The Marylhurst School

Traffic Impact Study

West Linn, Oregon

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RENEWS: 12/31/2020

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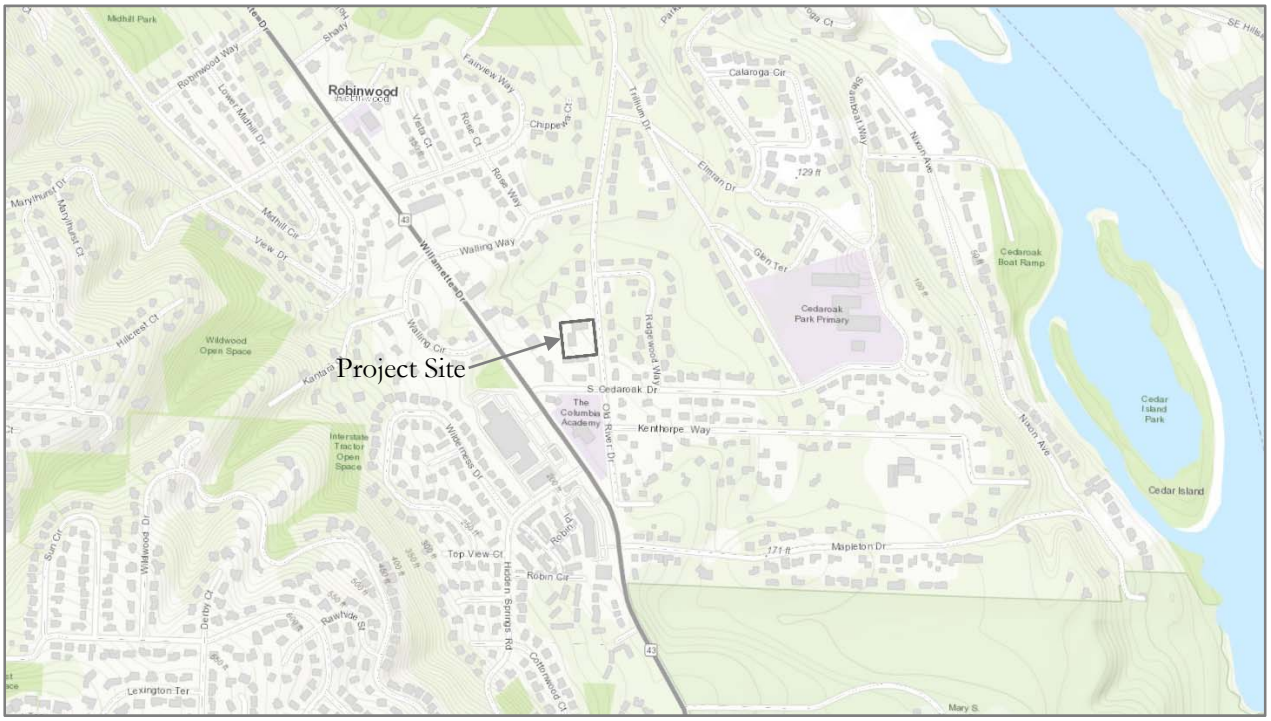
Executive Summary

1. The Marylhurst School is proposed for development at 19915 Old River Drive in West Linn, Oregon. The site previously hosted a church with a pre-school program.
2. There are two phases for the school construction, the first is a temporary facility and use of two existing buildings which is planned to support up to 115 students. The second phase is the construction of the new school building. The new construction is anticipated to have a maximum capacity of 194 students.
3. The trip generation calculations show that the proposed development is projected to generate 105 morning peak hour, 71 afternoon peak hour, and 30 evening peak hour site trips for the first phase of development. In the second phase of development, the school is projected to generate 177 morning peak hour, 120 afternoon peak hour, and 50 evening peak hour site trips.
4. All study intersections are projected to operate within the City of West Linn and ODOT standards under all analysis scenarios. No capacity related mitigation is necessary or recommended.
5. Queues for the turning movements at Highway 43 at Cedar Oak Drive do not exceed the available storage length. Queue length at the City intersections do not exceed three vehicles.
6. Due to the low number of crashes and the low severity of collisions, there do not appear to be any significant safety hazards at the nearby transportation facilities. No safety mitigation is recommended.

Introduction

A new school is proposed at 19915 Old River Drive in West Linn, Oregon. The site previously hosted the New Life Church Robinwood. The project site is located east of Willamette Drive and north of Cedar Oak Drive at 19915 Old River Drive in West Linn, Oregon (see Figure 1). The applicant is proposing to develop the property in two phases. The first phase includes a new temporary building and will utilize two existing buildings. This first phase is anticipated to have a maximum capacity of 115 students. The second phase will be a permanent development which is anticipated to have a maximum capacity of 194 students.

Figure 1: Project Site Location



Access between the site and the greater transportation system will be provided via the two existing driveways onto Old River Road. For drop-off and pick-up, parents enter through the northern driveway, and exit through the southern driveway. General parking can enter/exit through the southern driveway. The proposed site plan is shown in Figure 2 on page 3.

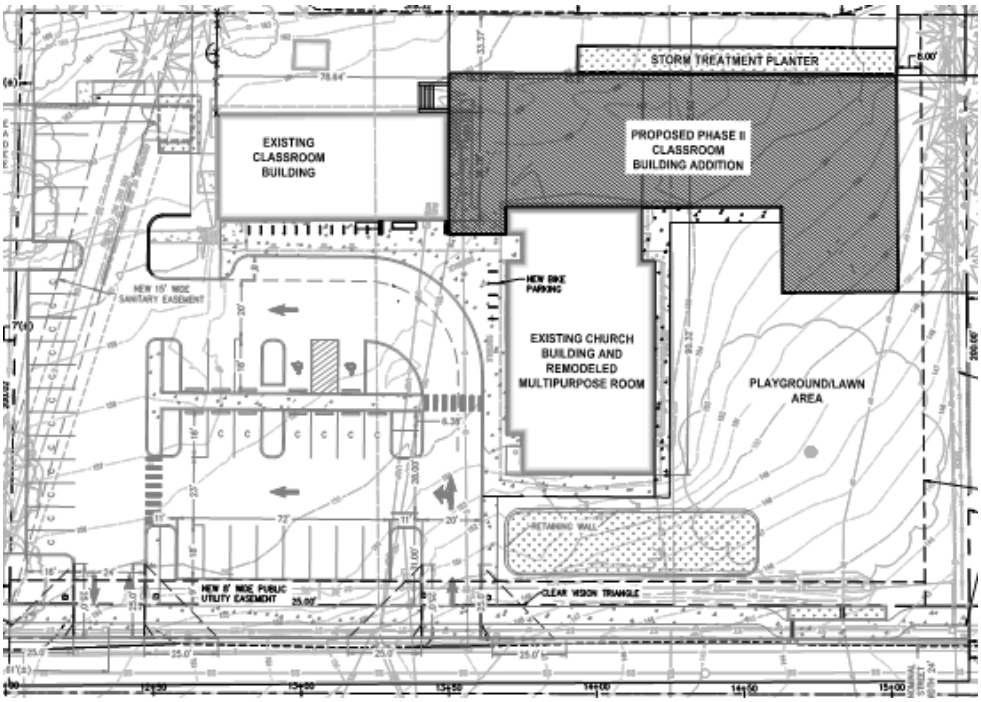


Figure 2 - Proposed Site Plan

Supporting Transportation Network

The trips associated with the proposed development are anticipated to predominantly use the following three nearby vicinity roadways: Old River Drive, Cedar Oak Drive, and Willamette Drive/Highway 43. Table 1 provides a description of each of the vicinity roadways.

Table 1 – Vicinity Roadway Descriptions

Roadway	Jurisdiction	Functional Classification	Cross-Section	Speed	On-street Parking	Bicycle Lanes	Curbs	Sidewalks
Old River Road	West Linn	Neighborhood Route	2 Lanes	25 mph Posted	Not Permitted	Both Sides	Both Sides	Partial Both Sides
Cedar Oak Drive	West Linn	Neighborhood Route	2 Lanes	25 mph Posted	Not Permitted	None	Partial Both Sides	Partial Both Sides
Willamette Drive / Highway 43	ODOT	Major Arterial	2 Lanes	35 mph Posted	Not Permitted	None	Both Sides	Both Sides

Study Intersections

It is anticipated that the majority of traffic traveling to and from the project site will be traveling along Old River Drive to Cedar Oak Drive and then onto Willamette Drive. These assumptions were confirmed with the City of West Linn[1] and ODOT. As a result, the intersections of Old River Drive at Cedar Oak Drive and Willamette Drive at Cedar Oak Drive were evaluated for potential operational and safety impact.

