TRANSPORTATION TECHNICAL REPORT

for the

New Middle School at Former Alderwood Middle School Site

PREPARED FOR:

Edmonds School District

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1. INTRODUCTION

This transportation technical report presents the traffic impact analysis for the Edmonds School District's (District) proposed New Middle School at the Former Alderwood Middle (FAM) School site. It describes the potential transportation impacts of the project including the net change in site-generated vehicle trips and parking demand, site access and circulation, student loading / unloading, and non-motorized impacts. The scope of this analysis was discussed with City staff after the City's review of a *Transportation Analysis Scoping Memorandum*[1] and in meetings and email correspondence from April through September 2025.[2] These analyses are intended to support the Project Design Review application, Transportation Concurrency review, as well as the SEPA Checklist being prepared by the District for this project.

2. PROJECT DESCRIPTION

The proposed project would construct a new middle school to meet the current educational specifications, standards, and requirements for 6th- through 8th-grade students. Although all District middle schools currently serve only 7th- and 8th-grade students, the 2024 Bond funds the plans for all middle schools to serve 6th- through 8th-grade students. The project accommodates the addition of 6th graders to middle schools.

Figure 1 shows the proposed site location at 20000-28th Avenue W, which was previously located within unincorporated Snohomish County. Lynnwood's City Council has recently approved annexation of the site into the City of Lynnwood (City) and is to be designated as a public institutional land use.[3] The analyses in this report were prepared consistent with City requirements based on anticipated permitting within the City.

2.1. Existing Site

The FAM school site was developed as a junior high school in the mid-1960s and later was converted to a middle school. It went through major modernizations in 1988 and 2001. By 2014, the original building was functionally obsolete and had passed its useful life as a middle school. As a result, the District constructed a new replacement middle school (New Alderwood Middle School) adjacent to Martha Lake Elementary School about 2 miles to the north. The new Alderwood Middle School opened in January 2017. At the time, just prior to its relocation, Alderwood Middle School had a capacity for 850 students.[4] Since the relocation of Alderwood Middle School, the FAM site has been used as a swing school temporarily housing elementary schools while they were under construction for replacement and/or redevelopment. Oak Heights Elementary School is currently housed at the site, along with the Robotics program and practice arena, and the Edmonds Hub resource center for students in the District.

All vehicular access for student arrival and dismissal (including school buses and automobiles), and all parking for the school is accessed from one driveway on 28th Avenue W.

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1 *Edmonds School District –New Middle School at FAM School Redevelopment, Transportation Analysis Scoping for City of Lynnwood Memorandum* (Heffron Transportation, Inc. May 8, 2025.)

2 Coordination with Charlie Palmer, Development Services Engineering Manager and Maisha Mahmud, City Traffic Engineer, City of Lynnwood.

3 Lynnwood City Council approval on September 8, 2025.

4 Edmonds School District and Heffron Transportation, Inc., *Alderwood Middle School Replacement Project – Transportation Concurrency & SEPA / CUP Traffic Study*, November 5, 2014.

2.2. Proposed Site Changes

The District proposes to redevelop the site and construct a new middle school with capacity for up to 1,000 students—a net increase of 150 students compared to its prior middle school capacity, and up to 90 staff are planned.

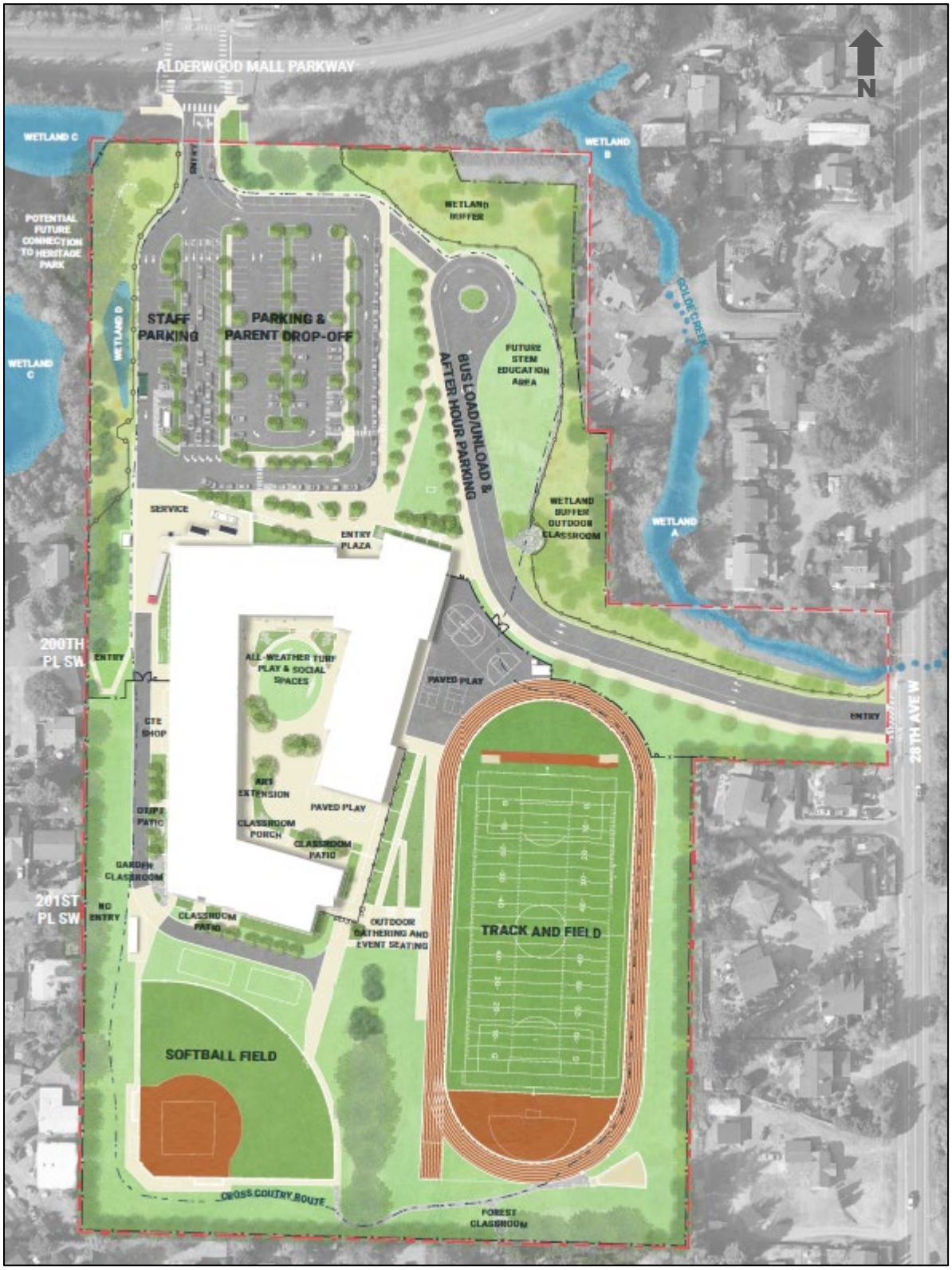
The project would also construct a new second site access driveway on Alderwood Mall Parkway at the north end of the site. The proposed new access would become the fourth (southern) leg of the signalized 3000 Block / Alderwood Mall Parkway intersection and would be the future main access to the school site. The proposed new site access driveway is being pursued as a separate Development Engineering Permit (DEP) with the City. The existing driveway on 28th Avenue W is planned to be retained for the new middle school and used as a separate school-bus access during peak arrival and dismissal times.

The project-site improvements would include the new separate signalized main access for automobiles, increased parking, substantially more on-site vehicle-queue storage space, separated access and circulation for school buses and automobiles, and improved pedestrian arrival and departure pathways. Construction is planned to begin in summer 2026 and the new school is proposed to open in fall 2028. Figure 2 shows the preliminary site plan with proposed site accesses.

Figure 1. Site Location and Vicinity

Source: Google Earth, imagery date July 6, 2024; annotations by Heffron Transportation, Inc. May 2025.

Figure 2. Site Plan



Source: Osborne Consulting, September 2025.

3. BACKGROUND CONDITIONS

This section describes the existing street network, traffic volumes, traffic operations at the study intersections, parking conditions, and pedestrian facilities in the site vicinity. It also describes how these conditions may change in the future without the proposed project. As noted previously, the project is planned to be complete for occupancy in fall 2028; analysis of future conditions (without and with the project) presented in this report reflect forecast year 2028 conditions.

3.1. Street Network

Table 1 lists key characteristics of the streets nearest the site.

Table 1. Existing Vicinity Streets

Street / *Speed Limit* [a]	Classification(s) [b]	Lanes / Parking	Non-Motorized and Transit Characteristics
Interstate 5 (I-5) *Speed limit: 60 mph*	Freeway	Five travel lanes in each direction. Parking is prohibited	None.
196th Street SW (SR-524) *Speed limit: 35 mph*	Principal Arterial	Two travel lanes in each direction with center left-turn lane. On-street parking is prohibited.	Sidewalks provided on both sides of street, and marked crosswalks at vicinity street intersections. No pedestrian facilities along the south side of the bridge over I-5. Bus stops for Community Transit routes on both sides of street.
Alderwood Mall Parkway *Speed Limit: 35 miles per hour (mph)*	Minor Arterial	Two travel lanes in each direction with center left-turn lane. North of 28th Ave W, three north/east bound travel lanes, two south/west bound travel lanes with center left-turn lane. On-street parking is prohibited.	Sidewalks provided along both sides of street, and marked crosswalks at vicinity street intersections. Bus stops for Community Transit routes north of 196th Street SW.
28th Avenue W *Speed limit: 25 mph*	Minor Arterial	One travel lane in each direction. On-street parking is prohibited.	Marked walkway provided on both sides of the street with intermittent sidewalks. Marked crosswalks at vicinity street intersections.
Poplar Way *Speed limit: 30 mph*	Collector Arterial	Two travel lanes in each direction with center left-turn lane. Two lanes transition to one travel lane in each direction south of 200th Pl SW (additional turning lanes at 204th Street SW intersection). On-street parking is prohibited.	Marked walkway provided on both sides of the street with sections of intermittent sidewalks. Marked crosswalks at vicinity street intersections. No non-motorized facilities provided on west side between Alderwood Mall Parkway and 196th Street SW.
3000 Block *Speed limit: Not posted*	Local Street	One travel lane in each direction, additional turn lanes at signalized intersections. Parking signage not posted.	Sidewalk provided on west side and marked crosswalks at signalized intersections.

a. City of Lynnwood Municipal Code (Chapter 11.20), Snohomish County: speed limits set at 35 mph unless otherwise posted, posted signage was reviewed using Google Street View July 2025.

b. City of Lynnwood, Imagine Lynnwood Comprehensive Plan, Adopted January 27, 2025.

The City of Lynnwood's *City Projects, Programs & Initiatives,*[5] *Snohomish County's 2025-2030 Six Year Transportation Improvement Program (TIP),*[6] and Snohomish County's *Current Road Projects,*[7] were reviewed to determine if any transportation improvements are planned near the school site that could make capacity changes by the time the new school is planned to open. Based on this review, there are two projects planned in the vicinity, as listed below.

Poplar Way Extension Bridge – The City of Lynnwood plans to construct an arterial bridge over I-5 to connect Poplar Way between 196th Street SW and 33rd Avenue West. The project has completed the design phase and is nearing completion of the ROW phase. Construction has yet to be scheduled.

Poplar Way: Larch Way to 200th Place SW (Lynnwood City Limits) – Snohomish County Public Works proposes corridor improvements to accommodate expected growth and traffic pattern changes, including improvements to bicycle and pedestrian facilities. The project is currently in the design phase and proposed construction is planned to begin in 2030 after completion of the Poplar Way Extension Bridge project and is subject to approval of funding and permitting.

It is likely the school will open prior to either of the projects listed being complete. However, the City requested that the analysis assume the Poplar Way Extension Bridge as complete to account for any future travel pattern changes when the bridge does open. The remaining existing street network conditions were assumed to remain unchanged for all future-year analyses.

5 City of Lynnwood, *City Projects, Programs & Initiatives.* https://www.lynnwoodwa.gov/Government/Departments/Public-Works/Engineering-Construction/City-Projects-Programs-Initiatives, Accessed July 9, 2025.
6 Snohomish County, *Exhibit A,* November 25, 2024.
7 Snohomish County, *Current Road Projects.* https://www.snohomishcountywa.gov/513/Current-Road-Projects, Accessed July 9, 2025.

3.2. Traffic Volumes

3.2.1. Study Area

The City requires site access and off-site intersection analysis at arterial intersections within one-quarter mile of projects estimated to generate more than 50 peak hour trips (defined as the PM peak hour).[8] Based on the estimated net project trip generation and trip assignments (shown later in Section 4.2.1 of this report), traffic analysis would not be required at off-site intersections. However, with the site access changes, travel patterns to and from the site would be different from existing conditions in the immediate vicinity. Therefore, as coordinated with City transportation review staff, analyses were performed for intersections in the immediate vicinity that could be most affected during the school's morning arrival peak hour. Analysis was also performed during the afternoon and PM peak hours at select intersections. The site access driveway intersections were evaluated for all peak hours. Table 2 lists the study-area intersections and time periods evaluated as coordinated with the City staff based on the net new trip assignments provided during the scoping process.

Table 2. Study-Area Intersections and Peak Hours Evaluated

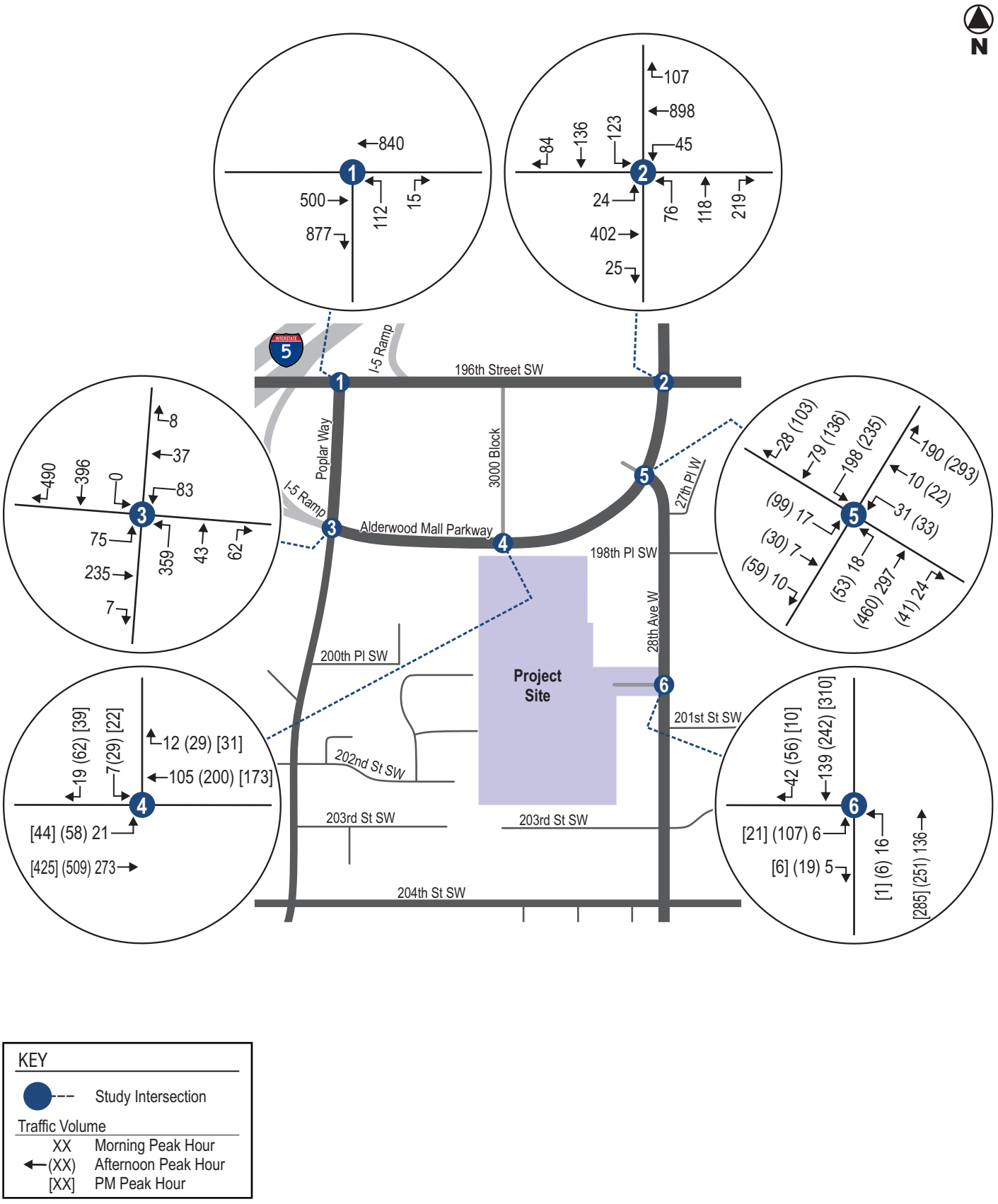
Study Intersection / Site Driveway	Morning Peak Hour	Afternoon Peak Hour	PM Peak Hour
Alderwood Mall Parkway / 3000 Block / New School Access Driveway	X	X	X
28th Avenue W / School Access Driveway	X	X	X
Alderwood Mall Parkway / 28th Avenue W	X	X	
Alderwood Mall Parkway / Poplar Way / I-5 Access	X		
Alderwood Mall Parkway / 196th Street SW	X		
196th Street SW / Poplar Way	X		

3.2.2. Existing Traffic Volumes

Traffic counts were performed for this analysis in fall 2024 and spring 2025. All counts were conducted when the Former Alderwood Middle School was being used as a swing school for Oak Heights Elementary School (occupying the site while that school is being redeveloped). The site access driveway on 28th Avenue W and the Alderwood Mall Parkway / 3000 Block intersection (proposed location of the new site access driveway) were counted on Wednesday, September 25, 2024. The remaining study-area intersections were counted on Thursday. May 29, 2025. All morning peak period counts were performed from 7:00 to 9:00 A.M.; afternoon and PM peak period counts at the Alderwood Mall Parkway / 28th Avenue W intersection and proposed site access locations were performed from 2:00 to 6:00 P.M.

Based on past counts performed at Alderwood Middle School in 2014 and current bell schedules for other District middle schools, the morning arrival peak hour is expected to occur from 7:15 to 8:15 A.M.; the afternoon dismissal peak hour is expected to occur from 2:00 to 3:00 P.M. The counts indicated that the PM peak hour at study-area intersections occurs from 4:00 to 5:00 P.M. Figure 3 shows the existing morning, afternoon, and commuter PM peak hour traffic volumes. The traffic count data sheets are provided in Appendix A.

[8] Lynnwood Municipal Code references: §12.22.180 Site Access Evaluation. §12.22.010 Definitions (PM peak hour means the highest volume of traffic for a continuous hour between 4:00 P.M. and 6:00 P.M.



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NEW MIDDLE SCHOOL AT FAM

Figure 3
Existing Peak Hour Traffic Volumes

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3.2.3. Forecast-2028-Without-Project Traffic Volumes

Forecast-2028-without-project traffic volumes were estimated according to the approach coordinated with City staff, which involved multiple layers of forecasting elements. The City provided 2023 traffic volumes and future-year-2044 modeled traffic volumes at intersections near the site to assist with forecasting year 2028 traffic volumes for this analysis. Based on review of these volume sets, the future volumes were shown to increase by rates of 1.3% and 1.5% per year during the AM and PM peak hours, respectively. To provide conservatively high forecasts, a 2.0% compound annual growth rate was applied to the existing volumes at the study area intersections. City staff did not identify any additional pipeline development projects for inclusion in the forecasts. However, the volumes were adjusted to reflect conditions with the Poplar Bridge Extension project over I-5, which was assumed to be complete for this analysis.[9]

As mentioned, and detailed later in this report (Section 4.2.1), the site is occupied by the former Alderwood Middle School building, which had capacity for 850 students prior to its 2017 relocation. Without the project, the District could re-use the building as a middle school. Therefore, to provide an adequate comparison of future conditions, the future 2028-without-project volumes also reflect the existing site operating as an 850-student middle school. The overall trip distribution patterns used for the proposed project (see Section 4.2.2) were applied to the 850-student school trips to estimate the trip assignments used for the 2028-without-project forecasts. It is noted that no trip-credit was taken for the trips associated with the site's existing use as a swing school (Oak Heights Elementary) as it is likely the morning arrival and afternoon dismissal peak hours of the elementary school would be different from a middle school, given the typical bell schedules. Figure 4 shows the resulting 2028-without-project morning, afternoon, and PM peak hour traffic volumes.

[9] Information provided from Maisha Mahmud, City Traffic Engineer, City of Lynnwood, via emails in July 2025.

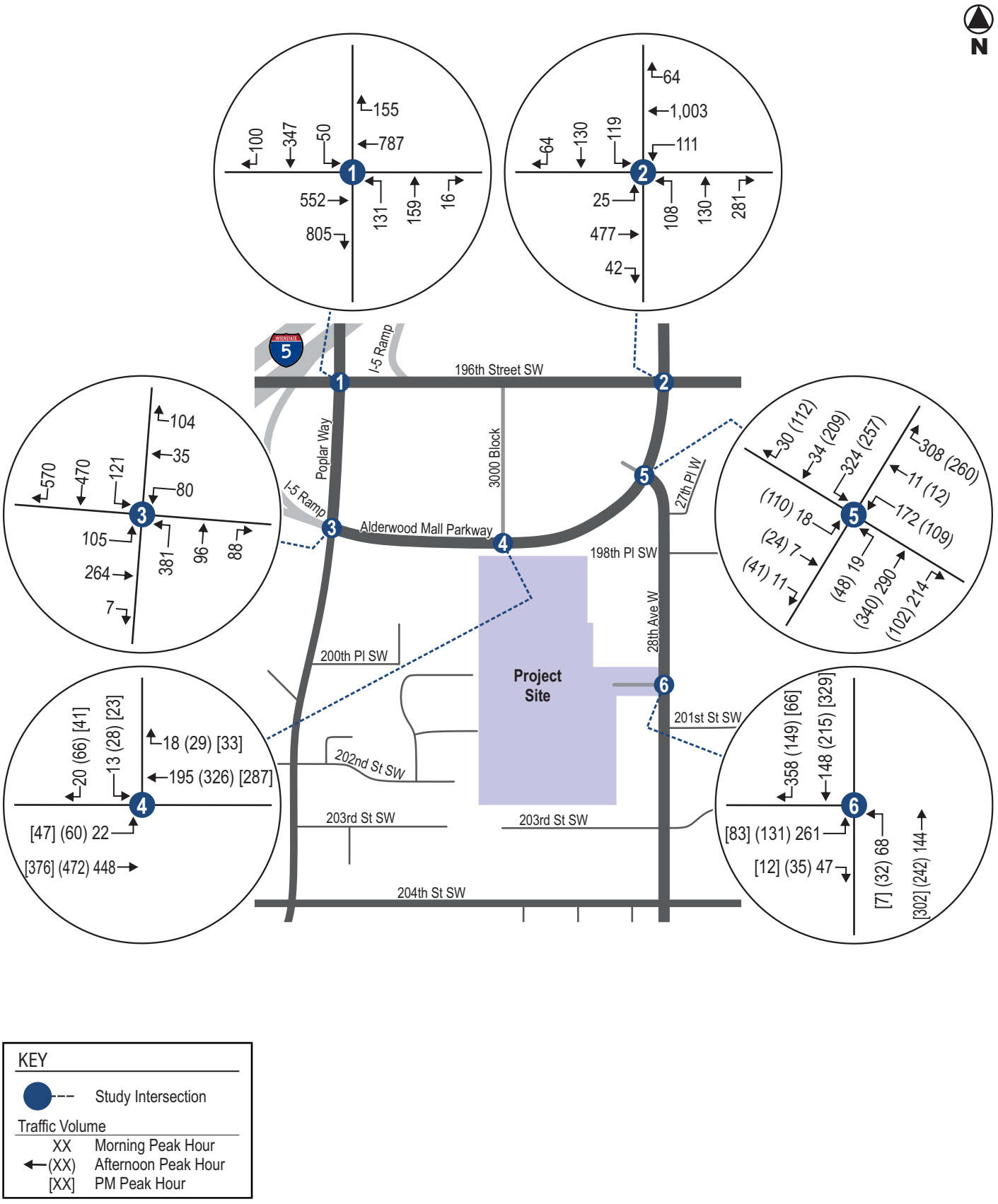

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Figure 4
2028-Without-Project Peak Hour Traffic Volumes

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3.3. Traffic Operations

3.3.1. Intersection and Site Access Operations

Traffic operations analyses were completed for the study-area intersections and the site access driveways. Traffic operations are evaluated based on level of service, which is a qualitative measure used to characterize intersection operating conditions. Six letter designations, "A" through "F" are used; LOS A represents the best traffic operations with little or no delay to motorists; and LOS F indicates poor traffic operations with long delays. Levels of service for the study intersections were determined using the methodology in the *Highway Capacity Manual, 7th Edition [HCM 7]*[10] and all level-of-service calculations were performed using the *Synchro 12* traffic operations analysis software. Results for signalized intersections were reported using the Synchro module, and unsignalized intersections were reported using the HCM *7* module. The City of Lynnwood staff provided signal timing information.[11] The level of service definitions and thresholds are provided in Appendix B. The City has established level-of-service standards in its *Imagine Lynnwood Comprehensive Plan*.[12] For non-City Center arterials and non-State Highways LOS D is the standard during the PM peak hour. Within the City Center, the LOS standard is LOS E during the PM peak hour. The study-area intersections with Alderwood Mall Parkway and 196th Street SW are located in the City Center; therefore, LOS E is the standard applied for this analysis.

The analysis accounts for the peaking factors associated with school traffic patterns that condense traffic into only part of the hour. Peak hour factors (PHFs), which convert each movement's peak hour volume to reflect the hourly flow rate during the peak 15-minutes, were derived from counts during each peak hour. Heavy-vehicle percentages (e.g., for school buses), and non-motorized (pedestrian and bicycle) volumes were also accounted for during each analysis hour. Table 3 summarizes existing and forecast-2028-without-project levels of service for the morning, afternoon, and PM peak hour conditions. As noted, these analyses reflect existing conditions with the site operating as a swing school, and the future-without-project condition reflects the site operating with an 850-student middle school. Both conditions have all vehicle access from 28th Avenue W.

[10] National Academies of Sciences, Engineering, and Medicine. 2022. *Highway Capacity Manual 7th Edition: A Guide for Multimodal Mobility Analysis*.
[11] Received via email from Mike Thomas, City of Lynnwood staff, June 30. ,2025.
[12] City of Lynnwood, Adopted January 27, 2025.

Table 3. Level of Service Summary – Existing and 2028-Without-Project Conditions

	Morning Peak Hour (7:15 to 8:15 A.M.)				Afternoon Peak Hour (2:00 to 3:00 P.M.)				PM Peak Hour (4:00 to 5:00 P.M.)			
	Existing		Without-Project		Existing		Without-Project		Existing		Without-Project	
Signalized Intersections	**LOS** [1]	**Delay** [2]	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**
Alderwood Mall Pkwy / 3000 Block	A	2.6	A	3.7	A	4.0	A	4.1	A	3.0	A	3.9
Alderwood Mall Pkwy / 28th Avenue W	A	9.7	B	14.9	B	10.5	B	11.1				
Alderwood Mall Pkwy / Poplar Way / I-5 Access	C	28.1	E	60.5	Not Applicable [3]							
Alderwood Mall Pkwy / 196th Street SW	C	25.4	C	28.1								
196th Street SW / Poplar Way	A	4.7	B	14.4								
Unsignalized Intersection	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**
28th Avenue W / School Dwy	A	0.9	F	218.2	A	0.3	B	12.0	A	0.8	A	3.1
Northbound Approach	*A*	*7.7*	*A*	*10.0*	*A*	*7.9*	*A*	*8.8*	*A*	*8.0*	*A*	*8.2*
Eastbound Approach	*B*	*10.1*	*F*	*562.9*	*B*	*11.3*	*E*	*48.1*	*B*	*13.6*	*C*	*19.1*

Source: Heffron Transportation, Inc., September 2025.
Note: Existing conditions reflect site operating as a swing school (Oak Heights Elementary School), and without-project conditions reflect site operating with an 850-student middle school. Vehicle access only on 28th Avenue W for both conditions.
1. *LOS = Level of service.*
2. *Delay = Average seconds of delay per vehicle.*
3. *Not applicable; level of service analysis not required for afternoon or PM peak at these signalized study intersections.*

As shown, the signalized study-area intersections currently operate at LOS C or better during the selected analysis peak hours. The unsignalized site access driveway currently operates at LOS A overall with the site occupied by a swing school. However, it should be noted that the analysis times selected for the middle school project may not be representative of the peak hours of the elementary school.

The analyses indicate that, in 2028 with the assumed background traffic growth, the Poplar Way Bridge Extension project completed, and the site operating with an 850-student middle school with vehicle access only on 28th Avenue W, all but one of the off-site study intersections would operate similar to existing conditions. The exception is the Alderwood Mall Parkway / Poplar Way / I-5 Access intersection, which is estimated to degrade from LOS C to LOS E during the morning peak hour. The site access driveway is estimated to operate at LOS F during the morning peak hour, with the eastbound approach (driveway exit) failing (LOS F) with severe delays. This movement is estimated to operate at LOS E in 2028 without the project during the afternoon peak hour. The level-of-service calculation sheets are provided in Appendix C.

3.3.2. On-Site Circulation

Prior observations of site operations found difficult circulation, conflicting flows of autos and school buses, and extensive queuing when the site was occupied by Alderwood Middle School in 2014 and by Spruce Elementary in 2021. In 2021, the vehicle traffic related to afternoon dismissal activities contributed to traffic conflicts along 28th Avenue W and at the school's driveway on this street. An

extensive vehicle queue in the southbound travel lane on 28th Avenue W extended north from the school's driveway blocking the use of this lane for nearly 40 minutes on the day observed. At its peak, the 30-vehicle queue blocked about 900 feet of this street length. This queue contributed to poor and unsafe decisions by drivers trying to circumvent the queue using U-turn maneuvers and driving southbound in the northbound lane (wrong direction of travel) to by-pass the queue.

