0		50.0	50.0		20.0	58.0		20.0	58.0	
Yellow Time (s)	3.5	4.5		4.5	4.5		3.5	4.0		3.5	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
All-Red Time (s)	1.0	1.2		1.2	1.2		1.0	1.2		1.0	1.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.7	4.0	5.7	8.7	7.0	4.5	5.2	4.0	4.5	5.2	4.0
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	3.0		2.0	3.0	
Minimum Gap (s)	1.0	0.5		3.0	3.0		2.0	1.0		2.0	1.0	
Time Before Reduce (s)	10.0	10.0		0.0	0.0		0.0	20.0		0.0	20.0	
Time To Reduce (s)	10.0	15.0		0.0	0.0		0.0	20.0		0.0	20.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		18.0						12.0			14.0	
Pedestrian Calls (#/hr)		0						0			0	
Act Effct Green (s)	50.6	49.3			10.2		34.2	26.7		32.2	25.7	
Actuated g/C Ratio	0.52	0.51			0.11		0.35	0.27		0.33	0.26	
v/c Ratio	0.54	0.20			0.77		0.34	0.47		0.23	0.80	
Control Delay	19.4	10.0			65.0		25.8	33.0		23.6	34.5	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	19.4	10.0			65.0		25.8	33.0		23.6	34.5	
LOS	B	A			E		C	C		C	C	
Approach Delay		16.6			65.0			31.9			33.5	
Approach LOS		B			E			C			C	
Queue Length 50th (ft)	153	33			50		30	121		29	187	
Queue Length 95th (ft)	317	92			139		74	214		74	333	
Internal Link Dist (ft)		189			113			100			505	
Turn Bay Length (ft)	100						100			100		
Base Capacity (vph)	893	1490			640		438	2230		517	2119	
Starvation Cap Reductn	0	0			0		0	0		0	0	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.46	0.12			0.19		0.18	0.20		0.15	0.36	

Intersection Summary

Area Type: Other
Cycle Length: 187.9
Actuated Cycle Length: 97.1
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 30.2 Intersection LOS: C
Intersection Capacity Utilization 67.9% ICU Level of Service C
Analysis Period (min) 15
* User Entered Value

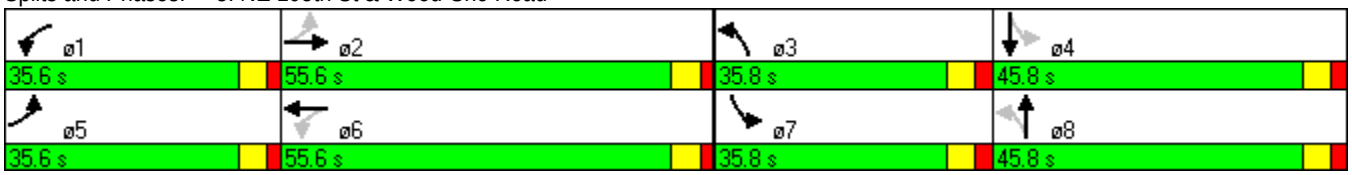
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	477	114	61	456	131	152	356	18	92	399	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	125		0	110		0	110		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.971			0.967			0.993			0.977	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3437	0	1770	3422	0	1770	3514	0	1770	3458	0
Flt Permitted	0.309			0.323			0.333			0.483		
Satd. Flow (perm)	576	3437	0	602	3422	0	620	3514	0	900	3458	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			22			3			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			424			458			622	
Travel Time (s)		6.5			9.6			10.4			14.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	67	492	118	63	470	135	157	367	19	95	411	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	67	610	0	63	605	0	157	386	0	95	487	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	7.0		4.0	7.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.6	30.6		9.6	30.6		9.8	28.8		9.8	28.8	
Total Split (s)	35.6	55.6	0.0	35.6	55.6	0.0	35.8	45.8	0.0	35.8	45.8	0.0
Total Split (%)	20.6%	32.2%	0.0%	20.6%	32.2%	0.0%	20.7%	26.5%	0.0%	20.7%	26.5%	0.0%
Maximum Green (s)	30.0	50.0		30.0	50.0		30.0	40.0		30.0	40.0	
Yellow Time (s)	3.8	3.8		3.8	3.8		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.8	1.8		1.8	1.8		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.8	5.8	4.0	5.8	5.8	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	4.0		2.0	4.0		2.0	2.5		2.0	2.5	
Minimum Gap (s)	0.5	2.0		0.5	2.0		0.5	1.5		0.5	1.5	
Time Before Reduce (s)	10.0	20.0		10.0	20.0		10.0	5.0		10.0	5.0	
Time To Reduce (s)	15.0	20.0		15.0	20.0		15.0	10.0		15.0	5.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		18.0			18.0			16.0			16.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	28.9	23.3		27.8	22.7		25.2	16.1		24.0	15.5	
Actuated g/C Ratio	0.38	0.31		0.37	0.30		0.33	0.21		0.32	0.21	
v/c Ratio	0.20	0.57		0.19	0.58		0.45	0.51		0.25	0.68	
Control Delay	14.7	24.9		14.8	25.4		21.3	30.4		18.2	33.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	14.7	24.9		14.8	25.4		21.3	30.4		18.2	33.9	
LOS	B	C		B	C		C	C		B	C	
Approach Delay		23.9			24.4			27.8			31.4	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	17	123		16	123		48	85		28	110	
Queue Length 95th (ft)	47	214		44	215		104	153		68	194	
Internal Link Dist (ft)		208			344			378			542	
Turn Bay Length (ft)	100			125			110			110		
Base Capacity (vph)	786	2400		787	2391		765	1974		774	1946	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.09	0.25		0.08	0.25		0.21	0.20		0.12	0.25	

Intersection Summary

Area Type: Other
Cycle Length: 172.8
Actuated Cycle Length: 75.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 26.6 — Intersection LOS: C
Intersection Capacity Utilization 61.2% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 8: NE 195th St & Wood-Sno Road



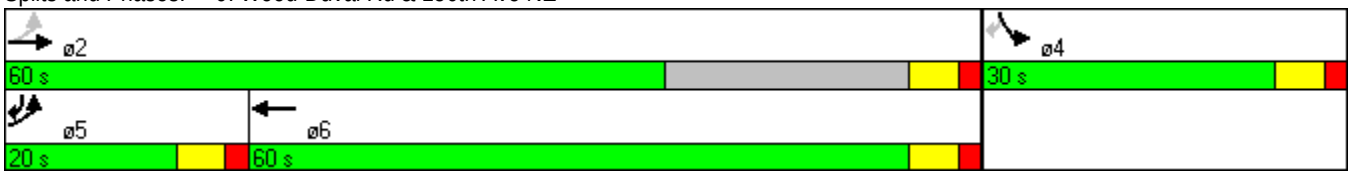
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	111	640	487	24	133	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	235			0	90	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.994			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	1870	0	1787	1599
Flt Permitted	0.209				0.950	
Satd. Flow (perm)	393	3574	1870	0	1787	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			3			127
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	688		815	
Travel Time (s)		13.5	15.6		18.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	117	674	513	25	140	127
Shared Lane Traffic (%)						
Lane Group Flow (vph)	117	674	538	0	140	127
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt					pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2					4
Detector Phase	5	2	6		4	5
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	22.0	24.0		24.0	11.0
Total Split (s)	20.0	60.0	60.0	0.0	30.0	20.0
Total Split (%)	18.2%	54.5%	54.5%	0.0%	27.3%	18.2%
Maximum Green (s)	14.0	54.0	54.0		24.0	14.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Min	Min		Min	None
Walk Time (s)			7.0		7.0	
Flash Dont Walk (s)			11.0		11.0	
Pedestrian Calls (#/hr)			0		0	
Act Effct Green (s)	39.3	39.3	23.4		10.7	26.6
Actuated g/C Ratio	0.63	0.63	0.37		0.17	0.42
v/c Ratio	0.25	0.30	0.77		0.46	0.17
Control Delay	6.1	5.7	25.7		31.4	3.7
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	6.1	5.7	25.7		31.4	3.7
LOS	A	A	C		C	A
Approach Delay		5.8	25.7		18.2	
Approach LOS		A	C		B	
Queue Length 50th (ft)	14	50	165		47	0
Queue Length 95th (ft)	37	91	331		121	30
Internal Link Dist (ft)		513	608		735	
Turn Bay Length (ft)	235				90	
Base Capacity (vph)	573	3481	1610		718	872
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.20	0.19	0.33		0.19	0.15

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 62.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 14.6 — Intersection LOS: B
Intersection Capacity Utilization 55.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: Wood-Duval Rd & 156th Ave NE



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	36	86	88	86	80	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	45	108	109	106	99	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	439	115	132			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	439	115	132			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	89	93			
cM capacity (veh/h)	533	937	1465			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	152	215	132
Volume Left	45	109	0
Volume Right	108	0	33
cSH	765	1465	1700
Volume to Capacity	0.20	0.07	0.08
Queue Length 95th (ft)	18	6	0
Control Delay (s)	10.9	4.2	0.0
Lane LOS	B	A	
Approach Delay (s)	10.9	4.2	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	30.0%	ICU Level of Service	A
Analysis Period (min)	15		

2019 Baseline Conditions Peak-Hour LOS Calculations

Arterial Level of Service: WB AU 463 - 240th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-9	IV	29	124.3	60.8	185.1	1.00	19.4	B
Total	IV		124.3	60.8	185.1	1.00	19.4	B

Arterial Level of Service: EB AU 464 - 240th St SE

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
75th Ave SE	III	32	225.0	4.2	229.2	2.00	31.4	A
Total	III		225.0	4.2	229.2	2.00	31.4	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	75	134	64	173	102	22
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.94	0.94	0.84	0.84
Hourly flow rate (vph)	96	172	68	184	121	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	455	135	148			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	455	135	148			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	82	81	95			
cM capacity (veh/h)	533	909	1428			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	268	252	148
Volume Left	96	68	0
Volume Right	172	0	26
cSH	725	1428	1700
Volume to Capacity	0.37	0.05	0.09
Queue Length 95th (ft)	43	4	0
Control Delay (s)	12.8	2.4	0.0
Lane LOS	B	A	
Approach Delay (s)	12.8	2.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

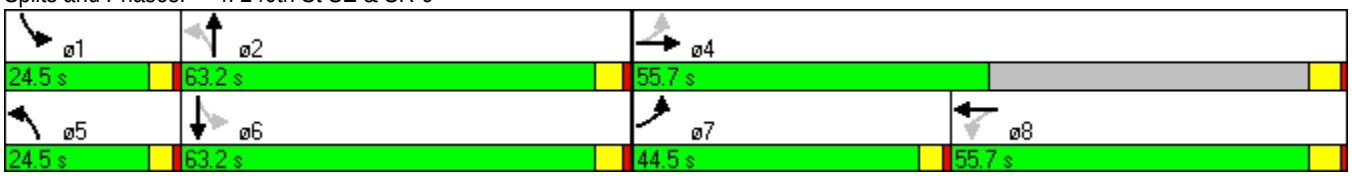
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	301	46	92	13	37	112	75	800	24	111	385	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	100		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.900			0.907			0.996			0.931	
Flt Protected	0.950				0.996		0.950			0.950		
Satd. Flow (prot)	1736	1644	0	0	1699	0	1736	3457	0	1736	3232	0
Flt Permitted	0.441				0.961		0.235			0.132		
Satd. Flow (perm)	806	1644	0	0	*1170	0	429	3457	0	241	3232	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		77			57			2			118	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		269			193			180			585	
Travel Time (s)		6.1			4.4			4.1			13.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	314	48	96	14	39	117	78	833	25	116	401	342
Shared Lane Traffic (%)												
Lane Group Flow (vph)	314	144	0	0	170	0	78	858	0	116	743	0
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	7.0		5.0	7.0	
Minimum Split (s)	9.5	30.7		20.0	20.0		9.5	24.2		9.5	26.2	
Total Split (s)	44.5	55.7	0.0	55.7	55.7	0.0	24.5	63.2	0.0	24.5	63.2	0.0
Total Split (%)	23.7%	29.6%	0.0%	29.6%	29.6%	0.0%	13.0%	33.6%	0.0%	13.0%	33.6%	0.0%
Maximum Green (s)	40.0	50.0		50.0	50.0		20.0	58.0		20.0	58.0	
Yellow Time (s)	3.5	4.5		4.5	4.5		3.5	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.2		1.2	1.2		1.0	1.2		1.0	1.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	2.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.7	4.0	5.7	8.2	7.0	4.5	5.2	4.0	4.5	5.2	4.0
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	3.0		2.0	3.0	
Minimum Gap (s)	1.0	0.5		3.0	3.0		2.0	1.0		2.0	1.0	
Time Before Reduce (s)	10.0	10.0		0.0	0.0		0.0	20.0		0.0	20.0	
Time To Reduce (s)	10.0	15.0		0.0	0.0		0.0	20.0		0.0	20.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		18.0						12.0			14.0	
Pedestrian Calls (#/hr)		0						0			0	
Act Effct Green (s)	51.6	50.3			15.1		42.4	33.2		44.9	36.9	
Actuated g/C Ratio	0.47	0.46			0.14		0.39	0.30		0.41	0.34	
v/c Ratio	0.51	0.18			0.81		0.29	0.81		0.52	0.63	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	22.5	9.8			60.8		24.4	43.8		30.0	30.8	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	22.5	9.8			60.8		24.4	43.8		30.0	30.8	
LOS	C	A			E		C	D		C	C	
Approach Delay		18.5			60.8			42.2			30.7	
Approach LOS		B			E			D			C	
Queue Length 50th (ft)	129	24			75		31	281		47	196	
Queue Length 95th (ft)	268	77			197		80	493		112	356	
Internal Link Dist (ft)		189			113			100			505	
Turn Bay Length (ft)	100						100			100		
Base Capacity (vph)	771	1411			578		446	1977		400	1898	
Starvation Cap Reductn	0	0			0		0	0		0	37	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.41	0.10			0.29		0.17	0.43		0.29	0.40	

Intersection Summary

Area Type: Other
Cycle Length: 187.9
Actuated Cycle Length: 109.1
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 34.9 Intersection LOS: C
Intersection Capacity Utilization 74.9% ICU Level of Service D
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 4: 240th St SE & SR-9



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	75	134	64	173	102	22
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.94	0.94	0.84	0.84
Hourly flow rate (vph)	96	172	68	184	121	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	455	135	148			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	455	135	148			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	82	81	95			
cM capacity (veh/h)	533	909	1428			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	268	252	148
Volume Left	96	68	0
Volume Right	172	0	26
cSH	725	1428	1700
Volume to Capacity	0.37	0.05	0.09
Queue Length 95th (ft)	43	4	0
Control Delay (s)	12.8	2.4	0.0
Lane LOS	B	A	
Approach Delay (s)	12.8	2.4	0.0
Approach LOS	B		

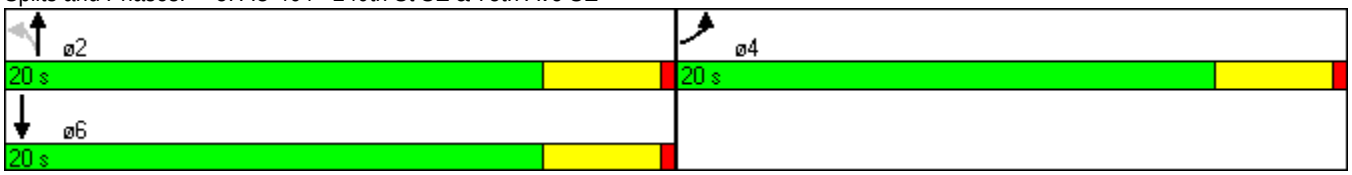
Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	6			18	7	
Queue Length 95th (ft)	28			54	26	
Internal Link Dist (ft)	10480			1138	4450	
Turn Bay Length (ft)						
Base Capacity (vph)	1143			1089	1196	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.19			0.23	0.11	

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 27.7
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.33
Intersection Signal Delay: 5.2 Intersection LOS: A
Intersection Capacity Utilization 41.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: AU 464 - 240th St SE & 75th Ave SE



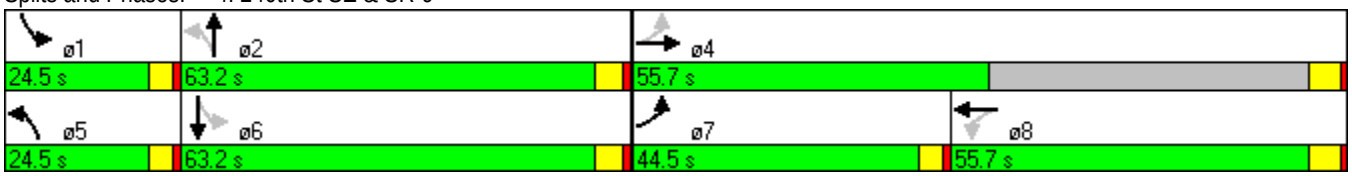
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	455	69	125	18	36	79	85	468	23	84	381	470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	100		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.903			0.920			0.993			0.917	
Flt Protected	0.950				0.993		0.950			0.950		
Satd. Flow (prot)	1736	1650	0	0	1669	0	1736	3447	0	1736	3183	0
Flt Permitted	0.500				0.915		0.115			0.359		
Satd. Flow (perm)	913	1650	0	0	*1170	0	210	3447	0	656	3183	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		70			37			3			172	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		269			193			180			585	
Travel Time (s)		6.1			4.4			4.1			13.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	474	72	130	19	38	82	89	488	24	88	397	490
Shared Lane Traffic (%)												
Lane Group Flow (vph)	474	202	0	0	139	0	89	512	0	88	887	0
Turn Type	pm+pt			Perm			pm+pt			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	7.0		5.0	7.0	
Minimum Split (s)	9.5	30.7		20.0	20.0		9.5	24.2		9.5	26.2	
Total Split (s)	44.5	55.7	0.0	55.7	55.7	0.0	24.5	63.2	0.0	24.5	63.2	0.0
Total Split (%)	23.7%	29.6%	0.0%	29.6%	29.6%	0.0%	13.0%	33.6%	0.0%	13.0%	33.6%	0.0%
Maximum Green (s)	40.0	50.0		50.0	50.0		20.0	58.0		20.0	58.0	
Yellow Time (s)	3.5	4.5		4.5	4.5		3.5	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.2		1.2	1.2		1.0	1.2		1.0	1.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.7	4.0	5.7	8.7	7.0	4.5	5.2	4.0	4.5	5.2	4.0
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	3.0		2.0	3.0		2.0	3.0	
Minimum Gap (s)	1.0	0.5		3.0	3.0		2.0	1.0		2.0	1.0	
Time Before Reduce (s)	10.0	10.0		0.0	0.0		0.0	20.0		0.0	20.0	
Time To Reduce (s)	10.0	15.0		0.0	0.0		0.0	20.0		0.0	20.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		18.0						12.0			14.0	
Pedestrian Calls (#/hr)		0						0			0	
Act Effct Green (s)	58.4	57.1			13.5		45.2	34.7		42.0	33.1	
Actuated g/C Ratio	0.50	0.49			0.12		0.39	0.30		0.36	0.28	
v/c Ratio	0.67	0.24			0.82		0.43	0.50		0.28	0.86	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	26.7	12.9			74.7		29.2	36.1		25.3	42.0	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay	26.7	12.9			74.7		29.2	36.1		25.3	42.1	
LOS	C	B			E		C	D		C	D	
Approach Delay		22.6			74.7			35.1			40.5	
Approach LOS		C			E			D			D	
Queue Length 50th (ft)	225	51			77		42	171		42	284	
Queue Length 95th (ft)	450	131			178		87	261		87	433	
Internal Link Dist (ft)		189			113			100			505	
Turn Bay Length (ft)	100						100			100		
Base Capacity (vph)	765	1358			522		365	1822		469	1762	
Starvation Cap Reductn	0	0			0		0	0		0	26	
Spillback Cap Reductn	0	0			0		0	0		0	0	
Storage Cap Reductn	0	0			0		0	0		0	0	
Reduced v/c Ratio	0.62	0.15			0.27		0.24	0.28		0.19	0.51	

Intersection Summary

Area Type: Other
Cycle Length: 187.9
Actuated Cycle Length: 116.3
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 36.1 Intersection LOS: D
Intersection Capacity Utilization 75.1% ICU Level of Service D
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 4: 240th St SE & SR-9



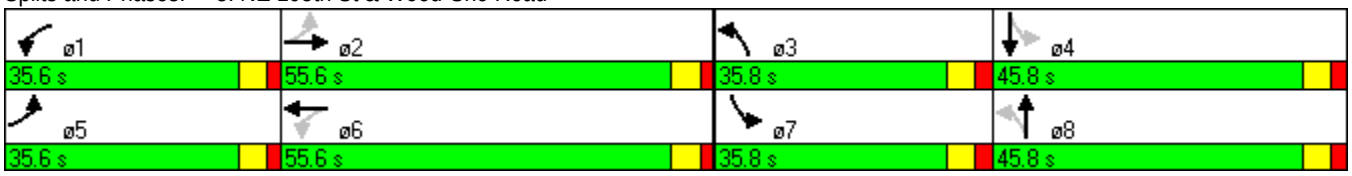
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	548	131	70	524	150	175	409	21	106	458	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	125		0	110		0	110		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.971			0.967			0.993			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3437	0	1770	3422	0	1770	3514	0	1770	3454	0
Flt Permitted	0.243			0.256			0.279			0.421		
Satd. Flow (perm)	453	3437	0	477	3422	0	520	3514	0	784	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			22			3			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			424			458			622	
Travel Time (s)		6.5			9.6			10.4			14.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	77	565	135	72	540	155	180	422	22	109	472	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	700	0	72	695	0	180	444	0	109	560	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	7.0		4.0	7.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.6	30.6		9.6	30.6		9.8	28.8		9.8	28.8	
Total Split (s)	35.6	55.6	0.0	35.6	55.6	0.0	35.8	45.8	0.0	35.8	45.8	0.0
Total Split (%)	20.6%	32.2%	0.0%	20.6%	32.2%	0.0%	20.7%	26.5%	0.0%	20.7%	26.5%	0.0%
Maximum Green (s)	30.0	50.0		30.0	50.0		30.0	40.0		30.0	40.0	
Yellow Time (s)	3.8	3.8		3.8	3.8		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.8	1.8		1.8	1.8		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.8	5.8	4.0	5.8	5.8	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	4.0		2.0	4.0		2.0	2.5		2.0	2.5	
Minimum Gap (s)	0.5	2.0		0.5	2.0		0.5	1.5		0.5	1.5	
Time Before Reduce (s)	10.0	20.0		10.0	20.0		10.0	5.0		10.0	5.0	
Time To Reduce (s)	15.0	20.0		15.0	20.0		15.0	10.0		15.0	5.0	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		18.0			18.0			16.0			16.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	34.8	28.5		33.6	27.9		33.0	22.5		31.2	21.6	
Actuated g/C Ratio	0.39	0.32		0.38	0.31		0.37	0.25		0.35	0.24	
v/c Ratio	0.26	0.63		0.25	0.64		0.53	0.50		0.29	0.66	
Control Delay	18.3	29.5		18.4	30.1		24.1	31.9		20.0	35.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.3	29.5		18.4	30.1		24.1	31.9		20.0	35.5	
LOS	B	C		B	C		C	C		C	D	
Approach Delay		28.4			29.0			29.6			33.0	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	24	171		22	171		63	111		36	145	
Queue Length 95th (ft)	62	297		59	298		136	199		87	258	
Internal Link Dist (ft)		208			344			378			542	
Turn Bay Length (ft)	100			125			110			110		
Base Capacity (vph)	685	2063		687	2056		680	1683		702	1659	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.11	0.34		0.10	0.34		0.26	0.26		0.16	0.34	

Intersection Summary

Area Type: Other
Cycle Length: 172.8
Actuated Cycle Length: 88.8
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 29.9 Intersection LOS: C
Intersection Capacity Utilization 67.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 8: NE 195th St & Wood-Sno Road



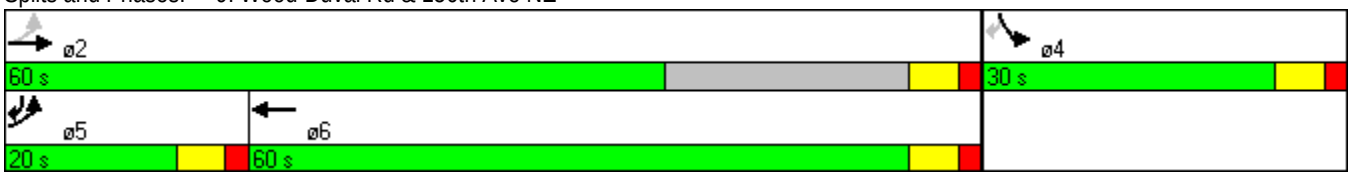
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	128	735	559	28	153	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	235			0	90	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.994			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	1870	0	1787	1599
Flt Permitted	0.170				0.950	
Satd. Flow (perm)	320	3574	1870	0	1787	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			3			146
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	688		815	
Travel Time (s)		13.5	15.6		18.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	135	774	588	29	161	146
Shared Lane Traffic (%)						
Lane Group Flow (vph)	135	774	617	0	161	146
Turn Type	pm+pt					pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2					4
Detector Phase	5	2	6		4	5
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	22.0	24.0		24.0	11.0
Total Split (s)	20.0	60.0	60.0	0.0	30.0	20.0
Total Split (%)	18.2%	54.5%	54.5%	0.0%	27.3%	18.2%
Maximum Green (s)	14.0	54.0	54.0		24.0	14.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Min	Min		Min	None
Walk Time (s)			7.0		7.0	
Flash Dont Walk (s)			11.0		11.0	
Pedestrian Calls (#/hr)			0		0	
Act Effct Green (s)	45.5	45.5	28.7		12.3	29.1
Actuated g/C Ratio	0.65	0.65	0.41		0.17	0.41
v/c Ratio	0.32	0.34	0.81		0.52	0.20
Control Delay	7.0	6.1	27.9		35.9	4.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	7.0	6.1	27.9		35.9	4.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	A	A	C		D	A
Approach Delay		6.2	27.9		20.7	
Approach LOS		A	C		C	
Queue Length 50th (ft)	18	64	217		61	0
Queue Length 95th (ft)	45	118	417		152	36
Internal Link Dist (ft)		513	608		735	
Turn Bay Length (ft)	235				90	
Base Capacity (vph)	515	3353	1475		644	836
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.26	0.23	0.42		0.25	0.17

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 70.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 15.9 Intersection LOS: B
Intersection Capacity Utilization 61.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: Wood-Duval Rd & 156th Ave NE



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	41	99	101	99	92	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	51	124	125	122	114	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	504	133	152			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	504	133	152			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	86	91			
cM capacity (veh/h)	482	916	1441			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	175	247	152
Volume Left	51	125	0
Volume Right	124	0	38
cSH	725	1441	1700
Volume to Capacity	0.24	0.09	0.09
Queue Length 95th (ft)	24	7	0
Control Delay (s)	11.5	4.3	0.0
Lane LOS	B	A	
Approach Delay (s)	11.5	4.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	75	134	64	173	102	22
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.94	0.94	0.84	0.84
Hourly flow rate (vph)	96	172	68	184	121	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	455	135	148			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	455	135	148			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	82	81	95			
cM capacity (veh/h)	533	909	1428			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	268	252	148
Volume Left	96	68	0
Volume Right	172	0	26
cSH	725	1428	1700
Volume to Capacity	0.37	0.05	0.09
Queue Length 95th (ft)	43	4	0
Control Delay (s)	12.8	2.4	0.0
Lane LOS	B	A	
Approach Delay (s)	12.8	2.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	0	279	7	3	3	293	1474	3	3	725	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		70	0		0	350		0	200		140
Storage Lanes	1		0	0		0	2		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Frt		0.850			0.969							0.850
Flt Protected	0.950				0.974		0.950			0.950		
Satd. Flow (prot)	1752	1568	0	0	1741	0	3400	3505	0	1752	3505	1568
Flt Permitted	0.653						0.950			0.950		
Satd. Flow (perm)	1205	1568	0	0	1787	0	3400	3505	0	1752	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		400			3							67
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4236			427			1702			5221	
Travel Time (s)		96.3			9.7			38.7			118.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	156	0	291	7	3	3	305	1535	3	3	755	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	291	0	0	13	0	305	1538	0	3	755	104
Turn Type	pm+pt			pm+pt			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	8.0	21.0		8.0	47.0		8.0	33.0		8.0	41.0	41.0
Total Split (s)	15.0	35.0	0.0	15.0	47.0	0.0	25.0	75.0	0.0	25.0	75.0	75.0
Total Split (%)	9.3%	21.6%	0.0%	9.3%	29.0%	0.0%	15.4%	46.3%	0.0%	15.4%	46.3%	46.3%
Maximum Green (s)	10.0	30.0		10.0	42.0		20.0	69.0		20.0	69.0	69.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	5.0		4.0	5.0	5.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	6.0	4.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5		2.0	2.5		2.0	4.5		2.0	4.5	4.5
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)					7.0			7.0			7.0	7.0
Flash Dont Walk (s)					35.0			20.0			28.0	28.0
Pedestrian Calls (#/hr)					0			0			0	0
Act Effct Green (s)	11.8	11.8			5.7		12.5	67.4		4.8	51.5	51.5
Actuated g/C Ratio	0.13	0.13			0.06		0.14	0.73		0.05	0.56	0.56
v/c Ratio	0.74	0.53			0.11		0.66	0.60		0.03	0.38	0.11
Control Delay	59.5	4.0			41.2		45.6	8.5		47.3	13.0	5.4
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	59.5	4.0			41.2		45.6	8.5		47.3	13.0	5.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	A			D		D	A		D	B	A
Approach Delay		23.4			41.2			14.6			12.2	
Approach LOS		C			D			B			B	
Queue Length 50th (ft)	82	0			5		80	151		2	111	8
Queue Length 95th (ft)	167	3			28		153	458		12	222	42
Internal Link Dist (ft)		4156			347			1622			5141	
Turn Bay Length (ft)	300						350			200		140
Base Capacity (vph)	219	939			826		747	2657		385	2657	1205
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.71	0.31			0.02		0.41	0.58		0.01	0.28	0.09

Intersection Summary

Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 92
Natural Cycle: 115
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 15.3 Intersection LOS: B
Intersection Capacity Utilization 74.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: 228th St SE & SR-9

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Volume (vph)	27	105	180	1854	0	559	458
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	450		155		0
Storage Lanes	1	1	1		1		1
Taper Length (ft)	25	25	25		25		25
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	1.00
Frt		0.850					0.850
Flt Protected	0.950		0.950				
Satd. Flow (prot)	1752	1568	1752	3505	1845	3505	1568
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1752	1568	1752	3505	1845	3505	1568
Right Turn on Red		Yes					Yes
Satd. Flow (RTOR)		114					498
Link Speed (mph)	30			30		30	
Link Distance (ft)	299			650		714	
Travel Time (s)	6.8			14.8		16.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	29	114	196	2015	0	608	498
Shared Lane Traffic (%)							
Lane Group Flow (vph)	29	114	196	2015	0	608	498
Turn Type		Perm	Prot		Prot		Perm
Protected Phases	4		5	2	1	6	
Permitted Phases		4					6
Detector Phase	4	4	5	2	1	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	3.0	10.0	3.0	10.0	10.0
Minimum Split (s)	20.0	20.0	8.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	25.0	70.0	10.0	55.0	55.0
Total Split (%)	20.0%	20.0%	25.0%	70.0%	10.0%	55.0%	55.0%
Maximum Green (s)	15.0	15.0	20.4	64.7	5.4	49.7	49.7
Yellow Time (s)	4.0	4.0	3.6	4.3	3.6	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.6	5.3	4.6	5.3	5.3
Lead/Lag			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	2.0	4.0	2.0	4.0	4.0
Recall Mode	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	8.0	8.0	15.4	81.7		61.6	61.6
Actuated g/C Ratio	0.08	0.08	0.15	0.82		0.62	0.62
v/c Ratio	0.21	0.49	0.72	0.70		0.28	0.43
Control Delay	45.4	15.9	50.9	7.5		10.3	2.4
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	45.4	15.9	50.9	7.5		10.3	2.4
LOS	D	B	D	A		B	A
Approach Delay	21.9			11.3		6.7	
Approach LOS	C			B		A	

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Queue Length 50th (ft)	18	0	125	305		86	0
Queue Length 95th (ft)	44	50	m170	345		149	47
Internal Link Dist (ft)	219			570		634	
Turn Bay Length (ft)	100		450				
Base Capacity (vph)	263	332	361	2863		2160	1158
Starvation Cap Reductn	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0		0	0
Reduced v/c Ratio	0.11	0.34	0.54	0.70		0.28	0.43

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 10.3 Intersection LOS: B
Intersection Capacity Utilization 71.2% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SR-522 WB Ramp & SR-9

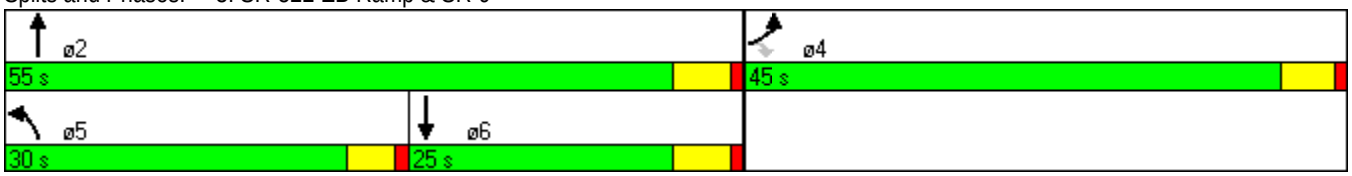
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	992	390	298	1240	711	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	260	250			0
Storage Lanes	2	1	1			0
Taper Length (ft)	25	25	25			25
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.987	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3493	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3493	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		415			9	
Link Speed (mph)	30			30	30	
Link Distance (ft)	725			585	374	
Travel Time (s)	16.5			13.3	8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1055	415	317	1319	756	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1055	415	317	1319	828	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	3.0	10.0	10.0	
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	45.0	45.0	30.0	55.0	25.0	0.0
Total Split (%)	45.0%	45.0%	30.0%	55.0%	25.0%	0.0%
Maximum Green (s)	40.0	40.0	25.4	49.7	19.7	
Yellow Time (s)	4.0	4.0	3.6	4.3	4.3	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.6	5.3	5.3	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.5	3.5	2.0	4.0	4.0	
Recall Mode	None	None	None	C-Min	C-Min	
Act Effct Green (s)	37.5	37.5	21.3	52.2	26.3	
Actuated g/C Ratio	0.38	0.38	0.21	0.52	0.26	
v/c Ratio	0.82	0.49	0.84	0.71	0.89	
Control Delay	34.1	4.1	57.1	21.5	53.0	
Queue Delay	0.0	0.0	0.0	0.6	0.0	
Total Delay	34.1	4.1	57.1	22.0	53.0	
LOS	C	A	E	C	D	
Approach Delay	25.7			28.8	53.0	
Approach LOS	C			C	D	
Queue Length 50th (ft)	298	0	193	335	184	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 95th (ft)	374	57	282	426	#472	
Internal Link Dist (ft)	645			505	294	
Turn Bay Length (ft)		260	250			
Base Capacity (vph)	1373	882	450	1849	927	
Starvation Cap Reductn	0	0	0	201	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.77	0.47	0.70	0.80	0.89	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 32.7 Intersection LOS: C
Intersection Capacity Utilization 79.0% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: SR-522 EB Ramp & SR-9



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	249	210	82	329	132	420	1388	177	68	592	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		150	450		0	270		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.983			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1703	3348	0	1703	3341	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1703	3348	0	1703	3341	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			213			108		15			13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		374			300			708			666	
Travel Time (s)		8.5			6.8			16.1			15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Adj. Flow (vph)	115	271	228	89	358	143	457	1509	192	74	643	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	271	228	89	358	143	457	1701	0	74	738	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	8.0	20.0	20.0	8.0	37.0	37.0	8.0	31.0		8.0	31.0	
Total Split (s)	12.0	36.0	36.0	13.0	37.0	37.0	38.0	67.0	0.0	9.0	38.0	0.0
Total Split (%)	9.6%	28.8%	28.8%	10.4%	29.6%	29.6%	30.4%	53.6%	0.0%	7.2%	30.4%	0.0%
Maximum Green (s)	8.4	31.0	31.0	9.4	32.0	32.0	34.4	61.0		5.4	32.0	
Yellow Time (s)	3.6	4.0	4.0	3.6	4.0	4.0	3.6	5.0		3.6	5.0	
All-Red Time (s)	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.6	5.0	5.0	3.6	5.0	5.0	3.6	6.0	4.0	3.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	3.5	3.5	2.5	3.5	3.5	3.0	4.5		3.0	4.5	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)					7.0	7.0		7.0			7.0	
Flash Dont Walk (s)					25.0	25.0		18.0			18.0	
Pedestrian Calls (#/hr)					0	0		0			0	
Act Effct Green (s)	8.4	27.8	27.8	8.9	28.3	28.3	34.0	61.1		5.4	32.5	
Actuated g/C Ratio	0.07	0.23	0.23	0.07	0.23	0.23	0.28	0.50		0.04	0.27	
v/c Ratio	0.97	0.66	0.44	0.71	0.86	0.33	0.96	1.01		0.97	0.82	
Control Delay	134.1	51.0	9.2	85.6	64.7	13.5	75.6	53.7		155.1	50.2	
Queue Delay	0.0	0.0	0.0	0.0	91.8	0.6	0.0	0.0		0.0	0.0	
Total Delay	134.1	51.0	9.2	85.6	156.6	14.1	75.6	53.7		155.1	50.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	D	A	F	F	B	E	D		F	D	
Approach Delay		51.1			111.3			58.3			59.7	
Approach LOS		D			F			E			E	
Queue Length 50th (ft)	~94	195	9	71	270	22	365	~768		~61	293	
Queue Length 95th (ft)	#222	289	76	#153	#410	77	#583	#918		#165	#391	
Internal Link Dist (ft)		294			220			628			586	
Turn Bay Length (ft)	100		140	100		150	450			270		
Base Capacity (vph)	118	458	548	132	473	481	483	1692		76	903	
Starvation Cap Reductn	0	0	0	0	172	138	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.97	0.59	0.42	0.67	1.19	0.42	0.95	1.01		0.97	0.82	

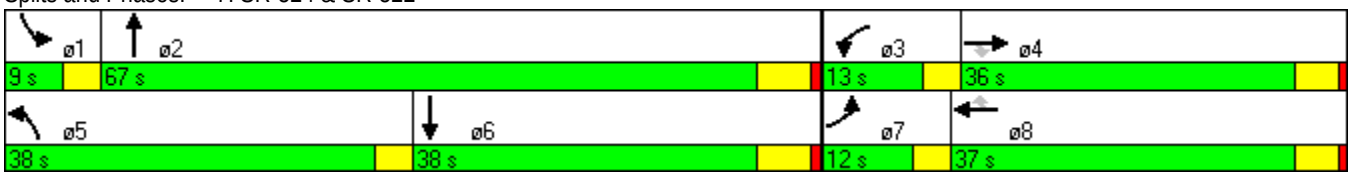
Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 121.4
Natural Cycle: 125
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 65.0 Intersection LOS: E
Intersection Capacity Utilization 86.8% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: SR-524 & SR-522



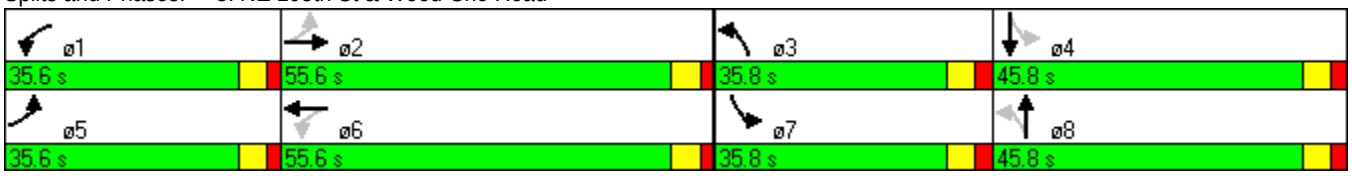
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	739	210	37	708	170	266	609	28	124	379	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	125		0	110		0	110		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.967			0.971			0.993			0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3422	0	1770	3437	0	1770	3514	0	1770	3320	0
Flt Permitted	0.141			0.159			0.134			0.297		
Satd. Flow (perm)	263	3422	0	296	3437	0	250	3514	0	553	3320	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			17			2			95	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			424			458			622	
Travel Time (s)		6.5			9.6			10.4			14.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	88	762	216	38	730	175	274	628	29	128	391	273
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	978	0	38	905	0	274	657	0	128	664	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	7.0		4.0	7.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.6	30.6		9.6	30.6		9.8	28.8		9.8	28.8	
Total Split (s)	35.6	55.6	0.0	35.6	55.6	0.0	35.8	45.8	0.0	35.8	45.8	0.0
Total Split (%)	20.6%	32.2%	0.0%	20.6%	32.2%	0.0%	20.7%	26.5%	0.0%	20.7%	26.5%	0.0%
Maximum Green (s)	30.0	50.0		30.0	50.0		30.0	40.0		30.0	40.0	
Yellow Time (s)	3.8	3.8		3.8	3.8		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.8	1.8		1.8	1.8		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.8	5.8	4.0	5.8	5.8	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	4.0		2.0	4.0		2.0	2.5		2.0	2.5	
Minimum Gap (s)	0.5	2.0		0.5	2.0		0.5	1.5		0.5	1.5	
Time Before Reduce (s)	10.0	20.0		10.0	20.0		10.0	5.0		10.0	5.0	
Time To Reduce (s)	15.0	20.0		15.0	20.0		15.0	10.0		15.0	5.0	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		18.0			18.0			16.0			16.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	55.8	48.6		49.3	43.1		52.3	36.1		39.7	28.6	
Actuated g/C Ratio	0.45	0.40		0.40	0.35		0.43	0.29		0.32	0.23	
v/c Ratio	0.39	0.72		0.20	0.75		0.81	0.64		0.44	0.79	
Control Delay	25.9	36.9		23.6	40.5		48.9	41.1		28.4	46.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.9	36.9		23.6	40.5		48.9	41.1		28.4	46.5	
LOS	C	D		C	D		D	D		C	D	
Approach Delay		36.0			39.8			43.4			43.6	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	38	344		16	321		158	247		64	234	
Queue Length 95th (ft)	89	550		46	521		281	342		113	354	
Internal Link Dist (ft)		208			344			378			542	
Turn Bay Length (ft)	100			125			110			110		
Base Capacity (vph)	508	1502		515	1472		496	1281		546	1192	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.17	0.65		0.07	0.61		0.55	0.51		0.23	0.56	

Intersection Summary

Area Type: Other
Cycle Length: 172.8
Actuated Cycle Length: 123
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 40.4 — Intersection LOS: D
Intersection Capacity Utilization 83.2% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 8: NE 195th St & Wood-Sno Road



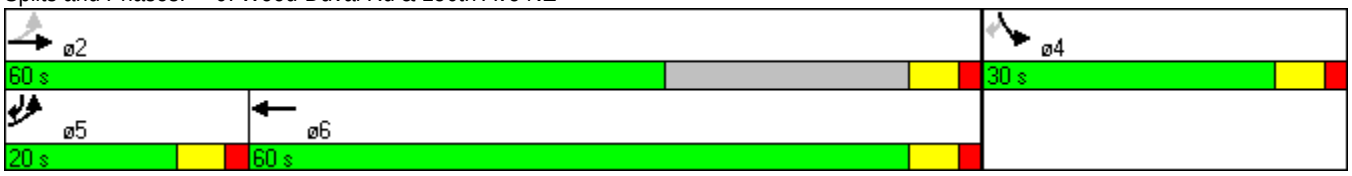
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	276	1188	816	30	247	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	235			0	90	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.995			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	1872	0	1787	1599
Flt Permitted	0.069				0.950	
Satd. Flow (perm)	130	3574	1872	0	1787	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			2			108
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	688		815	
Travel Time (s)		13.5	15.6		18.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	291	1251	859	32	260	164
Shared Lane Traffic (%)						
Lane Group Flow (vph)	291	1251	891	0	260	164
Turn Type	pm+pt					pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2					4
Detector Phase	5	2	6		4	5
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	22.0	24.0		24.0	11.0
Total Split (s)	20.0	60.0	60.0	0.0	30.0	20.0
Total Split (%)	18.2%	54.5%	54.5%	0.0%	27.3%	18.2%
Maximum Green (s)	14.0	54.0	54.0		24.0	14.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Min	Min		Min	None
Walk Time (s)			7.0		7.0	
Flash Dont Walk (s)			11.0		11.0	
Pedestrian Calls (#/hr)			0		0	
Act Effct Green (s)	72.2	72.2	52.1		19.5	39.7
Actuated g/C Ratio	0.70	0.70	0.50		0.19	0.38
v/c Ratio	0.92	0.50	0.95		0.77	0.24
Control Delay	64.1	8.7	45.3		56.5	9.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	64.1	8.7	45.3		56.5	9.3

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	E	A	D		E	A
Approach Delay		19.1	45.3		38.2	
Approach LOS		B	D		D	
Queue Length 50th (ft)	144	186	548		169	24
Queue Length 95th (ft)	#329	260	#879		260	69
Internal Link Dist (ft)		513	608		735	
Turn Bay Length (ft)	235				90	
Base Capacity (vph)	315	2565	981		416	677
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.92	0.49	0.91		0.63	0.24

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 103.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 30.1 Intersection LOS: C
Intersection Capacity Utilization 88.7% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Wood-Duval Rd & 156th Ave NE



2019 Future Conditions with Development Peak-Hour LOS Calculations

Arterial Level of Service: WB AU 463 - 240th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-9	IV	29	124.3	52.0	176.3	1.00	20.4	B
Total	IV		124.3	52.0	176.3	1.00	20.4	B

Arterial Level of Service: EB AU 464 - 240th St SE

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
75th Ave SE	III	32	225.0	4.9	229.9	2.00	31.3	A
Total	III		225.0	4.9	229.9	2.00	31.3	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	301	46	92	23	37	186	75	800	39	224	385	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		200	300		0	300		0
Storage Lanes	1		0	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.900				0.850		0.993			0.931	
Flt Protected	0.950				0.981		0.950			0.950		
Satd. Flow (prot)	1736	1644	0	0	1845	1599	1736	3447	0	1736	3232	0
Flt Permitted	0.716				0.813		0.950			0.950		
Satd. Flow (perm)	1308	1644	0	0	1529	1599	1736	3447	0	1736	3232	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88				194		4			233	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		269			193			180			585	
Travel Time (s)		6.1			4.4			4.1			13.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	314	48	96	24	39	194	78	833	41	233	401	342
Shared Lane Traffic (%)												
Lane Group Flow (vph)	314	144	0	0	63	194	78	874	0	233	743	0
Turn Type	pm+pt			Perm		Perm	Prot			Prot		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8						
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	9.5	30.7		20.0	20.0	20.0	9.5	24.2		9.5	26.2	
Total Split (s)	24.0	44.0	0.0	20.0	20.0	20.0	16.8	46.0	0.0	30.0	59.2	0.0
Total Split (%)	20.0%	36.7%	0.0%	16.7%	16.7%	16.7%	14.0%	38.3%	0.0%	25.0%	49.3%	0.0%
Maximum Green (s)	19.5	38.3		14.3	14.3	14.3	12.3	40.8		25.5	54.0	
Yellow Time (s)	3.5	4.5		4.5	4.5	4.5	3.5	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.2		1.2	1.2	1.2	1.0	1.2		1.0	1.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.7	4.0	5.7	5.7	5.7	4.5	5.2	4.0	4.5	5.2	4.0
Lead/Lag	Lag			Lead	Lead	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Minimum Gap (s)	1.0	0.5		3.0	3.0	3.0	2.0	1.0		2.0	1.0	
Time Before Reduce (s)	10.0	10.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Time To Reduce (s)	10.0	15.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		18.0						12.0			14.0	
Pedestrian Calls (#/hr)		0						0			0	
Act Effct Green (s)	30.2	28.9			9.6	9.6	8.7	30.3		17.3	41.7	
Actuated g/C Ratio	0.33	0.31			0.10	0.10	0.09	0.33		0.19	0.45	
v/c Ratio	0.64	0.25			0.40	0.57	0.48	0.77		0.72	0.47	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	36.4	13.0			52.0	14.1	55.5	34.8		51.3	14.2	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	36.4	13.0			52.0	14.1	55.5	34.8		51.3	14.2	
LOS	D	B			D	B	E	C		D	B	
Approach Delay		29.1			23.4			36.5			23.1	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	151	23			36	0	45	243		131	110	
Queue Length 95th (ft)	293	81			92	69	109	389		254	191	
Internal Link Dist (ft)		189			113			100			505	
Turn Bay Length (ft)	100					200	300			300		
Base Capacity (vph)	605	765			248	422	243	1601		503	2073	
Starvation Cap Reductn	0	0			0	0	0	0		0	0	
Spillback Cap Reductn	0	0			0	0	0	0		0	0	
Storage Cap Reductn	0	0			0	0	0	0		0	0	
Reduced v/c Ratio	0.52	0.19			0.25	0.46	0.32	0.55		0.46	0.36	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 92.7
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 29.0 Intersection LOS: C
Intersection Capacity Utilization 71.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: 240th St SE & SR-9

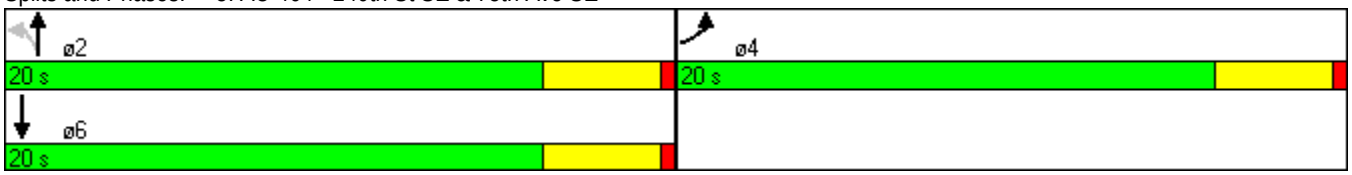
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	80	144	79	173	102	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.913				0.970	
Flt Protected	0.982			0.985		
Satd. Flow (prot)	1638	0	0	1817	1807	0
Flt Permitted	0.982			0.873		
Satd. Flow (perm)	1638	0	0	1610	1807	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	185				35	
Link Speed (mph)	32			30	30	
Link Distance (ft)	10560			1218	4530	
Travel Time (s)	225.0			27.7	103.0	
Peak Hour Factor	0.78	0.78	0.94	0.94	0.84	0.84
Heavy Vehicles (%)	4%	4%	3%	3%	2%	2%
Adj. Flow (vph)	103	185	84	184	121	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	288	0	0	268	156	0
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	20.0		20.0	20.0	20.0	
Total Split (s)	20.0	0.0	20.0	20.0	20.0	0.0
Total Split (%)	50.0%	0.0%	50.0%	50.0%	50.0%	0.0%
Maximum Green (s)	16.0		16.0	16.0	16.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	-1.7	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	2.3	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		Min	Min	Min	
Walk Time (s)	5.0		5.0	5.0	5.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	9.5			14.6	14.6	
Actuated g/C Ratio	0.35			0.53	0.53	
v/c Ratio	0.42			0.31	0.16	
Control Delay	4.9			7.3	5.2	
Queue Delay	0.0			0.0	0.0	
Total Delay	4.9			7.3	5.2	
LOS	A			A	A	
Approach Delay	4.9			7.3	5.2	
Approach LOS	A			A	A	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 50th (ft)	7			20	8	
Queue Length 95th (ft)	31			68	31	
Internal Link Dist (ft)	10480			1138	4450	
Turn Bay Length (ft)						
Base Capacity (vph)	1137			1068	1211	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.25			0.25	0.13	

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 27.5
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay: 5.9 Intersection LOS: A
Intersection Capacity Utilization 43.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: AU 464 - 240th St SE & 75th Ave SE



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	80	144	79	173	102	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.94	0.94	0.84	0.84
Hourly flow rate (vph)	103	185	84	184	121	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	491	139	156			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	491	139	156			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	80	80	94			
cM capacity (veh/h)	502	904	1418			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	287	268	156
Volume Left	103	84	0
Volume Right	185	0	35
cSH	703	1418	1700
Volume to Capacity	0.41	0.06	0.09
Queue Length 95th (ft)	50	5	0
Control Delay (s)	13.6	2.8	0.0
Lane LOS	B	A	
Approach Delay (s)	13.6	2.8	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	0	294	7	3	3	303	1484	3	3	740	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		70	0		0	350		0	200		140
Storage Lanes	1		0	0		0	2		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Frt		0.850			0.969							0.850
Flt Protected	0.950				0.974		0.950			0.950		
Satd. Flow (prot)	1752	1568	0	0	1741	0	3400	3505	0	1752	3505	1568
Flt Permitted	0.653						0.950			0.950		
Satd. Flow (perm)	1205	1568	0	0	1787	0	3400	3505	0	1752	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		397			3							65
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4236			427			1702			5221	
Travel Time (s)		96.3			9.7			38.7			118.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	156	0	306	7	3	3	316	1546	3	3	771	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	306	0	0	13	0	316	1549	0	3	771	104
Turn Type	pm+pt			pm+pt			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	8.0	21.0		8.0	47.0		8.0	33.0		8.0	41.0	41.0
Total Split (s)	15.0	35.0	0.0	15.0	47.0	0.0	25.0	75.0	0.0	25.0	75.0	75.0
Total Split (%)	9.3%	21.6%	0.0%	9.3%	29.0%	0.0%	15.4%	46.3%	0.0%	15.4%	46.3%	46.3%
Maximum Green (s)	10.0	30.0		10.0	42.0		20.0	69.0		20.0	69.0	69.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	5.0		4.0	5.0	5.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	6.0	4.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5		2.0	2.5		2.0	4.5		2.0	4.5	4.5
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)					7.0			7.0			7.0	7.0
Flash Dont Walk (s)					35.0			20.0			28.0	28.0
Pedestrian Calls (#/hr)					0			0			0	0
Act Effct Green (s)	11.8	11.8			5.7		12.9	68.4		4.8	52.2	52.2
Actuated g/C Ratio	0.13	0.13			0.06		0.14	0.74		0.05	0.56	0.56
v/c Ratio	0.74	0.56			0.12		0.67	0.60		0.03	0.39	0.11
Control Delay	60.7	5.0			41.3		46.1	8.5		47.3	13.2	5.7
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	60.7	5.0			41.3		46.1	8.5		47.3	13.2	5.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	A			D		D	A		D	B	A
Approach Delay		23.8			41.3			14.8			12.4	
Approach LOS		C			D			B			B	
Queue Length 50th (ft)	84	0			5		86	152		2	115	9
Queue Length 95th (ft)	167	15			28		157	464		12	230	43
Internal Link Dist (ft)		4156			347			1622			5141	
Turn Bay Length (ft)	300						350			200		140
Base Capacity (vph)	216	931			816		738	2625		380	2625	1191
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.72	0.33			0.02		0.43	0.59		0.01	0.29	0.09

Intersection Summary

Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 93
Natural Cycle: 115
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 15.6 Intersection LOS: B
Intersection Capacity Utilization 76.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: 228th St SE & SR-9

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Volume (vph)	27	120	224	1874	0	589	458
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	450		155		0
Storage Lanes	1	1	1		1		1
Taper Length (ft)	25	25	25		25		25
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	1.00
Frt		0.850					0.850
Flt Protected	0.950		0.950				
Satd. Flow (prot)	1752	1568	1752	3505	1845	3505	1568
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1752	1568	1752	3505	1845	3505	1568
Right Turn on Red		Yes					Yes
Satd. Flow (RTOR)		130					498
Link Speed (mph)	30			30		30	
Link Distance (ft)	299			650		714	
Travel Time (s)	6.8			14.8		16.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	29	130	243	2037	0	640	498
Shared Lane Traffic (%)							
Lane Group Flow (vph)	29	130	243	2037	0	640	498
Turn Type		Perm	Prot		Prot		Perm
Protected Phases	4		5	2	1	6	
Permitted Phases		4					6
Detector Phase	4	4	5	2	1	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	3.0	10.0	3.0	10.0	10.0
Minimum Split (s)	20.0	20.0	8.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	25.0	70.0	10.0	55.0	55.0
Total Split (%)	20.0%	20.0%	25.0%	70.0%	10.0%	55.0%	55.0%
Maximum Green (s)	15.0	15.0	20.4	64.7	5.4	49.7	49.7
Yellow Time (s)	4.0	4.0	3.6	4.3	3.6	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.6	5.3	4.6	5.3	5.3
Lead/Lag			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	2.0	4.0	2.0	4.0	4.0
Recall Mode	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	8.1	8.1	17.9	81.6		59.1	59.1
Actuated g/C Ratio	0.08	0.08	0.18	0.82		0.59	0.59
v/c Ratio	0.20	0.53	0.77	0.71		0.31	0.44
Control Delay	45.2	15.8	51.4	7.3		11.8	2.6
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	45.2	15.8	51.4	7.3		11.8	2.6
LOS	D	B	D	A		B	A
Approach Delay	21.2			12.0		7.8	
Approach LOS	C			B		A	

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Queue Length 50th (ft)	18	0	161	295		99	0
Queue Length 95th (ft)	44	54	m208	340		168	50
Internal Link Dist (ft)	219			570		634	
Turn Bay Length (ft)	100		450				
Base Capacity (vph)	263	346	370	2860		2070	1130
Starvation Cap Reductn	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0		0	0
Reduced v/c Ratio	0.11	0.38	0.66	0.71		0.31	0.44

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 11.0 Intersection LOS: B
Intersection Capacity Utilization 71.7% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SR-522 WB Ramp & SR-9

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	992	458	308	1304	756	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	260	250			0
Storage Lanes	2	1	1			0
Taper Length (ft)	25	25	25			25
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.988	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3497	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3497	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		487			8	
Link Speed (mph)	30			30	30	
Link Distance (ft)	725			585	374	
Travel Time (s)	16.5			13.3	8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1055	487	328	1387	804	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1055	487	328	1387	876	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	3.0	10.0	10.0	
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	45.0	45.0	30.0	55.0	25.0	0.0
Total Split (%)	45.0%	45.0%	30.0%	55.0%	25.0%	0.0%
Maximum Green (s)	40.0	40.0	25.4	49.7	19.7	
Yellow Time (s)	4.0	4.0	3.6	4.3	4.3	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.6	5.3	5.3	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.5	3.5	2.0	4.0	4.0	
Recall Mode	None	None	None	C-Min	C-Min	
Act Effct Green (s)	37.7	37.7	21.8	52.0	25.6	
Actuated g/C Ratio	0.38	0.38	0.22	0.52	0.26	
v/c Ratio	0.82	0.54	0.85	0.75	0.97	
Control Delay	33.7	4.4	57.6	22.8	68.0	
Queue Delay	0.0	0.0	0.0	0.8	0.0	
Total Delay	33.7	4.4	57.6	23.6	68.0	
LOS	C	A	E	C	E	
Approach Delay	24.5			30.1	68.0	
Approach LOS	C			C	E	
Queue Length 50th (ft)	295	0	199	367	~296	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 95th (ft)	374	61	#299	462	#508	
Internal Link Dist (ft)	645			505	294	
Turn Bay Length (ft)		260	250			
Base Capacity (vph)	1373	925	450	1841	902	
Starvation Cap Reductn	0	0	0	188	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.77	0.53	0.73	0.84	0.97	

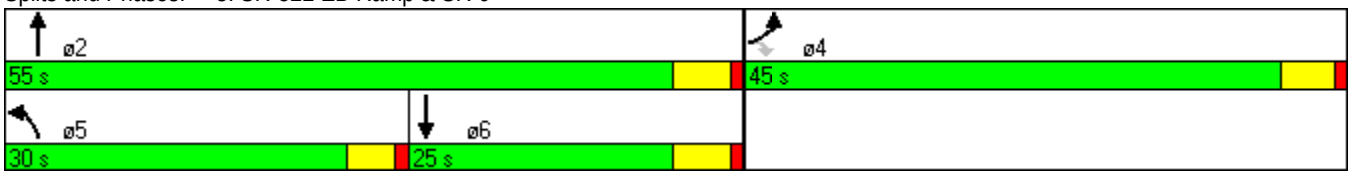
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 36.0 Intersection LOS: D
Intersection Capacity Utilization 80.8% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: SR-522 EB Ramp & SR-9



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	254	210	82	333	132	420	1398	177	68	607	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		150	450		0	270		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.983			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1703	3348	0	1703	3341	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1703	3348	0	1703	3341	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			209			107		15			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		374			300			708			666	
Travel Time (s)		8.5			6.8			16.1			15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Adj. Flow (vph)	115	276	228	89	362	143	457	1520	192	74	660	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	276	228	89	362	143	457	1712	0	74	755	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	8.0	20.0	20.0	8.0	37.0	37.0	8.0	31.0		8.0	31.0	
Total Split (s)	12.0	36.0	36.0	13.0	37.0	37.0	38.0	67.0	0.0	9.0	38.0	0.0
Total Split (%)	9.6%	28.8%	28.8%	10.4%	29.6%	29.6%	30.4%	53.6%	0.0%	7.2%	30.4%	0.0%
Maximum Green (s)	8.4	31.0	31.0	9.4	32.0	32.0	34.4	61.0		5.4	32.0	
Yellow Time (s)	3.6	4.0	4.0	3.6	4.0	4.0	3.6	5.0		3.6	5.0	
All-Red Time (s)	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.6	5.0	5.0	3.6	5.0	5.0	3.6	6.0	4.0	3.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	3.5	3.5	2.5	3.5	3.5	3.0	4.5		3.0	4.5	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)					7.0	7.0		7.0			7.0	
Flash Dont Walk (s)					25.0	25.0		18.0			18.0	
Pedestrian Calls (#/hr)					0	0		0			0	
Act Effct Green (s)	8.4	28.0	28.0	8.9	28.5	28.5	34.1	61.1		5.4	32.4	
Actuated g/C Ratio	0.07	0.23	0.23	0.07	0.23	0.23	0.28	0.50		0.04	0.27	
v/c Ratio	0.97	0.67	0.45	0.71	0.86	0.33	0.96	1.01		0.97	0.84	
Control Delay	134.2	51.3	9.6	85.8	65.1	13.7	76.0	55.9		155.2	51.8	
Queue Delay	0.0	0.0	0.0	0.0	104.1	0.7	0.0	0.0		0.0	0.0	
Total Delay	134.2	51.3	9.6	85.8	169.2	14.4	76.0	55.9		155.2	51.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	D	A	F	F	B	E	E		F	D	
Approach Delay		51.4			119.4			60.2			61.0	
Approach LOS		D			F			E			E	
Queue Length 50th (ft)	~95	199	12	71	274	22	366	~784		~61	304	
Queue Length 95th (ft)	#222	296	79	#153	#416	78	#583	#927		#165	#408	
Internal Link Dist (ft)		294			220			628			586	
Turn Bay Length (ft)	100		140	100		150	450			270		
Base Capacity (vph)	118	457	544	132	472	480	482	1689		76	899	
Starvation Cap Reductn	0	0	0	0	175	140	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.97	0.60	0.42	0.67	1.22	0.42	0.95	1.01		0.97	0.84	

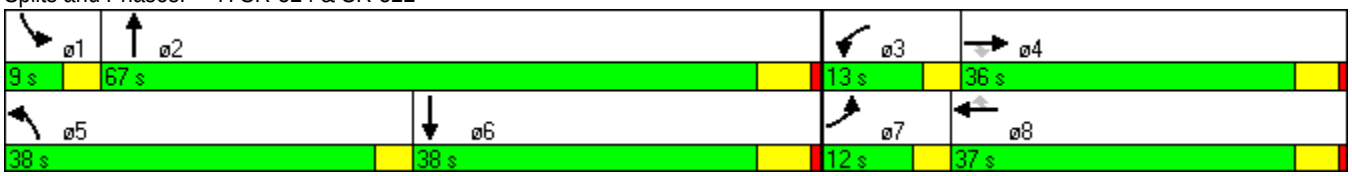
Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 121.6
Natural Cycle: 125
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 67.4 Intersection LOS: E
Intersection Capacity Utilization 87.3% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: SR-524 & SR-522