The intersection of Old River Drive at Cedar Oak Drive is a four-legged intersection under City of West Linn Jurisdiction that is stop-controlled for the minor street approaches of Old River Drive. Each approach has one shared lane for all turning movements. There is a striped crosswalk on the southern approach.

The intersection of Willamette Drive/Highway 43 at Cedar Oak Drive is a three-legged signalized intersection under ODOT jurisdiction. The southbound approach has one left-turn lane, two through lanes, and a bicycle lane. The northbound approach has one through / right-turn lane and a bicycle lane. The westbound approach has a left-turn lane and a right-turn lane. Crosswalks are marked across all approaches.

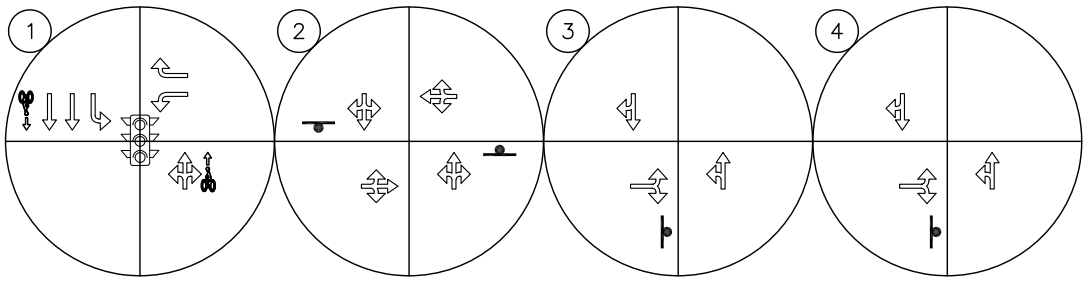
Figure 3 on the following page shows the study intersection configurations and traffic control devices.

Pedestrian & Bicycle Accessibility

As explained in the following section on trip generation, the Marylhurst School enrolls students from throughout the Portland Metro area, and it is not typical for students to walk or bike to school. Like many private schools, busing is not provided and the large majority of the students arrive via passenger vehicles.

While bike lanes and sidewalks are not in place on Old River Road in the vicinity of the site, the school is not expected to generate trips from people walking or biking to the site. Also, the surrounding West Linn neighborhoods have streets of similar character that commonly do not have dedicated infrastructure for pedestrians and bicycles. However, bike lanes and sidewalks are provided on higher volume roadways near the site, such as Pacific Highway and on portions of Cedar Oak Drive.

[1] Scope approval via email on July 30th from Amy Pepper



LEGEND

- STUDY INTERSECTION (EXISTING)
- STOP SIGN
- TRAFFIC SIGNAL
- BIKE LANE
- PROJECT SITE
- ARTERIAL ROADWAY
- NEIGHBORHOOD ROUTE
- LOCAL ROADWAY

STUDY INTERSECTION CONFIGURATIONS

no scale

FIGURE 3

Trip Generation

The proposed Marylhurst School includes two phases of development, the first including space and staff to accommodate 115 students, and the second to accommodate 194 students. To estimate the number of trips that will be generated by the proposed phases, trip rates from the *Trip Generation Manual*[2] were used. Data from land-use code 534, *Private School (K-8)*, was used to estimate the proposed development's trip generation of the site based on the number of students.

Land-use code 534, *Private School (K-8)*, was used since that precisely describes Marylhurst School. Like many private schools, students come from homes throughout the region, with very few, if any students living in the immediate neighborhood. The school does not provide busing although they do encourage carpooling among parents that pick up and drop off students, which is also a relatively common practice at similar private schools.

The trip generation calculations show that the proposed development is projected to generate 105 morning peak hour, 71 afternoon peak hour, and 30 evening peak hour site trips for the first phase of development. In the second phase of development, the school is projected to generate 177 morning peak hour, 120 afternoon peak hour, and 50 evening peak hour site trips, respectively. The trip generation estimates are summarized in Table 2. Detailed trip generation calculations are included as an attachment to this study.

Table 2 –Trip Generation Summary

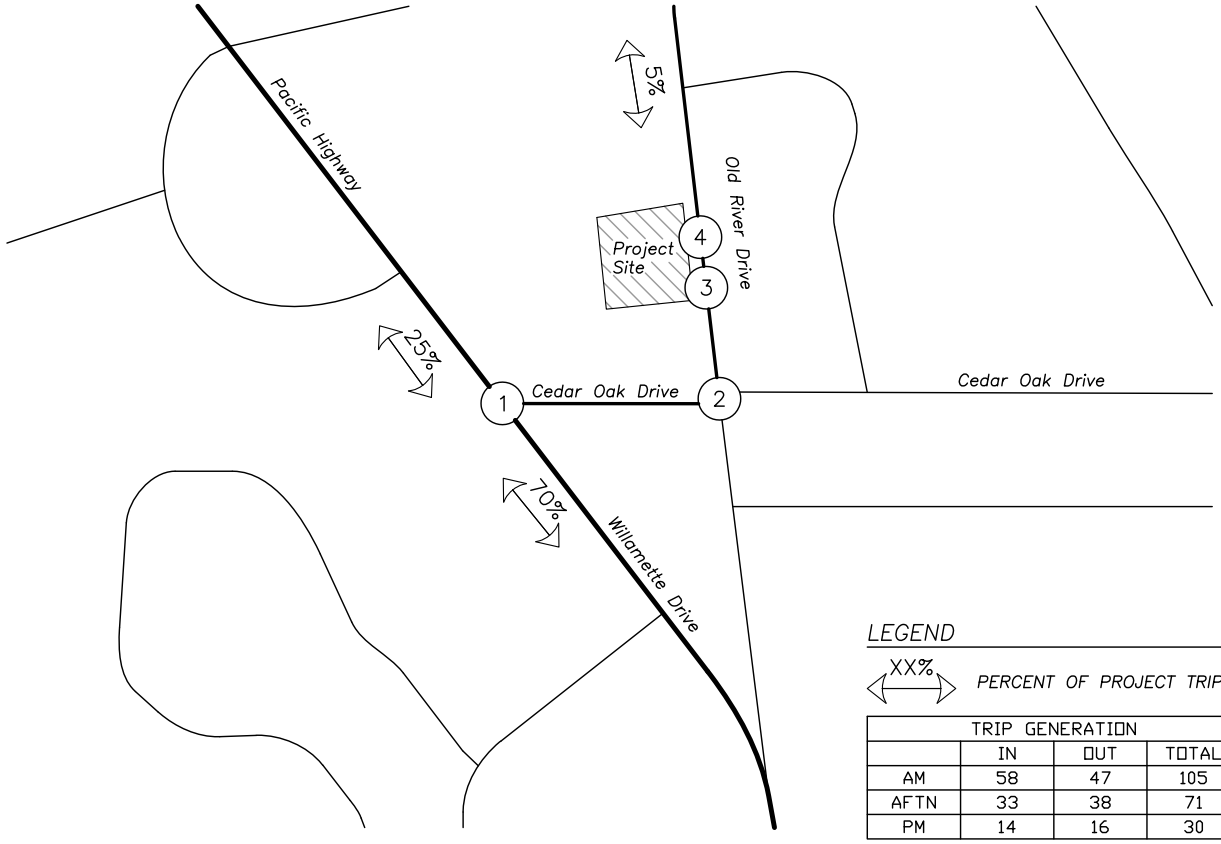
ITE Code	Size (Students)	Morning Peak Hour			Afternoon Peak Hour			Evening Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Phase One - Temporary										
Private School (K-8) - 534	115	58	47	105	33	38	71	14	16	30
Phase Two - Permanent										
Private School (K-8) - 534	194	97	80	177	56	64	120	23	27	50