3.4. Safety

Collision data for the study area intersections and identified road segments were obtained from the Washington Department of Transportation (WSDOT). These data, reflecting the period between January 1, 2022, and June 18, 2025 (3.5 years), were examined to determine if there are any unusual traffic safety conditions that could impact or be impacted by the proposed project. Table 4 summarizes the collision data.

Table 4. Collision Summary

	Rear-End	Side-Swipe	Right Turn	Left Turn	Right Angle	Ped / Cycle	Other [a]	Total for 3.5 Years	Average/ Year
Signalized Intersections									
Alderwood Mall Pkwy / 28th Ave W	1	1	0	5	17	4	1	29	8.4
Alderwood Mall Pkwy / 196th St SW	6	7	0	1	9	0	3	26	7.5
196th St SW / Poplar Way	4	3	0	0	0	0	1	8	2.3
Alderwood Mall Pkwy / Poplar Way / I-5 Access	5	2	0	2	3	0	2	14	4.0
Alderwood Mall Pkwy / 3000 Block / Proposed School Dwy	1	0	0	1	0	0	0	2	0.6
Unsignalized Intersection									
28th Ave W / School Access	0	0	0	0	0	0	0	0	0.0
Road Segments									
28th Avenue W Between Alderwood Mall Pkwy and 203rd St SW	0	0	0	1	0	0	2	3	0.9
Alderwood Mall Parkway Between Poplar Way and 28th Ave W	0	1	0	0	0	0	0	1	0.3

Source: Washington State Department of Transportation, data reflect collisions report from January 1, 2022, through June 18, 2025, July 2025.

a. Other collisions: Vehicle struck fixed object (6); U-Turn (1); Improper backing maneuver (1); and Collision with insufficient information to determine type (1).

As shown, the intersections with the highest number of collisions occurred along the Alderwood Mall Parkway corridor at 28th Avenue W (29 collisions) and at Poplar Way (26 collisions). The most frequent collision type overall was the right-angle collision, with no discernable or consistent pattern for cause among them. Four of the reported collisions involved pedestrians, all of which occurred at the Alderwood Mall Parkway / 28th Avenue W intersection. None of the reported collisions resulted in fatalities.

Overall, these data do not indicate any unusual traffic safety conditions.

3.5. Parking

The former Alderwood Middle School site has 67 striped parking stalls. On-street parking is not provided near the school on Alderwood Mall Parkway or 28th Avenue W. Event parking is currently provided within the student load/unload loop at the south end of the school site, parking around the shop buildings, and on the grass field at the northeast portion of the school site.

3.6. Non-Motorized Transportation Facilities

As detailed in the *Street Network* section, sidewalks exist along both sides of 196th Street SW and Alderwood Mall Parkway. Along other vicinity streets in the study area, including 28th Avenue W, walkways are marked along both sides of the street with sidewalks provided intermittently. Except for at I-5 on / off ramp intersections, marked crosswalks are provided at all main vicinity street intersections.

3.7. Transit

Community Transit provides bus transit service within the study area and operates Route 166 north of the site and Route 120 south of the site. Stops are provided along 196th Street SW west of Alderwood Mall Parkway, Alderwood Mall Parkway north of 196th Street SW, and along 204th Street SW as listed below.

- **Route 166** (Edmonds Station | Silver Firs) has stops along both sides 196th Street SW, west of Alderwood Mall Parkway and the east side of Alderwood Mall Parkway just north of 196th Street SW. Two stops with shelters are located on 196th Street SW near Alderwood Mall Parkway. The route operates every 30 minutes on weekdays from 5:00 A.M. to 8:00 P.M. and hourly until 11:00 P.M.
- **Route 120** (UW Bothell/Cascadia | Lynnwood City Center Station) has stops along both sides of 204th Street SW. The route operates every 30 minutes on weekdays from 5:20 A.M. to 6:20 P.M. and hourly until 11:00 P.M.

Service hours and headways for both routes are more limited on weekends.

4. PROJECT IMPACTS

This section of the report describes the conditions that would exist with the New Middle School completed at the Former Alderwood Middle School site. The proposed school is estimated to open and operate with an estimated 890 students; however, the campus would provide capacity for up to 1,000 students. As a worst-cast condition, the analysis assumes the school would open with 1,000 students enrolled. Vehicle trip estimates reflecting the proposed enrollment capacity were combined with the 2028-without-project traffic volume forecasts. Level-of-service analyses were performed to determine the proposed project's impact on local traffic operations. Potential impacts to other transportation facilities were also examined. The following sections describe the methodology used to determine the proposed project's impacts, estimated results, and recommended and/or required mitigation.

4.1. Street Network

The District is pursuing a separate Development Engineering Permit (DEP) with the City for a new site access driveway at the north end of the site. The driveway would be the south leg of the signalized Alderwood Mall Parkway / 3000 Block intersection. Traffic signal changes would be implemented to accommodate this additional south leg. The project would install frontage improvements along Alderwood Mall Parkway and 28th Avenue W, as required by the City. No other changes to the off-site street network are proposed.

4.2. Traffic Volumes

As described in the following sections, the New Middle School at its proposed capacity is expected to increase the vehicular activity on the surrounding transportation network compared to conditions with the former Alderwood Middle School enrolled to its pre-closure capacity on the site. The assumptions used to estimate the change in site generated traffic and assignments are summarized in the following sections. The trip generation analysis methodology, approach, and results were coordinated with City Transportation review staff during the analysis scoping efforts.

4.2.1. Site Traffic Generation

Peak hour trip generation for the proposed new middle school at FAM were determined using equations and rates published for Middle School/Junior High School (Land Use Code 522) in the Institute of Transportation Engineers' [ITE] *Trip Generation Manual*.[13]. The net increases in site generated trips are based on the difference between the school site's prior capacity (850 students) and the proposed enrollment capacity (1,000 students)—a net increase of 150 students. It is noted that the District expects the student enrollment for the New Middle School to be around 890 students based on the existing and future enrollment forecasts. Table 5 summarizes the trip estimates for the proposed New Middle School at FAM. As shown, compared to the former school, the proposed school is estimated to generate just over 300 net additional daily trips; 107 net additional morning peak hour trips, 51 net additional afternoon peak hour trips, and 22 net additional PM peak hour trips.

[13] ITE, 12th Edition, August 2025.

Table 5. Net Trip Generation Estimates – New Middle School at FAM Site

Site Condition	Enrollment Capacity (students)	Daily Trips	Morning Peak Hour [1] In	Morning Peak Hour [1] Out	Morning Peak Hour [1] Total	Afternoon Peak Hour [2] In	Afternoon Peak Hour [2] Out	Afternoon Peak Hour [2] Total	PM Peak Hour [3] In	PM Peak Hour [3] Out	PM Peak Hour [3] Total
Middle / Junior High School (LU 522) Trip Rates and Equations		*Ln(T) = 0.97 Ln(X) + 0.97*	*Ln(T) = 0.93 Ln(X) + 0.22 (55% in, 45% out)*			*T = 0.34(X) + 4.16 (46% in, 54% out)*			*0.15 trips / student (48% in, 52% out)*		
New Middle School	1,000	2,144	422	346	768	158	186	344	72	78	150
FAM	850	1,832	364	297	661	135	158	293	61	67	128
Net Change	**150**	**312**	**58**	**49**	**107**	**23**	**28**	**51**	**11**	**11**	**22**

Source: Heffron Transportation, Inc., August 2025, based on equations and rates in Trip Generation Manual (ITE, 12th Edition, 2025) for Middle School / Junior High School (Land Use 522).

1. *Expected to occur from 7:15 to 8:15 A.M. based on schedule at Alderwood Middle School (8:05 A.M. to 2:35 P.M.). Assumes peak hour of generator overlaps AM peak hour of adjacent street network.*
2. *Expected to occur from 2:00 to 3:00 P.M. based on schedule at Alderwood Middle School (8:05 A.M. to 2:35 P.M.).*
3. *Reflects trip generation during a peak hour between 4:00 and 6:00 P.M.*

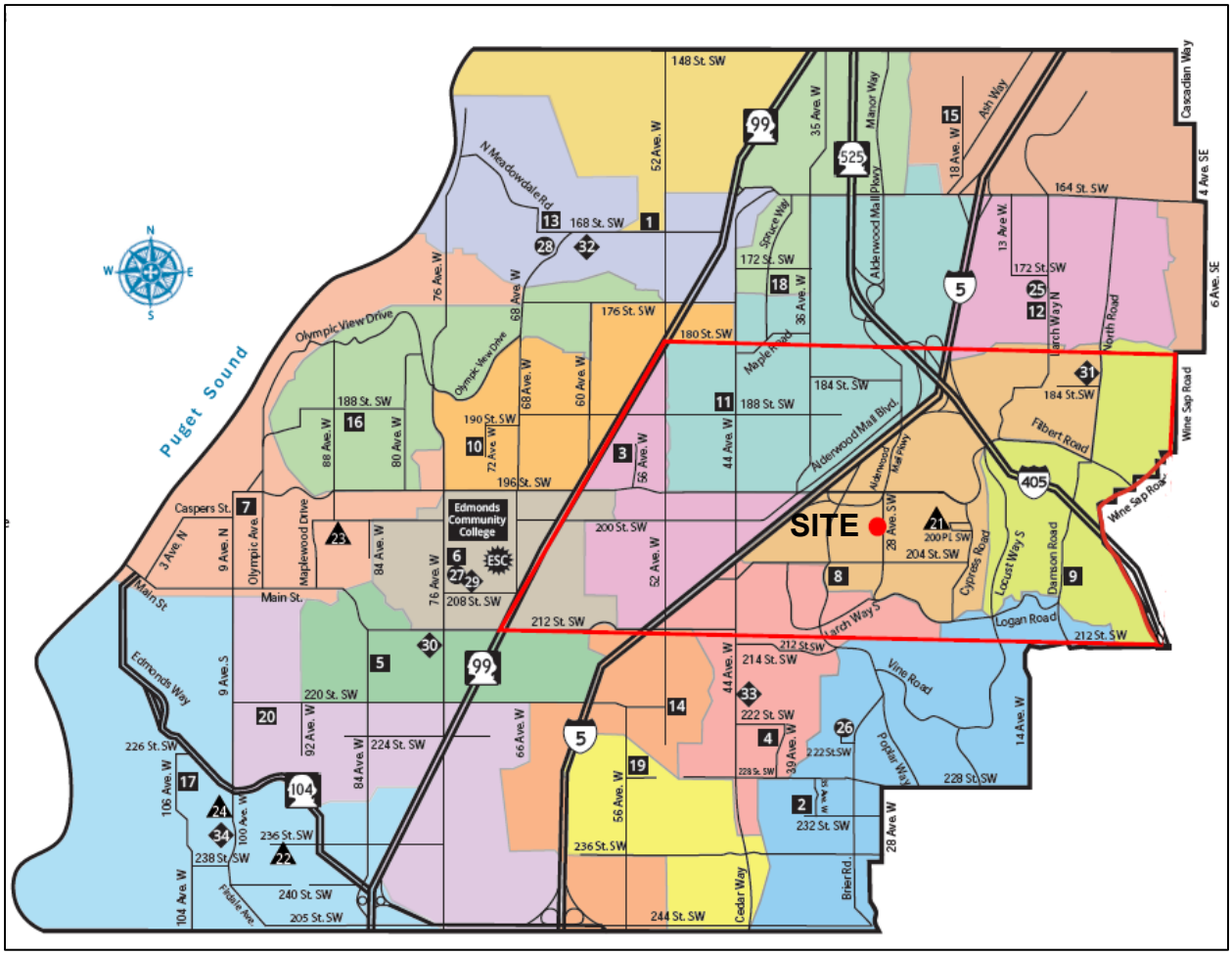
4.2.2. Trip Distribution and Assignments

Trip distribution patterns were derived for the proposed new middle school based on the location of the school site, 2020 Census data for residential densities within the District's tentative enrollment area for the new school, the proposed site access configuration, and traffic counts performed in September 2024 and May 2025 at and around the school site. The project trip distribution also assumes the Popular Way Bridge Extension project would be complete when the new middle school is expected to open in fall 2028.

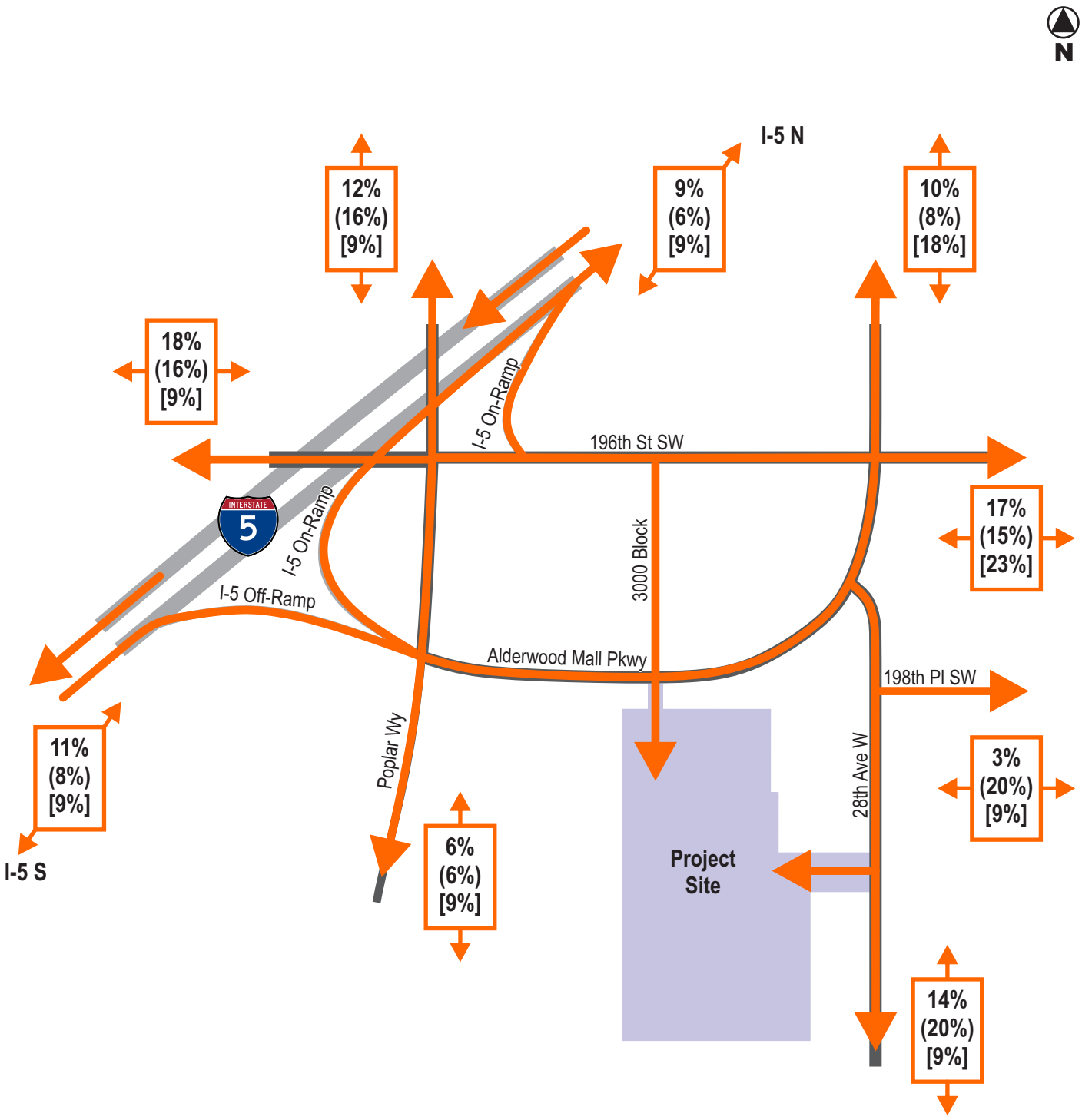
The net changes in project trips at the site were assigned to the local street network. Figure 5 shows the Edmonds School District enrollment boundary, which includes the Cities of Edmonds, Lynnwood, Mountlake Terrace, Woodway, and Brier, and parts of unincorporated Snohomish County. The new middle school site is located in the eastern-central portion of the District. Figure 6 shows the estimated project trip distribution patterns and Figure 7 shows the net change in trip assignments for the morning, afternoon, and PM peak hours.

The net new project trips were combined with the 2028-without-project traffic volumes. Figure 8 shows the resulting 2028-with-project morning, afternoon, and PM peak hour traffic volumes.

Figure 5. Edmonds School District Enrollment Boundary



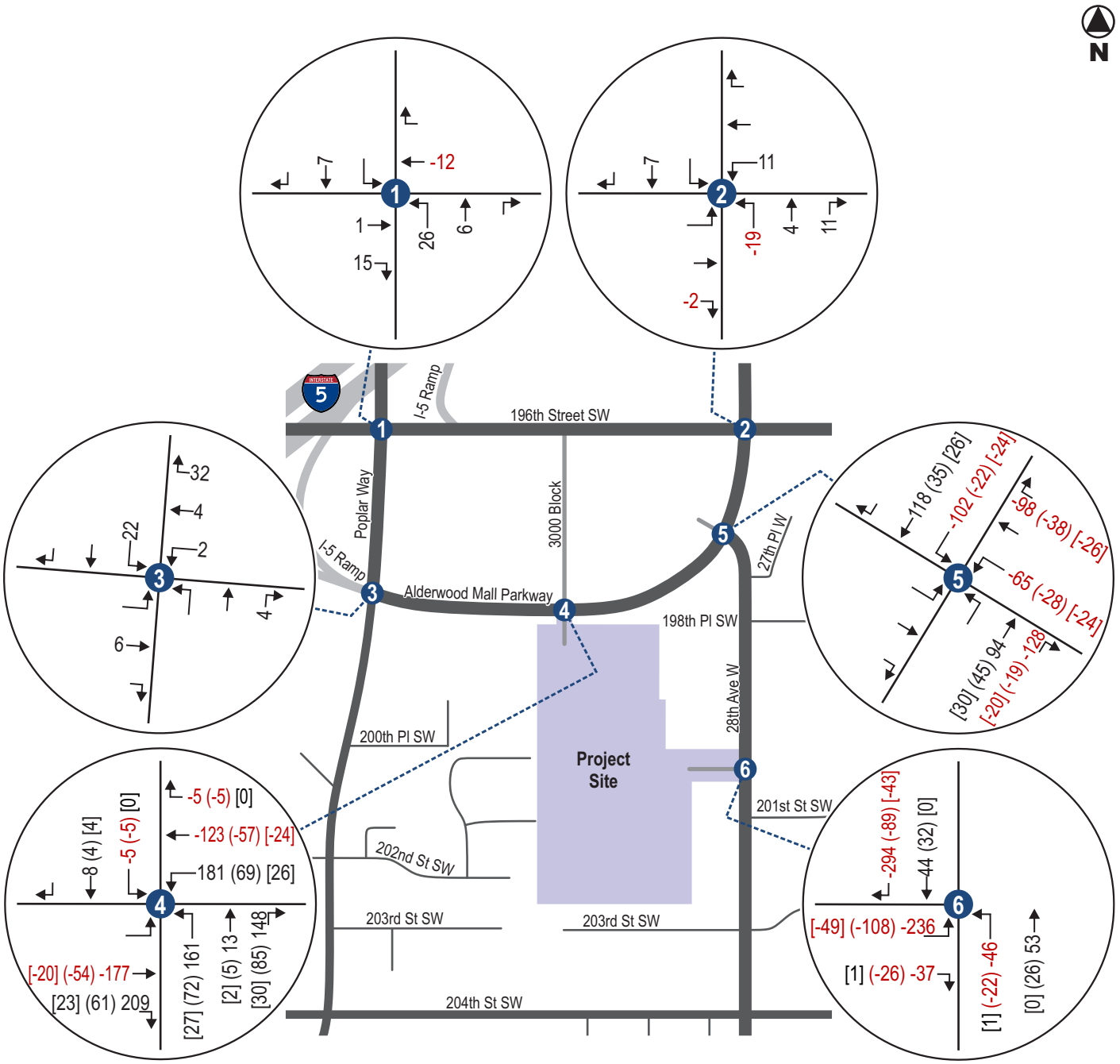
Source: Edmonds School District, October 2024. Annotations by Heffron Transportation, Inc. 2025.



EDMONDS SCHOOL DISTRICT
NEW MIDDLE SCHOOL AT FAM

Figure 6
Project Trip Distribution

heffron transportation inc



KEY

Study Intersection

Traffic Volume

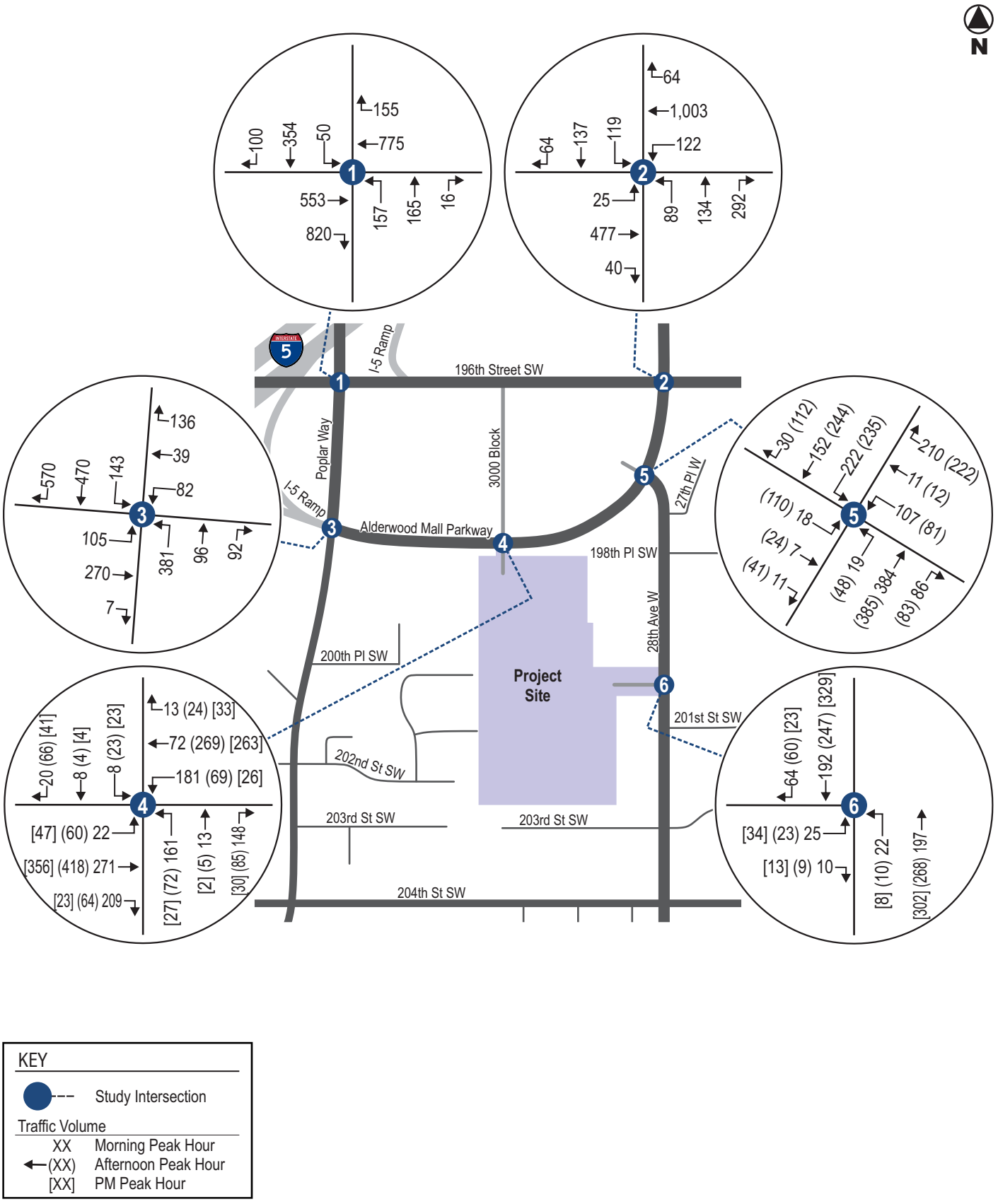
XX Morning Peak Hour
←(XX) Afternoon Peak Hour
[XX] PM Peak Hour

*Note red values reflect a net reduction in trips due to change in site access

EDMONDS SCHOOL DISTRICT
NEW MIDDLE SCHOOL AT FAM

Figure 7
Total Net Change In Project Trips
Morning, Afternoon, and PM Peak Hours

heffron transportation inc



EDMONDS SCHOOL DISTRICT
NEW MIDDLE SCHOOL AT FAM

Figure 8
Forecast 2028-With-Project Peak Hour Traffic Volumes

heffron transportation inc

4.3. Traffic Operations

The following sections describe the traffic operations analyses prepared to evaluate conditions with the proposed school project.

4.3.1. Intersection and Site Access Operations

Intersection levels of service for forecast-2028-with-project conditions were determined using the same methodology described previously. Table 6 shows the results of the analysis; levels of service for the 2028-without-project conditions are shown for comparison.

Table 6. Level of Service Summary – 2028-Without- and With-Project Conditions

	Morning Peak Hour (7:15 to 8:15 A.M.)				Afternoon Peak Hour (2:00 to 3:00 P.M.)				PM Peak Hour (4:00 to 5:00 P.M.)			
	Without-Project [1]		With-Project		Without-Project [1]		With-Project		Without-Project [1]		With-Project	
Signalized Intersections	**LOS [2]**	**Delay [3]**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**
Alderwood Mall Pkwy / 3000 Block / Proposed School Dwy	A	3.7	B	15.5	A	4.1	B	14.0	A	3.9	A	9.6
Alderwood Mall Pkwy / 28th Avenue W	B	14.9	B	12.3	B	11.1	B	11.2				
Alderwood Mall Pkwy / Poplar Way / I-5 Access	E	60.5	E	74.8	Not Applicable [4]							
Alderwood Mall Pkwy / 196th Street SW	C	28.1	C	28.1								
196th Street SW / Poplar Way	B	14.4	B	14.5								
Unsignalized Intersections	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**
28th Avenue W / School Dwy	**F**	**218.2**	**A**	**2.4**	**B**	**12.0**	**A**	**1.5**	**A**	**3.1**	**A**	**1.4**
Northbound Approach	A	10.0	A	8.0	A	8.8	A	9.8	A	8.2	A	8.1
Eastbound Approach	F	562.9	C	16.2	E	48.1	C	19.9	C	19.1	B	14.9

Source: Heffron Transportation, Inc., September 2025.

1. *Without project conditions reflect site operating with an 850-student middle school and all vehicle access only on 28th Avenue W.*
2. *LOS = Level of service.*
3. *Delay = Average seconds of delay per vehicle.*
4. *Not applicable; level of service analysis not required for afternoon or PM peak at these signalized study intersections.*

As shown, the proposed school project would contribute to some delay changes at nearly all the study intersections during all peak times. Most would continue to operate with similar levels of service, except for the site access driveway on 28th Avenue W. This school driveway is expected to have improved operations during peak times, since volumes would be reduced and serving only buses. The proposed new signalized access along Alderwood Mall Parkway opposite 3000 Block is expected to continue operating at acceptable levels of service during all peak conditions with the school project.

4.3.2. On-Site Circulation

Site Access and Queuing

As described, the signalized site access on Alderwood Mall Parkway would operate as the main access to the school site. It would provide access for the automobile drop-off/pick-up area, parking for staff and visitors, and service/delivery access.

The existing site driveway on 28th Avenue W would be retained as the school bus access. This driveway would be open to all traffic after school hours, and for evening use and events. The school bus loading area would provide additional parking capacity during these times.

Sight Distance

The City will require the proposed new site driveway on Alderwood Mall Parkway at 3000 Block to meet its requirements for vehicle and pedestrian sight distance standards.

On-Site Queuing Conditions

The proposed site improvements are expected to better accommodate the volume of automobiles during peak morning arrival and afternoon dismissal periods for the new school compared to the existing site layout and the former Alderwood Middle School on the site. In the mornings, school drop-off activities usually occur with limited queues or delay within a formalized student unload area. This is because arrivals tend to be spread out over 20 to 30 minutes before the school start time. During this period, family drivers generally arrive, drop off students, and then immediately leave the site and vicinity. In the afternoon, many drivers arrive early and wait in the queue lane(s), in unused on-site parking spaces for the students to be dismissed, and longer vehicle queues can develop. With the existing site access configuration, on-street vehicle queuing was observed prior to and during afternoon dismissal.

To estimate potential queuing demand for the new middle school, observations were performed at the existing relocated Alderwood Middle School (with an existing enrollment of 682 students) on Wednesday, February 12, 2025. The longest vehicle queue during the morning arrival peak was 40 vehicles. Based on this information, the expected peak queue during the morning peak hour for the proposed New Middle School at its proposed capacity of 1,000 students would be 58 vehicles. The proposed new site would have more on-site drop-off space to accommodate arriving vehicles. Morning arrival queues can also be modeled directly, using Poisson arrival methodologies for a multi-channel service system (i.e., the number of drop-off spaces that can be used simultaneously). Service times for the modeling were derived from data and observations performed at Pacific-Cascade Middle School in Issaquah, WA.[14] These observations of 120 morning-unloading maneuvers over three consecutive days found an average of about 33 seconds for students to exit vehicles before the vehicles began egressing the site. This equates to a service rate for each drop-off space of 1.82 vehicles per minute (36.4 vehicles in 20 minutes or a rate of 109 vehicles per hour).

The forecast morning peak hour arrival volume at the proposed school is estimated at 422 vehicles; however, about 76 of those vehicles are estimated to be staff trips. Based on the proposed site configuration, bus trips would be destined to the school bus loop driveway on 28th Avenue W. It is estimated that 322 vehicles could be family drivers bringing students to school and using the load/unload area on the site. Drop-off traffic during the peak 15-minute period was estimated at four times the peak

[14] Heffron Transportation, Inc., 3-day video observations at Pacific-Cascade Middle School, Issaquah, WA, June 2019.

15-minute component of this value, which assumes that drop-off activity would be more compressed than data show for all morning arrivals. Based on counts performed at other middle schools, it is estimated that an average of 40% of the peak hour traffic is likely to be compressed into the peak 15-minutes of the hour. Therefore, the estimated peak 15-minute arrival rate is equivalent to about 515 vehicles per hour (40% × 322 × 4).