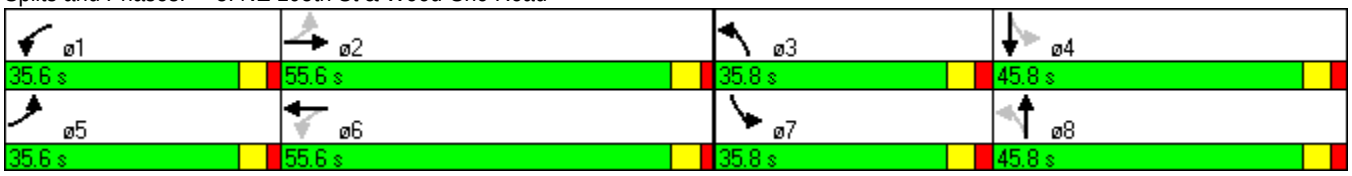
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	739	210	37	708	173	266	619	28	126	384	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	125		0	110		0	110		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.967			0.971			0.993			0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3422	0	1770	3437	0	1770	3514	0	1770	3320	0
Flt Permitted	0.138			0.158			0.130			0.291		
Satd. Flow (perm)	257	3422	0	294	3437	0	242	3514	0	542	3320	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			17			2			95	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			424			458			622	
Travel Time (s)		6.5			9.6			10.4			14.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	90	762	216	38	730	178	274	638	29	130	396	276
Shared Lane Traffic (%)												
Lane Group Flow (vph)	90	978	0	38	908	0	274	667	0	130	672	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	7.0		4.0	7.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.6	30.6		9.6	30.6		9.8	28.8		9.8	28.8	
Total Split (s)	35.6	55.6	0.0	35.6	55.6	0.0	35.8	45.8	0.0	35.8	45.8	0.0
Total Split (%)	20.6%	32.2%	0.0%	20.6%	32.2%	0.0%	20.7%	26.5%	0.0%	20.7%	26.5%	0.0%
Maximum Green (s)	30.0	50.0		30.0	50.0		30.0	40.0		30.0	40.0	
Yellow Time (s)	3.8	3.8		3.8	3.8		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.8	1.8		1.8	1.8		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.8	5.8	4.0	5.8	5.8	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	4.0		2.0	4.0		2.0	2.5		2.0	2.5	
Minimum Gap (s)	0.5	2.0		0.5	2.0		0.5	1.5		0.5	1.5	
Time Before Reduce (s)	10.0	20.0		10.0	20.0		10.0	5.0		10.0	5.0	
Time To Reduce (s)	15.0	20.0		15.0	20.0		15.0	10.0		15.0	5.0	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		18.0			18.0			16.0			16.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	56.2	48.9		49.4	43.2		53.3	36.7		40.3	29.0	
Actuated g/C Ratio	0.45	0.39		0.40	0.35		0.43	0.30		0.32	0.23	
v/c Ratio	0.40	0.72		0.20	0.75		0.81	0.64		0.45	0.79	
Control Delay	26.5	37.4		24.0	41.3		49.0	41.4		28.6	47.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.5	37.4		24.0	41.3		49.0	41.4		28.6	47.1	
LOS	C	D		C	D		D	D		C	D	
Approach Delay		36.5			40.6			43.6			44.1	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	39	349		16	327		160	252		65	240	
Queue Length 95th (ft)	92	554		46	527		285	351		115	362	
Internal Link Dist (ft)		208			344			378			542	
Turn Bay Length (ft)	100			125			110			110		
Base Capacity (vph)	503	1489		511	1457		491	1274		542	1181	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.18	0.66		0.07	0.62		0.56	0.52		0.24	0.57	

Intersection Summary

Area Type: Other
Cycle Length: 172.8
Actuated Cycle Length: 124.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 40.9 — Intersection LOS: D
Intersection Capacity Utilization 83.4% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 8: NE 195th St & Wood-Sno Road



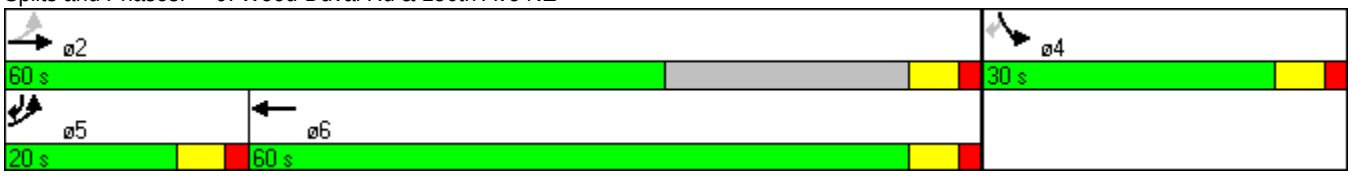
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	281	1188	816	37	252	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	235			0	90	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.994			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	1870	0	1787	1599
Flt Permitted	0.068				0.950	
Satd. Flow (perm)	128	3574	1870	0	1787	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			3			108
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	688		815	
Travel Time (s)		13.5	15.6		18.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	296	1251	859	39	265	167
Shared Lane Traffic (%)						
Lane Group Flow (vph)	296	1251	898	0	265	167
Turn Type	pm+pt					pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2					4
Detector Phase	5	2	6		4	5
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	22.0	24.0		24.0	11.0
Total Split (s)	20.0	60.0	60.0	0.0	30.0	20.0
Total Split (%)	18.2%	54.5%	54.5%	0.0%	27.3%	18.2%
Maximum Green (s)	14.0	54.0	54.0		24.0	14.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Min	Min		Min	None
Walk Time (s)			7.0		7.0	
Flash Dont Walk (s)			11.0		11.0	
Pedestrian Calls (#/hr)			0		0	
Act Effct Green (s)	72.7	72.7	52.6		19.8	39.9
Actuated g/C Ratio	0.70	0.70	0.50		0.19	0.38
v/c Ratio	0.95	0.50	0.95		0.78	0.25
Control Delay	69.6	8.7	46.2		57.4	9.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	69.6	8.7	46.2		57.4	9.5

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	E	A	D		E	A
Approach Delay		20.4	46.2		38.9	
Approach LOS		C	D		D	
Queue Length 50th (ft)	150	189	561		173	26
Queue Length 95th (ft)	#338	260	#890		265	70
Internal Link Dist (ft)		513	608		735	
Turn Bay Length (ft)	235				90	
Base Capacity (vph)	312	2543	972		412	676
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.95	0.49	0.92		0.64	0.25

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 104.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 31.2 Intersection LOS: C
Intersection Capacity Utilization 89.7% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Wood-Duval Rd & 156th Ave NE



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	80	144	79	173	102	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.94	0.94	0.84	0.84
Hourly flow rate (vph)	103	185	84	184	121	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	491	139	156			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	491	139	156			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	80	80	94			
cM capacity (veh/h)	502	904	1418			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	287	268	156
Volume Left	103	84	0
Volume Right	185	0	35
cSH	703	1418	1700
Volume to Capacity	0.41	0.06	0.09
Queue Length 95th (ft)	50	5	0
Control Delay (s)	13.6	2.8	0.0
Lane LOS	B	A	
Approach Delay (s)	13.6	2.8	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

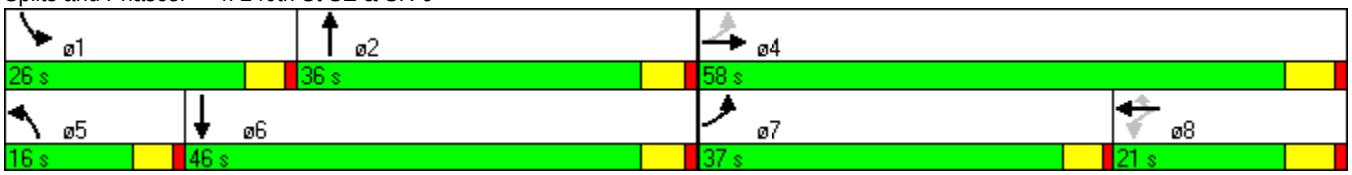
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	455	69	125	32	36	183	85	468	36	186	381	470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		200	300		0	300		0
Storage Lanes	1		0	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.903				0.850		0.989			0.917	
Flt Protected	0.950				0.977		0.950			0.950		
Satd. Flow (prot)	1736	1650	0	0	1785	1553	1736	3433	0	1736	3183	0
Flt Permitted	0.496				0.754		0.950			0.950		
Satd. Flow (perm)	906	1650	0	0	1377	1553	1736	3433	0	1736	3183	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		96				191		6			282	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		269			193			180			585	
Travel Time (s)		6.1			4.4			4.1			13.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	474	72	130	33	38	191	89	488	38	194	397	490
Shared Lane Traffic (%)												
Lane Group Flow (vph)	474	202	0	0	71	191	89	526	0	194	887	0
Turn Type	pm+pt			Perm		Perm	Prot			Prot		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8						
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	9.5	30.7		20.0	20.0	20.0	9.5	24.2		9.5	26.2	
Total Split (s)	37.0	58.0	0.0	21.0	21.0	21.0	16.0	36.0	0.0	26.0	46.0	0.0
Total Split (%)	30.8%	48.3%	0.0%	17.5%	17.5%	17.5%	13.3%	30.0%	0.0%	21.7%	38.3%	0.0%
Maximum Green (s)	32.5	52.3		15.3	15.3	15.3	11.5	30.8		21.5	40.8	
Yellow Time (s)	3.5	4.5		4.5	4.5	4.5	3.5	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.2		1.2	1.2	1.2	1.0	1.2		1.0	1.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.7	4.0	5.7	5.7	8.7	4.5	5.2	4.0	4.5	5.2	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Minimum Gap (s)	1.0	0.5		3.0	3.0	3.0	2.0	1.0		2.0	1.0	
Time Before Reduce (s)	10.0	10.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Time To Reduce (s)	10.0	15.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		18.0						12.0			14.0	
Pedestrian Calls (#/hr)		0						0			0	
Act Effct Green (s)	43.9	42.6			10.2	7.0	8.8	20.0		14.4	28.5	
Actuated g/C Ratio	0.47	0.46			0.11	0.08	0.09	0.21		0.15	0.31	
v/c Ratio	0.70	0.25			0.47	0.65	0.54	0.71		0.72	0.76	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	26.1	10.2			54.8	18.3	58.4	40.8		56.4	25.9	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	26.1	10.2			54.8	18.3	58.4	40.8		56.4	25.9	
LOS	C	B			D	B	E	D		E	C	
Approach Delay		21.4			28.2			43.3			31.4	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	194	35			42	0	53	158		116	191	
Queue Length 95th (ft)	380	98			99	70	122	246		218	292	
Internal Link Dist (ft)		189			113			100			505	
Turn Bay Length (ft)	100					200	300			300		
Base Capacity (vph)	742	1013			238	380	225	1197		421	1617	
Starvation Cap Reductn	0	0			0	0	0	0		0	0	
Spillback Cap Reductn	0	0			0	0	0	0		0	0	
Storage Cap Reductn	0	0			0	0	0	0		0	0	
Reduced v/c Ratio	0.64	0.20			0.30	0.50	0.40	0.44		0.46	0.55	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 93.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 31.3 Intersection LOS: C
Intersection Capacity Utilization 75.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: 240th St SE & SR-9



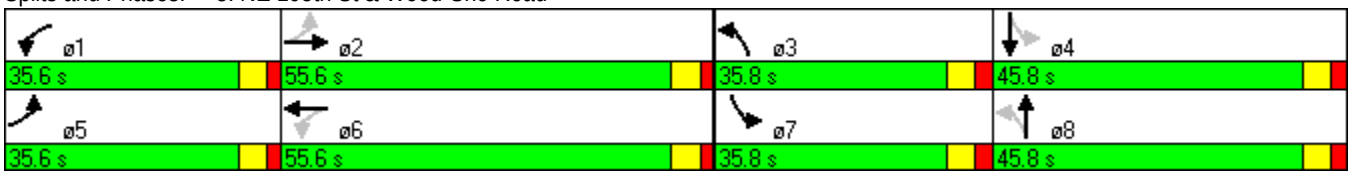
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	548	131	70	524	153	175	419	21	109	467	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	125		0	110		0	110		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.971			0.966			0.993			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3437	0	1770	3419	0	1770	3514	0	1770	3454	0
Flt Permitted	0.240			0.256			0.273			0.408		
Satd. Flow (perm)	447	3437	0	477	3419	0	509	3514	0	760	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			22			3			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			424			458			622	
Travel Time (s)		6.5			9.6			10.4			14.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	78	565	135	72	540	158	180	432	22	112	481	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	78	700	0	72	698	0	180	454	0	112	571	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	7.0		4.0	7.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.6	30.6		9.6	30.6		9.8	28.8		9.8	28.8	
Total Split (s)	35.6	55.6	0.0	35.6	55.6	0.0	35.8	45.8	0.0	35.8	45.8	0.0
Total Split (%)	20.6%	32.2%	0.0%	20.6%	32.2%	0.0%	20.7%	26.5%	0.0%	20.7%	26.5%	0.0%
Maximum Green (s)	30.0	50.0		30.0	50.0		30.0	40.0		30.0	40.0	
Yellow Time (s)	3.8	3.8		3.8	3.8		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.8	1.8		1.8	1.8		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.8	5.8	4.0	5.8	5.8	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	4.0		2.0	4.0		2.0	2.5		2.0	2.5	
Minimum Gap (s)	0.5	2.0		0.5	2.0		0.5	1.5		0.5	1.5	
Time Before Reduce (s)	10.0	20.0		10.0	20.0		10.0	5.0		10.0	5.0	
Time To Reduce (s)	15.0	20.0		15.0	20.0		15.0	10.0		15.0	5.0	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		18.0			18.0			16.0			16.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	35.3	28.9		33.9	28.2		33.5	22.9		31.9	22.1	
Actuated g/C Ratio	0.39	0.32		0.38	0.31		0.37	0.26		0.36	0.25	
v/c Ratio	0.26	0.63		0.25	0.64		0.53	0.51		0.29	0.66	
Control Delay	18.6	29.8		18.6	30.5		24.3	32.2		20.2	35.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.6	29.8		18.6	30.5		24.3	32.2		20.2	35.8	
LOS	B	C		B	C		C	C		C	D	
Approach Delay		28.6			29.4			30.0			33.3	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	24	173		22	174		63	114		38	150	
Queue Length 95th (ft)	64	301		60	304		137	206		89	266	
Internal Link Dist (ft)		208			344			378			542	
Turn Bay Length (ft)	100			125			110			110		
Base Capacity (vph)	680	2044		683	2035		675	1668		697	1644	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.11	0.34		0.11	0.34		0.27	0.27		0.16	0.35	

Intersection Summary

Area Type: Other
Cycle Length: 172.8
Actuated Cycle Length: 89.8
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 30.2 Intersection LOS: C
Intersection Capacity Utilization 68.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 8: NE 195th St & Wood-Sno Road



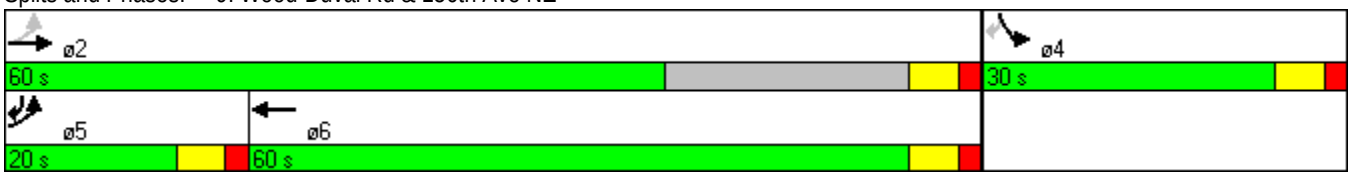
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	132	735	559	35	160	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	235			0	90	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.992			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	1866	0	1787	1599
Flt Permitted	0.165				0.950	
Satd. Flow (perm)	310	3574	1866	0	1787	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			4			151
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	688		815	
Travel Time (s)		13.5	15.6		18.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	139	774	588	37	168	151
Shared Lane Traffic (%)						
Lane Group Flow (vph)	139	774	625	0	168	151
Turn Type	pm+pt					pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2					4
Detector Phase	5	2	6		4	5
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	22.0	24.0		24.0	11.0
Total Split (s)	20.0	60.0	60.0	0.0	30.0	20.0
Total Split (%)	18.2%	54.5%	54.5%	0.0%	27.3%	18.2%
Maximum Green (s)	14.0	54.0	54.0		24.0	14.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Min	Min		Min	None
Walk Time (s)			7.0		7.0	
Flash Dont Walk (s)			11.0		11.0	
Pedestrian Calls (#/hr)			0		0	
Act Effct Green (s)	46.4	46.4	29.5		12.7	29.6
Actuated g/C Ratio	0.65	0.65	0.41		0.18	0.41
v/c Ratio	0.33	0.33	0.81		0.53	0.20
Control Delay	7.2	6.1	28.4		36.6	4.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	7.2	6.1	28.4		36.6	4.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	A	A	C		D	A
Approach Delay		6.3	28.4		21.2	
Approach LOS		A	C		C	
Queue Length 50th (ft)	19	65	225		65	0
Queue Length 95th (ft)	48	121	430		160	37
Internal Link Dist (ft)		513	608		735	
Turn Bay Length (ft)	235				90	
Base Capacity (vph)	506	3327	1452		634	834
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.27	0.23	0.43		0.26	0.18

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 71.8
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 16.3 — Intersection LOS: B
Intersection Capacity Utilization 62.7% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: Wood-Duval Rd & 156th Ave NE



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	48	113	115	99	92	38
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	60	141	142	122	114	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	543	137	160			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	543	137	160			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	87	85	90			
cM capacity (veh/h)	451	911	1431			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	201	264	160
Volume Left	60	142	0
Volume Right	141	0	47
cSH	699	1431	1700
Volume to Capacity	0.29	0.10	0.09
Queue Length 95th (ft)	30	8	0
Control Delay (s)	12.2	4.6	0.0
Lane LOS	B	A	
Approach Delay (s)	12.2	4.6	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

MOVEMENT SUMMARY

Site: Internal Access RAB PM

Wellington Hills Park (12-040)
Internal Access Roundabout PM Peak-Hour
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Northbound											
3	L2	126	1.0	0.232	7.3	LOS A	0.9	22.5	0.48	0.86	26.3
8	T1	28	1.0	0.232	7.3	LOS A	0.9	22.5	0.48	0.86	26.3
18	R2	24	1.0	0.232	7.3	LOS A	0.9	22.5	0.48	0.86	26.3
Approach		178	1.0	0.232	7.3	LOS A	0.9	22.5	0.48	0.43	26.3
East: Westbound											
1	L2	34	1.0	0.186	5.9	LOS A	0.7	18.1	0.36	0.53	27.8
6	T1	123	1.0	0.186	5.9	LOS A	0.7	18.1	0.36	0.53	27.8
16	R2	10	1.0	0.186	5.9	LOS A	0.7	18.1	0.36	0.53	27.8
Approach		167	1.0	0.186	5.9	LOS A	0.7	18.1	0.36	0.26	27.8
North: Southbound											
7	L2	6	1.0	0.083	5.1	LOS A	0.3	7.3	0.38	0.55	28.1
4	T1	22	1.0	0.083	5.1	LOS A	0.3	7.3	0.38	0.55	28.1
14	R2	42	1.0	0.083	5.1	LOS A	0.3	7.3	0.38	0.55	28.1
Approach		70	1.0	0.083	5.1	LOS A	0.3	7.3	0.38	0.28	28.1
West: Eastbound											
5	L2	66	1.0	0.529	9.9	LOS A	3.5	87.2	0.30	0.30	25.6
2	T1	300	1.0	0.529	9.9	LOS A	3.5	87.2	0.30	0.30	25.6
12	R2	190	1.0	0.529	9.9	LOS A	3.5	87.2	0.30	0.30	25.6
Approach		556	1.0	0.529	9.9	LOS A	3.5	87.2	0.30	0.15	25.6
All Vehicles		970	1.0	0.529	8.3	LOS A	3.5	87.2	0.35	0.23	26.3

Level of Service (LOS) Method: Delay (HCM 2000).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: Internal Access RAB PM

Wellington Hills Park (12-040)
Internal Access Roundabout PM Peak-Hour

Volume Display Method: Total and %

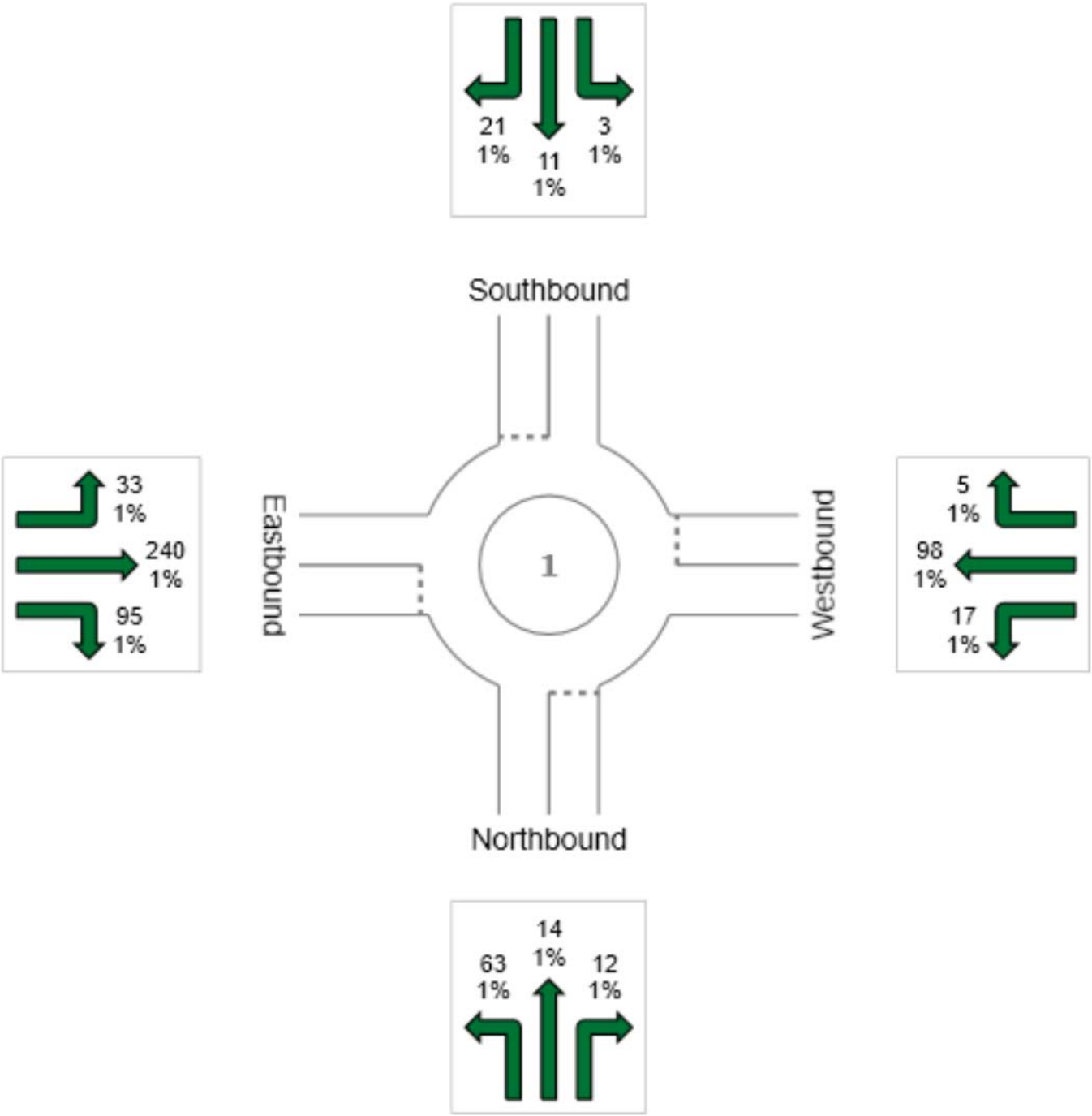
Volumes are shown for Movement Class(es): All Classes and Heavy Vehicles

Total Intersection Volumes (veh)

All Movement Classes: 612

Light Vehicles (LV): 606

Heavy Vehicles (HV): 6



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MOVEMENT SUMMARY

Site: Internal Access RAB SAT

Wellington Hills Park (12-040)
Internal Access Roundabout Saturday
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Northbound											
3	L2	178	1.0	0.287	7.2	LOS A	1.2	30.5	0.42	0.65	26.3
8	T1	40	1.0	0.287	7.2	LOS A	1.2	30.5	0.42	0.65	26.3
18	R2	34	1.0	0.287	7.2	LOS A	1.2	30.5	0.42	0.65	26.3
Approach		252	1.0	0.287	7.2	LOS A	1.2	30.5	0.42	0.33	26.3
East: Westbound											
1	L2	34	1.0	0.244	6.8	LOS A	1.0	24.6	0.42	0.69	27.3
6	T1	165	1.0	0.244	6.8	LOS A	1.0	24.6	0.42	0.69	27.3
16	R2	8	1.0	0.244	6.8	LOS A	1.0	24.6	0.42	0.69	27.3
Approach		207	1.0	0.244	6.8	LOS A	1.0	24.6	0.42	0.34	27.3
North: Southbound											
7	L2	8	1.0	0.141	6.2	LOS A	0.5	12.8	0.45	0.77	27.5
4	T1	42	1.0	0.141	6.2	LOS A	0.5	12.8	0.45	0.77	27.5
14	R2	58	1.0	0.141	6.2	LOS A	0.5	12.8	0.45	0.77	27.5
Approach		108	1.0	0.141	6.2	LOS A	0.5	12.8	0.45	0.39	27.5
West: Eastbound											
5	L2	56	1.0	0.394	7.7	LOS A	2.0	51.4	0.28	0.31	26.6
2	T1	175	1.0	0.394	7.7	LOS A	2.0	51.4	0.28	0.31	26.6
12	R2	174	1.0	0.394	7.7	LOS A	2.0	51.4	0.28	0.31	26.6
Approach		405	1.0	0.394	7.7	LOS A	2.0	51.4	0.28	0.15	26.6
All Vehicles		972	1.0	0.394	7.2	LOS A	2.0	51.4	0.37	0.27	26.8

Level of Service (LOS) Method: Delay (HCM 2000).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: Internal Access RAB SAT

Wellington Hills Park (12-040)
Internal Access Roundabout Saturday

Volume Display Method: Total and %

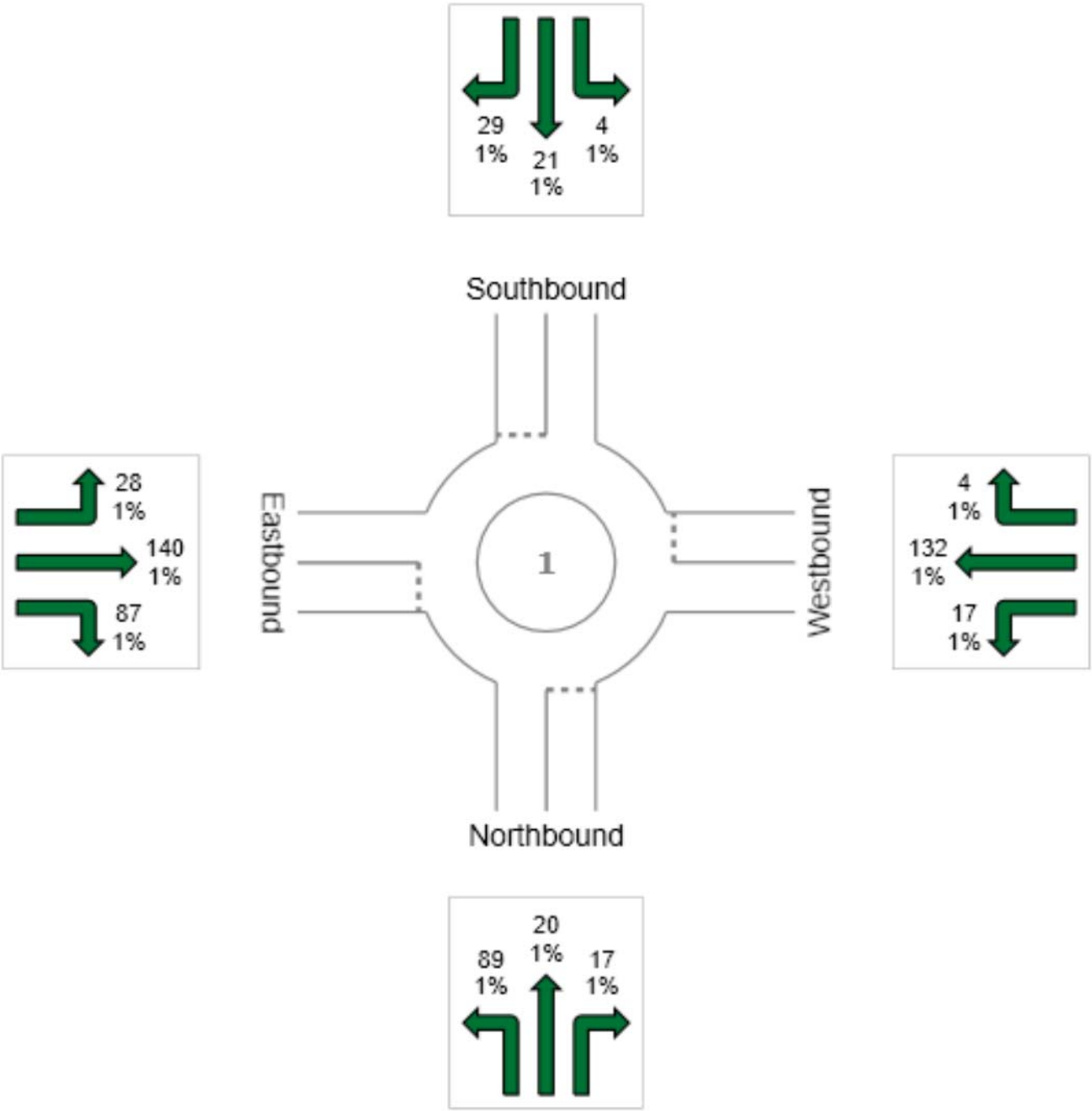
Volumes are shown for Movement Class(es): All Classes and Heavy Vehicles

Total Intersection Volumes (veh)

All Movement Classes: 588

Light Vehicles (LV): 582

Heavy Vehicles (HV): 6



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Project: Wellington Hills Park
Project #: 12-040
Analysis Period: PM Peak-Hour

Intersection: 75th Avenue SE at 240th Street SE (Minor Leg Stop Control)

	LOS	Delay	Difference
Existing	B	12.7 sec	
			0.1 sec
Baseline	B	12.8 sec	
			0.8 sec
Future With	B	13.6 sec	

Intersection: Access Roundabout

	Delay	
	Westbound	Eastbound
Future With	5.9 sec	9.9 sec

Future no Roundabout			
Travel Time (sec)			
AU #463 (1-Mile)		AU #464 (2-Miles)	
Westbound	Eastbound	Westbound	Eastbound
176.3 sec	142.0 sec	217.0 sec	229.9 sec

Future with Roundabout			
Travel Time (sec)			
AU #463 (1-Mile)		AU #464 (2-Miles)	
Westbound	Eastbound	Westbound	Eastbound
182.2 sec	151.9 sec	222.9 sec	239.8 sec
Speed (mph)			
AU #463 (1-Mile)		AU #464 (2-Miles)	
Westbound	Eastbound	Westbound	Eastbound
19.8 mph	23.7 mph	32.3 mph	30.0 mph

Speed Hump Delay

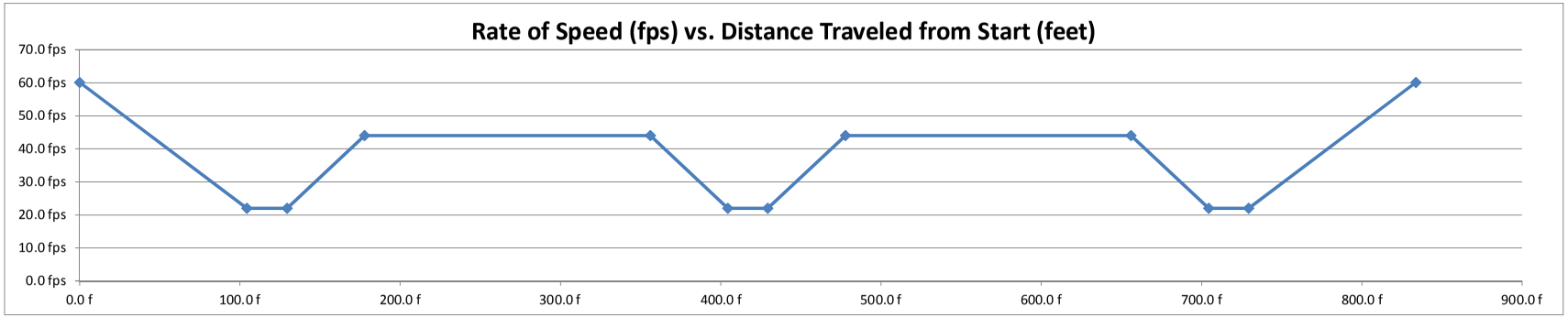
Number of Humps: 3
Average Delay: 6.0 sec

Future with Roundabout + Speed Humps			
Travel Time (sec)			
AU #463 (1-Mile)		AU #464 (2-Miles)	
Westbound	Eastbound	Westbound	Eastbound
200.2 sec	169.9 sec	240.9 sec	257.8 sec
Speed (mph)			
AU #463 (1-Mile)		AU #464 (2-Miles)	
Westbound	Eastbound	Westbound	Eastbound
18.0 mph	21.2 mph	29.9 mph	27.9 mph

Calculating Seconds of Lost Time Resulting from Three Speed Humps

Variables to Enter							
acc/dec rate	Free-Flow Speed	Speed Over Humps	Speed Between Humps	Actual Hump Width	Effective Hump Width	Distance Hump 1 to Hump 2	Distance Hump 2 to Hump 3
15.00 fpsps	41 mph	15 mph	30 mph	15.0 f	25.0 f	300.0 f	300.0 f

Summary of Results			
Distance Traveled from Start	Total Elapsed Time	Cover Distance at Starting	Total Lost Time
834 f	22.5 s	13.9 s	-8.6 s



	Starting Speed	decel-eration ===>	Speed Hump 1	accel-eration ===>	Between Humps 1 & 2	deceleration ===>	Speed Hump 2	accel-eration ===>	Between Humps 2 & 3	deceleration ===>	Speed Hump 3	accel-eration ===>
MPH	41 mph	15 mph	15 mph	30 mph	30 mph	15 mph	15 mph	30 mph	30 mph	15 mph	15 mph	41 mph
Feet Per Second (fps)	60.1 fps	22.0 fps	22.0 fps	44.0 fps	44.0 fps	22.0 fps	22.0 fps	44.0 fps	44.0 fps	22.0 fps	22.0 fps	60.1 fps
Time Elapsed During Interval		2.542 s	1.136 s	1.467 s	4.050 s	1.467 s	1.136 s	1.467 s	4.050 s	1.467 s	1.136 s	2.542 s
Average fps During Interval		41.1 fps	22.0 fps	33.0 fps	44.0 fps	33.0 fps	22.0 fps	33.0 fps	44.0 fps	33.0 fps	22.0 fps	41.1 fps
Distance Traveled in Interval		104.4 f	25.0 f	48.4 f	178.2 f	48.4 f	25.0 f	48.4 f	178.2 f	48.4 f	25.0 f	104.4 f
Total Distance Traveled from Start	0.0 f	104.4 f	129.4 f	177.8 f	356.0 f	404.4 f	429.4 f	477.8 f	656.0 f	704.4 f	729.4 f	833.8 f
Time to Cover Interval at Starting Velocity		1.736 s	0.416 s	0.805 s	2.963 s	0.805 s	0.416 s	0.805 s	2.963 s	0.805 s	0.416 s	1.736 s
Lost Time in Interval		-0.806 s	-0.721 s	-0.662 s	-1.087 s	-0.662 s	-0.721 s	-0.662 s	-1.087 s	-0.662 s	-0.721 s	-0.806 s
Cumulative Lost Time		-0.806 s	-1.527 s	-2.188 s	-3.275 s	-3.937 s	-4.657 s	-5.319 s	-6.406 s	-7.068 s	-7.788 s	-8.594 s
Total Time Elapsed	0.000 s	2.542 s	3.679 s	5.145 s	9.195 s	10.662 s	11.798 s	13.265 s	17.315 s	18.782 s	19.918 s	22.460 s
Time to Travel from Start at Starting Velocity		1.736 s	2.152 s	2.957 s	5.920 s	6.725 s	7.141 s	7.946 s	10.909 s	11.714 s	12.130 s	13.866 s
Cumulative Lost Alternative Calculation		-0.806 s	-1.527 s	-2.188 s	-3.275 s	-3.937 s	-4.657 s	-5.319 s	-6.406 s	-7.068 s	-7.788 s	-8.594 s
Check		0	0	0	0	0	0	0	0	0	0	0
Center of Hump (Distance from Start)			116.9 f				416.9 f				716.9 f	
Distance from Middle of Last Hump							300.0 f				300.0 f	

Synchro ID: 3

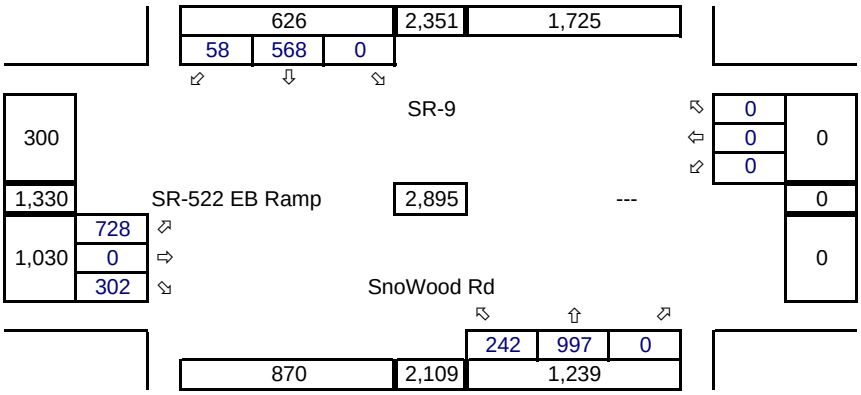
Existing

Average Weekday - PH 1

PM Peak Hour

Year: **6/1/11**

Data Source: WSDOT



Future without Project

Average Weekday - PH 1

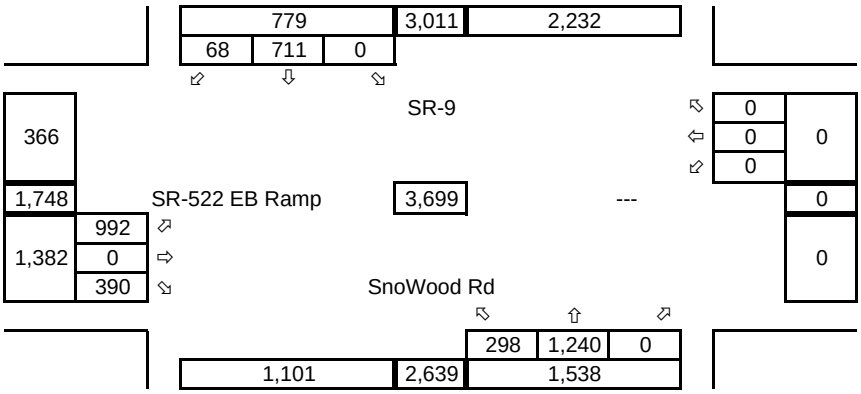
PM Peak Hour

Year: 2019

Growth Rate = 0.0%

Years of Growth = 8

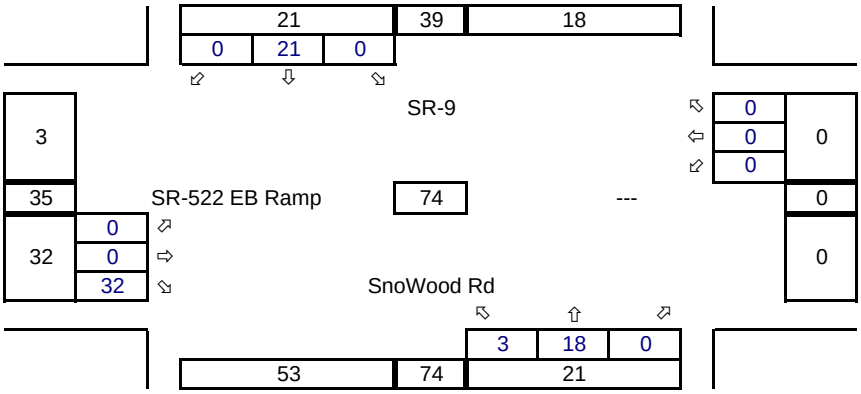
Total Growth = 1.0000



Total Project Trips

Average Weekday - PH 1

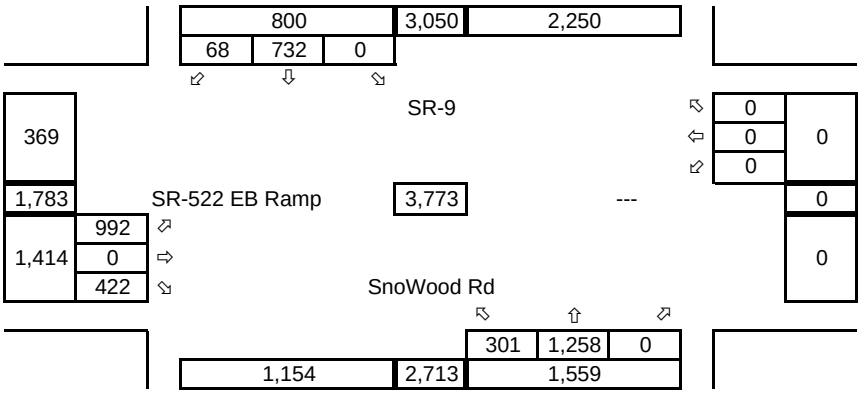
PM Peak Hour



Future with Project

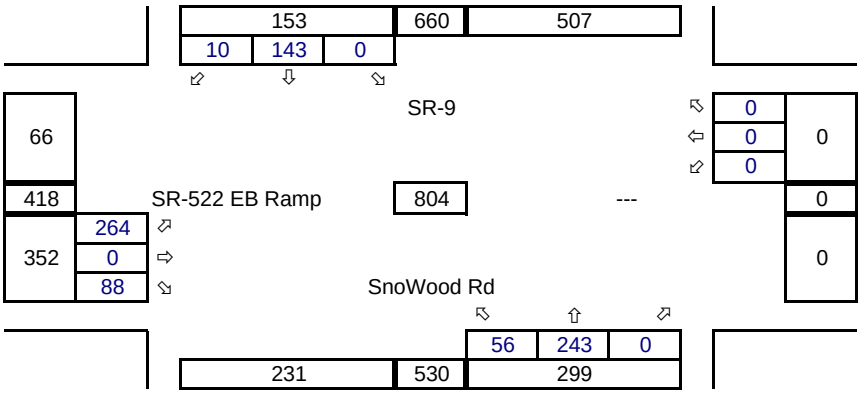
Average Weekday - PH 1

PM Peak Hour



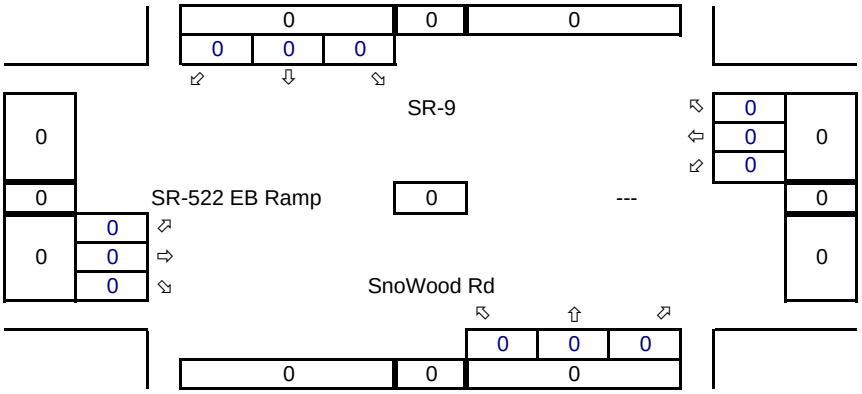
Total Pipeline Project Trips
Average Weekday - PH 1
PM Peak Hour

Pipeline Data Date
October 1, 2013



North

Pass-By Project Trips
Average Weekday - PH 1
PM Peak Hour



North

Synchro ID: 4

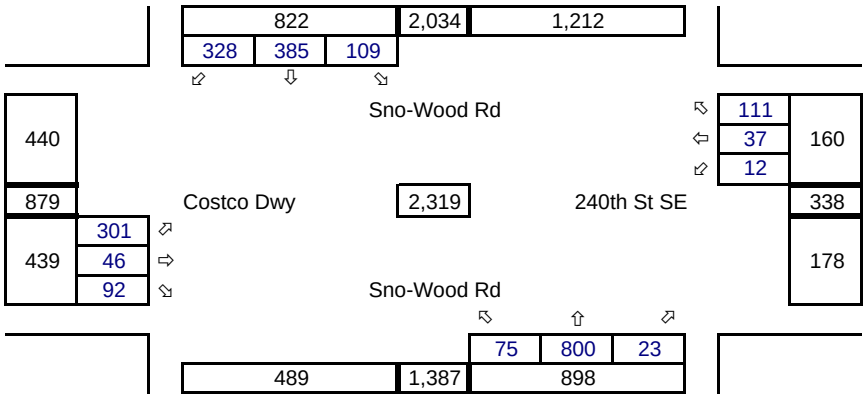
Existing

Average Weekday - PH 1

PM Peak Hour

Year: **3/22/12**

Data Source: Sno County



Future without Project

Average Weekday - PH 1

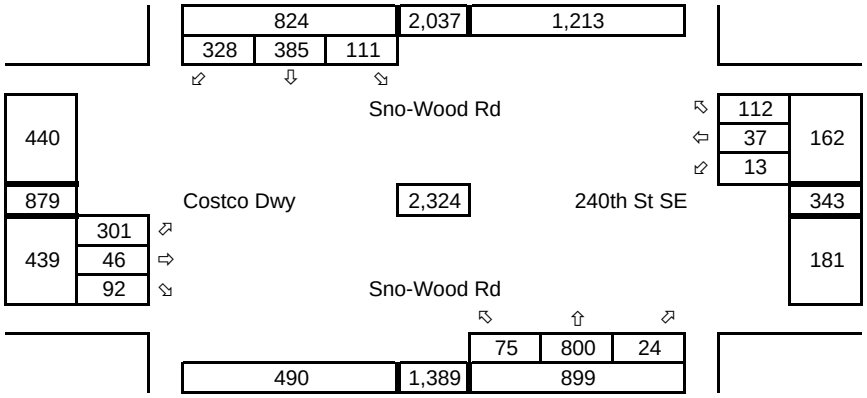
PM Peak Hour

Year: 2019

Growth Rate = 0.0%

Years of Growth = 7

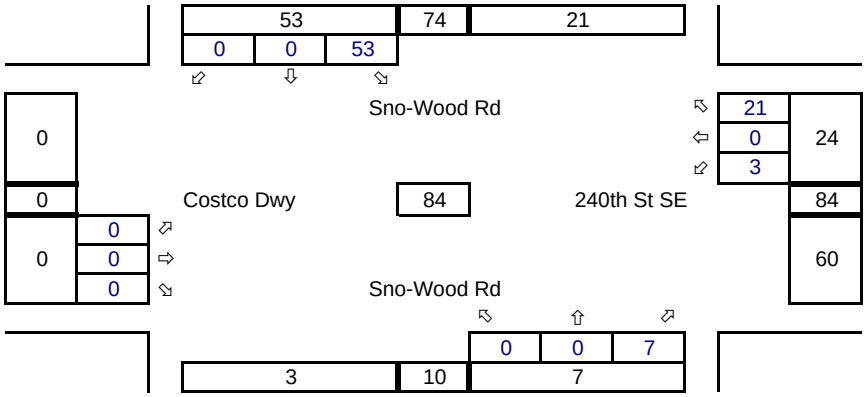
Total Growth = 1.0000



Total Project Trips

Average Weekday - PH 1

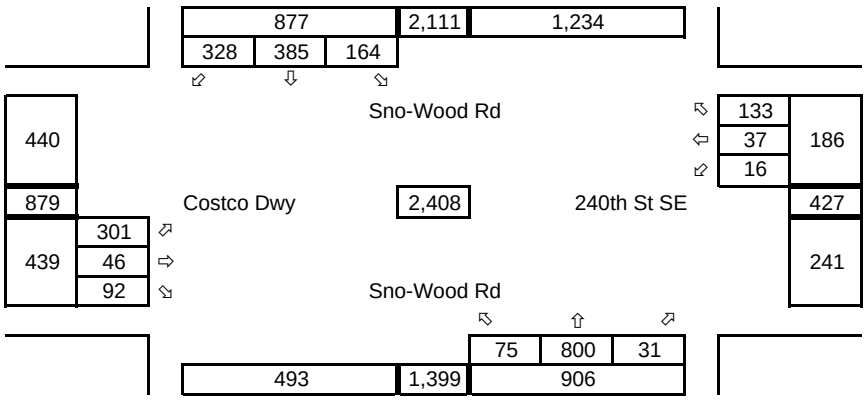
PM Peak Hour



Future with Project

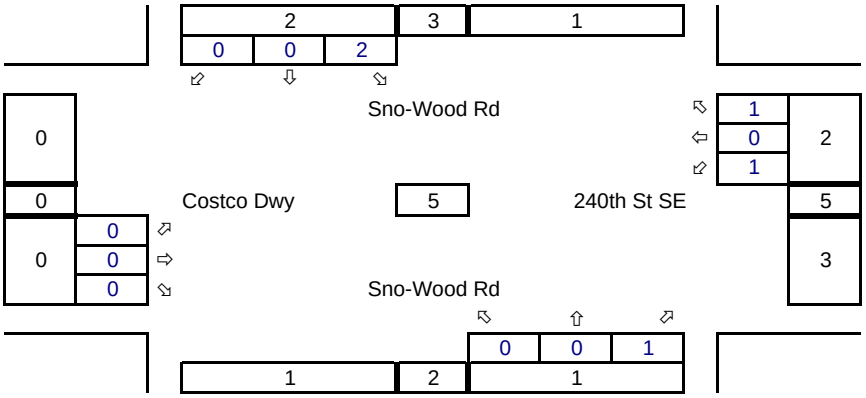
Average Weekday - PH 1

PM Peak Hour



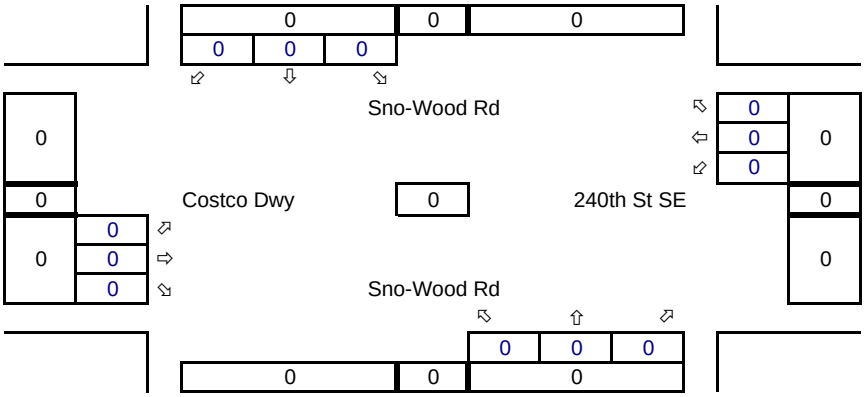
Total Pipeline Project Trips
Average Weekday - PH 1
PM Peak Hour

Pipeline Data Date
October 1, 2013



↑
North
|

Pass-By Project Trips
Average Weekday - PH 1
PM Peak Hour



↑
North
|

Synchro ID: 3

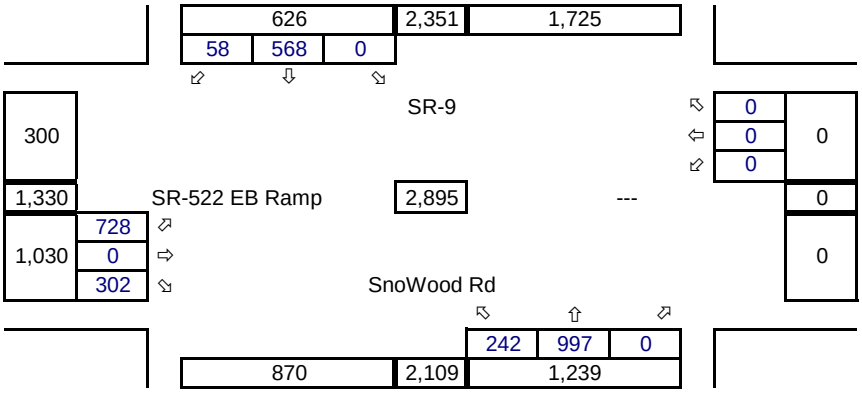
Existing

Event Weekday - PH 1

PM Peak Hour

Year: **6/1/11**

Data Source: WSDOT



Future without Project

Event Weekday - PH 1

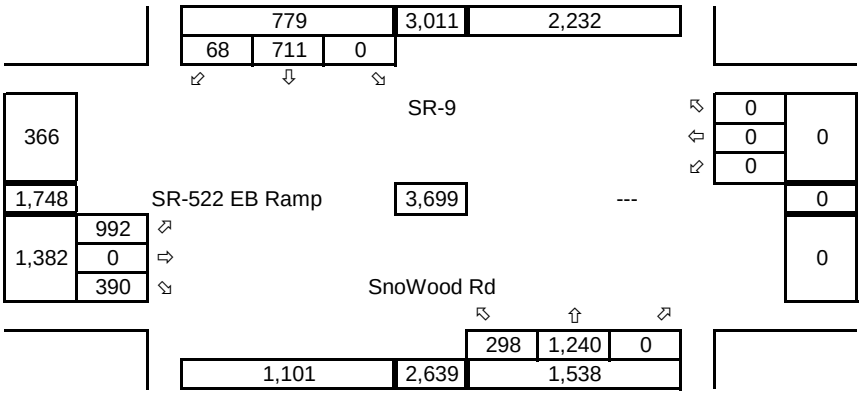
PM Peak Hour

Year: 2019

Growth Rate = 0.0%

Years of Growth = 8

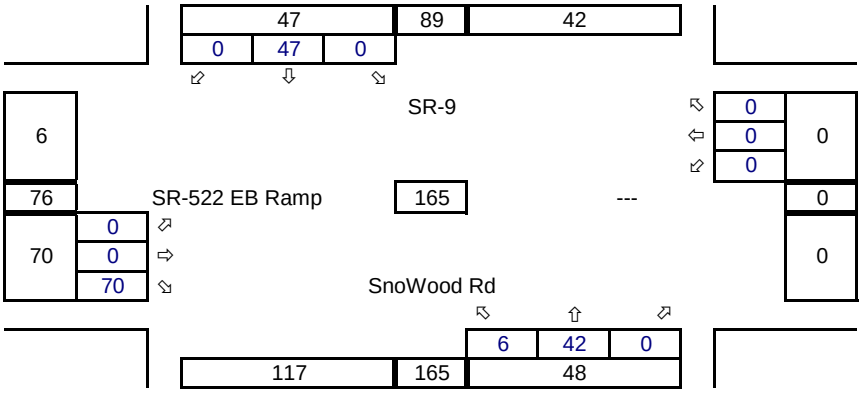
Total Growth = 1.0000



Total Project Trips

Event Weekday - PH 1

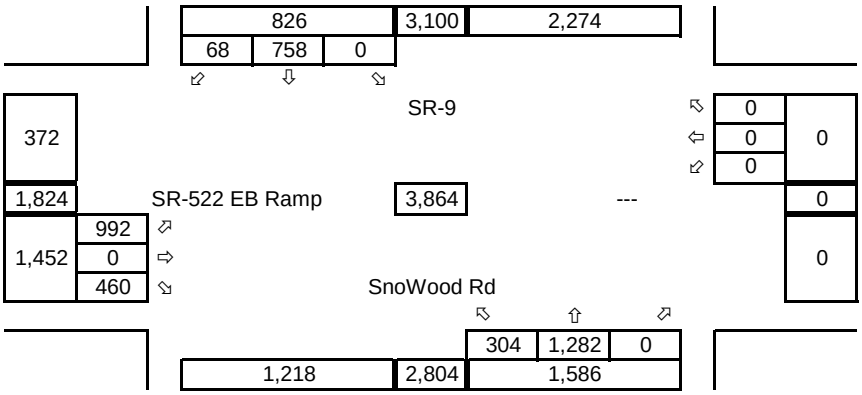
PM Peak Hour



Future with Project

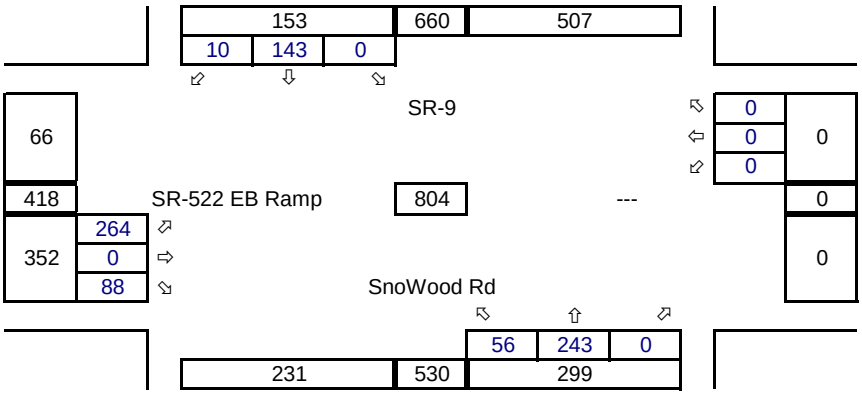
Event Weekday - PH 1

PM Peak Hour



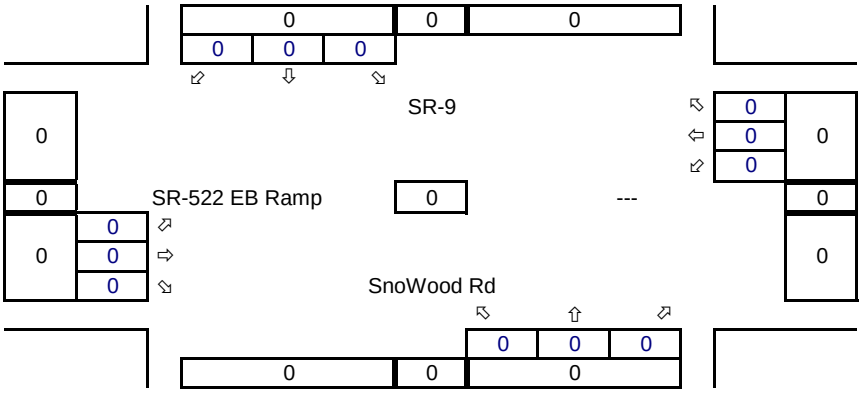
Total Pipeline Project Trips
Event Weekday - PH 1
PM Peak Hour