Trip Distribution

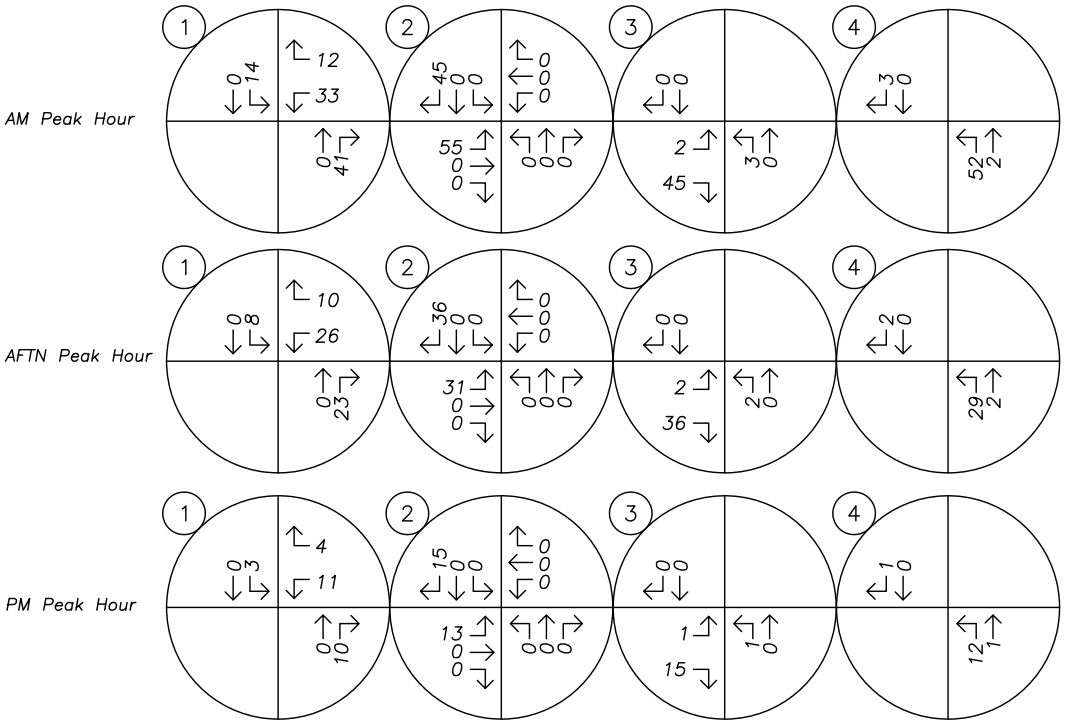
The directional distribution of site trips to and from the proposed development was estimated based on existing traffic patterns as well as the locations of where trips would most likely be coming to and from. Based on the local destinations and the proximity to major transportation facilities, the trip distribution is shown in Figure 4 and Figure 5.

The total site trip assignment for Phase 1 is shown in Figure 4 on page 7. The total site trip assignment for Phase 2 is shown in Figure 5 on page 8.

[2] Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition, 2017.



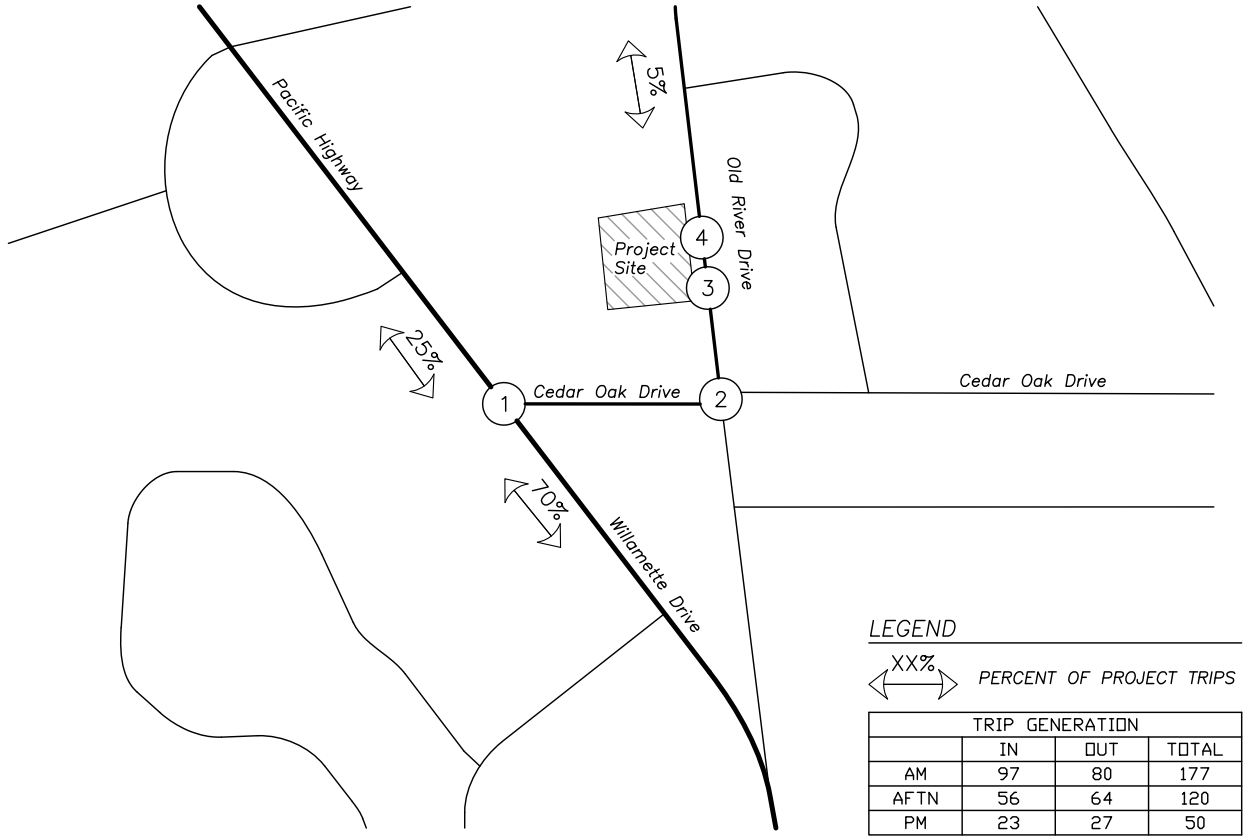
TRIP GENERATION			
	IN	OUT	TOTAL
AM	58	47	105
AFTN	33	38	71
PM	14	16	30



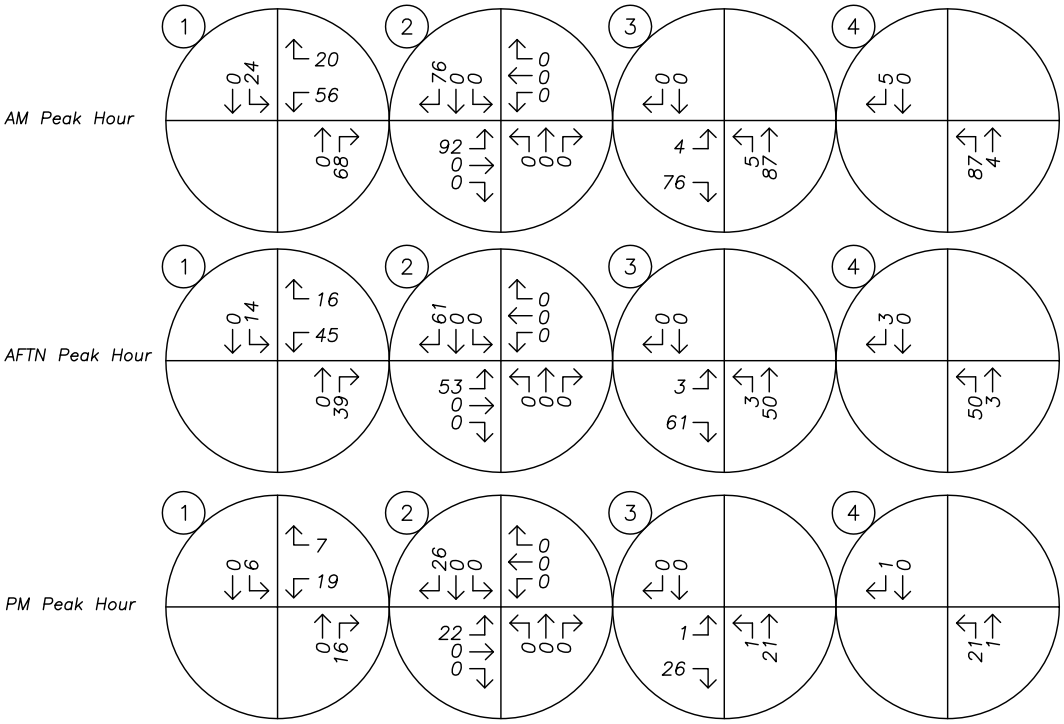
SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Phase 1
AM, AFTN, & PM Peak Hours

no scale

FIGURE 4



TRIP GENERATION			
	IN	OUT	TOTAL
AM	97	80	177
AFTN	56	64	120
PM	23	27	50



SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Phase 2
AM, AFTN, & PM Peak Hours