Students that are driven to the site by family members are expected to be dropped off within the proposed load/unload loop. To provide an analysis of potential worst-case conditions, only 10 load/unload spaces closest to the building entry were evaluated to estimate both the average and 95th-percentile queues for the on-site drop-off area during the morning peak hour. Table 7 presents the estimated queues for the assumed drop-off spaces at the school during the morning arrival period with the school at a full enrollment (1,000 students). As shown, the estimated morning arrival queues (average of 5 vehicles and 95th-percentile of 15 vehicles) are expected to be accommodated on the proposed site. The queue model calculation results are provided in Appendix H.

Table 7. Estimated Arrival (Drop-off) Vehicle Queues

Peak Hour	Vehicles Served Simultaneously	Average Queue	95th Percentile Queue	Exceeds On-Site Vehicle Capacity?
Morning	10 vehicles	5 vehicles	15 vehicles	No

Source: Heffron Transportation, Inc., September 2025, using service rates derived from 3-day video observations of arrivals at Pacific-Cascade Middle School, Issaquah, WA, June 2019, observations at Alderwood Middle School in February 2025, and other middle schools observed by Heffron from 2023 to 2025.

Although the queue analysis and estimation model are reasonable for application to morning arrival queues, afternoon dismissal queuing conditions are different. Family drivers typically arrive prior to school dismissal during a time when no vehicles are being loaded (or serviced). In addition, students arrive at vehicles at different rates, so service times per vehicle are different than during morning arrival. Based on observations and counts at the existing Alderwood Middle School on Wednesday, February 12, 2025, the afternoon dismissal period experienced the longest vehicle queue of 44 vehicles at the main access, plus another 20 vehicles in the front parking lot area, for a total of 64 vehicles. Using the ratio of student-enrollment-to-vehicle-queue, with the proposed 1,000 student capacity, the afternoon peak vehicle queue is estimated at 94 vehicles. The proposed on-site vehicle load/unload and queuing area would provide space for about 84 vehicles) before the queues could extend onto Alderwood Mall Parkway.[15] The proposed queue area is designed to operate like a ferry-line waiting area, with managed vehicle flow from one lane to another dismissed to the student load area. If this area were to fill in the afternoon, family drivers would be directed to unused parking spaces within the main parking lot, and circulate within the parking drive aisles before entering the ferry line queues. The load/unload area, internal drive aisles, and on-site parking would provide capacity that could accommodate the peak queue. It is acknowledged that some fluctuation in volumes and queuing activities is common, as they can be affected by weather, special events, and unfamiliarity with drop-off/pick-up procedures at the beginning of each school year.

Pedestrian and Bicycle Access

Pedestrian access to the site would be provided from 28th Avenue W and Alderwood Mall Parkway. New pedestrian circulation paths are planned to enhance access from the adjacent street to the building and to

[15] On-site vehicle load/unload and queue supply provided by Osborn Consulting, September 2025.

better connect the internal parking areas and passenger load/unload areas. The site design would allow for a potential future pedestrian connection at the northwest area of the site for connection to Heritage Park, which is west of the school site. The project would provide 50 bicycle parking spaces for students and/or staff.

4.4. Safety

The collision data provided for the study area did not indicate any unusual collision patterns that would impact or be impacted by the proposed project. The proposed project includes the following improvements:

1) Provide an additional site access driveway to allow for separation between family and staff vehicles, and school buses accessing the site;
2) Increase on-site parking;
3) Install and improve non-motorized access to and from the school site from both Alderwood Mall Parkway and 28th Avenue W;
4) Provide a potential future pedestrian connection between Heritage Park to the west during non-school hours; and
5) Provide more on-site vehicle queuing and load/unload capacity.

These proposed improvements are expected to enhance overall transportation safety at and around the school. As a result, the project is not expected to result in any significant adverse safety impacts.

4.5. Parking

The State of Washington adopted SEPA-related amendments on January 20, 2023, which removed parking as an element of the environment in WAC 197-11-444(2)(c)(iv) and removed the parking-related question from the environmental checklist in WAC 197-11-960(B)(14)(c). However, the City requested analyses of parking supply and demand to address code requirements.

4.5.1. School Day Parking

School day parking demand was estimated for the school using rates derived from parking demand counts and observations at the existing Alderwood Middle School parking lots. Counts were performed before school, midday during school hours, and after school, on Wednesday, February 12, 2025. A peak of 69 parked vehicles were counted on the site, which included staff and visitors. Based on enrollment at that time (682 students), the counts indicate a peak school-day parking demand rate of 0.10-vehicles-per-student. With the proposed capacity of 1,000 students, estimated future school-day parking demand would be 101 vehicles. This rate is comparable to the published information for Middle School / Junior High (Land Use 522) in ITE's *Parking Generation Manual.*[16] That publication estimates a range between 86 and 100 spaces would be required for the proposed school with 1,000 students.

The proposed project would provide a total of 104 stalls (an increase of 37 striped stalls on the site). The proposed parking supply would accommodate the estimated peak school-day demand for up to 90 staff and visitors.

[16] ITE, 6th Edition, October 2023.

City staff have indicated that the Lynnwood Municipal Code is undergoing a code update, including the parking section where it is likely that schools would be exempt from set requirements.[17] As in many jurisdictions, the school districts would be allowed to estimate the number of parking spaces needed based on estimated demand for each unique school site, as to not overpark school sites. It is noted, the current City of Lynnwood's code-required parking rate of one-stall-per-six-students of capacity is listed in Table 21.18.03 of the Lynnwood Municipal Code[18] would require 166 parking stalls for the proposed project.

4.5.2. Evening Event Parking

As at other middle schools, there would be occasional events held at the school. To account for potential additional parking needs, the proposed on-site automobile load/unload curb area could provide space for an additional 22 vehicles. Portions of the ferry-style vehicle queue area could also be used for event parking with space for up to 38 vehicles. Finaly, the school bus load/unload area could provide space for about 45 vehicles during evening and weekend events, while allowing fire access as required. These additional spaces would allow space for up to 209 vehicles to park on the site during non-school times for events (evenings and weekends).[19] Strategies to limit event parking overspill onto the neighborhood streets are recommended. These could include separating large events into multiple days, accommodating large events at other locations off-campus, and/or encouraging carpooling and transit usage. The District and school would coordinate scheduled large events at the school, so all required parking is accommodated on the site.

4.6. Non-Motorized Transportation Facilities

The existing site does not generate significant pedestrian and bicycle trips within the site vicinity. However, the project would install sidewalks along both sides of the site access drives with connections to both Alderwood Mall Parkway and 28th Avenue W. Sidewalks along the site frontages would be provided according to City and County standards.

The proposed site driveway on Alderwood Mall Parkway at 3000 Block would be designed to meet the City's vehicle and pedestrian sight distance requirements. A crosswalk would be provided across the new site access driveway at Alderwood Mall Parkway with pedestrian actuated crossing signals. New ADA ramps would be installed to City standards at the Alderwood Mall Parkway / 3000 Block / New School Driveway intersection as required by the City. No adverse impacts to the surrounding non-motorized facilities are anticipated with the proposed project.

4.7. Transit

As described previously, Community Transit provides bus transit service within the study area and operates Routes 166 and 120 within walking distance to nearby transit stops. It is recognized that some staff could utilize the transit services provided. District-provided school bus transportation will be available at the new middle school for students, so it is unlikely that a significant number of students would use public transportation.

Student bus ridership and staff transit use can vary from year to year; however, the existing bus stops and transit routes are expected to accommodate any increases associated with the new school. The pedestrian routes to and from the transit stops and the school include sidewalks and/or walking paths and crosswalks. No adverse impacts to the surrounding transit facilities or service are anticipated with the proposed project.

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[17] City of Lynnwood Pre-Development Meeting Comments, provided September 16, 2025, from August 28, 2025, Teams meeting.

[18] Website access: Ch. 21.18 Off-Street Parking | Lynnwood Municipal Code.

[19] On-site vehicle parking supply estimates provided by Osborn Consulting, September 2025.

4.8. Short-Term Construction Impacts

Construction is planned to start in summer 2026 and be completed fall 2028. An early phase of the construction would include site clearing, moving, and exporting of material. More than half of the cut soil will be relocated and utilized as fill on the site. It is estimated that about 36,250 loose cubic yards (cy) of spoils will need to be exported. The export of material is expected to be completed with truck-and-pup combinations that carry an average of about 20 cy each. This effort is expected to generate about 1,800 total truckloads. With about 18 truckloads of removal per day, this effort would take about 100 days. Over a typical eight-hour construction workday, this would equate to roughly four to five truck trips per hour (inbound plus outbound).

The construction of the project would also generate employee and equipment trips to and from the site. It is anticipated that construction workers would arrive at the construction site before the AM peak traffic period on local area streets and depart the site prior to the PM peak period; construction work shifts for schools are usually from 7:00 A.M. to 3:30 P.M., with workers arriving between 6:30 and 6:45 A.M. The number of workers at the project site at any one time would vary depending upon the construction element being implemented. Parking for construction personnel would be provided within the site.

4.9. Transportation Concurrency

The City will conduct a Transportation Concurrency Management review for the proposed project according to Chapter 12.22 of the Lynnwood Municipal Code (LMC).[20] The concurrency evaluation fees will be paid by the applicant. The City will issue a capacity reservation certificate, with or without conditions if the project is compliant. If the project evaluation is deemed not concurrent, then the applicant can work with the City with options for the project to reach concurrency compliance.

[20] City of Lynnwood, Ordinance 3478, passed April 28, 2025. https://lynnwood.municipal.codes/LMC/12.22

5. SUMMARY AND FINDINGS

The following summarizes the findings of the analysis:

- The project would replace and redevelop the former Alderwood Middle School site with a new middle school. The new school would meet current educational specifications, standards, and requirements to support the District plans for all middle schools to serve 6th through 8th grade students.

- The project would provide a new main site access driveway at the Alderwood Mall Parkway / 3000 Block signalized intersection. This improvement would allow for student families, staff, and visitors to use this new access, while the existing access along 28th Avenue W would be retained for school bus access. The site redevelopment would also increase parking, on-site queueing, and improve non-motorized access from the site frontages to the school buildings.

- When complete, the school site would have a total capacity of 1,000 students—a net increase of 150 students compared to the former Alderwood Middle School on the site. It is also planned for up to 90 staff.

- The proposed New Middle School is estimated to generate a net increase of 107 morning peak hour trips, 51 afternoon peak, and 22 PM peak hour trips.

- The proposed New Middle School, if enrolled to its proposed capacity, would experience improved site access operating conditions with a signalized main access at Alderwood Mall Parkway. The existing stop-controlled driveway on 28th Avenue W would also experience improved operations with bus-only access during school hours. The site would experience improved site access conditions during all peak hours compared to the site with the existing access.

- The proposed project would have negligible impacts to the study-area intersections with no change in level of service except at the Alderwood Mall Parkway / 3000 Block / School Driveway, which is anticipated to change from LOS A to LOS B during both the morning and afternoon peak hours. All intersections and site access driveways are expected to operate at acceptable levels during all peak hours with the proposed school project.

- Overall, the proposed on-site circulation facilities are forecast to better accommodate the school traffic demand. The separation of school bus access from passenger vehicle access is a substantial improvement for the overall school operations during peak times. School buses will be able to enter and exit the site without conflicting with other vehicles. The new signalized driveway and queuing capacity on the site will allow for controlled ingress and egress, and the on-site queuing capacity will be greater than the existing configuration. Overall, the site redevelopment, access changes, and frontage improvements are expected to provide noticeable improvement in operational conditions within the vicinity.

- The proposed project would provide 104 day-time parking stalls, which is expected to accommodate the total school-day parking demand for the up to 90 staff and visitors. The student load/unload area, a portion of the ferry-style queue area, and the bus load/unload curb lanes could be used for parking during weekend and evening events as needed with an additional 105 stalls, and a total of 209 stalls on the site.

6. RECOMMENDATIONS AND MITIGATION

Although the proposed New Middle School project would not result in significant adverse impacts to the transportation system in the site vicinity, the following measures are recommended to reduce the short-term construction-related and long-term traffic and parking impacts of the project.

6.1. Recommended Short-Term Mitigation

Construction Transportation Management Plan (CTMP) – The District should require the selected contractor to develop a CTMP that addresses traffic and pedestrian control during construction of the New Middle School project and site improvements. It should define truck routes, lane closures, walkway closures, and parking or load/unload area disruptions, as necessary. To the extent possible, the CTMP should direct trucks along the shortest route to arterials and away from residential streets to avoid unnecessary conflicts with resident and pedestrian activity. The CTMP could include measures to keep adjacent streets clean daily at the truck exit points (such as street sweeping or on-site truck wheel cleaning) to reduce tracking dirt off-site.

6.2. Recommended Long-Term Mitigation

Communicate Transportation and Access Changes – Prior to school opening at the new site, the District and school principal should establish a communication plan to educate families about access and parking at the new school site. These communications and on-site staff management should stress the measures required to keep the main access driveway clear of queued vehicles and to prevent school-generated traffic queues from spilling into the school's signalized intersection with Alderwood Mall Parkway.

Management of Large School Events – Management of large events may be needed so that available on-site parking can accommodate the demand. Measures such as modifying large events by separating them into two sessions or into two nights based on grade levels (as occurs at some other schools) can reduce peak event demand. Scheduling large events at an off-site location could also be an option if necessary.

6.3. City of Lynnwood Transportation Impact Fees

The City of Lynnwood collects transportation mitigation fees for new development based on the Lynnwood Municipal Code (LMC) Section 3.105. The City provides a Transportation Impact Fee (TrIF) Calculation tool to estimate the fee based on the proposed land use and the location of the proposed development. The City is separated into two different Transportation Impact Fee Zones: Zone A (City Center and Mall) and Zone B (Remainder of the City). Since the school site is in the process of being annexed into the City of Lynnwood from Snohomish County, the site has not yet been designated into either zone; however, it is adjacent to Zone A to the north. The area adjacent to the project site is subject to a 15% reduction in Zone A fees.

The most current impact fee schedule available on the City's website (dated as of January 1, 2015)[21] uses square footage as a variable for calculating fees for schools. The schedule includes designated peak hour trip rates of $5,107 for Zone A and $7,944 for Zone B. As mentioned throughout this report, the Institute of Transportation Engineers only provides information to calculate school trips based on the student

[21] City of Lynnwood TrIF Calculation Worksheet, City website accessed September 2025: Permit & Impact Fees – City of Lynnwood.

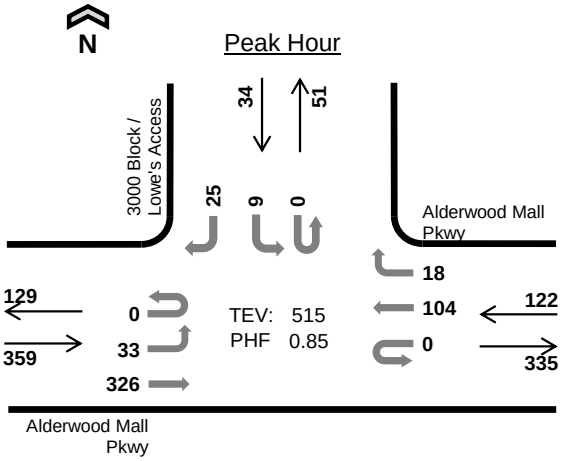
enrollment, not square footage as a variable. To align with the transportation analysis provided in this transportation technical report, it is recommended that the transportation impact fees be calculated based on the site's net change in PM peak hour trips multiplied by the applied trip rate for the designated zone. The proposed New Middle School is estimated to generate a net increase of 22 PM peak hour trips. The estimated impact fees based on the stated fee schedule could range between $112,354 and $174,768. The City's transportation impact fees are payable at the time of building permit issuance.

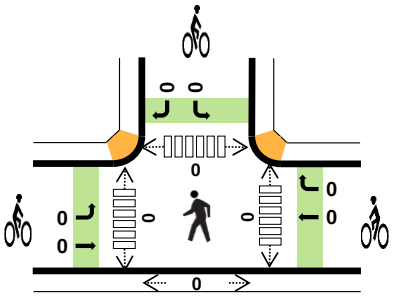
No other transportation-related mitigation should be required based on the impacts evaluated.

APPENDIX A
Traffic Count Data Sheets

3000 Block / Lowe's Access
Alderwood Mall Pkwy

Date: 09/25/2024
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	5.0%	0.87
WB	4.9%	0.80
NB	-	-
SB	5.9%	0.77
TOTAL	5.0%	0.85

Two-Hour Count Summaries

Interval Start		Alderwood Mall Pkwy Eastbound				Alderwood Mall Pkwy Westbound				0 Northbound				3000 Block / Lowe's Access Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	1	37	0	0	0	23	3	0	0	0	0	0	2	0	3	69	0
7:15 AM		0	4	64	0	0	0	23	6	0	0	0	0	0	1	0	1	99	0
7:30 AM		0	5	57	0	0	0	39	1	0	0	0	0	0	3	0	5	110	0
7:45 AM		0	8	81	0	0	0	23	2	0	0	0	0	0	3	0	6	123	401
8:00 AM		**0**	**4**	**71**	**0**	**0**	**0**	**20**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**105**	437
8:15 AM		**0**	**6**	**82**	**0**	**0**	**0**	**24**	**4**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**6**	**125**	463
8:30 AM		**0**	**8**	**85**	**0**	**0**	**0**	**29**	**4**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**6**	**133**	486
8:45 AM		**0**	**15**	**88**	**0**	**0**	**0**	**31**	**7**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**6**	**152**	**515**
Count Total		0	51	565	0	0	0	212	30	0	0	0	0	0	18	0	40	916	0
Peak Hour	**All**	**0**	**33**	**326**	**0**	**0**	**0**	**104**	**18**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**25**	**515**	**0**
	HV	**0**	**3**	**15**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**26**	**0**
	HV%	**-**	**9%**	**5%**	**-**	**-**	**-**	**6%**	**0%**	**-**	**-**	**-**	**-**	**-**	**11%**	**-**	**4%**	**5%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	4	1	0	1	*6*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	6	0	0	0	*6*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	1	3	0	1	*5*	0	0	0	0	*0*	1	0	1	1	*3*
7:45 AM	1	1	0	1	*3*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	**7**	**3**	**0**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**4**	**1**	**0**	**1**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:30 AM	**3**	**0**	**0**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:45 AM	**4**	**2**	**0**	**1**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	30	11	0	5	*46*	0	0	0	0	*0*	1	0	1	1	*3*
Peak Hr	**18**	**6**	**0**	**2**	***26***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

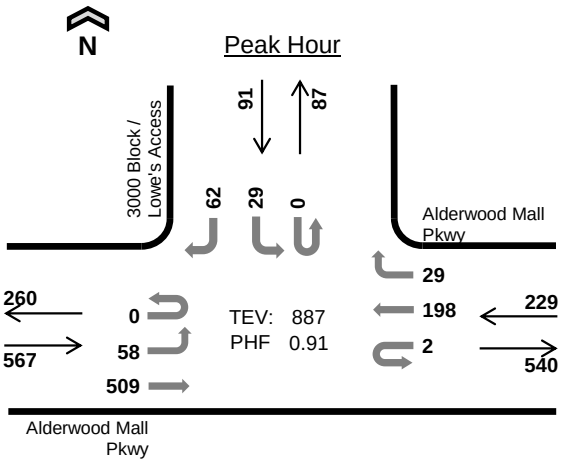
Interval Start	Alderwood Mall Pkwy				Alderwood Mall Pkwy				0				3000 Block / Lowe's Access				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	1	6	0
7:15 AM	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
7:30 AM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	1	5	0
7:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	3	20
8:00 AM	**0**	**1**	**6**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	24
8:15 AM	**0**	**1**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**6**	24
8:30 AM	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	22
8:45 AM	**0**	**1**	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	**26**
Count Total	0	4	26	0	0	0	11	0	0	0	0	0	0	2	0	3	46	0
Peak Hour	**0**	**3**	**15**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**26**	**0**

Two-Hour Count Summaries - Bikes

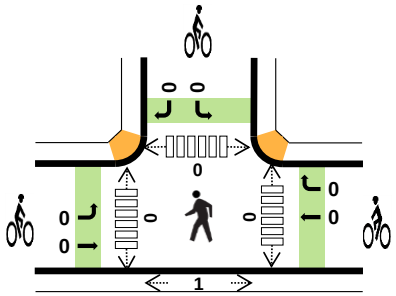
Interval Start	Alderwood Mall Pkwy			Alderwood Mall Pkwy			0			3000 Block / Lowe's Access			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

3000 Block / Lowe's Access
Alderwood Mall Pkwy



Date: 09/25/2024
Count Period: 2:00 PM to 6:00 PM
Peak Hour: 3:00 PM to 4:00 PM



	HV %:	PHF
EB	2.1%	0.88
WB	1.3%	0.88
NB	-	-
SB	3.3%	0.76
TOTAL	2.0%	0.91

Four-Hour Count Summaries

Interval Start		Alderwood Mall Pkwy Eastbound				Alderwood Mall Pkwy Westbound				0 Northbound				3000 Block / Lowe's Access Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM		0	14	108	0	0	0	44	7	0	0	0	0	0	7	0	16	196	0
3:15 PM		0	10	118	0	1	0	54	10	0	0	0	0	0	4	0	11	208	0
3:30 PM		0	18	144	0	1	0	54	3	0	0	0	0	0	9	0	14	243	0
3:45 PM		0	16	139	0	0	0	46	9	0	0	0	0	0	9	0	21	240	887
Peak Hour	All	0	58	509	0	2	0	198	29	0	0	0	0	0	29	0	62	887	0
	HV	0	2	10	0	0	0	3	0	0	0	0	0	0	2	0	1	18	0
	HV%	-	3%	2%	-	0%	-	2%	0%	-	-	-	-	-	7%	-	2%	2%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:00 PM	3	1	0	1	*5*	0	0	0	0	*0*	0	0	0	0	*0*
3:15 PM	4	0	0	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
3:30 PM	3	2	0	2	*7*	0	0	0	0	*0*	0	0	0	0	*0*
3:45 PM	2	0	0	0	*2*	0	0	0	0	*0*	0	0	0	1	*1*
Peak Hour	12	3	0	3	*18*	0	0	0	0	*0*	0	0	0	1	*1*

Four-Hour Count Summaries

Interval Start	Alderwood Mall Pkwy Eastbound				Alderwood Mall Pkwy Westbound				0 Northbound				3000 Block / Lowe's Access Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	14	115	0	0	0	46	6	0	0	0	0	0	5	0	17	203	0
2:15 PM	0	18	118	0	0	0	45	7	0	0	0	0	0	6	0	16	210	0
2:30 PM	0	14	105	0	0	0	47	3	0	0	0	0	0	7	0	10	186	0
2:45 PM	0	11	144	0	0	0	34	7	0	0	0	0	0	4	0	19	219	818
3:00 PM	**0**	**14**	**108**	**0**	**0**	**0**	**44**	**7**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**16**	**196**	811
3:15 PM	**0**	**10**	**118**	**0**	**1**	**0**	**54**	**10**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**11**	**208**	809
3:30 PM	**0**	**18**	**144**	**0**	**1**	**0**	**54**	**3**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**14**	**243**	866
3:45 PM	**0**	**16**	**139**	**0**	**0**	**0**	**46**	**9**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**21**	**240**	**887**
4:00 PM	0	8	122	0	0	0	40	9	0	0	0	0	0	6	0	5	190	881
4:15 PM	0	9	115	0	0	0	48	8	0	0	0	0	0	4	0	9	193	866
4:30 PM	0	12	102	0	0	0	43	7	0	0	0	0	0	10	0	10	184	807
4:45 PM	0	15	86	0	0	0	42	7	0	0	0	0	0	2	0	15	167	734
5:00 PM	0	8	96	0	0	0	66	8	0	0	0	0	0	2	0	16	196	740
5:15 PM	0	21	100	0	0	0	46	4	0	0	0	0	0	7	0	10	188	735
5:30 PM	0	17	112	0	0	0	42	13	0	0	0	0	0	9	0	20	213	764
5:45 PM	0	8	95	0	0	0	35	6	0	0	0	0	0	8	0	8	160	757
Count Total	0	213	1,819	0	2	0	732	114	0	0	0	0	0	99	0	217	3,196	0
Peak Hour All	**0**	**58**	**509**	**0**	**2**	**0**	**198**	**29**	**0**	**0**	**0**	**0**	**0**	**29**	**0**	**62**	**887**	**0**
Peak Hour HV	**0**	**2**	**10**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**18**	**0**
Peak Hour HV%	**-**	**3%**	**2%**	**-**	**0%**	**-**	**2%**	**0%**	**-**	**-**	**-**	**-**	**-**	**7%**	**-**	**2%**	**2%**	**0**

Note: Four-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
2:00 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	1	*1*
2:15 PM	4	0	0	0	*4*	0	0	0	0	*0*	0	0	0	1	*1*
2:30 PM	4	1	0	0	*5*	0	0	0	0	*0*	0	0	0	1	*1*
2:45 PM	4	1	0	1	*6*	0	0	0	0	*0*	0	0	0	1	*1*
3:00 PM	**3**	**1**	**0**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
3:15 PM	**4**	**0**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
3:30 PM	**3**	**2**	**0**	**2**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
3:45 PM	**2**	**0**	**0**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
4:00 PM	7	0	0	0	*7*	0	0	0	0	*0*	0	0	0	1	*1*
4:15 PM	2	0	0	2	*4*	0	0	0	0	*0*	0	0	0	2	*2*
4:30 PM	0	1	0	1	*2*	0	0	0	0	*0*	0	0	0	3	*3*
4:45 PM	3	1	0	0	*4*	0	0	0	0	*0*	0	0	0	0	*0*
5:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	1	1	0	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	2	1	0	0	*3*	0	0	0	0	*0*	0	1	0	0	*1*
5:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	39	9	0	8	*56*	0	0	0	0	*0*	0	1	0	11	*12*
Peak Hr	**12**	**3**	**0**	**3**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***

Four-Hour Count Summaries - Heavy Vehicles

Interval Start	Alderwood Mall Pkwy				Alderwood Mall Pkwy				0				3000 Block / Lowe's Access				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
2:15 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
2:30 PM	0	1	3	0	0	0	1	0	0	0	0	0	0	0	0	0	5	0
2:45 PM	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	1	6	16
3:00 PM	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	20
3:15 PM	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	20
3:30 PM	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**7**	22
3:45 PM	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**18**
4:00 PM	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	20
4:15 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	4	20
4:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	15
4:45 PM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4	17
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
5:15 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	8
5:30 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	9
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Count Total	0	3	36	0	0	0	9	0	0	0	0	0	0	2	0	6	56	0
Peak Hour	**0**	**2**	**10**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**18**	**0**

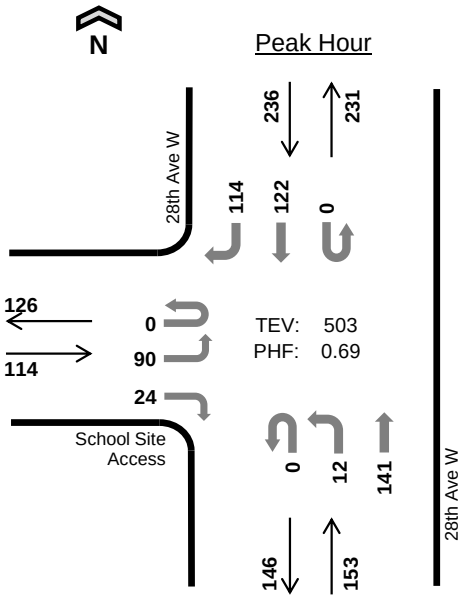
Four-Hour Count Summaries - Bikes

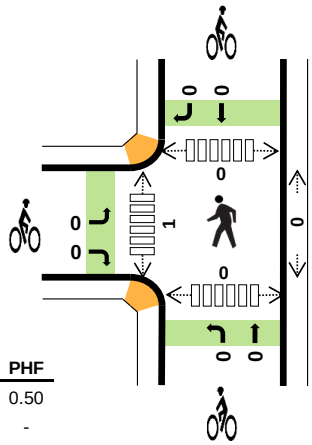
Interval Start	Alderwood Mall Pkwy			Alderwood Mall Pkwy			0			3000 Block / Lowe's Access			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
3:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
3:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
3:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

28th Ave W
School Site Access

Date: 09/25/2024
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	7.0%	0.50
WB	-	-
NB	2.6%	0.80
SB	5.5%	0.68
TOTAL	5.0%	0.69

Two-Hour Count Summaries

Interval Start	School Site Access Eastbound				0 Westbound				28th Ave W Northbound				28th Ave W Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	0	0	0	0	0	0	2	36	0	0	0	20	6	65	0
7:15 AM	0	0	0	1	0	0	0	0	0	6	33	0	0	0	33	10	83	0
7:30 AM	0	2	0	0	0	0	0	0	0	2	37	0	0	0	37	10	88	0
7:45 AM	0	2	0	1	0	0	0	0	0	2	37	0	0	0	33	10	85	321
8:00 AM	**0**	**2**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**6**	**29**	**0**	**0**	**0**	**36**	**12**	**88**	344
8:15 AM	**0**	**16**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**2**	**29**	**0**	**0**	**0**	**30**	**35**	**120**	381
8:30 AM	**0**	**52**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**4**	**35**	**0**	**0**	**0**	**31**	**56**	**183**	476
8:45 AM	**0**	**20**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**48**	**0**	**0**	**0**	**25**	**11**	**112**	**503**
Count Total	0	95	0	26	0	0	0	0	0	24	284	0	0	0	245	150	824	0
Peak Hour All	**0**	**90**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**12**	**141**	**0**	**0**	**0**	**122**	**114**	**503**	**0**
Peak Hour HV	**0**	**2**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**7**	**6**	**25**	**0**
Peak Hour HV%	**-**	**2%**	**-**	**25%**	**-**	**-**	**-**	**-**	**-**	**17%**	**1%**	**-**	**-**	**-**	**6%**	**5%**	**5%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	0	1	2	*3*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	1	0	0	*1*
7:30 AM	0	0	0	2	*2*	0	0	0	0	*0*	0	1	0	0	*1*
7:45 AM	0	0	2	1	*3*	0	0	0	0	*0*	0	2	0	0	*2*
8:00 AM	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
8:15 AM	**2**	**0**	**0**	**5**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:30 AM	**1**	**0**	**4**	**5**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:45 AM	**5**	**0**	**0**	**1**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	8	0	7	18	*33*	0	0	0	0	*0*	0	5	0	0	*5*
Peak Hr	**8**	**0**	**4**	**13**	***25***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	***1***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	School Site Access				0				28th Ave W				28th Ave W				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	8
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	7
8:15 AM	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**7**	14
8:30 AM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**1**	**4**	**10**	22
8:45 AM	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**6**	**25**
Count Total	0	2	0	6	0	0	0	0	0	2	5	0	0	0	12	6	33	0
Peak Hour	**0**	**2**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**7**	**6**	**25**	**0**