Pipeline Data Date
October 1, 2013



North

Pass-By Project Trips
Event Weekday - PH 1
PM Peak Hour



North

Synchro ID: 4

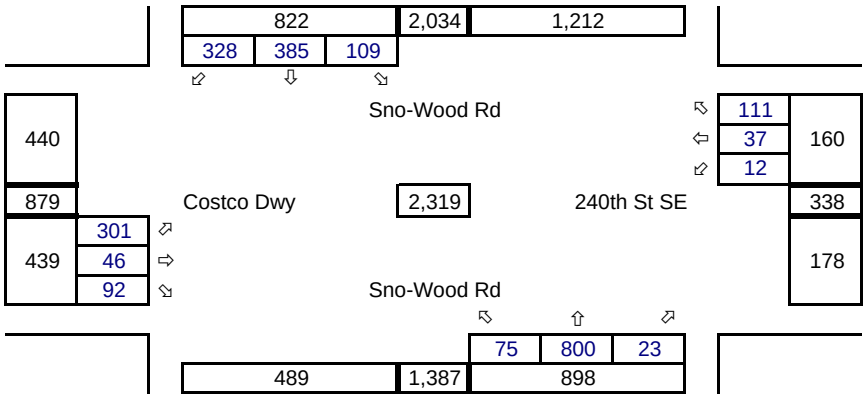
Existing

Event Weekday - PH 1

PM Peak Hour

Year: **3/22/12**

Data Source: Sno County



Future without Project

Event Weekday - PH 1

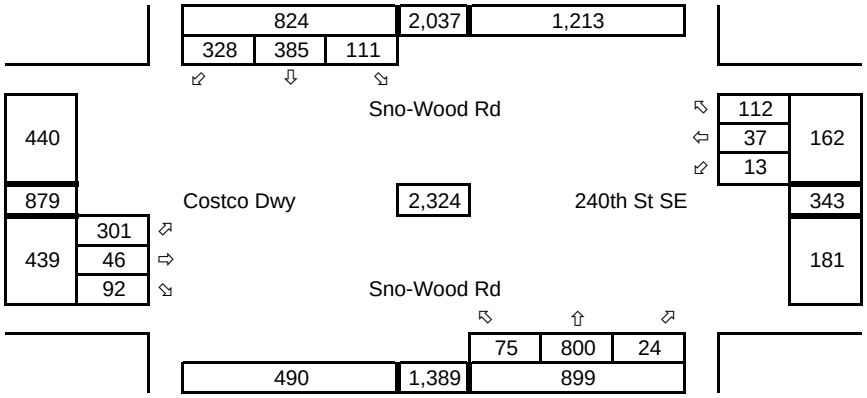
PM Peak Hour

Year: 2019

Growth Rate = 0.0%

Years of Growth = 7

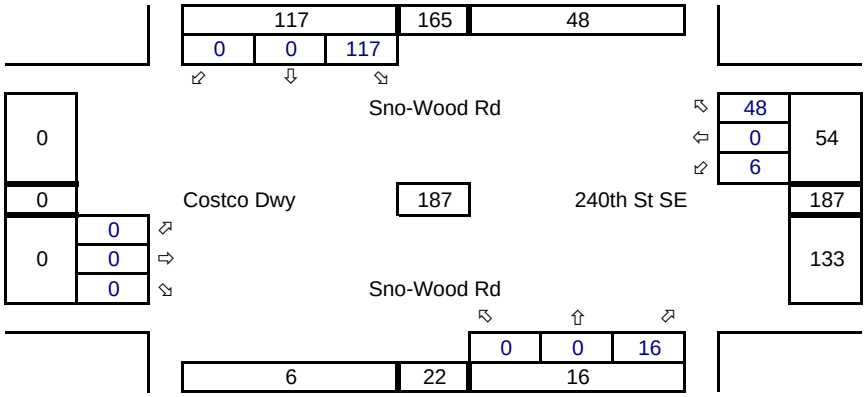
Total Growth = 1.0000



Total Project Trips

Event Weekday - PH 1

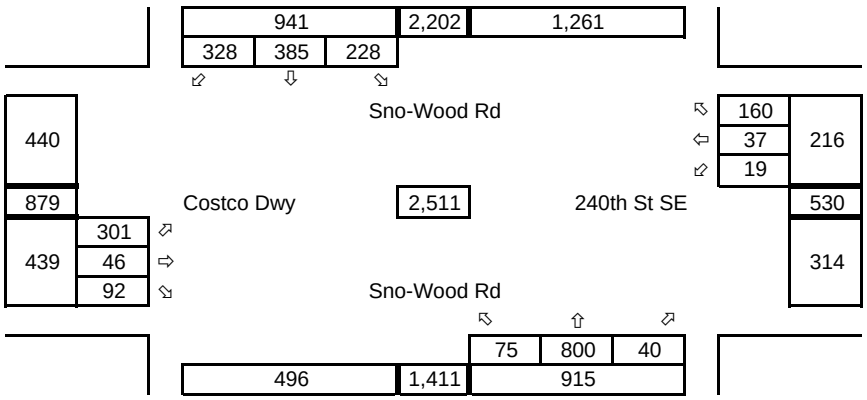
PM Peak Hour



Future with Project

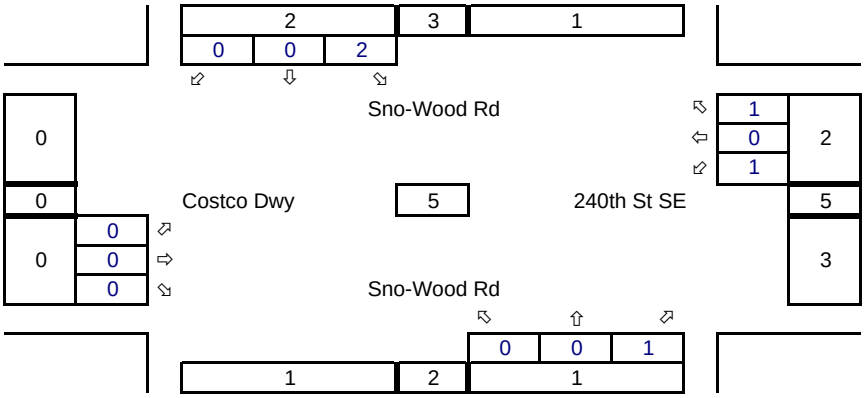
Event Weekday - PH 1

PM Peak Hour

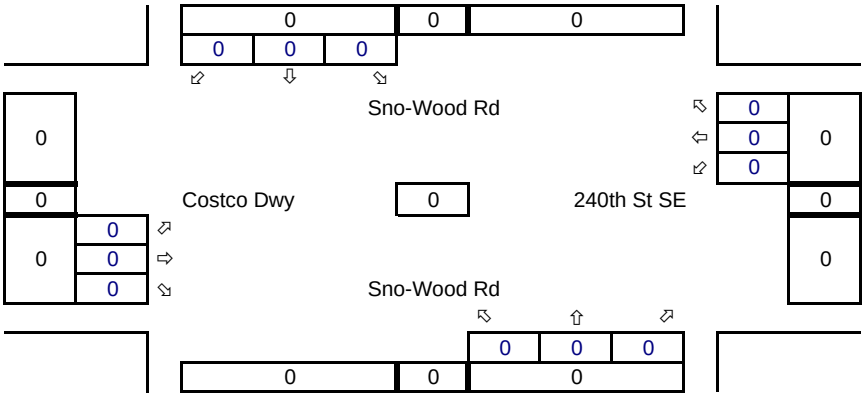


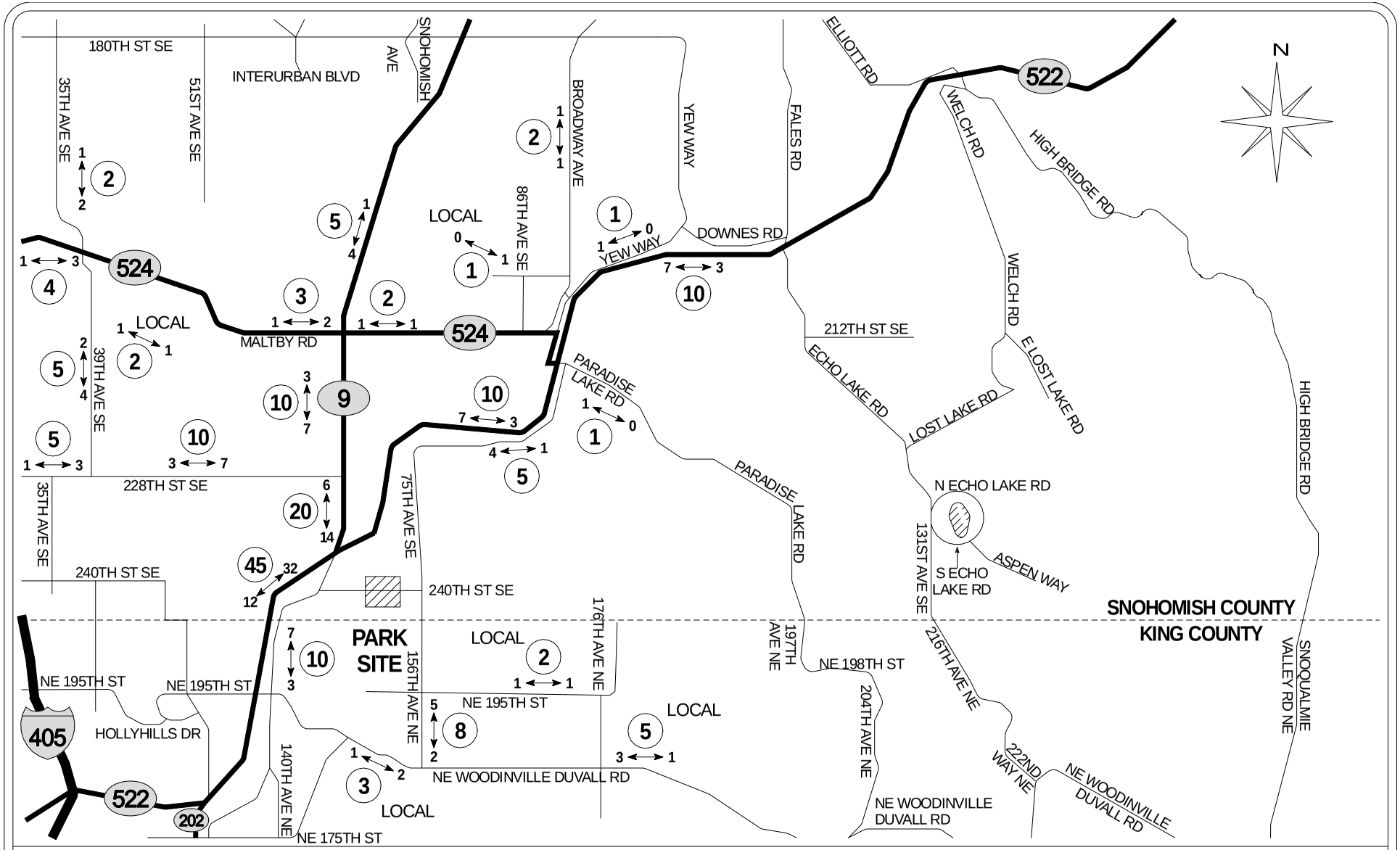
Total Pipeline Project Trips
Event Weekday - PH 1
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Event Weekday - PH 1
PM Peak Hour





GIBSON TRAFFIC CONSULTANTS

TRAFFIC IMPACT STUDY
GTC #12-040

WELLINGTON HILLS COUNTY PARK

SNOHOMISH COUNTY

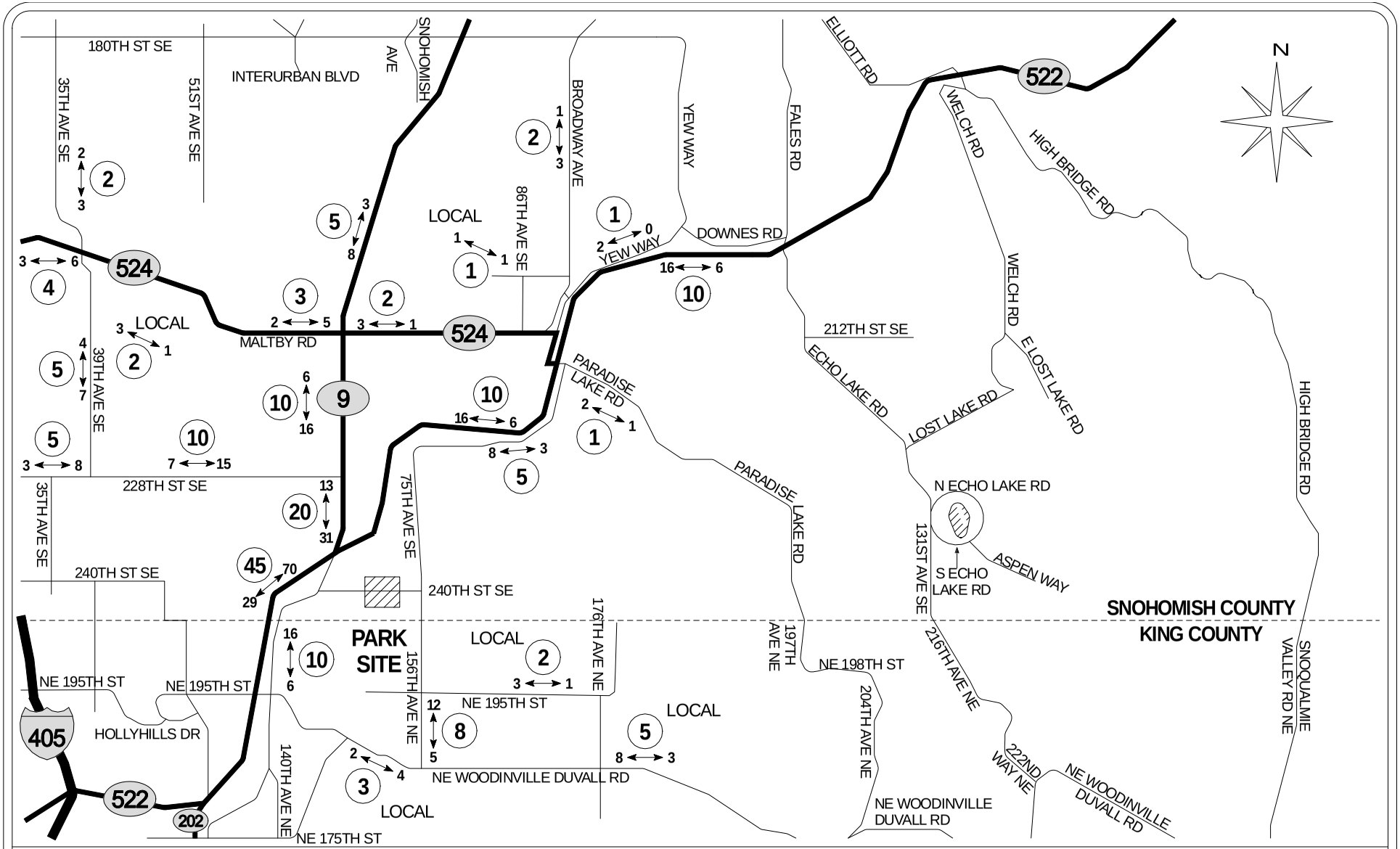
LEGEND

AWDT
PM ⟷ PEAK — NEW SITE TRAFFIC (DAILY/PEAK HOUR)

(25) — TRIP DISTRIBUTION %

FIGURE X

WEEKDAY PM PHASE 1 TRIP DISTRIBUTION



GIBSON TRAFFIC CONSULTANTS

TRAFFIC IMPACT STUDY
GTC #12-040

WELLINGTON HILLS COUNTY PARK

SNOHOMISH COUNTY

LEGEND

AWDT
PM ⟷ PEAK — NEW SITE TRAFFIC (DAILY/PEAK HOUR)

(25) — TRIP DISTRIBUTION %

FIGURE Y

WEEKDAY EVENT PHASE 1 TRIP DISTRIBUTION

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	992	422	301	1258	732	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	260	250			0
Storage Lanes	2	1	1			0
Taper Length (ft)	25	25	25			25
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.987	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3493	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3493	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		449			8	
Link Speed (mph)	30			30	30	
Link Distance (ft)	725			585	374	
Travel Time (s)	16.5			13.3	8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1055	449	320	1338	779	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1055	449	320	1338	851	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	3.0	10.0	10.0	
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	45.0	45.0	31.0	55.0	24.0	0.0
Total Split (%)	45.0%	45.0%	31.0%	55.0%	24.0%	0.0%
Maximum Green (s)	40.0	40.0	26.4	49.7	18.7	
Yellow Time (s)	4.0	4.0	3.6	4.3	4.3	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.6	5.3	5.3	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.5	3.5	2.0	4.0	4.0	
Recall Mode	None	None	None	C-Min	C-Min	
Act Effct Green (s)	37.6	37.6	21.6	52.1	25.9	
Actuated g/C Ratio	0.38	0.38	0.22	0.52	0.26	
v/c Ratio	0.82	0.51	0.84	0.73	0.93	
Control Delay	33.9	4.2	56.0	21.9	62.6	
Queue Delay	0.0	0.0	0.0	0.6	0.0	
Total Delay	33.9	4.2	56.0	22.5	62.6	
LOS	C	A	E	C	E	
Approach Delay	25.1			28.9	62.6	
Approach LOS	C			C	E	
Queue Length 50th (ft)	295	0	194	346	~254	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 95th (ft)	374	59	281	436	#504	
Internal Link Dist (ft)	645			505	294	
Turn Bay Length (ft)		260	250			
Base Capacity (vph)	1373	903	467	1845	911	
Starvation Cap Reductn	0	0	0	193	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.77	0.50	0.69	0.81	0.93	

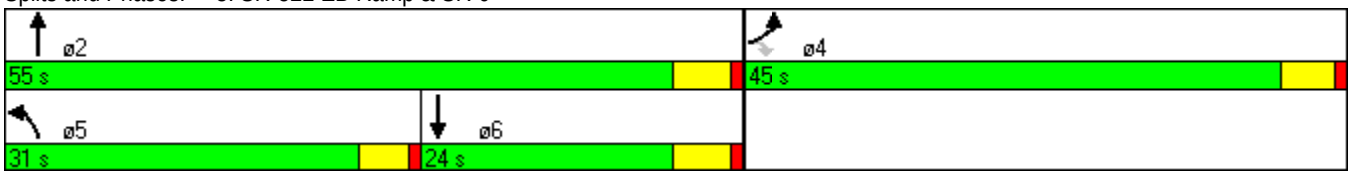
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 34.6 Intersection LOS: C
Intersection Capacity Utilization 79.8% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: SR-522 EB Ramp & SR-9



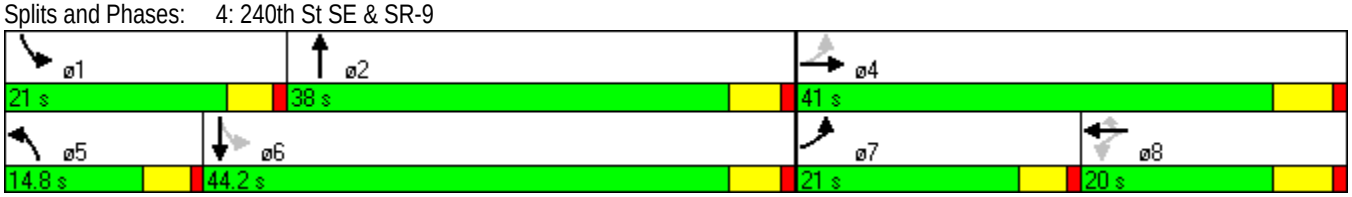
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	301	46	92	19	37	160	75	800	40	228	385	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	100		0
Storage Lanes	1		0	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.900				0.850		0.993			0.931	
Flt Protected	0.950				0.983		0.950			0.950		
Satd. Flow (prot)	1736	1644	0	0	1796	1553	1736	3447	0	1736	3232	0
Flt Permitted	0.474				0.830		0.950			0.138		
Satd. Flow (perm)	866	1644	0	0	1516	1553	1736	3447	0	252	3232	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		96				167		5			252	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		269			193			180			585	
Travel Time (s)		6.1			4.4			4.1			13.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	314	48	96	20	39	167	78	833	42	238	401	342
Shared Lane Traffic (%)												
Lane Group Flow (vph)	314	144	0	0	59	167	78	875	0	238	743	0
Turn Type	pm+pt			Perm		Perm	Prot			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8				6		
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	9.5	30.7		20.0	20.0	20.0	9.5	24.2		9.5	26.2	
Total Split (s)	21.0	41.0	0.0	20.0	20.0	20.0	14.8	38.0	0.0	21.0	44.2	0.0
Total Split (%)	21.0%	41.0%	0.0%	20.0%	20.0%	20.0%	14.8%	38.0%	0.0%	21.0%	44.2%	0.0%
Maximum Green (s)	16.5	35.3		14.3	14.3	14.3	10.3	32.8		16.5	39.0	
Yellow Time (s)	3.5	4.5		4.5	4.5	4.5	3.5	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.2		1.2	1.2	1.2	1.0	1.2		1.0	1.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.7	4.0	5.7	5.7	5.7	4.5	5.2	4.0	4.5	5.2	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Minimum Gap (s)	1.0	0.5		3.0	3.0	3.0	2.0	1.0		2.0	1.0	
Time Before Reduce (s)	10.0	10.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Time To Reduce (s)	10.0	15.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		18.0						12.0			14.0	
Pedestrian Calls (#/hr)		0						0			0	
Act Effct Green (s)	30.0	28.7			8.7	8.7	7.9	26.3		42.2	32.2	
Actuated g/C Ratio	0.36	0.35			0.11	0.11	0.10	0.32		0.51	0.39	
v/c Ratio	0.65	0.23			0.37	0.53	0.47	0.79		0.71	0.52	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	29.5	9.6			44.4	13.4	48.1	32.0		27.1	14.6	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	29.5	9.6			44.4	13.4	48.1	32.0		27.1	14.6	
LOS	C	A			D	B	D	C		C	B	
Approach Delay		23.2			21.5			33.3			17.7	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	123	16			29	0	39	215		65	103	
Queue Length 95th (ft)	236	63			74	59	93	327		150	171	
Internal Link Dist (ft)		189			113			100			505	
Turn Bay Length (ft)	100						100			100		
Base Capacity (vph)	496	780			271	415	224	1418		438	1706	
Starvation Cap Reductn	0	0			0	0	0	0		0	0	
Spillback Cap Reductn	0	0			0	0	0	0		0	0	
Storage Cap Reductn	0	0			0	0	0	0		0	0	
Reduced v/c Ratio	0.63	0.18			0.22	0.40	0.35	0.62		0.54	0.44	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 82.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 24.7 Intersection LOS: C
Intersection Capacity Utilization 72.2% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: 240th St SE & SR-9



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	992	460	304	1282	758	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	260	250			0
Storage Lanes	2	1	1			0
Taper Length (ft)	25	25	25			25
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.988	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3497	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3497	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		489			8	
Link Speed (mph)	30			30	30	
Link Distance (ft)	725			585	374	
Travel Time (s)	16.5			13.3	8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1055	489	323	1364	806	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1055	489	323	1364	878	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	3.0	10.0	10.0	
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	45.0	45.0	31.0	55.0	24.0	0.0
Total Split (%)	45.0%	45.0%	31.0%	55.0%	24.0%	0.0%
Maximum Green (s)	40.0	40.0	26.4	49.7	18.7	
Yellow Time (s)	4.0	4.0	3.6	4.3	4.3	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.6	5.3	5.3	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.5	3.5	2.0	4.0	4.0	
Recall Mode	None	None	None	C-Min	C-Min	
Act Effct Green (s)	37.7	37.7	21.8	52.0	25.6	
Actuated g/C Ratio	0.38	0.38	0.22	0.52	0.26	
v/c Ratio	0.82	0.54	0.84	0.74	0.97	
Control Delay	33.7	4.4	56.1	22.4	71.2	
Queue Delay	0.0	0.0	0.0	0.7	0.0	
Total Delay	33.7	4.4	56.1	23.1	71.2	
LOS	C	A	E	C	E	
Approach Delay	24.4			29.4	71.2	
Approach LOS	C			C	E	
Queue Length 50th (ft)	295	0	196	358	~296	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 95th (ft)	374	61	283	450	#522	
Internal Link Dist (ft)	645			505	294	
Turn Bay Length (ft)		260	250			
Base Capacity (vph)	1373	927	467	1841	902	
Starvation Cap Reductn	0	0	0	191	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.77	0.53	0.69	0.83	0.97	

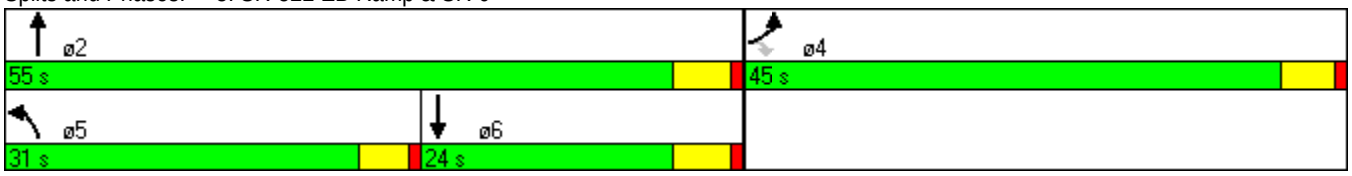
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 36.5 Intersection LOS: D
Intersection Capacity Utilization 80.7% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: SR-522 EB Ramp & SR-9



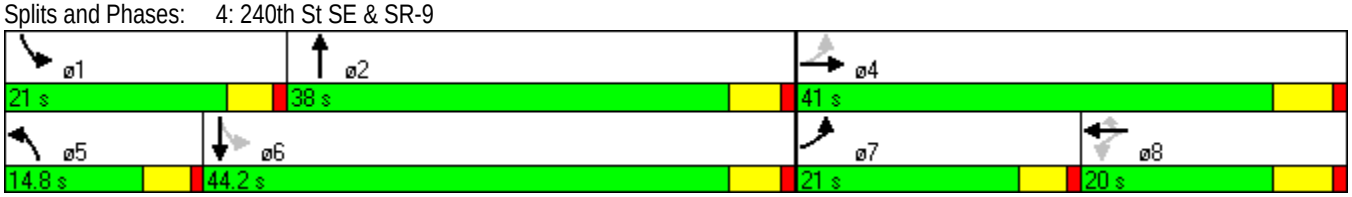
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	301	46	92	19	37	160	75	800	40	228	385	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	100		0
Storage Lanes	1		0	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.900				0.850		0.993			0.931	
Flt Protected	0.950				0.983		0.950			0.950		
Satd. Flow (prot)	1736	1644	0	0	1796	1553	1736	3447	0	1736	3232	0
Flt Permitted	0.474				0.830		0.950			0.138		
Satd. Flow (perm)	866	1644	0	0	1516	1553	1736	3447	0	252	3232	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		96				167		5			252	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		269			193			180			585	
Travel Time (s)		6.1			4.4			4.1			13.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	314	48	96	20	39	167	78	833	42	238	401	342
Shared Lane Traffic (%)												
Lane Group Flow (vph)	314	144	0	0	59	167	78	875	0	238	743	0
Turn Type	pm+pt			Perm		Perm	Prot			pm+pt		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8				6		
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	9.5	30.7		20.0	20.0	20.0	9.5	24.2		9.5	26.2	
Total Split (s)	21.0	41.0	0.0	20.0	20.0	20.0	14.8	38.0	0.0	21.0	44.2	0.0
Total Split (%)	21.0%	41.0%	0.0%	20.0%	20.0%	20.0%	14.8%	38.0%	0.0%	21.0%	44.2%	0.0%
Maximum Green (s)	16.5	35.3		14.3	14.3	14.3	10.3	32.8		16.5	39.0	
Yellow Time (s)	3.5	4.5		4.5	4.5	4.5	3.5	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.2		1.2	1.2	1.2	1.0	1.2		1.0	1.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.7	4.0	5.7	5.7	5.7	4.5	5.2	4.0	4.5	5.2	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Minimum Gap (s)	1.0	0.5		3.0	3.0	3.0	2.0	1.0		2.0	1.0	
Time Before Reduce (s)	10.0	10.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Time To Reduce (s)	10.0	15.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		18.0						12.0			14.0	
Pedestrian Calls (#/hr)		0						0			0	
Act Effct Green (s)	30.0	28.7			8.7	8.7	7.9	26.3		42.2	32.2	
Actuated g/C Ratio	0.36	0.35			0.11	0.11	0.10	0.32		0.51	0.39	
v/c Ratio	0.65	0.23			0.37	0.53	0.47	0.79		0.71	0.52	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	29.5	9.6			44.4	13.4	48.1	32.0		27.1	14.6	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	29.5	9.6			44.4	13.4	48.1	32.0		27.1	14.6	
LOS	C	A			D	B	D	C		C	B	
Approach Delay		23.2			21.5			33.3			17.7	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	123	16			29	0	39	215		65	103	
Queue Length 95th (ft)	236	63			74	59	93	327		150	171	
Internal Link Dist (ft)		189			113			100			505	
Turn Bay Length (ft)	100						100			100		
Base Capacity (vph)	496	780			271	415	224	1418		438	1706	
Starvation Cap Reductn	0	0			0	0	0	0		0	0	
Spillback Cap Reductn	0	0			0	0	0	0		0	0	
Storage Cap Reductn	0	0			0	0	0	0		0	0	
Reduced v/c Ratio	0.63	0.18			0.22	0.40	0.35	0.62		0.54	0.44	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 82.2
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 24.7 Intersection LOS: C
Intersection Capacity Utilization 72.2% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: 240th St SE & SR-9



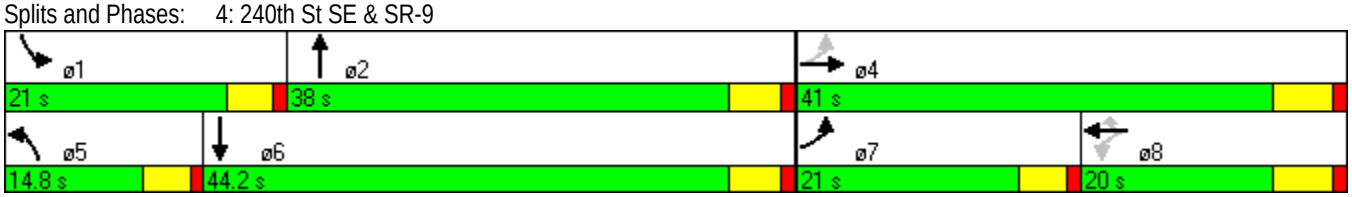
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	301	46	92	16	37	133	75	800	31	164	385	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	100		0
Storage Lanes	1		0	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.900				0.850		0.994			0.931	
Flt Protected	0.950				0.985		0.950			0.950		
Satd. Flow (prot)	1736	1644	0	0	1800	1553	1736	3450	0	1736	3232	0
Flt Permitted	0.473				0.845		0.950			0.950		
Satd. Flow (perm)	864	1644	0	0	1544	1553	1736	3450	0	1736	3232	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		96				139		4			252	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		269			193			180			585	
Travel Time (s)		6.1			4.4			4.1			13.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	314	48	96	17	39	139	78	833	32	171	401	342
Shared Lane Traffic (%)												
Lane Group Flow (vph)	314	144	0	0	56	139	78	865	0	171	743	0
Turn Type	pm+pt			Perm		Perm	Prot			Prot		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8						
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	9.5	30.7		20.0	20.0	20.0	9.5	24.2		9.5	26.2	
Total Split (s)	21.0	41.0	0.0	20.0	20.0	20.0	14.8	38.0	0.0	21.0	44.2	0.0
Total Split (%)	21.0%	41.0%	0.0%	20.0%	20.0%	20.0%	14.8%	38.0%	0.0%	21.0%	44.2%	0.0%
Maximum Green (s)	16.5	35.3		14.3	14.3	14.3	10.3	32.8		16.5	39.0	
Yellow Time (s)	3.5	4.5		4.5	4.5	4.5	3.5	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.2		1.2	1.2	1.2	1.0	1.2		1.0	1.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.7	4.0	5.7	5.7	5.7	4.5	5.2	4.0	4.5	5.2	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Minimum Gap (s)	1.0	0.5		3.0	3.0	3.0	2.0	1.0		2.0	1.0	
Time Before Reduce (s)	10.0	10.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Time To Reduce (s)	10.0	15.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		18.0						12.0			14.0	
Pedestrian Calls (#/hr)		0						0			0	
Act Effct Green (s)	29.8	28.6			8.5	8.5	7.9	26.2		12.2	33.0	
Actuated g/C Ratio	0.36	0.35			0.10	0.10	0.10	0.32		0.15	0.40	
v/c Ratio	0.66	0.23			0.35	0.49	0.47	0.79		0.67	0.52	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	30.3	9.8			44.4	13.7	48.4	32.4		48.9	14.4	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	30.3	9.8			44.4	13.7	48.4	32.4		48.9	14.4	
LOS	C	A			D	B	D	C		D	B	
Approach Delay		23.8			22.5			33.7			20.9	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	128	17			28	0	40	217		87	102	
Queue Length 95th (ft)	237	63			71	54	92	321		168	171	
Internal Link Dist (ft)		189			113			100			505	
Turn Bay Length (ft)	100						100			100		
Base Capacity (vph)	490	775			274	390	222	1408		356	1695	
Starvation Cap Reductn	0	0			0	0	0	0		0	0	
Spillback Cap Reductn	0	0			0	0	0	0		0	0	
Storage Cap Reductn	0	0			0	0	0	0		0	0	
Reduced v/c Ratio	0.64	0.19			0.20	0.36	0.35	0.61		0.48	0.44	

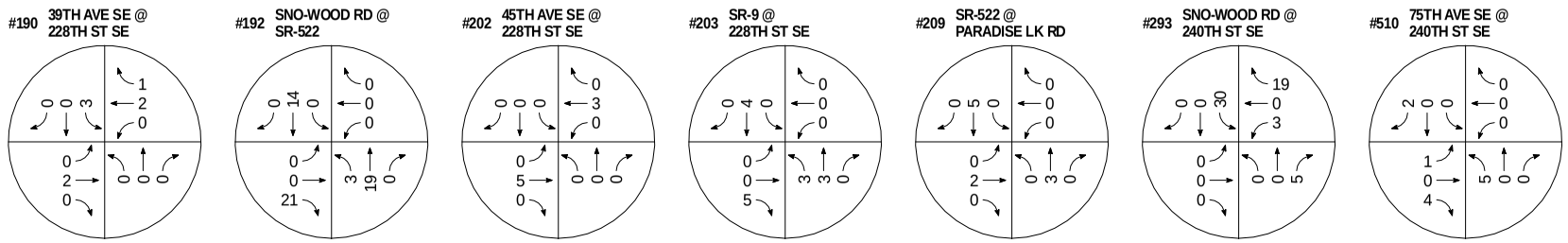
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 82.8
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 26.4 Intersection LOS: C
Intersection Capacity Utilization 68.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: 240th St SE & SR-9



Snohomish County Key Intersection Volumes



GIBSON TRAFFIC CONSULTANTS

TRAFFIC IMPACT STUDY
GTC #12-040

WELLINGTON HILLS COUNTY PARK

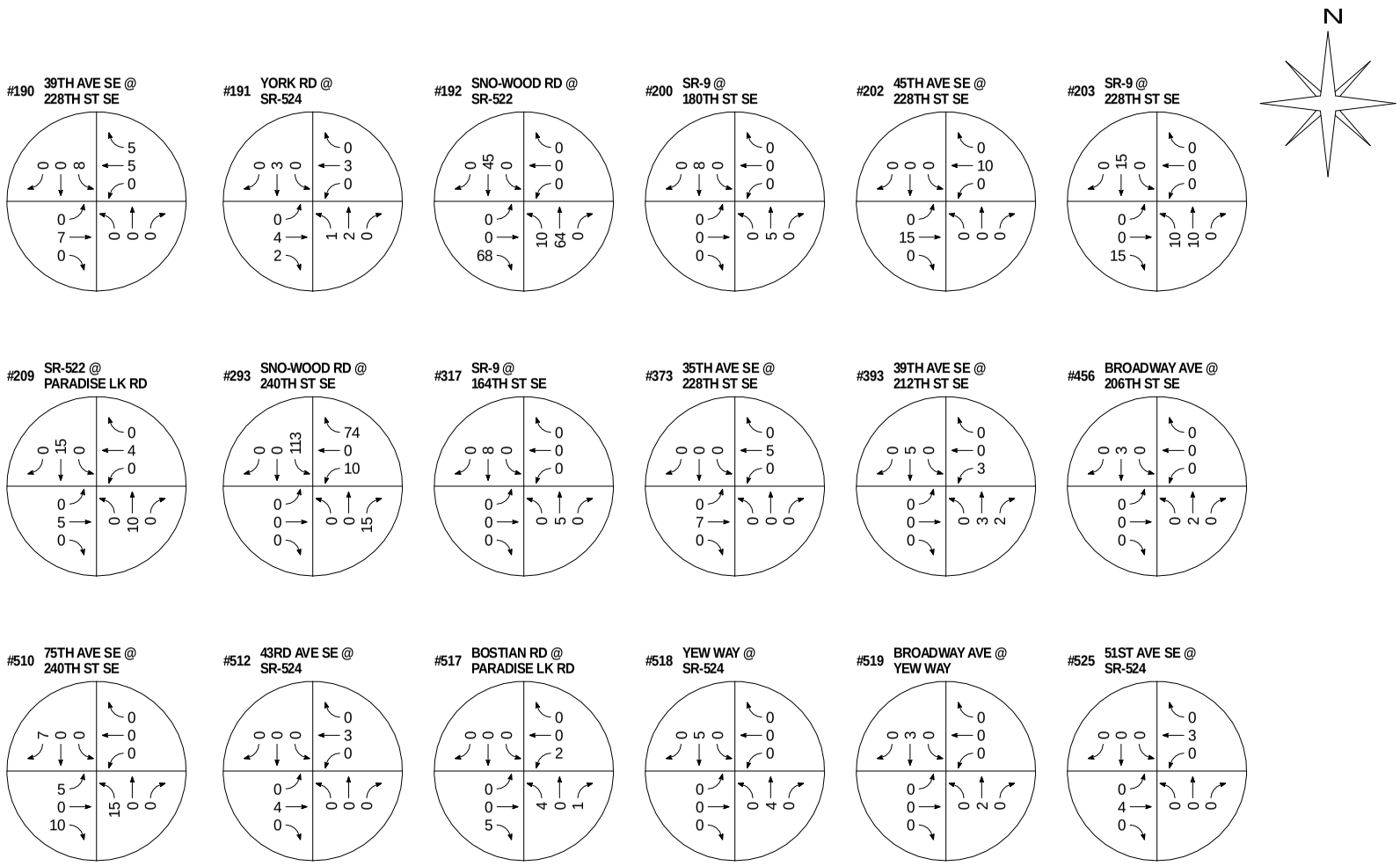
SNOHOMISH COUNTY

LEGEND

XX → AM PEAK-HOUR TURNING MOVEMENT VOLUMES

FIGURE A

KEY INTERSECTION VOLUMES AM PEAK-HOUR



GIBSON TRAFFIC CONSULTANTS

TRAFFIC IMPACT STUDY
GTC #12-040

WELLINGTON HILLS COUNTY PARK

SNOHOMISH COUNTY

LEGEND

XX → PM PEAK-HOUR TURNING MOVEMENT VOLUMES

FIGURE B

KEY INTERSECTION VOLUMES PM PEAK-HOUR

TABLE A

WELLINGTON HILLS COUNTY PARK KEY INTERSECTION VOLUMES AM PEAK-HOUR

Art Unit ID #	Key Int ID #	North-South Leg	East-West Leg	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
209	190	39th Avenue SE	228th Street SE	0	2	0	0	2	1	0	0	0	3	0	0
211	192	Snohomish-Woodinville Road	SR-522	0	0	21	0	0	0	3	19	0	0	14	0
	293	Snohomish-Woodinville Road	240th Street SE	0	0	0	3	0	19	0	0	5	30	0	0
272	202	45th Avenue SE	228th Street SE	0	5	0	0	3	0	0	0	0	0	0	0
	203	SR-9	228th Street SE	0	0	5	0	0	0	3	3	0	0	4	0
354	209	SR-522	Paradise Lake Road	0	2	0	0	0	0	0	3	0	0	5	0
470	510	75th Avenue SE	240th Street SE	1	0	4	0	0	0	5	0	0	0	0	2

TABLE B

WELLINGTON HILLS COUNTY PARK KEY INTERSECTION VOLUMES PM PEAK-HOUR

Art Unit ID #	Key Int ID #	North-South Leg	East-West Leg	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
209	190	39th Avenue SE	228th Street SE	0	7	0	0	5	5	0	0	0	8	0	0
	191	York Road/39th Avenue SE	SR-524	0	4	2	0	3	0	1	2	0	0	3	0
	393	39th Avenue SE	212th Street SE	0	0	0	3	0	0	0	3	2	0	5	0
211	192	Snohomish-Woodinville Road	SR-522	0	0	68	0	0	0	10	64	0	0	45	0
	293	Snohomish-Woodinville Road	240th Street SE	0	0	0	10	0	74	0	0	15	113	0	0
272	202	45th Avenue SE	228th Street SE	0	15	0	0	10	0	0	0	0	0	0	0
	203	SR-9	228th Street SE	0	0	15	0	0	0	10	10	0	0	15	0
330	456	Broadway Avenue	206th Street SE	0	0	0	0	0	0	0	2	0	0	3	0
	519	Broadway Avenue	Yew Way	0	0	0	0	0	0	0	2	0	0	3	0
331	317	SR-9	164th Street SE	0	0	0	0	0	0	0	5	0	0	8	0
333	373	35th Avenue SE	228th Street SE	0	7	0	0	5	0	0	0	0	0	0	0
350	200	SR-9	180th Street SE	0	0	0	0	0	0	0	5	0	0	8	0
354	209	SR-522	Paradise Lake Road	0	5	0	0	4	0	0	10	0	0	15	0
	517	91st Avenue SE/Bostian Road	Paradise Lake Road	0	0	5	2	0	0	4	0	1	0	0	0
466	512	43rd Avenue SE	SR-524	0	4	0	0	3	0	0	0	0	0	0	0
468	525	51st Avenue SE	SR-524	0	4	0	0	3	0	0	0	0	0	0	0
470	510	75th Avenue SE	240th Street SE	5	0	10	0	0	0	15	0	0	0	0	7
471	518	Yew Way	SR-524	0	0	0	0	4	0	0	0	0	0	5	0

ADT & Speed Data

Wellington Hills County Park
GTC #12-040

Roadway Section	Existing ADT	Pipeline Trips		Development Trips	Future with Development ADT	Length (mi.)	Weighted Average ADT
		PM	ADT				
Sno-Wood Rd: Between SR-522 EB Ramps to 240th St SE	17,448	3	36	1,328	18,812	0.16	15,326
Sno-Wood Rd: Between 240th St SE to King County Line (244th St SE)	13,618	2	24	177	13,819	0.37	

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD SB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/5/2012
CLIENT: BLOODGOOD-MONITOR — Thursday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	8	12	12:00 PM	157	616
12:15 AM	1		12:15 PM	147	
12:30 AM	1		12:30 PM	171	
12:45 AM	2		12:45 PM	141	
1:00 AM	1	13	1:00 PM	147	619
1:15 AM	4		1:15 PM	137	
1:30 AM	4		1:30 PM	154	
1:45 AM	4		1:45 PM	181	
2:00 AM	3	10	2:00 PM	144	583
2:15 AM	0		2:15 PM	153	
2:30 AM	4		2:30 PM	137	
2:45 AM	3		2:45 PM	149	
3:00 AM	3	48	3:00 PM	161	621
3:15 AM	3		3:15 PM	161	
3:30 AM	17		3:30 PM	147	
3:45 AM	25		3:45 PM	152	
4:00 AM	16	140	4:00 PM	171	617
4:15 AM	23		4:15 PM	168	
4:30 AM	35		4:30 PM	144	
4:45 AM	66		4:45 PM	134	
5:00 AM	38	348	5:00 PM	163	622
5:15 AM	53		5:15 PM	171	
5:30 AM	110		5:30 PM	134	
5:45 AM	147		5:45 PM	154	
6:00 AM	137	750	6:00 PM	155	624
6:15 AM	180		6:15 PM	166	
6:30 AM	206		6:30 PM	164	
6:45 AM	227		6:45 PM	139	
7:00 AM	187	750	7:00 PM	117	455
7:15 AM	200		7:15 PM	121	
7:30 AM	178		7:30 PM	121	
7:45 AM	185		7:45 PM	96	
8:00 AM	182	715	8:00 PM	76	238
8:15 AM	183		8:15 PM	61	
8:30 AM	182		8:30 PM	51	
8:45 AM	168		8:45 PM	50	
9:00 AM	147	599	9:00 PM	35	122
9:15 AM	138		9:15 PM	42	
9:30 AM	146		9:30 PM	20	
9:45 AM	168		9:45 PM	25	
10:00 AM	156	605	10:00 PM	16	72
10:15 AM	161		10:15 PM	21	
10:30 AM	153		10:30 PM	17	
10:45 AM	135		10:45 PM	18	
11:00 AM	170	637	11:00 PM	8	26
11:15 AM	158		11:15 PM	8	
11:30 AM	169		11:30 PM	6	
11:45 AM	140		11:45 PM	4	

	S/B
24 Hour Volume	9842

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	4627	5215
Peak Hour	6:30 AM	5:45 PM
Volume	820	639
Factor	0.90	0.96

M - 2

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD SB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/6/2012
CLIENT: BLOODGOOD-MONITOR — Friday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	7	21	12:00 PM	206	730
12:15 AM	5		12:15 PM	173	
12:30 AM	4		12:30 PM	173	
12:45 AM	5		12:45 PM	178	
1:00 AM	2	10	1:00 PM	162	658
1:15 AM	1		1:15 PM	171	
1:30 AM	2		1:30 PM	168	
1:45 AM	5		1:45 PM	157	
2:00 AM	3	13	2:00 PM	155	616
2:15 AM	2		2:15 PM	154	
2:30 AM	4		2:30 PM	141	
2:45 AM	4		2:45 PM	166	
3:00 AM	5	44	3:00 PM	173	658
3:15 AM	3		3:15 PM	176	
3:30 AM	11		3:30 PM	155	
3:45 AM	25		3:45 PM	154	
4:00 AM	15	104	4:00 PM	153	640
4:15 AM	17		4:15 PM	169	
4:30 AM	38		4:30 PM	164	
4:45 AM	34		4:45 PM	154	
5:00 AM	37	285	5:00 PM	176	673
5:15 AM	51		5:15 PM	165	
5:30 AM	84		5:30 PM	167	
5:45 AM	113		5:45 PM	165	
6:00 AM	118	684	6:00 PM	146	590
6:15 AM	162		6:15 PM	157	
6:30 AM	207		6:30 PM	150	
6:45 AM	197		6:45 PM	137	
7:00 AM	188	707	7:00 PM	137	464
7:15 AM	190		7:15 PM	119	
7:30 AM	171		7:30 PM	114	
7:45 AM	158		7:45 PM	94	
8:00 AM	165	638	8:00 PM	84	254
8:15 AM	164		8:15 PM	70	
8:30 AM	155		8:30 PM	49	
8:45 AM	154		8:45 PM	51	
9:00 AM	137	619	9:00 PM	33	125
9:15 AM	147		9:15 PM	39	
9:30 AM	161		9:30 PM	30	
9:45 AM	174		9:45 PM	23	
10:00 AM	206	741	10:00 PM	27	84
10:15 AM	179		10:15 PM	20	
10:30 AM	173		10:30 PM	18	
10:45 AM	183		10:45 PM	19	
11:00 AM	143	668	11:00 PM	14	51
11:15 AM	174		11:15 PM	15	
11:30 AM	158		11:30 PM	7	
11:45 AM	193		11:45 PM	15	

	S/B
24 Hour Volume	10077

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	4534	5543
Peak Hour	6:30 AM	12:00 PM
Volume	782	730
Factor	0.94	0.89

M - 3

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD SB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/7/2012
CLIENT: BLOODGOOD-MONITOR — Saturday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	7	32	12:00 PM	153	629
12:15 AM	6		12:15 PM	137	
12:30 AM	10		12:30 PM	164	
12:45 AM	9		12:45 PM	175	
1:00 AM	5	18	1:00 PM	184	665
1:15 AM	4		1:15 PM	163	
1:30 AM	4		1:30 PM	178	
1:45 AM	5		1:45 PM	140	
2:00 AM	1	11	2:00 PM	159	651
2:15 AM	3		2:15 PM	164	
2:30 AM	3		2:30 PM	159	
2:45 AM	4		2:45 PM	169	
3:00 AM	4	45	3:00 PM	168	647
3:15 AM	5		3:15 PM	161	
3:30 AM	11		3:30 PM	153	
3:45 AM	25		3:45 PM	165	
4:00 AM	7	58	4:00 PM	164	634
4:15 AM	14		4:15 PM	151	
4:30 AM	17		4:30 PM	153	
4:45 AM	20		4:45 PM	166	
5:00 AM	4	54	5:00 PM	188	613
5:15 AM	13		5:15 PM	160	
5:30 AM	17		5:30 PM	140	
5:45 AM	20		5:45 PM	125	
6:00 AM	13	122	6:00 PM	131	428
6:15 AM	28		6:15 PM	119	
6:30 AM	31		6:30 PM	98	
6:45 AM	50		6:45 PM	80	
7:00 AM	40	241	7:00 PM	80	289
7:15 AM	70		7:15 PM	73	
7:30 AM	54		7:30 PM	64	
7:45 AM	77		7:45 PM	72	
8:00 AM	68	363	8:00 PM	40	174
8:15 AM	93		8:15 PM	45	
8:30 AM	95		8:30 PM	54	
8:45 AM	107		8:45 PM	35	
9:00 AM	132	680	9:00 PM	36	141
9:15 AM	162		9:15 PM	40	
9:30 AM	179		9:30 PM	32	
9:45 AM	207		9:45 PM	33	
10:00 AM	158	639	10:00 PM	23	76
10:15 AM	165		10:15 PM	14	
10:30 AM	151		10:30 PM	16	
10:45 AM	165		10:45 PM	23	
11:00 AM	168	678	11:00 PM	9	38
11:15 AM	160		11:15 PM	13	
11:30 AM	176		11:30 PM	9	
11:45 AM	174		11:45 PM	7	

	S/B
24 Hour Volume	7926

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	2941	4985
Peak Hour	9:30 AM	12:45 PM
Volume	709	700
Factor	0.86	0.95

M - 4

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD SB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/8/2012
CLIENT: BLOODGOOD-MONITOR — Sunday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	4	20	12:00 PM	111	404
12:15 AM	8		12:15 PM	91	
12:30 AM	5		12:30 PM	106	
12:45 AM	3		12:45 PM	96	
1:00 AM	5	27	1:00 PM	108	437
1:15 AM	12		1:15 PM	94	
1:30 AM	3		1:30 PM	117	
1:45 AM	7		1:45 PM	118	
2:00 AM	6	11	2:00 PM	96	372
2:15 AM	2		2:15 PM	92	
2:30 AM	3		2:30 PM	88	
2:45 AM	0		2:45 PM	96	
3:00 AM	5	16	3:00 PM	89	339
3:15 AM	3		3:15 PM	77	
3:30 AM	4		3:30 PM	77	
3:45 AM	4		3:45 PM	96	
4:00 AM	8	35	4:00 PM	96	359
4:15 AM	8		4:15 PM	86	
4:30 AM	10		4:30 PM	79	
4:45 AM	9		4:45 PM	98	
5:00 AM	3	19	5:00 PM	86	338
5:15 AM	4		5:15 PM	79	
5:30 AM	7		5:30 PM	87	
5:45 AM	5		5:45 PM	86	
6:00 AM	6	37	6:00 PM	65	275
6:15 AM	7		6:15 PM	65	
6:30 AM	11		6:30 PM	74	
6:45 AM	13		6:45 PM	71	
7:00 AM	13	74	7:00 PM	59	242
7:15 AM	12		7:15 PM	69	
7:30 AM	24		7:30 PM	63	
7:45 AM	25		7:45 PM	51	
8:00 AM	34	165	8:00 PM	54	169
8:15 AM	39		8:15 PM	53	
8:30 AM	49		8:30 PM	31	
8:45 AM	43		8:45 PM	31	
9:00 AM	42	273	9:00 PM	33	122
9:15 AM	51		9:15 PM	37	
9:30 AM	77		9:30 PM	21	
9:45 AM	103		9:45 PM	31	
10:00 AM	86	399	10:00 PM	17	61
10:15 AM	89		10:15 PM	19	
10:30 AM	112		10:30 PM	13	
10:45 AM	112		10:45 PM	12	
11:00 AM	91	403	11:00 PM	6	26
11:15 AM	110		11:15 PM	10	
11:30 AM	98		11:30 PM	6	
11:45 AM	104		11:45 PM	4	

	S/B
24 Hour Volume	4623

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	1479	3144
Peak Hour	10:30 AM	1:00 PM
Volume	425	437
Factor	0.95	0.93

M - 5

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD SB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/9/2012
CLIENT: BLOODGOOD-MONITOR — Monday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	11	17	12:00 PM	148	587
12:15 AM	3		12:15 PM	143	
12:30 AM	2		12:30 PM	142	
12:45 AM	1		12:45 PM	154	
1:00 AM	5	8	1:00 PM	157	620
1:15 AM	1		1:15 PM	158	
1:30 AM	2		1:30 PM	152	
1:45 AM	0		1:45 PM	153	
2:00 AM	2	9	2:00 PM	159	602
2:15 AM	3		2:15 PM	152	
2:30 AM	3		2:30 PM	144	
2:45 AM	1		2:45 PM	147	
3:00 AM	4	51	3:00 PM	172	639
3:15 AM	4		3:15 PM	165	
3:30 AM	16		3:30 PM	149	
3:45 AM	27		3:45 PM	153	
4:00 AM	24	155	4:00 PM	162	676
4:15 AM	35		4:15 PM	178	
4:30 AM	38		4:30 PM	171	
4:45 AM	58		4:45 PM	165	
5:00 AM	47	372	5:00 PM	151	617
5:15 AM	68		5:15 PM	156	
5:30 AM	99		5:30 PM	155	
5:45 AM	158		5:45 PM	155	
6:00 AM	134	797	6:00 PM	144	594
6:15 AM	185		6:15 PM	148	
6:30 AM	218		6:30 PM	167	
6:45 AM	260		6:45 PM	135	
7:00 AM	167	770	7:00 PM	115	460
7:15 AM	196		7:15 PM	123	
7:30 AM	197		7:30 PM	108	
7:45 AM	210		7:45 PM	114	
8:00 AM	159	689	8:00 PM	79	221
8:15 AM	167		8:15 PM	63	
8:30 AM	190		8:30 PM	45	
8:45 AM	173		8:45 PM	34	
9:00 AM	145	594	9:00 PM	34	102
9:15 AM	159		9:15 PM	33	
9:30 AM	125		9:30 PM	20	
9:45 AM	165		9:45 PM	15	
10:00 AM	144	608	10:00 PM	15	55
10:15 AM	161		10:15 PM	9	
10:30 AM	146		10:30 PM	24	
10:45 AM	157		10:45 PM	7	
11:00 AM	169	597	11:00 PM	10	26
11:15 AM	144		11:15 PM	7	
11:30 AM	152		11:30 PM	6	
11:45 AM	132		11:45 PM	3	

	S/B
24 Hour Volume	9866

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	4667	5199
Peak Hour	6:30 AM	4:00 PM
Volume	841	676
Factor	0.81	0.95

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD SB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/10/2012
CLIENT: BLOODGOOD-MONITOR — Tuesday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	3	9	12:00 PM	168	616
12:15 AM	3		12:15 PM	156	
12:30 AM	2		12:30 PM	136	
12:45 AM	1		12:45 PM	156	
1:00 AM	2	5	1:00 PM	149	576
1:15 AM	0		1:15 PM	134	
1:30 AM	2		1:30 PM	147	
1:45 AM	1		1:45 PM	146	
2:00 AM	2	7	2:00 PM	144	618
2:15 AM	1		2:15 PM	171	
2:30 AM	2		2:30 PM	144	
2:45 AM	2		2:45 PM	159	
3:00 AM	3	54	3:00 PM	148	621
3:15 AM	4		3:15 PM	159	
3:30 AM	20		3:30 PM	147	
3:45 AM	27		3:45 PM	167	
4:00 AM	17	147	4:00 PM	148	697
4:15 AM	20		4:15 PM	201	
4:30 AM	45		4:30 PM	162	
4:45 AM	65		4:45 PM	186	
5:00 AM	43	371	5:00 PM	139	623
5:15 AM	62		5:15 PM	151	
5:30 AM	107		5:30 PM	168	
5:45 AM	159		5:45 PM	165	
6:00 AM	150	770	6:00 PM	157	611
6:15 AM	182		6:15 PM	165	
6:30 AM	204		6:30 PM	159	
6:45 AM	234		6:45 PM	130	
7:00 AM	195	634	7:00 PM	121	421
7:15 AM	130		7:15 PM	103	
7:30 AM	153		7:30 PM	101	
7:45 AM	156		7:45 PM	96	
8:00 AM	176	720	8:00 PM	76	237
8:15 AM	189		8:15 PM	81	
8:30 AM	171		8:30 PM	32	
8:45 AM	184		8:45 PM	48	
9:00 AM	159	566	9:00 PM	37	111
9:15 AM	142		9:15 PM	26	
9:30 AM	117		9:30 PM	30	
9:45 AM	148		9:45 PM	18	
10:00 AM	150	599	10:00 PM	12	56
10:15 AM	156		10:15 PM	17	
10:30 AM	147		10:30 PM	10	
10:45 AM	146		10:45 PM	17	
11:00 AM	132	626	11:00 PM	4	26
11:15 AM	161		11:15 PM	10	
11:30 AM	162		11:30 PM	5	
11:45 AM	171		11:45 PM	7	

	S/B
24 Hour Volume	9721

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	4508	5213
Peak Hour	6:15 AM	4:00 PM
Volume	815	697
Factor	0.87	0.87

M - 7

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD SB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/11/2012
CLIENT: BLOODGOOD-MONITOR — Wednesday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	5	17	12:00 PM	155	605
12:15 AM	6		12:15 PM	172	
12:30 AM	4		12:30 PM	130	
12:45 AM	2		12:45 PM	148	
1:00 AM	1	6	1:00 PM	151	615
1:15 AM	2		1:15 PM	161	
1:30 AM	1		1:30 PM	137	
1:45 AM	2		1:45 PM	166	
2:00 AM	1	5	2:00 PM	151	579
2:15 AM	2		2:15 PM	160	
2:30 AM	0		2:30 PM	130	
2:45 AM	2		2:45 PM	138	
3:00 AM	6	54	3:00 PM	140	549
3:15 AM	3		3:15 PM	149	
3:30 AM	16		3:30 PM	115	
3:45 AM	29		3:45 PM	145	
4:00 AM	22	160	4:00 PM	144	584
4:15 AM	32		4:15 PM	167	
4:30 AM	37		4:30 PM	138	
4:45 AM	69		4:45 PM	135	
5:00 AM	43	384	5:00 PM	154	570
5:15 AM	78		5:15 PM	140	
5:30 AM	112		5:30 PM	144	
5:45 AM	151		5:45 PM	132	
6:00 AM	143	744	6:00 PM	162	610
6:15 AM	183		6:15 PM	149	
6:30 AM	182		6:30 PM	154	
6:45 AM	236		6:45 PM	145	
7:00 AM	231	830	7:00 PM	119	412
7:15 AM	214		7:15 PM	118	
7:30 AM	189		7:30 PM	102	
7:45 AM	196		7:45 PM	73	
8:00 AM	190	718	8:00 PM	79	231
8:15 AM	182		8:15 PM	57	
8:30 AM	177		8:30 PM	49	
8:45 AM	169		8:45 PM	46	
9:00 AM	124	572	9:00 PM	32	96
9:15 AM	151		9:15 PM	30	
9:30 AM	144		9:30 PM	20	
9:45 AM	153		9:45 PM	14	
10:00 AM	174	623	10:00 PM	17	58
10:15 AM	152		10:15 PM	13	
10:30 AM	137		10:30 PM	12	
10:45 AM	160		10:45 PM	16	
11:00 AM	130	570	11:00 PM	9	28
11:15 AM	144		11:15 PM	5	
11:30 AM	145		11:30 PM	5	
11:45 AM	151		11:45 PM	9	

	S/B
24 Hour Volume	9620

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	4683	4937
Peak Hour	6:45 AM	1:00 PM
Volume	870	615
Factor	0.92	0.93

M - 8

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD NB NE/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 4/5/2012
Thursday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	14	33	12:00 PM	158	596
12:15 AM	12		12:15 PM	135	
12:30 AM	5		12:30 PM	155	
12:45 AM	2		12:45 PM	148	
1:00 AM	5	20	1:00 PM	156	661
1:15 AM	5		1:15 PM	172	
1:30 AM	4		1:30 PM	187	
1:45 AM	6		1:45 PM	146	
2:00 AM	4	13	2:00 PM	183	730
2:15 AM	4		2:15 PM	179	
2:30 AM	2		2:30 PM	185	
2:45 AM	3		2:45 PM	183	
3:00 AM	6	18	3:00 PM	201	853
3:15 AM	2		3:15 PM	205	
3:30 AM	4		3:30 PM	223	
3:45 AM	6		3:45 PM	224	
4:00 AM	4	24	4:00 PM	218	849
4:15 AM	5		4:15 PM	197	
4:30 AM	7		4:30 PM	226	
4:45 AM	8		4:45 PM	208	
5:00 AM	13	86	5:00 PM	222	916
5:15 AM	19		5:15 PM	250	
5:30 AM	21		5:30 PM	229	
5:45 AM	33		5:45 PM	215	
6:00 AM	35	210	6:00 PM	214	819
6:15 AM	45		6:15 PM	210	
6:30 AM	62		6:30 PM	202	
6:45 AM	68		6:45 PM	193	
7:00 AM	88	318	7:00 PM	161	637
7:15 AM	54		7:15 PM	178	
7:30 AM	99		7:30 PM	151	
7:45 AM	77		7:45 PM	147	
8:00 AM	79	323	8:00 PM	159	495
8:15 AM	67		8:15 PM	119	
8:30 AM	98		8:30 PM	116	
8:45 AM	79		8:45 PM	101	
9:00 AM	75	295	9:00 PM	82	229
9:15 AM	69		9:15 PM	57	
9:30 AM	73		9:30 PM	46	
9:45 AM	78		9:45 PM	44	
10:00 AM	89	479	10:00 PM	32	105
10:15 AM	107		10:15 PM	22	
10:30 AM	156		10:30 PM	37	
10:45 AM	127		10:45 PM	14	
11:00 AM	131	579	11:00 PM	27	65
11:15 AM	151		11:15 PM	16	
11:30 AM	142		11:30 PM	16	
11:45 AM	155		11:45 PM	6	

	N/B
24 Hour Volume	9353

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	2398	6955
Peak Hour	11:00 AM	5:00 PM
Volume	579	916
Factor	0.93	0.92

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD NB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/6/2012
CLIENT: BLOODGOOD-MONITOR — Friday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	6	29	12:00 PM	192	800
12:15 AM	9		12:15 PM	183	
12:30 AM	7		12:30 PM	221	
12:45 AM	7		12:45 PM	204	
1:00 AM	7	18	1:00 PM	217	840
1:15 AM	5		1:15 PM	208	
1:30 AM	4		1:30 PM	212	
1:45 AM	2		1:45 PM	203	
2:00 AM	0	8	2:00 PM	198	804
2:15 AM	3		2:15 PM	177	
2:30 AM	4		2:30 PM	225	
2:45 AM	1		2:45 PM	204	
3:00 AM	2	18	3:00 PM	219	845
3:15 AM	2		3:15 PM	205	
3:30 AM	9		3:30 PM	216	
3:45 AM	5		3:45 PM	205	
4:00 AM	7	28	4:00 PM	211	866
4:15 AM	1		4:15 PM	203	
4:30 AM	9		4:30 PM	215	
4:45 AM	11		4:45 PM	237	
5:00 AM	10	86	5:00 PM	234	865
5:15 AM	14		5:15 PM	204	
5:30 AM	23		5:30 PM	220	
5:45 AM	39		5:45 PM	207	
6:00 AM	43	190	6:00 PM	217	792
6:15 AM	44		6:15 PM	214	
6:30 AM	49		6:30 PM	197	
6:45 AM	54		6:45 PM	164	
7:00 AM	68	328	7:00 PM	186	638
7:15 AM	88		7:15 PM	168	
7:30 AM	84		7:30 PM	135	
7:45 AM	88		7:45 PM	149	
8:00 AM	79	326	8:00 PM	143	532
8:15 AM	84		8:15 PM	152	
8:30 AM	81		8:30 PM	123	
8:45 AM	82		8:45 PM	114	
9:00 AM	80	327	9:00 PM	83	273
9:15 AM	83		9:15 PM	68	
9:30 AM	86		9:30 PM	65	
9:45 AM	78		9:45 PM	57	
10:00 AM	96	534	10:00 PM	55	161
10:15 AM	128		10:15 PM	50	
10:30 AM	162		10:30 PM	25	
10:45 AM	148		10:45 PM	31	
11:00 AM	187	722	11:00 PM	38	92
11:15 AM	162		11:15 PM	25	
11:30 AM	179		11:30 PM	15	
11:45 AM	194		11:45 PM	14	

	N/B
24 Hour Volume	10122

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	2614	7508
Peak Hour	11:00 AM	4:45 PM
Volume	722	895
Factor	0.93	0.94

M - 10

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD NB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/7/2012
CLIENT: BLOODGOOD-MONITOR — Saturday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	20	61	12:00 PM	185	732
12:15 AM	20		12:15 PM	187	
12:30 AM	13		12:30 PM	191	
12:45 AM	8		12:45 PM	169	
1:00 AM	12	26	1:00 PM	195	788
1:15 AM	7		1:15 PM	189	
1:30 AM	6		1:30 PM	202	
1:45 AM	1		1:45 PM	202	
2:00 AM	3	13	2:00 PM	218	764
2:15 AM	2		2:15 PM	173	
2:30 AM	4		2:30 PM	202	
2:45 AM	4		2:45 PM	171	
3:00 AM	4	9	3:00 PM	186	750
3:15 AM	2		3:15 PM	186	
3:30 AM	2		3:30 PM	191	
3:45 AM	1		3:45 PM	187	
4:00 AM	2	14	4:00 PM	174	741
4:15 AM	2		4:15 PM	197	
4:30 AM	7		4:30 PM	192	
4:45 AM	3		4:45 PM	178	
5:00 AM	8	30	5:00 PM	179	747
5:15 AM	7		5:15 PM	188	
5:30 AM	6		5:30 PM	184	
5:45 AM	9		5:45 PM	196	
6:00 AM	8	56	6:00 PM	200	672
6:15 AM	9		6:15 PM	199	
6:30 AM	18		6:30 PM	152	
6:45 AM	21		6:45 PM	121	
7:00 AM	28	118	7:00 PM	99	358
7:15 AM	29		7:15 PM	80	
7:30 AM	24		7:30 PM	101	
7:45 AM	37		7:45 PM	78	
8:00 AM	43	238	8:00 PM	65	254
8:15 AM	56		8:15 PM	68	
8:30 AM	71		8:30 PM	62	
8:45 AM	68		8:45 PM	59	
9:00 AM	62	367	9:00 PM	51	189
9:15 AM	84		9:15 PM	49	
9:30 AM	83		9:30 PM	45	
9:45 AM	138		9:45 PM	44	
10:00 AM	156	680	10:00 PM	31	100
10:15 AM	171		10:15 PM	20	
10:30 AM	166		10:30 PM	22	
10:45 AM	187		10:45 PM	27	
11:00 AM	172	717	11:00 PM	27	95
11:15 AM	172		11:15 PM	20	
11:30 AM	172		11:30 PM	25	
11:45 AM	201		11:45 PM	23	

	N/B
24 Hour Volume	8519

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	2329	6190
Peak Hour	11:00 AM	1:15 PM
Volume	717	811
Factor	0.89	0.93