no scale

FIGURE 5

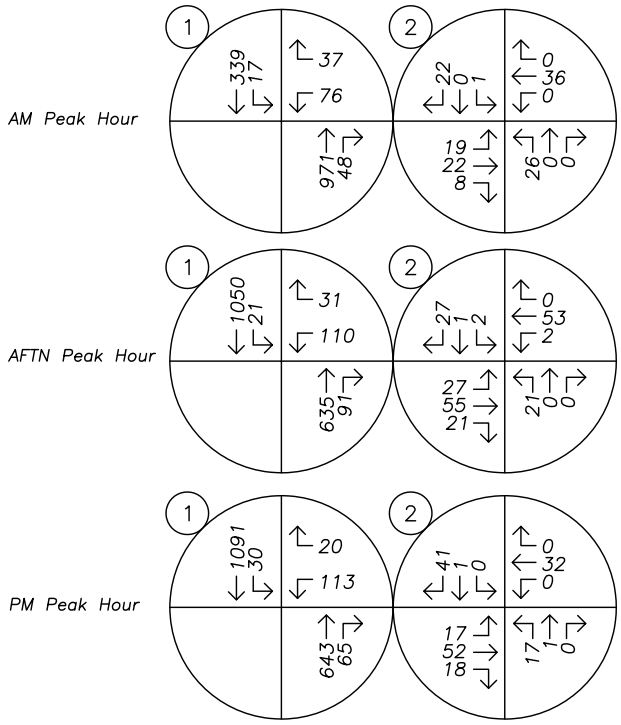
Traffic Volumes

To determine if the nearby transportation facilities can adequately accommodate future trips to and from the proposed development in addition to the existing uses within the site vicinity, peak hour observations of traffic conditions were conducted. Traffic observations were conducted at the study intersections on Tuesday, July 31st, 2018 between 7:00 AM and 9:00 AM, 2:00 PM and 4:00 PM, and 4:00 PM and 6:00 PM, and on Wednesday, August 1st, 2018 between 2:00 PM and 4:00 PM, in order to account for the morning, afternoon, and evening peak hours. Data from each intersection's peak hour was used for analysis. The existing volumes are shown in Figure 6 on page 10. Technical data is provided in the technical appendix.

Future Traffic Volumes

Future traffic volumes along ODOT highways were projected in conformance with the requirements established in ODOT's Analysis Procedures Manual. This includes the determination of the 30th-highest hour volumes. Based on seasonal trend variations, an adjustment factor of 1.012 was applied to highway volumes. Additionally, annual growth factors for ODOT facilities were determined based on data from ODOT's Future Volumes Table and estimated to be 0.93% per year. Detailed information in provided in the Appendix. To estimate future traffic volumes along all City roadways, a growth rate of two percent per year was used. These growth rates were applied to estimate background conditions before accounting for trips to be generated from the proposed development.

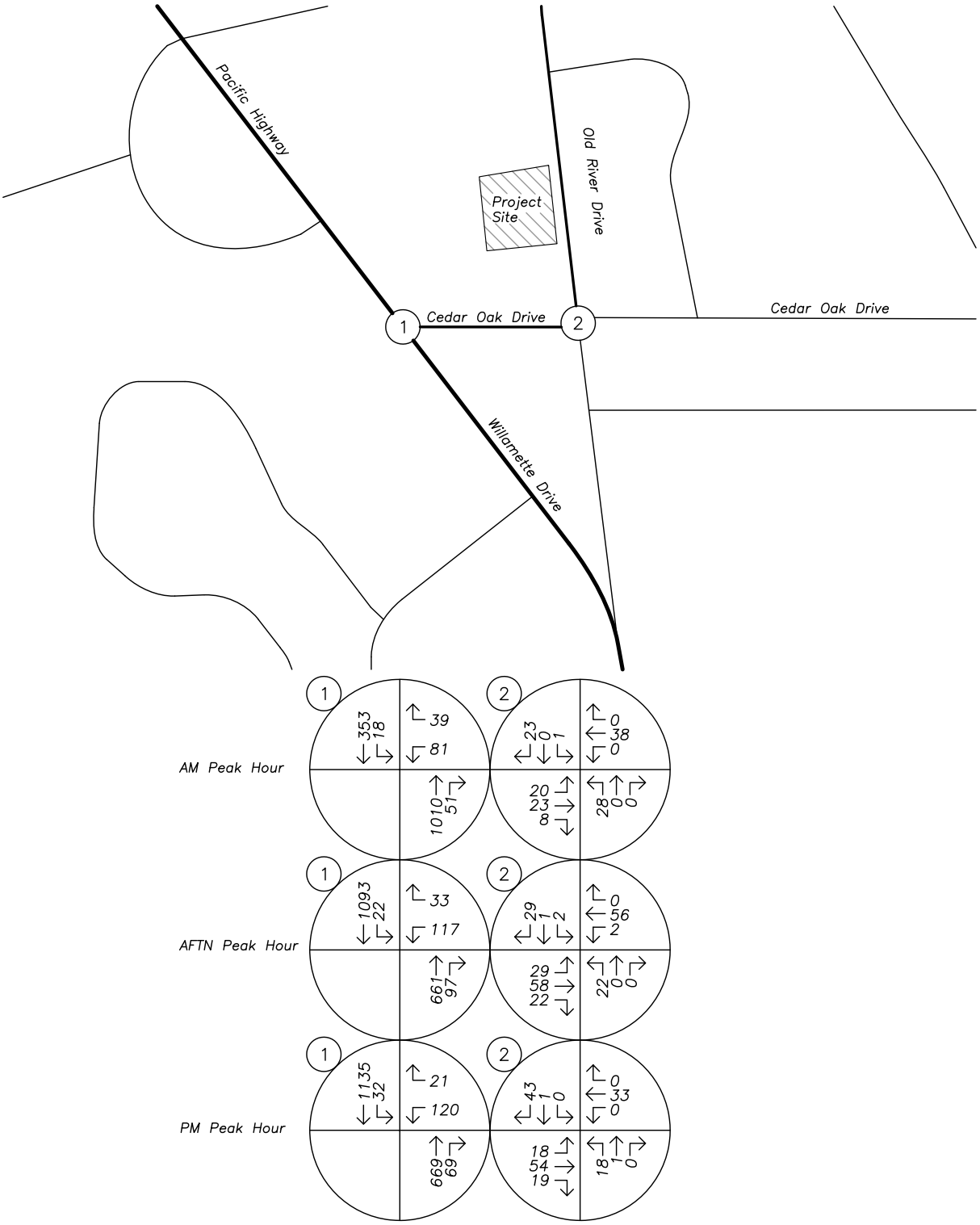
The anticipated completion of the temporary school is 2019 and the anticipated completion of the permanent school structures is 2021. The 2021 background traffic volumes are shown in Figure 7 on page 11. The year 2021 background conditions with the addition of site trips from Phase Two is shown in Figure 8.



TRAFFIC VOLUMES
Year 2018 Existing Traffic Volumes
AM, AFTN, & PM Peak Hours

no scale

FIGURE 6

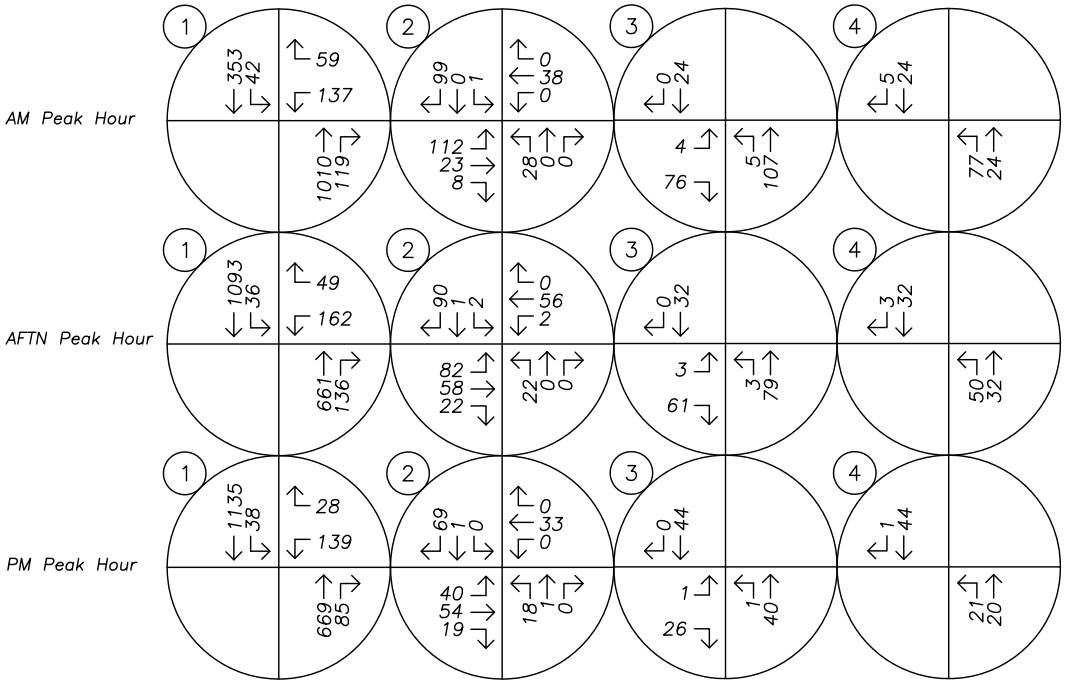


ODOT FACILITY GROWTH RATE: 0.93 PERCENT PER YEAR LINEAR
LOCAL FACILITY GROWTH RATE: 2.0 PERCENT PER YEAR COMPOUNDED

TRAFFIC VOLUMES
Year 2021 Background Conditions
AM, AFTN, & PM Peak Hours

no scale

FIGURE 7



TRAFFIC VOLUMES
Year 2021 Background Conditions plus Phase Two
AM, AFTN, & PM Peak Hours

no scale

FIGURE 8

Operational Analysis

To determine the capacity and level-of-service at the study intersections, a capacity analysis was conducted. The analysis was conducted using the intersection analysis methodologies in the Highway Capacity Manual (HCM). The level of service (LOS) of an intersection can range from LOS A, which indicates little or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay. The minimum operational standard specified in the city of West Linn Comprehensive Plan (April 2006) is LOS D for all facilities except major arterials where the minimum is LOS E. The intersection of Highway 43/Willamette Drive operates under the jurisdiction of the Oregon Department of Transportation and must meet the v/c ratio targets established under the Oregon Highway Plan. For intersections inside the Urban Growth Boundary and within the Portland Metropolitan Region, there is a maximum v/c ratio of 0.99.