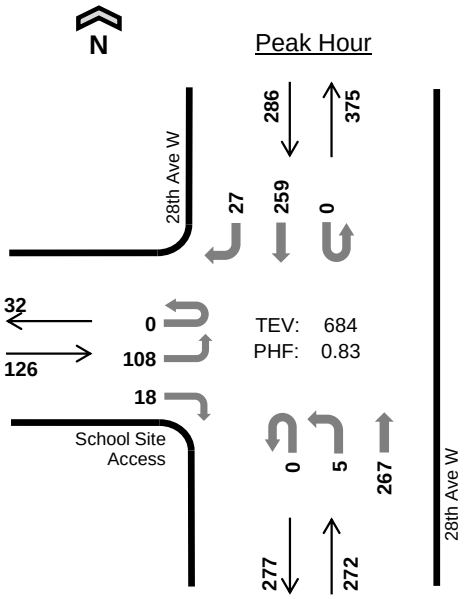
Two-Hour Count Summaries - Bikes

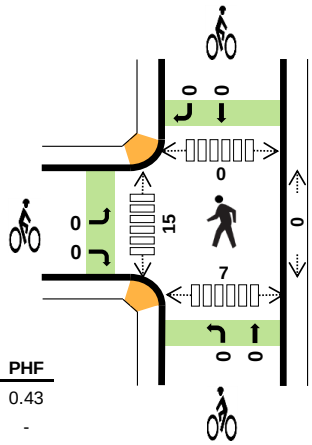
Interval Start	School Site Access			0			28th Ave W			28th Ave W			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

28th Ave W
School Site Access

Date: 09/25/2024
Count Period: 2:00 PM to 6:00 PM
Peak Hour: 3:15 PM to 4:15 PM





	HV %:	PHF
EB	8.7%	0.43
WB	-	-
NB	2.6%	0.79
SB	1.7%	0.94
TOTAL	3.4%	0.83

Four-Hour Count Summaries

Interval Start		School Site Access Eastbound				0 Westbound				28th Ave W Northbound				28th Ave W Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:15 PM		0	65	0	8	0	0	0	0	0	3	57	0	0	0	56	16	205	0
3:30 PM		0	25	0	3	0	0	0	0	0	1	54	0	0	0	60	3	146	0
3:45 PM		0	14	0	6	0	0	0	0	0	0	86	0	0	0	72	4	182	0
4:00 PM		0	4	0	1	0	0	0	0	0	1	70	0	0	0	71	4	151	684
Peak Hour	All	0	108	0	18	0	0	0	0	0	5	267	0	0	0	259	27	684	0
	HV	0	10	0	1	0	0	0	0	0	4	3	0	0	0	3	2	23	0
	HV%	-	9%	-	6%	-	-	-	-	-	80%	1%	-	-	-	1%	7%	3%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:15 PM	7	0	4	1	*12*	0	0	0	0	*0*	0	0	0	0	*0*
3:30 PM	3	0	1	1	*5*	0	0	0	0	*0*	0	0	0	0	*0*
3:45 PM	0	0	2	2	*4*	0	0	0	0	*0*	0	7	0	7	*14*
4:00 PM	1	0	0	1	*2*	0	0	0	0	*0*	0	8	0	0	*8*
Peak Hour	11	0	7	5	*23*	0	0	0	0	*0*	0	15	0	7	*22*

Four-Hour Count Summaries

Interval Start	School Site Access				0				28th Ave W				28th Ave W				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	61	0	0	0	53	3	117	0
2:15 PM	0	1	0	1	0	0	0	0	0	0	65	0	0	0	36	8	111	0
2:30 PM	0	2	0	1	0	0	0	0	0	4	46	0	0	0	55	12	120	0
2:45 PM	0	1	0	2	0	0	0	0	0	1	56	0	0	0	59	16	135	483
3:00 PM	0	3	0	2	0	0	0	0	0	2	54	0	0	0	54	33	148	514
3:15 PM	**0**	**65**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**3**	**57**	**0**	**0**	**0**	**56**	**16**	**205**	608
3:30 PM	**0**	**25**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**54**	**0**	**0**	**0**	**60**	**3**	**146**	634
3:45 PM	**0**	**14**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**86**	**0**	**0**	**0**	**72**	**4**	**182**	681
4:00 PM	**0**	**4**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**70**	**0**	**0**	**0**	**71**	**4**	**151**	**684**
4:15 PM	0	7	0	3	0	0	0	0	0	0	76	0	0	0	73	4	163	642
4:30 PM	0	7	0	2	0	0	0	0	0	0	68	0	0	0	82	0	159	655
4:45 PM	0	3	0	0	0	0	0	0	0	0	71	0	0	0	84	2	160	633
5:00 PM	0	1	0	3	0	0	0	0	0	0	79	0	0	0	87	1	171	653
5:15 PM	0	1	0	0	0	0	0	0	0	0	65	0	0	0	87	1	154	644
5:30 PM	0	3	0	1	0	0	0	0	0	1	69	0	0	0	89	1	164	649
5:45 PM	0	3	0	2	0	0	0	0	0	0	78	0	0	0	90	2	175	664
Count Total	0	140	0	35	0	0	0	0	0	13	1,055	0	0	0	1,108	110	2,461	0
Peak Hour All	**0**	**108**	**0**	**18**	**0**	**0**	**0**	**0**	**0**	**5**	**267**	**0**	**0**	**0**	**259**	**27**	**684**	**0**
Peak Hour HV	**0**	**10**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**4**	**3**	**0**	**0**	**0**	**3**	**2**	**23**	**0**
Peak Hour HV%	**-**	**9%**	**-**	**6%**	**-**	**-**	**-**	**-**	**-**	**80%**	**1%**	**-**	**-**	**-**	**1%**	**7%**	**3%**	**0**

Note: Four-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
2:00 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
2:15 PM	1	0	3	0	*4*	0	0	0	0	*0*	0	2	0	0	*2*
2:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
2:45 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
3:00 PM	0	0	0	5	*5*	0	0	0	0	*0*	0	1	0	0	*1*
3:15 PM	**7**	**0**	**4**	**1**	***12***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
3:30 PM	**3**	**0**	**1**	**1**	***5***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
3:45 PM	**0**	**0**	**2**	**2**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**7**	**0**	**7**	*14*
4:00 PM	**1**	**0**	**0**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**8**	**0**	**0**	***8***
4:15 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	1	0	0	*1*
4:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	0	0	0	*0*
5:00 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	0	0	1	0	*1*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	0	1	0	*1*	0	0	1	0	*1*	0	1	0	0	*1*
Count Total	12	0	15	13	*40*	0	0	1	0	*1*	0	20	0	7	*27*
Peak Hr	**11**	**0**	**7**	**5**	***23***	**0**	**0**	**0**	**0**	***0***	**0**	**15**	**0**	**7**	***22***

Four-Hour Count Summaries - Heavy Vehicles

Interval Start	School Site Access				0				28th Ave W				28th Ave W				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
2:15 PM	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	4	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2	7
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5	11
3:15 PM	**0**	**6**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**1**	**12**	19
3:30 PM	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**5**	24
3:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**1**	**4**	26
4:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**23**
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	12
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2
Count Total	0	10	0	2	0	0	0	0	0	5	10	0	0	0	6	7	40	0
Peak Hour	**0**	**10**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**4**	**3**	**0**	**0**	**0**	**3**	**2**	**23**	**0**

Four-Hour Count Summaries - Bikes

Interval Start	School Site Access			0			28th Ave W			28th Ave W			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
3:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
3:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Count Total	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

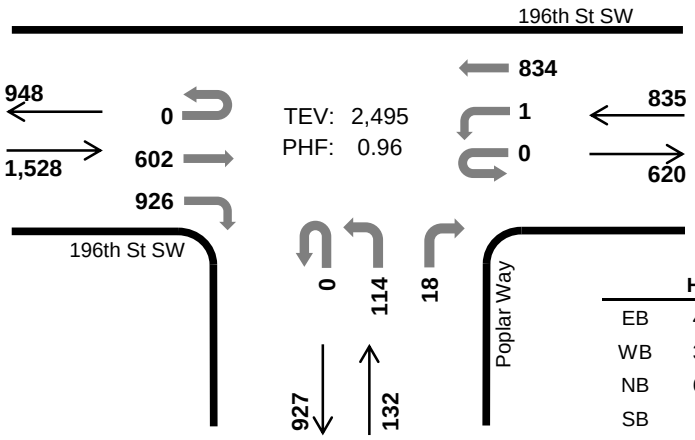
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Poplar Way
196th St SW

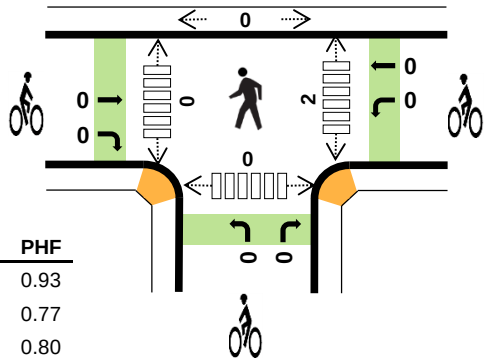
N

Peak Hour

Date: 05/29/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	4.1%	0.93
WB	3.6%	0.77
NB	6.8%	0.80
SB	-	-
TOTAL	4.1%	0.96



Two-Hour Count Summaries

Interval Start	196th St SW Eastbound				196th St SW Westbound				Poplar Way Northbound				0 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	122	174	0	0	169	0	0	13	0	2	0	0	0	0	480	0
7:15 AM	0	0	110	217	0	0	178	0	0	25	0	3	0	0	0	0	533	0
7:30 AM	0	0	109	213	0	0	192	0	0	17	0	1	0	0	0	0	532	0
7:45 AM	**0**	**0**	**160**	**226**	**0**	**0**	**200**	**0**	**0**	**35**	**0**	**6**	**0**	**0**	**0**	**0**	**627**	2,172
8:00 AM	**0**	**0**	**121**	**221**	**0**	**0**	**270**	**0**	**0**	**35**	**0**	**5**	**0**	**0**	**0**	**0**	**652**	2,344
8:15 AM	**0**	**0**	**152**	**238**	**0**	**0**	**181**	**0**	**0**	**22**	**0**	**6**	**0**	**0**	**0**	**0**	**599**	2,410
8:30 AM	**0**	**0**	**169**	**241**	**0**	**1**	**183**	**0**	**0**	**22**	**0**	**1**	**0**	**0**	**0**	**0**	**617**	**2,495**
8:45 AM	0	0	137	239	0	0	197	0	0	34	0	9	0	0	0	0	616	2,484
Count Total	0	0	1,080	1,769	0	1	1,570	0	0	203	0	33	0	0	0	0	4,656	0
Peak Hour All	**0**	**0**	**602**	**926**	**0**	**1**	**834**	**0**	**0**	**114**	**0**	**18**	**0**	**0**	**0**	**0**	**2,495**	**0**
Peak Hour HV	**0**	**0**	**34**	**29**	**0**	**0**	**30**	**0**	**0**	**7**	**0**	**2**	**0**	**0**	**0**	**0**	**102**	**0**
Peak Hour HV%	**-**	**-**	**6%**	**3%**	**-**	**0%**	**4%**	**-**	**-**	**6%**	**-**	**11%**	**-**	**-**	**-**	**-**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	8	7	0	0	*15*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	16	9	2	0	*27*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	16	11	0	0	*27*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	**11**	**5**	**3**	**0**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**14**	**10**	**4**	**0**	***28***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**21**	**6**	**2**	**0**	***29***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:30 AM	**17**	**9**	**0**	**0**	***26***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***
8:45 AM	16	8	0	0	*24*	0	0	0	0	*0*	2	0	0	0	*2*
Count Total	119	65	11	0	*195*	0	0	0	0	*0*	4	0	0	0	*4*
Peak Hr	**63**	**30**	**9**	**0**	***102***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	196th St SW Eastbound				196th St SW Westbound				Poplar Way Northbound				0 Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	4	4	0	0	7	0	0	0	0	0	0	0	0	0	15	0
7:15 AM	0	0	11	5	0	0	9	0	0	1	0	1	0	0	0	0	27	0
7:30 AM	0	0	7	9	0	0	11	0	0	0	0	0	0	0	0	0	27	0
7:45 AM	**0**	**0**	**6**	**5**	**0**	**0**	**5**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	88
8:00 AM	**0**	**0**	**5**	**9**	**0**	**0**	**10**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**28**	101
8:15 AM	**0**	**0**	**16**	**5**	**0**	**0**	**6**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**29**	103
8:30 AM	**0**	**0**	**7**	**10**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**26**	**102**
8:45 AM	0	0	5	11	0	0	8	0	0	0	0	0	0	0	0	0	24	107
Count Total	0	0	61	58	0	0	65	0	0	8	0	3	0	0	0	0	195	0
Peak Hour	**0**	**0**	**34**	**29**	**0**	**0**	**30**	**0**	**0**	**7**	**0**	**2**	**0**	**0**	**0**	**0**	**102**	**0**

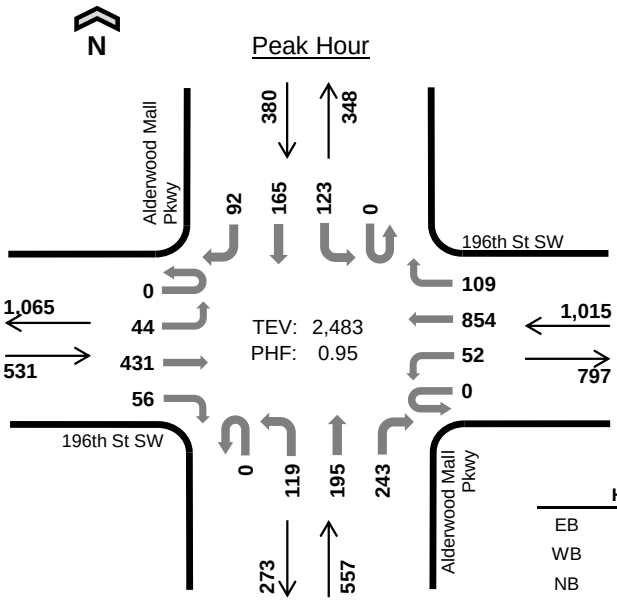
Two-Hour Count Summaries - Bikes

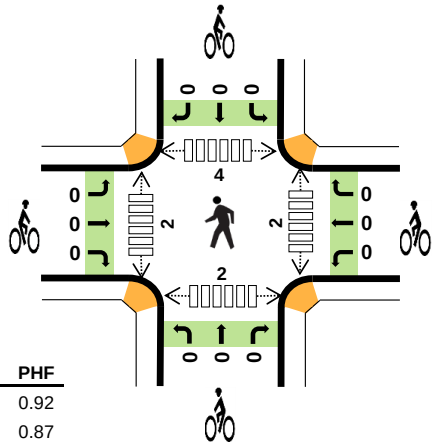
Interval Start	196th St SW Eastbound			196th St SW Westbound			Poplar Way Northbound			0 Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Alderwood Mall Pkwy
196th St SW

Date: 05/29/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	5.3%	0.92
WB	3.4%	0.87
NB	7.7%	0.84
SB	5.3%	0.97
TOTAL	5.1%	0.95

Two-Hour Count Summaries

Interval Start	196th St SW Eastbound				196th St SW Westbound				Alderwood Mall Pkwy Northbound				Alderwood Mall Pkwy Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	7	96	6	0	7	179	18	0	21	22	40	0	18	19	24	457	0
7:15 AM	0	7	89	5	0	7	190	20	0	13	20	47	0	26	26	19	469	0
7:30 AM	0	3	90	4	0	14	217	34	0	21	22	61	0	25	36	18	545	0
7:45 AM	0	8	115	9	0	13	231	32	0	19	42	56	0	39	34	22	620	2,091
8:00 AM	**0**	**6**	**108**	**7**	**0**	**11**	**260**	**21**	**0**	**23**	**34**	**55**	**0**	**33**	**40**	**25**	**623**	2,257
8:15 AM	**0**	**13**	**94**	**21**	**0**	**14**	**177**	**34**	**0**	**30**	**36**	**59**	**0**	**37**	**45**	**15**	**575**	2,363
8:30 AM	**0**	**10**	**117**	**18**	**0**	**19**	**198**	**26**	**0**	**34**	**52**	**69**	**0**	**27**	**39**	**24**	**633**	2,451
8:45 AM	**0**	**15**	**112**	**10**	**0**	**8**	**219**	**28**	**0**	**32**	**73**	**60**	**0**	**26**	**41**	**28**	**652**	**2,483**
Count Total	0	69	821	80	0	93	1,671	213	0	193	301	447	0	231	280	175	4,574	0
Peak Hour All	**0**	**44**	**431**	**56**	**0**	**52**	**854**	**109**	**0**	**119**	**195**	**243**	**0**	**123**	**165**	**92**	**2,483**	**0**
Peak Hour HV	**0**	**4**	**24**	**0**	**0**	**3**	**30**	**2**	**0**	**16**	**11**	**16**	**0**	**3**	**11**	**6**	**126**	**0**
Peak Hour HV%	**-**	**9%**	**6%**	**0%**	**-**	**6%**	**4%**	**2%**	**-**	**13%**	**6%**	**7%**	**-**	**2%**	**7%**	**7%**	**5%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	6	9	2	2	*19*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	9	12	3	2	*26*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	6	14	1	2	*23*	0	0	0	0	*0*	1	1	1	0	*3*
7:45 AM	8	7	4	8	*27*	0	0	0	0	*0*	2	0	1	0	*3*
8:00 AM	**4**	**11**	**9**	**6**	***30***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**1**	*2*
8:15 AM	**13**	**8**	**10**	**8**	***39***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
8:30 AM	**5**	**6**	**10**	**5**	***26***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**3**	**0**	*4*
8:45 AM	**6**	**10**	**14**	**1**	***31***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**1**	***3***
Count Total	57	77	53	34	*221*	0	0	0	0	*0*	5	3	6	2	*16*
Peak Hour	**28**	**35**	**43**	**20**	***126***	**0**	**0**	**0**	**0**	***0***	**2**	**2**	**4**	**2**	***10***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	196th St SW Eastbound				196th St SW Westbound				Alderwood Mall Pkwy Northbound				Alderwood Mall Pkwy Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	6	0	0	0	9	0	0	1	1	0	0	0	1	1	19	0
7:15 AM	0	1	7	1	0	0	10	2	0	0	1	2	0	0	0	2	26	0
7:30 AM	0	1	5	0	0	2	7	5	0	1	0	0	0	1	0	1	23	0
7:45 AM	0	1	7	0	0	2	5	0	0	2	0	2	0	3	4	1	27	95
8:00 AM	**0**	**0**	**4**	**0**	**0**	**0**	**10**	**1**	**0**	**3**	**1**	**5**	**0**	**1**	**2**	**3**	**30**	106
8:15 AM	**0**	**1**	**12**	**0**	**0**	**2**	**6**	**0**	**0**	**4**	**2**	**4**	**0**	**2**	**6**	**0**	**39**	119
8:30 AM	**0**	**0**	**5**	**0**	**0**	**0**	**5**	**1**	**0**	**4**	**3**	**3**	**0**	**0**	**2**	**3**	**26**	122
8:45 AM	**0**	**3**	**3**	**0**	**0**	**1**	**9**	**0**	**0**	**5**	**5**	**4**	**0**	**0**	**1**	**0**	**31**	**126**
Count Total	0	7	49	1	0	7	61	9	0	20	13	20	0	7	16	11	221	0
Peak Hour	**0**	**4**	**24**	**0**	**0**	**3**	**30**	**2**	**0**	**16**	**11**	**16**	**0**	**3**	**11**	**6**	**126**	**0**

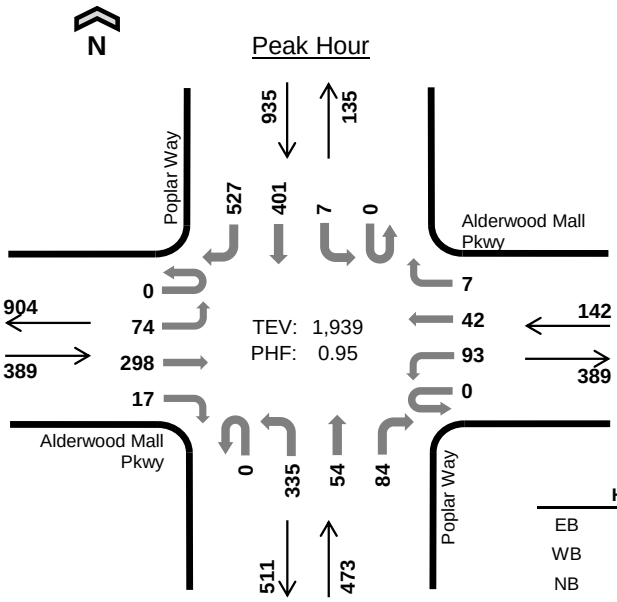
Two-Hour Count Summaries - Bikes

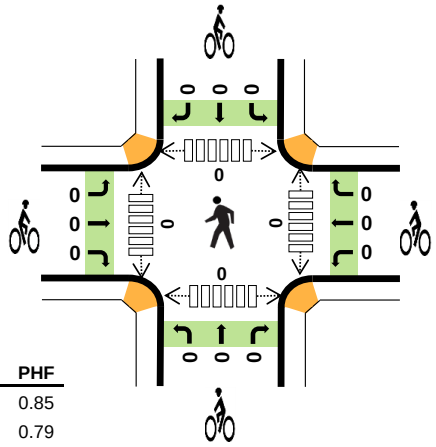
Interval Start	196th St SW Eastbound			196th St SW Westbound			Alderwood Mall Pkwy Northbound			Alderwood Mall Pkwy Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Poplar Way
Alderwood Mall Pkwy

Date: 05/29/2025
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	5.1%	0.85
WB	3.5%	0.79
NB	2.7%	0.96
SB	3.6%	0.98
TOTAL	3.7%	0.95

Two-Hour Count Summaries

Interval Start	Alderwood Mall Pkwy Eastbound				Alderwood Mall Pkwy Westbound				Poplar Way Northbound				Poplar Way Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	7	42	0	0	10	8	0	0	86	7	13	0	0	87	86	346	0
7:15 AM	0	21	54	0	0	15	12	1	0	92	4	8	0	0	91	130	428	0
7:30 AM	0	14	56	1	0	19	8	1	0	95	6	14	0	0	85	128	427	0
7:45 AM	0	22	66	5	0	29	9	3	0	84	16	25	0	0	114	113	486	1,687
8:00 AM	**0**	**18**	**59**	**1**	**0**	**20**	**8**	**3**	**0**	**88**	**17**	**15**	**0**	**0**	**106**	**119**	**454**	1,795
8:15 AM	**0**	**13**	**78**	**6**	**0**	**27**	**5**	**1**	**0**	**77**	**17**	**20**	**0**	**1**	**96**	**140**	**481**	1,848
8:30 AM	**0**	**17**	**78**	**4**	**0**	**15**	**16**	**2**	**0**	**92**	**7**	**24**	**0**	**4**	**86**	**149**	**494**	1,915
8:45 AM	**0**	**26**	**83**	**6**	**0**	**31**	**13**	**1**	**0**	**78**	**13**	**25**	**0**	**2**	**113**	**119**	**510**	**1,939**
Count Total	0	138	516	23	0	166	79	12	0	692	87	144	0	7	778	984	3,626	0
Peak Hour All	**0**	**74**	**298**	**17**	**0**	**93**	**42**	**7**	**0**	**335**	**54**	**84**	**0**	**7**	**401**	**527**	**1,939**	**0**
Peak Hour HV	**0**	**2**	**18**	**0**	**0**	**5**	**0**	**0**	**0**	**7**	**3**	**3**	**0**	**0**	**14**	**20**	**72**	**0**
Peak Hour HV%	**-**	**3%**	**6%**	**0%**	**-**	**5%**	**0%**	**0%**	**-**	**2%**	**6%**	**4%**	**-**	**0%**	**3%**	**4%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	0	1	4	*6*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	4	1	4	7	*16*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	1	2	5	8	*16*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	5	5	3	5	*18*	0	1	0	0	*1*	1	0	0	0	*1*
8:00 AM	**5**	**0**	**4**	**8**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**7**	**2**	**3**	**8**	***20***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:30 AM	**3**	**0**	**3**	**11**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:45 AM	**5**	**3**	**3**	**7**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
Count Total	31	13	26	58	*128*	0	1	0	0	*1*	1	0	0	0	*1*
Peak Hour	**20**	**5**	**13**	**34**	***72***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Alderwood Mall Pkwy Eastbound				Alderwood Mall Pkwy Westbound				Poplar Way Northbound				Poplar Way Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	2	2	6	0
7:15 AM	0	1	3	0	0	0	1	0	0	2	1	1	0	0	3	4	16	0
7:30 AM	0	0	1	0	0	2	0	0	0	3	1	1	0	0	3	5	16	0
7:45 AM	0	2	2	1	0	4	1	0	0	2	1	0	0	0	2	3	18	56
8:00 AM	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**4**	**4**	**17**	67
8:15 AM	**0**	**1**	**6**	**0**	**0**	**2**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**3**	**5**	**20**	71
8:30 AM	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**3**	**8**	**17**	72
8:45 AM	**0**	**0**	**5**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**4**	**3**	**18**	**72**
Count Total	0	5	25	1	0	11	2	0	0	15	6	5	0	0	24	34	128	0
Peak Hour	**0**	**2**	**18**	**0**	**0**	**5**	**0**	**0**	**0**	**7**	**3**	**3**	**0**	**0**	**14**	**20**	**72**	**0**

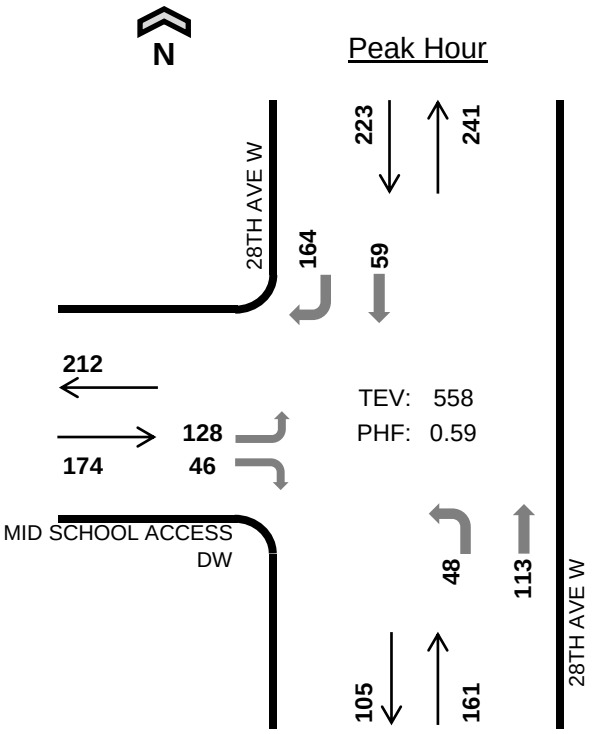
Two-Hour Count Summaries - Bikes

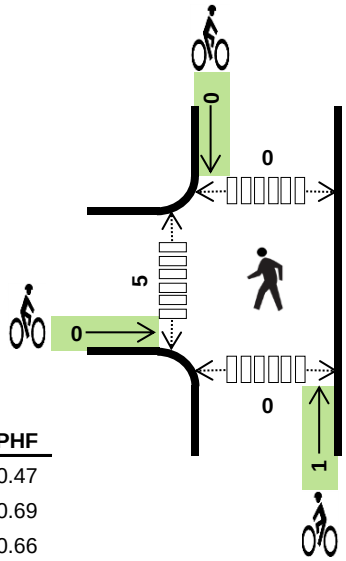
Interval Start	Alderwood Mall Pkwy Eastbound			Alderwood Mall Pkwy Westbound			Poplar Way Northbound			Poplar Way Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	1	0	0	0	0	0	0	0	0	1	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Count Total	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

28TH AVE W
MID SCHOOL ACCESS DW

Date: Wed, Mar 12, 2014
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM





	HV %:	PHF
EB	8.6%	0.47
NB	3.1%	0.69
SB	9.0%	0.66
TOTAL	7.2%	0.59

Two-Hour Count Summaries

Interval Start	MID SCHOOL ACCESS DW Eastbound			MID SCHOOL ACCESS DW Westbound			28TH AVE W Northbound			28TH AVE W Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	1	26	0	0	12	5	44	
7:15 AM	**9**	**0**	**0**	**0**	**0**	**0**	**6**	**25**	**0**	**0**	**10**	**25**	**75**	
7:30 AM	**42**	**0**	**22**	**0**	**0**	**0**	**19**	**21**	**0**	**0**	**17**	**68**	**189**	
7:45 AM	**69**	**0**	**23**	**0**	**0**	**0**	**23**	**35**	**0**	**0**	**17**	**68**	**235**	543
8:00 AM	**8**	**0**	**1**	**0**	**0**	**0**	**0**	**32**	**0**	**0**	**15**	**3**	**59**	**558**
8:15 AM	1	0	0	0	0	0	0	28	0	0	12	6	47	530
8:30 AM	4	0	0	0	0	0	0	31	0	0	19	2	56	397
8:45 AM	0	0	2	0	0	0	2	32	0	0	24	4	64	226
Count Total	133	0	48	0	0	0	51	230	0	0	126	181	769	
Peak Hr	**128**	**0**	**46**	**0**	**0**	**0**	**48**	**113**	**0**	**0**	**59**	**164**	**558**	