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD NB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/8/2012
CLIENT: BLOODGOOD-MONITOR — Sunday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	22	69	12:00 PM	107	436
12:15 AM	20		12:15 PM	117	
12:30 AM	13		12:30 PM	99	
12:45 AM	14		12:45 PM	113	
1:00 AM	4	20	1:00 PM	109	408
1:15 AM	6		1:15 PM	96	
1:30 AM	3		1:30 PM	105	
1:45 AM	7		1:45 PM	98	
2:00 AM	4	17	2:00 PM	79	374
2:15 AM	7		2:15 PM	105	
2:30 AM	4		2:30 PM	88	
2:45 AM	2		2:45 PM	102	
3:00 AM	7	15	3:00 PM	101	365
3:15 AM	3		3:15 PM	106	
3:30 AM	2		3:30 PM	81	
3:45 AM	3		3:45 PM	77	
4:00 AM	5	8	4:00 PM	92	325
4:15 AM	0		4:15 PM	82	
4:30 AM	3		4:30 PM	75	
4:45 AM	0		4:45 PM	76	
5:00 AM	1	9	5:00 PM	88	333
5:15 AM	0		5:15 PM	73	
5:30 AM	4		5:30 PM	86	
5:45 AM	4		5:45 PM	86	
6:00 AM	3	23	6:00 PM	59	268
6:15 AM	7		6:15 PM	66	
6:30 AM	8		6:30 PM	83	
6:45 AM	5		6:45 PM	60	
7:00 AM	8	54	7:00 PM	66	240
7:15 AM	5		7:15 PM	70	
7:30 AM	19		7:30 PM	62	
7:45 AM	22		7:45 PM	42	
8:00 AM	20	106	8:00 PM	52	216
8:15 AM	28		8:15 PM	56	
8:30 AM	28		8:30 PM	60	
8:45 AM	30		8:45 PM	48	
9:00 AM	34	175	9:00 PM	27	110
9:15 AM	42		9:15 PM	24	
9:30 AM	37		9:30 PM	37	
9:45 AM	62		9:45 PM	22	
10:00 AM	75	312	10:00 PM	17	58
10:15 AM	71		10:15 PM	20	
10:30 AM	69		10:30 PM	12	
10:45 AM	97		10:45 PM	9	
11:00 AM	77	373	11:00 PM	9	35
11:15 AM	73		11:15 PM	12	
11:30 AM	119		11:30 PM	11	
11:45 AM	104		11:45 PM	3	

	N/B
24 Hour Volume	4349

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	1181	3168
Peak Hour	11:00 AM	12:15 PM
Volume	373	438
Factor	0.78	0.94

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD NB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/9/2012
CLIENT: BLOODGOOD-MONITOR — Monday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	9	20	12:00 PM	172	681
12:15 AM	3		12:15 PM	166	
12:30 AM	4		12:30 PM	170	
12:45 AM	4		12:45 PM	173	
1:00 AM	1	5	1:00 PM	158	667
1:15 AM	3		1:15 PM	161	
1:30 AM	1		1:30 PM	169	
1:45 AM	0		1:45 PM	179	
2:00 AM	2	3	2:00 PM	185	751
2:15 AM	0		2:15 PM	180	
2:30 AM	0		2:30 PM	194	
2:45 AM	1		2:45 PM	192	
3:00 AM	4	13	3:00 PM	206	827
3:15 AM	3		3:15 PM	204	
3:30 AM	2		3:30 PM	204	
3:45 AM	4		3:45 PM	213	
4:00 AM	7	40	4:00 PM	210	928
4:15 AM	8		4:15 PM	218	
4:30 AM	11		4:30 PM	259	
4:45 AM	14		4:45 PM	241	
5:00 AM	12	87	5:00 PM	239	924
5:15 AM	14		5:15 PM	230	
5:30 AM	27		5:30 PM	217	
5:45 AM	34		5:45 PM	238	
6:00 AM	36	204	6:00 PM	223	808
6:15 AM	45		6:15 PM	217	
6:30 AM	54		6:30 PM	191	
6:45 AM	69		6:45 PM	177	
7:00 AM	97	358	7:00 PM	204	656
7:15 AM	72		7:15 PM	171	
7:30 AM	100		7:30 PM	138	
7:45 AM	89		7:45 PM	143	
8:00 AM	85	337	8:00 PM	92	433
8:15 AM	83		8:15 PM	124	
8:30 AM	84		8:30 PM	112	
8:45 AM	85		8:45 PM	105	
9:00 AM	95	346	9:00 PM	70	223
9:15 AM	85		9:15 PM	61	
9:30 AM	86		9:30 PM	50	
9:45 AM	80		9:45 PM	42	
10:00 AM	88	500	10:00 PM	23	78
10:15 AM	124		10:15 PM	20	
10:30 AM	148		10:30 PM	19	
10:45 AM	140		10:45 PM	16	
11:00 AM	148	661	11:00 PM	22	51
11:15 AM	152		11:15 PM	8	
11:30 AM	187		11:30 PM	15	
11:45 AM	174		11:45 PM	6	

	N/B
24 Hour Volume	9601

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	2574	7027
Peak Hour	11:00 AM	4:30 PM
Volume	661	969
Factor	0.88	0.94

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD NB NE/O 240 ST SE — Site: 20050-0.45
WEATHER: 7 MIXED — Date: 4/10/2012
CLIENT: BLOODGOOD-MONITOR — Tuesday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	8	22	12:00 PM	153	643
12:15 AM	6		12:15 PM	159	
12:30 AM	6		12:30 PM	179	
12:45 AM	2		12:45 PM	152	
1:00 AM	12	20	1:00 PM	157	699
1:15 AM	2		1:15 PM	161	
1:30 AM	3		1:30 PM	178	
1:45 AM	3		1:45 PM	203	
2:00 AM	2	8	2:00 PM	164	776
2:15 AM	2		2:15 PM	194	
2:30 AM	0		2:30 PM	210	
2:45 AM	4		2:45 PM	208	
3:00 AM	6	16	3:00 PM	197	829
3:15 AM	4		3:15 PM	200	
3:30 AM	1		3:30 PM	211	
3:45 AM	5		3:45 PM	221	
4:00 AM	12	40	4:00 PM	220	899
4:15 AM	5		4:15 PM	216	
4:30 AM	13		4:30 PM	221	
4:45 AM	10		4:45 PM	242	
5:00 AM	6	74	5:00 PM	216	895
5:15 AM	15		5:15 PM	229	
5:30 AM	19		5:30 PM	211	
5:45 AM	34		5:45 PM	239	
6:00 AM	41	223	6:00 PM	212	816
6:15 AM	51		6:15 PM	198	
6:30 AM	57		6:30 PM	222	
6:45 AM	74		6:45 PM	184	
7:00 AM	82	366	7:00 PM	154	636
7:15 AM	88		7:15 PM	180	
7:30 AM	86		7:30 PM	158	
7:45 AM	110		7:45 PM	144	
8:00 AM	92	327	8:00 PM	132	450
8:15 AM	70		8:15 PM	116	
8:30 AM	78		8:30 PM	113	
8:45 AM	87		8:45 PM	89	
9:00 AM	88	327	9:00 PM	62	208
9:15 AM	90		9:15 PM	65	
9:30 AM	82		9:30 PM	42	
9:45 AM	67		9:45 PM	39	
10:00 AM	77	456	10:00 PM	23	86
10:15 AM	100		10:15 PM	19	
10:30 AM	140		10:30 PM	26	
10:45 AM	139		10:45 PM	18	
11:00 AM	152	541	11:00 PM	19	56
11:15 AM	125		11:15 PM	15	
11:30 AM	136		11:30 PM	12	
11:45 AM	128		11:45 PM	10	

	N/B
24 Hour Volume	9413

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	2420	6993
Peak Hour	10:30 AM	4:30 PM
Volume	556	908
Factor	0.91	0.94

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNOHOMISH-WOODINVILLE RD NB NE/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 4/11/2012
Wednesday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	10	28	12:00 PM	138	634
12:15 AM	9		12:15 PM	171	
12:30 AM	4		12:30 PM	154	
12:45 AM	5		12:45 PM	171	
1:00 AM	8	21	1:00 PM	164	683
1:15 AM	7		1:15 PM	175	
1:30 AM	3		1:30 PM	172	
1:45 AM	3		1:45 PM	172	
2:00 AM	3	12	2:00 PM	173	744
2:15 AM	5		2:15 PM	165	
2:30 AM	2		2:30 PM	200	
2:45 AM	2		2:45 PM	206	
3:00 AM	5	16	3:00 PM	214	820
3:15 AM	0		3:15 PM	184	
3:30 AM	2		3:30 PM	198	
3:45 AM	9		3:45 PM	224	
4:00 AM	10	36	4:00 PM	215	861
4:15 AM	7		4:15 PM	197	
4:30 AM	10		4:30 PM	229	
4:45 AM	9		4:45 PM	220	
5:00 AM	14	93	5:00 PM	197	818
5:15 AM	13		5:15 PM	205	
5:30 AM	22		5:30 PM	201	
5:45 AM	44		5:45 PM	215	
6:00 AM	42	217	6:00 PM	195	796
6:15 AM	40		6:15 PM	205	
6:30 AM	66		6:30 PM	204	
6:45 AM	69		6:45 PM	192	
7:00 AM	82	308	7:00 PM	155	596
7:15 AM	71		7:15 PM	164	
7:30 AM	73		7:30 PM	138	
7:45 AM	82		7:45 PM	139	
8:00 AM	67	309	8:00 PM	121	425
8:15 AM	75		8:15 PM	106	
8:30 AM	87		8:30 PM	119	
8:45 AM	80		8:45 PM	79	
9:00 AM	79	330	9:00 PM	56	204
9:15 AM	75		9:15 PM	66	
9:30 AM	89		9:30 PM	46	
9:45 AM	87		9:45 PM	36	
10:00 AM	95	453	10:00 PM	32	95
10:15 AM	110		10:15 PM	24	
10:30 AM	118		10:30 PM	19	
10:45 AM	130		10:45 PM	20	
11:00 AM	133	544	11:00 PM	19	60
11:15 AM	127		11:15 PM	16	
11:30 AM	126		11:30 PM	10	
11:45 AM	158		11:45 PM	15	

	N/B
24 Hour Volume	9103

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	2367	6736
Peak Hour	11:00 AM	3:45 PM
Volume	544	865
Factor	0.86	0.94

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD SB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/20/2012
Tuesday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	4	11	12:00 PM	99	399
12:15 AM	4		12:15 PM	96	
12:30 AM	3		12:30 PM	95	
12:45 AM	0		12:45 PM	109	
1:00 AM	3	9	1:00 PM	92	406
1:15 AM	2		1:15 PM	114	
1:30 AM	0		1:30 PM	103	
1:45 AM	4		1:45 PM	97	
2:00 AM	3	10	2:00 PM	107	418
2:15 AM	1		2:15 PM	100	
2:30 AM	2		2:30 PM	111	
2:45 AM	4		2:45 PM	100	
3:00 AM	3	37	3:00 PM	71	401
3:15 AM	1		3:15 PM	107	
3:30 AM	15		3:30 PM	104	
3:45 AM	18		3:45 PM	119	
4:00 AM	18	156	4:00 PM	97	431
4:15 AM	27		4:15 PM	103	
4:30 AM	49		4:30 PM	106	
4:45 AM	62		4:45 PM	125	
5:00 AM	45	309	5:00 PM	87	411
5:15 AM	71		5:15 PM	96	
5:30 AM	91		5:30 PM	104	
5:45 AM	102		5:45 PM	124	
6:00 AM	125	690	6:00 PM	74	308
6:15 AM	153		6:15 PM	82	
6:30 AM	202		6:30 PM	67	
6:45 AM	210		6:45 PM	85	
7:00 AM	227	910	7:00 PM	55	215
7:15 AM	214		7:15 PM	56	
7:30 AM	227		7:30 PM	43	
7:45 AM	242		7:45 PM	61	
8:00 AM	189	693	8:00 PM	49	155
8:15 AM	172		8:15 PM	41	
8:30 AM	172		8:30 PM	41	
8:45 AM	160		8:45 PM	24	
9:00 AM	143	473	9:00 PM	20	65
9:15 AM	148		9:15 PM	18	
9:30 AM	94		9:30 PM	11	
9:45 AM	88		9:45 PM	16	
10:00 AM	70	390	10:00 PM	10	33
10:15 AM	102		10:15 PM	12	
10:30 AM	106		10:30 PM	6	
10:45 AM	112		10:45 PM	5	
11:00 AM	112	452	11:00 PM	8	18
11:15 AM	109		11:15 PM	3	
11:30 AM	111		11:30 PM	2	
11:45 AM	120		11:45 PM	5	

	S/B
24 Hour Volume	7400

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	4140	3260
Peak Hour	7:00 AM	4:00 PM
Volume	910	431
Factor	0.94	0.86

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION:	SNO-WOOD RD SB SW/O 240 ST SE	Site:	20050-0.45
WEATHER:	7 MIXED	Date:	3/21/2012
CLIENT:	BLOODGOOD-MONITOR		Wednesday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	1	10	12:00 PM	114	460
12:15 AM	4		12:15 PM	114	
12:30 AM	2		12:30 PM	116	
12:45 AM	3		12:45 PM	116	
1:00 AM	2	6	1:00 PM	95	450
1:15 AM	1		1:15 PM	124	
1:30 AM	2		1:30 PM	114	
1:45 AM	1		1:45 PM	117	
2:00 AM	3	14	2:00 PM	93	430
2:15 AM	4		2:15 PM	133	
2:30 AM	4		2:30 PM	106	
2:45 AM	3		2:45 PM	98	
3:00 AM	0	34	3:00 PM	101	421
3:15 AM	2		3:15 PM	96	
3:30 AM	13		3:30 PM	101	
3:45 AM	19		3:45 PM	123	
4:00 AM	7	144	4:00 PM	105	467
4:15 AM	37		4:15 PM	111	
4:30 AM	33		4:30 PM	117	
4:45 AM	67		4:45 PM	134	
5:00 AM	37	312	5:00 PM	89	377
5:15 AM	73		5:15 PM	91	
5:30 AM	80		5:30 PM	90	
5:45 AM	122		5:45 PM	107	
6:00 AM	139	716	6:00 PM	100	388
6:15 AM	148		6:15 PM	113	
6:30 AM	192		6:30 PM	91	
6:45 AM	237		6:45 PM	84	
7:00 AM	224	901	7:00 PM	59	217
7:15 AM	209		7:15 PM	57	
7:30 AM	219		7:30 PM	58	
7:45 AM	249		7:45 PM	43	
8:00 AM	155	709	8:00 PM	52	176
8:15 AM	181		8:15 PM	51	
8:30 AM	174		8:30 PM	40	
8:45 AM	199		8:45 PM	33	
9:00 AM	135	539	9:00 PM	18	70
9:15 AM	170		9:15 PM	26	
9:30 AM	138		9:30 PM	18	
9:45 AM	96		9:45 PM	8	
10:00 AM	79	390	10:00 PM	14	36
10:15 AM	110		10:15 PM	9	
10:30 AM	94		10:30 PM	9	
10:45 AM	107		10:45 PM	4	
11:00 AM	112	442	11:00 PM	6	16
11:15 AM	126		11:15 PM	5	
11:30 AM	88		11:30 PM	1	
11:45 AM	116		11:45 PM	4	

	S/B
24 Hour Volume	7725

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	4217	3508
Peak Hour	7:00 AM	4:00 PM
Volume	901	467
Factor	0.90	0.87

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD SB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/22/2012
Thursday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	3	9	12:00 PM	100	408
12:15 AM	2		12:15 PM	113	
12:30 AM	0		12:30 PM	100	
12:45 AM	4		12:45 PM	95	
1:00 AM	1	6	1:00 PM	103	426
1:15 AM	0		1:15 PM	101	
1:30 AM	2		1:30 PM	116	
1:45 AM	3		1:45 PM	106	
2:00 AM	3	10	2:00 PM	108	396
2:15 AM	3		2:15 PM	102	
2:30 AM	2		2:30 PM	94	
2:45 AM	2		2:45 PM	92	
3:00 AM	4	40	3:00 PM	91	404
3:15 AM	5		3:15 PM	82	
3:30 AM	12		3:30 PM	95	
3:45 AM	19		3:45 PM	136	
4:00 AM	16	155	4:00 PM	95	447
4:15 AM	29		4:15 PM	115	
4:30 AM	42		4:30 PM	110	
4:45 AM	68		4:45 PM	127	
5:00 AM	36	314	5:00 PM	117	436
5:15 AM	67		5:15 PM	112	
5:30 AM	98		5:30 PM	104	
5:45 AM	113		5:45 PM	103	
6:00 AM	133	720	6:00 PM	102	353
6:15 AM	203		6:15 PM	97	
6:30 AM	171		6:30 PM	84	
6:45 AM	213		6:45 PM	70	
7:00 AM	219	907	7:00 PM	71	222
7:15 AM	205		7:15 PM	53	
7:30 AM	232		7:30 PM	46	
7:45 AM	251		7:45 PM	52	
8:00 AM	176	727	8:00 PM	53	158
8:15 AM	191		8:15 PM	44	
8:30 AM	188		8:30 PM	40	
8:45 AM	172		8:45 PM	21	
9:00 AM	141	485	9:00 PM	31	81
9:15 AM	131		9:15 PM	12	
9:30 AM	107		9:30 PM	23	
9:45 AM	106		9:45 PM	15	
10:00 AM	95	392	10:00 PM	20	75
10:15 AM	99		10:15 PM	11	
10:30 AM	94		10:30 PM	19	
10:45 AM	104		10:45 PM	25	
11:00 AM	106	455	11:00 PM	11	33
11:15 AM	111		11:15 PM	11	
11:30 AM	122		11:30 PM	9	
11:45 AM	116		11:45 PM	2	

	S/B
24 Hour Volume	7659

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	4220	3439
Peak Hour	7:00 AM	4:15 PM
Volume	907	469
Factor	0.90	0.92

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD SB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/23/2012
Friday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	3	10	12:00 PM	117	491
12:15 AM	4		12:15 PM	112	
12:30 AM	2		12:30 PM	129	
12:45 AM	1		12:45 PM	133	
1:00 AM	2	6	1:00 PM	110	465
1:15 AM	0		1:15 PM	115	
1:30 AM	3		1:30 PM	115	
1:45 AM	1		1:45 PM	125	
2:00 AM	6	12	2:00 PM	137	518
2:15 AM	0		2:15 PM	129	
2:30 AM	3		2:30 PM	124	
2:45 AM	3		2:45 PM	128	
3:00 AM	4	44	3:00 PM	120	462
3:15 AM	4		3:15 PM	114	
3:30 AM	16		3:30 PM	111	
3:45 AM	20		3:45 PM	117	
4:00 AM	11	113	4:00 PM	120	502
4:15 AM	24		4:15 PM	122	
4:30 AM	30		4:30 PM	124	
4:45 AM	48		4:45 PM	136	
5:00 AM	37	289	5:00 PM	104	472
5:15 AM	51		5:15 PM	118	
5:30 AM	94		5:30 PM	133	
5:45 AM	107		5:45 PM	117	
6:00 AM	130	658	6:00 PM	91	388
6:15 AM	165		6:15 PM	102	
6:30 AM	170		6:30 PM	93	
6:45 AM	193		6:45 PM	102	
7:00 AM	197	778	7:00 PM	88	297
7:15 AM	173		7:15 PM	101	
7:30 AM	208		7:30 PM	61	
7:45 AM	200		7:45 PM	47	
8:00 AM	150	660	8:00 PM	49	209
8:15 AM	181		8:15 PM	55	
8:30 AM	154		8:30 PM	62	
8:45 AM	175		8:45 PM	43	
9:00 AM	136	476	9:00 PM	25	105
9:15 AM	128		9:15 PM	25	
9:30 AM	116		9:30 PM	29	
9:45 AM	96		9:45 PM	26	
10:00 AM	105	454	10:00 PM	25	76
10:15 AM	133		10:15 PM	21	
10:30 AM	105		10:30 PM	17	
10:45 AM	111		10:45 PM	13	
11:00 AM	119	516	11:00 PM	14	33
11:15 AM	119		11:15 PM	12	
11:30 AM	124		11:30 PM	1	
11:45 AM	154		11:45 PM	6	

	S/B
24 Hour Volume	8034

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	4016	4018
Peak Hour	7:00 AM	2:00 PM
Volume	778	518
Factor	0.94	0.95

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD SB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/24/2012
Saturday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	7	23	12:00 PM	114	541
12:15 AM	4		12:15 PM	141	
12:30 AM	6		12:30 PM	158	
12:45 AM	6		12:45 PM	128	
1:00 AM	3	16	1:00 PM	146	503
1:15 AM	3		1:15 PM	120	
1:30 AM	4		1:30 PM	119	
1:45 AM	6		1:45 PM	118	
2:00 AM	6	15	2:00 PM	140	493
2:15 AM	3		2:15 PM	109	
2:30 AM	4		2:30 PM	133	
2:45 AM	2		2:45 PM	111	
3:00 AM	3	32	3:00 PM	124	463
3:15 AM	2		3:15 PM	110	
3:30 AM	8		3:30 PM	103	
3:45 AM	19		3:45 PM	126	
4:00 AM	8	45	4:00 PM	106	467
4:15 AM	7		4:15 PM	133	
4:30 AM	9		4:30 PM	119	
4:45 AM	21		4:45 PM	109	
5:00 AM	11	53	5:00 PM	112	445
5:15 AM	8		5:15 PM	107	
5:30 AM	11		5:30 PM	117	
5:45 AM	23		5:45 PM	109	
6:00 AM	15	96	6:00 PM	112	349
6:15 AM	14		6:15 PM	100	
6:30 AM	32		6:30 PM	69	
6:45 AM	35		6:45 PM	68	
7:00 AM	32	179	7:00 PM	85	265
7:15 AM	37		7:15 PM	67	
7:30 AM	50		7:30 PM	68	
7:45 AM	60		7:45 PM	45	
8:00 AM	49	294	8:00 PM	40	131
8:15 AM	66		8:15 PM	31	
8:30 AM	82		8:30 PM	27	
8:45 AM	97		8:45 PM	33	
9:00 AM	97	403	9:00 PM	22	97
9:15 AM	109		9:15 PM	27	
9:30 AM	96		9:30 PM	27	
9:45 AM	101		9:45 PM	21	
10:00 AM	105	477	10:00 PM	20	76
10:15 AM	132		10:15 PM	23	
10:30 AM	111		10:30 PM	20	
10:45 AM	129		10:45 PM	13	
11:00 AM	112	507	11:00 PM	15	47
11:15 AM	136		11:15 PM	13	
11:30 AM	124		11:30 PM	13	
11:45 AM	135		11:45 PM	6	

	S/B
24 Hour Volume	6017

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	2140	3877
Peak Hour	11:00 AM	12:15 PM
Volume	507	573
Factor	0.93	0.91

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD SB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/25/2012
Sunday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	7	28	12:00 PM	120	477
12:15 AM	8		12:15 PM	111	
12:30 AM	9		12:30 PM	132	
12:45 AM	4		12:45 PM	114	
1:00 AM	3	14	1:00 PM	113	445
1:15 AM	5		1:15 PM	119	
1:30 AM	2		1:30 PM	120	
1:45 AM	4		1:45 PM	93	
2:00 AM	5	9	2:00 PM	122	463
2:15 AM	1		2:15 PM	125	
2:30 AM	0		2:30 PM	114	
2:45 AM	3		2:45 PM	102	
3:00 AM	2	21	3:00 PM	112	419
3:15 AM	1		3:15 PM	105	
3:30 AM	7		3:30 PM	108	
3:45 AM	11		3:45 PM	94	
4:00 AM	6	34	4:00 PM	101	400
4:15 AM	10		4:15 PM	113	
4:30 AM	5		4:30 PM	104	
4:45 AM	13		4:45 PM	82	
5:00 AM	7	30	5:00 PM	90	357
5:15 AM	9		5:15 PM	92	
5:30 AM	5		5:30 PM	89	
5:45 AM	9		5:45 PM	86	
6:00 AM	1	35	6:00 PM	70	240
6:15 AM	10		6:15 PM	65	
6:30 AM	10		6:30 PM	58	
6:45 AM	14		6:45 PM	47	
7:00 AM	17	72	7:00 PM	36	151
7:15 AM	15		7:15 PM	36	
7:30 AM	19		7:30 PM	41	
7:45 AM	21		7:45 PM	38	
8:00 AM	21	171	8:00 PM	23	88
8:15 AM	38		8:15 PM	27	
8:30 AM	46		8:30 PM	22	
8:45 AM	66		8:45 PM	16	
9:00 AM	56	296	9:00 PM	13	57
9:15 AM	73		9:15 PM	15	
9:30 AM	74		9:30 PM	17	
9:45 AM	93		9:45 PM	12	
10:00 AM	77	387	10:00 PM	11	33
10:15 AM	72		10:15 PM	3	
10:30 AM	108		10:30 PM	11	
10:45 AM	130		10:45 PM	8	
11:00 AM	87	406	11:00 PM	7	18
11:15 AM	108		11:15 PM	5	
11:30 AM	94		11:30 PM	2	
11:45 AM	117		11:45 PM	4	

	S/B
24 Hour Volume	4651

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	1503	3148
Peak Hour	10:30 AM	12:30 PM
Volume	433	478
Factor	0.83	0.91

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD SB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/26/2012
Monday

Daily Volume, per Channel

Channel: S/B

Interval Begin			Interval Begin		
12:00 AM	5	9	12:00 PM	114	457
12:15 AM	1		12:15 PM	116	
12:30 AM	1		12:30 PM	113	
12:45 AM	2		12:45 PM	114	
1:00 AM	0	7	1:00 PM	91	400
1:15 AM	1		1:15 PM	107	
1:30 AM	3		1:30 PM	89	
1:45 AM	3		1:45 PM	113	
2:00 AM	0	6	2:00 PM	114	424
2:15 AM	1		2:15 PM	94	
2:30 AM	2		2:30 PM	122	
2:45 AM	3		2:45 PM	94	
3:00 AM	2	38	3:00 PM	109	451
3:15 AM	3		3:15 PM	99	
3:30 AM	10		3:30 PM	112	
3:45 AM	23		3:45 PM	131	
4:00 AM	17	154	4:00 PM	92	434
4:15 AM	29		4:15 PM	108	
4:30 AM	42		4:30 PM	114	
4:45 AM	66		4:45 PM	120	
5:00 AM	40	318	5:00 PM	100	368
5:15 AM	58		5:15 PM	112	
5:30 AM	102		5:30 PM	90	
5:45 AM	118		5:45 PM	66	
6:00 AM	123	699	6:00 PM	85	343
6:15 AM	180		6:15 PM	96	
6:30 AM	165		6:30 PM	78	
6:45 AM	231		6:45 PM	84	
7:00 AM	203	831	7:00 PM	62	245
7:15 AM	200		7:15 PM	69	
7:30 AM	223		7:30 PM	50	
7:45 AM	205		7:45 PM	64	
8:00 AM	189	732	8:00 PM	52	141
8:15 AM	196		8:15 PM	35	
8:30 AM	171		8:30 PM	26	
8:45 AM	176		8:45 PM	28	
9:00 AM	128	506	9:00 PM	25	67
9:15 AM	139		9:15 PM	15	
9:30 AM	129		9:30 PM	17	
9:45 AM	110		9:45 PM	10	
10:00 AM	78	370	10:00 PM	12	39
10:15 AM	107		10:15 PM	9	
10:30 AM	96		10:30 PM	6	
10:45 AM	89		10:45 PM	12	
11:00 AM	114	423	11:00 PM	7	10
11:15 AM	111		11:15 PM	1	
11:30 AM	93		11:30 PM	0	
11:45 AM	105		11:45 PM	2	

	S/B
24 Hour Volume	7472

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	S/B	S/B
Count	4093	3379
Peak Hour	6:45 AM	12:00 PM
Volume	857	457
Factor	0.93	0.98

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD NB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/20/2012
Tuesday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	7	22	12:00 PM	101	461
12:15 AM	8		12:15 PM	124	
12:30 AM	4		12:30 PM	128	
12:45 AM	3		12:45 PM	108	
1:00 AM	5	11	1:00 PM	106	479
1:15 AM	2		1:15 PM	91	
1:30 AM	2		1:30 PM	146	
1:45 AM	2		1:45 PM	136	
2:00 AM	1	5	2:00 PM	135	552
2:15 AM	0		2:15 PM	130	
2:30 AM	1		2:30 PM	143	
2:45 AM	3		2:45 PM	144	
3:00 AM	7	20	3:00 PM	183	697
3:15 AM	2		3:15 PM	142	
3:30 AM	6		3:30 PM	206	
3:45 AM	5		3:45 PM	166	
4:00 AM	4	21	4:00 PM	181	787
4:15 AM	5		4:15 PM	182	
4:30 AM	6		4:30 PM	222	
4:45 AM	6		4:45 PM	202	
5:00 AM	7	64	5:00 PM	224	809
5:15 AM	6		5:15 PM	218	
5:30 AM	23		5:30 PM	181	
5:45 AM	28		5:45 PM	186	
6:00 AM	14	108	6:00 PM	175	622
6:15 AM	23		6:15 PM	162	
6:30 AM	31		6:30 PM	155	
6:45 AM	40		6:45 PM	130	
7:00 AM	43	210	7:00 PM	111	400
7:15 AM	47		7:15 PM	128	
7:30 AM	53		7:30 PM	82	
7:45 AM	67		7:45 PM	79	
8:00 AM	48	196	8:00 PM	92	256
8:15 AM	54		8:15 PM	68	
8:30 AM	44		8:30 PM	41	
8:45 AM	50		8:45 PM	55	
9:00 AM	50	227	9:00 PM	45	162
9:15 AM	53		9:15 PM	47	
9:30 AM	60		9:30 PM	37	
9:45 AM	64		9:45 PM	33	
10:00 AM	66	291	10:00 PM	33	81
10:15 AM	75		10:15 PM	21	
10:30 AM	69		10:30 PM	9	
10:45 AM	81		10:45 PM	18	
11:00 AM	83	366	11:00 PM	11	48
11:15 AM	87		11:15 PM	10	
11:30 AM	105		11:30 PM	18	
11:45 AM	91		11:45 PM	9	

	N/B
24 Hour Volume	6895

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	1541	5354
Peak Hour	11:00 AM	4:30 PM
Volume	366	866
Factor	0.87	0.97

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD NB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/21/2012
Wednesday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	11	30	12:00 PM	99	474
12:15 AM	7		12:15 PM	106	
12:30 AM	6		12:30 PM	141	
12:45 AM	6		12:45 PM	128	
1:00 AM	3	9	1:00 PM	110	481
1:15 AM	4		1:15 PM	108	
1:30 AM	1		1:30 PM	123	
1:45 AM	1		1:45 PM	140	
2:00 AM	4	12	2:00 PM	138	556
2:15 AM	2		2:15 PM	120	
2:30 AM	2		2:30 PM	153	
2:45 AM	4		2:45 PM	145	
3:00 AM	6	10	3:00 PM	144	657
3:15 AM	0		3:15 PM	132	
3:30 AM	1		3:30 PM	201	
3:45 AM	3		3:45 PM	180	
4:00 AM	4	25	4:00 PM	197	836
4:15 AM	6		4:15 PM	200	
4:30 AM	3		4:30 PM	228	
4:45 AM	12		4:45 PM	211	
5:00 AM	9	55	5:00 PM	228	827
5:15 AM	8		5:15 PM	185	
5:30 AM	14		5:30 PM	222	
5:45 AM	24		5:45 PM	192	
6:00 AM	26	116	6:00 PM	187	632
6:15 AM	18		6:15 PM	148	
6:30 AM	30		6:30 PM	170	
6:45 AM	42		6:45 PM	127	
7:00 AM	49	209	7:00 PM	118	390
7:15 AM	39		7:15 PM	108	
7:30 AM	64		7:30 PM	89	
7:45 AM	57		7:45 PM	75	
8:00 AM	64	225	8:00 PM	88	316
8:15 AM	42		8:15 PM	74	
8:30 AM	65		8:30 PM	89	
8:45 AM	54		8:45 PM	65	
9:00 AM	48	252	9:00 PM	47	171
9:15 AM	60		9:15 PM	64	
9:30 AM	65		9:30 PM	29	
9:45 AM	79		9:45 PM	31	
10:00 AM	71	293	10:00 PM	38	82
10:15 AM	74		10:15 PM	14	
10:30 AM	68		10:30 PM	18	
10:45 AM	80		10:45 PM	12	
11:00 AM	86	406	11:00 PM	16	41
11:15 AM	100		11:15 PM	9	
11:30 AM	110		11:30 PM	11	
11:45 AM	110		11:45 PM	5	

	N/B
24 Hour Volume	7105

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	1642	5463
Peak Hour	11:00 AM	4:15 PM
Volume	406	867
Factor	0.92	0.95

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD NB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/22/2012
Thursday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	13	28	12:00 PM	129	508
12:15 AM	5		12:15 PM	128	
12:30 AM	3		12:30 PM	124	
12:45 AM	7		12:45 PM	127	
1:00 AM	10	20	1:00 PM	148	570
1:15 AM	5		1:15 PM	121	
1:30 AM	3		1:30 PM	154	
1:45 AM	2		1:45 PM	147	
2:00 AM	5	12	2:00 PM	160	601
2:15 AM	3		2:15 PM	129	
2:30 AM	3		2:30 PM	172	
2:45 AM	1		2:45 PM	140	
3:00 AM	6	24	3:00 PM	163	684
3:15 AM	4		3:15 PM	162	
3:30 AM	8		3:30 PM	207	
3:45 AM	6		3:45 PM	152	
4:00 AM	3	19	4:00 PM	190	807
4:15 AM	3		4:15 PM	210	
4:30 AM	4		4:30 PM	213	
4:45 AM	9		4:45 PM	194	
5:00 AM	7	48	5:00 PM	202	770
5:15 AM	7		5:15 PM	197	
5:30 AM	17		5:30 PM	185	
5:45 AM	17		5:45 PM	186	
6:00 AM	18	124	6:00 PM	195	650
6:15 AM	25		6:15 PM	176	
6:30 AM	43		6:30 PM	156	
6:45 AM	38		6:45 PM	123	
7:00 AM	49	177	7:00 PM	127	442
7:15 AM	31		7:15 PM	111	
7:30 AM	44		7:30 PM	94	
7:45 AM	53		7:45 PM	110	
8:00 AM	47	200	8:00 PM	69	254
8:15 AM	36		8:15 PM	80	
8:30 AM	53		8:30 PM	66	
8:45 AM	64		8:45 PM	39	
9:00 AM	57	254	9:00 PM	59	194
9:15 AM	61		9:15 PM	55	
9:30 AM	61		9:30 PM	47	
9:45 AM	75		9:45 PM	33	
10:00 AM	77	363	10:00 PM	26	71
10:15 AM	105		10:15 PM	22	
10:30 AM	92		10:30 PM	10	
10:45 AM	89		10:45 PM	13	
11:00 AM	104	409	11:00 PM	15	40
11:15 AM	93		11:15 PM	11	
11:30 AM	103		11:30 PM	5	
11:45 AM	109		11:45 PM	9	

	N/B
24 Hour Volume	7269

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	1678	5591
Peak Hour	11:00 AM	4:15 PM
Volume	409	819
Factor	0.94	0.96

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD NB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/23/2012
Friday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	14	31	12:00 PM	114	584
12:15 AM	8		12:15 PM	165	
12:30 AM	5		12:30 PM	151	
12:45 AM	4		12:45 PM	154	
1:00 AM	8	17	1:00 PM	132	560
1:15 AM	2		1:15 PM	148	
1:30 AM	4		1:30 PM	146	
1:45 AM	3		1:45 PM	134	
2:00 AM	0	68	2:00 PM	177	626
2:15 AM	4		2:15 PM	152	
2:30 AM	37		2:30 PM	151	
2:45 AM	27		2:45 PM	146	
3:00 AM	3	17	3:00 PM	190	723
3:15 AM	6		3:15 PM	172	
3:30 AM	3		3:30 PM	205	
3:45 AM	5		3:45 PM	156	
4:00 AM	3	25	4:00 PM	171	787
4:15 AM	9		4:15 PM	190	
4:30 AM	5		4:30 PM	225	
4:45 AM	8		4:45 PM	201	
5:00 AM	5	64	5:00 PM	199	750
5:15 AM	12		5:15 PM	197	
5:30 AM	24		5:30 PM	178	
5:45 AM	23		5:45 PM	176	
6:00 AM	14	105	6:00 PM	153	592
6:15 AM	23		6:15 PM	173	
6:30 AM	36		6:30 PM	144	
6:45 AM	32		6:45 PM	122	
7:00 AM	42	186	7:00 PM	123	414
7:15 AM	51		7:15 PM	114	
7:30 AM	55		7:30 PM	94	
7:45 AM	38		7:45 PM	83	
8:00 AM	55	221	8:00 PM	86	292
8:15 AM	45		8:15 PM	77	
8:30 AM	54		8:30 PM	78	
8:45 AM	67		8:45 PM	51	
9:00 AM	61	297	9:00 PM	50	214
9:15 AM	51		9:15 PM	67	
9:30 AM	103		9:30 PM	49	
9:45 AM	82		9:45 PM	48	
10:00 AM	85	386	10:00 PM	50	157
10:15 AM	97		10:15 PM	48	
10:30 AM	107		10:30 PM	34	
10:45 AM	97		10:45 PM	25	
11:00 AM	124	467	11:00 PM	46	99
11:15 AM	111		11:15 PM	20	
11:30 AM	105		11:30 PM	19	
11:45 AM	127		11:45 PM	14	

	N/B
24 Hour Volume	7682

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	1884	5798
Peak Hour	11:00 AM	4:30 PM
Volume	467	822
Factor	0.92	0.91

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION:	SNO-WOOD RD NB SW/O 240 ST SE	Site:	20050-0.45
WEATHER:	7 MIXED	Date:	3/24/2012
CLIENT:	BLOODGOOD-MONITOR		Saturday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	25	75	12:00 PM	118	538
12:15 AM	27		12:15 PM	170	
12:30 AM	12		12:30 PM	118	
12:45 AM	11		12:45 PM	132	
1:00 AM	14	47	1:00 PM	141	516
1:15 AM	12		1:15 PM	118	
1:30 AM	12		1:30 PM	120	
1:45 AM	9		1:45 PM	137	
2:00 AM	5	11	2:00 PM	140	556
2:15 AM	2		2:15 PM	135	
2:30 AM	1		2:30 PM	130	
2:45 AM	3		2:45 PM	151	
3:00 AM	2	13	3:00 PM	127	507
3:15 AM	4		3:15 PM	140	
3:30 AM	5		3:30 PM	113	
3:45 AM	2		3:45 PM	127	
4:00 AM	6	11	4:00 PM	107	455
4:15 AM	1		4:15 PM	119	
4:30 AM	2		4:30 PM	120	
4:45 AM	2		4:45 PM	109	
5:00 AM	5	27	5:00 PM	116	442
5:15 AM	7		5:15 PM	107	
5:30 AM	4		5:30 PM	112	
5:45 AM	11		5:45 PM	107	
6:00 AM	7	46	6:00 PM	119	397
6:15 AM	10		6:15 PM	88	
6:30 AM	13		6:30 PM	100	
6:45 AM	16		6:45 PM	90	
7:00 AM	19	88	7:00 PM	93	304
7:15 AM	17		7:15 PM	67	
7:30 AM	18		7:30 PM	79	
7:45 AM	34		7:45 PM	65	
8:00 AM	43	167	8:00 PM	58	212
8:15 AM	18		8:15 PM	53	
8:30 AM	46		8:30 PM	46	
8:45 AM	60		8:45 PM	55	
9:00 AM	49	229	9:00 PM	62	214
9:15 AM	62		9:15 PM	61	
9:30 AM	58		9:30 PM	52	
9:45 AM	60		9:45 PM	39	
10:00 AM	93	397	10:00 PM	42	127
10:15 AM	98		10:15 PM	22	
10:30 AM	106		10:30 PM	46	
10:45 AM	100		10:45 PM	17	
11:00 AM	102	416	11:00 PM	25	84
11:15 AM	101		11:15 PM	20	
11:30 AM	108		11:30 PM	20	
11:45 AM	105		11:45 PM	19	

	N/B
24 Hour Volume	5879

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	1527	4352
Peak Hour	11:00 AM	12:15 PM
Volume	416	561
Factor	0.96	0.83

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD NB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/25/2012
Sunday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	30	69	12:00 PM	128	457
12:15 AM	21		12:15 PM	109	
12:30 AM	8		12:30 PM	105	
12:45 AM	10		12:45 PM	115	
1:00 AM	12	27	1:00 PM	119	489
1:15 AM	6		1:15 PM	134	
1:30 AM	4		1:30 PM	112	
1:45 AM	5		1:45 PM	124	
2:00 AM	4	15	2:00 PM	114	441
2:15 AM	4		2:15 PM	96	
2:30 AM	3		2:30 PM	123	
2:45 AM	4		2:45 PM	108	
3:00 AM	3	9	3:00 PM	114	461
3:15 AM	1		3:15 PM	112	
3:30 AM	4		3:30 PM	120	
3:45 AM	1		3:45 PM	115	
4:00 AM	3	6	4:00 PM	124	426
4:15 AM	0		4:15 PM	108	
4:30 AM	2		4:30 PM	100	
4:45 AM	1		4:45 PM	94	
5:00 AM	3	15	5:00 PM	107	405
5:15 AM	7		5:15 PM	111	
5:30 AM	3		5:30 PM	100	
5:45 AM	2		5:45 PM	87	
6:00 AM	2	12	6:00 PM	91	293
6:15 AM	2		6:15 PM	73	
6:30 AM	3		6:30 PM	73	
6:45 AM	5		6:45 PM	56	
7:00 AM	8	49	7:00 PM	73	242
7:15 AM	12		7:15 PM	62	
7:30 AM	9		7:30 PM	54	
7:45 AM	20		7:45 PM	53	
8:00 AM	12	84	8:00 PM	33	133
8:15 AM	20		8:15 PM	36	
8:30 AM	26		8:30 PM	32	
8:45 AM	26		8:45 PM	32	
9:00 AM	30	161	9:00 PM	33	109
9:15 AM	38		9:15 PM	19	
9:30 AM	41		9:30 PM	29	
9:45 AM	52		9:45 PM	28	
10:00 AM	58	257	10:00 PM	14	51
10:15 AM	57		10:15 PM	14	
10:30 AM	77		10:30 PM	18	
10:45 AM	65		10:45 PM	5	
11:00 AM	78	363	11:00 PM	9	30
11:15 AM	101		11:15 PM	8	
11:30 AM	91		11:30 PM	6	
11:45 AM	93		11:45 PM	7	

	N/B
24 Hour Volume	4604

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	1067	3537
Peak Hour	11:00 AM	1:00 PM
Volume	363	489
Factor	0.90	0.91

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: SNO-WOOD RD NB SW/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD-MONITOR

Site: 20050-0.45
Date: 3/26/2012
Monday

Daily Volume, per Channel

Channel: N/B

Interval Begin			Interval Begin		
12:00 AM	6	22	12:00 PM	103	422
12:15 AM	6		12:15 PM	106	
12:30 AM	5		12:30 PM	107	
12:45 AM	5		12:45 PM	106	
1:00 AM	6	11	1:00 PM	134	510
1:15 AM	1		1:15 PM	106	
1:30 AM	2		1:30 PM	135	
1:45 AM	2		1:45 PM	135	
2:00 AM	0	2	2:00 PM	151	556
2:15 AM	0		2:15 PM	114	
2:30 AM	1		2:30 PM	143	
2:45 AM	1		2:45 PM	148	
3:00 AM	3	9	3:00 PM	172	694
3:15 AM	4		3:15 PM	151	
3:30 AM	2		3:30 PM	209	
3:45 AM	0		3:45 PM	162	
4:00 AM	2	17	4:00 PM	176	791
4:15 AM	2		4:15 PM	212	
4:30 AM	2		4:30 PM	203	
4:45 AM	11		4:45 PM	200	
5:00 AM	11	61	5:00 PM	237	804
5:15 AM	6		5:15 PM	177	
5:30 AM	17		5:30 PM	212	
5:45 AM	27		5:45 PM	178	
6:00 AM	15	102	6:00 PM	156	596
6:15 AM	18		6:15 PM	183	
6:30 AM	31		6:30 PM	148	
6:45 AM	38		6:45 PM	109	
7:00 AM	51	204	7:00 PM	119	372
7:15 AM	53		7:15 PM	112	
7:30 AM	46		7:30 PM	75	
7:45 AM	54		7:45 PM	66	
8:00 AM	51	204	8:00 PM	95	294
8:15 AM	49		8:15 PM	82	
8:30 AM	53		8:30 PM	61	
8:45 AM	51		8:45 PM	56	
9:00 AM	47	255	9:00 PM	52	159
9:15 AM	66		9:15 PM	37	
9:30 AM	85		9:30 PM	40	
9:45 AM	57		9:45 PM	30	
10:00 AM	70	317	10:00 PM	23	77
10:15 AM	91		10:15 PM	19	
10:30 AM	70		10:30 PM	25	
10:45 AM	86		10:45 PM	10	
11:00 AM	105	406	11:00 PM	25	47
11:15 AM	92		11:15 PM	5	
11:30 AM	94		11:30 PM	7	
11:45 AM	115		11:45 PM	10	

	N/B
24 Hour Volume	6932

	12:00 AM - 12:00 PM	**12:00 PM - 12:00 AM**
	N/B	N/B
Count	1610	5322
Peak Hour	11:00 AM	4:15 PM
Volume	406	852
Factor	0.88	0.90

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/20/2012
Tuesday

24 Hour Speed
Channel: W/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	3	0	0	0	1	0	2	0	0	0	0	0	0	0
1:00 AM	2	0	0	0	0	1	1	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	2	0	0	0	0	1	1	0	0	0	0	0	0	0
4:00 AM	12	0	0	1	1	5	5	0	0	0	0	0	0	0
5:00 AM	37	1	1	0	10	16	8	1	0	0	0	0	0	0
6:00 AM	109	0	1	3	27	60	18	0	0	0	0	0	0	0
7:00 AM	104	3	1	3	26	55	16	0	0	0	0	0	0	0
8:00 AM	69	0	0	4	15	36	13	1	0	0	0	0	0	0
9:00 AM	69	0	0	2	19	34	13	1	0	0	0	0	0	0
10:00 AM	63	0	0	4	24	25	8	2	0	0	0	0	0	0
11:00 AM	64	2	0	3	32	21	6	0	0	0	0	0	0	0
12:00 PM	73	1	1	4	27	32	7	0	1	0	0	0	0	0
1:00 PM	70	0	0	6	27	26	11	0	0	0	0	0	0	0
2:00 PM	65	1	0	2	23	26	11	1	1	0	0	0	0	0
3:00 PM	101	1	0	7	29	49	14	1	0	0	0	0	0	0
4:00 PM	96	3	0	7	27	36	20	3	0	0	0	0	0	0
5:00 PM	82	2	0	6	18	39	16	1	0	0	0	0	0	0
6:00 PM	66	1	0	3	20	31	9	1	1	0	0	0	0	0
7:00 PM	55	0	0	3	18	22	11	1	0	0	0	0	0	0
8:00 PM	27	0	0	3	7	12	4	1	0	0	0	0	0	0
9:00 PM	9	0	0	2	2	4	1	0	0	0	0	0	0	0
10:00 PM	8	0	0	0	2	4	2	0	0	0	0	0	0	0
11:00 PM	4	0	0	1	2	0	1	0	0	0	0	0	0	0
Total	1190	15	4	64	357	535	198	14	3	0	0	0	0	0
%		1.3	0.3	5.4	30.0	45.0	16.6	1.2	0.3	0.0	0.0	0.0	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	25.9	27.0	31.0	35.1	36.5

10 mph Pace Speed 25.9 - 35.9
Number in Pace 947 (79.6 %)

Average 30.9 mph
Minimum 5.8 mph
Maximum 46.5 mph

Speeds Exceeded	55 mph	65 mph
	0.0 %	0.0 %
Count	0	0

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/21/2012
Wednesday

24 Hour Speed
Channel: W/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0
1:00 AM	3	0	0	1	0	1	1	0	0	0	0	0	0	0
2:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0
3:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0
4:00 AM	9	0	0	0	1	5	2	0	1	0	0	0	0	0
5:00 AM	32	0	0	1	7	12	10	0	2	0	0	0	0	0
6:00 AM	103	1	1	2	28	53	14	3	1	0	0	0	0	0
7:00 AM	123	0	2	2	36	59	23	1	0	0	0	0	0	0
8:00 AM	83	0	0	2	18	38	19	4	2	0	0	0	0	0
9:00 AM	62	0	0	2	15	27	15	2	1	0	0	0	0	0
10:00 AM	70	0	0	2	21	33	12	1	0	1	0	0	0	0
11:00 AM	76	0	0	6	28	35	7	0	0	0	0	0	0	0
12:00 PM	70	0	0	1	15	37	17	0	0	0	0	0	0	0
1:00 PM	55	0	1	3	18	23	8	2	0	0	0	0	0	0
2:00 PM	71	0	0	5	23	32	10	1	0	0	0	0	0	0
3:00 PM	97	2	0	5	24	42	20	3	1	0	0	0	0	0
4:00 PM	79	2	1	4	24	32	12	4	0	0	0	0	0	0
5:00 PM	86	2	1	3	23	39	16	2	0	0	0	0	0	0
6:00 PM	65	0	1	2	17	30	12	3	0	0	0	0	0	0
7:00 PM	62	0	1	6	20	24	9	1	1	0	0	0	0	0
8:00 PM	59	0	0	4	23	26	4	2	0	0	0	0	0	0
9:00 PM	16	0	0	3	3	6	2	2	0	0	0	0	0	0
10:00 PM	11	0	0	0	3	5	2	1	0	0	0	0	0	0
11:00 PM	3	0	0	1	0	1	0	1	0	0	0	0	0	0
Total	1238	7	8	55	349	560	216	33	9	1	0	0	0	0
%		0.6	0.6	4.4	28.2	45.2	17.4	2.7	0.7	0.1	0.0	0.0	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	26.6	27.4	31.6	35.8	37.2

10 mph Pace Speed 26.6 - 36.6
Number in Pace 990 (80.0 %)

Average 31.5 mph
Minimum 5.6 mph
Maximum 50.3 mph

Speeds Exceeded	55 mph	65 mph
	0.0 %	0.0 %
Count	0	0

M - 31

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/22/2012
Thursday

24 Hour Speed
Channel: W/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	2	0	0	1	1	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	4	0	0	0	0	2	2	0	0	0	0	0	0	0
3:00 AM	4	0	0	0	0	2	2	0	0	0	0	0	0	0
4:00 AM	10	0	0	0	3	4	3	0	0	0	0	0	0	0
5:00 AM	29	0	0	0	6	15	7	0	1	0	0	0	0	0
6:00 AM	90	1	0	3	23	47	14	2	0	0	0	0	0	0
7:00 AM	93	2	0	3	38	38	12	0	0	0	0	0	0	0
8:00 AM	75	0	1	3	20	36	15	0	0	0	0	0	0	0
9:00 AM	49	0	0	2	20	19	7	1	0	0	0	0	0	0
10:00 AM	66	0	0	5	19	33	8	1	0	0	0	0	0	0
11:00 AM	72	0	0	3	21	39	9	0	0	0	0	0	0	0
12:00 PM	74	0	1	2	23	38	10	0	0	0	0	0	0	0
1:00 PM	63	0	1	4	17	33	8	0	0	0	0	0	0	0
2:00 PM	63	0	0	5	17	31	9	1	0	0	0	0	0	0
3:00 PM	92	0	0	2	24	46	17	2	0	0	0	1	0	0
4:00 PM	100	2	1	3	32	40	19	3	0	0	0	0	0	0
5:00 PM	88	1	0	3	24	46	12	2	0	0	0	0	0	0
6:00 PM	88	1	1	6	28	36	15	1	0	0	0	0	0	0
7:00 PM	68	0	0	3	18	35	10	1	0	0	1	0	0	0
8:00 PM	27	0	0	2	8	10	3	3	1	0	0	0	0	0
9:00 PM	27	0	0	1	9	10	5	2	0	0	0	0	0	0
10:00 PM	7	0	0	0	0	6	1	0	0	0	0	0	0	0
11:00 PM	2	0	0	0	1	1	0	0	0	0	0	0	0	0
Total	1193	7	5	51	352	567	188	19	2	0	1	1	0	0
%		0.6	0.4	4.3	29.5	47.5	15.8	1.6	0.2	0.0	0.1	0.1	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	26.2	27.0	31.0	35.1	36.5

10 mph Pace Speed 25.9 - 35.9
Number in Pace 980 (82.1 %)

Average 31.3 mph
Minimum 6.6 mph
Maximum 60.1 mph

Speeds Exceeded	55 mph	65 mph
	0.2 %	0.0 %
Count	2	0

M - 32

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/23/2012
Friday

24 Hour Speed
Channel: W/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0
1:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0
2:00 AM	6	0	0	0	3	1	2	0	0	0	0	0	0	0
3:00 AM	3	0	0	0	0	2	0	1	0	0	0	0	0	0
4:00 AM	8	0	0	0	2	2	4	0	0	0	0	0	0	0
5:00 AM	32	0	0	3	7	14	7	1	0	0	0	0	0	0
6:00 AM	85	1	0	1	17	47	19	0	0	0	0	0	0	0
7:00 AM	114	3	0	4	28	52	23	3	1	0	0	0	0	0
8:00 AM	94	2	0	5	25	44	15	2	1	0	0	0	0	0
9:00 AM	80	0	1	2	32	35	9	1	0	0	0	0	0	0
10:00 AM	87	0	0	3	34	41	9	0	0	0	0	0	0	0
11:00 AM	82	0	0	3	24	42	12	1	0	0	0	0	0	0
12:00 PM	90	0	0	3	32	43	10	2	0	0	0	0	0	0
1:00 PM	86	0	0	8	26	36	14	2	0	0	0	0	0	0
2:00 PM	91	1	2	0	24	42	21	1	0	0	0	0	0	0
3:00 PM	110	0	0	4	33	54	18	0	0	1	0	0	0	0
4:00 PM	107	1	1	1	24	55	21	4	0	0	0	0	0	0
5:00 PM	95	0	0	0	31	48	13	2	0	1	0	0	0	0
6:00 PM	72	0	0	1	17	36	17	0	1	0	0	0	0	0
7:00 PM	53	1	0	4	23	12	10	2	1	0	0	0	0	0
8:00 PM	26	1	0	1	10	11	3	0	0	0	0	0	0	0
9:00 PM	18	0	0	1	4	9	2	2	0	0	0	0	0	0
10:00 PM	15	0	0	0	4	8	3	0	0	0	0	0	0	0
11:00 PM	11	0	0	0	2	5	3	1	0	0	0	0	0	0
Total	1367	10	4	44	402	641	235	25	4	2	0	0	0	0
%		0.7	0.3	3.2	29.4	46.9	17.2	1.8	0.3	0.1	0.0	0.0	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	26.6	27.8	31.6	35.8	36.5

10 mph Pace Speed 26.6 - 36.6
Number in Pace 1136 (83.1 %)

Average 31.5 mph
Minimum 6.5 mph
Maximum 51.7 mph

Speeds Exceeded	55 mph	65 mph
	0.0 %	0.0 %
Count	0	0

M - 33

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/24/2012
Saturday

24 Hour Speed
Channel: W/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	9	0	0	2	1	3	2	1	0	0	0	0	0	0
1:00 AM	2	0	0	0	0	2	0	0	0	0	0	0	0	0
2:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0
3:00 AM	3	0	0	0	1	0	1	1	0	0	0	0	0	0
4:00 AM	3	0	0	0	1	0	2	0	0	0	0	0	0	0
5:00 AM	11	0	0	0	4	1	4	0	1	1	0	0	0	0
6:00 AM	15	0	0	0	5	8	1	1	0	0	0	0	0	0
7:00 AM	31	0	0	2	4	13	12	0	0	0	0	0	0	0
8:00 AM	50	2	0	3	14	20	9	0	1	1	0	0	0	0
9:00 AM	89	1	1	1	21	44	17	4	0	0	0	0	0	0
10:00 AM	88	2	0	2	26	39	17	1	0	0	0	1	0	0
11:00 AM	93	0	0	2	15	57	13	5	1	0	0	0	0	0
12:00 PM	78	0	0	1	20	39	16	1	0	1	0	0	0	0
1:00 PM	68	2	1	1	18	33	11	0	1	1	0	0	0	0
2:00 PM	78	0	1	7	21	30	16	3	0	0	0	0	0	0
3:00 PM	57	0	1	4	18	24	7	3	0	0	0	0	0	0
4:00 PM	89	0	0	4	15	45	21	4	0	0	0	0	0	0
5:00 PM	86	1	0	3	19	43	19	1	0	0	0	0	0	0
6:00 PM	50	1	1	0	9	29	10	0	0	0	0	0	0	0
7:00 PM	25	0	1	1	9	10	4	0	0	0	0	0	0	0
8:00 PM	26	0	0	2	5	7	10	2	0	0	0	0	0	0
9:00 PM	30	0	0	0	7	15	7	1	0	0	0	0	0	0
10:00 PM	15	0	0	1	5	6	3	0	0	0	0	0	0	0
11:00 PM	13	1	0	2	2	7	0	0	1	0	0	0	0	0
Total	1010	10	6	38	240	476	202	28	5	4	0	1	0	0
%		1.0	0.6	3.8	23.8	47.1	20.0	2.8	0.5	0.4	0.0	0.1	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	26.6	27.8	31.6	35.8	37.2

10 mph Pace Speed 26.6 - 36.6
Number in Pace 809 (80.1 %)

Average 31.9 mph
Minimum 11.7 mph
Maximum 62.1 mph

Speeds Exceeded	55 mph	65 mph
	0.1 %	0.0 %
Count	1	0

M - 34

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/25/2012
Sunday

24 Hour Speed
Channel: W/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	7	0	0	0	2	1	4	0	0	0	0	0	0	0
1:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0
2:00 AM	5	0	0	0	2	1	1	1	0	0	0	0	0	0
3:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0
4:00 AM	5	0	0	0	0	1	3	1	0	0	0	0	0	0
5:00 AM	3	0	0	0	0	1	1	0	0	1	0	0	0	0
6:00 AM	9	0	0	0	1	5	3	0	0	0	0	0	0	0
7:00 AM	19	1	0	2	3	8	5	0	0	0	0	0	0	0
8:00 AM	37	0	0	1	8	22	4	1	1	0	0	0	0	0
9:00 AM	71	0	0	4	13	36	15	2	1	0	0	0	0	0
10:00 AM	84	0	0	2	30	39	11	2	0	0	0	0	0	0
11:00 AM	95	0	1	2	29	44	16	3	0	0	0	0	0	0
12:00 PM	114	0	0	4	37	50	22	1	0	0	0	0	0	0
1:00 PM	86	0	0	7	25	35	17	2	0	0	0	0	0	0
2:00 PM	73	0	0	4	20	35	11	2	0	0	0	0	0	1
3:00 PM	105	0	0	4	21	63	15	2	0	0	0	0	0	0
4:00 PM	74	1	2	6	15	37	11	2	0	0	0	0	0	0
5:00 PM	52	0	0	1	12	26	11	2	0	0	0	0	0	0
6:00 PM	43	0	1	2	14	19	7	0	0	0	0	0	0	0
7:00 PM	46	1	0	1	11	22	7	4	0	0	0	0	0	0
8:00 PM	30	0	0	1	10	9	9	1	0	0	0	0	0	0
9:00 PM	17	0	0	1	4	6	4	1	1	0	0	0	0	0
10:00 PM	7	0	0	2	1	2	2	0	0	0	0	0	0	0
11:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0
Total	987	3	4	44	262	462	180	27	3	1	0	0	0	1
%		0.3	0.4	4.5	26.5	46.8	18.2	2.7	0.3	0.1	0.0	0.0	0.0	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	26.6	27.8	31.6	35.8	37.2

10 mph Pace Speed 26.6 - 36.6
Number in Pace 785 (79.5 %)

Average 31.7 mph
Minimum 8.0 mph
Maximum 88.7 mph

Speeds Exceeded	55 mph	65 mph
	0.1 %	0.1 %
Count	1	1

M - 35

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/26/2012
Monday

24 Hour Speed
Channel: W/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0
1:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0
2:00 AM	2	0	0	0	0	1	1	0	0	0	0	0	0	0
3:00 AM	2	0	0	0	1	0	1	0	0	0	0	0	0	0
4:00 AM	10	0	0	1	1	3	4	0	0	1	0	0	0	0
5:00 AM	29	0	0	0	10	12	5	2	0	0	0	0	0	0
6:00 AM	97	1	0	2	31	38	23	1	1	0	0	0	0	0
7:00 AM	115	3	0	4	29	59	17	3	0	0	0	0	0	0
8:00 AM	88	0	1	2	24	50	11	0	0	0	0	0	0	0
9:00 AM	63	1	0	6	16	28	10	2	0	0	0	0	0	0
10:00 AM	86	0	0	7	28	33	14	4	0	0	0	0	0	0
11:00 AM	85	1	0	2	24	44	10	3	0	0	0	0	0	1
12:00 PM	67	0	0	3	26	30	8	0	0	0	0	0	0	0
1:00 PM	55	0	0	3	19	25	6	2	0	0	0	0	0	0
2:00 PM	78	0	0	2	17	46	11	2	0	0	0	0	0	0
3:00 PM	89	0	0	5	22	38	21	2	1	0	0	0	0	0
4:00 PM	112	1	0	1	31	62	17	0	0	0	0	0	0	0
5:00 PM	74	0	1	2	13	38	19	1	0	0	0	0	0	0
6:00 PM	68	2	0	1	20	37	7	0	1	0	0	0	0	0
7:00 PM	58	1	0	2	13	33	8	0	1	0	0	0	0	0
8:00 PM	32	0	0	2	12	12	5	1	0	0	0	0	0	0
9:00 PM	27	1	0	3	7	14	2	0	0	0	0	0	0	0
10:00 PM	10	0	1	1	1	4	2	1	0	0	0	0	0	0
11:00 PM	3	0	0	0	1	1	0	1	0	0	0	0	0	0
Total	1252	11	3	49	348	608	202	25	4	1	0	0	0	1
%		0.9	0.2	3.9	27.8	48.6	16.1	2.0	0.3	0.1	0.0	0.0	0.0	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	27.0	27.8	31.6	35.1	36.5

10 mph Pace Speed 26.6 - 36.6
Number in Pace 1032 (82.4 %)

Average 31.5 mph
Minimum 5.6 mph
Maximum 93.1 mph

Speeds Exceeded	55 mph	65 mph
	0.1 %	0.1 %
Count	1	1

M - 36

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/20/2012
Tuesday

24 Hour Speed
Channel: E/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	5	0	0	0	0	4	1	0	0	0	0	0	0	0
1:00 AM	2	0	0	0	1	1	0	0	0	0	0	0	0	0
2:00 AM	4	0	0	0	2	1	1	0	0	0	0	0	0	0
3:00 AM	2	0	0	0	1	1	0	0	0	0	0	0	0	0
4:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0
5:00 AM	8	0	0	1	1	4	2	0	0	0	0	0	0	0
6:00 AM	38	0	0	0	10	19	9	0	0	0	0	0	0	0
7:00 AM	79	1	0	0	10	42	23	3	0	0	0	0	0	0
8:00 AM	83	0	1	3	17	35	20	7	0	0	0	0	0	0
9:00 AM	44	0	0	2	10	26	6	0	0	0	0	0	0	0
10:00 AM	55	0	1	2	14	27	10	1	0	0	0	0	0	0
11:00 AM	99	0	0	0	20	60	17	2	0	0	0	0	0	0
12:00 PM	94	0	0	5	25	47	17	0	0	0	0	0	0	0
1:00 PM	92	0	0	0	30	47	12	3	0	0	0	0	0	0
2:00 PM	122	0	0	2	31	59	27	3	0	0	0	0	0	0
3:00 PM	141	1	0	3	41	66	27	3	0	0	0	0	0	0
4:00 PM	168	1	1	7	40	86	29	3	1	0	0	0	0	0
5:00 PM	168	1	3	7	34	84	36	3	0	0	0	0	0	0
6:00 PM	125	0	0	1	23	64	32	3	1	1	0	0	0	0
7:00 PM	91	1	0	4	16	45	22	3	0	0	0	0	0	0
8:00 PM	68	0	0	3	19	27	14	4	1	0	0	0	0	0
9:00 PM	32	0	0	1	4	15	11	1	0	0	0	0	0	0
10:00 PM	10	0	0	0	2	1	4	3	0	0	0	0	0	0
11:00 PM	12	0	0	0	1	8	3	0	0	0	0	0	0	0
Total	1543	5	6	41	352	770	323	42	3	1	0	0	0	0
%		0.3	0.4	2.7	22.8	49.9	20.9	2.7	0.2	0.1	0.0	0.0	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	27.4	28.2	32.1	35.8	37.2