All study intersections are projected to operate within the City of West Linn and ODOT standards under all analysis scenarios. The results of the capacity analysis are summarized in the following table. The applicable performance standard is shown in bold for each intersection. No mitigation is necessary or recommended with regard to intersection capacity or operation as part of the proposed development. Detailed data sheets, as well as the year 2019 background plus Phase One analysis results, are attached in the technical appendix.

Table 3 - Capacity Analysis Summary

	Morning Peak			Afternoon Peak			Evening Peak		
	Delay	**LOS**	**V/C**	**Delay**	**LOS**	**V/C**	**Delay**	**LOS**	**V/C**
Highway 43 at Cedar Oak Drive									
Year 2018 Existing Conditions	14	B	**0.79**	12	B	**0.82**	11	B	**0.79**
Year 2021 Background Conditions	16	B	**0.83**	14	B	**0.85**	13	B	**0.83**
Year 2021 Background + Phase 2	37	D	**0.94**	19	B	**0.90**	15	B	**0.84**
Cedar Oak Drive at Old River Road									
Year 2018 Existing Conditions	10	**A**	0.04	10	**B**	0.04	10	**B**	0.05
Year 2021 Background Conditions	10	**A**	0.04	11	**B**	0.04	10	**B**	0.05
Year 2021 Background + Phase 2	14	**B**	0.09	13	**B**	0.11	11	**B**	0.09
Old River Road at Southern Site Access									
Year 2021 Background + Phase 2	9	**A**	0.08	9	**A**	0.07	9	**A**	0.03
Old River Road at Northern Site Access									
Year 2021 Background + Phase 2	7	**A**	0.05	7	**A**	0.04	7	**A**	0.02

Crash Analysis

Using data obtained from the Oregon Department of Transportation's (ODOT) Crash Analysis and Reporting Unit, a review was performed for the most recent five years of available crash data (January 2012 through December 2016) at the study intersections. Crash rates were calculated under the common assumption that traffic counted during the evening peak hour represents 10 percent of annual average daily traffic (AADT) at the intersection. The crash data was evaluated based on the number of crashes, the type of collisions, and the severity of the collisions at the nearby transportation facilities. Crash rates greater than 1.0

CMEV are generally indicative of a need for further investigation and possible mitigation. Willamette Drive at Cedar Oak Drive is an ODOT intersection. As such, crash data at the intersection was evaluated by comparing the 90th percentile crash rates in accordance with the Analysis Procedures Manual.

There were nine crashes reported at the intersection of Willamette Drive at Cedar Oak Drive. Eight of the crashes were rear-end collisions and one crash was an angle-type collision. All of the rear-end collisions occurred between vehicles traveling along Willamette Drive, split evenly in each direction. The crashes resulted in two reports of Injury B – *Non-Incapacitating Injury*, and five reports of Injury C – *Possible Injury or Complaint of Pain*. The crash rate for this intersection was calculated to be 0.249 CMEV, which is less than the 90th percentile rate of 0.509 identified by ODOT for three-legged signalized intersections within urban areas.

No other crashes were reported within the immediate site vicinity. Due to the low number of crashes and the low severity of collisions, there do not appear to be any significant safety hazards at the nearby transportation facilities. Accordingly, no safety mitigation is necessary or recommended.

Detailed crash history information is provided in the technical appendix.

Sight Distance

Intersection sight distance was examined for both existing access driveways. Sight distances were measured and evaluated in accordance with the standards established in *A Policy on Geometric Design of Highways and Streets*[3]. According to AASHTO, the driver's eye is assumed to be 15 feet from the near edge of the nearest lane of the intersecting street and at a height of 3.5 feet. The vehicle driver's eye-height along the major-street approach is assumed to be 3.5 feet above the cross-street pavement.

Based on the posted speed of 25 mph on Old River Road, the minimum recommended intersection sight distance for passenger cars is 280 feet in each direction. Sight distance at both access driveways was measured to be in excess of 400 feet to the north, past the intersection of Ridgewood Way, and in excess of 350 feet to the south, past the intersection of Cedar Oak Drive. Sight distance is met at both site accesses. No mitigation is necessary.

Access Spacing

The City of West Linn Public Works Design Standards Section 5.0070.D.4 states that there shall be a minimum distance of 30 feet between any two curb cuts on the same lot on a neighborhood route. The two site access driveways are spaced 115 feet apart, measured centerline to centerline. No mitigation is required related to access spacing.

[3] American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 7th Edition, 2018.

On-Site Circulation

As stated previously, the northern site access will be one-way enter-only. The southern driveway will have two-way traffic for parking and vehicles exiting the site. Signage will be present at each driveway to indicate the direction of traffic flow within the site. Additionally, a school administrator will be present to assist with directing vehicles during the peak periods associated with school pick up and drop off activities.

It is noted that parents of students in grades kindergarten through eighth grade usually utilize the pick-up/drop-off area. Although parents of pre-school students normally park and come inside, the pick-up/drop-off times for pre-school students do not overlap with those for K-8. Pick-up times for middle school, primary, and pre-school students are staggered at least 45 minutes apart to disperse impacts and traffic congestion on the site. There are also students enrolled in the extended care program which allows kids to be dropped off up to one hour early and stay up to two and a half hours after normal pick-up time. Information regarding pick-up and drop-off times as well as expected parking utilization is included in the attached appendix.

The site plan is shown in Figure 9 on page 15 for context. The site has 37 parking stalls and two drive aisles for pick-up and drop-off.

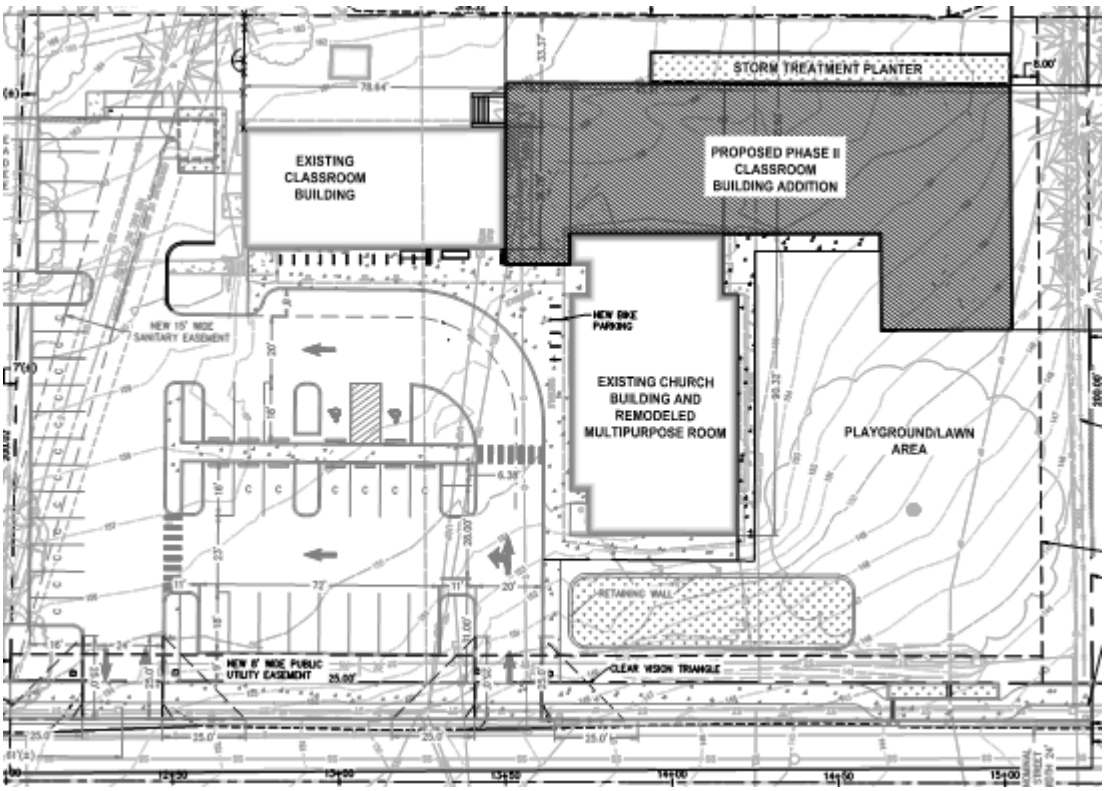


Figure 9 - Site Plan

The Marylhurst School has indicated that correspondence about site circulation during pick-up and drop-off occurs through weekly emails and orientation packets. Additionally, a map will be posted in order to assist parents with carpooling.