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	**2**	**0**	**3**	**2**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
7:30 AM	**7**	**0**	**2**	**13**	***22***	**0**	**0**	**0**	**0**	***0***	**0**	**4**	**0**	**0**	***4***
7:45 AM	**4**	**0**	**0**	**2**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:00 AM	**2**	**0**	**0**	**3**	***5***	**0**	**0**	**1**	**0**	***1***	**0**	**1**	**0**	**0**	***1***
8:15 AM	0	0	1	1	*2*	0	0	0	0	*0*	0	2	0	0	*2*
8:30 AM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	0	0	3	1	*4*	0	0	0	0	*0*	0	2	0	0	*2*
Count Total	15	0	9	23	*47*	0	0	1	0	*1*	0	9	0	0	*9*
Peak Hr	**15**	**0**	**5**	**20**	***40***	**0**	**0**	**1**	**0**	***1***	**0**	**5**	**0**	**0**	***5***

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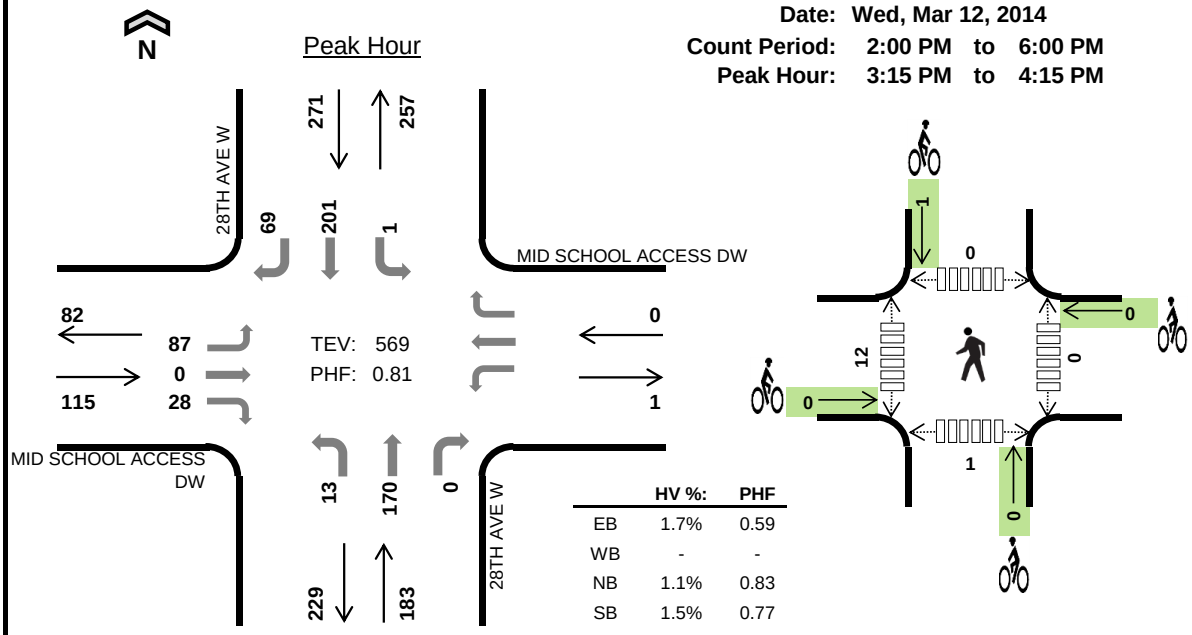
28TH AVE W
MID SCHOOL ACCESS DW

Date: Wed, Mar 12, 2014
Count Period: 2:00 PM to 6:00 PM
Peak Hour: 3:15 PM to 4:15 PM



	HV %:	PHF
EB	1.7%	0.59
WB	-	-
NB	1.1%	0.83
SB	1.5%	0.77
TOTAL	1.4%	0.81

Peak-Hour Count Summaries

Interval Start	MID SCHOOL ACCESS DW			MID SCHOOL ACCESS DW			28TH AVE W			28TH AVE W			15-min Total
	Eastbound			Westbound			Northbound			Southbound			
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
3:15 PM	25	0	11	0	0	0	5	46	0	0	53	35	175
3:30 PM	42	0	7	0	0	0	2	26	0	1	45	19	142
3:45 PM	11	0	6	0	0	0	2	53	0	0	46	7	125
4:00 PM	9	0	4	0	0	0	4	45	0	0	57	8	127
Peak Hr	**87**	**0**	**28**	**0**	**0**	**0**	**13**	**170**	**0**	**1**	**201**	**69**	**569**

Note: For all four-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:15 PM	0	0	0	2	*2*	0	0	0	0	*0*	0	2	0	0	*2*
3:30 PM	1	0	1	0	*2*	0	0	0	1	*1*	0	6	0	1	*7*
3:45 PM	0	0	1	1	*2*	0	0	0	0	*0*	0	2	0	0	*2*
4:00 PM	1	0	0	1	*2*	0	0	0	0	*0*	0	2	0	0	*2*
Peak Hr	**2**	**0**	**2**	**4**	***8***	**0**	**0**	**0**	**1**	***1***	**0**	**12**	**0**	**1**	***13***

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Four-Hour Count Summaries

Interval Start	MID SCHOOL ACCESS DW			MID SCHOOL ACCESS DW			28TH AVE W			28TH AVE W			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
2:00 PM	3	0	3	0	0	0	2	33	0	0	23	7	71	
2:15 PM	7	0	2	0	0	0	6	35	0	0	32	24	106	
2:30 PM	28	0	8	0	0	0	4	29	0	0	39	10	118	
2:45 PM	8	0	8	0	0	0	6	35	0	0	44	15	116	411
3:00 PM	17	0	4	0	0	0	1	31	0	0	45	13	111	451
3:15 PM	**25**	**0**	**11**	**0**	**0**	**0**	**5**	**46**	**0**	**0**	**53**	**35**	**175**	520
3:30 PM	**42**	**0**	**7**	**0**	**0**	**0**	**2**	**26**	**0**	**1**	**45**	**19**	**142**	544
3:45 PM	**11**	**0**	**6**	**0**	**0**	**0**	**2**	**53**	**0**	**0**	**46**	**7**	**125**	553
4:00 PM	**9**	**0**	**4**	**0**	**0**	**0**	**4**	**45**	**0**	**0**	**57**	**8**	**127**	**569**
4:15 PM	4	0	5	0	0	0	1	39	0	0	55	16	120	514
4:30 PM	24	0	6	0	0	0	3	32	0	0	53	7	125	497
4:45 PM	5	0	1	0	0	0	2	48	0	0	57	1	114	486
5:00 PM	3	0	2	0	0	0	0	43	0	0	58	1	107	466
5:15 PM	0	0	1	0	0	0	0	41	0	0	53	0	95	441
5:30 PM	0	0	2	0	0	0	1	49	0	0	59	0	111	427
5:45 PM	0	0	1	0	0	0	0	47	0	0	55	2	105	418
Count Total	186	0	71	0	0	0	39	632	0	1	774	165	1,868	
Peak Hr	**87**	**0**	**28**	**0**	**0**	**0**	**13**	**170**	**0**	**1**	**201**	**69**	**569**	

Note: Four-hour count summary volumes include heavy vehicles but excludes bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
2:00 PM	1	0	3	1	*5*	0	0	0	0	*0*	0	0	1	0	*1*
2:15 PM	0	0	2	14	*16*	0	0	0	0	*0*	0	0	0	0	*0*
2:30 PM	16	0	4	1	*21*	0	0	0	0	*0*	0	3	0	0	*3*
2:45 PM	2	0	0	1	*3*	0	0	0	0	*0*	0	2	0	0	*2*
3:00 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
3:15 PM	**0**	**0**	**0**	**2**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
3:30 PM	**1**	**0**	**1**	**0**	***2***	**0**	**0**	**0**	**1**	***1***	**0**	**6**	**0**	**1**	***7***
3:45 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
4:00 PM	**1**	**0**	**0**	**1**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	***2***
4:15 PM	0	0	2	2	*4*	1	0	0	0	*1*	0	5	0	0	*5*
4:30 PM	2	0	1	1	*4*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	0	0	2	0	*2*	0	0	0	0	*0*	0	0	0	0	*0*
5:00 PM	0	0	0	1	*1*	0	0	0	1	*1*	0	0	0	0	*0*
5:15 PM	0	0	0	0	*0*	0	0	0	1	*1*	0	0	0	0	*0*
5:30 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	0	0	1	*1*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	23	0	16	27	*66*	1	0	0	3	*4*	0	22	1	1	*24*
Peak Hr	**2**	**0**	**2**	**4**	***8***	**0**	**0**	**0**	**1**	***1***	**0**	**12**	**0**	**1**	***13***

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APPENDIX B
Level of Service Definitions

Levels of service (LOS) are qualitative descriptions of traffic operating conditions. These levels of service are designated with letters ranging from LOS A, which is indicative of good operating conditions with little or no delay, to LOS F, which is indicative of stop-and-go conditions with frequent and lengthy delays. Levels of service for this analysis were developed using procedures presented in the *Highway Capacity Manual 7th Edition* (Transportation Research Board, 2022).

Signalized Intersections

Level of service for signalized intersections is defined in terms of average delay for all vehicles that travel through the intersection. Delay can be a cause of driver discomfort, frustration, inefficient fuel consumption, and lost travel time. Specifically, level-of-service criteria are stated in terms of the average delay per vehicle in seconds. Delay is a complex measure and is dependent on a number of variables including: number and type of vehicles by movement, intersection lane geometry, signal phasing, the amount of green time allocated to each phase, transit stops and parking maneuvers. Table A-1 shows the level of service criteria for signalized intersections from the *Highway Capacity Manual, 7th Edition.*

Table A-1. Level of Service for Signalized Intersections

Level of Service	Average Control Delay Per Vehicle
A	≤ 10 seconds
B	> 10 – 20 seconds
C	> 20 – 35 seconds
D	> 35 – 55 seconds
E	> 55 – 80 seconds
F	> 80 seconds

Source: Transportation Research Board, Highway Capacity Manual 7th Edition, 2022, Exhibit 19-8.

Stop-Controlled (Unsignalized) Intersections

For intersections controlled by stops signs on one or two approaches, level of service is based on the average delay per vehicle for each turning movement, which is related to the availability of gaps in the main street's traffic flow, and the ability of a driver to enter or pass through those gaps. For intersections controlled by an all-way stop, level of service is based upon the average delay for all vehicles that travel through the intersection. Table A-2 shows the level of service criteria for unsignalized intersections from the *Highway Capacity Manual, 7th Edition*.

Table A-2. Level of Service Criteria for Stop-Controlled (Unsignalized) Intersections

Level of Service	Average Control Delay per Vehicle
A	0 – 10 seconds
B	> 10 – 15 seconds
C	> 15 – 25 seconds
D	> 25 – 35 seconds
E	> 35 – 50 seconds
F	> 50 seconds

Source: Transportation Research Board, Highway Capacity Manual 7th Edition, 2022, Exhibit 20-2.

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APPENDIX C
Level of Service Calculation Sheets

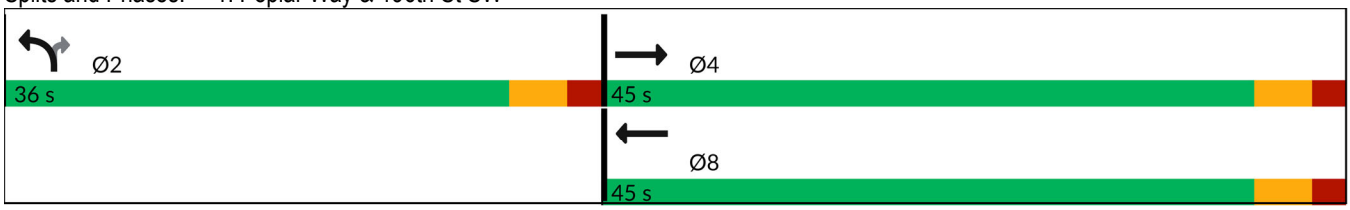
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	500	877	0	840	112	15
Future Volume (vph)	500	877	0	840	112	15
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Storage Length (ft)		0	0		0	230
Storage Lanes		1	0		0	1
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt		0.850				0.850
Flt Protected					0.950	
Satd. Flow (prot)	3197	1430	0	3197	3014	1390
Flt Permitted					0.950	
Satd. Flow (perm)	3197	1430	0	3197	3014	1390
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		974				17
Link Speed (mph)	35			35	30	
Link Distance (ft)	908			1593	718	
Travel Time (s)	17.7			31.0	16.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	4%	4%	4%	7%	7%
Adj. Flow (vph)	556	974	0	933	124	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	556	974	0	933	124	17
Turn Type	NA	Free		NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases		Free				2
Detector Phase	4			8	2	2
Switch Phase						
Minimum Initial (s)	15.0			15.0	3.0	3.0
Minimum Split (s)	21.8			21.8	30.5	30.5
Total Split (s)	45.0			45.0	36.0	36.0
Total Split (%)	55.6%			55.6%	44.4%	44.4%
Maximum Green (s)	39.4			39.4	30.5	30.5
Yellow Time (s)	3.6			3.6	3.5	3.5
All-Red Time (s)	2.0			2.0	2.0	2.0
Lost Time Adjust (s)	-1.0			-1.0	-1.0	-1.0
Total Lost Time (s)	4.6			4.6	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.5			4.5	2.5	2.5
Minimum Gap (s)	4.5			4.5	2.5	2.5
Time Before Reduce (s)	10.0			10.0	10.0	10.0
Time To Reduce (s)	15.0			15.0	15.0	15.0
Recall Mode	Min			Min	None	None
Walk Time (s)					7.0	7.0
Flash Don't Walk (s)					18.0	18.0
Pedestrian Calls (#/hr)					0	0
Act Effct Green (s)	26.9	40.6		26.9	8.0	8.0
Actuated g/C Ratio	0.66	1.00		0.66	0.20	0.20

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
v/c Ratio	0.26	0.68		0.44	0.21	0.06
Control Delay (s/veh)	4.6	2.6		5.6	15.2	8.7
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	4.6	2.6		5.6	15.2	8.7
LOS	A	A		A	B	A
Approach Delay (s/veh)	3.3			5.6	14.4	
Approach LOS	A			A	B	
Queue Length 50th (ft)	26	0		52	10	0
Queue Length 95th (ft)	52	0		97	31	12
Internal Link Dist (ft)	828			1513	638	
Turn Bay Length (ft)						230
Base Capacity (vph)	3079	1430		3079	2364	1093
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	0.18	0.68		0.30	0.05	0.02

Intersection Summary

Area Type: Other
Cycle Length: 81
Actuated Cycle Length: 40.6
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay (s/veh): 4.7
Intersection LOS: A
Intersection Capacity Utilization 36.3%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Poplar Way & 196th St SW



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	402	25	45	898	107	76	118	219	123	136	84
Future Volume (vph)	24	402	25	45	898	107	76	118	219	123	136	84
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	255		0	160		0	350		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00		1.00		0.98	0.99	0.99	
Frt		0.991			0.984				0.850		0.943	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	3106	0	1599	3140	0	1599	3197	1430	1583	2967	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1567	3106	0	1597	3140	0	1593	3197	1403	1574	2967	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			7				241		78	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1593			1336			535			739	
Travel Time (s)		31.0			26.0			12.2			16.8	
Confl. Peds. (#/hr)	2		1	1		2	2		3	3		2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Adj. Flow (vph)	26	442	27	49	987	118	84	130	241	135	149	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	26	469	0	49	1105	0	84	130	241	135	241	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		6.0	10.0		6.0	10.0	6.0	7.0	10.0	
Minimum Split (s)	12.2	29.2		12.2	29.2		12.2	28.2	12.2	26.0	28.2	
Total Split (s)	41.0	46.0		26.0	51.0		26.0	46.0	26.0	41.0	46.0	
Total Split (%)	22.9%	25.7%		14.5%	28.5%		14.5%	25.7%	14.5%	22.9%	25.7%	
Maximum Green (s)	35.8	40.8		20.8	45.8		20.8	40.8	20.8	35.8	40.8	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	-1.7	-1.7		-1.7	-1.7		-1.7	-1.7	-1.0	-1.7	-1.7	
Total Lost Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	4.2	3.5	3.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		2.0	3.5		2.0	3.5	2.0	3.0	4.0	
Minimum Gap (s)	1.5	2.5		1.0	2.5		1.0	1.5	1.0	1.5	1.5	
Time Before Reduce (s)	10.0	15.0		5.0	15.0		5.0	25.0	5.0	10.0	15.0	
Time To Reduce (s)	15.0	20.0		10.0	20.0		10.0	15.0	10.0	15.0	15.0	
Recall Mode	None	Min		None	Min		None	None	None	None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		17.0			17.0			16.0			16.0	
Pedestrian Calls (#/hr)		1			2			3			2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	9.6	42.7		9.6	48.6		11.4	14.3	22.4	15.4	20.9	
Actuated g/C Ratio	0.10	0.44		0.10	0.50		0.12	0.15	0.23	0.16	0.22	
v/c Ratio	0.17	0.34		0.31	0.70		0.44	0.27	0.47	0.53	0.34	
Control Delay (s/veh)	47.8	19.6		49.7	24.1		50.2	39.9	7.0	47.4	24.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	47.8	19.6		49.7	24.1		50.2	39.9	7.0	47.4	24.8	
LOS	D	B		D	C		D	D	A	D	C	
Approach Delay (s/veh)		21.1			25.2			24.3			32.9	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	15	88		29	272		49	39	0	78	47	
Queue Length 95th (ft)	48	182		76	#523		112	73	56	159	89	
Internal Link Dist (ft)		1513			1256			455			659	
Turn Bay Length (ft)	100			255			160			350		
Base Capacity (vph)	624	2061		382	1586		382	1442	679	630	1841	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.04	0.23		0.13	0.70		0.22	0.09	0.35	0.21	0.13	

Intersection Summary

Area Type: Other
Cycle Length: 179
Actuated Cycle Length: 96.3
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay (s/veh): 25.4 Intersection LOS: C
Intersection Capacity Utilization 66.6% 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: 31: Alderwood Mall Pkwy & 196th St SW

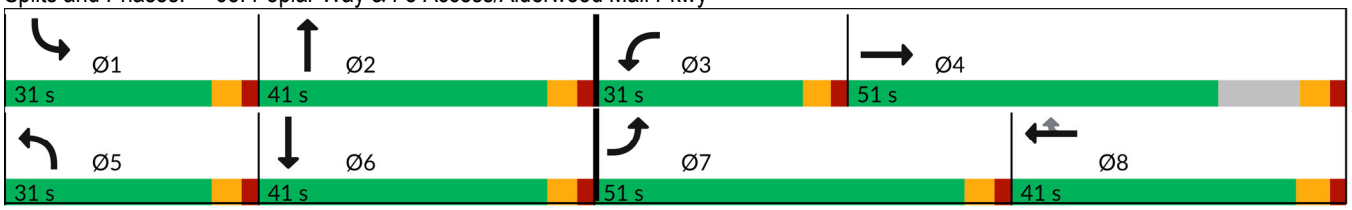
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	235	7	83	37	8	359	43	62	0	396	490
Future Volume (vph)	75	235	7	83	37	8	359	43	62	0	396	490
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	205		0	0		214	390		0	285		450
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor						0.99		0.99				
Frt		0.995				0.850		0.912				0.850
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1583	3151	0	1568	1651	1403	1614	2921	0	1699	3228	1444
Flt Permitted	0.950			0.950			0.950					
Satd. Flow (perm)	1583	3151	0	1568	1651	1385	1614	2921	0	1699	3228	1444
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				126		67				533
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		463			838			554			718	
Travel Time (s)		10.5			19.0			12.6			16.3	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)						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 (%)	5%	5%	5%	6%	6%	6%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	82	255	8	90	40	9	390	47	67	0	430	533
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	263	0	90	40	9	390	114	0	0	430	533
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						Free
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	8.6	37.0		8.6	21.0	21.0	8.6	37.5		8.6	21.0	
Total Split (s)	51.0	51.0		31.0	41.0	41.0	31.0	41.0		31.0	41.0	
Total Split (%)	31.1%	31.1%		18.9%	25.0%	25.0%	18.9%	25.0%		18.9%	25.0%	
Maximum Green (s)	45.5	45.4		25.5	35.0	35.0	25.5	35.5		25.5	35.5	
Yellow Time (s)	3.5	3.6		3.5	4.0	4.0	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.5	4.6		4.5	5.0	5.0	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	3.5		2.0	3.0	3.0	2.5	3.0		2.0	3.0	
Recall Mode	None	None		None	None	None	None	Min		None	Min	
Walk Time (s)		7.0						7.0				
Flash Don't Walk (s)		23.0						25.0				
Pedestrian Calls (#/hr)		0						1				
Act Effct Green (s)	14.6	15.1		11.2	16.7	16.7	26.8	50.3			18.9	90.4
Actuated g/C Ratio	0.16	0.17		0.12	0.18	0.18	0.30	0.56			0.21	1.00

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.32	0.50		0.47	0.13	0.03	0.81	0.07			0.64	0.37
Control Delay (s/veh)	40.6	38.4		46.7	35.5	0.1	47.1	5.3			37.9	0.7
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0			0.0	0.0
Total Delay (s/veh)	40.6	38.4		46.7	35.5	0.1	47.1	5.3			37.9	0.7
LOS	D	D		D	D	A	D	A			D	A
Approach Delay (s/veh)		38.9			40.5			37.7			17.3	
Approach LOS		D			D			D			B	
Queue Length 50th (ft)	44	71		48	19	0	203	5			117	0
Queue Length 95th (ft)	99	124		106	53	0	#453	21			187	0
Internal Link Dist (ft)		383			758			474			638	
Turn Bay Length (ft)	205					214	390					450
Base Capacity (vph)	824	1991		465	665	633	479	1654			1319	1444
Starvation Cap Reductn	0	0		0	0	0	0	0			0	0
Spillback Cap Reductn	0	0		0	0	0	0	0			0	0
Storage Cap Reductn	0	0		0	0	0	0	0			0	0
Reduced v/c Ratio	0.10	0.13		0.19	0.06	0.01	0.81	0.07			0.33	0.37

Intersection Summary

Area Type: Other
Cycle Length: 164
Actuated Cycle Length: 90.4
Natural Cycle: 95
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay (s/veh): 28.1 Intersection LOS: C
Intersection Capacity Utilization 60.8% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 65: Poplar Way & I-5 Access/Alderwood Mall Pkwy



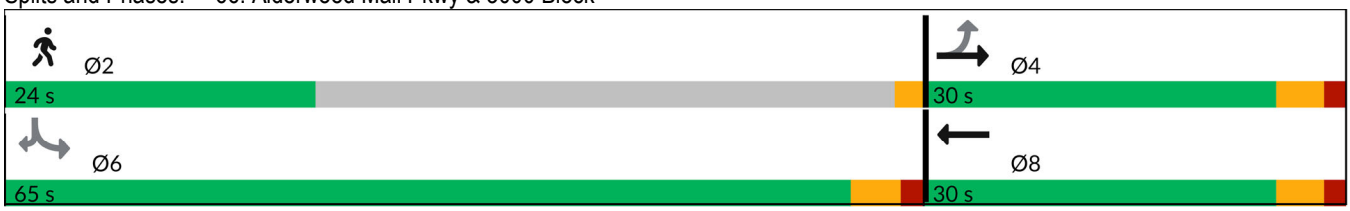
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	21	273	105	12	7	19	
Future Volume (vph)	21	273	105	12	7	19	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	
Storage Length (ft)	200			0	0	175	
Storage Lanes	1			0	0	1	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00	
Ped Bike Factor	1.00		1.00		1.00		
Frt			0.985			0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1583	3167	3083	0	1539	1377	
Flt Permitted	0.669				0.950		
Satd. Flow (perm)	1112	3167	3083	0	1539	1377	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			12			21	
Link Speed (mph)		30	30		25		
Link Distance (ft)		838	442		400		
Travel Time (s)		19.0	10.0		10.9		
Confl. Peds. (#/hr)	1			1	1		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	
Heavy Vehicles (%)	5%	5%	6%	6%	8%	8%	
Adj. Flow (vph)	24	307	118	13	8	21	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	24	307	131	0	8	21	
Turn Type	Perm	NA	NA		Perm	Perm	
Protected Phases		4	8				2
Permitted Phases	4				6	6	
Detector Phase	4	4	8		6	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	1.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0	24.0
Total Split (s)	30.0	30.0	30.0		65.0	65.0	24.0
Total Split (%)	31.6%	31.6%	31.6%		68.4%	68.4%	25%
Maximum Green (s)	25.0	25.0	25.0		60.0	60.0	22.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5	2.0
All-Red Time (s)	1.5	1.5	1.5		1.5	1.5	0.0
Lost Time Adjust (s)	-1.5	-1.5	-1.5		-1.5	-1.5	
Total Lost Time (s)	3.5	3.5	3.5		3.5	3.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.5	2.5	2.5		4.0	4.0	0.2
Recall Mode	Min	Min	Min		None	None	None
Walk Time (s)			5.0				5.0
Flash Don't Walk (s)			10.0				15.0
Pedestrian Calls (#/hr)			1				1
Act Effct Green (s)	29.1	29.1	29.1		10.1	10.1	
Actuated g/C Ratio	0.91	0.91	0.91		0.32	0.32	
v/c Ratio	0.02	0.11	0.05		0.02	0.05	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Control Delay (s/veh)	3.1	2.3	2.3		10.1	6.0	
Queue Delay	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	3.1	2.3	2.3		10.1	6.0	
LOS	A	A	A		B	A	
Approach Delay (s/veh)		2.3	2.3		7.1		
Approach LOS		A	A		A		
Queue Length 50th (ft)	0	0	0		1	0	
Queue Length 95th (ft)	11	40	18		9	12	
Internal Link Dist (ft)		758	362		320		
Turn Bay Length (ft)	200					175	
Base Capacity (vph)	1012	2884	2808		1539	1377	
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	0.02	0.11	0.05		0.01	0.02	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 32
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.11
Intersection Signal Delay (s/veh): 2.6 Intersection LOS: A
Intersection Capacity Utilization 19.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 66: Alderwood Mall Pkwy & 3000 Block



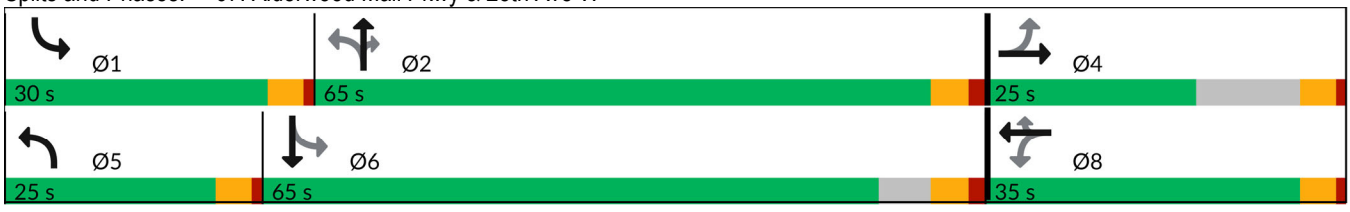
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	7	10	31	10	190	18	297	24	198	79	28
Future Volume (vph)	17	7	10	31	10	190	18	297	24	198	79	28
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	100		100	150		150	100		0
Storage Lanes	1		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor	1.00					0.98					0.99	
Frt		0.911				0.850			0.850		0.961	
Flt Protected	0.950				0.964		0.950			0.950		
Satd. Flow (prot)	1614	1548	0	0	1670	1473	1583	3167	1417	1583	3027	0
Flt Permitted	0.723				0.805		0.667			0.443		
Satd. Flow (perm)	1224	1548	0	0	1395	1449	1112	3167	1417	738	3027	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				238			88		35	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			340			336			535	
Travel Time (s)		6.5			7.7			7.6			12.2	
Confl. Peds. (#/hr)	2					2						
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	21	9	13	39	13	238	23	371	30	248	99	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	21	22	0	0	52	238	23	371	30	248	134	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	10.0	10.0	7.0	10.0	
Minimum Split (s)	24.5	24.5		26.0	26.0	26.0	9.5	24.2	24.2	11.5	24.2	
Total Split (s)	25.0	25.0		35.0	35.0	35.0	25.0	65.0	65.0	30.0	65.0	
Total Split (%)	19.2%	19.2%		26.9%	26.9%	26.9%	19.2%	50.0%	50.0%	23.1%	50.0%	
Maximum Green (s)	20.5	20.5		30.5	30.5	30.5	20.5	59.8	59.8	25.5	59.8	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.7	3.7	3.5	3.7	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.5	3.5			3.5	3.5	3.5	4.2	4.2	3.5	4.2	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	4.0	4.0	2.5	4.0	
Minimum Gap (s)	1.0	1.0		1.5	1.5	1.5	1.0	2.5	2.5	1.5	2.5	
Time Before Reduce (s)	10.0	10.0		10.0	10.0	10.0	5.0	25.0	25.0	10.0	25.0	
Time To Reduce (s)	10.0	10.0		15.0	15.0	15.0	10.0	25.0	25.0	10.0	25.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)	13.0	13.0		13.0	13.0	13.0		12.0	12.0		12.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		2	2	2		0	0		0	
Act Effct Green (s)	10.4	10.4			10.4	10.4	20.5	13.5	13.5	27.8	25.6	
Actuated g/C Ratio	0.23	0.23			0.23	0.23	0.45	0.30	0.30	0.61	0.56	
v/c Ratio	0.08	0.06			0.16	0.46	0.04	0.40	0.06	0.39	0.08	
Control Delay (s/veh)	15.4	10.7			16.1	6.1	5.6	15.3	0.3	6.8	5.7	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	15.4	10.7			16.1	6.1	5.6	15.3	0.3	6.8	5.7	
LOS	B	B			B	A	A	B	A	A	A	
Approach Delay (s/veh)		13.0			7.9			13.7			6.4	
Approach LOS		B			A			B			A	
Queue Length 50th (ft)	4	2			10	0	2	34	0	19	3	
Queue Length 95th (ft)	17	14			32	29	11	84	0	70	23	
Internal Link Dist (ft)		204			260			256			455	
Turn Bay Length (ft)	100					100	150		150	100		
Base Capacity (vph)	881	1118			1004	1110	911	3130	1401	987	3027	
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	
Reduced v/c Ratio	0.02	0.02			0.05	0.21	0.03	0.12	0.02	0.25	0.04	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 45.4
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.46
Intersection Signal Delay (s/veh): 9.7
Intersection LOS: A
Intersection Capacity Utilization 40.6%
ICU Level of Service A
Analysis Period (min) 15
Description: 3s LPI on Ph4&8