10 mph Pace Speed 27.4 - 37.4
Number in Pace 1271 (82.4 %)

Average 32.1 mph
Minimum 10.0 mph
Maximum 54.8 mph

Speeds Exceeded	55 mph	65 mph
	0.0 %	0.0 %
Count	0	0

M - 37

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/21/2012
Wednesday

24 Hour Speed
Channel: E/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	7	0	0	0	3	3	0	1	0	0	0	0	0	0
1:00 AM	4	0	0	0	0	0	3	1	0	0	0	0	0	0
2:00 AM	5	0	0	0	1	2	0	2	0	0	0	0	0	0
3:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0
4:00 AM	3	0	0	0	0	1	1	1	0	0	0	0	0	0
5:00 AM	11	0	0	0	2	2	5	2	0	0	0	0	0	0
6:00 AM	38	0	0	2	7	16	10	3	0	0	0	0	0	0
7:00 AM	85	1	1	6	20	37	18	2	0	0	0	0	0	0
8:00 AM	85	0	0	0	10	35	35	4	1	0	0	0	0	0
9:00 AM	50	0	1	0	11	19	17	2	0	0	0	0	0	0
10:00 AM	46	0	0	0	8	21	16	0	1	0	0	0	0	0
11:00 AM	90	0	0	1	20	47	21	1	0	0	0	0	0	0
12:00 PM	98	0	0	5	32	39	19	3	0	0	0	0	0	0
1:00 PM	108	0	1	6	32	47	16	5	1	0	0	0	0	0
2:00 PM	131	0	0	9	29	78	15	0	0	0	0	0	0	0
3:00 PM	137	0	0	4	35	76	20	2	0	0	0	0	0	0
4:00 PM	175	2	0	4	41	92	31	5	0	0	0	0	0	0
5:00 PM	176	0	1	3	21	104	41	6	0	0	0	0	0	0
6:00 PM	159	0	2	6	41	81	29	0	0	0	0	0	0	0
7:00 PM	95	0	0	6	27	41	20	1	0	0	0	0	0	0
8:00 PM	84	0	0	2	20	37	19	5	1	0	0	0	0	0
9:00 PM	45	1	0	0	7	17	17	3	0	0	0	0	0	0
10:00 PM	23	0	0	1	2	15	5	0	0	0	0	0	0	0
11:00 PM	12	0	0	0	2	5	4	1	0	0	0	0	0	0
Total	1668	4	6	55	372	815	362	50	4	0	0	0	0	0
%		0.2	0.4	3.3	22.3	48.9	21.7	3.0	0.2	0.0	0.0	0.0	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	27.4	28.2	32.1	36.5	37.2

10 mph Pace Speed 27.4 - 37.4
Number in Pace 1371 (82.2 %)

Average 32.2 mph
Minimum 6.4 mph
Maximum 45.4 mph

Speeds Exceeded	55 mph	65 mph
	0.0 %	0.0 %
Count	0	0

M - 38

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/22/2012
Thursday

24 Hour Speed
Channel: E/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	4	0	0	0	1	0	2	1	0	0	0	0	0	0
1:00 AM	3	0	0	0	2	0	1	0	0	0	0	0	0	0
2:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0
3:00 AM	1	0	0	0	0	0	0	1	0	0	0	0	0	0
4:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0
5:00 AM	13	0	0	0	3	5	5	0	0	0	0	0	0	0
6:00 AM	29	0	0	2	6	17	4	0	0	0	0	0	0	0
7:00 AM	70	0	2	4	33	24	6	1	0	0	0	0	0	0
8:00 AM	77	0	0	1	21	41	14	0	0	0	0	0	0	0
9:00 AM	46	1	0	2	7	21	11	4	0	0	0	0	0	0
10:00 AM	46	0	0	0	10	26	8	1	1	0	0	0	0	0
11:00 AM	74	0	1	2	18	36	17	0	0	0	0	0	0	0
12:00 PM	97	0	0	2	15	57	20	2	1	0	0	0	0	0
1:00 PM	117	1	0	4	32	63	17	0	0	0	0	0	0	0
2:00 PM	125	1	0	2	38	55	25	4	0	0	0	0	0	0
3:00 PM	146	0	1	9	32	70	33	0	0	0	0	1	0	0
4:00 PM	167	2	2	6	36	92	23	4	1	1	0	0	0	0
5:00 PM	170	2	0	2	35	99	28	4	0	0	0	0	0	0
6:00 PM	156	0	0	3	38	84	28	3	0	0	0	0	0	0
7:00 PM	105	0	1	5	26	52	18	2	1	0	0	0	0	0
8:00 PM	73	0	0	3	17	29	20	3	1	0	0	0	0	0
9:00 PM	45	0	0	3	5	23	14	0	0	0	0	0	0	0
10:00 PM	14	0	0	0	1	5	5	3	0	0	0	0	0	0
11:00 PM	11	0	0	0	2	5	2	2	0	0	0	0	0	0
Total	1591	7	7	50	379	804	302	35	5	1	0	1	0	0
%		0.4	0.4	3.1	23.8	50.5	19.0	2.2	0.3	0.1	0.0	0.1	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	27.0	27.8	32.1	35.8	37.2

10 mph Pace Speed 26.6 - 36.6
Number in Pace 1299 (81.6 %)

Average 31.9 mph
Minimum 5.8 mph
Maximum 60.1 mph

Speeds Exceeded	55 mph	65 mph
	0.1 %	0.0 %
Count	1	0

M - 39

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/23/2012
Friday

24 Hour Speed
Channel: E/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	8	0	0	0	4	2	1	1	0	0	0	0	0	0
1:00 AM	2	0	0	1	1	0	0	0	0	0	0	0	0	0
2:00 AM	5	0	0	0	2	1	2	0	0	0	0	0	0	0
3:00 AM	4	0	0	0	2	1	0	1	0	0	0	0	0	0
4:00 AM	3	0	0	0	1	1	1	0	0	0	0	0	0	0
5:00 AM	9	0	0	1	2	4	1	1	0	0	0	0	0	0
6:00 AM	35	0	0	0	4	16	12	2	1	0	0	0	0	0
7:00 AM	80	3	2	2	14	36	20	2	1	0	0	0	0	0
8:00 AM	72	0	1	1	13	34	21	2	0	0	0	0	0	0
9:00 AM	51	0	0	2	12	19	17	1	0	0	0	0	0	0
10:00 AM	53	0	0	1	9	32	9	2	0	0	0	0	0	0
11:00 AM	100	0	0	1	30	44	25	0	0	0	0	0	0	0
12:00 PM	95	0	0	5	23	45	21	1	0	0	0	0	0	0
1:00 PM	124	0	2	14	22	66	17	3	0	0	0	0	0	0
2:00 PM	138	4	2	5	25	72	27	3	0	0	0	0	0	0
3:00 PM	154	0	0	5	33	70	42	4	0	0	0	0	0	0
4:00 PM	178	1	0	7	43	83	42	2	0	0	0	0	0	0
5:00 PM	150	0	0	1	48	73	27	1	0	0	0	0	0	0
6:00 PM	123	0	0	1	38	57	23	3	1	0	0	0	0	0
7:00 PM	83	1	0	1	29	26	24	2	0	0	0	0	0	0
8:00 PM	58	0	0	0	14	28	11	5	0	0	0	0	0	0
9:00 PM	35	0	0	2	4	16	12	1	0	0	0	0	0	0
10:00 PM	32	0	0	0	6	15	8	3	0	0	0	0	0	0
11:00 PM	33	0	0	0	7	15	6	5	0	0	0	0	0	0
Total	1625	9	7	50	386	756	369	45	3	0	0	0	0	0
%		0.6	0.4	3.1	23.8	46.5	22.7	2.8	0.2	0.0	0.0	0.0	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	27.4	28.2	32.1	36.5	37.2

10 mph Pace Speed 27.4 - 37.4
Number in Pace 1327 (81.7 %)

Average 32.1 mph
Minimum 6.8 mph
Maximum 49.0 mph

Speeds Exceeded	55 mph	65 mph
	0.0 %	0.0 %
Count	0	0

M - 40

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/24/2012
Saturday

24 Hour Speed
Channel: E/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	11	0	0	1	3	4	2	1	0	0	0	0	0	0
1:00 AM	7	0	0	1	2	3	1	0	0	0	0	0	0	0
2:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0
3:00 AM	2	0	0	1	0	1	0	0	0	0	0	0	0	0
4:00 AM	3	0	0	1	0	1	1	0	0	0	0	0	0	0
5:00 AM	4	0	0	0	1	1	2	0	0	0	0	0	0	0
6:00 AM	10	0	0	1	4	5	0	0	0	0	0	0	0	0
7:00 AM	16	0	0	0	5	8	3	0	0	0	0	0	0	0
8:00 AM	28	0	1	2	5	13	5	2	0	0	0	0	0	0
9:00 AM	45	0	0	0	8	23	13	1	0	0	0	0	0	0
10:00 AM	86	0	2	2	20	40	19	1	1	0	0	0	0	1
11:00 AM	85	0	0	1	18	39	23	3	1	0	0	0	0	0
12:00 PM	87	0	0	2	17	46	20	2	0	0	0	0	0	0
1:00 PM	121	0	0	2	28	64	25	2	0	0	0	0	0	0
2:00 PM	130	0	2	5	32	52	37	2	0	0	0	0	0	0
3:00 PM	110	1	1	2	23	57	25	1	0	0	0	0	0	0
4:00 PM	129	0	0	6	31	66	23	3	0	0	0	0	0	0
5:00 PM	107	0	0	4	25	47	26	4	1	0	0	0	0	0
6:00 PM	95	2	4	4	23	42	16	4	0	0	0	0	0	0
7:00 PM	77	0	1	3	9	42	19	3	0	0	0	0	0	0
8:00 PM	30	0	0	0	6	12	10	2	0	0	0	0	0	0
9:00 PM	47	0	0	1	15	24	7	0	0	0	0	0	0	0
10:00 PM	35	0	0	0	5	19	7	4	0	0	0	0	0	0
11:00 PM	23	2	0	0	6	11	3	0	1	0	0	0	0	0
Total	1289	5	11	39	286	621	287	35	4	0	0	0	0	1
%		0.4	0.9	3.0	22.2	48.2	22.3	2.7	0.3	0.0	0.0	0.0	0.0	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	27.0	28.2	32.1	36.5	37.2

10 mph Pace Speed 26.6 - 36.6
Number in Pace 1044 (81.0 %)

Average 32.1 mph
Minimum 9.2 mph
Maximum 74.5 mph

Speeds Exceeded	55 mph	65 mph
	0.1 %	0.1 %
Count	1	1

M - 41

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/25/2012
Sunday

24 Hour Speed
Channel: E/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	13	0	0	1	4	4	3	1	0	0	0	0	0	0
1:00 AM	9	0	0	0	2	2	3	2	0	0	0	0	0	0
2:00 AM	4	0	0	0	0	2	1	0	1	0	0	0	0	0
3:00 AM	1	0	0	0	0	0	0	1	0	0	0	0	0	0
4:00 AM	3	0	0	0	1	2	0	0	0	0	0	0	0	0
5:00 AM	3	0	0	0	1	0	1	1	0	0	0	0	0	0
6:00 AM	4	0	0	0	1	1	2	0	0	0	0	0	0	0
7:00 AM	14	0	0	0	2	10	2	0	0	0	0	0	0	0
8:00 AM	38	0	0	2	11	16	9	0	0	0	0	0	0	0
9:00 AM	43	0	0	0	6	21	14	2	0	0	0	0	0	0
10:00 AM	68	1	0	4	16	33	14	0	0	0	0	0	0	0
11:00 AM	82	0	0	0	29	33	19	1	0	0	0	0	0	0
12:00 PM	93	0	0	3	25	44	21	0	0	0	0	0	0	0
1:00 PM	128	0	1	2	28	71	24	2	0	0	0	0	0	0
2:00 PM	121	1	0	2	29	65	20	2	1	0	0	0	0	1
3:00 PM	105	0	0	3	20	57	22	3	0	0	0	0	0	0
4:00 PM	102	0	1	1	21	51	26	2	0	0	0	0	0	0
5:00 PM	115	0	0	6	26	59	21	3	0	0	0	0	0	0
6:00 PM	99	1	2	2	25	41	23	4	1	0	0	0	0	0
7:00 PM	60	0	0	2	11	29	15	3	0	0	0	0	0	0
8:00 PM	49	0	0	2	11	19	15	2	0	0	0	0	0	0
9:00 PM	38	1	0	2	5	20	6	3	1	0	0	0	0	0
10:00 PM	11	0	0	0	1	7	3	0	0	0	0	0	0	0
11:00 PM	7	0	0	0	0	2	2	2	1	0	0	0	0	0
Total	1210	4	4	32	275	589	266	34	5	0	0	0	0	1
%		0.3	0.3	2.6	22.7	48.7	22.0	2.8	0.4	0.0	0.0	0.0	0.0	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	27.8	28.6	32.1	36.5	37.2

10 mph Pace Speed 27.4 - 37.4
Number in Pace 992 (82.0 %)

Average 32.3 mph
Minimum 12.8 mph
Maximum 98.0 mph

Speeds Exceeded	55 mph	65 mph
	0.1 %	0.1 %
Count	1	1

M - 42

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 240 ST SE W/O 75 AVE SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20040-0.00
Date: 3/26/2012
Monday

24 Hour Speed
Channel: E/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	4	0	0	0	0	3	0	1	0	0	0	0	0	0
1:00 AM	2	0	0	0	0	1	0	1	0	0	0	0	0	0
2:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0
3:00 AM	2	0	1	0	1	0	0	0	0	0	0	0	0	0
4:00 AM	2	0	0	0	0	0	1	1	0	0	0	0	0	0
5:00 AM	10	0	0	0	3	5	2	0	0	0	0	0	0	0
6:00 AM	27	0	0	1	5	11	10	0	0	0	0	0	0	0
7:00 AM	85	1	1	1	27	39	15	1	0	0	0	0	0	0
8:00 AM	85	0	0	1	11	57	13	3	0	0	0	0	0	0
9:00 AM	54	0	1	3	13	25	12	0	0	0	0	0	0	0
10:00 AM	52	1	2	2	7	27	12	1	0	0	0	0	0	0
11:00 AM	86	0	0	3	24	43	12	3	1	0	0	0	0	0
12:00 PM	104	0	0	3	26	47	25	1	2	0	0	0	0	0
1:00 PM	97	1	0	2	17	58	15	3	1	0	0	0	0	0
2:00 PM	122	0	0	3	30	61	27	1	0	0	0	0	0	0
3:00 PM	167	0	0	0	37	93	35	2	0	0	0	0	0	0
4:00 PM	163	0	0	2	45	93	19	4	0	0	0	0	0	0
5:00 PM	193	1	0	6	36	89	55	5	1	0	0	0	0	0
6:00 PM	136	2	0	2	21	81	27	2	1	0	0	0	0	0
7:00 PM	98	1	0	3	18	50	25	1	0	0	0	0	0	0
8:00 PM	66	1	1	0	15	30	17	2	0	0	0	0	0	0
9:00 PM	41	3	0	2	8	17	8	1	2	0	0	0	0	0
10:00 PM	15	0	0	1	2	7	4	1	0	0	0	0	0	0
11:00 PM	10	0	0	0	2	6	2	0	0	0	0	0	0	0
Total	1622	11	6	35	348	844	336	34	8	0	0	0	0	0
%		0.7	0.4	2.2	21.5	52.0	20.7	2.1	0.5	0.0	0.0	0.0	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	27.4	28.6	32.1	36.5	37.2

10 mph Pace Speed 27.4 - 37.4
Number in Pace 1353 (83.4 %)

Average 32.2 mph
Minimum 8.6 mph
Maximum 49.0 mph

Speeds Exceeded	55 mph	65 mph
	0.0 %	0.0 %
Count	0	0

M - 43

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/20/2012
Tuesday

24 Hour Speed
Channel: N/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	3	0	0	0	0	1	1	1	0	0	0	0	0	0
1:00 AM	6	0	0	0	0	2	3	0	1	0	0	0	0	0
2:00 AM	4	0	0	0	0	2	1	0	1	0	0	0	0	0
3:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0
4:00 AM	1	0	0	0	0	0	0	1	0	0	0	0	0	0
5:00 AM	9	0	2	0	0	0	4	2	1	0	0	0	0	0
6:00 AM	21	0	0	0	3	1	6	9	2	0	0	0	0	0
7:00 AM	49	0	0	1	1	8	25	9	5	0	0	0	0	0
8:00 AM	56	0	0	1	0	13	26	12	4	0	0	0	0	0
9:00 AM	45	0	0	0	2	9	16	12	4	1	0	1	0	0
10:00 AM	62	0	0	0	5	7	29	19	1	1	0	0	0	0
11:00 AM	78	0	1	1	2	13	34	19	7	0	0	0	0	1
12:00 PM	110	0	0	0	3	22	38	37	9	1	0	0	0	0
1:00 PM	103	0	1	0	0	14	50	32	5	1	0	0	0	0
2:00 PM	129	0	2	4	0	20	56	39	8	0	0	0	0	0
3:00 PM	196	0	0	1	3	32	105	39	14	1	1	0	0	0
4:00 PM	186	0	0	0	2	35	79	59	10	1	0	0	0	0
5:00 PM	187	0	0	0	3	21	93	59	9	2	0	0	0	0
6:00 PM	164	0	0	0	1	23	75	54	10	1	0	0	0	0
7:00 PM	120	0	0	0	1	14	56	41	8	0	0	0	0	0
8:00 PM	89	0	0	1	2	16	40	22	6	1	1	0	0	0
9:00 PM	45	0	0	0	0	5	22	12	4	2	0	0	0	0
10:00 PM	20	0	0	0	0	2	8	8	2	0	0	0	0	0
11:00 PM	22	0	0	0	0	3	4	8	5	2	0	0	0	0
Total	1706	0	6	9	28	263	772	494	116	14	2	1	0	1
%		0.0	0.4	0.5	1.6	15.4	45.3	29.0	6.8	0.8	0.1	0.1	0.0	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	33.2	34.5	38.8	43.3	44.3

10 mph Pace Speed 34.5 - 44.5
Number in Pace 1330 (78.0 %)

Average 38.6 mph
Minimum 17.6 mph
Maximum 80.9 mph

Speeds Exceeded	55 mph	65 mph
	0.2 %	0.1 %
Count	4	1

M - 44

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/21/2012
Wednesday

24 Hour Speed
Channel: N/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	7	0	0	0	0	0	3	2	1	0	1	0	0	0
1:00 AM	5	0	0	0	0	2	1	2	0	0	0	0	0	0
2:00 AM	3	0	0	0	1	1	0	0	1	0	0	0	0	0
3:00 AM	3	0	0	0	0	0	1	1	0	0	0	1	0	0
4:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0
5:00 AM	9	0	1	1	0	0	2	3	2	0	0	0	0	0
6:00 AM	20	0	0	0	0	3	6	8	1	1	0	1	0	0
7:00 AM	59	0	0	0	3	10	25	14	6	1	0	0	0	0
8:00 AM	55	0	0	0	4	10	26	11	2	2	0	0	0	0
9:00 AM	53	0	0	0	3	14	19	14	3	0	0	0	0	0
10:00 AM	54	0	0	1	2	9	21	16	5	0	0	0	0	0
11:00 AM	82	0	0	0	3	13	36	26	4	0	0	0	0	0
12:00 PM	122	0	0	0	3	15	51	44	8	1	0	0	0	0
1:00 PM	102	0	1	0	8	21	43	23	6	0	0	0	0	0
2:00 PM	128	1	2	6	6	18	52	39	4	0	0	0	0	0
3:00 PM	166	1	1	4	1	21	77	54	7	0	0	0	0	0
4:00 PM	203	0	0	1	6	21	91	69	13	1	1	0	0	0
5:00 PM	220	0	1	0	2	22	108	73	12	2	0	0	0	0
6:00 PM	201	0	0	1	8	35	95	51	9	1	0	1	0	0
7:00 PM	116	0	0	0	1	26	52	32	5	0	0	0	0	0
8:00 PM	107	0	0	2	2	18	42	31	11	1	0	0	0	0
9:00 PM	50	0	0	1	1	6	21	14	5	1	0	0	1	0
10:00 PM	26	0	0	0	0	5	8	8	3	0	2	0	0	0
11:00 PM	14	0	0	0	0	3	7	1	2	1	0	0	0	0
Total	1806	2	6	17	54	274	787	536	110	12	4	3	1	0
%		0.1	0.3	0.9	3.0	15.2	43.6	29.7	6.1	0.7	0.2	0.2	0.1	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	32.7	33.9	38.8	43.3	44.3

10 mph Pace Speed 34.5 - 44.5
Number in Pace 1375 (76.1 %)

Average 38.4 mph
Minimum 8.6 mph
Maximum 66.5 mph

Speeds Exceeded	55 mph	65 mph
	0.4 %	0.1 %
Count	8	1

M - 45

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/22/2012
Thursday

24 Hour Speed
Channel: N/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0
1:00 AM	4	0	0	0	0	1	1	1	1	0	0	0	0	0
2:00 AM	3	0	0	0	1	0	0	1	0	1	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0
5:00 AM	7	0	1	0	0	0	3	2	1	0	0	0	0	0
6:00 AM	14	0	0	0	0	1	6	4	1	2	0	0	0	0
7:00 AM	52	0	0	0	0	7	27	17	1	0	0	0	0	0
8:00 AM	57	0	0	0	0	15	30	10	2	0	0	0	0	0
9:00 AM	58	0	0	0	2	14	27	13	1	0	0	0	0	1
10:00 AM	55	0	0	0	1	7	25	18	4	0	0	0	0	0
11:00 AM	81	0	0	1	3	12	38	25	2	0	0	0	0	0
12:00 PM	116	0	0	2	4	10	50	39	7	3	0	1	0	0
1:00 PM	127	0	0	1	3	28	60	28	6	1	0	0	0	0
2:00 PM	136	0	1	6	1	18	55	49	6	0	0	0	0	0
3:00 PM	173	1	0	0	4	22	79	59	8	0	0	0	0	0
4:00 PM	177	0	1	0	8	27	83	44	12	2	0	0	0	0
5:00 PM	200	0	0	0	3	32	99	52	13	0	1	0	0	0
6:00 PM	180	0	0	1	3	22	82	61	11	0	0	0	0	0
7:00 PM	119	0	0	1	3	13	66	29	5	2	0	0	0	0
8:00 PM	82	0	0	3	3	11	33	25	6	0	1	0	0	0
9:00 PM	64	0	0	0	2	7	30	18	6	0	0	0	0	1
10:00 PM	21	0	0	0	2	2	8	8	0	1	0	0	0	0
11:00 PM	16	0	0	0	1	1	7	5	0	1	0	0	1	0
Total	1744	1	3	15	44	251	810	508	93	13	2	1	1	2
%		0.1	0.2	0.9	2.5	14.4	46.4	29.1	5.3	0.7	0.1	0.1	0.1	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	32.7	33.9	38.8	42.3	44.3

10 mph Pace Speed 34.5 - 44.5
Number in Pace 1369 (78.5 %)

Average 38.4 mph
Minimum 14.8 mph
Maximum 74.5 mph

Speeds Exceeded	55 mph	65 mph
	0.3 %	0.2 %
Count	6	3

M - 46

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/23/2012
Friday

24 Hour Speed
Channel: N/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	7	0	0	0	2	1	2	0	2	0	0	0	0	0
1:00 AM	3	0	0	0	1	1	0	0	1	0	0	0	0	0
2:00 AM	13	0	0	0	0	0	5	6	0	2	0	0	0	0
3:00 AM	2	0	0	0	0	1	1	0	0	0	0	0	0	0
4:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0
5:00 AM	9	0	0	1	1	1	3	2	1	0	0	0	0	0
6:00 AM	9	0	0	0	0	1	2	3	3	0	0	0	0	0
7:00 AM	65	0	0	0	2	7	28	19	7	1	1	0	0	0
8:00 AM	60	0	0	1	4	9	28	16	2	0	0	0	0	0
9:00 AM	53	0	0	0	3	6	16	25	3	0	0	0	0	0
10:00 AM	52	0	0	1	2	7	24	12	4	1	0	1	0	0
11:00 AM	96	0	0	0	2	16	43	30	5	0	0	0	0	0
12:00 PM	119	0	0	0	1	13	59	39	5	0	1	0	0	1
1:00 PM	107	0	0	0	4	13	57	27	4	1	0	1	0	0
2:00 PM	139	0	0	0	2	17	72	38	6	2	2	0	0	0
3:00 PM	189	0	0	1	3	24	93	55	11	2	0	0	0	0
4:00 PM	231	2	0	2	2	21	98	96	8	1	0	0	1	0
5:00 PM	174	0	0	0	6	15	86	55	8	3	1	0	0	0
6:00 PM	144	0	0	1	3	26	66	42	5	1	0	0	0	0
7:00 PM	103	0	0	1	4	9	49	32	8	0	0	0	0	0
8:00 PM	90	0	0	0	2	10	36	28	12	1	0	0	1	0
9:00 PM	63	0	0	0	0	6	34	20	3	0	0	0	0	0
10:00 PM	49	0	0	0	2	3	26	14	3	1	0	0	0	0
11:00 PM	45	0	0	1	3	11	21	4	3	1	0	1	0	0
Total	1823	2	0	9	49	218	850	563	104	17	5	3	2	1
%		0.1	0.0	0.5	2.7	12.0	46.6	30.9	5.7	0.9	0.3	0.2	0.1	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	33.9	34.5	38.8	43.3	44.3

10 mph Pace Speed 34.5 - 44.5
Number in Pace 1470 (80.6 %)

Average 38.8 mph
Minimum 5.6 mph
Maximum 77.6 mph

Speeds Exceeded	55 mph	65 mph
	0.6 %	0.2 %
Count	11	3

M - 47

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/24/2012
Saturday

24 Hour Speed
Channel: N/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	17	0	0	0	2	2	7	5	1	0	0	0	0	0
1:00 AM	12	0	0	0	1	2	6	2	1	0	0	0	0	0
2:00 AM	3	0	0	0	0	0	0	2	0	0	0	1	0	0
3:00 AM	2	0	0	0	0	0	0	1	0	0	0	0	1	0
4:00 AM	5	0	1	0	1	0	1	1	1	0	0	0	0	0
5:00 AM	3	0	0	0	0	0	0	2	0	1	0	0	0	0
6:00 AM	6	0	0	0	0	3	1	1	0	1	0	0	0	0
7:00 AM	22	0	0	0	2	1	7	10	2	0	0	0	0	0
8:00 AM	36	0	0	1	2	5	14	12	1	0	0	1	0	0
9:00 AM	58	0	1	0	0	5	27	20	4	0	0	0	0	1
10:00 AM	99	0	0	2	5	20	49	19	4	0	0	0	0	0
11:00 AM	112	1	0	1	11	21	56	18	3	1	0	0	0	0
12:00 PM	128	0	0	2	5	22	56	35	7	1	0	0	0	0
1:00 PM	128	0	0	2	6	29	53	33	2	3	0	0	0	0
2:00 PM	142	0	1	1	10	21	64	37	6	2	0	0	0	0
3:00 PM	108	0	1	1	2	14	48	36	5	1	0	0	0	0
4:00 PM	117	0	0	2	6	17	58	29	5	0	0	0	0	0
5:00 PM	124	1	0	0	3	21	58	35	5	1	0	0	0	0
6:00 PM	103	2	0	1	6	16	47	25	4	2	0	0	0	0
7:00 PM	98	1	0	0	3	12	52	26	3	1	0	0	0	0
8:00 PM	81	0	0	0	2	8	38	25	7	1	0	0	0	0
9:00 PM	71	0	0	1	4	6	30	24	5	1	0	0	0	0
10:00 PM	43	0	0	0	2	6	19	13	3	0	0	0	0	0
11:00 PM	28	0	0	0	0	4	14	9	1	0	0	0	0	0
Total	1546	5	4	14	73	235	705	420	70	16	0	2	1	1
%		0.3	0.3	0.9	4.7	15.2	45.6	27.2	4.5	1.0	0.0	0.1	0.1	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	32.1	33.2	38.0	42.3	43.3

10 mph Pace Speed 34.5 - 44.5
Number in Pace 1177 (76.1 %)

Average 38.0 mph
Minimum 7.3 mph
Maximum 74.5 mph

Speeds Exceeded	55 mph	65 mph
	0.3 %	0.1 %
Count	4	2

M - 48

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/25/2012
Sunday

24 Hour Speed
Channel: N/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	20	0	0	0	0	0	9	6	1	4	0	0	0	0
1:00 AM	11	0	0	0	0	2	4	1	4	0	0	0	0	0
2:00 AM	5	0	0	0	0	0	2	3	0	0	0	0	0	0
3:00 AM	1	0	0	0	0	0	0	1	0	0	0	0	0	0
4:00 AM	2	0	0	0	1	0	0	1	0	0	0	0	0	0
5:00 AM	2	0	0	0	0	0	0	1	0	1	0	0	0	0
6:00 AM	6	0	1	0	0	1	3	1	0	0	0	0	0	0
7:00 AM	23	0	0	0	0	2	12	5	3	1	0	0	0	0
8:00 AM	49	0	0	1	1	6	18	18	3	2	0	0	0	0
9:00 AM	92	0	1	0	3	13	41	25	8	1	0	0	0	0
10:00 AM	101	1	0	1	3	12	61	17	6	0	0	0	0	0
11:00 AM	106	0	0	5	4	14	41	31	11	0	0	0	0	0
12:00 PM	108	1	1	0	3	7	51	30	13	1	0	0	0	1
1:00 PM	133	0	3	0	3	37	48	34	6	0	0	0	1	1
2:00 PM	107	0	0	0	2	15	51	31	6	2	0	0	0	0
3:00 PM	122	0	0	4	5	29	49	26	9	0	0	0	0	0
4:00 PM	100	0	0	0	2	21	46	25	5	1	0	0	0	0
5:00 PM	149	0	0	1	3	23	64	42	13	3	0	0	0	0
6:00 PM	80	0	0	1	2	11	40	23	3	0	0	0	0	0
7:00 PM	96	0	0	0	2	9	35	40	7	1	0	1	0	1
8:00 PM	73	1	0	0	3	13	26	19	7	4	0	0	0	0
9:00 PM	41	0	0	0	4	2	19	12	2	1	0	1	0	0
10:00 PM	24	0	0	0	1	2	8	6	5	2	0	0	0	0
11:00 PM	8	0	0	0	1	0	3	2	1	0	0	1	0	0
Total	1459	3	6	13	43	219	631	400	113	24	0	3	1	3
%		0.2	0.4	0.9	2.9	15.0	43.2	27.4	7.7	1.6	0.0	0.2	0.1	0.2

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	32.7	33.9	38.8	43.3	44.3

10 mph Pace Speed 34.5 - 44.5
Number in Pace 1069 (73.3 %)

Average 38.6 mph
Minimum 5.9 mph
Maximum 93.1 mph

Speeds Exceeded	55 mph	65 mph
	0.5 %	0.3 %
Count	7	4

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/26/2012
Monday

24 Hour Speed
Channel: N/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	7	0	0	0	0	1	3	0	2	0	1	0	0	0
1:00 AM	3	0	0	0	0	0	0	2	1	0	0	0	0	0
2:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0
3:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	9	0	1	1	0	0	5	0	2	0	0	0	0	0
6:00 AM	11	0	0	0	0	1	5	4	0	0	1	0	0	0
7:00 AM	48	0	0	0	1	5	25	12	4	1	0	0	0	0
8:00 AM	80	0	0	1	2	17	32	20	7	1	0	0	0	0
9:00 AM	61	0	0	0	3	11	30	12	4	0	1	0	0	0
10:00 AM	47	1	0	2	1	9	23	9	1	0	0	1	0	0
11:00 AM	83	0	0	0	1	19	37	17	8	1	0	0	0	0
12:00 PM	100	0	0	0	4	18	56	17	3	2	0	0	0	0
1:00 PM	112	0	0	1	1	14	56	33	5	2	0	0	0	0
2:00 PM	116	0	0	6	3	11	43	45	6	0	1	1	0	0
3:00 PM	184	0	1	4	5	32	79	54	9	0	0	0	0	0
4:00 PM	207	0	0	0	4	21	104	69	7	2	0	0	0	0
5:00 PM	208	0	0	1	2	21	94	85	5	0	0	0	0	0
6:00 PM	168	0	0	0	7	26	63	63	6	3	0	0	0	0
7:00 PM	116	0	0	0	2	26	54	23	8	3	0	0	0	0
8:00 PM	73	0	0	1	2	8	36	19	7	0	0	0	0	0
9:00 PM	47	0	0	0	1	12	14	13	6	1	0	0	0	0
10:00 PM	17	0	0	0	1	6	1	3	4	1	0	0	0	1
11:00 PM	15	0	0	0	1	2	5	2	2	1	0	1	1	0
Total	1714	1	2	17	41	261	766	502	97	18	4	3	1	1
%		0.1	0.1	1.0	2.4	15.2	44.7	29.3	5.7	1.1	0.2	0.2	0.1	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	32.7	33.9	38.8	43.3	44.3

10 mph Pace Speed 34.5 - 44.5
Number in Pace 1326 (77.4 %)

Average 38.6 mph
Minimum 11.5 mph
Maximum 88.7 mph

Speeds Exceeded	55 mph	65 mph
	0.5 %	0.1 %
Count	9	2

M - 50

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/20/2012
Tuesday

24 Hour Speed
Channel: S/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	2	0	0	0	0	1	1	0	0	0	0	0	0	0
1:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	11	0	0	1	1	2	6	1	0	0	0	0	0	0
5:00 AM	32	0	0	1	4	4	16	5	1	1	0	0	0	0
6:00 AM	118	0	0	2	14	22	49	23	7	1	0	0	0	0
7:00 AM	165	2	3	2	5	30	70	47	5	0	0	0	0	1
8:00 AM	152	1	3	6	6	37	63	28	6	2	0	0	0	0
9:00 AM	97	0	2	0	1	11	46	26	9	0	1	1	0	0
10:00 AM	67	0	0	1	2	10	28	20	5	1	0	0	0	0
11:00 AM	106	0	0	0	5	28	51	16	6	0	0	0	0	0
12:00 PM	98	0	0	4	5	27	36	20	6	0	0	0	0	0
1:00 PM	76	0	0	2	2	12	34	24	2	0	0	0	0	0
2:00 PM	100	0	1	0	4	20	49	22	3	1	0	0	0	0
3:00 PM	106	0	0	2	5	24	46	21	8	0	0	0	0	0
4:00 PM	90	0	0	2	7	9	37	31	4	0	0	0	0	0
5:00 PM	97	0	0	2	3	11	45	32	4	0	0	0	0	0
6:00 PM	84	0	1	0	4	14	37	21	5	1	0	0	1	0
7:00 PM	50	0	0	1	3	9	18	13	6	0	0	0	0	0
8:00 PM	49	0	0	1	0	13	16	11	8	0	0	0	0	0
9:00 PM	26	0	0	2	1	1	13	9	0	0	0	0	0	0
10:00 PM	15	0	0	1	1	5	3	2	3	0	0	0	0	0
11:00 PM	5	0	0	0	0	1	1	0	0	2	0	0	0	1
Total	1547	3	10	30	73	291	666	372	88	9	1	1	1	2
%		0.2	0.6	1.9	4.7	18.8	43.1	24.0	5.7	0.6	0.1	0.1	0.1	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	31.0	32.7	38.0	42.3	43.3

10 mph Pace Speed 32.7 - 42.7
Number in Pace 1137 (73.5 %)

Average 37.5 mph
Minimum 7.2 mph
Maximum 88.7 mph

Speeds Exceeded	55 mph	65 mph
	0.3 %	0.2 %
Count	5	3

M - 51

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/21/2012
Wednesday

24 Hour Speed
Channel: S/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	4	0	0	0	0	0	2	1	0	0	0	0	0	1
1:00 AM	1	0	0	0	0	0	0	1	0	0	0	0	0	0
2:00 AM	1	0	0	0	0	0	0	1	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	11	0	0	0	0	3	6	1	0	1	0	0	0	0
5:00 AM	34	0	0	0	2	4	20	6	2	0	0	0	0	0
6:00 AM	116	0	0	1	9	18	63	18	6	0	0	1	0	0
7:00 AM	164	0	2	1	6	21	83	39	11	1	0	0	0	0
8:00 AM	146	1	1	5	5	19	60	43	7	4	0	1	0	0
9:00 AM	98	0	0	2	3	14	47	26	5	1	0	0	0	0
10:00 AM	80	0	0	0	2	16	40	16	6	0	0	0	0	0
11:00 AM	105	0	0	0	9	18	56	19	1	2	0	0	0	0
12:00 PM	86	0	2	1	4	10	43	19	6	1	0	0	0	0
1:00 PM	88	1	0	3	2	14	38	22	6	1	0	1	0	0
2:00 PM	103	0	0	2	9	32	36	22	2	0	0	0	0	0
3:00 PM	108	0	1	3	5	23	37	26	7	5	1	0	0	0
4:00 PM	100	0	0	2	6	11	40	37	2	2	0	0	0	0
5:00 PM	104	0	0	1	4	26	54	17	2	0	0	0	0	0
6:00 PM	85	0	0	3	5	15	36	22	3	1	0	0	0	0
7:00 PM	76	0	0	4	4	14	31	19	1	2	1	0	0	0
8:00 PM	73	0	0	5	5	20	26	12	4	1	0	0	0	0
9:00 PM	19	0	0	1	2	2	5	9	0	0	0	0	0	0
10:00 PM	15	0	0	0	1	3	6	3	2	0	0	0	0	0
11:00 PM	6	0	0	0	0	1	3	1	0	0	0	1	0	0
Total	1623	2	6	34	83	284	732	380	73	22	2	4	0	1
%		0.1	0.4	2.1	5.1	17.5	45.1	23.4	4.5	1.4	0.1	0.2	0.0	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	31.0	32.7	38.0	42.3	43.3

10 mph Pace Speed 32.7 - 42.7
Number in Pace 1182 (72.8 %)

Average 37.6 mph
Minimum 7.6 mph
Maximum 71.6 mph

Speeds Exceeded	55 mph	65 mph
	0.4 %	0.1 %
Count	7	1

M - 52

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/22/2012
Thursday

24 Hour Speed
Channel: S/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	4	0	0	0	0	3	0	0	0	1	0	0	0	0
1:00 AM	1	0	0	0	0	0	0	0	1	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0
4:00 AM	9	0	0	1	2	2	2	1	1	0	0	0	0	0
5:00 AM	34	0	0	1	1	2	18	9	3	0	0	0	0	0
6:00 AM	100	0	0	4	9	18	42	19	6	2	0	0	0	0
7:00 AM	178	0	0	2	7	41	82	36	9	1	0	0	0	0
8:00 AM	143	1	5	3	3	29	69	29	3	1	0	0	0	0
9:00 AM	110	0	0	1	4	24	46	28	5	2	0	0	0	0
10:00 AM	82	1	0	3	4	15	33	23	3	0	0	0	0	0
11:00 AM	87	0	0	1	5	9	49	18	4	1	0	0	0	0
12:00 PM	103	1	1	2	3	13	53	26	2	1	0	1	0	0
1:00 PM	93	0	0	1	7	19	44	16	5	1	0	0	0	0
2:00 PM	103	0	1	1	6	25	48	18	3	1	0	0	0	0
3:00 PM	122	0	0	3	5	13	60	33	4	2	1	0	0	1
4:00 PM	95	2	1	3	8	24	36	17	4	0	0	0	0	0
5:00 PM	118	0	0	1	7	31	54	23	1	1	0	0	0	0
6:00 PM	91	2	0	1	3	12	45	22	6	0	0	0	0	0
7:00 PM	60	0	0	3	0	8	32	17	0	0	0	0	0	0
8:00 PM	41	0	0	1	3	7	15	10	4	1	0	0	0	0
9:00 PM	31	0	0	1	2	9	9	9	0	1	0	0	0	0
10:00 PM	11	0	0	0	0	2	6	1	1	1	0	0	0	0
11:00 PM	6	0	0	1	0	0	3	0	0	2	0	0	0	0
Total	1623	7	8	35	79	306	746	355	65	19	1	1	0	1
%		0.4	0.5	2.2	4.9	18.9	46.0	21.9	4.0	1.2	0.1	0.1	0.0	0.1

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	31.0	32.1	37.2	42.3	43.3

10 mph Pace Speed 31.6 - 41.6
Number in Pace 1198 (73.8 %)

Average 37.2 mph
Minimum 6.0 mph
Maximum 93.1 mph

Speeds Exceeded	55 mph	65 mph
	0.2 %	0.1 %
Count	3	1

M - 53

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/23/2012
Friday

24 Hour Speed
Channel: S/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0
1:00 AM	1	0	0	0	0	0	0	1	0	0	0	0	0	0
2:00 AM	6	0	0	0	0	1	3	1	1	0	0	0	0	0
3:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0
4:00 AM	6	0	0	0	1	2	2	1	0	0	0	0	0	0
5:00 AM	38	0	0	0	3	5	11	14	5	0	0	0	0	0
6:00 AM	105	0	0	1	6	17	52	19	7	3	0	0	0	0
7:00 AM	165	0	0	3	5	21	94	32	8	2	0	0	0	0
8:00 AM	152	2	1	4	3	25	69	33	10	5	0	0	0	0
9:00 AM	100	0	0	1	2	17	52	20	7	1	0	0	0	0
10:00 AM	84	0	0	1	4	12	41	22	3	0	1	0	0	0
11:00 AM	108	0	0	2	5	17	46	32	3	2	0	1	0	0
12:00 PM	117	0	0	0	8	29	52	24	4	0	0	0	0	0
1:00 PM	107	0	0	1	11	15	51	22	7	0	0	0	0	0
2:00 PM	111	0	0	0	4	38	38	24	7	0	0	0	0	0
3:00 PM	102	0	0	1	1	27	40	31	2	0	0	0	0	0
4:00 PM	114	1	0	0	5	14	43	39	10	2	0	0	0	0
5:00 PM	105	0	0	1	7	12	42	32	9	1	0	1	0	0
6:00 PM	83	0	0	0	5	17	37	20	3	0	1	0	0	0
7:00 PM	74	0	0	2	2	14	34	15	6	1	0	0	0	0
8:00 PM	36	0	0	2	1	3	15	13	2	0	0	0	0	0
9:00 PM	25	0	0	1	1	5	11	4	1	2	0	0	0	0
10:00 PM	22	0	0	0	3	2	8	4	4	1	0	0	0	0
11:00 PM	24	0	0	0	1	6	10	5	1	0	1	0	0	0
Total	1687	3	1	20	79	300	751	408	100	20	3	2	0	0
%		0.2	0.1	1.2	4.7	17.8	44.5	24.2	5.9	1.2	0.2	0.1	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	31.6	33.2	38.0	42.3	44.3

10 mph Pace Speed 32.7 - 42.7
Number in Pace 1232 (73.0 %)

Average 37.8 mph
Minimum 7.3 mph
Maximum 60.1 mph

Speeds Exceeded	55 mph	65 mph
	0.3 %	0.0 %
Count	5	0

M - 54

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/24/2012
Saturday

24 Hour Speed
Channel: S/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	16	0	0	1	0	4	5	6	0	0	0	0	0	0
1:00 AM	12	0	0	0	1	0	5	5	0	1	0	0	0	0
2:00 AM	2	0	0	0	1	0	0	1	0	0	0	0	0	0
3:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0
4:00 AM	5	0	0	0	0	2	2	0	0	0	0	0	0	1
5:00 AM	12	0	0	0	1	1	4	4	1	0	1	0	0	0
6:00 AM	17	0	0	0	1	2	5	4	4	0	1	0	0	0
7:00 AM	45	0	0	2	3	5	17	14	4	0	0	0	0	0
8:00 AM	67	2	1	1	7	14	29	10	1	1	0	1	0	0
9:00 AM	125	1	0	2	5	31	58	23	5	0	0	0	0	0
10:00 AM	110	0	0	6	5	27	51	17	3	0	0	0	0	1
11:00 AM	90	0	1	4	6	21	39	11	5	2	0	0	1	0
12:00 PM	134	3	1	8	8	23	59	24	5	1	1	1	0	0
1:00 PM	121	1	0	3	14	34	44	19	4	1	0	1	0	0
2:00 PM	111	0	4	7	6	33	38	17	3	2	0	0	0	1
3:00 PM	107	3	2	1	10	25	38	22	6	0	0	0	0	0
4:00 PM	131	0	1	3	1	34	56	30	6	0	0	0	0	0
5:00 PM	114	2	1	3	5	19	47	31	4	2	0	0	0	0
6:00 PM	77	1	0	2	5	14	27	20	6	1	1	0	0	0
7:00 PM	56	1	2	2	0	8	28	9	6	0	0	0	0	0
8:00 PM	50	0	0	0	3	4	27	13	3	0	0	0	0	0
9:00 PM	33	0	0	0	1	10	10	5	5	2	0	0	0	0
10:00 PM	26	0	0	0	1	5	12	5	3	0	0	0	0	0
11:00 PM	23	0	0	0	0	3	13	7	0	0	0	0	0	0
Total	1485	14	13	46	84	319	614	297	74	13	4	3	1	3
%		0.9	0.9	3.1	5.7	21.5	41.3	20.0	5.0	0.9	0.3	0.2	0.1	0.2

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	29.6	31.6	37.2	42.3	43.3

10 mph Pace Speed 32.7 - 42.7
Number in Pace 1029 (69.3 %)

Average 36.7 mph
Minimum 7.5 mph
Maximum 93.1 mph

Speeds Exceeded	55 mph	65 mph
	0.7 %	0.3 %
Count	11	4

M - 55

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/25/2012
Sunday

24 Hour Speed
Channel: S/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	9	0	0	0	0	1	6	1	1	0	0	0	0	0
1:00 AM	5	0	0	0	0	2	1	1	1	0	0	0	0	0
2:00 AM	6	0	0	2	0	1	0	1	2	0	0	0	0	0
3:00 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0
4:00 AM	5	0	0	0	1	1	1	2	0	0	0	0	0	0
5:00 AM	5	0	0	0	0	1	0	2	2	0	0	0	0	0
6:00 AM	14	1	0	0	1	2	4	4	1	0	0	0	0	1
7:00 AM	26	0	0	0	2	2	11	10	0	1	0	0	0	0
8:00 AM	63	0	0	1	2	7	23	21	9	0	0	0	0	0
9:00 AM	95	0	0	3	3	15	44	19	8	3	0	0	0	0
10:00 AM	115	1	2	4	6	24	50	20	7	1	0	0	0	0
11:00 AM	96	0	1	0	3	10	47	31	4	0	0	0	0	0
12:00 PM	157	2	1	2	7	45	70	20	8	1	0	0	0	1
1:00 PM	108	0	0	5	8	15	55	21	3	0	0	0	1	0
2:00 PM	103	0	0	1	5	26	43	23	5	0	0	0	0	0
3:00 PM	125	0	0	0	7	21	67	19	9	2	0	0	0	0
4:00 PM	105	1	0	1	8	19	45	24	5	2	0	0	0	0
5:00 PM	67	0	0	2	2	11	29	22	1	0	0	0	0	0
6:00 PM	63	0	0	1	4	15	21	18	3	1	0	0	0	0
7:00 PM	78	0	0	0	5	19	30	15	8	1	0	0	0	0
8:00 PM	45	0	1	0	4	9	21	8	2	0	0	0	0	0
9:00 PM	25	0	0	0	0	6	8	8	2	1	0	0	0	0
10:00 PM	13	0	0	0	1	3	5	2	1	1	0	0	0	0
11:00 PM	3	0	0	1	0	1	0	0	0	0	1	0	0	0
Total	1332	5	5	23	69	256	582	292	82	14	1	0	1	2
%		0.4	0.4	1.7	5.2	19.2	43.7	21.9	6.2	1.1	0.1	0.0	0.1	0.2

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	31.0	32.7	38.0	42.3	43.3

10 mph Pace Speed 32.7 - 42.7
Number in Pace 972 (73.0 %)

Average 37.5 mph
Minimum 5.6 mph
Maximum 88.7 mph

Speeds Exceeded	55 mph	65 mph
	0.3 %	0.2 %
Count	4	3

M - 56

Snohomish County Traffic Operations
3000 Rockefeller Admin 5-W
Everett WA 98201

LOCATION: 75 AVE SE N/O 240 ST SE
WEATHER: 7 MIXED
CLIENT: BLOODGOOD

Site: 20100-3.574
Date: 3/26/2012
Monday

24 Hour Speed
Channel: S/B

mph	Total	0 - < 15	15 - < 20	20 - < 25	25 - < 30	30 - < 35	35 - < 40	40 - < 45	45 - < 50	50 - < 55	55 - < 60	60 - < 65	65 - < 70	70 - < 200
12:00 AM	2	0	0	0	0	0	0	0	1	1	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	1	0	0	0	0	0	0	1	0	0	0	0	0	0
3:00 AM	2	0	0	1	1	0	0	0	0	0	0	0	0	0
4:00 AM	10	0	0	1	2	1	2	3	1	0	0	0	0	0
5:00 AM	36	0	0	0	3	4	23	4	2	0	0	0	0	0
6:00 AM	103	0	0	0	9	29	47	11	7	0	0	0	0	0
7:00 AM	168	0	1	0	6	47	79	26	8	1	0	0	0	0
8:00 AM	161	0	2	1	8	34	78	29	6	3	0	0	0	0
9:00 AM	84	0	0	0	6	14	44	12	7	1	0	0	0	0
10:00 AM	98	2	0	1	5	23	37	25	3	2	0	0	0	0
11:00 AM	106	0	1	1	1	16	53	33	1	0	0	0	0	0
12:00 PM	94	0	0	1	3	24	47	16	3	0	0	0	0	0
1:00 PM	67	0	0	1	4	15	32	10	4	1	0	0	0	0
2:00 PM	104	0	1	1	7	16	38	32	8	1	0	0	0	0
3:00 PM	121	0	0	0	10	18	58	32	2	1	0	0	0	0
4:00 PM	112	0	0	2	3	12	54	30	10	0	1	0	0	0
5:00 PM	100	0	0	1	2	16	54	23	3	0	0	1	0	0
6:00 PM	73	0	0	1	9	14	24	17	7	1	0	0	0	0
7:00 PM	50	0	0	4	9	6	15	12	3	0	1	0	0	0
8:00 PM	41	0	0	1	2	10	20	4	2	2	0	0	0	0
9:00 PM	21	0	0	0	5	4	10	1	0	1	0	0	0	0
10:00 PM	13	0	0	0	1	2	3	3	4	0	0	0	0	0
11:00 PM	5	0	0	0	0	0	1	1	1	0	1	1	0	0
Total	1572	2	5	17	96	305	719	325	83	15	3	2	0	0
%		0.1	0.3	1.1	6.1	19.4	45.7	20.7	5.3	1.0	0.2	0.1	0.0	0.0

Percentile Speeds	10 %	15 %	50 %	85 %	90 %
(mph)	31.0	32.7	37.2	42.3	43.3

10 mph Pace Speed 32.7 - 42.7
Number in Pace 1146 (72.9 %)

Average 37.3 mph
Minimum 5.0 mph
Maximum 60.1 mph

Speeds Exceeded	55 mph	65 mph
	0.3 %	0.0 %
Count	5	0

M - 57

Event Analysis

Wellington Hills County Park
GTC #12-040

Event "Worst Case" Analysis

Trip Generation for: Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 4 and 6 PM
(a.k.a.): Weekday PM Peak Hour

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Outdoor Fields	7 fields	GTC	35	69%	31%	245	0%	0	245	0%	0	0%	0	245	0	0	0	0	169	76
County Park	5.58 Acres	412	0.09	61%	39%	1	0%	0	1	0%	0	0%	0	1	0	0	0	0	0	1
Recreational Comm Center	42.275 ksqft	495	2.74	49%	51%	116	0%	0	116	0%	0	0%	0	116	0	0	0	0	57	59
Mountain Bike Facility	60.000 ksqft	GTC	0.58	67%	33%	35	0%	0	35	0%	0	0%	0	35	0	0	0	0	23	12
Golf Course	-9 holes	430	2.92	51%	49%	-26	0%	0	-26	0%	0	0%	0	-26	0	0	0	0	-13	-13
Totals						369.85		0	370		0		0	370	0	0	0	0	236	134
Phase 1: Fields/Park w/ Credit for Golf						219.22		0	219		0		0	219	0	0	0	0	156	63
Phase 2: + Recreational Comm Center						335.05		0	335		0		0	335	0	0	0	0	213	122
Phase 3: + Mountain Bike Facility						369.85		0	370		0		0	370	0	0	0	0	236	134

Wellington Hills County Park
GTC #12-040

Event "Worst Case" Analysis

Trip Generation for: Saturday Peak Hour of Generator

									NET EXTERNAL TRIPS BY TYPE											
									IN BOTH DIRECTIONS						DIRECTIONAL ASSIGNMENTS					
			Gross Trips				Internal Crossover		TOTAL	PASS-BY		DIVERTED LINK		NEW	PASS-BY		DIVERTED LINK		NEW	
LAND USES	VARIABLE	ITE LU code	Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In+Out (Total)	In+Out (Total)	In	Out	In	Out	In	Out
Outdoor Fields	7 fields	GTC	35	48%	52%	245	0%	0	245	0%	0	0%	0	245	0	0	0	0	118	127
County Park	5.58 Acres	412	2.21	57%	43%	12	0%	0	12	0%	0	0%	0	12	0	0	0	0	7	5
Recreational Comm Center	42.275 ksqft	495	1.07	54%	46%	45	0%	0	45	0%	0	0%	0	45	0	0	0	0	24	21
Mountain Bike Facility	60.000 ksqft	GTC	0.77	50%	50%	46	0%	0	46	0%	0	0%	0	46	0	0	0	0	23	23
Golf Course	-9 holes	430	4.59	49%	51%	-41	0%	0	-41	0%	0	0%	0	-41	0	0	0	0	-20	-21
Totals						307.45		0	307		0		0	307	0	0	0	0	152	155
Phase 1: Fields/Park w/ Credit for Golf						216.02		0	216		0		0	216	0	0	0	0	105	111
Phase 2: + Recreational Comm Center						261.25		0	261		0		0	261	0	0	0	0	129	132
Phase 3: + Mountain Bike Facility						307.45		0	307		0		0	307	0	0	0	0	152	155

Wellington Hills County Park
GTC #12-040

Event Analysis Trip Generation

Full Build-Out

PM Version

	New	New PM Peak Hour Trips				New	New PM Peak Hour Trips		
%	ADT	In	Out	Total	%	ADT	In	Out	Total
100%	0	236	134	370	100%	0	236	134	370
1%	0.00	2.36	1.34	3.70	51%	0.00	120.36	68.26	188.62
2%	0.00	4.72	2.68	7.40	52%	0.00	122.72	69.60	192.32
3%	0.00	7.08	4.02	11.10	53%	0.00	125.08	70.94	196.02
4%	0.00	9.44	5.35	14.79	54%	0.00	127.44	72.28	199.72
5%	**0.00**	**11.80**	**6.69**	**18.49**	**55%**	**0.00**	**129.80**	**73.62**	**203.42**
6%	0.00	14.16	8.03	22.19	56%	0.00	132.16	74.96	207.12
7%	0.00	16.52	9.37	25.89	57%	0.00	134.52	76.29	210.81
8%	0.00	18.88	10.71	29.59	58%	0.00	136.88	77.63	214.51
9%	0.00	21.24	12.05	33.29	59%	0.00	139.24	78.97	218.21
10%	**0.00**	**23.60**	**13.39**	**36.99**	**60%**	**0.00**	**141.60**	**80.31**	**221.91**
11%	0.00	25.96	14.72	40.68	61%	0.00	143.96	81.65	225.61
12%	0.00	28.32	16.06	44.38	62%	0.00	146.32	82.99	229.31
13%	0.00	30.68	17.40	48.08	63%	0.00	148.68	84.33	233.01
14%	0.00	33.04	18.74	51.78	64%	0.00	151.04	85.66	236.70
15%	**0.00**	**35.40**	**20.08**	**55.48**	**65%**	**0.00**	**153.40**	**87.00**	**240.40**
16%	0.00	37.76	21.42	59.18	66%	0.00	155.76	88.34	244.10
17%	0.00	40.12	22.75	62.87	67%	0.00	158.12	89.68	247.80
18%	0.00	42.48	24.09	66.57	68%	0.00	160.48	91.02	251.50
19%	0.00	44.84	25.43	70.27	69%	0.00	162.84	92.36	255.20
20%	**0.00**	**47.20**	**26.77**	**73.97**	**70%**	**0.00**	**165.20**	**93.70**	**258.90**
21%	0.00	49.56	28.11	77.67	71%	0.00	167.56	95.03	262.59
22%	0.00	51.92	29.45	81.37	72%	0.00	169.92	96.37	266.29
23%	0.00	54.28	30.79	85.07	73%	0.00	172.28	97.71	269.99
24%	0.00	56.64	32.12	88.76	74%	0.00	174.64	99.05	273.69
25%	**0.00**	**59.00**	**33.46**	**92.46**	**75%**	**0.00**	**177.00**	**100.39**	**277.39**
26%	0.00	61.36	34.80	96.16	76%	0.00	179.36	101.73	281.09
27%	0.00	63.72	36.14	99.86	77%	0.00	181.72	103.06	284.78
28%	0.00	66.08	37.48	103.56	78%	0.00	184.08	104.40	288.48
29%	0.00	68.44	38.82	107.26	79%	0.00	186.44	105.74	292.18
30%	**0.00**	**70.80**	**40.16**	**110.96**	**80%**	**0.00**	**188.80**	**107.08**	**295.88**
31%	0.00	73.16	41.49	114.65	81%	0.00	191.16	108.42	299.58
32%	0.00	75.52	42.83	118.35	82%	0.00	193.52	109.76	303.28
33%	0.00	77.88	44.17	122.05	83%	0.00	195.88	111.10	306.98
34%	0.00	80.24	45.51	125.75	84%	0.00	198.24	112.43	310.67
35%	**0.00**	**82.60**	**46.85**	**129.45**	**85%**	**0.00**	**200.60**	**113.77**	**314.37**
36%	0.00	84.96	48.19	133.15	86%	0.00	202.96	115.11	318.07
37%	0.00	87.32	49.52	136.84	87%	0.00	205.32	116.45	321.77
38%	0.00	89.68	50.86	140.54	88%	0.00	207.68	117.79	325.47
39%	0.00	92.04	52.20	144.24	89%	0.00	210.04	119.13	329.17
40%	**0.00**	**94.40**	**53.54**	**147.94**	**90%**	**0.00**	**212.40**	**120.47**	**332.87**
41%	0.00	96.76	54.88	151.64	91%	0.00	214.76	121.80	336.56
42%	0.00	99.12	56.22	155.34	92%	0.00	217.12	123.14	340.26
43%	0.00	101.48	57.56	159.04	93%	0.00	219.48	124.48	343.96
44%	0.00	103.84	58.89	162.73	94%	0.00	221.84	125.82	347.66
45%	**0.00**	**106.20**	**60.23**	**166.43**	**95%**	**0.00**	**224.20**	**127.16**	**351.36**
46%	0.00	108.56	61.57	170.13	96%	0.00	226.56	128.50	355.06
47%	0.00	110.92	62.91	173.83	97%	0.00	228.92	129.83	358.75
48%	0.00	113.28	64.25	177.53	98%	0.00	231.28	131.17	362.45
49%	0.00	115.64	65.59	181.23	99%	0.00	233.64	132.51	366.15
50%	**0.00**	**118.00**	**66.93**	**184.93**	**100%**	**0.00**	**236.00**	**133.85**	**369.85**

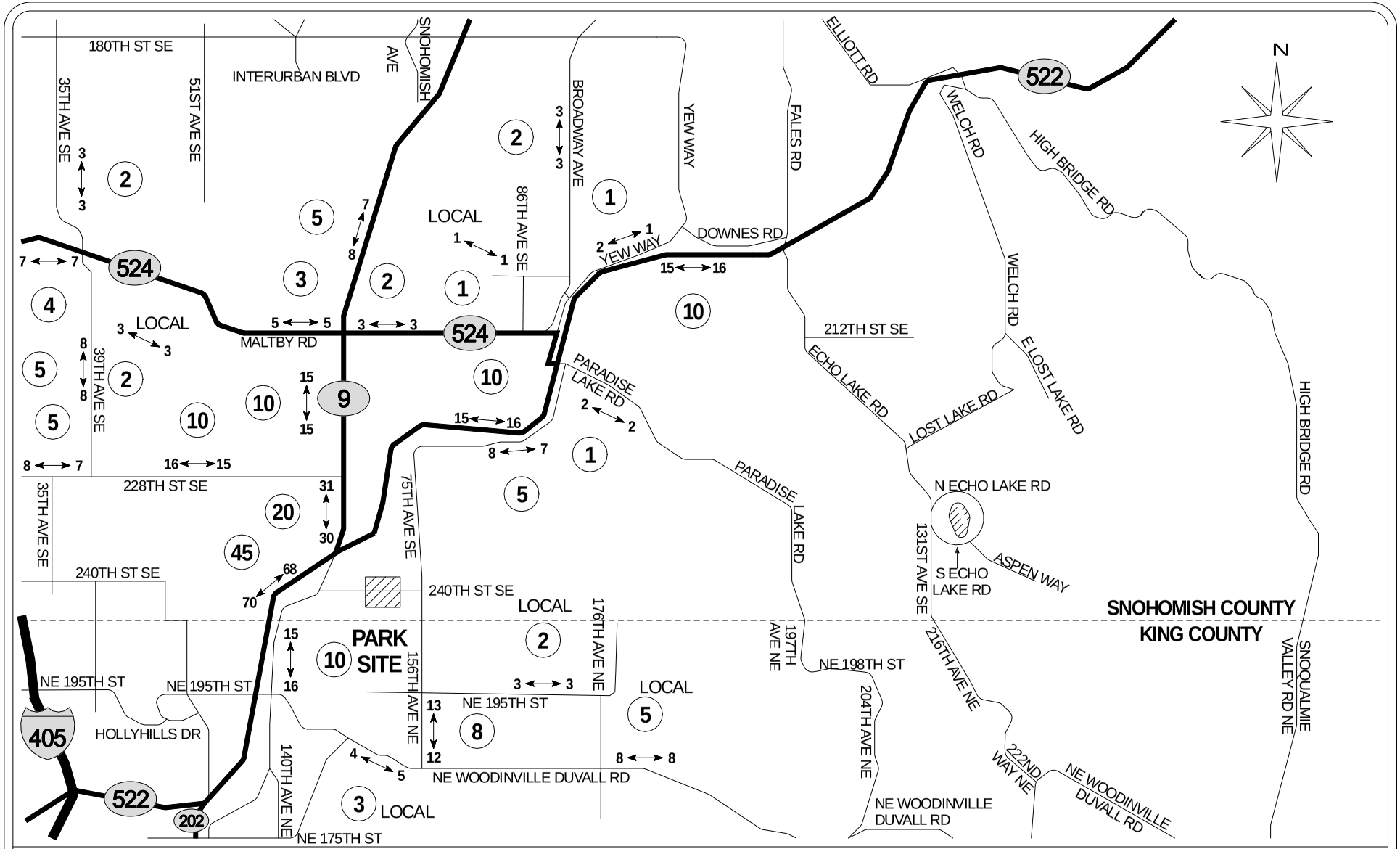
Wellington Hills County Park
GTC #12-040