Queuing Analysis

Queues were examined for the study intersections under Year 2021 Background plus Phase Two morning peak hour scenario because this peak hour experiences the highest number of site trips and traffic volumes. The queue lengths were calculated using a Synchro/SimTraffic simulation, with the reported values based on the 95th percentile queue lengths. This means that during the peak hour, 95 percent of the time the queue lengths will be less than or equal to the reported values. The results show that the calculated 95th percentile queues for left-turn movements at the intersection of Highway 43 at Cedar Oak Drive do not exceed the storage length of the turn lanes. The calculated 95th percentile queue lengths at the intersections of Cedar Oak Drive at Old River Drive and Old River Drive at the southern site access do not exceed 60 feet, or approximately three vehicles. The northern site access has a 95th percentile queue length of approximately one vehicle. Detailed queuing analysis worksheets are provided in the appendix.

The following table shows the pick-up and drop-off data provided by the school.

Table 4 - Pick-Up and Drop-Off Schedule (Monday - Thursday)

# Students	Grades	Drop-Off	Pick-Up
15	Middle School	8:30 AM	3:15 PM
72	Primary	8:30 AM	2:30 PM
18	Threes/Fours	9:00 AM	1:00 PM

The school has indicated that there are 36 families with multiple students and 11 kids with parents who teach at the school. Conservatively assuming 36 families with 2 children, and 11 teachers with 1 child, the total number of vehicles arriving/departing would be reduced from 105 to 58. Additionally, on average 10 students arrive early and 20 students stay late for the extended car program. Based on these estimates, there would be 48 vehicles arriving during morning drop-off and 38 during afternoon pick-up.

Typically, morning drop-off is expected to operate quickly, with each student taking less than 15 seconds to exit their vehicle. Afternoon drop-off is expected to experience higher queue lengths within the site as parents arrive early, park, and wait for kids to find them. Based on the percentage of students in each grade, reductions for families and teachers with kids who attend the school, and expected attendance of the extended care program, 7 vehicles are expected to arrive at or before 1:00 PM, 26 vehicles are expected to arrive at or before 2:30 PM, and 5 vehicles are expected to arrive at or before 3:15 PM. Peak periods for pick-up often last approximately 15 to 20 minutes, therefore each pick-up period will not overlap.

Based on the measured drive aisle length of 425 feet within the site, the site can accommodate approximately 20 vehicles before queueing begins on the public roadway. Additionally, the existing site has less available parking for parents and queues related to the school's drop-off and pick-up activity do not impact nearby

roadways. Based on the analysis and information provided by the school, queues are not expected to significantly impact the traffic flow along vicinity roadways.

Conclusions

All study intersections are projected to operate within the City of West Linn and ODOT standards under all analysis scenarios. No mitigation is necessary or recommended with regard to intersection capacity or operation as part of the proposed development.

Queues for the turning movements at Highway 43 at Cedar Oak Drive do not exceed the available storage length. Queue length at the City intersections do not exceed three vehicles.

Due to the low number of crashes and the low severity of collisions, there do not appear to be any significant safety hazards at the nearby transportation facilities. No safety mitigation is recommended.

Appendix

TRIP GENERATION CALCULATIONS

Land Use: Private School (K-8)
Land Use Code: 534
Setting/Location General Urban/Suburban
Variable: Students
Variable Value: 115

AM PEAK HOUR

Trip Rate: 0.91

	Enter	Exit	Total
Directional Distribution	55%	45%	
Trip Ends	**58**	**47**	**105**

PM PEAK HOUR

Trip Rate: 0.26

	Enter	Exit	Total
Directional Distribution	46%	54%	
Trip Ends	**14**	**16**	**30**

WEEKDAY

Trip Rate: 4.11

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**237**	**236**	**473**

PM PEAK HOUR OF GENERATOR

Trip Rate: 0.62

	Enter	Exit	Total
Directional Distribution	47%	53%	
Trip Ends	**33**	**38**	**71**

Source: TRIP GENERATION, Tenth Edition

TRIP GENERATION CALCULATIONS

Land Use: Private School (K-8)
Land Use Code: 534
Setting/Location General Urban/Suburban
Variable: Students
Variable Value: 194

AM PEAK HOUR

Trip Rate: 0.91

	Enter	Exit	Total
Directional Distribution	55%	45%	
Trip Ends	**97**	**80**	**177**

PM PEAK HOUR

Trip Rate: 0.26

	Enter	Exit	Total
Directional Distribution	46%	54%	
Trip Ends	**23**	**27**	**50**

WEEKDAY

Trip Rate: 4.11

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	**399**	**398**	**797**

PM PEAK HOUR OF GENERATOR

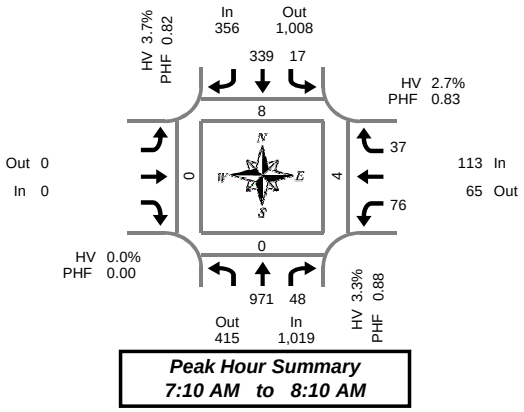
Trip Rate: 0.62

	Enter	Exit	Total
Directional Distribution	47%	53%	
Trip Ends	**56**	**64**	**120**

Source: TRIP GENERATION, Tenth Edition

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Hwy 43 & Cedar Oak Dr

Wednesday, August 01, 2018
7:00 AM to 9:00 AM

Peak Hour Summary
7:10 AM to 8:10 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
7:00 AM	73	5	0		2	25		0				0	1		3	0	109	0	0	0	0
7:05 AM	65	3	0		1	33		0				0	3		3	0	108	0	0	0	0
7:10 AM	89	5	0		0	21		0				0	4		4	0	123	0	0	0	0
7:15 AM	89	1	0		2	23		0				0	7		4	0	126	0	0	3	0
7:20 AM	95	7	0		0	33		0				0	6		6	0	147	0	0	0	0
7:25 AM	91	3	0		2	28		0				0	5		1	0	130	1	0	0	0
7:30 AM	90	3	0		1	19		0				0	6		2	0	121	0	0	0	0
7:35 AM	84	3	0		1	25		0				0	12		4	0	129	1	0	1	0
7:40 AM	86	2	1		1	28		0				0	5		2	0	124	0	0	0	0
7:45 AM	67	1	0		3	39		0				0	9		2	0	121	2	0	0	0
7:50 AM	68	5	0		0	31		0				0	4		6	0	114	0	0	0	0
7:55 AM	73	3	0		2	34		0				0	6		4	0	122	3	0	0	0
8:00 AM	66	10	0		2	29		0				0	4		1	0	112	0	0	0	0
8:05 AM	73	5	0		3	29		0				0	8		1	0	119	1	0	0	0
8:10 AM	63	7	0		0	41		0				0	3		2	0	116	1	0	2	0
8:15 AM	67	5	0		1	29		0				0	7		4	0	113	0	0	1	0
8:20 AM	75	3	0		1	38		0				0	8		3	1	128	0	0	1	0
8:25 AM	78	1	0		4	37		0				0	4		8	0	132	1	0	0	0
8:30 AM	86	1	0		0	34		0				0	9		5	0	135	0	0	0	0
8:35 AM	65	2	0		0	31		0				0	3		1	0	102	2	1	1	0
8:40 AM	87	5	0		3	35		0				0	6		4	0	140	0	0	0	0
8:45 AM	62	4	0		3	43		1				0	5		6	0	123	1	0	0	0
8:50 AM	82	1	0		2	40		0				0	5		2	0	132	0	0	0	0
8:55 AM	69	6	0		0	34		0				0	6		1	0	116	2	0	0	0
Total Survey	1,843	91	1		34	759		1				0	136		79	1	2,942	15	1	9	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
7:00 AM	227	13	0		3	79		0				0	8		10	0	340	0	0	0	0
7:15 AM	275	11	0		4	84		0				0	18		11	0	403	1	0	3	0
7:30 AM	260	8	1		3	72		0				0	23		8	0	374	1	0	1	0
7:45 AM	208	9	0		5	104		0				0	19		12	0	357	5	0	0	0
8:00 AM	202	22	0		5	99		0				0	15		4	0	347	2	0	2	0
8:15 AM	220	9	0		6	104		0				0	19		15	1	373	1	0	2	0
8:30 AM	238	8	0		3	100		0				0	18		10	0	377	2	1	1	0
8:45 AM	213	11	0		5	117		1				0	16		9	0	371	3	0	0	0
Total Survey	1,843	91	1		34	759		1				0	136		79	1	2,942	15	1	9	0