Splits and Phases: 67: Alderwood Mall Pkwy & 28th Ave W



Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	5	16	136	139	42
Future Vol, veh/h	6	5	16	136	139	42
Conflicting Peds, #/hr	0	0	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	55	55	97	97	94	94
Heavy Vehicles, %	0	0	1	1	3	3
Mvmt Flow	11	9	16	140	148	45

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	348	175	198	0	-	0
Stage 1	175	-	-	-	-	-
Stage 2	173	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	653	873	1381	-	-	-
Stage 1	860	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	637	868	1373	-	-	-
Mov Cap-2 Maneuver	637	-	-	-	-	-
Stage 1	844	-	-	-	-	-
Stage 2	857	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.11	0.81	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	189	-	725	-	-
HCM Lane V/C Ratio	0.012	-	0.028	-	-
HCM Ctrl Dly (s/v)	7.7	0	10.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

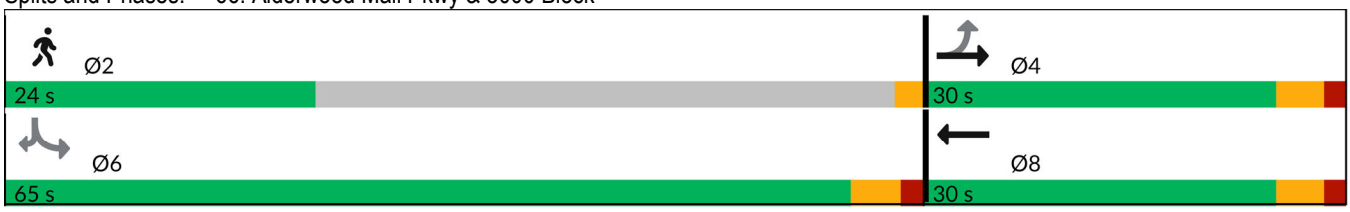
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	57	482	172	23	22	62	
Future Volume (vph)	57	482	172	23	22	62	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	
Storage Length (ft)	200			0	0	175	
Storage Lanes	1			0	0	1	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00	
Frt			0.982			0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1630	3260	3233	0	1630	1458	
Flt Permitted	0.620				0.950		
Satd. Flow (perm)	1064	3260	3233	0	1630	1458	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			15			67	
Link Speed (mph)		30	30		25		
Link Distance (ft)		417	442		400		
Travel Time (s)		9.5	10.0		10.9		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%	
Adj. Flow (vph)	61	518	185	25	24	67	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	61	518	210	0	24	67	
Turn Type	Perm	NA	NA		Perm	Perm	
Protected Phases		4	8				2
Permitted Phases	4				6	6	
Detector Phase	4	4	8		6	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	1.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0	24.0
Total Split (s)	30.0	30.0	30.0		65.0	65.0	24.0
Total Split (%)	31.6%	31.6%	31.6%		68.4%	68.4%	25%
Maximum Green (s)	25.0	25.0	25.0		60.0	60.0	22.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5	2.0
All-Red Time (s)	1.5	1.5	1.5		1.5	1.5	0.0
Lost Time Adjust (s)	-1.5	-1.5	-1.5		-1.5	-1.5	
Total Lost Time (s)	3.5	3.5	3.5		3.5	3.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.5	2.5	2.5		4.0	4.0	0.2
Recall Mode	Min	Min	Min		None	None	None
Walk Time (s)			5.0				5.0
Flash Don't Walk (s)			10.0				15.0
Pedestrian Calls (#/hr)			0				0
Act Effct Green (s)	22.9	22.9	22.9		8.9	8.9	
Actuated g/C Ratio	0.72	0.72	0.72		0.28	0.28	
v/c Ratio	0.08	0.22	0.09		0.05	0.15	
Control Delay (s/veh)	4.5	3.9	3.5		9.3	3.9	
Queue Delay	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Total Delay (s/veh)	4.5	3.9	3.5		9.3	3.9	
LOS	A	A	A		A	A	
Approach Delay (s/veh)		4.0	3.5		5.3		
Approach LOS		A	A		A		
Queue Length 50th (ft)	4	21	7		4	0	
Queue Length 95th (ft)	15	41	16		10	13	
Internal Link Dist (ft)		337	362		320		
Turn Bay Length (ft)	200					175	
Base Capacity (vph)	909	2787	2766		1630	1458	
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	0.07	0.19	0.08		0.01	0.05	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 31.7
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.22
Intersection Signal Delay (s/veh): 4.0
Intersection LOS: A
Intersection Capacity Utilization 25.3%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 66: Alderwood Mall Pkwy & 3000 Block



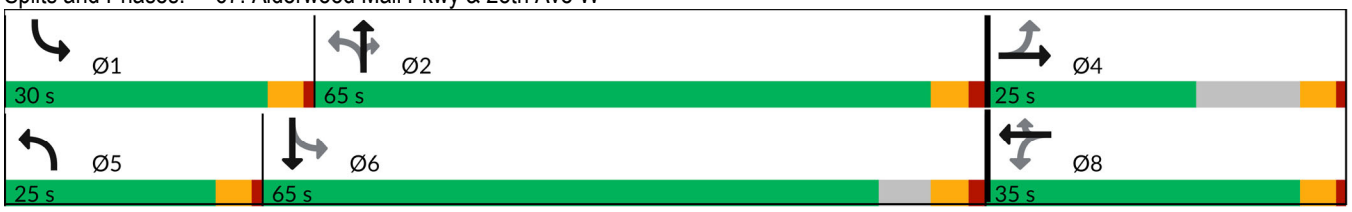
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	23	39	30	11	202	45	415	35	209	126	106
Future Volume (vph)	104	23	39	30	11	202	45	415	35	209	126	106
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	100		100	150		150	100		0
Storage Lanes	1		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor	0.99	0.99			1.00	0.98			0.97	1.00		
Frt		0.905				0.850			0.850		0.931	
Flt Protected	0.950				0.965		0.950			0.950		
Satd. Flow (prot)	1646	1554	0	0	1689	1488	1630	3260	1458	1662	3096	0
Flt Permitted	0.728				0.805		0.599			0.397		
Satd. Flow (perm)	1248	1554	0	0	1407	1453	1028	3260	1414	692	3096	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		41				215			88		113	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			340			336			261	
Travel Time (s)		6.5			7.7			7.6			5.9	
Confl. Peds. (#/hr)	6		1	1		6			3	3		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	2%	2%	2%	0%	0%	0%
Adj. Flow (vph)	111	24	41	32	12	215	48	441	37	222	134	113
Shared Lane Traffic (%)												
Lane Group Flow (vph)	111	65	0	0	44	215	48	441	37	222	247	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	10.0	10.0	7.0	10.0	
Minimum Split (s)	24.5	24.5		26.0	26.0	26.0	9.5	24.2	24.2	11.5	24.2	
Total Split (s)	25.0	25.0		35.0	35.0	35.0	25.0	65.0	65.0	30.0	65.0	
Total Split (%)	19.2%	19.2%		26.9%	26.9%	26.9%	19.2%	50.0%	50.0%	23.1%	50.0%	
Maximum Green (s)	20.5	20.5		30.5	30.5	30.5	20.5	59.8	59.8	25.5	59.8	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.7	3.7	3.5	3.7	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.5	3.5			3.5	3.5	3.5	4.2	4.2	3.5	4.2	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	4.0	4.0	2.5	4.0	
Minimum Gap (s)	1.0	1.0		1.5	1.5	1.5	1.0	2.5	2.5	1.5	2.5	
Time Before Reduce (s)	10.0	10.0		10.0	10.0	10.0	5.0	25.0	25.0	10.0	25.0	
Time To Reduce (s)	10.0	10.0		15.0	15.0	15.0	10.0	25.0	25.0	10.0	25.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)	13.0	13.0		13.0	13.0	13.0		12.0	12.0		12.0	
Pedestrian Calls (#/hr)	1	1		0	0	0		1	1		0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	11.4	11.4			11.4	11.4	22.4	15.0	15.0	29.3	22.9	
Actuated g/C Ratio	0.24	0.24			0.24	0.24	0.47	0.31	0.31	0.61	0.48	
v/c Ratio	0.38	0.16			0.13	0.42	0.08	0.43	0.07	0.36	0.16	
Control Delay (s/veh)	20.3	9.6			16.5	5.9	5.6	15.5	0.8	6.7	6.2	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	20.3	9.6			16.5	5.9	5.6	15.5	0.8	6.7	6.2	
LOS	C	A			B	A	A	B	A	A	A	
Approach Delay (s/veh)		16.4			7.7			13.6			6.4	
Approach LOS		B			A			B			A	
Queue Length 50th (ft)	25	5			9	0	4	46	0	20	11	
Queue Length 95th (ft)	70	31			33	42	20	111	3	71	38	
Internal Link Dist (ft)		204			260			256			181	
Turn Bay Length (ft)	100					100	150		150	100		
Base Capacity (vph)	849	1070			957	1057	908	3212	1394	994	3096	
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	
Reduced v/c Ratio	0.13	0.06			0.05	0.20	0.05	0.14	0.03	0.22	0.08	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 48
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay (s/veh): 10.5
Intersection LOS: B
Intersection Capacity Utilization 48.6%
ICU Level of Service A
Analysis Period (min) 15
Description: 3s LPI on Ph4&8

Splits and Phases: 67: Alderwood Mall Pkwy & 28th Ave W



Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	4	5	228	203	39
Future Vol, veh/h	4	4	5	228	203	39
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	90	90	81	81
Heavy Vehicles, %	13	13	2	2	1	1
Mvmt Flow	6	6	6	253	251	48

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	541	277	301	0	-	0
Stage 1	277	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.53	6.33	4.12	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.417	2.218	-	-	-
Pot Cap-1 Maneuver	483	736	1260	-	-	-
Stage 1	745	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	479	735	1257	-	-	-
Mov Cap-2 Maneuver	479	-	-	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	753	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.34	0.17	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	39	-	580	-	-
HCM Lane V/C Ratio	0.004	-	0.021	-	-
HCM Ctrl Dly (s/v)	7.9	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

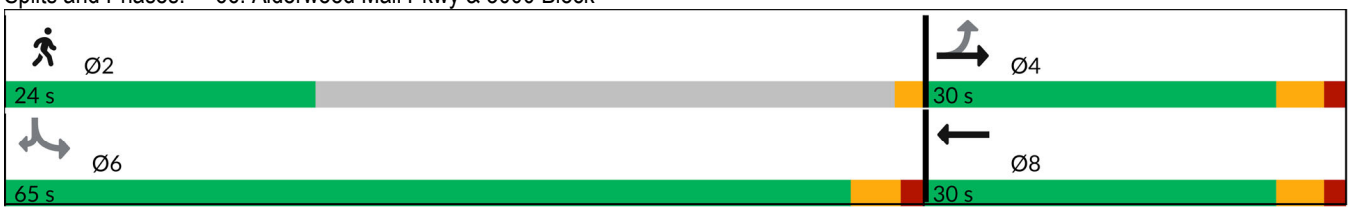
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	44	425	173	31	22	39	
Future Volume (vph)	44	425	173	31	22	39	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	
Storage Length (ft)	200			0	0	175	
Storage Lanes	1			0	0	1	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00	
Frt			0.977			0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1614	3228	3216	0	1583	1417	
Flt Permitted	0.617				0.950		
Satd. Flow (perm)	1048	3228	3216	0	1583	1417	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			22			41	
Link Speed (mph)		30	30		25		
Link Distance (ft)		417	442		400		
Travel Time (s)		9.5	10.0		10.9		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Heavy Vehicles (%)	3%	3%	1%	1%	5%	5%	
Adj. Flow (vph)	46	447	182	33	23	41	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	46	447	215	0	23	41	
Turn Type	Perm	NA	NA		Perm	Perm	
Protected Phases		4	8				2
Permitted Phases	4				6	6	
Detector Phase	4	4	8		6	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	1.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0	24.0
Total Split (s)	30.0	30.0	30.0		65.0	65.0	24.0
Total Split (%)	31.6%	31.6%	31.6%		68.4%	68.4%	25%
Maximum Green (s)	25.0	25.0	25.0		60.0	60.0	22.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5	2.0
All-Red Time (s)	1.5	1.5	1.5		1.5	1.5	0.0
Lost Time Adjust (s)	-1.5	-1.5	-1.5		-1.5	-1.5	
Total Lost Time (s)	3.5	3.5	3.5		3.5	3.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.5	2.5	2.5		4.0	4.0	0.2
Recall Mode	Min	Min	Min		None	None	None
Walk Time (s)			5.0				5.0
Flash Don't Walk (s)			10.0				15.0
Pedestrian Calls (#/hr)			0				0
Act Effct Green (s)	24.9	24.9	24.9		8.8	8.8	
Actuated g/C Ratio	0.82	0.82	0.82		0.29	0.29	
v/c Ratio	0.05	0.17	0.08		0.05	0.09	
Control Delay (s/veh)	3.4	2.7	2.5		9.8	4.9	
Queue Delay	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Total Delay (s/veh)	3.4	2.7	2.5		9.8	4.9	
LOS	A	A	A		A	A	
Approach Delay (s/veh)		2.8	2.5		6.7		
Approach LOS		A	A		A		
Queue Length 50th (ft)	0	0	0		2	0	
Queue Length 95th (ft)	12	34	16		12	12	
Internal Link Dist (ft)		337	362		320		
Turn Bay Length (ft)	200					175	
Base Capacity (vph)	934	2876	2868		1583	1417	
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	0.05	0.16	0.07		0.01	0.03	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 30.3
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.17
Intersection Signal Delay (s/veh): 3.0
Intersection LOS: A
Intersection Capacity Utilization 24.6%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 66: Alderwood Mall Pkwy & 3000 Block



Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	6	1	285	310	10
Future Vol, veh/h	21	6	1	285	310	10
Conflicting Peds, #/hr	0	0	9	0	0	9
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	94	94	93	93
Heavy Vehicles, %	4	4	1	1	1	1
Mvmt Flow	31	9	1	303	333	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	653	348	353	0	-	0
Stage 1	348	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.11	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.209	-	-	-
Pot Cap-1 Maneuver	429	691	1211	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	420	684	1199	-	-	-
Mov Cap-2 Maneuver	420	-	-	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.58	0.03	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	6	-	459	-	-
HCM Lane V/C Ratio	0.001	-	0.086	-	-
HCM Ctrl Dly (s/v)	8	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

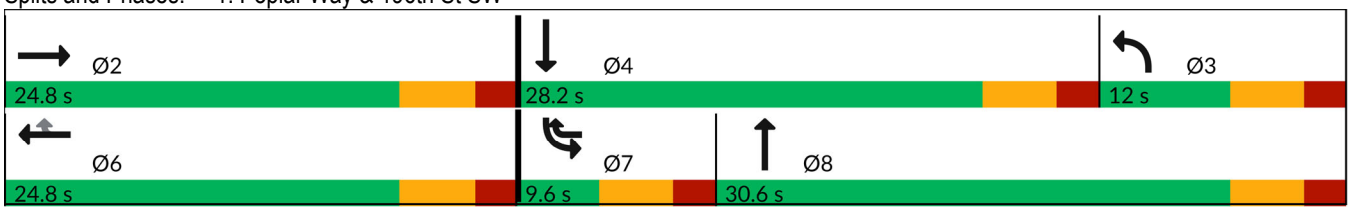
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	552	805	0	787	155	131	159	16	50	347	100
Future Volume (vph)	0	552	805	0	787	155	131	159	16	50	347	100
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	10	11	12	11	11	12	12	12	11	12	12
Storage Length (ft)	0		0	0		150	250		230	290		0
Storage Lanes	0		1	0		1	1		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	0.97	0.95	0.95
Frt			0.850			0.850		0.986			0.966	
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	2984	1383	0	3091	1410	3014	3064	0	3057	3149	0
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	2984	1383	0	3091	1410	3014	3064	0	3057	3149	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			758			172		18			62	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		908			1593			718			623	
Travel Time (s)		17.7			31.0			16.3			14.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	4%	4%	4%	2%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	0	613	894	0	874	172	146	177	18	56	386	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	613	894	0	874	172	146	195	0	56	497	0
Turn Type		NA	Free		NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		2			6	7	3	8		7	4	
Permitted Phases			Free			6						
Detector Phase		2			6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)		3.0			4.0	4.0	3.0	3.0		4.0	4.0	
Minimum Split (s)		8.6			21.6	9.6	8.6	30.6		9.6	9.6	
Total Split (s)		24.8			24.8	9.6	12.0	30.6		9.6	28.2	
Total Split (%)		38.2%			38.2%	14.8%	18.5%	47.1%		14.8%	43.4%	
Maximum Green (s)		19.2			19.2	4.0	6.4	25.0		4.0	22.6	
Yellow Time (s)		3.6			3.6	3.6	3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0			2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0	0.0	-1.0	0.0		0.0	0.0	
Total Lost Time (s)		4.6			4.6	5.6	4.6	5.6		5.6	5.6	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)		2.5			3.0	3.0	2.5	2.5		3.0	3.0	
Minimum Gap (s)		2.5			3.0	3.0	2.5	2.5		3.0	3.0	
Time Before Reduce (s)		10.0			10.0	10.0	10.0	10.0		10.0	10.0	
Time To Reduce (s)		15.0			15.0	15.0	15.0	15.0		15.0	15.0	
Recall Mode		None			None	None	None	None		None	None	
Walk Time (s)					5.0			7.0				
Flash Don't Walk (s)					11.0			18.0				
Pedestrian Calls (#/hr)					0			0				
Act Effct Green (s)		19.5	52.5		19.5	23.6	7.4	16.3		4.2	13.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.37	1.00		0.37	0.45	0.14	0.31		0.08	0.26	
v/c Ratio		0.55	0.65		0.76	0.24	0.34	0.20		0.23	0.58	
Control Delay (s/veh)		17.1	2.3		22.4	2.8	26.1	13.1		28.6	18.6	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		17.1	2.3		22.4	2.8	26.1	13.1		28.6	18.6	
LOS		B	A		C	A	C	B		C	B	
Approach Delay (s/veh)		8.3			19.1			18.6			19.6	
Approach LOS		A			B			B			B	
Queue Length 50th (ft)		84	0		133	0	23	23		9	67	
Queue Length 95th (ft)		150	0		#260	27	51	43		26	107	
Internal Link Dist (ft)		828			1513			638			543	
Turn Bay Length (ft)						150	250			290		
Base Capacity (vph)		1207	1383		1251	769	446	1543		244	1459	
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	0.65		0.70	0.22	0.33	0.13		0.23	0.34	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 52.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay (s/veh): 14.4 Intersection LOS: B
Intersection Capacity Utilization 53.9% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Poplar Way & 196th St SW



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	477	42	111	1003	64	108	130	281	119	130	64
Future Volume (vph)	25	477	42	111	1003	64	108	130	281	119	130	64
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	255		0	160		0	350		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00		1.00		0.98	0.99	0.99	
Frt		0.988			0.991				0.850		0.951	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	3096	0	1599	3165	0	1599	3197	1430	1583	2995	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1567	3096	0	1597	3165	0	1593	3197	1403	1574	2995	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			4				270		49	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1593			1336			535			739	
Travel Time (s)		31.0			26.0			12.2			16.8	
Confl. Peds. (#/hr)	2		1	1		2	2		3	3		2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Adj. Flow (vph)	27	524	46	122	1102	70	119	143	309	131	143	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	570	0	122	1172	0	119	143	309	131	213	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		6.0	10.0		6.0	10.0	6.0	7.0	10.0	
Minimum Split (s)	12.2	29.2		12.2	29.2		12.2	28.2	12.2	26.0	28.2	
Total Split (s)	41.0	46.0		26.0	51.0		26.0	46.0	26.0	41.0	46.0	
Total Split (%)	22.9%	25.7%		14.5%	28.5%		14.5%	25.7%	14.5%	22.9%	25.7%	
Maximum Green (s)	35.8	40.8		20.8	45.8		20.8	40.8	20.8	35.8	40.8	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	-1.7	-1.7		-1.7	-1.7		-1.7	-1.7	-1.0	-1.7	-1.7	
Total Lost Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	4.2	3.5	3.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		2.0	3.5		2.0	3.5	2.0	3.0	4.0	
Minimum Gap (s)	1.5	2.5		1.0	2.5		1.0	1.5	1.0	1.5	1.5	
Time Before Reduce (s)	10.0	15.0		5.0	15.0		5.0	25.0	5.0	10.0	15.0	
Time To Reduce (s)	15.0	20.0		10.0	20.0		10.0	15.0	10.0	15.0	15.0	
Recall Mode	None	Min		None	Min		None	None	None	None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		17.0			17.0			16.0			16.0	
Pedestrian Calls (#/hr)		1			2			3			2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	9.7	38.3		14.1	48.6		13.9	14.5	27.2	15.7	16.3	
Actuated g/C Ratio	0.10	0.39		0.15	0.50		0.14	0.15	0.28	0.16	0.17	
v/c Ratio	0.17	0.46		0.53	0.74		0.52	0.30	0.52	0.51	0.39	
Control Delay (s/veh)	48.1	25.1		49.0	25.8		49.2	40.3	8.2	46.8	31.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	48.1	25.1		49.0	25.8		49.2	40.3	8.2	46.8	31.0	
LOS	D	C		D	C		D	D	A	D	C	
Approach Delay (s/veh)		26.1			28.0			24.8			37.0	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	16	125		72	303		70	43	18	76	49	
Queue Length 95th (ft)	50	253		148	#602		145	80	82	156	92	
Internal Link Dist (ft)		1513			1256			455			659	
Turn Bay Length (ft)	100			255			160			350		
Base Capacity (vph)	620	2042		379	1587		379	1432	698	626	1835	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.04	0.28		0.32	0.74		0.31	0.10	0.44	0.21	0.12	

Intersection Summary

Area Type: Other
Cycle Length: 179
Actuated Cycle Length: 97
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay (s/veh): 28.1 Intersection LOS: C
Intersection Capacity Utilization 68.0% 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: 31: Alderwood Mall Pkwy & 196th St SW

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	264	7	80	35	104	381	96	88	121	470	570
Future Volume (vph)	105	264	7	80	35	104	381	96	88	121	470	570
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	205		0	0		214	390		0	285		0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor						0.99		0.99		1.00		
Frt		0.996				0.850		0.928				0.850
Flt Protected	0.950	0.998		0.950			0.950			0.950		
Satd. Flow (prot)	1441	3015	0	1568	1651	1403	1614	2977	0	1614	3228	1444
Flt Permitted	0.950	0.998		0.950			0.950			0.950		
Satd. Flow (perm)	1441	3015	0	1568	1651	1385	1614	2977	0	1612	3228	1444
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				149		96				620
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		463			838			554			718	
Travel Time (s)		10.5			19.0			12.6			16.3	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)						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 (%)	5%	5%	5%	6%	6%	6%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	114	287	8	87	38	113	414	104	96	132	511	620
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	103	306	0	87	38	113	414	200	0	132	511	620
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Free
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						Free
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	37.0	37.0		21.0	21.0	21.0	8.6	37.5		8.6	21.0	
Total Split (s)	37.0	37.0		28.0	28.0	28.0	40.0	66.4		8.6	35.0	
Total Split (%)	26.4%	26.4%		20.0%	20.0%	20.0%	28.6%	47.4%		6.1%	25.0%	
Maximum Green (s)	31.4	31.4		22.0	22.0	22.0	34.5	60.9		3.1	29.5	
Yellow Time (s)	3.6	3.6		4.0	4.0	4.0	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.6	4.6		5.0	5.0	5.0	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.5	3.5		3.0	3.0	3.0	2.5	3.0		2.0	3.0	
Recall Mode	Min	Min		None	None	None	Min	Min		None	None	
Walk Time (s)	7.0	7.0						7.0				
Flash Don't Walk (s)	23.0	23.0						25.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	18.2	18.2		12.6	12.6	12.6	36.0	55.2		4.2	23.3	109.0
Actuated g/C Ratio	0.17	0.17		0.12	0.12	0.12	0.33	0.51		0.04	0.21	1.00

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.43	0.61		0.48	0.20	0.39	0.78	0.13		2.16	0.74	0.43
Control Delay (s/veh)	48.3	48.2		56.4	48.6	7.0	47.0	8.4		600.1	47.8	0.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	48.3	48.2		56.4	48.6	7.0	47.0	8.4		600.1	47.8	0.9
LOS	D	D		E	D	A	D	A		F	D	A
Approach Delay (s/veh)		48.2			31.7			34.4			82.5	
Approach LOS		D			C			C			F	
Queue Length 50th (ft)	71	108		57	24	0	258	18		~147	174	0
Queue Length 95th (ft)	145	176		121	63	27	#532	45		#316	265	0
Internal Link Dist (ft)		383			758			474			638	
Turn Bay Length (ft)	205					214	390			285		
Base Capacity (vph)	433	909		335	352	413	532	1753		61	914	1444
Starvation Cap Reductn	0	0		0	0	0	0	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	0.24	0.34		0.26	0.11	0.27	0.78	0.11		2.16	0.56	0.43

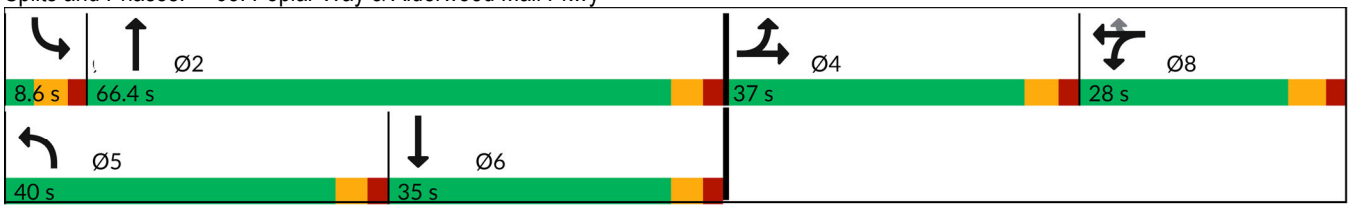
Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 109
Natural Cycle: 115
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.16
Intersection Signal Delay (s/veh): 60.5 Intersection LOS: E
Intersection Capacity Utilization 65.3% ICU Level of Service C
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: 65: Poplar Way & Alderwood Mall Pkwy



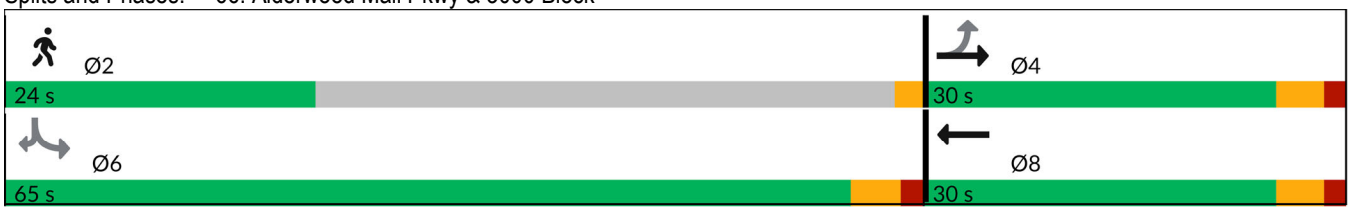
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	22	448	195	18	13	20	
Future Volume (vph)	22	448	195	18	13	20	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	
Storage Length (ft)	200			0	0	175	
Storage Lanes	1			0	0	1	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00	
Ped Bike Factor	1.00		1.00		1.00		
Frt			0.987			0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1583	3167	3090	0	1539	1377	
Flt Permitted	0.584				0.950		
Satd. Flow (perm)	971	3167	3090	0	1539	1377	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			10			26	
Link Speed (mph)		30	30		25		
Link Distance (ft)		838	442		400		
Travel Time (s)		19.0	10.0		10.9		
Confl. Peds. (#/hr)	1			1	1		
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	
Heavy Vehicles (%)	5%	5%	6%	6%	8%	8%	
Adj. Flow (vph)	28	574	250	23	17	26	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	28	574	273	0	17	26	
Turn Type	Perm	NA	NA		Perm	Perm	
Protected Phases		4	8				2
Permitted Phases	4				6	6	
Detector Phase	4	4	8		6	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	1.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0	24.0
Total Split (s)	30.0	30.0	30.0		65.0	65.0	24.0
Total Split (%)	31.6%	31.6%	31.6%		68.4%	68.4%	25%
Maximum Green (s)	25.0	25.0	25.0		60.0	60.0	22.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5	2.0
All-Red Time (s)	1.5	1.5	1.5		1.5	1.5	0.0
Lost Time Adjust (s)	-1.5	-1.5	-1.5		-1.5	-1.5	
Total Lost Time (s)	3.5	3.5	3.5		3.5	3.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.5	2.5	2.5		4.0	4.0	0.2
Recall Mode	Min	Min	Min		None	None	None
Walk Time (s)			5.0				5.0
Flash Don't Walk (s)			10.0				15.0
Pedestrian Calls (#/hr)			1				1
Act Effct Green (s)	29.0	29.0	29.0		10.4	10.4	
Actuated g/C Ratio	0.83	0.83	0.83		0.30	0.30	
v/c Ratio	0.03	0.22	0.11		0.04	0.06	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Control Delay (s/veh)	4.5	3.6	3.3		11.6	6.3	
Queue Delay	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	4.5	3.6	3.3		11.6	6.3	
LOS	A	A	A		B	A	
Approach Delay (s/veh)		3.6	3.3		8.4		
Approach LOS		A	A		A		
Queue Length 50th (ft)	0	0	0		1	0	
Queue Length 95th (ft)	12	64	31		11	10	
Internal Link Dist (ft)		758	362		320		
Turn Bay Length (ft)	200					175	
Base Capacity (vph)	802	2618	2556		1539	1377	
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	0.03	0.22	0.11		0.01	0.02	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 35
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.22
Intersection Signal Delay (s/veh): 3.7 Intersection LOS: A
Intersection Capacity Utilization 25.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 66: Alderwood Mall Pkwy & 3000 Block