Event Analysis Trip Generation

Full Build-Out

Saturday PHG

	New	New Saturday PHG				New	New Saturday PHG		
%	ADT	In	Out	Total	%	ADT	In	Out	Total
100%	0	152	155	307	100%	0	152	155	307
1%	0.00	1.52	1.55	3.07	51%	0.00	77.52	79.28	156.80
2%	0.00	3.04	3.11	6.15	52%	0.00	79.04	80.83	159.87
3%	0.00	4.56	4.66	9.22	53%	0.00	80.56	82.39	162.95
4%	0.00	6.08	6.22	12.30	54%	0.00	82.08	83.94	166.02
5%	**0.00**	**7.60**	**7.77**	**15.37**	**55%**	**0.00**	**83.60**	**85.50**	**169.10**
6%	0.00	9.12	9.33	18.45	56%	0.00	85.12	87.05	172.17
7%	0.00	10.64	10.88	21.52	57%	0.00	86.64	88.61	175.25
8%	0.00	12.16	12.44	24.60	58%	0.00	88.16	90.16	178.32
9%	0.00	13.68	13.99	27.67	59%	0.00	89.68	91.72	181.40
10%	**0.00**	**15.20**	**15.55**	**30.75**	**60%**	**0.00**	**91.20**	**93.27**	**184.47**
11%	0.00	16.72	17.10	33.82	61%	0.00	92.72	94.82	187.54
12%	0.00	18.24	18.65	36.89	62%	0.00	94.24	96.38	190.62
13%	0.00	19.76	20.21	39.97	63%	0.00	95.76	97.93	193.69
14%	0.00	21.28	21.76	43.04	64%	0.00	97.28	99.49	196.77
15%	**0.00**	**22.80**	**23.32**	**46.12**	**65%**	**0.00**	**98.80**	**101.04**	**199.84**
16%	0.00	24.32	24.87	49.19	66%	0.00	100.32	102.60	202.92
17%	0.00	25.84	26.43	52.27	67%	0.00	101.84	104.15	205.99
18%	0.00	27.36	27.98	55.34	68%	0.00	103.36	105.71	209.07
19%	0.00	28.88	29.54	58.42	69%	0.00	104.88	107.26	212.14
20%	**0.00**	**30.40**	**31.09**	**61.49**	**70%**	**0.00**	**106.40**	**108.82**	**215.22**
21%	0.00	31.92	32.64	64.56	71%	0.00	107.92	110.37	218.29
22%	0.00	33.44	34.20	67.64	72%	0.00	109.44	111.92	221.36
23%	0.00	34.96	35.75	70.71	73%	0.00	110.96	113.48	224.44
24%	0.00	36.48	37.31	73.79	74%	0.00	112.48	115.03	227.51
25%	**0.00**	**38.00**	**38.86**	**76.86**	**75%**	**0.00**	**114.00**	**116.59**	**230.59**
26%	0.00	39.52	40.42	79.94	76%	0.00	115.52	118.14	233.66
27%	0.00	41.04	41.97	83.01	77%	0.00	117.04	119.70	236.74
28%	0.00	42.56	43.53	86.09	78%	0.00	118.56	121.25	239.81
29%	0.00	44.08	45.08	89.16	79%	0.00	120.08	122.81	242.89
30%	**0.00**	**45.60**	**46.64**	**92.24**	**80%**	**0.00**	**121.60**	**124.36**	**245.96**
31%	0.00	47.12	48.19	95.31	81%	0.00	123.12	125.91	249.03
32%	0.00	48.64	49.74	98.38	82%	0.00	124.64	127.47	252.11
33%	0.00	50.16	51.30	101.46	83%	0.00	126.16	129.02	255.18
34%	0.00	51.68	52.85	104.53	84%	0.00	127.68	130.58	258.26
35%	**0.00**	**53.20**	**54.41**	**107.61**	**85%**	**0.00**	**129.20**	**132.13**	**261.33**
36%	0.00	54.72	55.96	110.68	86%	0.00	130.72	133.69	264.41
37%	0.00	56.24	57.52	113.76	87%	0.00	132.24	135.24	267.48
38%	0.00	57.76	59.07	116.83	88%	0.00	133.76	136.80	270.56
39%	0.00	59.28	60.63	119.91	89%	0.00	135.28	138.35	273.63
40%	**0.00**	**60.80**	**62.18**	**122.98**	**90%**	**0.00**	**136.80**	**139.91**	**276.71**
41%	0.00	62.32	63.73	126.05	91%	0.00	138.32	141.46	279.78
42%	0.00	63.84	65.29	129.13	92%	0.00	139.84	143.01	282.85
43%	0.00	65.36	66.84	132.20	93%	0.00	141.36	144.57	285.93
44%	0.00	66.88	68.40	135.28	94%	0.00	142.88	146.12	289.00
45%	**0.00**	**68.40**	**69.95**	**138.35**	**95%**	**0.00**	**144.40**	**147.68**	**292.08**
46%	0.00	69.92	71.51	141.43	96%	0.00	145.92	149.23	295.15
47%	0.00	71.44	73.06	144.50	97%	0.00	147.44	150.79	298.23
48%	0.00	72.96	74.62	147.58	98%	0.00	148.96	152.34	301.30
49%	0.00	74.48	76.17	150.65	99%	0.00	150.48	153.90	304.38
50%	**0.00**	**76.00**	**77.73**	**153.73**	**100%**	**0.00**	**152.00**	**155.45**	**307.45**



GIBSON TRAFFIC CONSULTANTS

TRAFFIC IMPACT STUDY
GTC #12-040

WELLINGTON HILLS COUNTY PARK

SNOHOMISH COUNTY

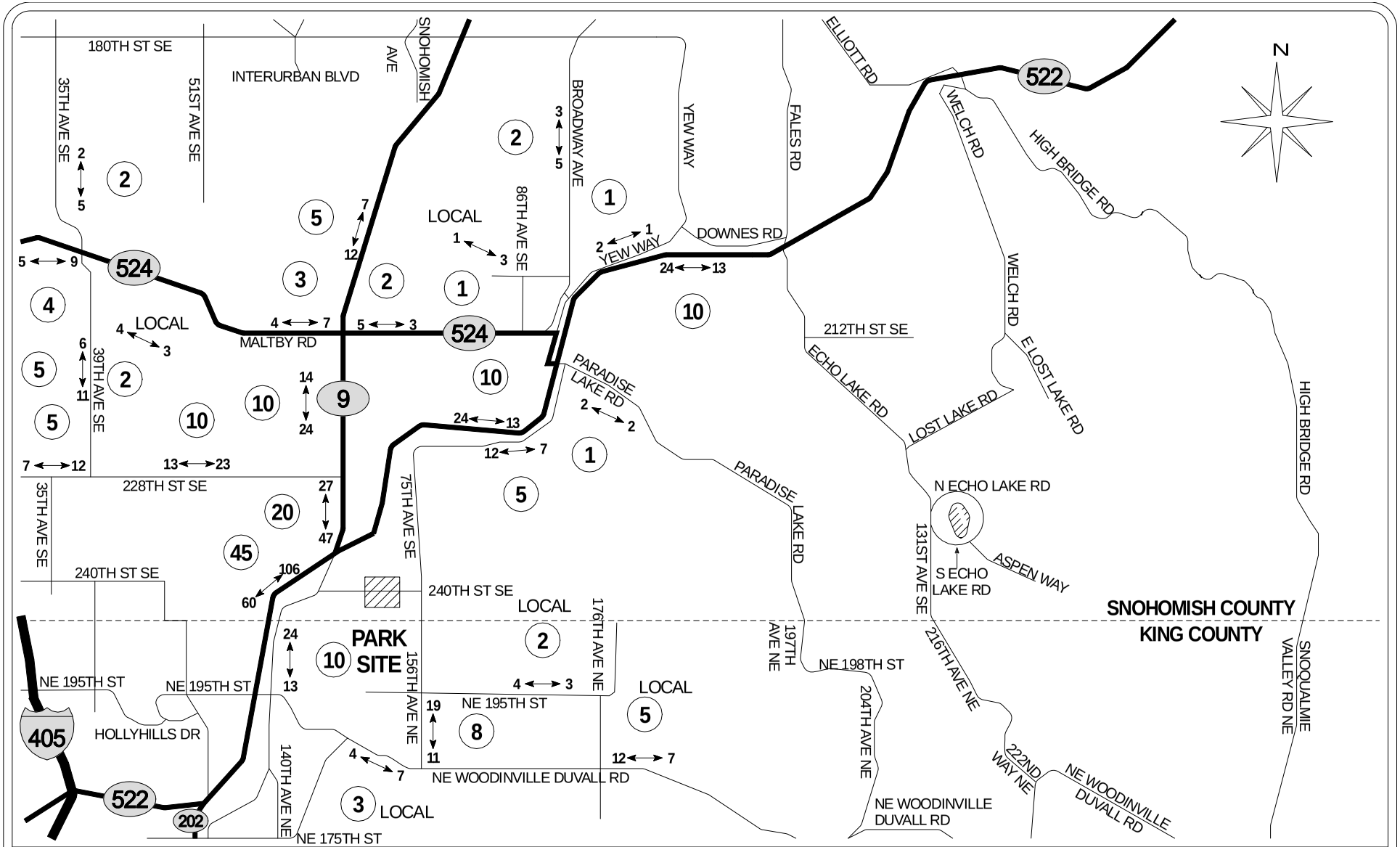
LEGEND

SAT ◄——► PEAK — NEW SITE TRAFFIC (PEAK-HOUR GENERATOR)

(25) — TRIP DISTRIBUTION %

EVENT

PARK FULL BUILD-OUT
TRIP DISTRIBUTION
SATURDAY PEAK-HOUR



GIBSON TRAFFIC CONSULTANTS

TRAFFIC IMPACT STUDY
GTC #12-040

WELLINGTON HILLS COUNTY PARK

SNOHOMISH COUNTY

LEGEND

AWDT
PM ⟷ PEAK — NEW SITE TRAFFIC (DAILY/PEAK HOUR)

(25) — TRIP DISTRIBUTION %

EVENT

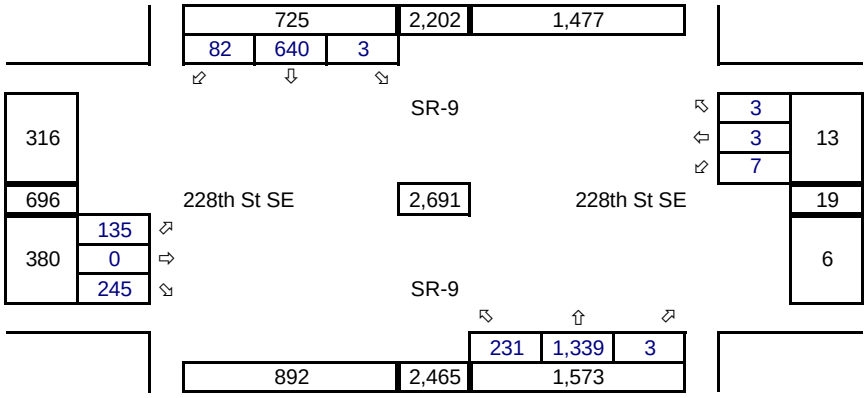
PARK FULL BUILD-OUT
TRIP DISTRIBUTION
WEEKDAY PM PEAK

Synchro ID: 1

Existing
Event Weekday
PM Peak Hour

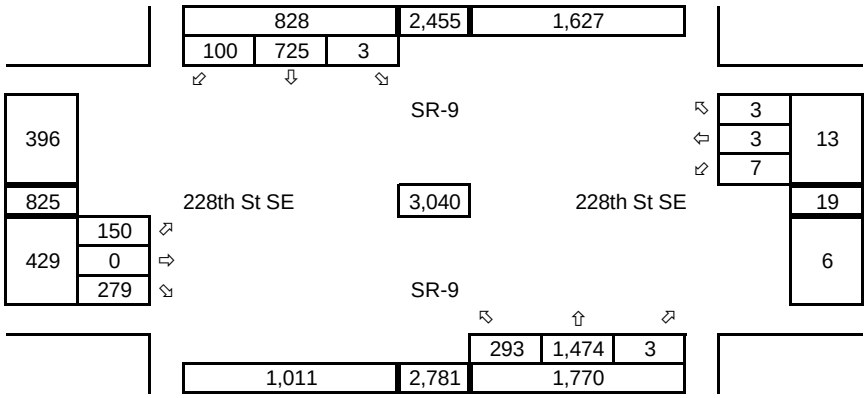
Year: **3/17/11**

Data Source: TDG

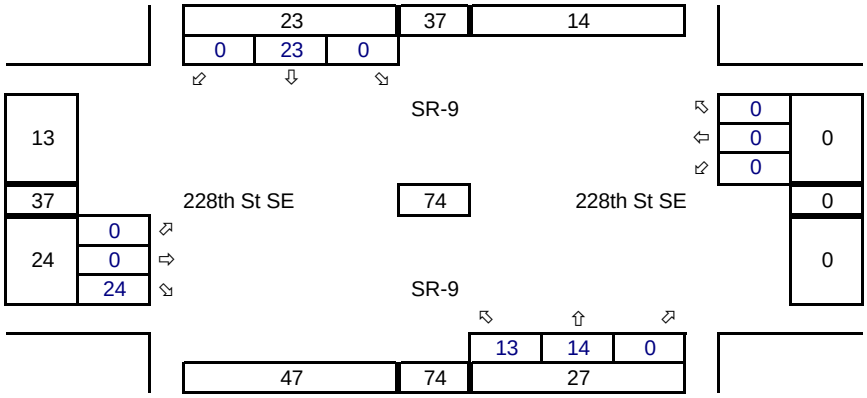


Future without Project
Event Weekday
PM Peak Hour

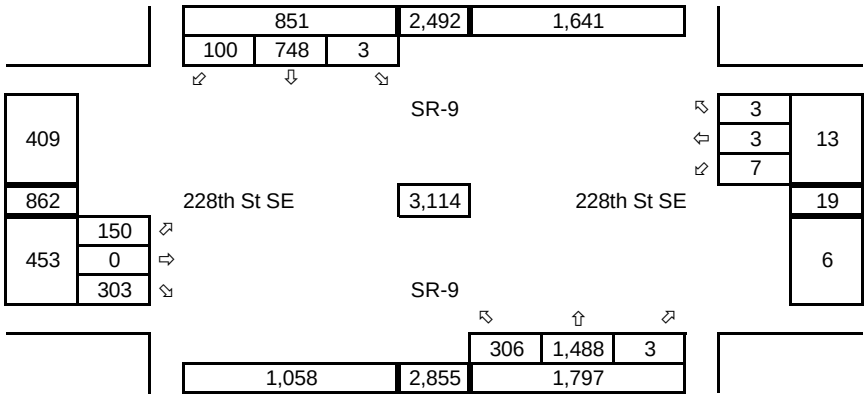
Year: 2019
Growth Rate = 0.0%
Years of Growth = 8
Total Growth = 1.0000



Total Project Trips
Event Weekday
PM Peak Hour

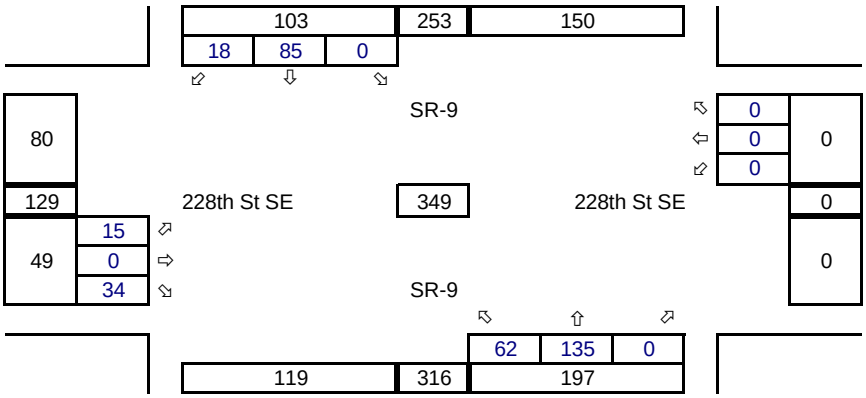


Future with Project
Event Weekday
PM Peak Hour

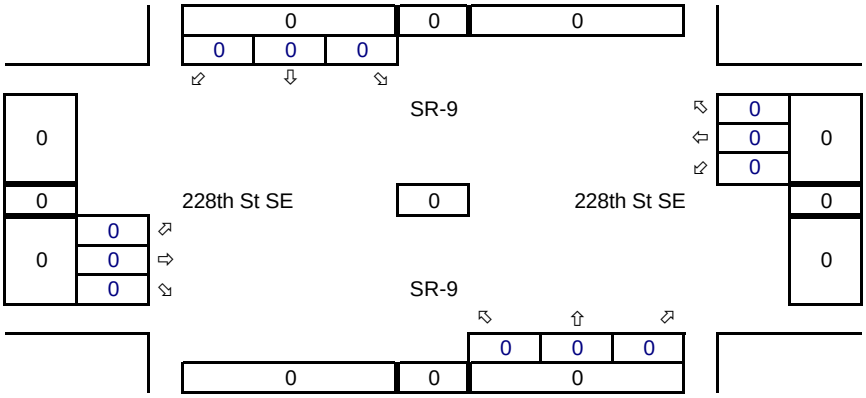


Total Pipeline Project Trips
Event Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Event Weekday
PM Peak Hour

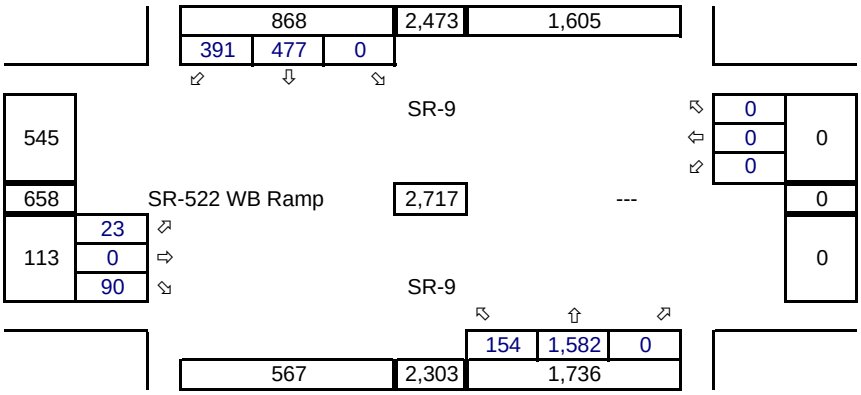


Synchro ID: 2

Existing
Event Weekday
PM Peak Hour

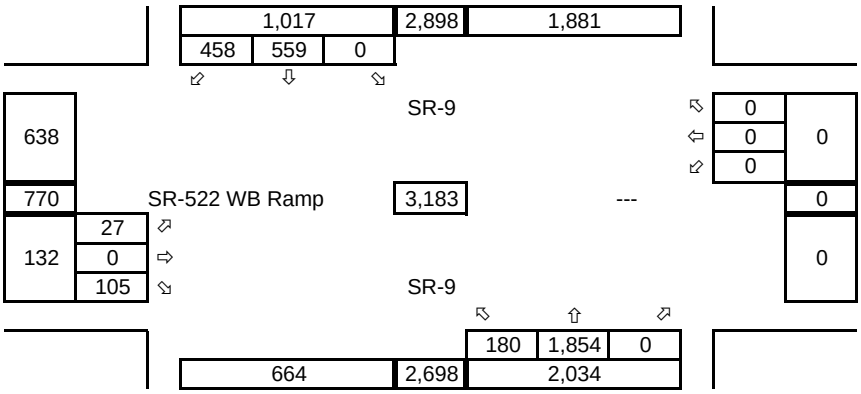
Year: **3/17/11**

Data Source: TDG

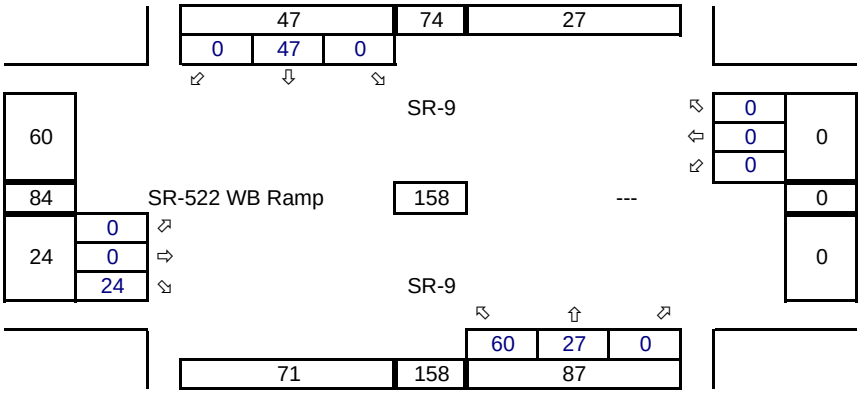


Future without Project
Event Weekday
PM Peak Hour

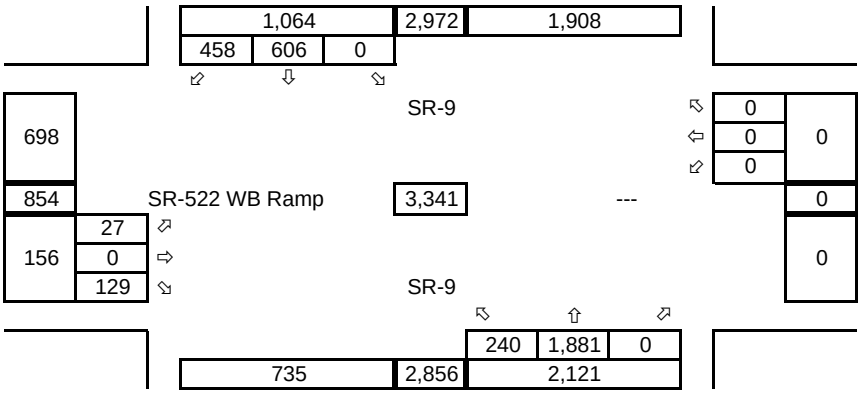
Year: 2019
Growth Rate = 2.0%
Years of Growth = 8
Total Growth = 1.1717



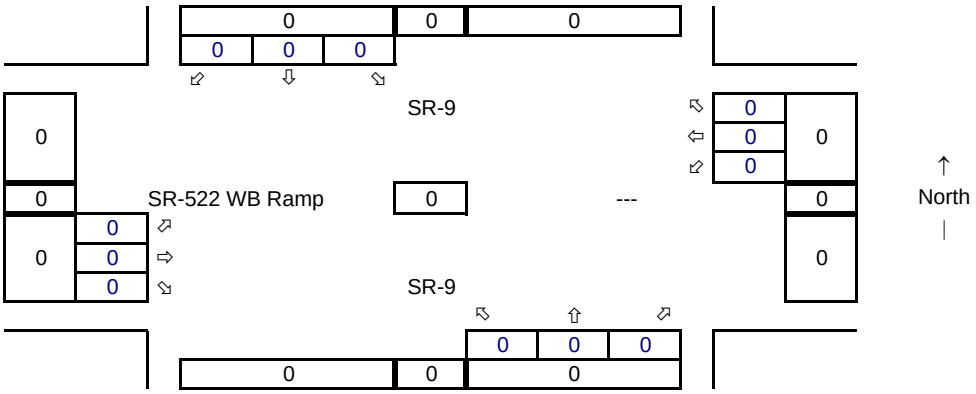
Total Project Trips
Event Weekday
PM Peak Hour



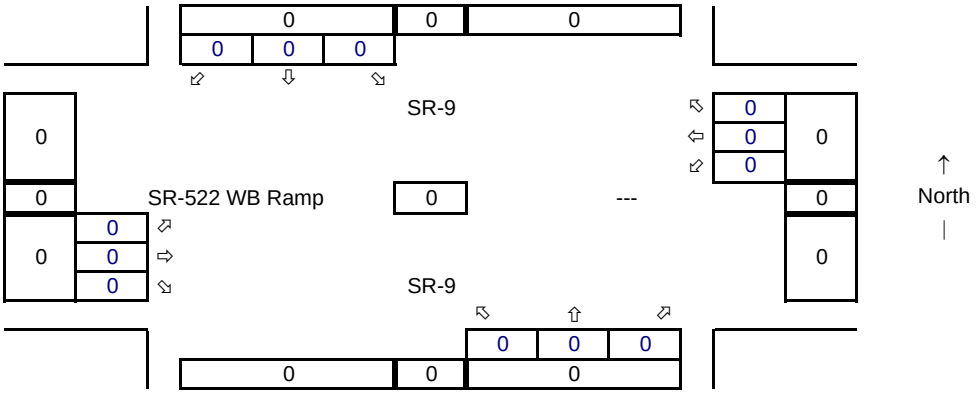
Future with Project
Event Weekday
PM Peak Hour



Total Pipeline Project Trips
Event Weekday
PM Peak Hour



Pass-By Project Trips
Event Weekday
PM Peak Hour

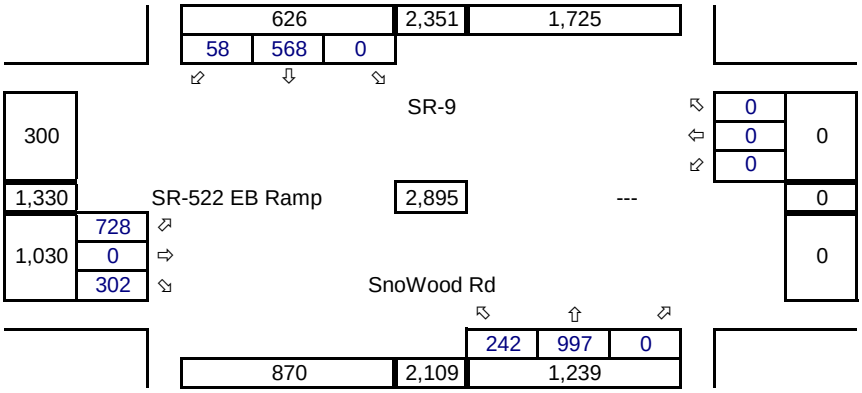


Synchro ID: 3

Existing
Event Weekday
PM Peak Hour

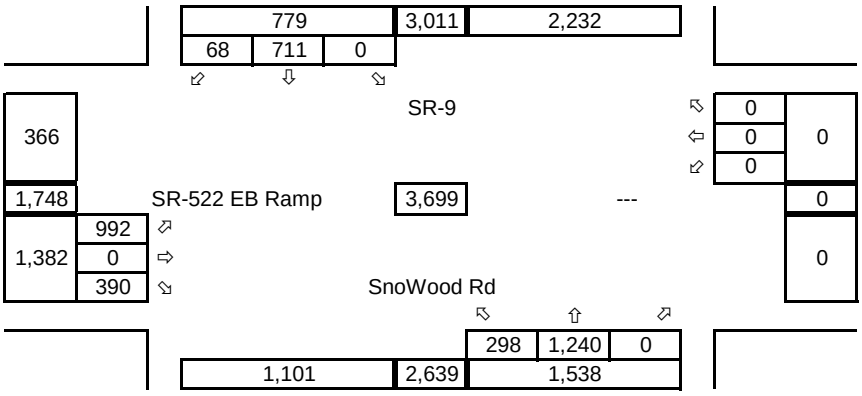
Year: **6/1/11**

Data Source: WSDOT

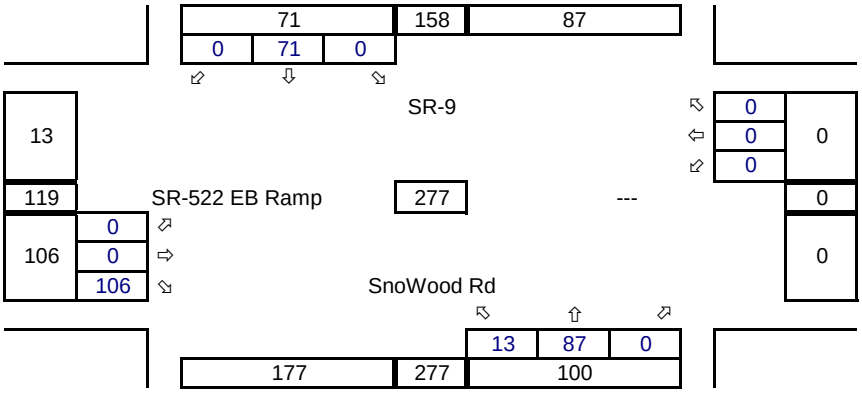


Future without Project
Event Weekday
PM Peak Hour

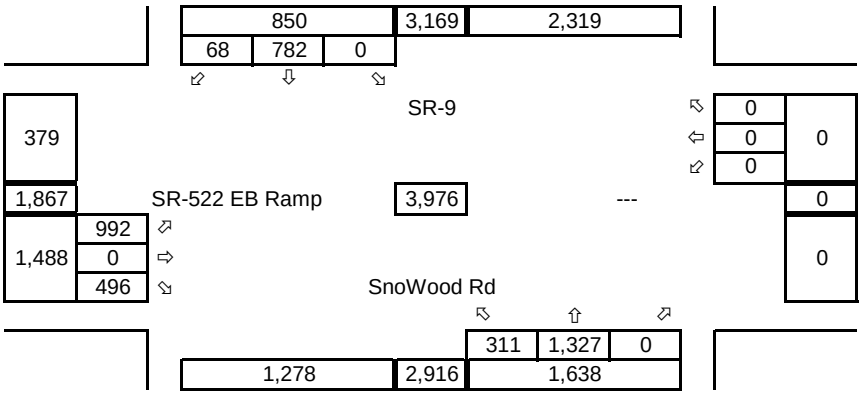
Year: 2019
Growth Rate = 0.0%
Years of Growth = 8
Total Growth = 1.0000



Total Project Trips
Event Weekday
PM Peak Hour

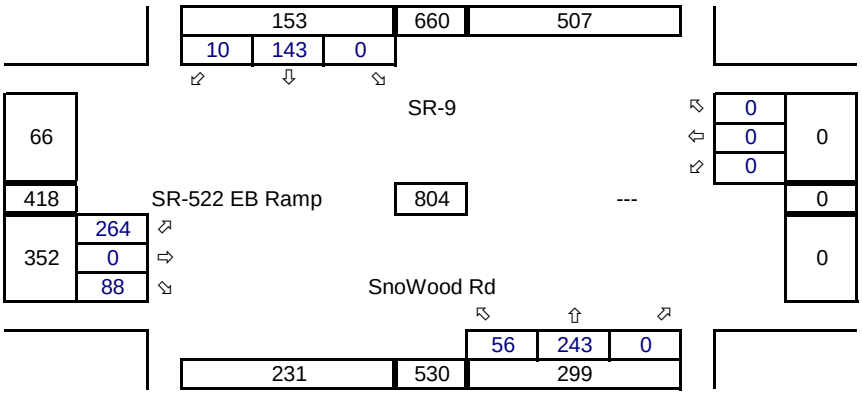


Future with Project
Event Weekday
PM Peak Hour



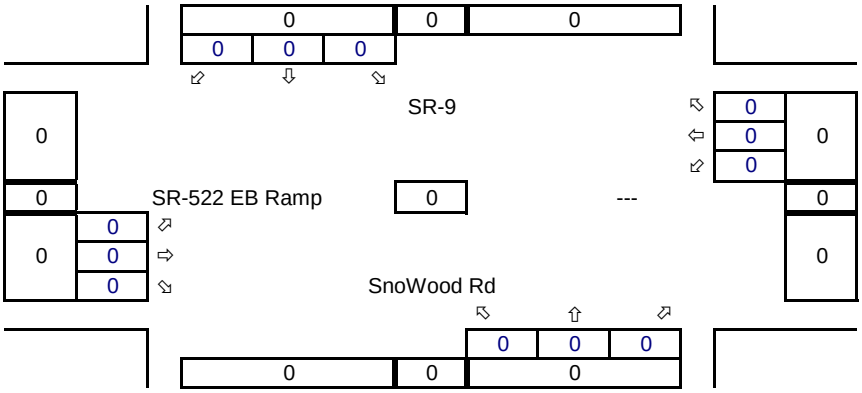
Total Pipeline Project Trips
Event Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



North

Pass-By Project Trips
Event Weekday
PM Peak Hour



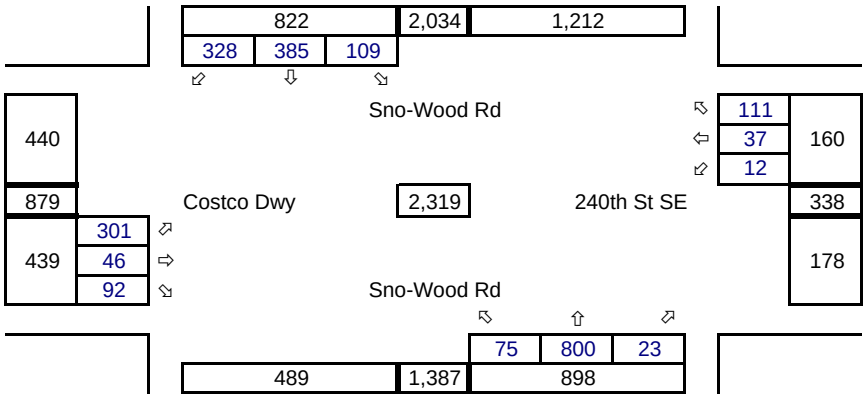
North

Synchro ID: 4

Existing
Event Weekday
PM Peak Hour

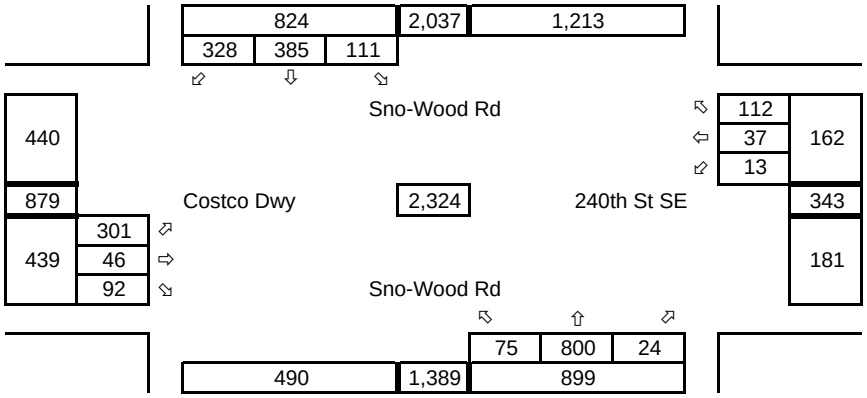
Year: **3/22/12**

Data Source: Sno County

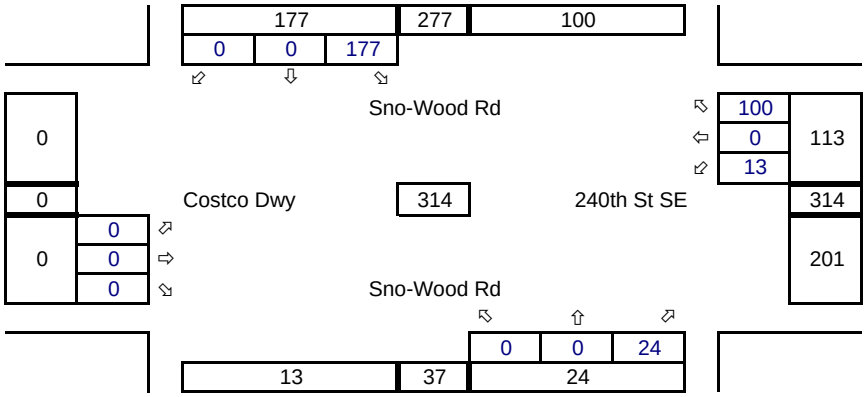


Future without Project
Event Weekday
PM Peak Hour

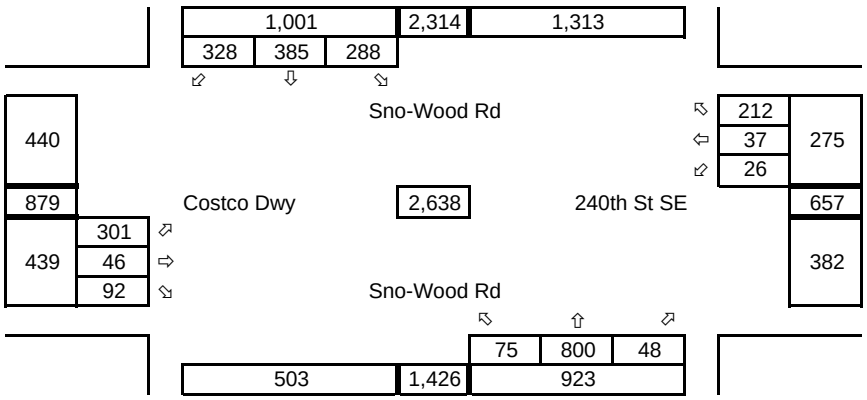
Year: 2019
Growth Rate = 0.0%
Years of Growth = 7
Total Growth = 1.0000



Total Project Trips
Event Weekday
PM Peak Hour

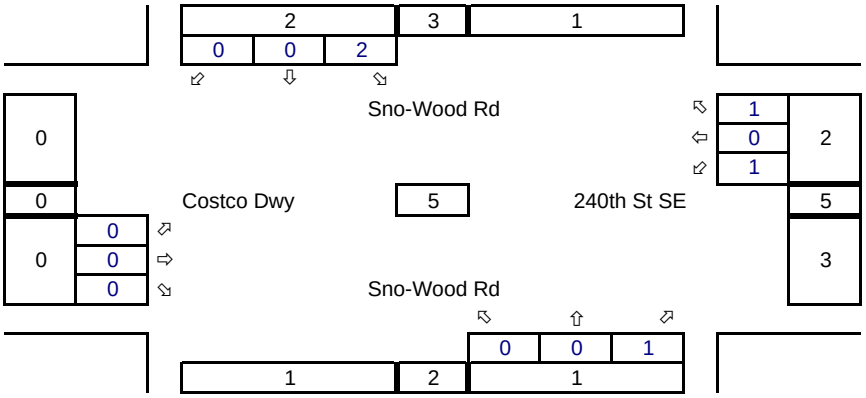


Future with Project
Event Weekday
PM Peak Hour

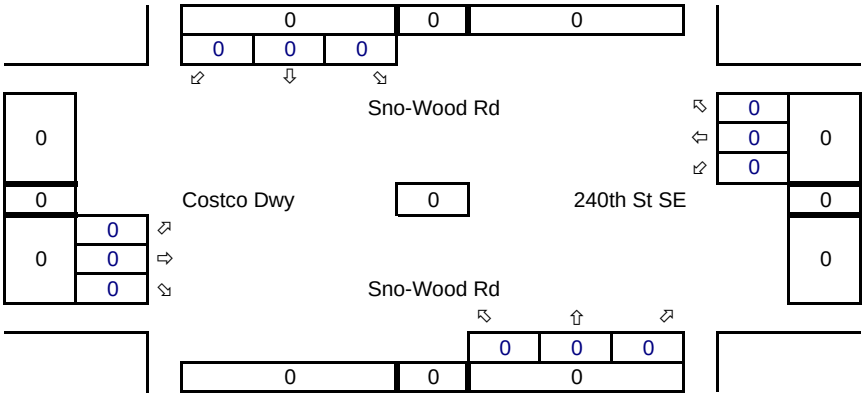


Total Pipeline Project Trips
Event Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Event Weekday
PM Peak Hour

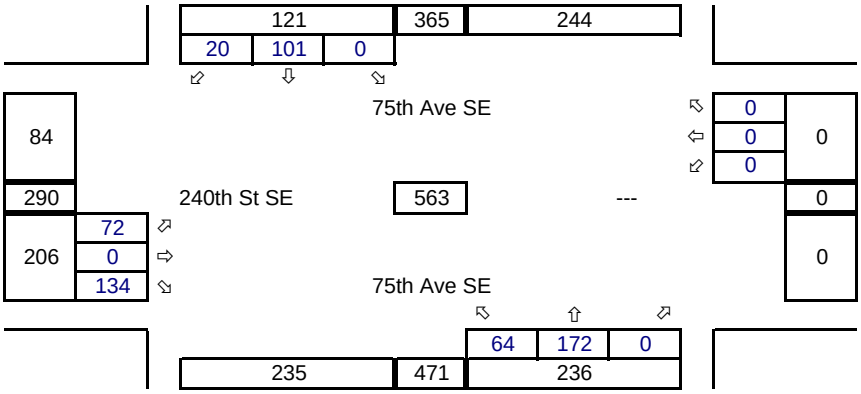


Synchro ID: 5

Existing
Event Weekday
PM Peak Hour

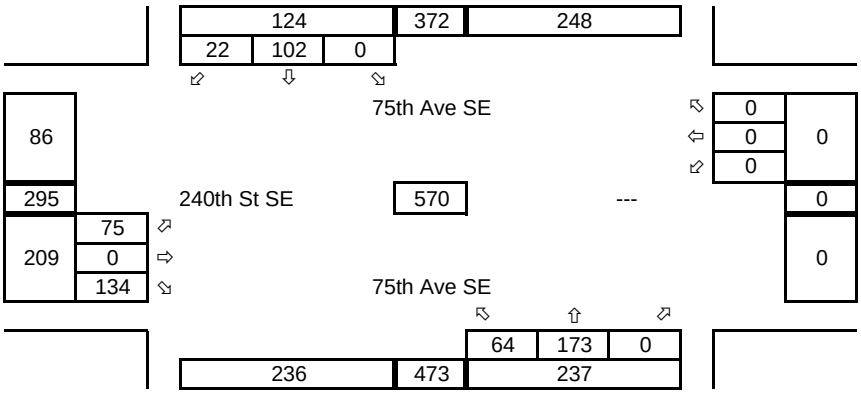
Year: **3/27/12**

Data Source: Sno County

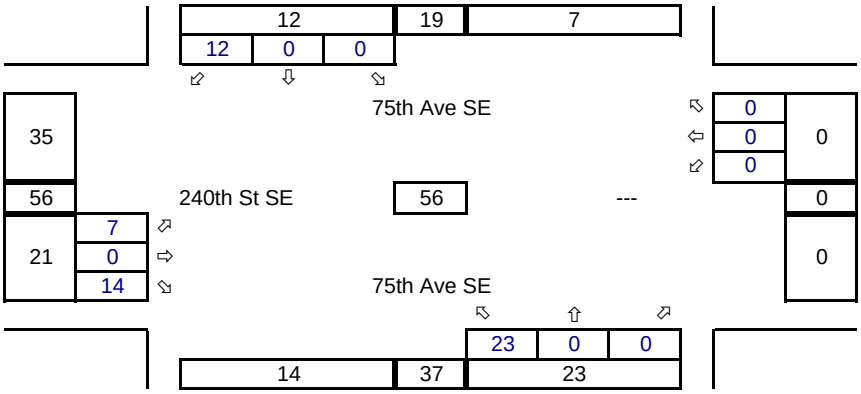


Future without Project
Event Weekday
PM Peak Hour

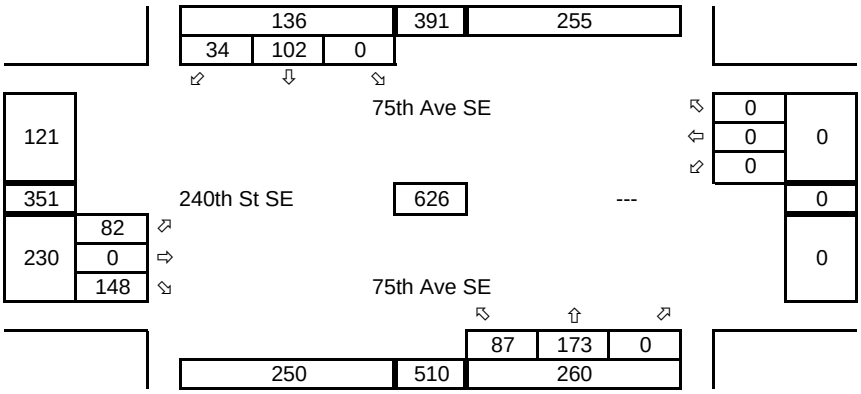
Year: 2019
Growth Rate = 0.0%
Years of Growth = 7
Total Growth = 1.0000



Total Project Trips
Event Weekday
PM Peak Hour

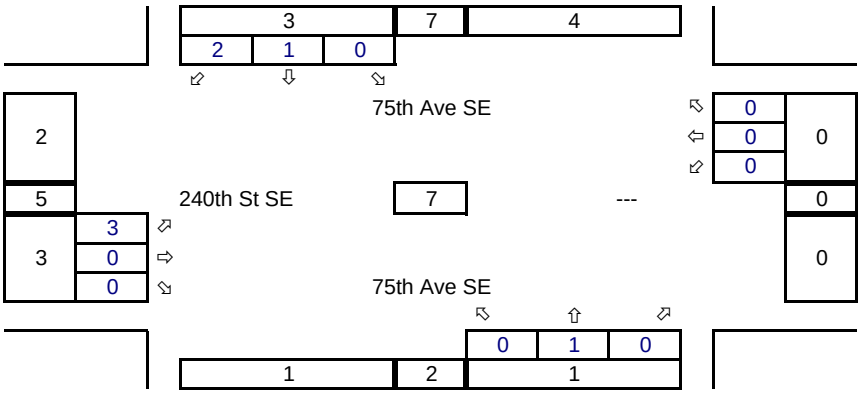


Future with Project
Event Weekday
PM Peak Hour

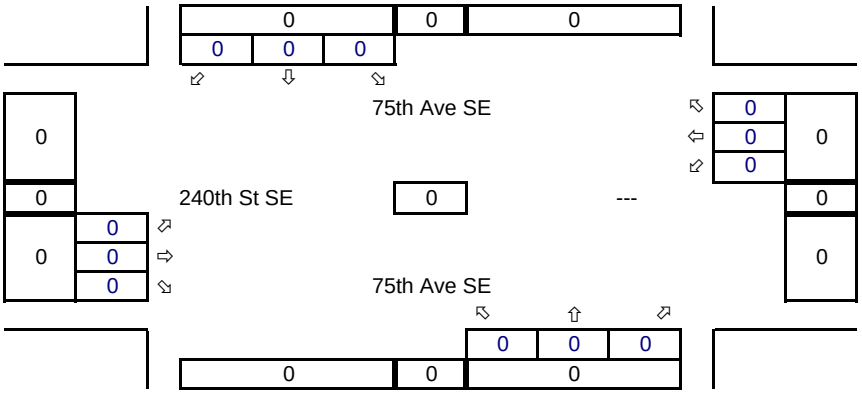


Total Pipeline Project Trips
Event Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Event Weekday
PM Peak Hour

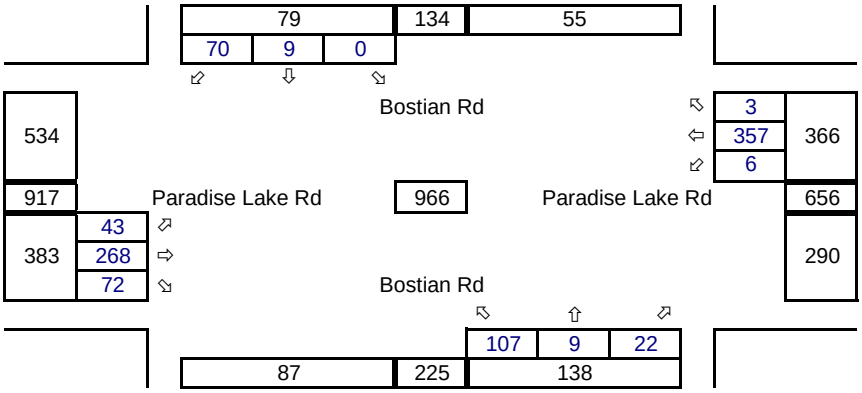


Synchro ID: 6

Existing
Event Weekday
PM Peak Hour

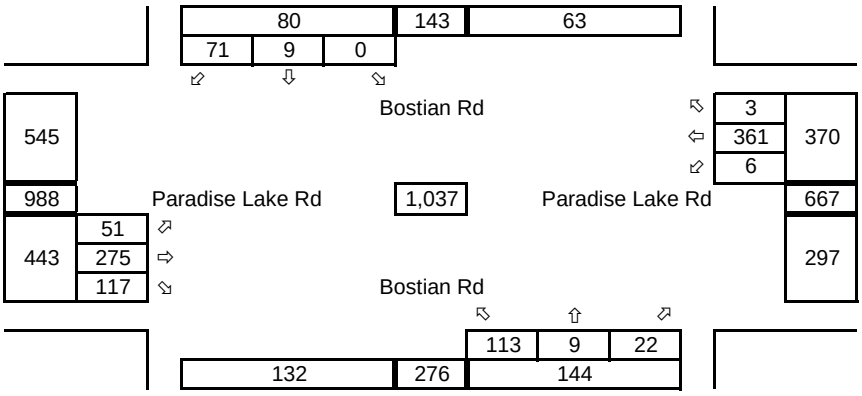
Year: **6/13/12**

Data Source: TDG

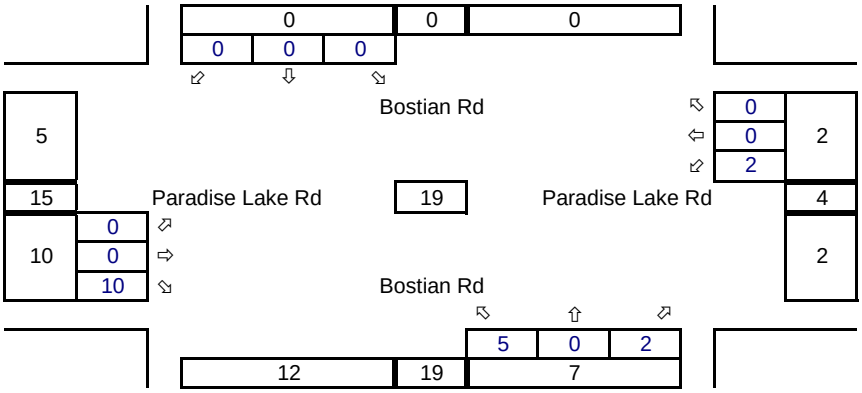


Future without Project
Event Weekday
PM Peak Hour

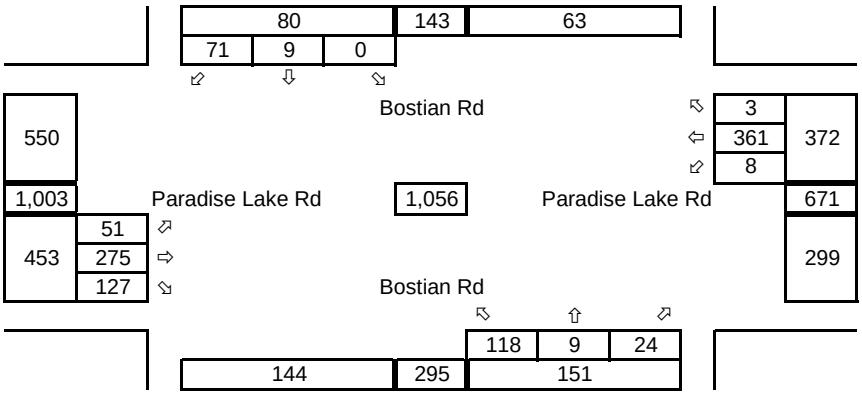
Year: 2019
Growth Rate = 0.0%
Years of Growth = 7
Total Growth = 1.0000



Total Project Trips
Event Weekday
PM Peak Hour

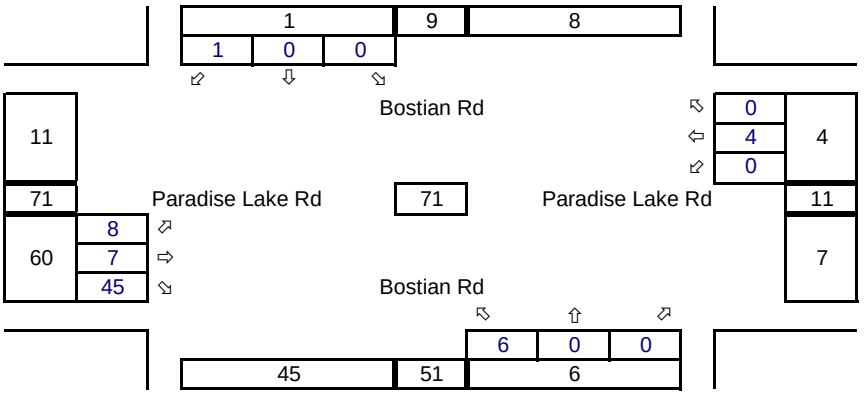


Future with Project
Event Weekday
PM Peak Hour

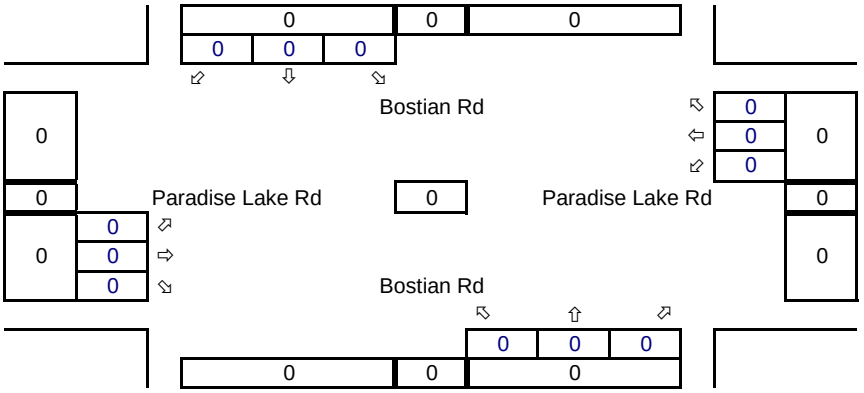


Total Pipeline Project Trips
Event Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Event Weekday
PM Peak Hour

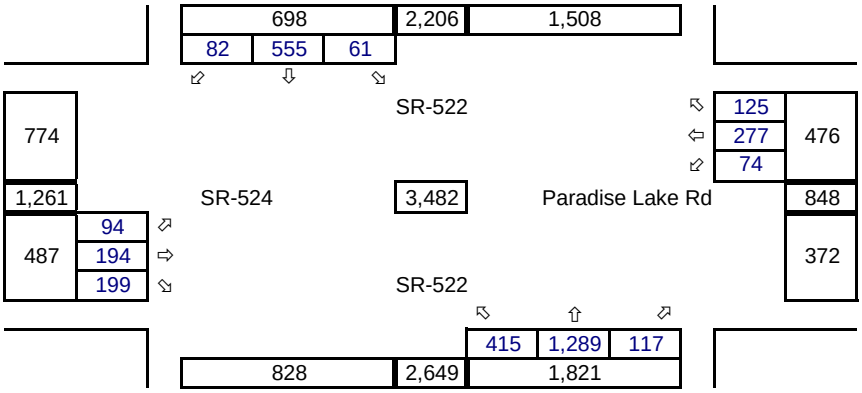


Synchro ID: 7

Existing
Event Weekday
PM Peak Hour

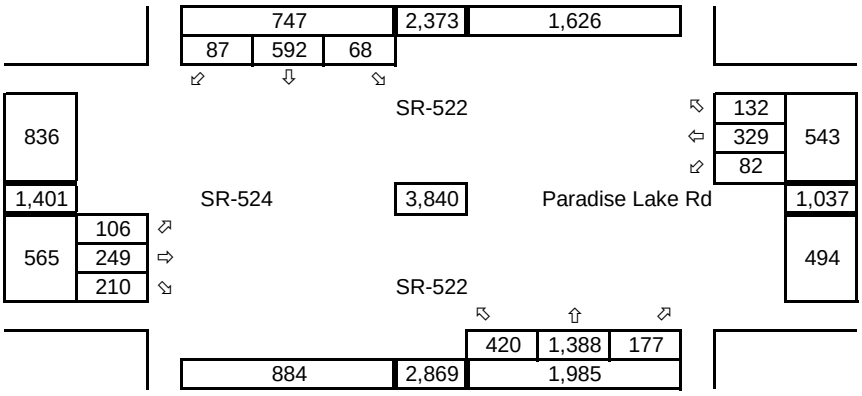
Year: **6/28/12**

Data Source: TDG

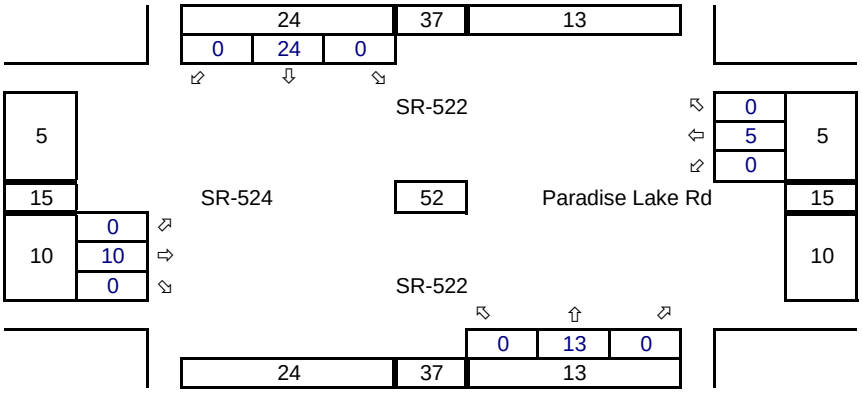


Future without Project
Event Weekday
PM Peak Hour

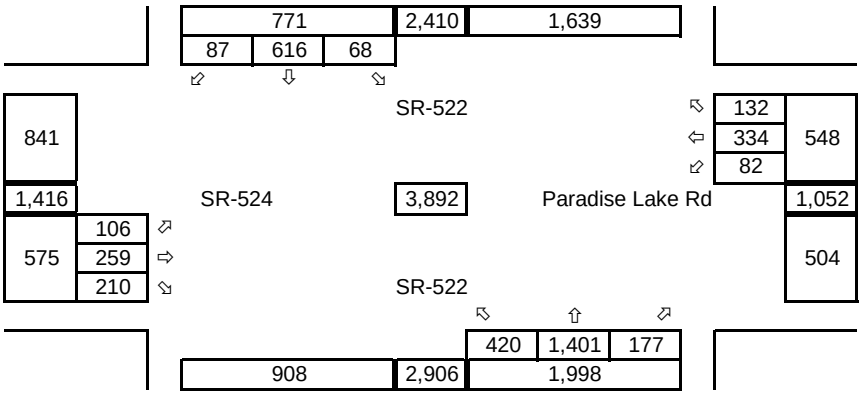
Year: 2019
Growth Rate = 0.0%
Years of Growth = 7
Total Growth = 1.0000



Total Project Trips
Event Weekday
PM Peak Hour

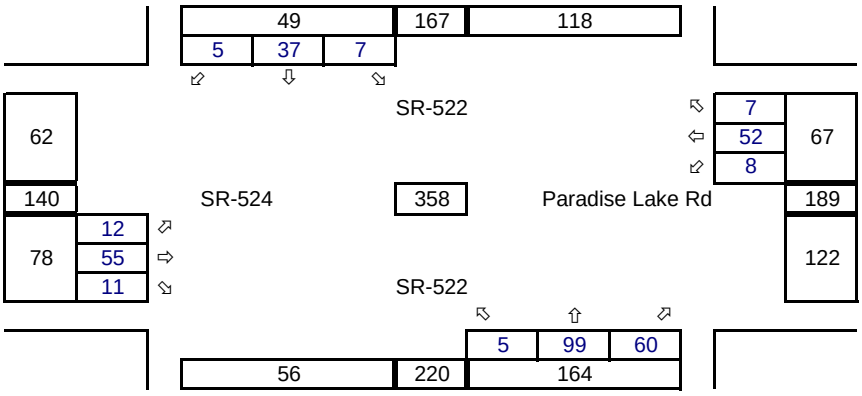


Future with Project
Event Weekday
PM Peak Hour

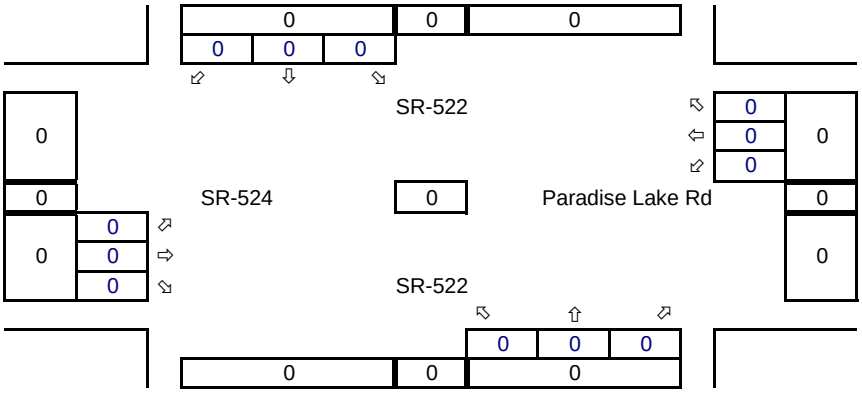


Total Pipeline Project Trips
Event Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Event Weekday
PM Peak Hour

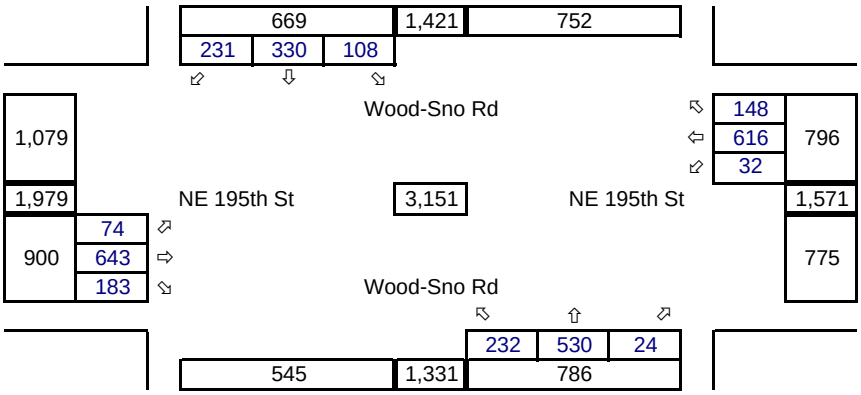


Synchro ID: 8

Existing
Event Weekday
PM Peak Hour

Year: **3/27/12**

Data Source: ATD

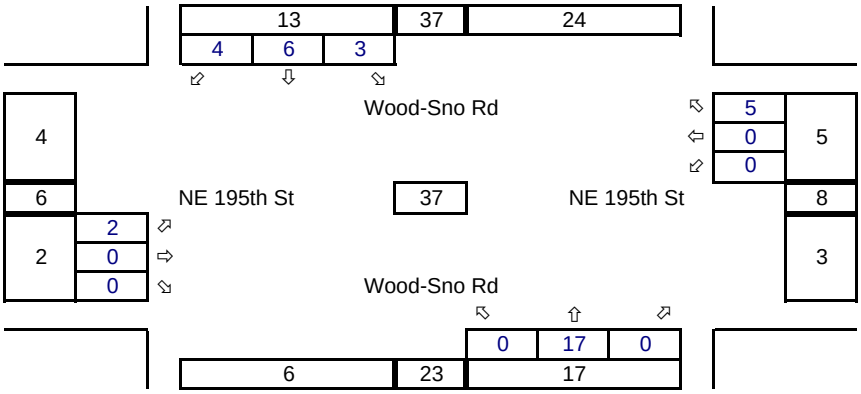


Future without Project
Event Weekday
PM Peak Hour

Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487

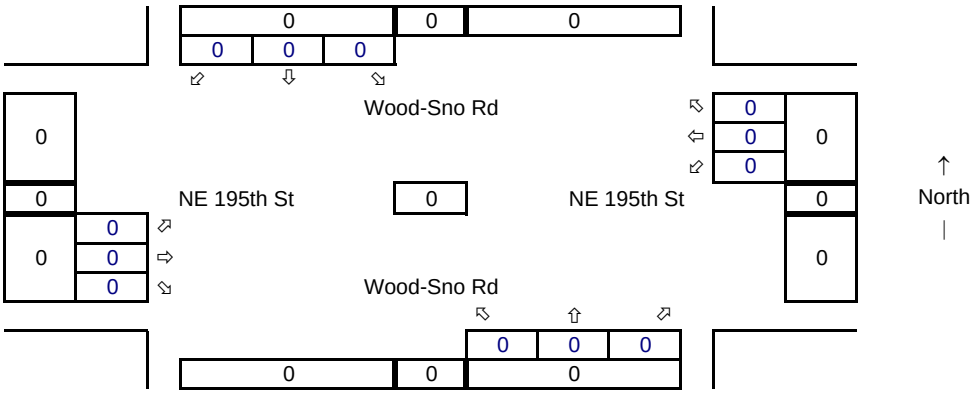
Total Project Trips
Event Weekday
PM Peak Hour