Peak Hour Summary
7:10 AM to 8:10 AM

By Approach	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	1,019	415	1,434	1	356	1,008	1,364	0	0	0	0	0	113	65	178	0	1,488	8	0	4	0
%HV	3.3%				3.7%				0.0%				2.7%				3.4%				
PHF	0.88				0.82				0.00				0.83				0.92				

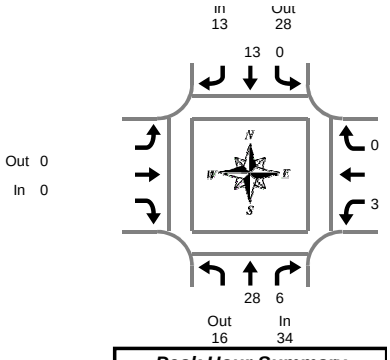
By Movement	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
	T	R	Total		L	T		Total				Total	L		R	Total	
Volume	971	48	1,019		17	339		356				0	76		37	113	1,488
%HV	NA	2.9%	12.5%	3.3%	0.0%	3.8%	NA	3.7%	NA	NA	NA	0.0%	3.9%	NA	0.0%	2.7%	3.4%
PHF		0.88	0.67	0.88	0.61	0.81		0.82				0.00	0.73		0.66	0.83	0.92

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
7:00 AM	970	41	1		15	339		0				0	68		41	0	1,474	7	0	4	0
7:15 AM	945	50	1		17	359		0				0	75		35	0	1,481	9	0	6	0
7:30 AM	890	48	1		19	379		0				0	76		39	1	1,451	9	0	5	0
7:45 AM	868	48	0		19	407		0				0	71		41	1	1,454	10	1	5	0
8:00 AM	873	50	0		19	420		1				0	68		38	1	1,468	8	1	5	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 43 & Cedar Oak Dr

Wednesday, August 01, 2018
7:00 AM to 9:00 AM

Peak Hour Summary
7:10 AM to 8:10 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
7:00 AM		4	0	4	0	2		2				0	0		0	0	6
7:05 AM		0	3	3	0	0		0				0	0		0	0	3
7:10 AM		3	1	4	0	0		0				0	0		0	0	4
7:15 AM		3	0	3	0	0		0				0	0		0	0	3
7:20 AM		2	1	3	0	2		2				0	1		0	1	6
7:25 AM		4	0	4	0	2		2				0	0		0	0	6
7:30 AM		0	1	1	0	1		1				0	1		0	1	3
7:35 AM		3	0	3	0	2		2				0	0		0	0	5
7:40 AM		3	0	3	0	1		1				0	1		0	1	5
7:45 AM		1	0	1	0	1		1				0	0		0	0	2
7:50 AM		0	1	1	0	1		1				0	0		0	0	2
7:55 AM		4	0	4	0	1		1				0	0		0	0	5
8:00 AM		3	1	4	0	2		2				0	0		0	0	6
8:05 AM		2	1	3	0	0		0				0	0		0	0	3
8:10 AM		2	2	4	0	2		2				0	0		0	0	6
8:15 AM		6	0	6	0	1		1				0	1		1	2	9
8:20 AM		4	0	4	0	0		0				0	0		0	0	4
8:25 AM		2	0	2	0	2		2				0	1		0	1	5
8:30 AM		2	0	2	0	1		1				0	1		1	2	5
8:35 AM		0	0	0	0	1		1				0	0		0	0	1
8:40 AM		2	0	2	0	0		0				0	0		0	0	2
8:45 AM		2	0	2	0	1		1				0	0		0	0	3
8:50 AM		2	0	2	0	1		1				0	0		0	0	3
8:55 AM		0	0	0	0	3		3				0	0		0	0	3
Total Survey		54	11	65	0	27		27				0	6		2	8	100

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
7:00 AM		7	4	11	0	2		2				0	0		0	0	13
7:15 AM		9	1	10	0	4		4				0	1		0	1	15
7:30 AM		6	1	7	0	4		4				0	2		0	2	13
7:45 AM		5	1	6	0	3		3				0	0		0	0	9
8:00 AM		7	4	11	0	4		4				0	0		0	0	15
8:15 AM		12	0	12	0	3		3				0	2		1	3	18
8:30 AM		4	0	4	0	2		2				0	1		1	2	8
8:45 AM		4	0	4	0	5		5				0	0		0	0	9
Total Survey		54	11	65	0	27		27				0	6		2	8	100

Heavy Vehicle Peak Hour Summary
7:10 AM to 8:10 AM

By Approach	Northbound Hwy 43			Southbound Hwy 43			Eastbound Cedar Oak Dr			Westbound Cedar Oak Dr			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	34	16	50	13	28	41	0	0	0	3	6	9	50
PHF	0.77			0.65			0.00			0.38			0.83

By Movement	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
		T	R	Total	L	T		Total				Total	L		R	Total	
Volume		28	6	34	0	13		13				0	3		0	3	50
PHF		0.78	0.75	0.77	0.00	0.65		0.65				0.00	0.38		0.00	0.38	0.83

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
7:00 AM		27	7	34	0	13		13				0	3		0	3	50
7:15 AM		27	7	34	0	15		15				0	3		0	3	52
7:30 AM		30	6	36	0	14		14				0	4		1	5	55
7:45 AM		28	5	33	0	12		12				0	3		2	5	50
8:00 AM		27	4	31	0	14		14				0	3		2	5	50

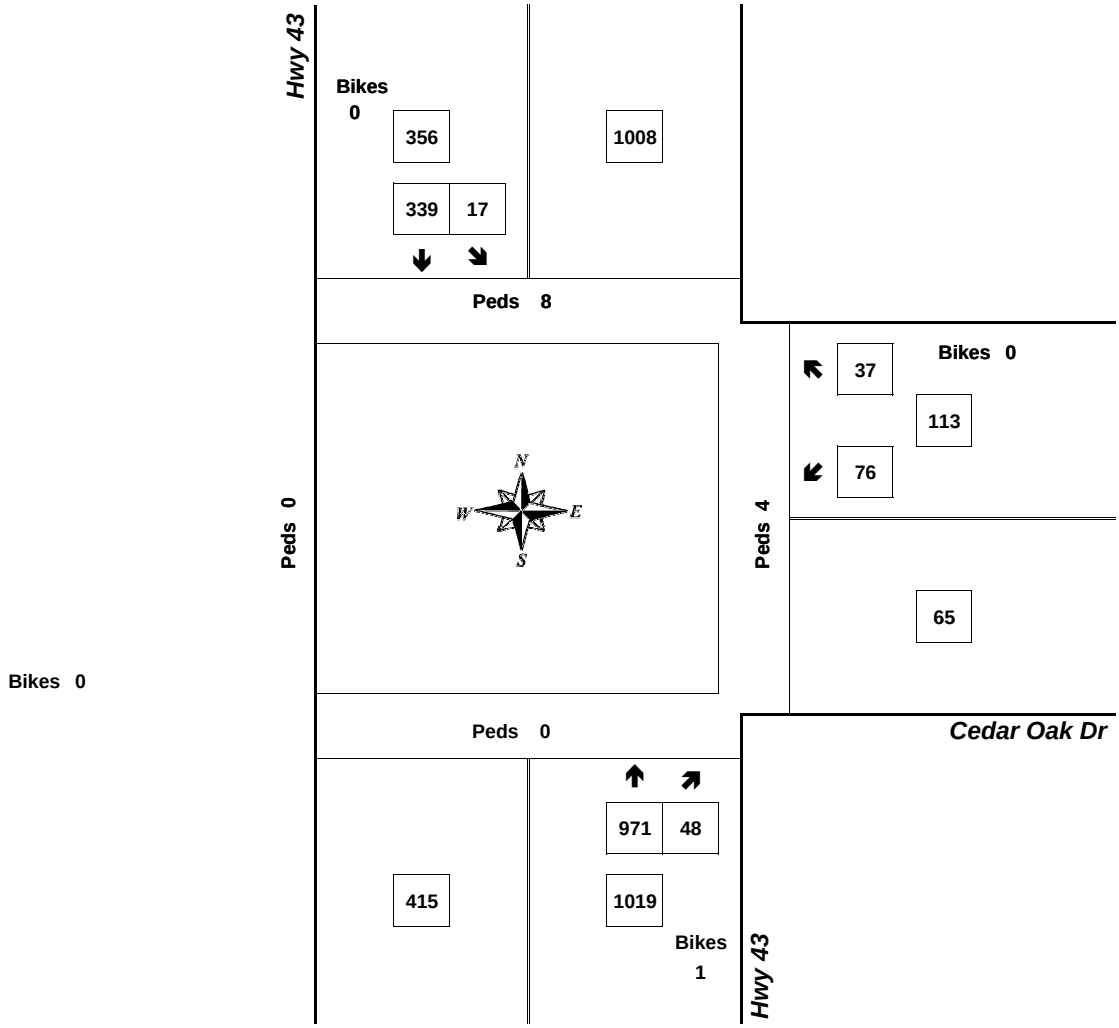
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Hwy 43 & Cedar Oak Dr