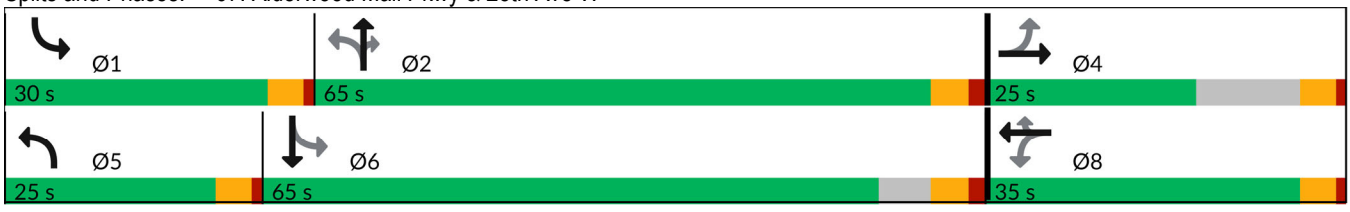
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	7	11	172	11	308	19	290	214	324	34	30
Future Volume (vph)	18	7	11	172	11	308	19	290	214	324	34	30
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	100		100	150		150	100		0
Storage Lanes	1		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor	1.00					0.98					0.99	
Frt		0.909				0.850			0.850		0.930	
Flt Protected	0.950				0.955		0.950			0.950		
Satd. Flow (prot)	1614	1544	0	0	1655	1473	1583	3167	1417	1583	2916	0
Flt Permitted	0.497				0.722		0.702			0.420		
Satd. Flow (perm)	843	1544	0	0	1251	1449	1170	3167	1417	700	2916	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				385			268		38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			340			336			535	
Travel Time (s)		6.5			7.7			7.6			12.2	
Confl. Peds. (#/hr)	2					2						
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	23	9	14	215	14	385	24	363	268	405	43	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	23	0	0	229	385	24	363	268	405	81	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	10.0	10.0	7.0	10.0	
Minimum Split (s)	24.5	24.5		26.0	26.0	26.0	9.5	24.2	24.2	11.5	24.2	
Total Split (s)	25.0	25.0		35.0	35.0	35.0	25.0	65.0	65.0	30.0	65.0	
Total Split (%)	19.2%	19.2%		26.9%	26.9%	26.9%	19.2%	50.0%	50.0%	23.1%	50.0%	
Maximum Green (s)	20.5	20.5		30.5	30.5	30.5	20.5	59.8	59.8	25.5	59.8	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.7	3.7	3.5	3.7	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.5	3.5			3.5	3.5	3.5	4.2	4.2	3.5	4.2	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	4.0	4.0	2.5	4.0	
Minimum Gap (s)	1.0	1.0		1.5	1.5	1.5	1.0	2.5	2.5	1.5	2.5	
Time Before Reduce (s)	10.0	10.0		10.0	10.0	10.0	5.0	25.0	25.0	10.0	25.0	
Time To Reduce (s)	10.0	10.0		15.0	15.0	15.0	10.0	25.0	25.0	10.0	25.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)	13.0	13.0		13.0	13.0	13.0		12.0	12.0		12.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		2	2	2		0	0		0	
Act Effct Green (s)	19.5	19.5			19.5	19.5	24.4	17.1	17.1	39.9	35.9	
Actuated g/C Ratio	0.29	0.29			0.29	0.29	0.37	0.26	0.26	0.60	0.54	
v/c Ratio	0.09	0.05			0.63	0.55	0.05	0.45	0.48	0.61	0.05	
Control Delay (s/veh)	20.8	13.1			30.8	6.0	9.5	24.7	6.8	12.5	6.8	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	20.8	13.1			30.8	6.0	9.5	24.7	6.8	12.5	6.8	
LOS	C	B			C	A	A	C	A	B	A	
Approach Delay (s/veh)		16.9			15.2			16.8			11.5	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	7	3			79	0	3	64	0	75	3	
Queue Length 95th (ft)	24	17			156	35	13	116	37	152	15	
Internal Link Dist (ft)		204			260			256			455	
Turn Bay Length (ft)	100					100	150		150	100		
Base Capacity (vph)	420	776			623	915	804	2789	1279	788	2683	
Starvation Cap Reductn	0	0			0	0	0	0	0	6	0	
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	
Reduced v/c Ratio	0.05	0.03			0.37	0.42	0.03	0.13	0.21	0.52	0.03	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 66.8
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay (s/veh): 14.9
Intersection LOS: B
Intersection Capacity Utilization 56.0%
ICU Level of Service B
Analysis Period (min) 15
Description: 3s LPI on Ph4&8

Splits and Phases: 67: Alderwood Mall Pkwy & 28th Ave W



Intersection	
Int Delay, s/veh	218.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	261	47	68	144	148	358
Future Vol, veh/h	261	47	68	144	148	358
Conflicting Peds, #/hr	0	0	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	47	47	58	97	94	58
Heavy Vehicles, %	0	0	1	1	3	3
Mvmt Flow	555	100	117	148	157	617

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	854	471	780	0	-	0
Stage 1	471	-	-	-	-	-
Stage 2	383	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-	-
Pot Cap-1 Maneuver	~ 332	597	842	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	694	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 278	594	837	-	-	-
Mov Cap-2 Maneuver	~ 278	-	-	-	-	-
Stage 1	~ 533	-	-	-	-	-
Stage 2	690	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	$ 562.94	4.41	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	768	-	303	-	-
HCM Lane V/C Ratio	0.14	-	2.166	-	-
HCM Ctrl Dly (s/v)	10	0	$ 562.9	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.5	-	49.1	-	-

Notes

~: Volume exceeds capacity
$: Delay exceeds 300s
+: Computation Not Defined
*: All major volume in platoon

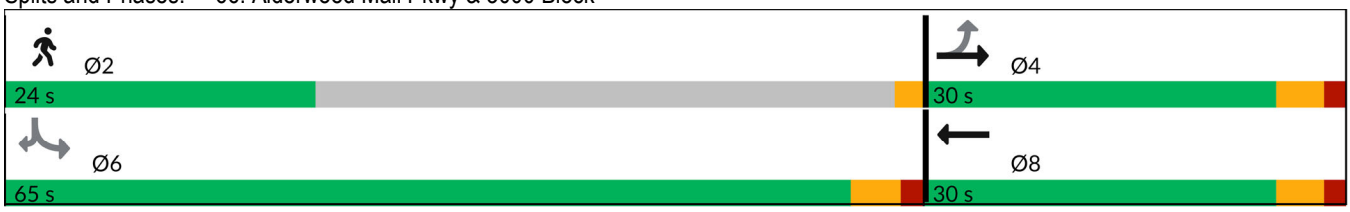
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	60	472	326	29	28	66	
Future Volume (vph)	60	472	326	29	28	66	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	
Storage Length (ft)	200			0	0	175	
Storage Lanes	1			0	0	1	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00	
Frt			0.988			0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1630	3260	3253	0	1630	1458	
Flt Permitted	0.525				0.950		
Satd. Flow (perm)	901	3260	3253	0	1630	1458	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			10			71	
Link Speed (mph)		30	30		25		
Link Distance (ft)		417	442		400		
Travel Time (s)		9.5	10.0		10.9		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%	
Adj. Flow (vph)	65	508	351	31	30	71	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	65	508	382	0	30	71	
Turn Type	Perm	NA	NA		Perm	Perm	
Protected Phases		4	8				2
Permitted Phases	4				6	6	
Detector Phase	4	4	8		6	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	1.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0	24.0
Total Split (s)	30.0	30.0	30.0		65.0	65.0	24.0
Total Split (%)	31.6%	31.6%	31.6%		68.4%	68.4%	25%
Maximum Green (s)	25.0	25.0	25.0		60.0	60.0	22.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5	2.0
All-Red Time (s)	1.5	1.5	1.5		1.5	1.5	0.0
Lost Time Adjust (s)	-1.5	-1.5	-1.5		-1.5	-1.5	
Total Lost Time (s)	3.5	3.5	3.5		3.5	3.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.5	2.5	2.5		4.0	4.0	0.2
Recall Mode	Min	Min	Min		None	None	None
Walk Time (s)			5.0				5.0
Flash Don't Walk (s)			10.0				15.0
Pedestrian Calls (#/hr)			0				0
Act Effct Green (s)	21.8	21.8	21.8		8.9	8.9	
Actuated g/C Ratio	0.71	0.71	0.71		0.29	0.29	
v/c Ratio	0.10	0.22	0.17		0.06	0.15	
Control Delay (s/veh)	4.9	4.1	3.8		8.7	3.6	
Queue Delay	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Total Delay (s/veh)	4.9	4.1	3.8		8.7	3.6	
LOS	A	A	A		A	A	
Approach Delay (s/veh)		4.2	3.8		5.1		
Approach LOS		A	A		A		
Queue Length 50th (ft)	5	21	15		5	0	
Queue Length 95th (ft)	16	40	29		11	12	
Internal Link Dist (ft)		337	362		320		
Turn Bay Length (ft)	200					175	
Base Capacity (vph)	788	2851	2846		1630	1458	
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	0.08	0.18	0.13		0.02	0.05	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 30.8
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.22
Intersection Signal Delay (s/veh): 4.1
Intersection LOS: A
Intersection Capacity Utilization 29.1%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 66: Alderwood Mall Pkwy & 3000 Block



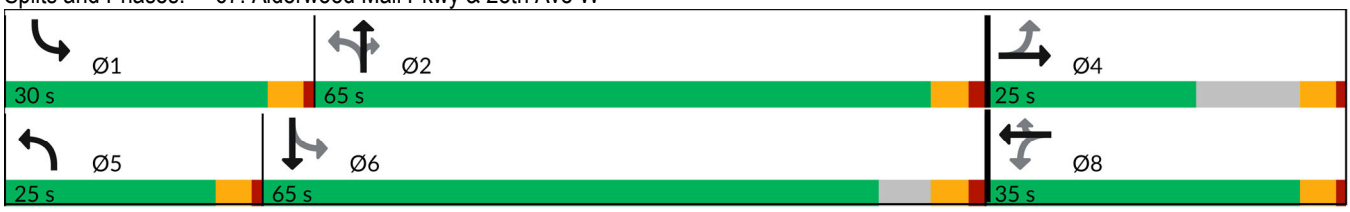
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	24	41	109	12	260	48	340	102	257	209	112
Future Volume (vph)	110	24	41	109	12	260	48	340	102	257	209	112
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	100		100	150		150	100		0
Storage Lanes	1		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor	0.99	0.99			1.00	0.98			0.97	1.00		
Frt		0.906				0.850			0.850		0.948	
Flt Protected	0.950				0.957		0.950			0.950		
Satd. Flow (prot)	1646	1556	0	0	1675	1488	1630	3260	1458	1662	3152	0
Flt Permitted	0.674				0.698		0.547			0.442		
Satd. Flow (perm)	1158	1556	0	0	1220	1453	938	3260	1414	770	3152	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44				277			109		111	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			340			336			261	
Travel Time (s)		6.5			7.7			7.6			5.9	
Confl. Peds. (#/hr)	6		1	1		6			3	3		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	2%	2%	2%	0%	0%	0%
Adj. Flow (vph)	117	26	44	116	13	277	51	362	109	273	222	119
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	70	0	0	129	277	51	362	109	273	341	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	10.0	10.0	7.0	10.0	
Minimum Split (s)	24.5	24.5		26.0	26.0	26.0	9.5	24.2	24.2	11.5	24.2	
Total Split (s)	25.0	25.0		35.0	35.0	35.0	25.0	65.0	65.0	30.0	65.0	
Total Split (%)	19.2%	19.2%		26.9%	26.9%	26.9%	19.2%	50.0%	50.0%	23.1%	50.0%	
Maximum Green (s)	20.5	20.5		30.5	30.5	30.5	20.5	59.8	59.8	25.5	59.8	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.7	3.7	3.5	3.7	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.5	3.5			3.5	3.5	3.5	4.2	4.2	3.5	4.2	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	4.0	4.0	2.5	4.0	
Minimum Gap (s)	1.0	1.0		1.5	1.5	1.5	1.0	2.5	2.5	1.5	2.5	
Time Before Reduce (s)	10.0	10.0		10.0	10.0	10.0	5.0	25.0	25.0	10.0	25.0	
Time To Reduce (s)	10.0	10.0		15.0	15.0	15.0	10.0	25.0	25.0	10.0	25.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)	13.0	13.0		13.0	13.0	13.0		12.0	12.0		12.0	
Pedestrian Calls (#/hr)	1	1		0	0	0		1	1		0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	12.7	12.7			12.7	12.7	22.0	14.4	14.4	30.3	23.9	
Actuated g/C Ratio	0.25	0.25			0.25	0.25	0.44	0.29	0.29	0.60	0.48	
v/c Ratio	0.40	0.16			0.42	0.48	0.10	0.39	0.23	0.41	0.22	
Control Delay (s/veh)	21.6	9.8			21.7	6.0	6.3	17.0	5.7	7.4	7.4	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	21.6	9.8			21.7	6.0	6.3	17.0	5.7	7.4	7.4	
LOS	C	A			C	A	A	B	A	A	A	
Approach Delay (s/veh)		17.2			11.0			13.6			7.4	
Approach LOS		B			B			B			A	
Queue Length 50th (ft)	27	6			30	0	5	42	0	29	21	
Queue Length 95th (ft)	79	34			85	49	20	98	33	87	56	
Internal Link Dist (ft)		204			260			256			181	
Turn Bay Length (ft)	100					100	150		150	100		
Base Capacity (vph)	754	1029			795	1043	873	3187	1385	969	3128	
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	
Reduced v/c Ratio	0.16	0.07			0.16	0.27	0.06	0.11	0.08	0.28	0.11	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 50.3
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay (s/veh): 11.1
Intersection LOS: B
Intersection Capacity Utilization 50.8%
ICU Level of Service A
Analysis Period (min) 15
Description: 3s LPI on Ph4&8

Splits and Phases: 67: Alderwood Mall Pkwy & 28th Ave W



Intersection	
Int Delay, s/veh	12

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	131	35	32	242	215	149
Future Vol, veh/h	131	35	32	242	215	149
Conflicting Peds, #/hr	0	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	59	59	51	90	81	51
Heavy Vehicles, %	13	13	2	2	1	1
Mvmt Flow	222	59	63	269	265	292

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	808	414	560	0	-	0
Stage 1	414	-	-	-	-	-
Stage 2	394	-	-	-	-	-
Critical Hdwy	6.53	6.33	4.12	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.417	2.218	-	-	-
Pot Cap-1 Maneuver	336	616	1011	-	-	-
Stage 1	644	-	-	-	-	-
Stage 2	658	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	310	614	1009	-	-	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	596	-	-	-	-	-
Stage 2	656	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	48.06	1.67	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	341	-	346	-	-
HCM Lane V/C Ratio	0.062	-	0.813	-	-
HCM Ctrl Dly (s/v)	8.8	0	48.1	-	-
HCM Lane LOS	A	A	E	-	-
HCM 95th %tile Q(veh)	0.2	-	7	-	-

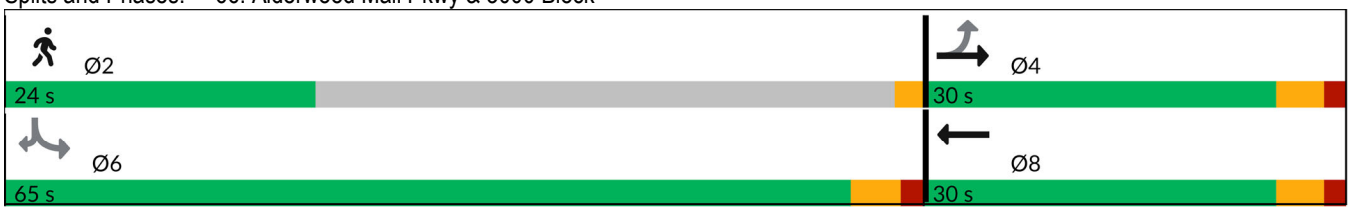
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	47	376	287	33	23	41	
Future Volume (vph)	47	376	287	33	23	41	
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	
Storage Length (ft)	200			0	0	175	
Storage Lanes	1			0	0	1	
Taper Length (ft)	25				25		
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00	
Frt			0.984			0.850	
Flt Protected	0.950				0.950		
Satd. Flow (prot)	1614	3228	3239	0	1583	1417	
Flt Permitted	0.539				0.950		
Satd. Flow (perm)	916	3228	3239	0	1583	1417	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)			13			46	
Link Speed (mph)		30	30		25		
Link Distance (ft)		417	442		400		
Travel Time (s)		9.5	10.0		10.9		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	3%	3%	1%	1%	5%	5%	
Adj. Flow (vph)	52	418	319	37	26	46	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	52	418	356	0	26	46	
Turn Type	Perm	NA	NA		Perm	Perm	
Protected Phases		4	8				2
Permitted Phases	4				6	6	
Detector Phase	4	4	8		6	6	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	1.0
Minimum Split (s)	20.0	20.0	20.0		20.0	20.0	24.0
Total Split (s)	30.0	30.0	30.0		65.0	65.0	24.0
Total Split (%)	31.6%	31.6%	31.6%		68.4%	68.4%	25%
Maximum Green (s)	25.0	25.0	25.0		60.0	60.0	22.0
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5	2.0
All-Red Time (s)	1.5	1.5	1.5		1.5	1.5	0.0
Lost Time Adjust (s)	-1.5	-1.5	-1.5		-1.5	-1.5	
Total Lost Time (s)	3.5	3.5	3.5		3.5	3.5	
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	2.5	2.5	2.5		4.0	4.0	0.2
Recall Mode	Min	Min	Min		None	None	None
Walk Time (s)			5.0				5.0
Flash Don't Walk (s)			10.0				15.0
Pedestrian Calls (#/hr)			0				0
Act Effct Green (s)	23.3	23.3	23.3		8.9	8.9	
Actuated g/C Ratio	0.73	0.73	0.73		0.28	0.28	
v/c Ratio	0.08	0.18	0.15		0.06	0.11	
Control Delay (s/veh)	4.4	3.7	3.5		9.8	4.3	
Queue Delay	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø2
Total Delay (s/veh)	4.4	3.7	3.5		9.8	4.3	
LOS	A	A	A		A	A	
Approach Delay (s/veh)		3.8	3.5		6.3		
Approach LOS		A	A		A		
Queue Length 50th (ft)	4	16	13		5	0	
Queue Length 95th (ft)	13	32	26		11	10	
Internal Link Dist (ft)		337	362		320		
Turn Bay Length (ft)	200					175	
Base Capacity (vph)	774	2728	2739		1583	1417	
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	0.07	0.15	0.13		0.02	0.03	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 32
Natural Cycle: 45
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.18
Intersection Signal Delay (s/veh): 3.9
Intersection LOS: A
Intersection Capacity Utilization 28.1%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 66: Alderwood Mall Pkwy & 3000 Block



Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	83	12	7	302	329	66
Future Vol, veh/h	83	12	7	302	329	66
Conflicting Peds, #/hr	0	0	9	0	0	9
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	94	94	93	93
Heavy Vehicles, %	4	4	1	1	1	1
Mvmt Flow	122	18	7	321	354	71

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	734	398	434	0	-	0
Stage 1	398	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.11	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.209	-	-	-
Pot Cap-1 Maneuver	384	647	1131	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	373	641	1120	-	-	-
Mov Cap-2 Maneuver	373	-	-	-	-	-
Stage 1	662	-	-	-	-	-
Stage 2	712	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	19.06	0.19	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	41	-	394	-	-
HCM Lane V/C Ratio	0.007	-	0.354	-	-
HCM Ctrl Dly (s/v)	8.2	0	19.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.6	-	-

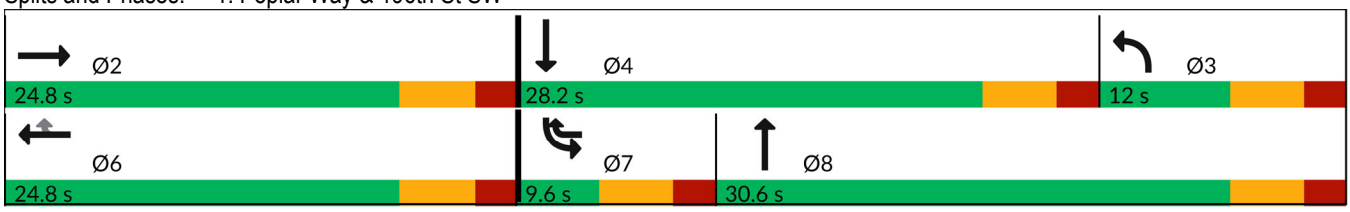
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	553	820	0	775	155	157	165	16	50	354	100
Future Volume (vph)	0	553	820	0	775	155	157	165	16	50	354	100
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Lane Width (ft)	12	10	11	12	11	11	12	12	12	11	12	12
Storage Length (ft)	0		0	0		150	250		230	290		0
Storage Lanes	0		1	0		1	1		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	0.95	0.97	0.95	0.95
Frt			0.850			0.850		0.987			0.967	
Flt Protected							0.950			0.950		
Satd. Flow (prot)	0	2984	1383	0	3091	1410	3014	3203	0	3057	3152	0
Flt Permitted							0.950			0.950		
Satd. Flow (perm)	0	2984	1383	0	3091	1410	3014	3203	0	3057	3152	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			755			172		18			55	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		908			1593			718			623	
Travel Time (s)		17.7			31.0			16.3			14.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	4%	4%	4%	4%	2%	7%	2%	7%	2%	2%	2%
Adj. Flow (vph)	0	614	911	0	861	172	174	183	18	56	393	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	614	911	0	861	172	174	201	0	56	504	0
Turn Type		NA	Free		NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases		2			6	7	3	8		7	4	
Permitted Phases			Free			6						
Detector Phase		2			6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)		3.0			4.0	4.0	3.0	3.0		4.0	4.0	
Minimum Split (s)		8.6			21.6	9.6	8.6	30.6		9.6	9.6	
Total Split (s)		24.8			24.8	9.6	12.0	30.6		9.6	28.2	
Total Split (%)		38.2%			38.2%	14.8%	18.5%	47.1%		14.8%	43.4%	
Maximum Green (s)		19.2			19.2	4.0	6.4	25.0		4.0	22.6	
Yellow Time (s)		3.6			3.6	3.6	3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0			2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		-1.0			-1.0	0.0	-1.0	0.0		0.0	0.0	
Total Lost Time (s)		4.6			4.6	5.6	4.6	5.6		5.6	5.6	
Lead/Lag						Lead	Lag	Lag		Lead	Lead	
Lead-Lag Optimize?												
Vehicle Extension (s)		2.5			3.0	3.0	2.5	2.5		3.0	3.0	
Minimum Gap (s)		2.5			3.0	3.0	2.5	2.5		3.0	3.0	
Time Before Reduce (s)		10.0			10.0	10.0	10.0	10.0		10.0	10.0	
Time To Reduce (s)		15.0			15.0	15.0	15.0	15.0		15.0	15.0	
Recall Mode		None			None	None	None	None		None	None	
Walk Time (s)					5.0			7.0				
Flash Don't Walk (s)					11.0			18.0				
Pedestrian Calls (#/hr)					0			0				
Act Effct Green (s)		20.0	53.4		20.0	24.2	7.5	16.5		4.1	13.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.37	1.00		0.37	0.45	0.14	0.31		0.08	0.26	
v/c Ratio		0.55	0.66		0.74	0.23	0.41	0.20		0.24	0.59	
Control Delay (s/veh)		17.2	2.5		22.0	2.8	27.1	13.0		28.9	18.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)		17.2	2.5		22.0	2.8	27.1	13.0		28.9	18.9	
LOS		B	A		C	A	C	B		C	B	
Approach Delay (s/veh)		8.4			18.8			19.5			19.9	
Approach LOS		A			B			B			B	
Queue Length 50th (ft)		85	0		132	0	28	24		9	69	
Queue Length 95th (ft)		151	0		#256	27	59	44		26	110	
Internal Link Dist (ft)		828			1513			638			543	
Turn Bay Length (ft)						150	250			290		
Base Capacity (vph)		1169	1383		1211	754	432	1563		237	1412	
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		0.53	0.66		0.71	0.23	0.40	0.13		0.24	0.36	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 53.4
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay (s/veh): 14.5 Intersection LOS: B
Intersection Capacity Utilization 54.5% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Poplar Way & 196th St SW



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	477	40	122	1003	64	89	134	292	119	137	64
Future Volume (vph)	25	477	40	122	1003	64	89	134	292	119	137	64
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	255		0	160		0	350		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	1.00		1.00		0.98	0.99	0.99	
Frt		0.988			0.991				0.850		0.952	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1568	3096	0	1599	3165	0	1599	3197	1430	1583	2999	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1567	3096	0	1597	3165	0	1593	3197	1403	1574	2999	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			4				270		45	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1593			1336			535			739	
Travel Time (s)		31.0			26.0			12.2			16.8	
Confl. Peds. (#/hr)	2		1	1		2	2		3	3		2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	4%	4%	4%	5%	5%	5%
Adj. Flow (vph)	27	524	44	134	1102	70	98	147	321	131	151	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	568	0	134	1172	0	98	147	321	131	221	0
Turn Type	Prot	NA		Prot	NA		Prot	NA	pm+ov	Prot	NA	
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	3	1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		6.0	10.0		6.0	10.0	6.0	7.0	10.0	
Minimum Split (s)	12.2	29.2		12.2	29.2		12.2	28.2	12.2	26.0	28.2	
Total Split (s)	41.0	46.0		26.0	51.0		26.0	46.0	26.0	41.0	46.0	
Total Split (%)	22.9%	25.7%		14.5%	28.5%		14.5%	25.7%	14.5%	22.9%	25.7%	
Maximum Green (s)	35.8	40.8		20.8	45.8		20.8	40.8	20.8	35.8	40.8	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.7	3.7	3.7	3.7	3.7	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5	1.5	1.5	1.5	
Lost Time Adjust (s)	-1.7	-1.7		-1.7	-1.7		-1.7	-1.7	-1.0	-1.7	-1.7	
Total Lost Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	4.2	3.5	3.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	4.0		2.0	3.5		2.0	3.5	2.0	3.0	4.0	
Minimum Gap (s)	1.5	2.5		1.0	2.5		1.0	1.5	1.0	1.5	1.5	
Time Before Reduce (s)	10.0	15.0		5.0	15.0		5.0	25.0	5.0	10.0	15.0	
Time To Reduce (s)	15.0	20.0		10.0	20.0		10.0	15.0	10.0	15.0	15.0	
Recall Mode	None	Min		None	Min		None	None	None	None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		17.0			17.0			16.0			16.0	
Pedestrian Calls (#/hr)		1			2			3			2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	9.7	37.6		14.9	48.6		12.6	14.6	28.1	15.6	17.6	
Actuated g/C Ratio	0.10	0.39		0.15	0.50		0.13	0.15	0.29	0.16	0.18	
v/c Ratio	0.17	0.47		0.55	0.74		0.47	0.31	0.53	0.51	0.38	
Control Delay (s/veh)	48.2	25.9		48.8	25.9		49.8	40.3	8.7	46.9	30.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	48.2	25.9		48.8	25.9		49.8	40.3	8.7	46.9	30.6	
LOS	D	C		D	C		D	D	A	D	C	
Approach Delay (s/veh)		26.9			28.2			24.0			36.7	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	16	127		79	304		58	45	23	76	52	
Queue Length 95th (ft)	50	256		158	#602		125	81	90	156	95	
Internal Link Dist (ft)		1513			1256			455			659	
Turn Bay Length (ft)	100			255			160			350		
Base Capacity (vph)	619	2041		379	1586		379	1431	698	625	1835	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.04	0.28		0.35	0.74		0.26	0.10	0.46	0.21	0.12	

Intersection Summary

Area Type: Other
Cycle Length: 179
Actuated Cycle Length: 97
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay (s/veh): 28.1 Intersection LOS: C
Intersection Capacity Utilization 68.0% 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: 31: Alderwood Mall Pkwy & 196th St SW

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	270	7	82	39	136	381	96	92	143	470	570
Future Volume (vph)	105	270	7	82	39	136	381	96	92	143	470	570
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	205		0	0		214	390		0	285		0
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.91	0.91	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor						0.99		0.99		1.00		
Frt		0.996				0.850		0.926				0.850
Flt Protected	0.950	0.998		0.950			0.950			0.950		
Satd. Flow (prot)	1441	3015	0	1568	1651	1403	1614	2970	0	1614	3228	1444
Flt Permitted	0.950	0.998		0.950			0.950			0.950		
Satd. Flow (perm)	1441	3015	0	1568	1651	1385	1614	2970	0	1612	3228	1444
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				149		100				620
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		463			838			554			718	
Travel Time (s)		10.5			19.0			12.6			16.3	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)						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 (%)	5%	5%	5%	6%	6%	6%	3%	3%	3%	3%	3%	3%
Adj. Flow (vph)	114	293	8	89	42	148	414	104	100	155	511	620
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	103	312	0	89	42	148	414	204	0	155	511	620
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	Free
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8						Free
Detector Phase	4	4		8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Split (s)	37.0	37.0		21.0	21.0	21.0	8.6	37.5		8.6	21.0	
Total Split (s)	37.0	37.0		28.0	28.0	28.0	40.0	66.4		8.6	35.0	
Total Split (%)	26.4%	26.4%		20.0%	20.0%	20.0%	28.6%	47.4%		6.1%	25.0%	
Maximum Green (s)	31.4	31.4		22.0	22.0	22.0	34.5	60.9		3.1	29.5	
Yellow Time (s)	3.6	3.6		4.0	4.0	4.0	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	-1.0	-1.0		-1.0	-1.0	-1.0	-1.0	-1.0		-1.0	-1.0	
Total Lost Time (s)	4.6	4.6		5.0	5.0	5.0	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lead		Lag	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.5	3.5		3.0	3.0	3.0	2.5	3.0		2.0	3.0	
Recall Mode	Min	Min		None	None	None	Min	Min		None	None	
Walk Time (s)	7.0	7.0						7.0				
Flash Don't Walk (s)	23.0	23.0						25.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	18.5	18.5		12.8	12.8	12.8	36.0	55.2		4.2	23.4	109.5
Actuated g/C Ratio	0.17	0.17		0.12	0.12	0.12	0.33	0.50		0.04	0.21	1.00