Based on Existing
Intersection Splits

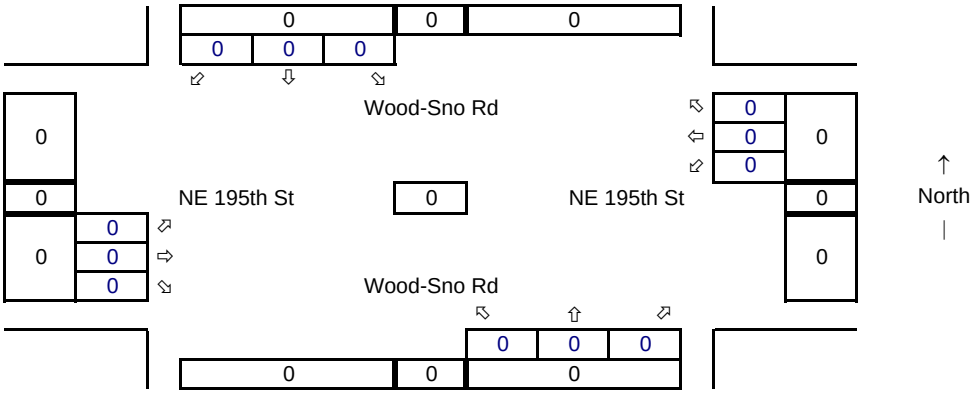


Future with Project
Event Weekday
PM Peak Hour

Total Pipeline Project Trips
Event Weekday
PM Peak Hour



Pass-By Project Trips
Event Weekday
PM Peak Hour

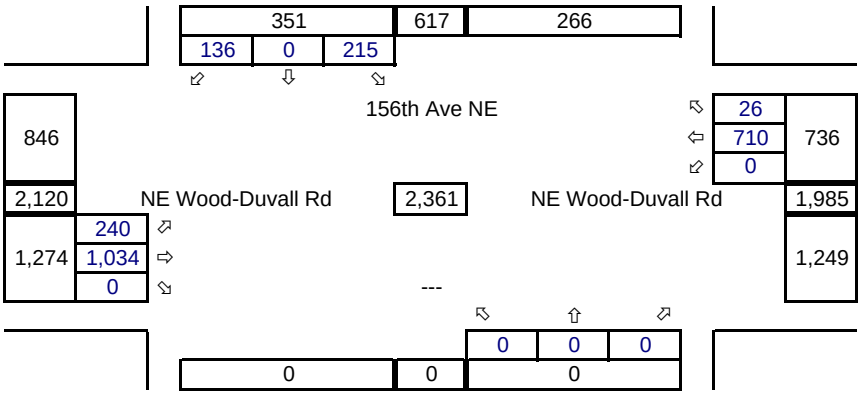


Synchro ID: 9

Existing
Event Weekday
PM Peak Hour

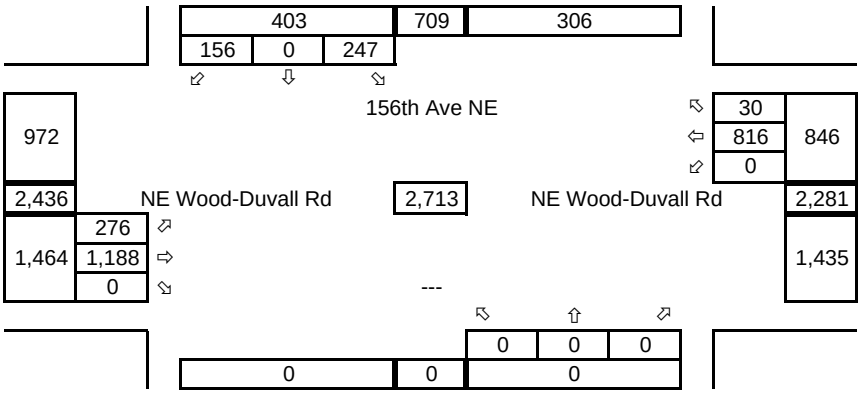
Year: **8/21/12**

Data Source: TDG

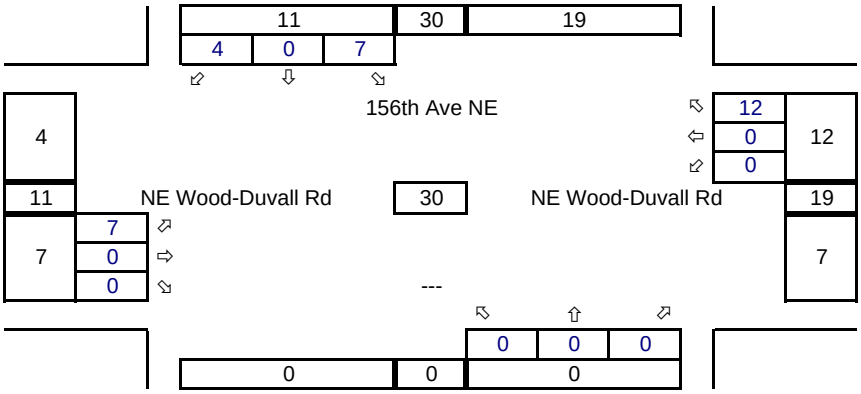


Future without Project
Event Weekday
PM Peak Hour

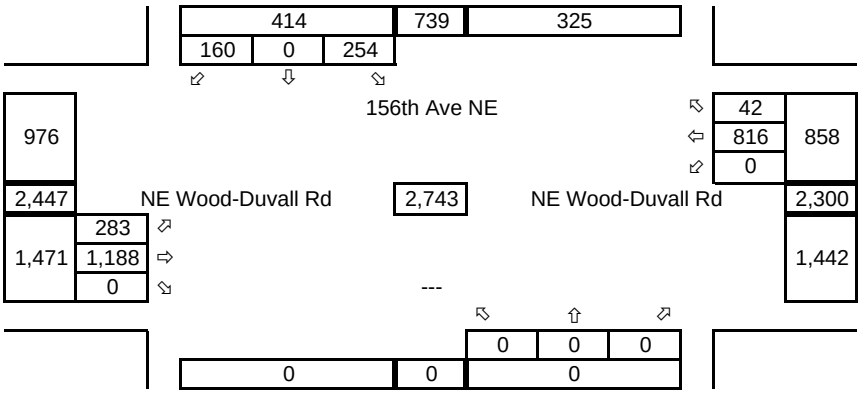
Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487



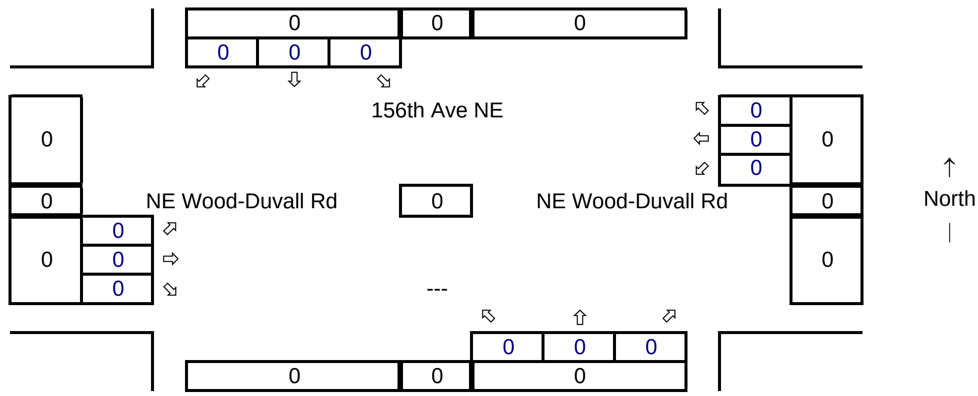
Total Project Trips
Event Weekday
PM Peak Hour



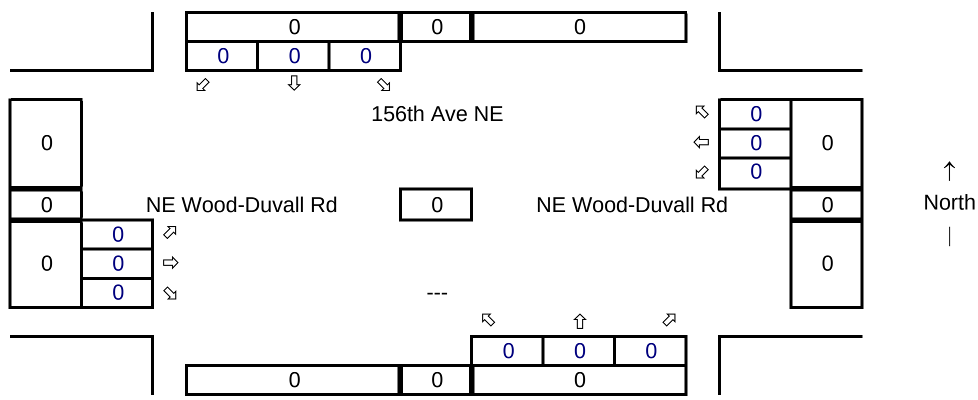
Future with Project
Event Weekday
PM Peak Hour



Total Pipeline Project Trips
Event Weekday
PM Peak Hour



Pass-By Project Trips
Event Weekday
PM Peak Hour



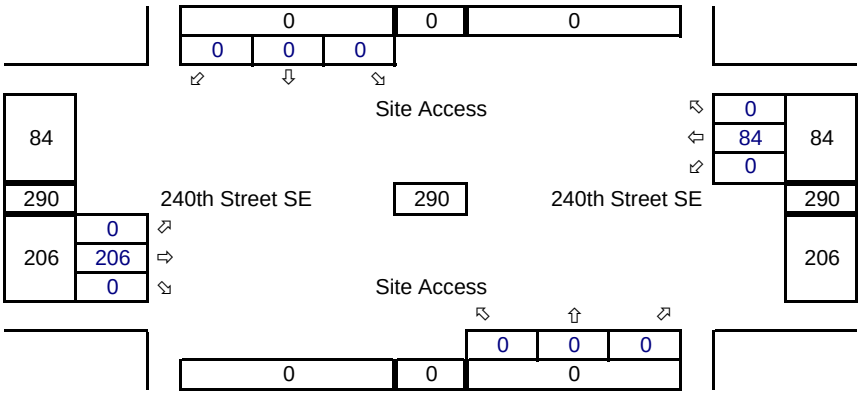
Synchro ID: 10

Existing
Event Weekday
PM Peak Hour

Year: **3/27/12**

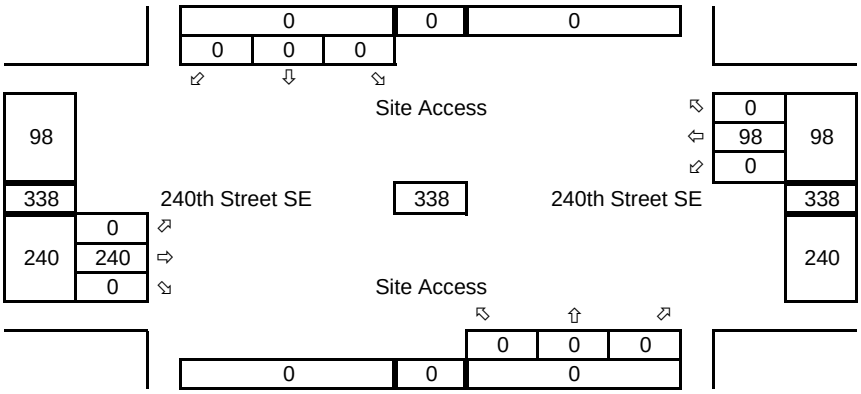
Data Source: Sno County

Extrapolated from:
75th Ave SE at 240th St SE



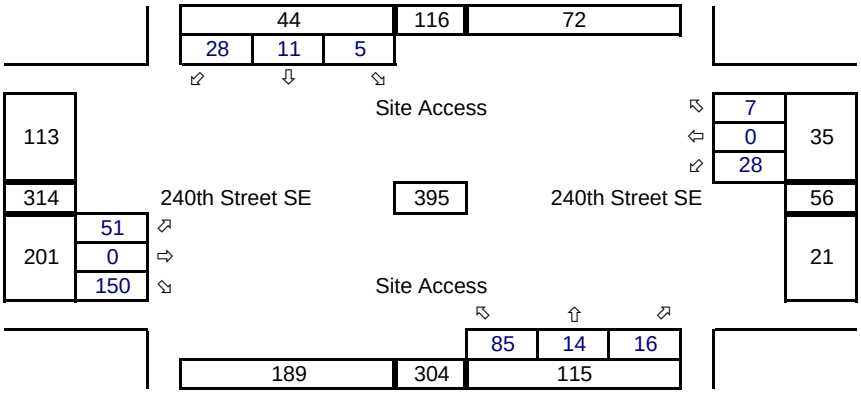
Future without Project
Event Weekday
PM Peak Hour

Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487

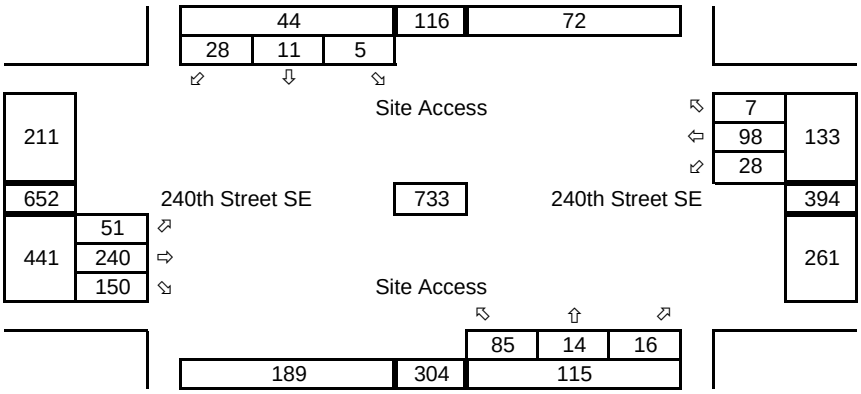


Total Project Trips
Event Weekday
PM Peak Hour

Dummy Trips Golf
Northbound 14
Southbound 11

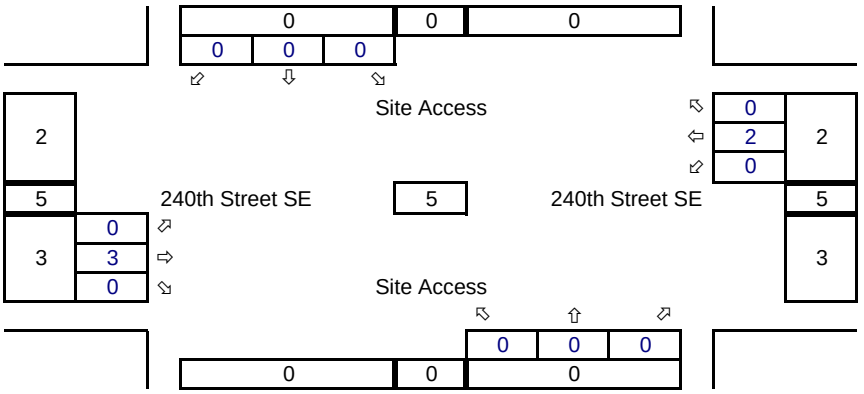


Future with Project
Event Weekday
PM Peak Hour

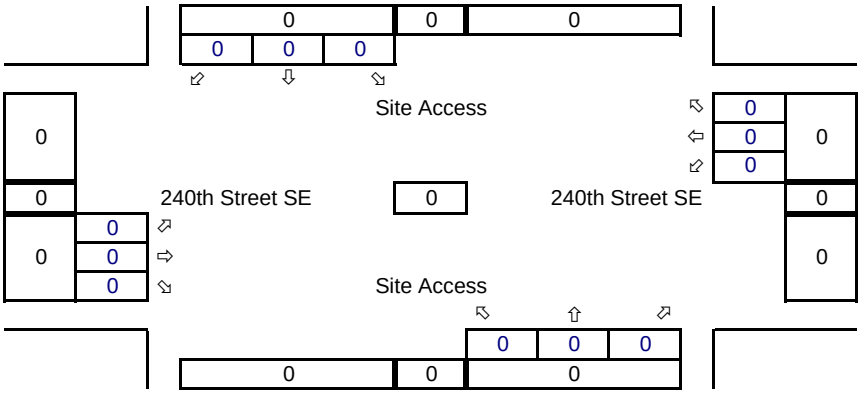


Total Pipeline Project Trips
Event Weekday
PM Peak Hour

Pipeline Data Date
October 1, 2013



Pass-By Project Trips
Event Weekday
PM Peak Hour

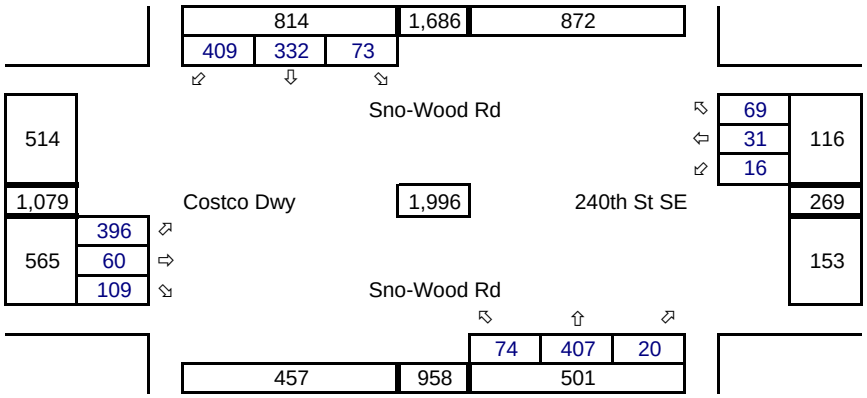


Synchro ID: 4

Existing
Event Saturday
PM Peak Hour

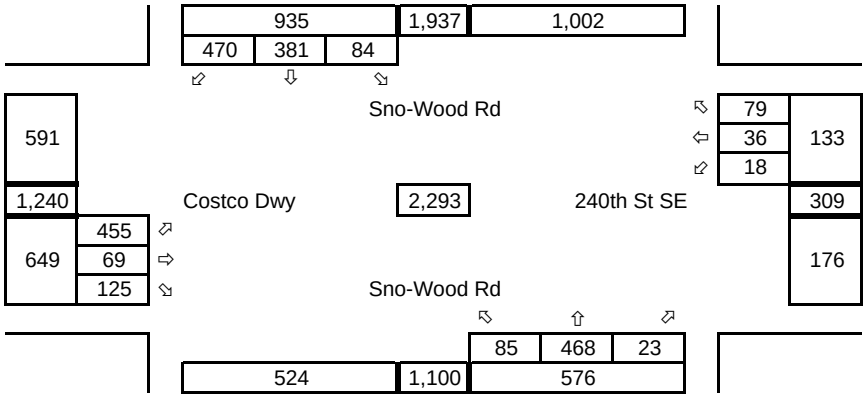
Year: **4/14/12**

Data Source: Sno County

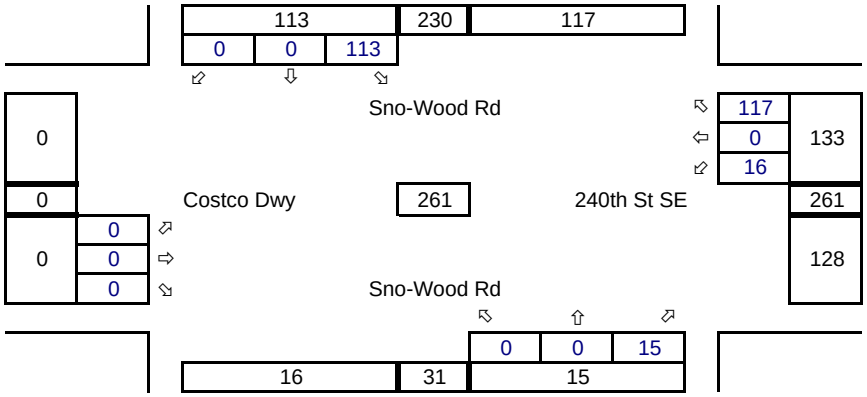


Future without Project
Event Saturday
PM Peak Hour

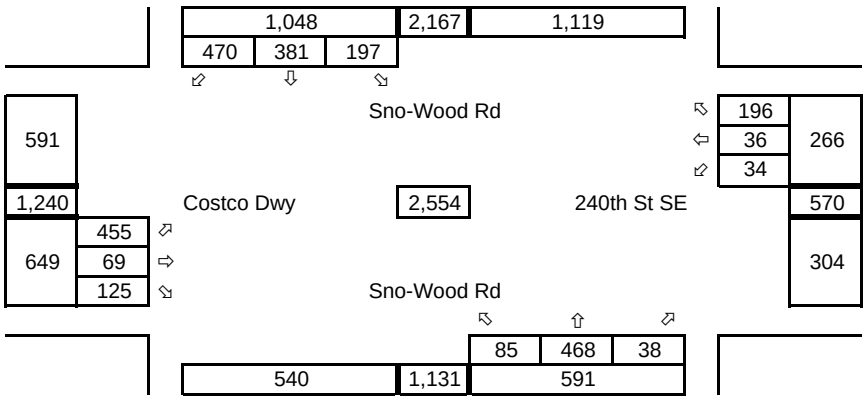
Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487



Total Project Trips
Event Saturday
PM Peak Hour



Future with Project
Event Saturday
PM Peak Hour

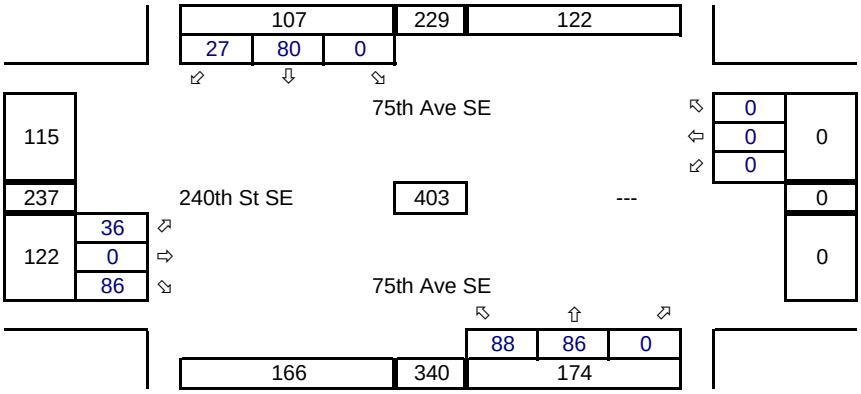


Synchro ID: 5

Existing
Event Saturday
PM Peak Hour

Year: **6/23/12**

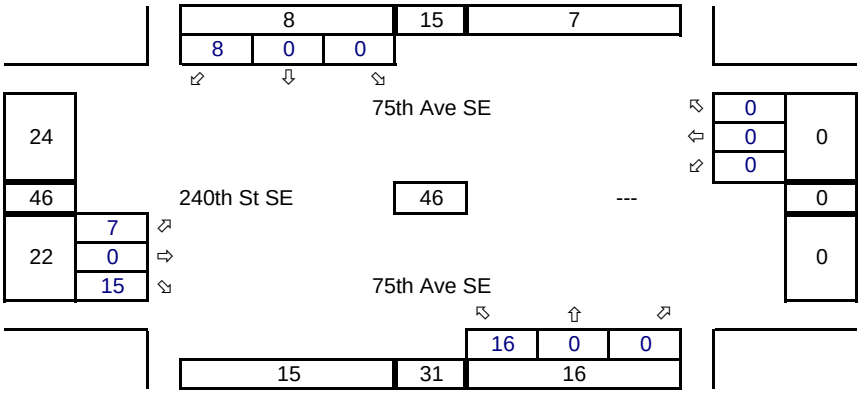
Data Source: TDG



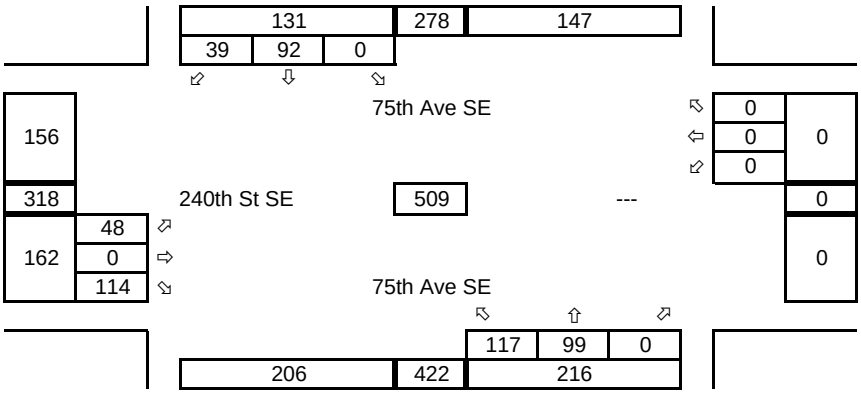
Future without Project
Event Saturday
PM Peak Hour

Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487

Total Project Trips
Event Saturday
PM Peak Hour



Future with Project
Event Saturday
PM Peak Hour

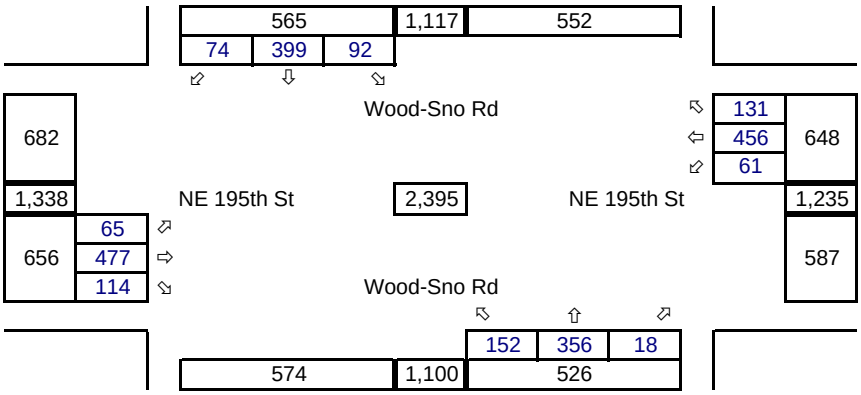


Synchro ID: 8

Existing
Event Saturday
PM Peak Hour

Year: **8/18/12**

Data Source: TDG

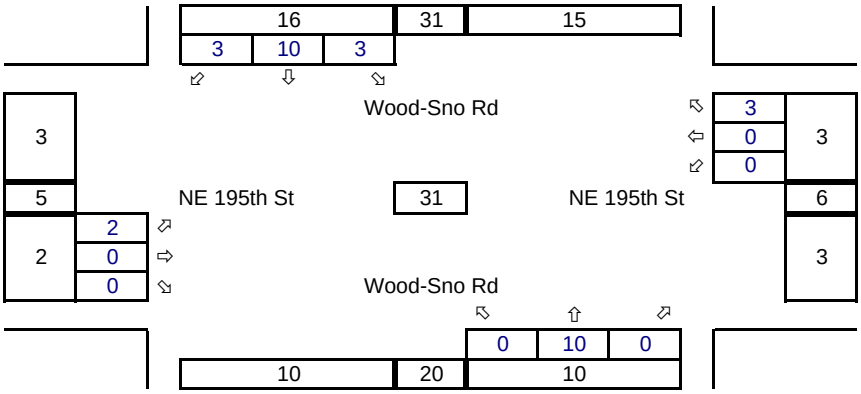


Future without Project
Event Saturday
PM Peak Hour

Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487

Total Project Trips
Event Saturday
PM Peak Hour

Based on Existing
Intersection Splits



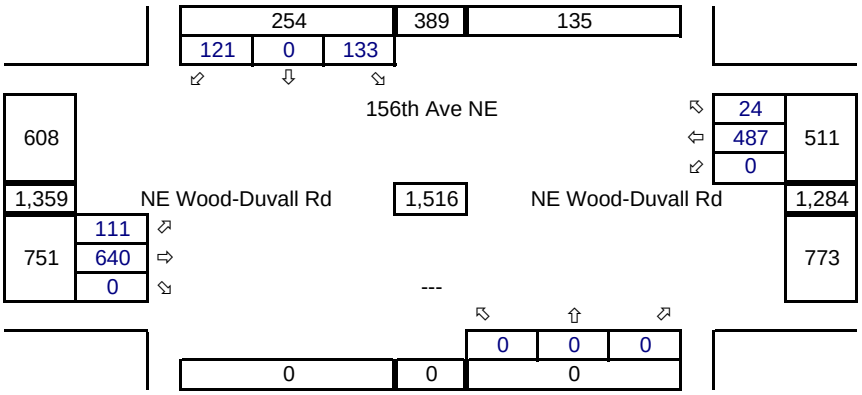
Future with Project
Event Saturday
PM Peak Hour

Synchro ID: 9

Existing
Event Saturday
PM Peak Hour

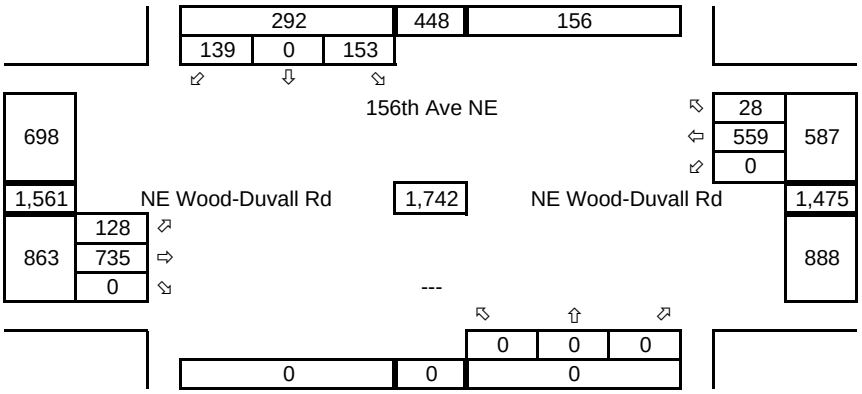
Year: **8/25/12**

Data Source: TDG

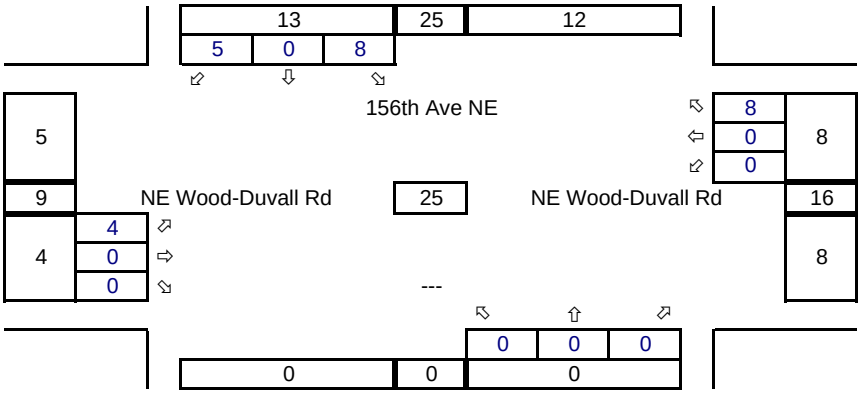


Future without Project
Event Saturday
PM Peak Hour

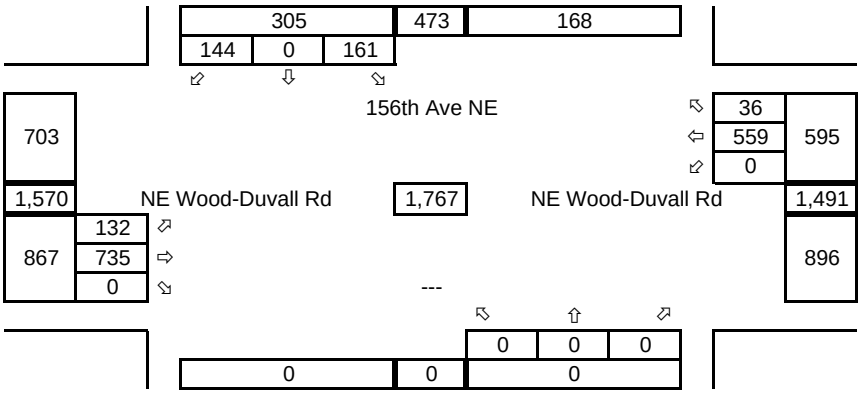
Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487



Total Project Trips
Event Saturday
PM Peak Hour



Future with Project
Event Saturday
PM Peak Hour



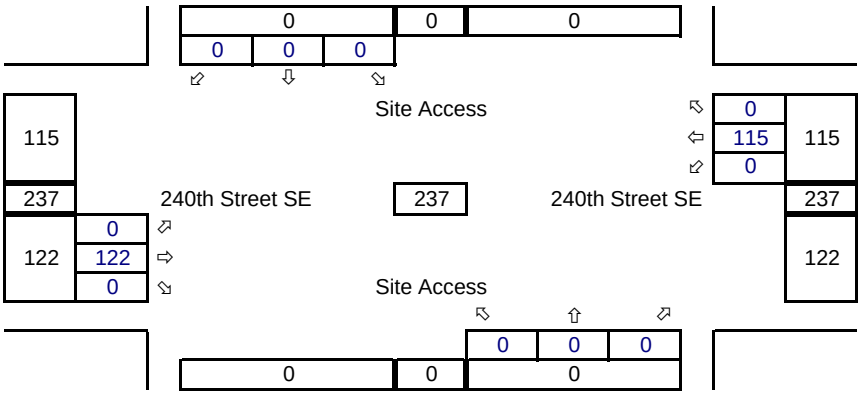
Synchro ID: 10

Existing
Event Saturday
PM Peak Hour

Year: **3/27/12**

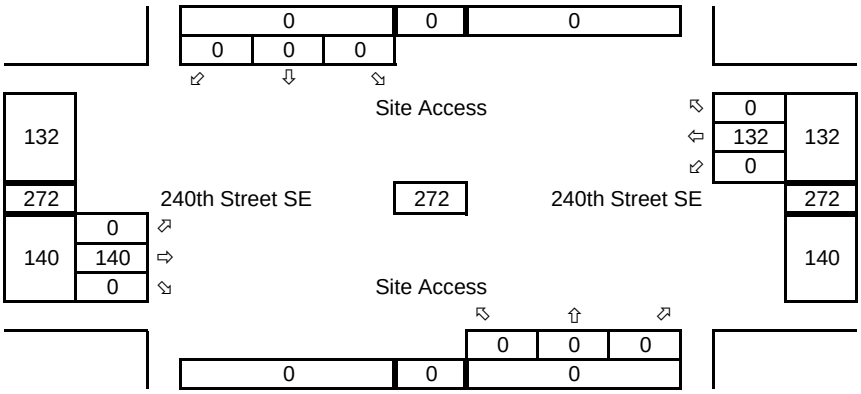
Data Source: Sno County

Extrapolated from:
75th Ave SE at 240th St SE



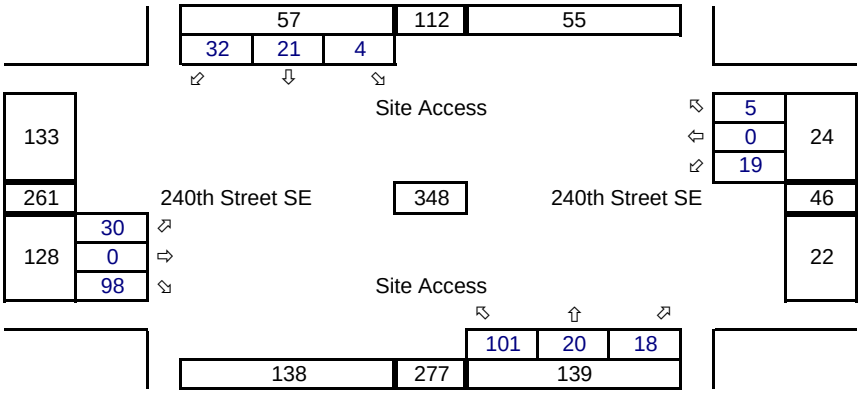
Future without Project
Event Saturday
PM Peak Hour

Year: 2019
Growth Rate = 2.0%
Years of Growth = 7
Total Growth = 1.1487

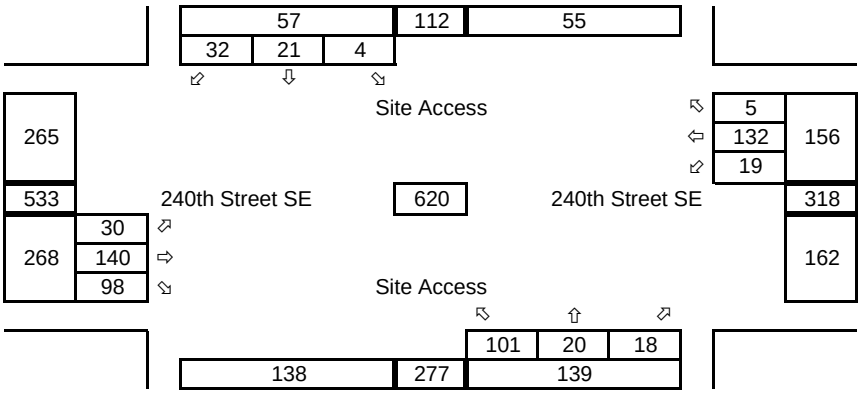


Total Project Trips
Event Saturday
PM Peak Hour

Dummy Trips Golf
Northbound 20
Southbound 21



Future with Project
Event Saturday
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	0	303	7	3	3	306	1488	3	3	748	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		70	0		0	350		0	200		140
Storage Lanes	1		0	0		0	2		0	1		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Frt		0.850			0.969							0.850
Flt Protected	0.950				0.974		0.950			0.950		
Satd. Flow (prot)	1752	1568	0	0	1741	0	3400	3505	0	1752	3505	1568
Flt Permitted	0.653						0.950			0.950		
Satd. Flow (perm)	1205	1568	0	0	1787	0	3400	3505	0	1752	3505	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		395			3							65
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		4236			427			1702			5221	
Travel Time (s)		96.3			9.7			38.7			118.7	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	156	0	316	7	3	3	319	1550	3	3	779	104
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	316	0	0	13	0	319	1553	0	3	779	104
Turn Type	pm+pt			pm+pt			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	5.0		3.0	5.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	8.0	21.0		8.0	47.0		8.0	33.0		8.0	41.0	41.0
Total Split (s)	15.0	35.0	0.0	15.0	47.0	0.0	25.0	75.0	0.0	25.0	75.0	75.0
Total Split (%)	9.3%	21.6%	0.0%	9.3%	29.0%	0.0%	15.4%	46.3%	0.0%	15.4%	46.3%	46.3%
Maximum Green (s)	10.0	30.0		10.0	42.0		20.0	69.0		20.0	69.0	69.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	5.0		4.0	5.0	5.0
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	6.0	4.0	5.0	6.0	6.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	2.0	2.5		2.0	2.5		2.0	4.5		2.0	4.5	4.5
Recall Mode	None	None		None	None		None	None		None	None	None
Walk Time (s)					7.0			7.0			7.0	7.0
Flash Dont Walk (s)					35.0			20.0			28.0	28.0
Pedestrian Calls (#/hr)					0			0			0	0
Act Effct Green (s)	11.8	11.8			5.7		13.0	68.6		4.8	52.3	52.3
Actuated g/C Ratio	0.13	0.13			0.06		0.14	0.74		0.05	0.56	0.56
v/c Ratio	0.75	0.58			0.12		0.67	0.60		0.03	0.40	0.11
Control Delay	60.9	5.7			41.4		46.0	8.5		47.3	13.3	5.7
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	60.9	5.7			41.4		46.0	8.5		47.3	13.3	5.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	E	A			D		D	A		D	B	A
Approach Delay		24.0			41.4			14.9			12.5	
Approach LOS		C			D			B			B	
Queue Length 50th (ft)	85	0			5		87	153		2	117	9
Queue Length 95th (ft)	167	23			28		158	466		12	233	43
Internal Link Dist (ft)		4156			347			1622			5141	
Turn Bay Length (ft)	300						350			200		140
Base Capacity (vph)	216	928			814		736	2619		379	2619	1188
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.72	0.34			0.02		0.43	0.59		0.01	0.30	0.09

Intersection Summary

Area Type: Other
Cycle Length: 162
Actuated Cycle Length: 93.2
Natural Cycle: 115
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 15.7 Intersection LOS: B
Intersection Capacity Utilization 76.7% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: 228th St SE & SR-9

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Volume (vph)	27	129	240	1881	0	606	458
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100	0	450		155		0
Storage Lanes	1	1	1		1		1
Taper Length (ft)	25	25	25		25		25
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	0.95	1.00
Frt		0.850					0.850
Flt Protected	0.950		0.950				
Satd. Flow (prot)	1752	1568	1752	3505	1845	3505	1568
Flt Permitted	0.950		0.950				
Satd. Flow (perm)	1752	1568	1752	3505	1845	3505	1568
Right Turn on Red		Yes					Yes
Satd. Flow (RTOR)		140					498
Link Speed (mph)	30			30		30	
Link Distance (ft)	299			650		714	
Travel Time (s)	6.8			14.8		16.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	29	140	261	2045	0	659	498
Shared Lane Traffic (%)							
Lane Group Flow (vph)	29	140	261	2045	0	659	498
Turn Type		Perm	Prot		Prot		Perm
Protected Phases	4		5	2	1	6	
Permitted Phases		4					6
Detector Phase	4	4	5	2	1	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	3.0	10.0	3.0	10.0	10.0
Minimum Split (s)	20.0	20.0	8.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	20.0	25.0	70.0	10.0	55.0	55.0
Total Split (%)	20.0%	20.0%	25.0%	70.0%	10.0%	55.0%	55.0%
Maximum Green (s)	15.0	15.0	20.4	64.7	5.4	49.7	49.7
Yellow Time (s)	4.0	4.0	3.6	4.3	3.6	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.6	5.3	4.6	5.3	5.3
Lead/Lag			Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.5	3.5	2.0	4.0	2.0	4.0	4.0
Recall Mode	None	None	None	C-Min	None	C-Min	C-Min
Act Effct Green (s)	8.2	8.2	18.8	81.5		58.0	58.0
Actuated g/C Ratio	0.08	0.08	0.19	0.82		0.58	0.58
v/c Ratio	0.20	0.54	0.79	0.72		0.32	0.45
Control Delay	44.9	15.6	52.0	7.3		12.4	2.6
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	44.9	15.6	52.0	7.3		12.4	2.6
LOS	D	B	D	A		B	A
Approach Delay	20.6			12.3		8.2	
Approach LOS	C			B		A	

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Queue Length 50th (ft)	18	0	173	293		106	0
Queue Length 95th (ft)	44	55	m227	337		173	50
Internal Link Dist (ft)	219			570		634	
Turn Bay Length (ft)	100		450				
Base Capacity (vph)	263	354	373	2855		2034	1119
Starvation Cap Reductn	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0		0	0
Reduced v/c Ratio	0.11	0.40	0.70	0.72		0.32	0.45

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 11.4 Intersection LOS: B
Intersection Capacity Utilization 71.9% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: SR-522 WB Ramp & SR-9

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	992	496	311	1327	782	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	260	250			0
Storage Lanes	2	1	1			0
Taper Length (ft)	25	25	25			25
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.988	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1583	1770	3539	3497	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	3433	1583	1770	3539	3497	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		528			8	
Link Speed (mph)	30			30	30	
Link Distance (ft)	725			585	374	
Travel Time (s)	16.5			13.3	8.5	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1055	528	331	1412	832	72
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1055	528	331	1412	904	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	5.0	5.0	3.0	10.0	10.0	
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	
Total Split (s)	45.0	45.0	30.0	55.0	25.0	0.0
Total Split (%)	45.0%	45.0%	30.0%	55.0%	25.0%	0.0%
Maximum Green (s)	40.0	40.0	25.4	49.7	19.7	
Yellow Time (s)	4.0	4.0	3.6	4.3	4.3	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.6	5.3	5.3	4.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.5	3.5	2.0	4.0	4.0	
Recall Mode	None	None	None	C-Min	C-Min	
Act Effct Green (s)	37.7	37.7	21.9	52.0	25.5	
Actuated g/C Ratio	0.38	0.38	0.22	0.52	0.26	
v/c Ratio	0.82	0.57	0.85	0.77	1.01	
Control Delay	33.7	4.5	57.9	23.3	77.4	
Queue Delay	0.0	0.0	0.0	0.9	0.0	
Total Delay	33.7	4.5	57.9	24.2	77.4	
LOS	C	A	E	C	E	
Approach Delay	24.0			30.6	77.4	
Approach LOS	C			C	E	
Queue Length 50th (ft)	295	0	200	378	~320	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Queue Length 95th (ft)	374	63	#314	476	#530	
Internal Link Dist (ft)	645			505	294	
Turn Bay Length (ft)		260	250			
Base Capacity (vph)	1373	950	450	1841	897	
Starvation Cap Reductn	0	0	0	186	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.77	0.56	0.74	0.85	1.01	

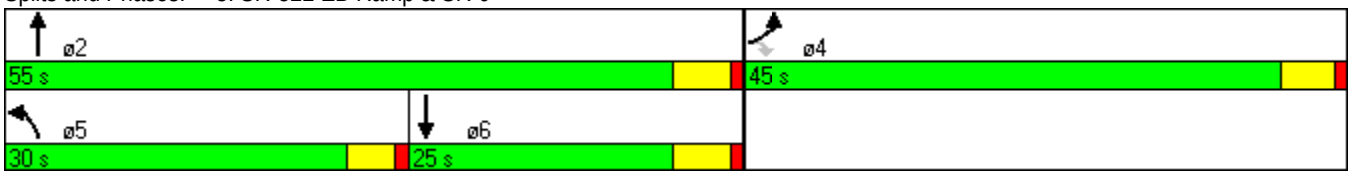
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 38.1 Intersection LOS: D
Intersection Capacity Utilization 81.7% ICU Level of Service D
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: SR-522 EB Ramp & SR-9



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	301	46	92	26	37	212	75	800	48	288	385	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		200	300		0	300		0
Storage Lanes	1		0	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.900				0.850		0.992			0.931	
Flt Protected	0.950				0.980		0.950			0.950		
Satd. Flow (prot)	1736	1644	0	0	1844	1599	1736	3443	0	1736	3232	0
Flt Permitted	0.494				0.802		0.950			0.950		
Satd. Flow (perm)	902	1644	0	0	1509	1599	1736	3443	0	1736	3232	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		88				221		5			234	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		269			193			180			585	
Travel Time (s)		6.1			4.4			4.1			13.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	314	48	96	27	39	221	78	833	50	300	401	342
Shared Lane Traffic (%)												
Lane Group Flow (vph)	314	144	0	0	66	221	78	883	0	300	743	0
Turn Type	pm+pt			Perm		Perm	Prot			Prot		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8						
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	9.5	30.7		20.0	20.0	20.0	9.5	24.2		9.5	26.2	
Total Split (s)	24.0	44.0	0.0	20.0	20.0	20.0	16.6	43.0	0.0	33.0	59.4	0.0
Total Split (%)	20.0%	36.7%	0.0%	16.7%	16.7%	16.7%	13.8%	35.8%	0.0%	27.5%	49.5%	0.0%
Maximum Green (s)	19.5	38.3		14.3	14.3	14.3	12.1	37.8		28.5	54.2	
Yellow Time (s)	3.5	4.5		4.5	4.5	4.5	3.5	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.2		1.2	1.2	1.2	1.0	1.2		1.0	1.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.7	4.0	5.7	5.7	5.7	4.5	5.2	4.0	4.5	5.2	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Minimum Gap (s)	1.0	0.5		3.0	3.0	3.0	2.0	1.0		2.0	1.0	
Time Before Reduce (s)	10.0	10.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Time To Reduce (s)	10.0	15.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		18.0						12.0			14.0	
Pedestrian Calls (#/hr)		0						0			0	
Act Effct Green (s)	34.1	32.9			9.9	9.9	8.9	31.0		21.4	46.3	
Actuated g/C Ratio	0.34	0.33			0.10	0.10	0.09	0.31		0.21	0.46	
v/c Ratio	0.69	0.24			0.45	0.62	0.51	0.84		0.82	0.46	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	38.6	13.6			57.4	14.8	60.9	41.6		57.8	14.4	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	38.6	13.6			57.4	14.8	60.9	41.6		57.8	14.4	
LOS	D	B			E	B	E	D		E	B	
Approach Delay		30.7			24.6			43.2			26.9	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	170	26			43	0	51	286		192	120	
Queue Length 95th (ft)	293	81			94	74	110	410		319	190	
Internal Link Dist (ft)		189			113			100			505	
Turn Bay Length (ft)	100					200	300			300		
Base Capacity (vph)	470	698			221	422	215	1335		506	1897	
Starvation Cap Reductn	0	0			0	0	0	0		0	0	
Spillback Cap Reductn	0	0			0	0	0	0		0	0	
Storage Cap Reductn	0	0			0	0	0	0		0	0	
Reduced v/c Ratio	0.67	0.21			0.30	0.52	0.36	0.66		0.59	0.39	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 101.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 33.0 Intersection LOS: C
Intersection Capacity Utilization 77.5% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: 240th St SE & SR-9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	259	210	82	334	132	420	1401	177	68	616	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		140	100		150	450		0	270		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.983			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1703	1792	1524	1703	1792	1524	1703	3348	0	1703	3341	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1703	1792	1524	1703	1792	1524	1703	3348	0	1703	3341	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			204			107		15			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		374			300			708			666	
Travel Time (s)		8.5			6.8			16.1			15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Adj. Flow (vph)	115	282	228	89	363	143	457	1523	192	74	670	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	115	282	228	89	363	143	457	1715	0	74	765	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	8.0	20.0	20.0	8.0	37.0	37.0	8.0	31.0		8.0	31.0	
Total Split (s)	12.0	36.0	36.0	13.0	37.0	37.0	38.0	67.0	0.0	9.0	38.0	0.0
Total Split (%)	9.6%	28.8%	28.8%	10.4%	29.6%	29.6%	30.4%	53.6%	0.0%	7.2%	30.4%	0.0%
Maximum Green (s)	8.4	31.0	31.0	9.4	32.0	32.0	34.4	61.0		5.4	32.0	
Yellow Time (s)	3.6	4.0	4.0	3.6	4.0	4.0	3.6	5.0		3.6	5.0	
All-Red Time (s)	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0		0.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.6	5.0	5.0	3.6	5.0	5.0	3.6	6.0	4.0	3.6	6.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	3.5	3.5	2.5	3.5	3.5	3.0	4.5		3.0	4.5	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)					7.0	7.0		7.0			7.0	
Flash Dont Walk (s)					25.0	25.0		18.0			18.0	
Pedestrian Calls (#/hr)					0	0		0			0	
Act Effct Green (s)	8.4	28.1	28.1	8.9	28.6	28.6	34.1	61.1		5.4	32.4	
Actuated g/C Ratio	0.07	0.23	0.23	0.07	0.24	0.24	0.28	0.50		0.04	0.27	
v/c Ratio	0.97	0.68	0.45	0.71	0.86	0.33	0.96	1.02		0.97	0.85	
Control Delay	134.7	52.0	10.2	85.8	65.1	13.7	76.1	56.6		155.2	52.6	
Queue Delay	0.0	0.0	0.0	0.0	107.3	0.7	0.0	0.0		0.0	0.0	
Total Delay	134.7	52.0	10.2	85.8	172.4	14.4	76.1	56.6		155.2	52.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	F	D	B	F	F	B	E	E		F	D	
Approach Delay		52.0			121.5			60.7			61.7	
Approach LOS		D			F			E			E	
Queue Length 50th (ft)	~95	205	15	72	275	22	367	~788		~61	310	
Queue Length 95th (ft)	#222	302	83	#153	#418	78	#583	#931		#165	#417	
Internal Link Dist (ft)		294			220			628			586	
Turn Bay Length (ft)	100		140	100		150	450			270		
Base Capacity (vph)	118	457	540	132	472	480	482	1688		76	899	
Starvation Cap Reductn	0	0	0	0	176	141	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.97	0.62	0.42	0.67	1.23	0.42	0.95	1.02		0.97	0.85	

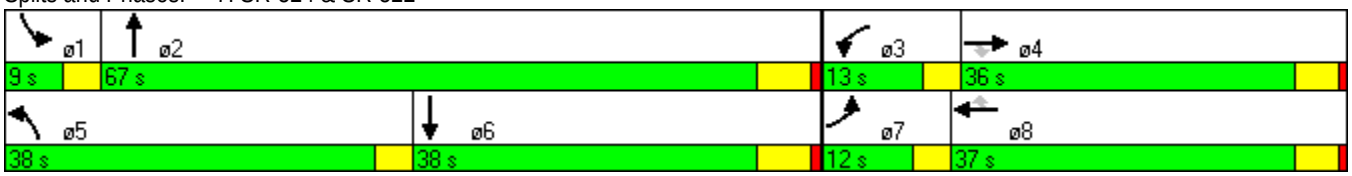
Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 121.7
Natural Cycle: 125
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 68.1 Intersection LOS: E
Intersection Capacity Utilization 87.4% ICU Level of Service E
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: SR-524 & SR-522



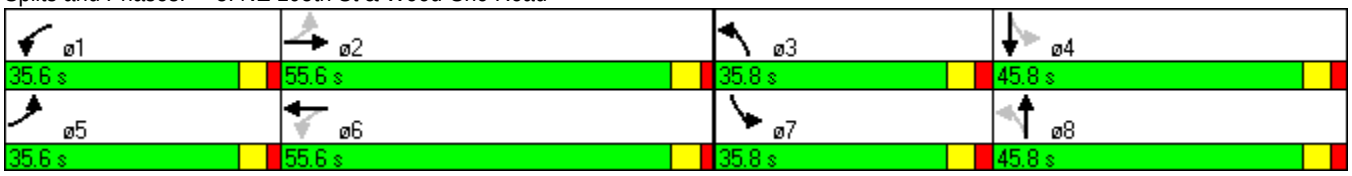
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	739	210	37	708	175	266	626	28	127	385	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	125		0	110		0	110		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.967			0.970			0.994			0.938	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3422	0	1770	3433	0	1770	3518	0	1770	3320	0
Flt Permitted	0.138			0.157			0.129			0.285		
Satd. Flow (perm)	257	3422	0	292	3433	0	240	3518	0	531	3320	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			18			2			95	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			424			458			622	
Travel Time (s)		6.5			9.6			10.4			14.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	90	762	216	38	730	180	274	645	29	131	397	277
Shared Lane Traffic (%)												
Lane Group Flow (vph)	90	978	0	38	910	0	274	674	0	131	674	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	7.0		4.0	7.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.6	30.6		9.6	30.6		9.8	28.8		9.8	28.8	
Total Split (s)	35.6	55.6	0.0	35.6	55.6	0.0	35.8	45.8	0.0	35.8	45.8	0.0
Total Split (%)	20.6%	32.2%	0.0%	20.6%	32.2%	0.0%	20.7%	26.5%	0.0%	20.7%	26.5%	0.0%
Maximum Green (s)	30.0	50.0		30.0	50.0		30.0	40.0		30.0	40.0	
Yellow Time (s)	3.8	3.8		3.8	3.8		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.8	1.8		1.8	1.8		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.8	5.8	4.0	5.8	5.8	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	4.0		2.0	4.0		2.0	2.5		2.0	2.5	
Minimum Gap (s)	0.5	2.0		0.5	2.0		0.5	1.5		0.5	1.5	
Time Before Reduce (s)	10.0	20.0		10.0	20.0		10.0	5.0		10.0	5.0	
Time To Reduce (s)	15.0	20.0		15.0	20.0		15.0	10.0		15.0	5.0	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		18.0			18.0			16.0			16.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	56.3	49.0		49.6	43.3		53.4	36.8		40.5	29.1	
Actuated g/C Ratio	0.45	0.39		0.40	0.35		0.43	0.30		0.33	0.23	
v/c Ratio	0.40	0.72		0.20	0.75		0.81	0.65		0.46	0.79	
Control Delay	26.6	37.5		24.1	41.4		49.2	41.7		28.7	47.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	26.6	37.5		24.1	41.4		49.2	41.7		28.7	47.2	
LOS	C	D		C	D		D	D		C	D	
Approach Delay		36.6			40.7			43.8			44.2	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	40	351		16	329		161	256		66	241	
Queue Length 95th (ft)	92	554		46	528		286	356		116	363	
Internal Link Dist (ft)		208			344			378			542	
Turn Bay Length (ft)	100			125			110			110		
Base Capacity (vph)	501	1486		509	1452		490	1271		540	1179	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.18	0.66		0.07	0.63		0.56	0.53		0.24	0.57	

Intersection Summary

Area Type: Other
Cycle Length: 172.8
Actuated Cycle Length: 124.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 41.1 — Intersection LOS: D
Intersection Capacity Utilization 83.5% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 8: NE 195th St & Wood-Sno Road



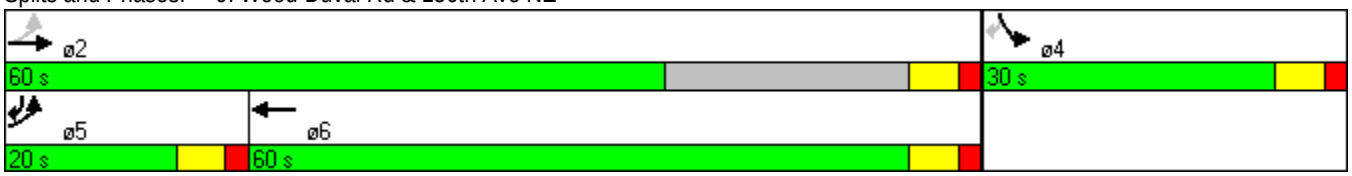
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	132	735	559	36	161	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	235			0	90	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.992			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	1866	0	1787	1599
Flt Permitted	0.165				0.950	
Satd. Flow (perm)	310	3574	1866	0	1787	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			4			152
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	688		815	
Travel Time (s)		13.5	15.6		18.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	139	774	588	38	169	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	139	774	626	0	169	152
Turn Type	pm+pt					pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2					4
Detector Phase	5	2	6		4	5
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	22.0	24.0		24.0	11.0
Total Split (s)	20.0	60.0	60.0	0.0	30.0	20.0
Total Split (%)	18.2%	54.5%	54.5%	0.0%	27.3%	18.2%
Maximum Green (s)	14.0	54.0	54.0		24.0	14.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Min	Min		Min	None
Walk Time (s)			7.0		7.0	
Flash Dont Walk (s)			11.0		11.0	
Pedestrian Calls (#/hr)			0		0	
Act Effct Green (s)	46.6	46.6	29.6		12.7	29.7
Actuated g/C Ratio	0.65	0.65	0.41		0.18	0.41
v/c Ratio	0.33	0.33	0.81		0.53	0.20
Control Delay	7.2	6.2	28.4		36.8	4.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	7.2	6.2	28.4		36.8	4.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	A	A	C		D	A
Approach Delay		6.3	28.4		21.3	
Approach LOS		A	C		C	
Queue Length 50th (ft)	19	65	226		66	0
Queue Length 95th (ft)	48	122	432		161	38
Internal Link Dist (ft)		513	608		735	
Turn Bay Length (ft)	235				90	
Base Capacity (vph)	505	3324	1449		632	834
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.28	0.23	0.43		0.27	0.18

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 72
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 16.3 — Intersection LOS: B
Intersection Capacity Utilization 62.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: Wood-Duval Rd & 156th Ave NE



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	82	148	87	173	102	34
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.94	0.94	0.84	0.84
Hourly flow rate (vph)	105	190	93	184	121	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	511	142	162			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	511	142	162			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	78	79	93			
cM capacity (veh/h)	485	901	1411			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	295	277	162
Volume Left	105	93	0
Volume Right	190	0	40
cSH	690	1411	1700
Volume to Capacity	0.43	0.07	0.10
Queue Length 95th (ft)	54	5	0
Control Delay (s)	14.1	3.0	0.0
Lane LOS	B	A	
Approach Delay (s)	14.1	3.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	6.8		
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		

MOVEMENT SUMMARY

Site: Internal Access RAB PM Event

Wellington Hills Park (12-040)
Internal Access Roundabout PM Peak-Hour Event
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Northbound											
3	L2	170	1.0	0.312	8.6	LOS A	1.3	31.9	0.53	1.02	25.6
8	T1	28	1.0	0.312	8.6	LOS A	1.3	31.9	0.53	1.02	25.6
18	R2	32	1.0	0.312	8.6	LOS A	1.3	31.9	0.53	1.02	25.6
Approach		230	1.0	0.312	8.6	LOS A	1.3	31.9	0.53	0.51	25.6
East: Westbound											
1	L2	56	1.0	0.233	6.8	LOS A	0.9	23.1	0.44	0.73	27.1
6	T1	123	1.0	0.233	6.8	LOS A	0.9	23.1	0.44	0.73	27.1
16	R2	14	1.0	0.233	6.8	LOS A	0.9	23.1	0.44	0.73	27.1
Approach		193	1.0	0.233	6.8	LOS A	0.9	23.1	0.44	0.37	27.1
North: Southbound											
7	L2	10	1.0	0.112	5.7	LOS A	0.4	9.9	0.42	0.69	27.6
4	T1	22	1.0	0.112	5.7	LOS A	0.4	9.9	0.42	0.69	27.6
14	R2	56	1.0	0.112	5.7	LOS A	0.4	9.9	0.42	0.69	27.6
Approach		88	1.0	0.112	5.7	LOS A	0.4	9.9	0.42	0.35	27.6
West: Eastbound											
5	L2	102	1.0	0.686	14.2	LOS B	6.0	151.4	0.49	0.58	23.6
2	T1	300	1.0	0.686	14.2	LOS B	6.0	151.4	0.49	0.58	23.6
12	R2	300	1.0	0.686	14.2	LOS B	6.0	151.4	0.49	0.58	23.6
Approach		702	1.0	0.686	14.2	LOS B	6.0	151.4	0.49	0.29	23.6
All Vehicles		1213	1.0	0.686	11.4	LOS B	6.0	151.4	0.49	0.35	24.7

Level of Service (LOS) Method: Delay (HCM 2000).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: Internal Access RAB PM Event