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.42	0.61		0.49	0.22	0.51	0.78	0.13		2.54	0.74	0.43
Control Delay (s/veh)	48.2	48.4		56.7	49.1	13.9	47.5	8.4		765.3	48.1	0.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	48.2	48.4		56.7	49.1	13.9	47.5	8.4		765.3	48.1	0.9
LOS	D	D		E	D	B	D	A		F	D	A
Approach Delay (s/veh)		48.3			32.9			34.6			111.8	
Approach LOS		D			C			C			F	
Queue Length 50th (ft)	71	111		59	27	0	260	18		~181	175	0
Queue Length 95th (ft)	145	179		124	67	62	#536	46		#366	267	0
Internal Link Dist (ft)		383			758			474			638	
Turn Bay Length (ft)	205					214	390			285		
Base Capacity (vph)	432	905		333	351	411	530	1743		61	910	1444
Starvation Cap Reductn	0	0		0	0	0	0	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	0.24	0.34		0.27	0.12	0.36	0.78	0.12		2.54	0.56	0.43

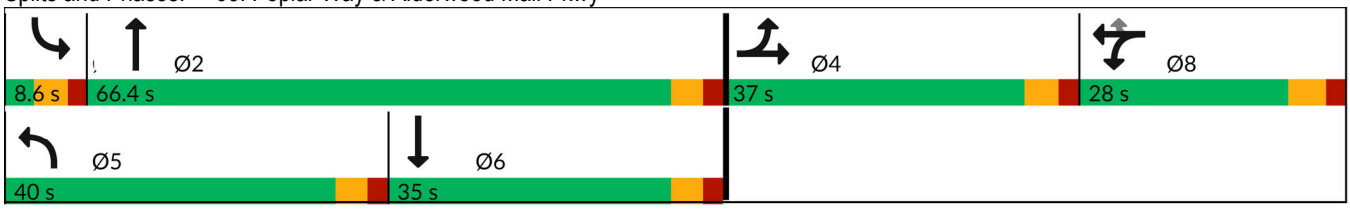
Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 109.5
Natural Cycle: 115
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.54
Intersection Signal Delay (s/veh): 74.8 Intersection LOS: E
Intersection Capacity Utilization 65.6% ICU Level of Service C
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: 65: Poplar Way & Alderwood Mall Pkwy



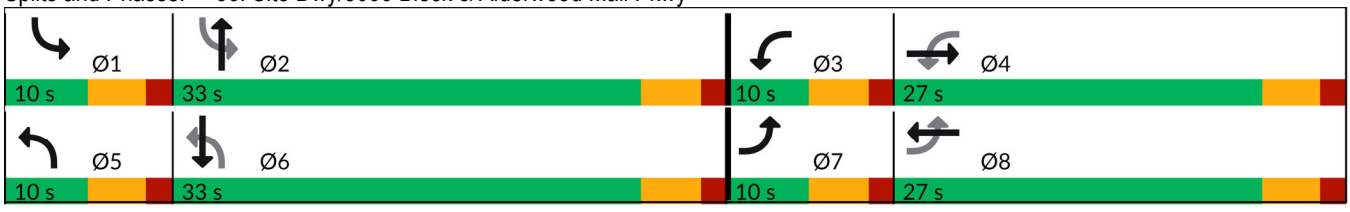
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	271	209	181	72	13	161	13	148	8	8	20
Future Volume (vph)	22	271	209	181	72	13	161	13	148	8	8	20
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	200		0	50		0	0		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.98	0.98		0.99	0.99		0.99	0.98		0.99	0.99	
Frt		0.935			0.977			0.862			0.894	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1583	2974	0	1662	3076	0	1662	1480	0	1568	1479	0
Flt Permitted	0.673			0.251			0.730			0.498		
Satd. Flow (perm)	1105	2974	0	437	3076	0	1267	1480	0	817	1479	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		248			19			218			29	
Link Speed (mph)		30			30			30			25	
Link Distance (ft)		838			442			274			400	
Travel Time (s)		19.0			10.0			6.2			10.9	
Confl. Peds. (#/hr)	10		10	10		10	10		10	10		10
Peak Hour Factor	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
Heavy Vehicles (%)	5%	5%	0%	0%	5%	5%	0%	0%	0%	6%	0%	6%
Adj. Flow (vph)	32	399	307	266	106	19	237	19	218	12	12	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	32	706	0	266	125	0	237	237	0	12	41	0
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	27.0		10.0	27.0		10.0	33.0		10.0	33.0	
Total Split (s)	10.0	27.0		10.0	27.0		10.0	33.0		10.0	33.0	
Total Split (%)	12.5%	33.8%		12.5%	33.8%		12.5%	41.3%		12.5%	41.3%	
Maximum Green (s)	5.0	22.0		5.0	22.0		5.0	28.0		5.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	-1.5	-1.5		-1.5	-1.5		-1.5	-1.5		-1.5	-1.5	
Total Lost Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	2.5		0.2	2.5		0.2	4.0		0.2	4.0	
Minimum Gap (s)	0.2	2.5		0.2	2.5		0.2	4.0		0.2	4.0	
Time Before Reduce (s)	10.0	0.0		10.0	0.0		10.0	0.0		10.0	0.0	
Time To Reduce (s)	15.0	0.0		15.0	0.0		15.0	0.0		15.0	0.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		15.0			15.0			21.0			21.0	
Pedestrian Calls (#/hr)		10			10			10			10	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	25.1	15.3		22.4	23.1		15.2	15.8		16.6	11.9	
Actuated g/C Ratio	0.49	0.30		0.44	0.45		0.30	0.31		0.33	0.23	
v/c Ratio	0.05	0.66		0.73	0.09		0.54	0.39		0.03	0.11	
Control Delay (s/veh)	10.3	14.5		27.7	12.3		18.1	5.4		11.0	10.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.3	14.5		27.7	12.3		18.1	5.4		11.0	10.3	
LOS	B	B		C	B		B	A		B	B	
Approach Delay (s/veh)		14.3			22.8			11.8			10.5	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)	4	58		43	7		51	4		2	3	
Queue Length 95th (ft)	19	96		#110	28		80	19		8	15	
Internal Link Dist (ft)		758			362			194			320	
Turn Bay Length (ft)	200			50						175		
Base Capacity (vph)	611	1630		363	1591		440	1021		371	952	
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	0.05	0.43		0.73	0.08		0.54	0.23		0.03	0.04	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 51
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay (s/veh): 15.5 Intersection LOS: B
Intersection Capacity Utilization 55.8% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 66: Site Dwy/3000 Block & Alderwood Mall Pkwy



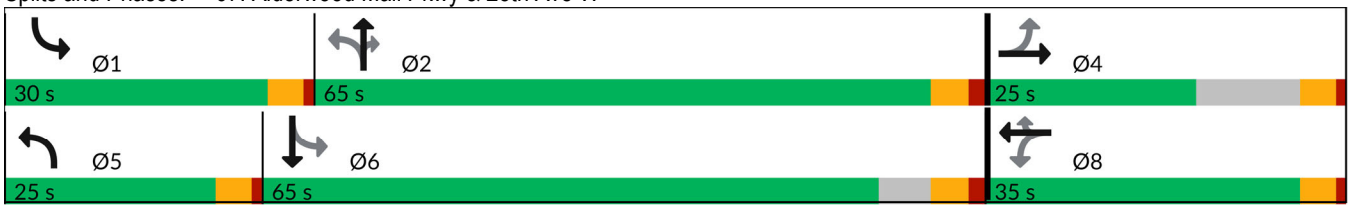
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	7	11	107	11	210	19	384	86	222	152	30
Future Volume (vph)	18	7	11	107	11	210	19	384	86	222	152	30
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	100		100	150		150	100		0
Storage Lanes	1		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor	1.00					0.98					1.00	
Frt		0.909				0.850			0.850		0.975	
Flt Protected	0.950				0.957		0.950			0.950		
Satd. Flow (prot)	1614	1544	0	0	1658	1473	1583	3167	1417	1583	3077	0
Flt Permitted	0.640				0.730		0.610			0.374		
Satd. Flow (perm)	1084	1544	0	0	1265	1449	1017	3167	1417	623	3077	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14				263			108		26	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			340			336			535	
Travel Time (s)		6.5			7.7			7.6			12.2	
Confl. Peds. (#/hr)	2					2						
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	23	9	14	134	14	263	24	480	108	278	190	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	23	0	0	148	263	24	480	108	278	228	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	10.0	10.0	7.0	10.0	
Minimum Split (s)	24.5	24.5		26.0	26.0	26.0	9.5	24.2	24.2	11.5	24.2	
Total Split (s)	25.0	25.0		35.0	35.0	35.0	25.0	65.0	65.0	30.0	65.0	
Total Split (%)	19.2%	19.2%		26.9%	26.9%	26.9%	19.2%	50.0%	50.0%	23.1%	50.0%	
Maximum Green (s)	20.5	20.5		30.5	30.5	30.5	20.5	59.8	59.8	25.5	59.8	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.7	3.7	3.5	3.7	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.5	3.5			3.5	3.5	3.5	4.2	4.2	3.5	4.2	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	4.0	4.0	2.5	4.0	
Minimum Gap (s)	1.0	1.0		1.5	1.5	1.5	1.0	2.5	2.5	1.5	2.5	
Time Before Reduce (s)	10.0	10.0		10.0	10.0	10.0	5.0	25.0	25.0	10.0	25.0	
Time To Reduce (s)	10.0	10.0		15.0	15.0	15.0	10.0	25.0	25.0	10.0	25.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)	13.0	13.0		13.0	13.0	13.0		12.0	12.0		12.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)	0	0		2	2	2		0	0		0	
Act Effct Green (s)	13.7	13.7			13.7	13.7	25.1	17.9	17.9	34.5	30.5	
Actuated g/C Ratio	0.25	0.25			0.25	0.25	0.45	0.32	0.32	0.62	0.55	
v/c Ratio	0.09	0.06			0.48	0.47	0.05	0.47	0.20	0.47	0.13	
Control Delay (s/veh)	19.6	13.0			25.7	6.4	6.1	17.7	5.1	8.0	7.4	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	19.6	13.0			25.7	6.4	6.1	17.7	5.1	8.0	7.4	
LOS	B	B			C	A	A	B	A	A	A	
Approach Delay (s/veh)		16.3			13.3			15.0			7.7	
Approach LOS		B			B			B			A	
Queue Length 50th (ft)	6	2			40	0	2	62	0	33	11	
Queue Length 95th (ft)	22	17			95	35	10	114	24	75	38	
Internal Link Dist (ft)		204			260			256			455	
Turn Bay Length (ft)	100					100	150		150	100		
Base Capacity (vph)	644	924			752	968	861	3036	1363	874	2996	
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	
Reduced v/c Ratio	0.04	0.02			0.20	0.27	0.03	0.16	0.08	0.32	0.08	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 55.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.48
Intersection Signal Delay (s/veh): 12.3
Intersection LOS: B
Intersection Capacity Utilization 49.0%
ICU Level of Service A
Analysis Period (min) 15
Description: 3s LPI on Ph4&8

Splits and Phases: 67: Alderwood Mall Pkwy & 28th Ave W



Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	10	22	197	192	64
Future Vol, veh/h	25	10	22	197	192	64
Conflicting Peds, #/hr	0	0	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	47	47	58	97	94	58
Heavy Vehicles, %	100	100	1	1	3	100
Mvmt Flow	53	21	38	203	204	110

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	543	264	320	0	-	0
Stage 1	264	-	-	-	-	-
Stage 2	279	-	-	-	-	-
Critical Hdwy	7.4	7.2	4.11	-	-	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	4.2	2.209	-	-	-
Pot Cap-1 Maneuver	366	587	1246	-	-	-
Stage 1	598	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	350	584	1239	-	-	-
Mov Cap-2 Maneuver	350	-	-	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	585	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	16.22	1.26	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	283	-	395	-	-
HCM Lane V/C Ratio	0.031	-	0.188	-	-
HCM Ctrl Dly (s/v)	8	0	16.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

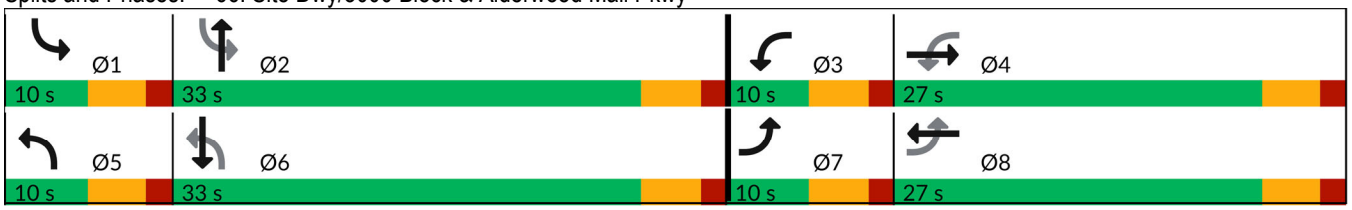
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	418	64	69	269	24	72	5	85	23	4	66
Future Volume (vph)	60	418	64	69	269	24	72	5	85	23	4	66
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	200		0	50		0	0		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99		0.99	1.00		0.99	0.98		0.99	0.98	
Frt		0.980			0.988			0.858			0.858	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1630	3187	0	1662	3243	0	1662	1472	0	1614	1432	0
Flt Permitted	0.514			0.340			0.699			0.684		
Satd. Flow (perm)	873	3187	0	591	3243	0	1214	1472	0	1154	1432	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			12			108			84	
Link Speed (mph)		30			30			30			25	
Link Distance (ft)		417			442			315			400	
Travel Time (s)		9.5			10.0			7.2			10.9	
Confl. Peds. (#/hr)	10		10	10		10	10		10	10		10
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	2%	2%	0%	0%	1%	1%	0%	0%	0%	3%	0%	3%
Adj. Flow (vph)	76	529	81	87	341	30	91	6	108	29	5	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	610	0	87	371	0	91	114	0	29	89	0
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	27.0		10.0	27.0		10.0	33.0		10.0	33.0	
Total Split (s)	10.0	27.0		10.0	27.0		10.0	33.0		10.0	33.0	
Total Split (%)	12.5%	33.8%		12.5%	33.8%		12.5%	41.3%		12.5%	41.3%	
Maximum Green (s)	5.0	22.0		5.0	22.0		5.0	28.0		5.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	-1.5	-1.5		-1.5	-1.5		-1.5	-1.5		-1.5	-1.5	
Total Lost Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	2.5		0.2	2.5		0.2	4.0		0.2	4.0	
Minimum Gap (s)	0.2	2.5		0.2	2.5		0.2	4.0		0.2	4.0	
Time Before Reduce (s)	10.0	0.0		10.0	0.0		10.0	0.0		10.0	0.0	
Time To Reduce (s)	15.0	0.0		15.0	0.0		15.0	0.0		15.0	0.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		15.0			15.0			21.0			21.0	
Pedestrian Calls (#/hr)		10			10			10			10	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	27.2	23.1		26.5	25.2		16.5	16.5		17.9	12.3	
Actuated g/C Ratio	0.52	0.44		0.51	0.48		0.32	0.32		0.34	0.24	
v/c Ratio	0.13	0.43		0.19	0.24		0.20	0.21		0.06	0.22	
Control Delay (s/veh)	10.6	17.2		11.1	14.7		12.6	5.9		11.3	6.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	10.6	17.2		11.1	14.7		12.6	5.9		11.3	6.9	
LOS	B	B		B	B		B	A		B	A	
Approach Delay (s/veh)		16.5			14.0			8.9			8.0	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)	11	76		12	43		18	1		5	1	
Queue Length 95th (ft)	42	158		46	96		41	24		18	22	
Internal Link Dist (ft)		337			362			235			320	
Turn Bay Length (ft)	200			50						175		
Base Capacity (vph)	563	1646		452	1674		447	951		462	917	
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	0.13	0.37		0.19	0.22		0.20	0.12		0.06	0.10	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 52.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay (s/veh): 14.0
Intersection LOS: B
Intersection Capacity Utilization 44.5%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 66: Site Dwy/3000 Block & Alderwood Mall Pkwy



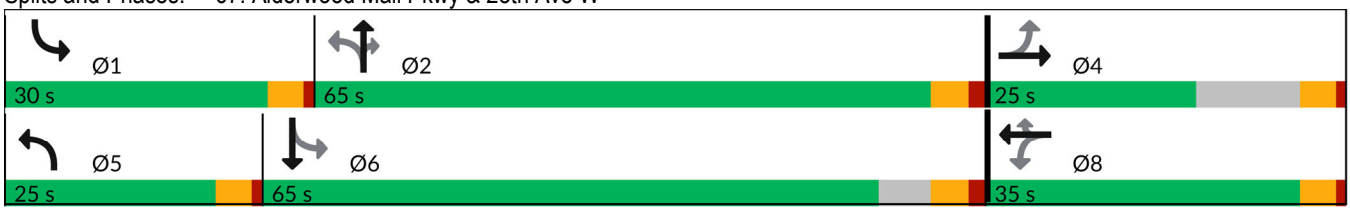
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	24	41	81	12	222	48	385	83	235	244	112
Future Volume (vph)	110	24	41	81	12	222	48	385	83	235	244	112
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	100		0	100		100	150		150	100		0
Storage Lanes	1		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor		0.99			1.00				0.98	1.00		
Frt		0.906				0.850			0.850		0.953	
Flt Protected	0.950				0.958		0.950			0.950		
Satd. Flow (prot)	1646	1556	0	0	1612	1430	1630	3260	1458	1630	3107	0
Flt Permitted	0.693				0.721		0.527			0.415		
Satd. Flow (perm)	1201	1556	0	0	1211	1430	904	3260	1424	711	3107	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44				236			88		83	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		284			340			336			261	
Travel Time (s)		6.5			7.7			7.6			5.9	
Confl. Peds. (#/hr)			1	1					1	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	4%	4%	4%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	117	26	44	86	13	236	51	410	88	250	260	119
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	70	0	0	99	236	51	410	88	250	379	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	4	4		8	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0	7.0	5.0	10.0	10.0	7.0	10.0	
Minimum Split (s)	24.5	24.5		26.0	26.0	26.0	9.5	24.2	24.2	11.5	24.2	
Total Split (s)	25.0	25.0		35.0	35.0	35.0	25.0	65.0	65.0	30.0	65.0	
Total Split (%)	19.2%	19.2%		26.9%	26.9%	26.9%	19.2%	50.0%	50.0%	23.1%	50.0%	
Maximum Green (s)	20.5	20.5		30.5	30.5	30.5	20.5	59.8	59.8	25.5	59.8	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.7	3.7	3.5	3.7	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.5	
Lost Time Adjust (s)	-1.0	-1.0			-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.5	3.5			3.5	3.5	3.5	4.2	4.2	3.5	4.2	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		3.0	3.0	3.0	2.0	4.0	4.0	2.5	4.0	
Minimum Gap (s)	1.0	1.0		1.5	1.5	1.5	1.0	2.5	2.5	1.5	2.5	
Time Before Reduce (s)	10.0	10.0		10.0	10.0	10.0	5.0	25.0	25.0	10.0	25.0	
Time To Reduce (s)	10.0	10.0		15.0	15.0	15.0	10.0	25.0	25.0	10.0	25.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0		7.0	7.0		7.0	
Flash Don't Walk (s)	13.0	13.0		13.0	13.0	13.0		12.0	12.0		12.0	
Pedestrian Calls (#/hr)	1	1		0	0	0		1	1		0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	12.0	12.0			12.0	12.0	22.6	15.1	15.1	30.3	23.9	
Actuated g/C Ratio	0.24	0.24			0.24	0.24	0.46	0.30	0.30	0.61	0.48	
v/c Ratio	0.40	0.17			0.34	0.45	0.10	0.41	0.18	0.39	0.25	
Control Delay (s/veh)	21.5	9.7			20.1	6.0	6.0	16.2	5.5	7.1	8.3	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	21.5	9.7			20.1	6.0	6.0	16.2	5.5	7.1	8.3	
LOS	C	A			C	A	A	B	A	A	A	
Approach Delay (s/veh)		17.1			10.2			13.6			7.8	
Approach LOS		B			B			B			A	
Queue Length 50th (ft)	28	6			23	0	4	45	0	24	27	
Queue Length 95th (ft)	76	33			65	44	20	106	28	80	68	
Internal Link Dist (ft)		204			260			256			181	
Turn Bay Length (ft)	100					100	150		150	100		
Base Capacity (vph)	792	1041			798	1023	879	3201	1400	958	3098	
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	
Reduced v/c Ratio	0.15	0.07			0.12	0.23	0.06	0.13	0.06	0.26	0.12	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 49.6
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.45
Intersection Signal Delay (s/veh): 11.2
Intersection LOS: B
Intersection Capacity Utilization 49.4%
ICU Level of Service A
Analysis Period (min) 15
Description: 3s LPI on Ph4&8

Splits and Phases: 67: Alderwood Mall Pkwy & 28th Ave W



Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	9	10	268	247	60
Future Vol, veh/h	23	9	10	268	247	60
Conflicting Peds, #/hr	0	7	8	0	0	8
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	59	59	51	75	86	51
Heavy Vehicles, %	100	100	100	3	3	100
Mvmt Flow	39	15	20	357	287	118

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	751	361	413	0	-	0
Stage 1	354	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Critical Hdwy	7.4	7.2	5.1	-	-	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	4.2	3.1	-	-	-
Pot Cap-1 Maneuver	267	510	769	-	-	-
Stage 1	537	-	-	-	-	-
Stage 2	510	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	254	503	762	-	-	-
Mov Cap-2 Maneuver	254	-	-	-	-	-
Stage 1	515	-	-	-	-	-
Stage 2	506	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	19.92	0.51	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	94	-	295	-	-
HCM Lane V/C Ratio	0.026	-	0.184	-	-
HCM Ctrl Dly (s/v)	9.8	0	19.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

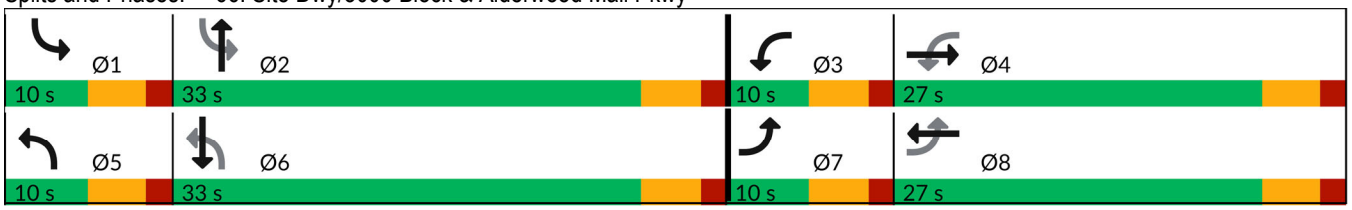
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	356	23	26	263	33	27	2	30	23	4	41
Future Volume (vph)	47	356	23	26	263	33	27	2	30	23	4	41
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	200		0	50		0	0		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00		1.00	1.00		1.00	0.98		1.00	0.99	
Frt		0.991			0.983			0.858			0.864	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1614	3199	0	1662	3226	0	1662	1479	0	1583	1425	0
Flt Permitted	0.547			0.496			0.723			0.734		
Satd. Flow (perm)	924	3199	0	864	3226	0	1260	1479	0	1218	1425	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			17			34			47	
Link Speed (mph)		30			30			30			25	
Link Distance (ft)		417			442			285			400	
Travel Time (s)		9.5			10.0			6.5			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	3%	3%	0%	0%	1%	1%	0%	0%	0%	5%	0%	5%
Adj. Flow (vph)	54	409	26	30	302	38	31	2	34	26	5	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	435	0	30	340	0	31	36	0	26	52	0
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		D.P+P	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8			4			6			2		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.0	27.0		10.0	27.0		10.0	33.0		10.0	33.0	
Total Split (s)	10.0	27.0		10.0	27.0		10.0	33.0		10.0	33.0	
Total Split (%)	12.5%	33.8%		12.5%	33.8%		12.5%	41.3%		12.5%	41.3%	
Maximum Green (s)	5.0	22.0		5.0	22.0		5.0	28.0		5.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	-1.5	-1.5		-1.5	-1.5		-1.5	-1.5		-1.5	-1.5	
Total Lost Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	2.5		0.2	2.5		0.2	4.0		0.2	4.0	
Minimum Gap (s)	0.2	2.5		0.2	2.5		0.2	4.0		0.2	4.0	
Time Before Reduce (s)	10.0	0.0		10.0	0.0		10.0	0.0		10.0	0.0	
Time To Reduce (s)	15.0	0.0		15.0	0.0		15.0	0.0		15.0	0.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Don't Walk (s)		15.0			15.0			21.0			21.0	
Pedestrian Calls (#/hr)		5			5			5			5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Act Effct Green (s)	25.9	29.6		26.5	27.9		13.0	14.5		13.6	12.9	
Actuated g/C Ratio	0.66	0.75		0.67	0.71		0.33	0.37		0.35	0.33	
v/c Ratio	0.07	0.18		0.04	0.15		0.06	0.06		0.05	0.10	
Control Delay (s/veh)	8.9	9.4		9.2	10.9		9.1	6.2		9.1	7.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	8.9	9.4		9.2	10.9		9.1	6.2		9.1	7.0	
LOS	A	A		A	B		A	A		A	A	
Approach Delay (s/veh)		9.3			10.8			7.5			7.7	
Approach LOS		A			B			A			A	
Queue Length 50th (ft)	0	0		1	0		1	0		1	0	
Queue Length 95th (ft)	35	128		23	97		20	18		18	22	
Internal Link Dist (ft)		337			362			205			320	
Turn Bay Length (ft)	200			50						175		
Base Capacity (vph)	758	2306		755	2328		502	1185		498	1145	
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	0.07	0.19		0.04	0.15		0.06	0.03		0.05	0.05	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 39.4
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.18
Intersection Signal Delay (s/veh): 9.6
Intersection LOS: A
Intersection Capacity Utilization 37.3%
ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 66: Site Dwy/3000 Block & Alderwood Mall Pkwy



Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	13	8	302	329	23
Future Vol, veh/h	34	13	8	302	329	23
Conflicting Peds, #/hr	0	0	9	0	0	9
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	94	94	93	93
Heavy Vehicles, %	4	4	1	1	1	1
Mvmt Flow	50	19	9	321	354	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	713	375	387	0	-	0
Stage 1	375	-	-	-	-	-
Stage 2	338	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.11	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.209	-	-	-
Pot Cap-1 Maneuver	395	667	1176	-	-	-
Stage 1	690	-	-	-	-	-
Stage 2	718	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	384	660	1165	-	-	-
Mov Cap-2 Maneuver	384	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	711	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.86	0.21	0
HCM LOS	B		

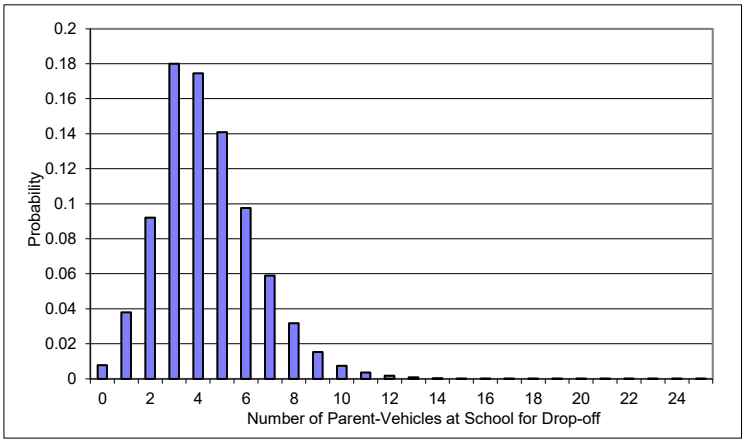
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	46	-	434	-	-
HCM Lane V/C Ratio	0.007	-	0.159	-	-
HCM Ctrl Dly (s/v)	8.1	0	14.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

APPENDIX D
On-Site Queue Model Calculations

M/M/s Queuing Model for Edmonds School District's New MS at FAM - 1,000 Student Capacity

Morning Peak Hour (Arrival) - Student Load/Unload Zone

Data		
λ =	528.08	(average arrival rate)
μ =	109.0	(average service rate)
s =	10	(# servers)



where:

L = average number of vehicles in the drop-off/queue lane (system) at any one time

L_q=average number of vehicles in queue

W = average wait time in the system (hours)

W_q = ave. wait time in queue (hours)

ρ = drop-off system utilization

P_0 = probability of 0 vehicles in the system

Pn = probability of n vehicles in the system, etc.

5 =Average number of vehicles in the system at any one time

15 =Peak (95th-percentile) number of vehicles in the system at any one time

	Results			Prob < x vehicles
	L =	4.872838131		
	L_q =	0.028067489		
	W =	0.009227462		
	W_q =	5.31501E-05		
	ρ =	0.484477064		
	P_0 =	0.007842547		0
	P_1 =	0.037995342	5%	1
	P_2 =	0.092039359	14%	2
	P_3 =	0.180027473	32%	3
	P_4 =	0.174438363	49%	4
	P_5 =	0.14085231	63%	5
	P_6 =	0.097485305	73%	6
	P_7 =	0.059036743	79%	7
	P_8 =	0.031779942	82%	8
	P_9 =	0.015396653	84%	9
	P_{10} =	0.007459325	84%	10
	P_{11} =	0.003613872	85%	11
	P_{12} =	0.001750838	85%	12
	P_{13} =	0.000848241	85%	13
	P_{14} =	0.000410953	85%	14
	P_{15} =	0.000199097	85%	15
	P_{16} =	9.64581E-05	85%	16
	P_{17} =	4.67318E-05	85%	17
	P_{18} =	2.26405E-05	85%	18
	P_{19} =	1.09688E-05	85%	19
	P_{20} =	0.000005314	85%	20
	P_{21} =	2.57457E-06	85%	21
	P_{22} =	1.24732E-06	85%	22
	P_{23} =	6.04298E-07	85%	23
	P_{24} =	2.92769E-07	85%	24
	P_{25} =	1.4184E-07	85%	25
	P_{26} =	6.87181E-08	85%	26
	P_{27} =	3.32923E-08	85%	27
	P_{28} =	1.61294E-08	85%	28
	P_{29} =	7.81431E-09	85%	29
	P_{30} =	3.78586E-09	85%	30
	P_{31} =	0.000000002	85%	31
	P_{32} =	8.88608E-10	85%	32
	P_{33} =	4.3051E-10	85%	33
	P_{34} =	2.08572E-10	85%	34
	P_{35} =	0.000000000	85%	35
	P_{36} =	4.89557E-11	85%	36
37	P_{37} =	2.37179E-11	85%	37