Wellington Hills Park (12-040)
Internal Access Roundabout PM Peak-Hour Event

Volume Display Method: Total and %

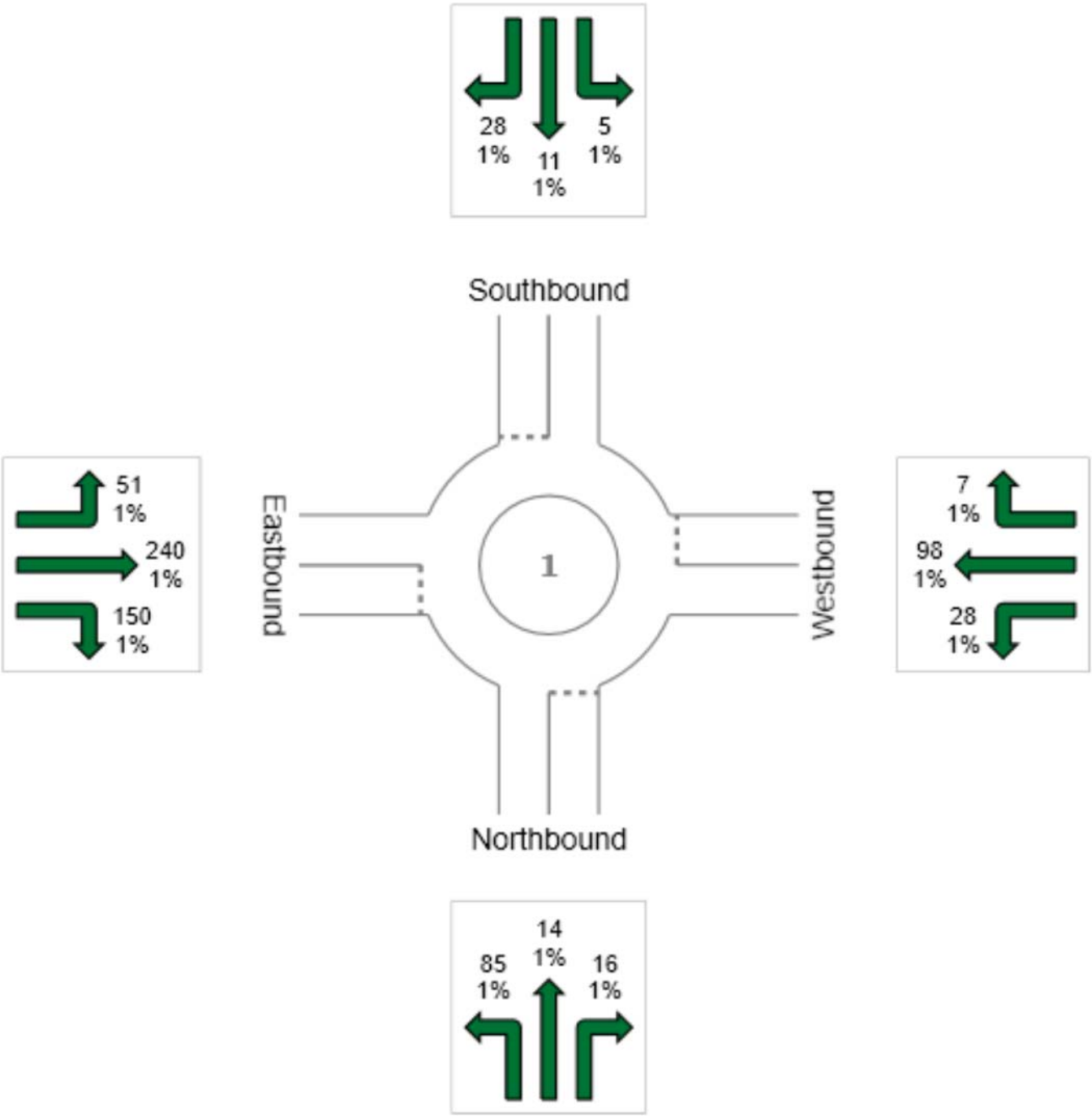
Volumes are shown for Movement Class(es): All Classes and Heavy Vehicles

Total Intersection Volumes (veh)

All Movement Classes: 733

Light Vehicles (LV): 726

Heavy Vehicles (HV): 7



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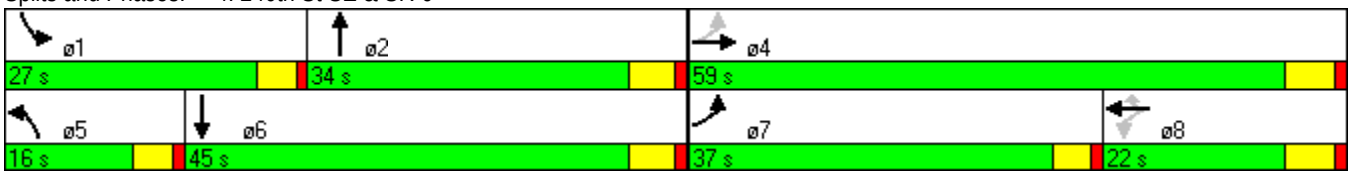
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	455	69	125	34	36	196	85	468	38	197	381	470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		200	300		0	300		0
Storage Lanes	1		0	0		1	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.903				0.850		0.989			0.917	
Flt Protected	0.950				0.977		0.950			0.950		
Satd. Flow (prot)	1736	1650	0	0	1785	1553	1736	3433	0	1736	3183	0
Flt Permitted	0.501				0.748		0.950			0.950		
Satd. Flow (perm)	915	1650	0	0	1367	1553	1736	3433	0	1736	3183	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		97				204		7			278	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		269			193			180			585	
Travel Time (s)		6.1			4.4			4.1			13.3	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	474	72	130	35	38	204	89	488	40	205	397	490
Shared Lane Traffic (%)												
Lane Group Flow (vph)	474	202	0	0	73	204	89	528	0	205	887	0
Turn Type	pm+pt			Perm		Perm	Prot			Prot		
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8						
Detector Phase	7	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	7.0		5.0	7.0	
Minimum Split (s)	9.5	30.7		20.0	20.0	20.0	9.5	24.2		9.5	26.2	
Total Split (s)	37.0	59.0	0.0	22.0	22.0	22.0	16.0	34.0	0.0	27.0	45.0	0.0
Total Split (%)	30.8%	49.2%	0.0%	18.3%	18.3%	18.3%	13.3%	28.3%	0.0%	22.5%	37.5%	0.0%
Maximum Green (s)	32.5	53.3		16.3	16.3	16.3	11.5	28.8		22.5	39.8	
Yellow Time (s)	3.5	4.5		4.5	4.5	4.5	3.5	4.0		3.5	4.0	
All-Red Time (s)	1.0	1.2		1.2	1.2	1.2	1.0	1.2		1.0	1.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.7	4.0	5.7	5.7	8.7	4.5	5.2	4.0	4.5	5.2	4.0
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	3.0		2.0	3.0	
Minimum Gap (s)	1.0	0.5		3.0	3.0	3.0	2.0	1.0		2.0	1.0	
Time Before Reduce (s)	10.0	10.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Time To Reduce (s)	10.0	15.0		0.0	0.0	0.0	0.0	20.0		0.0	20.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Walk Time (s)		7.0						7.0			7.0	
Flash Dont Walk (s)		18.0						12.0			14.0	
Pedestrian Calls (#/hr)		0						0			0	
Act Effct Green (s)	44.5	43.2			10.5	7.4	8.9	20.0		15.1	29.2	
Actuated g/C Ratio	0.47	0.46			0.11	0.08	0.09	0.21		0.16	0.31	
v/c Ratio	0.70	0.25			0.48	0.66	0.55	0.72		0.74	0.76	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	26.4	10.2			55.2	17.8	59.4	42.0		57.0	26.1	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	26.4	10.2			55.2	17.8	59.4	42.0		57.0	26.1	
LOS	C	B			E	B	E	D		E	C	
Approach Delay		21.5			27.7			44.5			31.9	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	199	35			44	0	54	162		124	195	
Queue Length 95th (ft)	382	98			102	73	123	252		232	297	
Internal Link Dist (ft)		189			113			100			505	
Turn Bay Length (ft)	100					200	300			300		
Base Capacity (vph)	738	1019			248	404	222	1107		435	1567	
Starvation Cap Reductn	0	0			0	0	0	0		0	0	
Spillback Cap Reductn	0	0			0	0	0	0		0	0	
Storage Cap Reductn	0	0			0	0	0	0		0	0	
Reduced v/c Ratio	0.64	0.20			0.29	0.50	0.40	0.48		0.47	0.57	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 94.5
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 31.8 Intersection LOS: C
Intersection Capacity Utilization 75.4% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: 240th St SE & SR-9



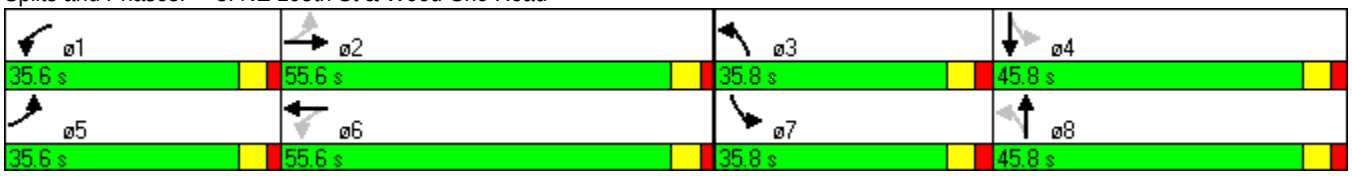
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	548	131	70	524	153	175	419	21	109	468	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	125		0	110		0	110		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.971			0.966			0.993			0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3437	0	1770	3419	0	1770	3514	0	1770	3454	0
Flt Permitted	0.239			0.256			0.272			0.409		
Satd. Flow (perm)	445	3437	0	477	3419	0	507	3514	0	762	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			22			3			12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			424			458			622	
Travel Time (s)		6.5			9.6			10.4			14.1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	79	565	135	72	540	158	180	432	22	112	482	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	700	0	72	698	0	180	454	0	112	573	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	4.0	7.0		4.0	7.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	9.6	30.6		9.6	30.6		9.8	28.8		9.8	28.8	
Total Split (s)	35.6	55.6	0.0	35.6	55.6	0.0	35.8	45.8	0.0	35.8	45.8	0.0
Total Split (%)	20.6%	32.2%	0.0%	20.6%	32.2%	0.0%	20.7%	26.5%	0.0%	20.7%	26.5%	0.0%
Maximum Green (s)	30.0	50.0		30.0	50.0		30.0	40.0		30.0	40.0	
Yellow Time (s)	3.8	3.8		3.8	3.8		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.8	1.8		1.8	1.8		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	4.0	5.6	5.6	4.0	5.8	5.8	4.0	5.8	5.8	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.0	4.0		2.0	4.0		2.0	2.5		2.0	2.5	
Minimum Gap (s)	0.5	2.0		0.5	2.0		0.5	1.5		0.5	1.5	
Time Before Reduce (s)	10.0	20.0		10.0	20.0		10.0	5.0		10.0	5.0	
Time To Reduce (s)	15.0	20.0		15.0	20.0		15.0	10.0		15.0	5.0	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		18.0			18.0			16.0			16.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	35.3	28.9		33.9	28.2		33.5	23.0		32.0	22.2	
Actuated g/C Ratio	0.39	0.32		0.38	0.31		0.37	0.26		0.36	0.25	
v/c Ratio	0.27	0.63		0.25	0.64		0.53	0.50		0.29	0.67	
Control Delay	18.7	29.8		18.7	30.6		24.4	32.2		20.2	35.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.7	29.8		18.7	30.6		24.4	32.2		20.2	35.8	
LOS	B	C		B	C		C	C		C	D	
Approach Delay		28.7			29.5			30.0			33.3	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	25	173		22	174		63	115		38	151	
Queue Length 95th (ft)	64	302		60	305		137	206		89	267	
Internal Link Dist (ft)		208			344			378			542	
Turn Bay Length (ft)	100			125			110			110		
Base Capacity (vph)	679	2041		682	2032		674	1665		697	1641	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.12	0.34		0.11	0.34		0.27	0.27		0.16	0.35	

Intersection Summary

Area Type: Other
Cycle Length: 172.8
Actuated Cycle Length: 89.9
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 30.3 Intersection LOS: C
Intersection Capacity Utilization 68.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 8: NE 195th St & Wood-Sno Road



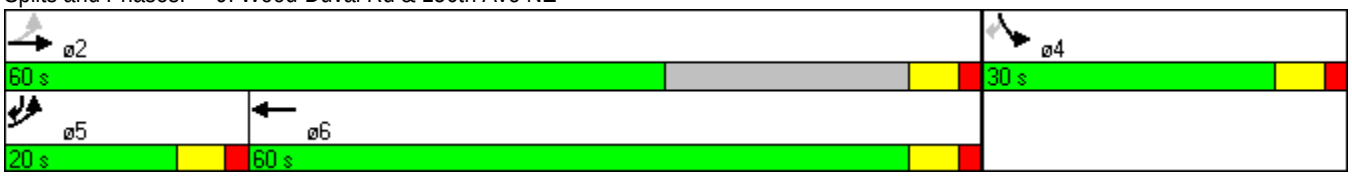
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	132	735	559	36	161	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	235			0	90	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25			25	25	25
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.992			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1787	3574	1866	0	1787	1599
Flt Permitted	0.165				0.950	
Satd. Flow (perm)	310	3574	1866	0	1787	1599
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			4			152
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	688		815	
Travel Time (s)		13.5	15.6		18.5	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	139	774	588	38	169	152
Shared Lane Traffic (%)						
Lane Group Flow (vph)	139	774	626	0	169	152
Turn Type	pm+pt					pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2					4
Detector Phase	5	2	6		4	5
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	11.0	22.0	24.0		24.0	11.0
Total Split (s)	20.0	60.0	60.0	0.0	30.0	20.0
Total Split (%)	18.2%	54.5%	54.5%	0.0%	27.3%	18.2%
Maximum Green (s)	14.0	54.0	54.0		24.0	14.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	Min	Min		Min	None
Walk Time (s)			7.0		7.0	
Flash Dont Walk (s)			11.0		11.0	
Pedestrian Calls (#/hr)			0		0	
Act Effct Green (s)	46.6	46.6	29.6		12.7	29.7
Actuated g/C Ratio	0.65	0.65	0.41		0.18	0.41
v/c Ratio	0.33	0.33	0.81		0.53	0.20
Control Delay	7.2	6.2	28.4		36.8	4.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	7.2	6.2	28.4		36.8	4.0

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
LOS	A	A	C		D	A
Approach Delay		6.3	28.4		21.3	
Approach LOS		A	C		C	
Queue Length 50th (ft)	19	65	226		66	0
Queue Length 95th (ft)	48	122	432		161	38
Internal Link Dist (ft)		513	608		735	
Turn Bay Length (ft)	235				90	
Base Capacity (vph)	505	3324	1449		632	834
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.28	0.23	0.43		0.27	0.18

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 72
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 16.3 Intersection LOS: B
Intersection Capacity Utilization 62.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: Wood-Duval Rd & 156th Ave NE



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	48	114	117	99	92	39
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	60	142	144	122	114	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	549	138	162			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	549	138	162			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	87	84	90			
cM capacity (veh/h)	447	911	1429			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	202	267	162
Volume Left	60	144	0
Volume Right	142	0	48
cSH	696	1429	1700
Volume to Capacity	0.29	0.10	0.10
Queue Length 95th (ft)	30	8	0
Control Delay (s)	12.3	4.6	0.0
Lane LOS	B	A	
Approach Delay (s)	12.3	4.6	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	38.6%	ICU Level of Service	A
Analysis Period (min)	15		

MOVEMENT SUMMARY

Site: Internal Access RAB SAT Event

Wellington Hills Park (12-040)
Internal Access Roundabout Saturday Event
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Northbound											
3	L2	202	1.0	0.318	7.6	LOS A	1.4	34.8	0.43	0.69	26.1
8	T1	40	1.0	0.318	7.6	LOS A	1.4	34.8	0.43	0.69	26.1
18	R2	36	1.0	0.318	7.6	LOS A	1.4	34.8	0.43	0.69	26.1
Approach		278	1.0	0.318	7.6	LOS A	1.4	34.8	0.43	0.35	26.1
East: Westbound											
1	L2	38	1.0	0.258	7.2	LOS A	1.0	26.2	0.45	0.76	27.1
6	T1	165	1.0	0.258	7.2	LOS A	1.0	26.2	0.45	0.76	27.1
16	R2	10	1.0	0.258	7.2	LOS A	1.0	26.2	0.45	0.76	27.1
Approach		213	1.0	0.258	7.2	LOS A	1.0	26.2	0.45	0.38	27.1
North: Southbound											
7	L2	8	1.0	0.153	6.5	LOS A	0.6	13.9	0.47	0.83	27.3
4	T1	42	1.0	0.153	6.5	LOS A	0.6	13.9	0.47	0.83	27.3
14	R2	64	1.0	0.153	6.5	LOS A	0.6	13.9	0.47	0.83	27.3
Approach		114	1.0	0.153	6.5	LOS A	0.6	13.9	0.47	0.42	27.3
West: Eastbound											
5	L2	60	1.0	0.421	8.2	LOS A	2.3	56.9	0.30	0.34	26.4
2	T1	175	1.0	0.421	8.2	LOS A	2.3	56.9	0.30	0.34	26.4
12	R2	196	1.0	0.421	8.2	LOS A	2.3	56.9	0.30	0.34	26.4
Approach		431	1.0	0.421	8.2	LOS A	2.3	56.9	0.30	0.17	26.4
All Vehicles		1036	1.0	0.421	7.6	LOS A	2.3	56.9	0.38	0.29	26.6

Level of Service (LOS) Method: Delay (HCM 2000).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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INPUT VOLUMES

Vehicles and pedestrians per 60 minutes

Site: Internal Access RAB SAT Event

Wellington Hills Park (12-040)
Internal Access Roundabout Saturday Event

Volume Display Method: Total and %

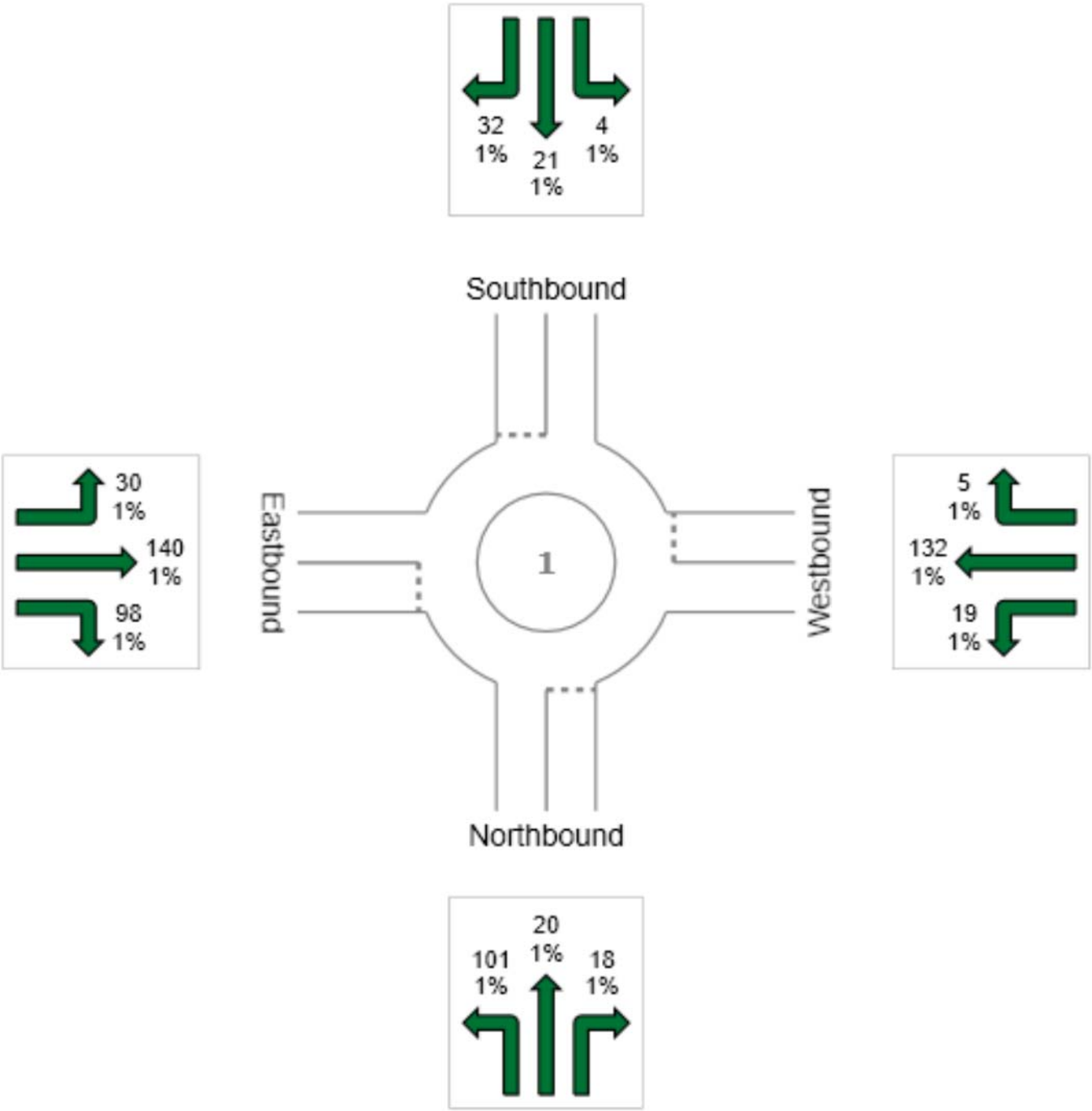
Volumes are shown for Movement Class(es): All Classes and Heavy Vehicles

Total Intersection Volumes (veh)

All Movement Classes: 620

Light Vehicles (LV): 614

Heavy Vehicles (HV): 6



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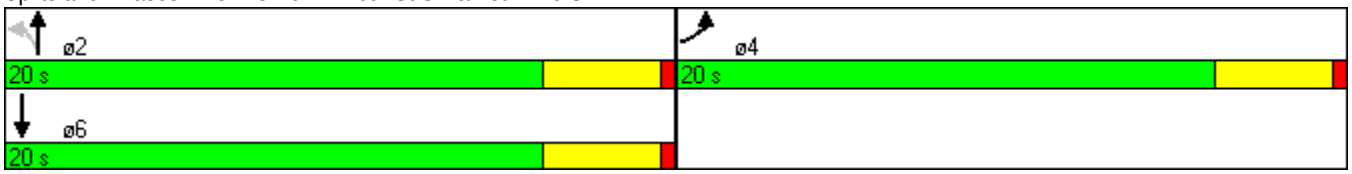
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	82	148	87	173	102	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.913				0.966	
Flt Protected	0.983			0.983		
Satd. Flow (prot)	1640	0	0	1813	1799	0
Flt Permitted	0.983			0.867		
Satd. Flow (perm)	1640	0	0	1599	1799	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	190				36	
Link Speed (mph)	32			30	30	
Link Distance (ft)	10560			1218	4530	
Travel Time (s)	225.0			27.7	103.0	
Peak Hour Factor	0.78	0.78	0.96	0.96	0.94	0.94
Heavy Vehicles (%)	4%	4%	3%	3%	2%	2%
Adj. Flow (vph)	105	190	91	180	109	36
Shared Lane Traffic (%)						
Lane Group Flow (vph)	295	0	0	271	145	0
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	
Minimum Split (s)	20.0		20.0	20.0	20.0	
Total Split (s)	20.0	0.0	20.0	20.0	20.0	0.0
Total Split (%)	50.0%	0.0%	50.0%	50.0%	50.0%	0.0%
Maximum Green (s)	16.0		16.0	16.0	16.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	-1.2	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	2.8	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		Min	Min	Min	
Act Effct Green (s)	9.1			14.8	14.8	
Actuated g/C Ratio	0.33			0.53	0.53	
v/c Ratio	0.44			0.32	0.15	
Control Delay	5.4			7.3	5.1	
Queue Delay	0.0			0.0	0.0	
Total Delay	5.4			7.3	5.1	
LOS	A			A	A	
Approach Delay	5.4			7.3	5.1	
Approach LOS	A			A	A	
Queue Length 50th (ft)	8			21	7	
Queue Length 95th (ft)	34			69	32	
Internal Link Dist (ft)	10480			1138	4450	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Turn Bay Length (ft)						
Base Capacity (vph)	1109			1056	1201	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.27			0.26	0.12	

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 27.8
Natural Cycle: 40
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay: 6.1 — Intersection LOS: A
Intersection Capacity Utilization 45.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 5: AU 464 - 240th St SE & 75th Ave SE



Arterial Level of Service: WB AU 463 - 240th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR-9	IV	29	124.3	57.4	181.7	1.00	19.8	B
Total	IV		124.3	57.4	181.7	1.00	19.8	B

Arterial Level of Service: EB AU 464 - 240th St SE

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
75th Ave SE	III	32	225.0	5.4	230.4	2.00	31.2	A
Total	III		225.0	5.4	230.4	2.00	31.2	A

Project: Wellington Hills Park
Project #: 12-040
Analysis Period: Event PM Peak-Hour

Intersection: 75th Avenue SE at 240th Street SE (Minor Leg Stop Control)

	LOS	Delay	Difference
Existing	B	12.7 sec	
			0.1 sec
Baseline	B	12.8 sec	
			1.3 sec
Future With Event	B	14.1 sec	

Intersection: Access Roundabout

	Delay	
	Westbound	Eastbound
Future With	6.8 sec	14.2 sec

Future no Roundabout			
Travel Time (sec)			
AU #463 (1-Mile)		AU #464 (2-Miles)	
Westbound	Eastbound	Westbound	Eastbound
181.7 sec	142.0 sec	230.0 sec	230.4 sec

Future with Roundabout			
Travel Time (sec)			
AU #463 (1-Mile)		AU #464 (2-Miles)	
Westbound	Eastbound	Westbound	Eastbound
188.5 sec	156.2 sec	236.8 sec	244.6 sec
Speed (mph)			
AU #463 (1-Mile)		AU #464 (2-Miles)	
Westbound	Eastbound	Westbound	Eastbound
19.1 mph	23.0 mph	30.4 mph	29.4 mph

Speed Hump Delay

Number of Humps: 3
Average Delay: 6.0 sec

Future with Roundabout + Speed Humps			
Travel Time (sec)			
AU #463 (1-Mile)		AU #464 (2-Miles)	
Westbound	Eastbound	Westbound	Eastbound
206.5 sec	174.2 sec	254.8 sec	262.6 sec
Speed (mph)			
AU #463 (1-Mile)		AU #464 (2-Miles)	
Westbound	Eastbound	Westbound	Eastbound
17.4 mph	20.7 mph	28.3 mph	27.4 mph

Scoping Documents

Critical Arterial Units and Traffic Study Scoping Sheet for Large Developments

CRITICAL ARTERIAL UNITS				Last Revised	8/6/2013				
				Print Date	8/14/2013				
TSA	UNIT	**	ROAD NAME	FROM	TO	AM nb/eb	AM sb/wb	PM nb/eb	PM sb/wb
A	162	R	27 AVE NE	MARINE DR NE	END OF COUNTY RD		X		X
B	166	U	SUNNYSIDE BLVD	SR 204	SOPER HILL RD		X		
C	353	U	AIRPORT WY	SR 9	SNOHOMISH C/L		X		X
D	204	U	35 AVE SE	168 ST SE	SEATTLE HILL RD			X	
D	*218	U	164 ST SW/SE	I-5 NB ON/OFF RAMPS	MILL CR C/L	UC	UC	UC	UC
D	*219	U	164 ST SW	LYNN C/L (Spruce Way)	I-5 SB ON/OFF RAMPS	UC	UC	UC	UC
D	220	U	ALDERWOOD MALL PKWY	164 ST SW	LYNNWOOD C/L		X	X	X
D	225	U	148 / 150 ST SW / JEFFERSON / MADISON WY	SR 99	ASH WAY				X
D	227	U	BEVERLY PARK RD	SR 525	AIRPORT RD (EVT)				X
D	228	U	AIRPORT/128 ST SW	SR 99	I-5 SB ON/OFF RAMPS	X	X	X	X
D	229	U	4 AVE W	128 ST SW	112 ST SW				X
D	287	U	35 AVE W/36 AVE W	LYNNWOOD C/L	164 ST SW	X			
D	289	U	ASH WAY	164 ST SW	134 ST SW		X	X	
D	293	U	GIBSON RD / 134 ST SW / 4 AVE W / ASH WY	SR 99	128 ST SW	X		X	X
D	300	U	116 ST SE	EVT C/L	35 AVE SE			X	X
D	304	U	LARCH WAY	164 ST SW	178 ST SW	X	X	X	
D	336	U	35 AVE SE	GRANNIS RD	168 ST SE		X	X	
D	352	U	4 AVE W	112 ST SW	EVERETT C/L	X		X	X
D	415	U	36/35 AVE W	164 ST SW	148 ST SW		X		
D	453	U	LINCOLN WAY	BEVERLY PARK RD	143 ft. W of LAKE RD	X	X	X	X
D	454	U	MEADOW RD	164 ST SW	146 ST SW		X		
E	207	U	35 AVE SE	GRANNIS RD	168 ST SE		X	X	
E	*211	U	SNOH-WOODINVILLE RD	KING CO LINE	SR 522 (EB RAMPS)	UC	UC	UC	UC
E	420	U	YORK RD/35 AVE SE	SR 524	GRANNIS RD		X	X	X
F	214	U	212 ST SW/LARCH WAY	MTLK TERR C/L	CYPRESS WY (N LEG)			X	
F	215	U	204 ST SW	LYNN C/L	28 AVE W		X	X	X
F	276	U	LOGAN RD/LARCH WAY	CYPRESS WY (N)	DAMSON RD			X	
F	278	U	POPLAR WY	LYNNWOOD C/L	BRIER C/L	X	X	X	X
F	337	U	YORK RD/35 AVE SE	SR 524	GRANNIS RD		X	X	X

* > Signifies Arterial Unit Declared to be at "Ultimate Capacity" by the County Council.

> Red color normally signifies an arterial unit in arrears (AUIA). There are currently no AUIA units.

"X" means future LOS analysis needed. "AUIA" means in arrears.** = Urban or Rural Designation. "UC" means at Ultimate Capacity.

Critical Arterial Units and Traffic Study Scoping Sheet for Large Developments

SCOPING SHEET

JH — Applicant will evaluate future LOS on any critical arterial unit impacted by 3+ PHT and any other arterial unit impacted by 50+ directional PHT.

Additional Arterial Units to be Evaluated Other Than Those Listed Above

UNIT #	ARTERIAL UNIT

MB — No Additional Arterial Units to Evaluate

NOTE: Per DPW Rule 4220.100(4) an arterial unit not identified as critical or called out for analysis at the traffic scoping meeting is not considered to be within the scope of required future level-of-service analysis and will not be a factor in concurrency determinations except when the arterial unit is declared to be in arrears prior to the development's concurrency vesting date. See 4220.100(4) for other possible exceptions.

Project currently called: WELLINGTON HILLS CO. PARK | PFN# | TSA: E

MB — Basic Percentage Trip Distribution was / was not reviewed, and tentatively looks OK** / needs revision.

*** If approved, applicant must include copy (initialed and dated by PDS) with submitted traffic study.*

Other Notes from Traffic Study Scoping Meeting

JH — Applicant agrees to use the versions* of the following in effect as of the date of this scoping meeting.

1	Arterial Unit Categories	5	Requirements For Traffic Studies With Future Level-Of-Service Analysis
2	Key intersections (Lists and Maps)	6	State Highways of Statewide Significance as Designated by WSDOT
3	List of Six-Year Network Assumptions	7	Synchro Calibration Revision
4	Required Format for Trip Distributions		

* http://www1.co.snohomish.wa.us/Departments/Public_Works/Divisions/TES/ProgramPlanning/3066B/

Applicant (or Traffic Consultant) Sign and Date in This Space: 8/14/13.

Planning and Development Services Sign and Date in This Space: Mark A Brown

Date	Valid Until
8-14-13	11-12-13

PLEASE NOTE: Attach this signed document to the traffic study with the submittal.

Critical Arterial Units and Traffic Study Scoping Sheet for Large Developments

CRITICAL ARTERIAL UNITS				Last Revised	8/6/2013				
				Print Date	11/12/2013				
TSA	UNIT	**	ROAD NAME	FROM	TO	AM nb/eb	AM sb/wb	PM nb/eb	PM sb/wb
A	162	R	27 AVE NE	MARINE DR NE	END OF COUNTY RD		X		X
B	166	U	SUNNYSIDE BLVD	SR 204	SOPER HILL RD		X		
C	353	U	AIRPORT WY	SR 9	SNOHOMISH C/L		X		X
D	204	U	35 AVE SE	168 ST SE	SEATTLE HILL RD			X	
D	*218	U	164 ST SW/SE	I-5 NB ON/OFF RAMPS	MILL CR C/L	UC	UC	UC	UC
D	*219	U	164 ST SW	LYNN C/L (Spruce Way)	I-5 SB ON/OFF RAMPS	UC	UC	UC	UC
D	220	U	ALDERWOOD MALL PKWY	164 ST SW	LYNNWOOD C/L		X	X	X
D	225	U	148 / 150 ST SW / JEFFERSON / MADISON WY	SR 99	ASH WAY				X
D	227	U	BEVERLY PARK RD	SR 525	AIRPORT RD (EVT)				X
D	228	U	AIRPORT/128 ST SW	SR 99	I-5 SB ON/OFF RAMPS	X	X	X	X
D	229	U	4 AVE W	128 ST SW	112 ST SW				X
D	287	U	35 AVE W/36 AVE W	LYNNWOOD C/L	164 ST SW	X			
D	289	U	ASH WAY	164 ST SW	134 ST SW		X	X	
D	293	U	GIBSON RD / 134 ST SW / 4 AVE W / ASH WY	SR 99	128 ST SW	X		X	X
D	300	U	116 ST SE	EVT C/L	35 AVE SE			X	X
D	304	U	LARCH WAY	164 ST SW	178 ST SW	X	X	X	
D	336	U	35 AVE SE	GRANNIS RD	168 ST SE		X	X	
D	352	U	4 AVE W	112 ST SW	EVERETT C/L	X		X	X
D	415	U	36/35 AVE W	164 ST SW	148 ST SW		X		
D	453	U	LINCOLN WAY	BEVERLY PARK RD	143 ft. W of LAKE RD	X	X	X	X
D	454	U	MEADOW RD	164 ST SW	146 ST SW		X		
E	207	U	35 AVE SE	GRANNIS RD	168 ST SE		X	X	
E	*211	U	SNOH-WOODINVILLE RD	KING CO LINE	SR 522 (EB RAMPS)	UC	UC	UC	UC
E	420	U	YORK RD/35 AVE SE	SR 524	GRANNIS RD		X	X	X
F	214	U	212 ST SW/LARCH WAY	MTLK TERR C/L	CYPRESS WY (N LEG)			X	
F	215	U	204 ST SW	LYNN C/L	28 AVE W		X	X	X
F	276	U	LOGAN RD/LARCH WAY	CYPRESS WY (N)	DAMSON RD			X	
F	278	U	POPLAR WY	LYNNWOOD C/L	BRIER C/L	X	X	X	X
F	337	U	YORK RD/35 AVE SE	SR 524	GRANNIS RD		X	X	X

* > Signifies Arterial Unit Declared to be at "Ultimate Capacity" by the County Council.

> Red color normally signifies an arterial unit in arrears (AUIA). There are currently no AUIA units.

"X" means future LOS analysis needed. "AUIA" means in arrears.** = Urban or Rural Designation. "UC" means at Ultimate Capacity.

Matt

From: Bloodgood, Jim <jim.bloodgood@co.snohomish.wa.us>
Sent: Thursday, September 19, 2013 3:40 PM
To: Matt
Cc: Edward
Subject: RE: Wellington Hills Park PFN: 12-105809 PS (Arterial Analysis)

Approved.

Jim

From: Matt [mailto:Mattp@gibsontraffic.com]
Sent: Thursday, September 19, 2013 11:18 AM
To: Bloodgood, Jim
Cc: Edward
Subject: RE: Wellington Hills Park PFN: 12-105809 PS (Arterial Analysis)

Hi Jim, we are still working through the update to the Wellington Hills County Park and as the data is getting older we did a check count at the intersection of Sno-Wood Rd at 240th St SE (Which is the critical intersection for determining the arterial capacity and the southbound left-turn queuing). When comparing the volumes from the new counts to the old counts during the same peak hour timeframe for the PM and Saturday the new counts show a small decrease in volume (2319 intersection trips to 2273 during the PM and 1996 to 1915 during the Saturday 4:30-5:30). There was an earlier peak hour during the Saturday from 3:30 to 4:30 that had an intersection volume of 2058 trips which is within 3 percent of the previous Saturday peak hour from 4:30 to 5:30. This is not much of a difference and could be accounted for in daily fluctuations.

Therefore, we are looking to continue to utilize the existing counts and arterial travel times for the analysis of the road system. As I don't currently know when the submittal is, I would ask that this data be valid through the rest of 2013.

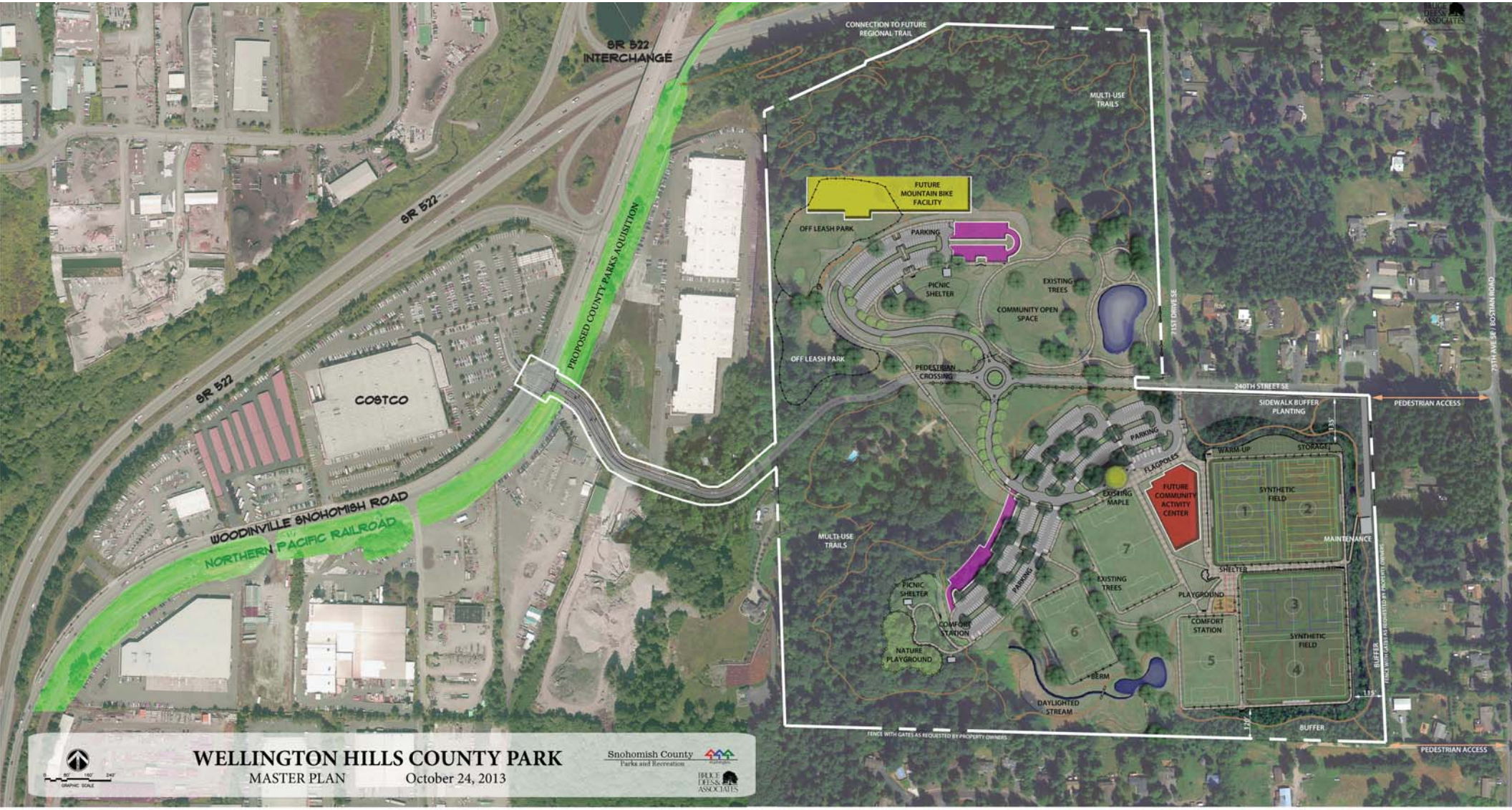
Thanks,

Matthew Palmer, P.E.
Gibson Traffic Consultants, Inc.
2802 Wetmore Ave #220
Everett, WA 98201
ph: 425.339.8266
fax: 425.258.2922
web: gibsontraffic.com

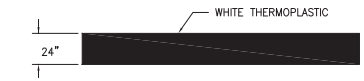
From: Bloodgood, Jim [mailto:jim.bloodgood@co.snohomish.wa.us]
Sent: Wednesday, August 21, 2013 9:00 AM
To: Matt
Cc: Edward
Subject: RE: Wellington Hills Park PFN: 12-105809 PS (Arterial Analysis)

Approved.

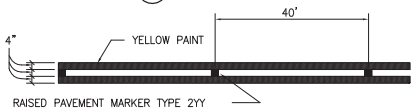
Site Plan


WELLINGTON HILLS COUNTY PARK
MASTER PLAN
October 24, 2013
Snohomish County
Parks and Recreation
BRUCE DIES & ASSOCIATES
SR 522
SR 522 INTERCHANGE
COSTCO
WOODINVILLE SNOHOMISH ROAD
NORTHERN PACIFIC RAILROAD
PROPOSED COUNTY PARKS AQUISITION
CONNECTION TO FUTURE REGIONAL TRAIL
MULTI-USE TRAILS
FUTURE MOUNTAIN BIKE FACILITY
OFF LEASH PARK
PARKING
PICNIC SHELTER
EXISTING TREES
COMMUNITY OPEN SPACE
PEDESTRIAN CROSSING
240TH STREET SE
SIDEWALK BUFFER PLANTING
PEDESTRIAN ACCESS
WARM UP
STORAGE
FLAGPOLES
EXISTING MAPLE
FUTURE COMMUNITY ACTIVITY CENTER
SYNTHETIC FIELD
MAINTENANCE
SHELTER
PLAYGROUND
COMFORT STATION
NATURE PLAYGROUND
BERM
DAYLIGHTED STREAM
BUFFER
FENCE WITH GATES AS REQUESTED BY PROPERTY OWNERS
PHASE II
PHASE III
FUTURE PHASES

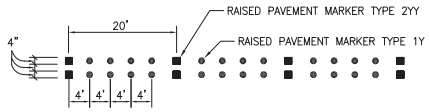
SECTION 34 & 35, T. 27 N., R. 5 E., W.M.



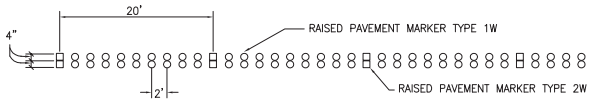
J_2 STOP LINE



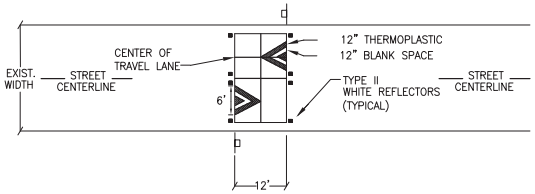
A_4 DOUBLE NO PASS CENTER LINE FOR ARTERIALS



A_5 DOUBLE NO-PASS RPM CENTERLINE



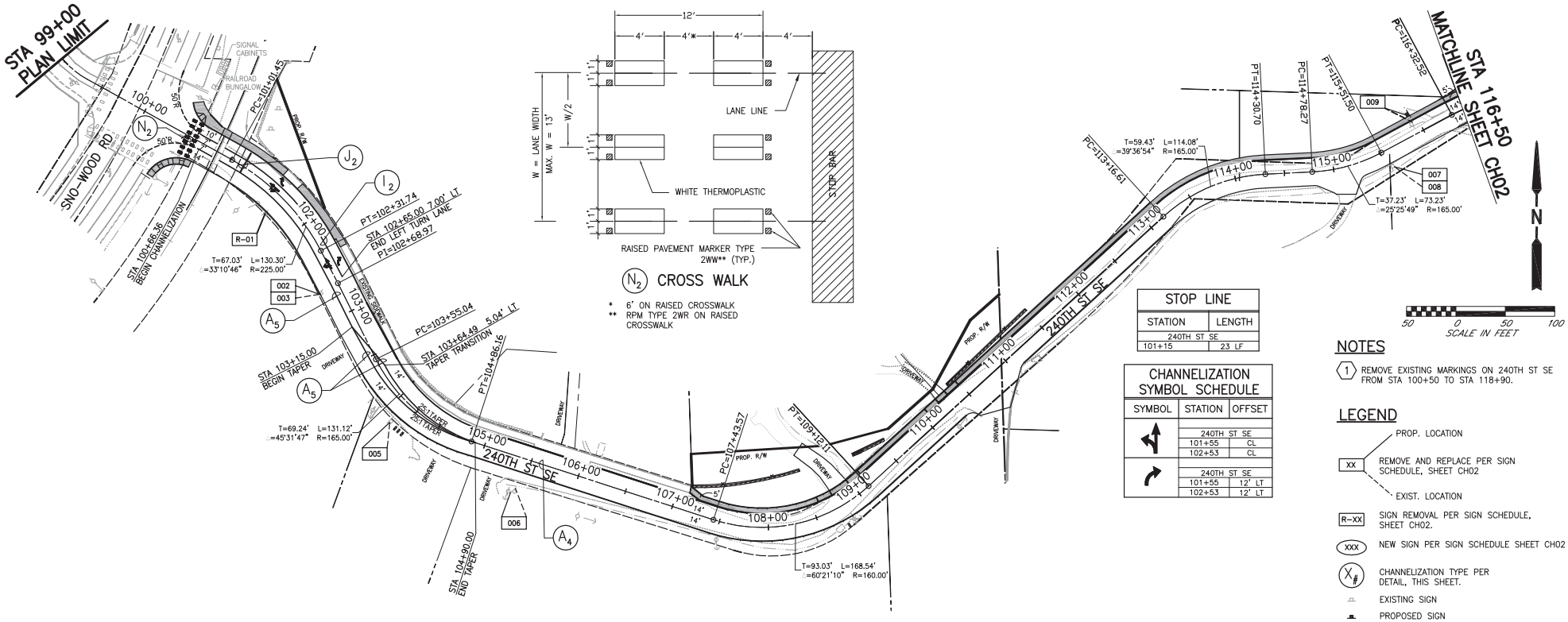
I_2 RPM WIDE LINE



V SPEED HUMP

N_2 CROSS WALK

* 6' ON RAISED CROSSWALK
** RPM TYPE 2WR ON RAISED CROSSWALK



STOP LINE	
STATION	LENGTH
240TH ST SE	
101+15	23 LF

CHANNELIZATION SYMBOL SCHEDULE		
SYMBOL	STATION	OFFSET
	240TH ST SE	
	101+55	CL
	102+53	CL
	240TH ST SE	
	101+55	12' LT
	102+53	12' LT

NOTES

1. REMOVE EXISTING MARKINGS ON 240TH ST SE FROM STA 100+50 TO STA 118+90.

LEGEND

- PROP. LOCATION
- XX — REMOVE AND REPLACE PER SIGN SCHEDULE, SHEET CH02
- EXIST. LOCATION
- R-XX — SIGN REMOVAL PER SIGN SCHEDULE, SHEET CH02.
- XXX — NEW SIGN PER SIGN SCHEDULE SHEET CH02
- X# — CHANNELIZATION TYPE PER DETAIL, THIS SHEET.
- EXISTING SIGN
- PROPOSED SIGN
- EXISTING MAILBOX
- PROPOSED MAILBOX

PLAN CHECK	BY	DATE	DATE	NO.	REVISION	BY

Last Saved By: spwbxc Aug 22, 2013 – 2:28pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		4346

DESIGNED BY: BAC | DRAWN BY: SJT

FIELD BOOK(S): | UPI# 12-0059-1

PRELIMINARY

60 PERCENT SUBMITTAL

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

FUNDING NO. RR 9322

WELLINGTON HILLS
240TH ST SE IMPROVEMENTS

CHANNELIZATION PLAN

REFERENCE SHEET NO. CH01

SHEET 1 OF 2 SHEETS

S:\PW_Project_Data_Management\6-PROJECTS_UPI Year_2012\12-0059-1\2 CADD\2.1 production data\2.1 Drawings\Design\PSE\12-0059_CH.dwg, Chan2-50x-1, 8/27/2013 1:54:23 PM, spwsj1, 1:2

Supplemental Trip Generation

Gibson Traffic Consultants
2802 Wetmore Avenue
Suite 220
Everett, WA 98201
425.339.8266

Burlington BMX
Trip Generation Analysis

Prepared for: Sean Curran
Jurisdiction: City of Burlington

April 6, 2012

GTC #12-026

TABLE OF CONTENTS

1. PROJECT IDENTIFICATION 1
2. TRIP GENERATION AND MITIGATION FEES 1

LIST OF TABLES

Table 1: Port Orchard Trip Generation 1

ATTACHMENTS

Trip Generation Calculations ..... A

1. PROJECT IDENTIFICATION

Gibson Traffic Consultants, Inc. (GTC) has been retained to analyze the trip generation of the Burlington BMX development. The Burlington BMX facility is located on the east side of Walton Drive, south of N Hill Boulevard. The development is proposed to include a 37,500 square-foot (SF) building that will be used for BMX and mountain bike racing. The site is anticipated to have one day of practice during the week and have qualifying races on Friday, Saturday and Sunday. The events during the week will start after 6:00 PM to accommodate typical work schedules.

Brad Lincoln, responsible for this report, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of ITE.

2. TRIP GENERATION AND MITIGATION FEES

The trip generation for the site has been calculated based on data collected at a similar site in Port Orchard, WA and anticipated usage by the proponents. The existing facility is located at 5867 Dogwood Road SE and consists of a 20,800 SF facility that has a similar schedule. The Port Orchard site has practice on Wednesday nights at 6:00 PM and the events on Friday start at 6:30 PM. Counts were performed at the Port Orchard site on Wednesday, Thursday and Friday to confirm this schedule and to determine the number of trips generated during the 4:00 PM to 6:00 PM peak-period and the peak-hour between 4:00 PM and 6:00 PM.

The existing count data shows that the Port Orchard site generated 9 PM peak-hour trips on Wednesday, 0 trips on Thursday and 12 PM peak-hour trips on Friday. The Port Orchard site generates a total of 21 PM peak-hour trips during the week (Monday through Friday), 17 inbound trips and 4 outbound trips. The weekly (Monday through Friday) average PM peak-hour trip generation is therefore 4 PM peak-hour trips, 3 inbound and 1 outbound, at the Port Orchard site.

Table 1: Port Orchard Trip Generation

Day	Inbound	Outbound	Total
Monday	0	0	0
Tuesday	0	0	0
Wednesday	9	0	0
Thursday	0	0	0
Friday	8	4	12
Weekday Total	17	4	21
Weekday Average	**3**	**1**	**4**

The trip generation at the Port Orchard site was factored up to account for the larger site proposed in Burlington. The Burlington site is 1.80 times larger than the Port Orchard site, 37,500 SF versus 20,800 SF. **The Burlington site is therefore anticipated to generate 7 PM peak-hour trips, 5 inbound and 2 outbound, based on the Monday through Friday data**. The count data is included with this memorandum.

The City of Burlington currently has a traffic impact fee of $1,816.50 per PM peak-hour trip, based on Ordinance #1758. **The Burlington BMX site is anticipated to generate 7 PM peak-hour trips, based on weekly average, and have traffic impact fees of $12,715.50**.

Trip Generation Calculations

A

Port Orchard, Washington
Wed 3/28/2012
Bike Park Driveway - 5867 Dogwood Rd SE
GTC12034M_4-6PM

TIME	IN	OUT
4:15PM	0	0
4:30PM	0	0
4:45PM	0	0
5:00PM	0	0
5:15PM	3	0
5:30PM	3	0
5:45PM	1	0
6:00PM	2	0
TOTALS	**9**	**0**

NOTES: There were 0 cars in the parking lot before the count.
There were 9 cars in the parking lot after the count.

Prepared for: **Gibson Traffic Consultants, Inc.**

Traffic Count Consultants, Inc.

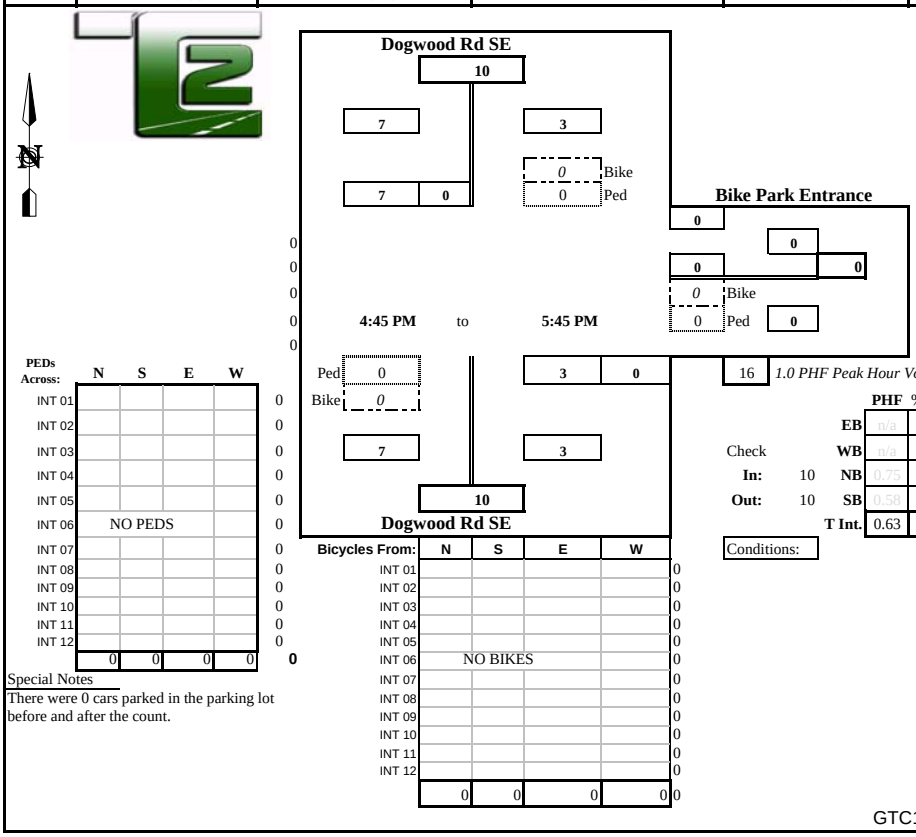
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Dogwood Rd SE & Bike Park Entrance **Date of Count:** Thurs 3/22/2012

Location: Port Orchard, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Dogwood Rd SE				From South on (NB) Dogwood Rd SE				From East on (WB) Bike Park Entrance				From West on (EB) 0				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
4:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 P	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
5:00 P	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4
5:15 P	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
5:30 P	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 P	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3
6:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	8	0	0	0	6	0	0	0	0	0	0	0	0	0	14
Peak Hour:	4:45 PM to 5:45 PM																
Total	0	0	7	0	0	0	3	0	0	0	0	0	0	0	0	0	10
Approach	7				3				0				0				10
%HV	n/a				n/a				n/a				n/a				0.0%
PHF	0.58				0.75				n/a				n/a				0.63



PEDs Across:	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04					0
INT 05					0
INT 06	NO PEDS				0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	0	0	0

Bicycles From:	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04					0
INT 05					0
INT 06	NO BIKES				0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	0	0	0

		PHF	%HV
	EB	n/a	n/a
Check	WB	n/a	n/a
In: 10	NB	0.75	n/a
Out: 10	SB	0.58	n/a
	T Int.	0.63	0.0%

Conditions:

Special Notes

There were 0 cars parked in the parking lot before and after the count.

GTC12028M_01

Prepared for: **Gibson Traffic Consulting, Inc.**

Traffic Count Consultants, Inc.

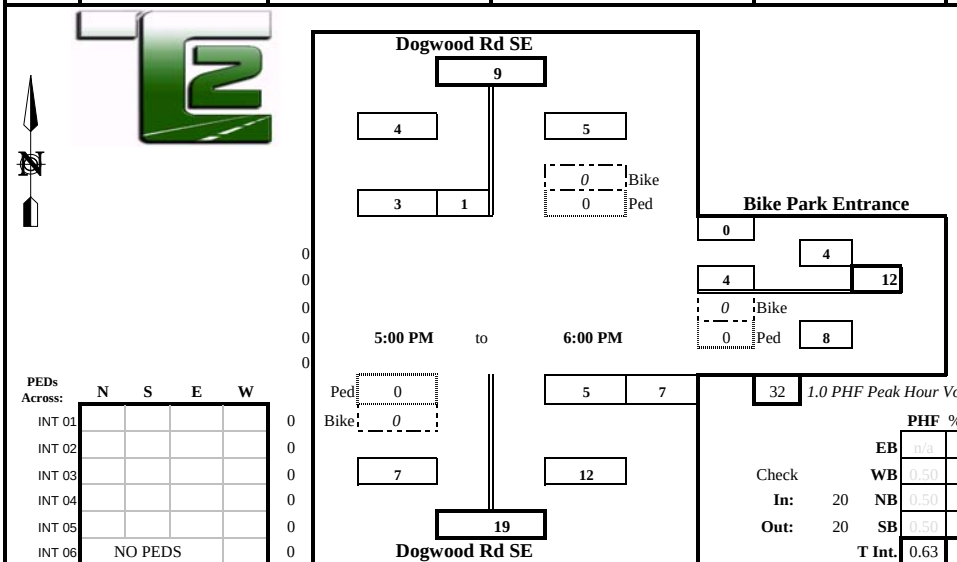
Phone: (253) 926-6009 FAX: (253) 922-7211 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Dogwood Rd SE & Bike Park Entrance **Date of Count:** Fri 3/23/2012

Location: Port Orchard, Washington **Checked By:** Jess

Time Interval Ending at	From North on (SB) Dogwood Rd SE				From South on (NB) Dogwood Rd SE				From East on (WB) Bike Park Entrance				From West on (EB) 0				Interval Total
	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	6
4:30 P	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	5
4:45 P	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
5:00 P	0	1	1	0	0	0	3	0	0	0	0	0	0	0	0	0	5
5:15 P	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:30 P	0	0	1	0	0	0	1	2	0	1	0	0	0	0	0	0	5
5:45 P	0	0	1	0	0	0	2	1	0	1	0	0	0	0	0	0	5
6:00 P	0	0	0	0	0	0	2	4	0	2	0	0	0	0	0	0	8
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	2	11	0	0	0	14	7	0	4	0	0	0	0	0	0	38
Peak Hour:	5:00 PM to 6:00 PM																
Total	0	1	3	0	0	0	5	7	0	4	0	0	0	0	0	0	20
Approach	4				12				4				0				20
%HV	n/a				n/a				n/a				n/a				0.0%
PHF	0.50				0.50				0.50				n/a				0.63



PEDs Across:	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04					0
INT 05					0
INT 06	NO PEDS				0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	0	0	0

Bicycles From:	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04					0
INT 05					0
INT 06	NO BIKES				0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	0	0	0

32 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	n/a	n/a
Check	WB	0.50	n/a
In: 20	NB	0.50	n/a
Out: 20	SB	0.50	n/a
	T Int.	0.63	0.0%

Conditions:

Special Notes

There was 1 vehicle parked in the parking lot before the count.

There was 6 vehicles parked in the parking lot after the count.

Strawberry Athletic Fields — Fields Total 3
Thursday, November 01, 2012 — Fields Used 2
4:00 to 6:00 PM

Time Interval Ending At	15-Minute Increment In	Out	Total	Hourly In	Out	Total	
4:00 PM							
4:15 PM	0	0	0	24	5	29	
4:30 PM	1	0	1	34	14	48	
4:45 PM	10	0	10	36	17	53	
5:00 PM	13	5	18	47	24	71	
5:15 PM	10	9	19	42	29	71	5:00 to 6:00 PM
5:30 PM	3	3	6				
5:45 PM	21	7	28	In	Out	Rate/Field	
6:00 PM	8	10	18	59%	41%	23.67	

Strawberry Athletic Fields — Fields Total 3
Saturday, November 03, 2012 — Fields Used 0 at 11 AM 2 at 2 PM
11:00 AM to 2:00 PM

Time Interval Ending At	15-Minute Increment In	Out	Total	Hourly In	Out	Total	
11:00 AM							
11:15 AM	0	0	0	4	1	5	
11:30 AM	0	0	0	10	4	14	
11:45 AM	0	0	0	15	5	20	
12:00 PM	4	1	5	24	10	34	
12:15 PM	6	3	9	27	10	37	
12:30 PM	5	1	6	24	8	32	
12:45 PM	9	5	14	22	10	32	
1:00 PM	7	1	8	19	6	25	
1:15 PM	3	1	4	29	12	41	1:00 to 2:00 PM
1:30 PM	3	3	6				
1:45 PM	6	1	7	In	Out	Rate/Field	
2:00 PM	17	7	24	71%	29%	13.67	

North County Fields — Fields Total 10
Saturday, November 03, 2012 — Fields Used 10
11:00 AM to 2:00 PM

Time Interval Ending At	15-Minute Increment In	Out	Total	Hourly In	Out	Total	
11:00 AM							
11:15 AM	34	21	55	185	159	344	
11:30 AM	29	62	91	186	199	385	11:15 to 12:15 PM
11:45 AM	66	40	106	183	154	337	
12:00 PM	56	36	92	178	183	361	
12:15 PM	35	61	96	145	168	313	
12:30 PM	26	17	43	146	140	286	
12:45 PM	61	69	130	147	164	311	
1:00 PM	23	21	44	116	164	280	
1:15 PM	36	33	69	105	177	282	
1:30 PM	27	41	68				
1:45 PM	30	69	99	In	Out	Rate/Field	
2:00 PM	12	34	46	48%	52%	38.50	
				Saturday	Average	26.08	

Study	Trip Generation		Parking Demand
	Daily	PM Peak Hour	
Soccer Complex ITE Land Use Code 488	71.33 per field	20.67 PM PHT/Field	Weekday: 38.30 veh/field, Equation: P=67.61x - 106, R^2 = 0.95 Saturday: 58.80 veh/field, Equation: P=64.27x - 26, R^2 = 0.97 Sunday: 56.30 veh/field, Equation: P=70.14x - 37, R^2 = 0.94
Parking and Vehicle Trip Generation for Soccer Fields and Elementary Schools ITE Journal/August 2010 by Ransford S. McCourt	No applicable data.	No applicable data.	15 veh/field (Practice) 60 veh/field (Games/Tournaments) 70-90 veh/field (Regional Qualifying Tournaments) DON'T DESIGN for this if a rare event. 45 veh/field (If overflow can be accommodated nearby, at an adjacent use, temporary lot, or on-street)
Trip Generation at Youth Soccer Complexes: Some Unforeseen Issues ITE Journal / Februay 1999 by Jon D. Fricker	No applicable data.	4.30 - 9.03 PHG Trips per Acre 0.39 PHG Trips per Parking Space 21.52 - 49.25 PHG Trips per Play Field in Use 0.72 - 2.24 PHG Trips per Player Present	Not included.
East Campus Sports Fields TIA (Berkeley, CA) February 2010 by LSA Associates, Inc.	No applicable data.	0.21 per Person Present (baseball and basketball players, coaches & specatators)	Used mode splits and an AVO of 2.37 persons per vehicle to assign people to vehicles
Memo Re: Hudson Hills Residential Development, Town of Brunswick June 7, 2007 by Creighton Manning Engineering, LLP	No applicable data.	44.5 PM PHT per baseball field (89% in, 11% out)	Not included.
San Diego Municipal Land Development Code Trip Generation Manual Revised May 2003 by City of San Diego	50 AWDT/acre for Developed Parks	4 PM PHT/acre for Developed Parks	Not included.
WetlandAthleticFieldFEISAppD_2002.pdf	Used Tennis Courts (ITE Land Use 491) and Recreational Community Center (ITE Land Use 495)	Used Tennis Courts (ITE Land Use 491) 3.88 per Court and Recreational Community Center (ITE Land Use 495) 1.75 per 1,000 SF. **Note: Current ITE rate for Recreational Community Center is 1.45 per 1,000 SF not 1.75.**	Not included.
Tech Memo Re: Seattle Parks and Recreation's North Shore Recreation Area January 27, 2010 by Tod S. McBryan, P.E., Principal - Heffron Transportation	No applicable data.	33 PM PHT/Soccer Field	Not included.
Sand Point Magnuson Park Drainage, Wetland/Habitat Complex and Sports Fields/Courts Project FEIS	from Fort Dent Study 70 AWDT/soccer field game 60 AWDT/softball or baseball game Used: Not calculated.	from Fort Dent Study 35 PM PHT/soccer field game 30 PM PHT/softball or baseball game Used: 35 Weekday PM PHT/field for All-Weather Fields (Soccer, Rugby, Ultimate Frisbee) 30 Weekday PM PHT/field for Ballfield (Softball or Baseball)	35 veh/soccer field 30 veh/baseball field
GTC Study, #99-044 Strawberry Fields	No applicable data.	0.55 PM PHT per participant	Not included.