7:10 AM to 8:10 AM
Wednesday, August 01, 2018

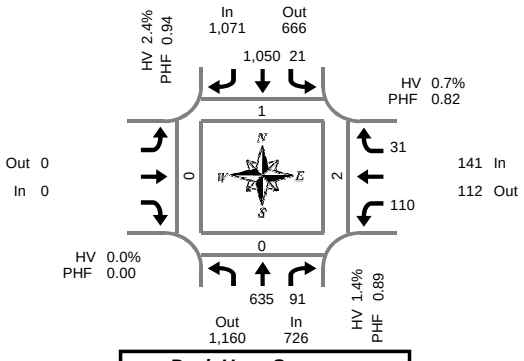


Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.83	2.7%	113
NB	0.88	3.3%	1,019
SB	0.82	3.7%	356
Intersection	0.92	3.4%	1,488

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
3:00 PM to 4:00 PM

Hwy 43 & Cedar Oak Dr

Tuesday, July 31, 2018
2:00 PM to 4:00 PM

5-Minute Interval Summary
2:00 PM to 4:00 PM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
2:00 PM	49	5	0		1	63		0				0	9		3	0	130	1	0	0	0
2:05 PM	53	3	0		2	54		0				0	14		4	0	130	1	0	1	0
2:10 PM	40	4	0		2	60		0				0	12		1	0	119	0	0	1	0
2:15 PM	41	5	0		2	56		0				0	7		2	0	113	0	0	0	0
2:20 PM	53	5	0		2	71		0				0	9		4	0	144	0	0	0	0
2:25 PM	45	6	0		2	61		0				0	12		2	0	128	0	0	0	0
2:30 PM	50	10	0		3	61		0				0	6		1	0	131	0	1	1	0
2:35 PM	47	3	0		2	67		0				0	11		3	0	133	1	0	0	0
2:40 PM	59	6	0		1	102		0				0	8		3	0	179	0	1	1	0
2:45 PM	46	6	0		4	71		0				0	10		1	0	138	0	0	0	0
2:50 PM	53	8	0		1	87		0				0	12		2	0	163	2	0	0	0
2:55 PM	43	7	0		3	73		0				0	9		4	0	139	0	0	0	0
3:00 PM	59	6	0		1	94		0				0	8		3	0	171	0	0	0	0
3:05 PM	45	9	0		4	79		0				0	13		2	0	152	0	0	2	0
3:10 PM	58	4	0		1	94		0				0	12		4	0	173	0	0	0	0
3:15 PM	54	4	0		3	92		0				0	7		1	0	161	0	0	0	0
3:20 PM	44	5	0		1	85		0				0	12		2	0	149	0	0	0	0
3:25 PM	44	7	0		1	83		0				0	13		6	0	154	0	0	0	0
3:30 PM	52	12	0		2	80		0				0	9		1	0	156	1	0	0	0
3:35 PM	65	13	0		1	89		0				0	6		2	0	176	0	0	0	0
3:40 PM	51	9	0		4	88		0				0	10		3	0	165	0	0	0	0
3:45 PM	59	7	0		2	101		0				0	1		3	0	173	0	0	0	0
3:50 PM	45	4	0		0	81		0				0	11		2	0	143	0	0	0	0
3:55 PM	59	11	1		1	84		0				0	8		2	0	165	0	0	0	0
Total Survey	1,214	159	1		46	1,876		0				0	229		61	0	3,585	6	2	6	0

15-Minute Interval Summary
2:00 PM to 4:00 PM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
2:00 PM	142	12	0		5	177		0				0	35		8	0	379	2	0	2	0
2:15 PM	139	16	0		6	188		0				0	28		8	0	385	0	0	0	0
2:30 PM	156	19	0		6	230		0				0	25		7	0	443	1	2	2	0
2:45 PM	142	21	0		8	231		0				0	31		7	0	440	2	0	0	0
3:00 PM	162	19	0		6	267		0				0	33		9	0	496	0	0	2	0
3:15 PM	142	16	0		5	260		0				0	32		9	0	464	0	0	0	0
3:30 PM	168	34	0		7	257		0				0	25		6	0	497	1	0	0	0
3:45 PM	163	22	1		3	266		0				0	20		7	0	481	0	0	0	0
Total Survey	1,214	159	1		46	1,876		0				0	229		61	0	3,585	6	2	6	0

Peak Hour Summary
3:00 PM to 4:00 PM

By Approach	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	726	1,160	1,886	1	1,071	666	1,737	0	0	0	0	0	141	112	253	0	1,938	1	0	2	0
%HV	1.4%				2.4%				0.0%				0.7%				1.9%				
PHF	0.89				0.94				0.00				0.82				0.94				

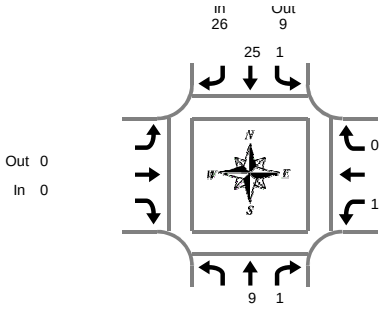
By Movement	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
	T	R	Total		L	T		Total				Total	L		R	Total	
Volume	635	91	726		21	1,050		1,071				0	110		31	141	1,938
%HV	NA	1.4%	1.1%	1.4%	4.8%	2.4%	NA	2.4%	NA	NA	NA	0.0%	0.9%	NA	0.0%	0.7%	1.9%
PHF		0.91	0.67	0.89	0.66	0.94		0.94				0.00	0.81		0.86	0.82	0.94

Rolling Hour Summary
2:00 PM to 4:00 PM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
2:00 PM	579	68	0		25	826		0				0	119		30	0	1,647	5	2	4	0
2:15 PM	599	75	0		26	916		0				0	117		31	0	1,764	3	2	4	0
2:30 PM	602	75	0		25	988		0				0	121		32	0	1,843	3	2	4	0
2:45 PM	614	90	0		26	1,015		0				0	121		31	0	1,897	3	0	2	0
3:00 PM	635	91	1		21	1,050		0				0	110		31	0	1,938	1	0	2	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 43 & Cedar Oak Dr

Tuesday, July 31, 2018
2:00 PM to 4:00 PM

Peak Hour Summary
3:00 PM to 4:00 PM

Heavy Vehicle 5-Minute Interval Summary
2:00 PM to 4:00 PM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
2:00 PM		1	1	2	0	1		1				0	0		0	0	3
2:05 PM		2	0	2	0	0		0				0	0		0	0	2
2:10 PM		1	0	1	0	2		2				0	0		0	0	3
2:15 PM		2	0	2	0	0		0				0	0		0	0	2
2:20 PM		0	0	0	0	2		2				0	0		1	1	3
2:25 PM		2	0	2	0	0		0				0	1		0	1	3
2:30 PM		0	0	0	0	1		1				0	0		0	0	1
2:35 PM		0	0	0	0	1		1				0	0		0	0	1
2:40 PM		1	0	1	1	1		2				0	0		0	0	3
2:45 PM		0	0	0	0	5		5				0	1		0	1	6
2:50 PM		2	0	2	0	4		4				0	0		0	0	6
2:55 PM		0	0	0	0	3		3				0	0		0	0	3
3:00 PM		2	0	2	0	2		2				0	0		0	0	4
3:05 PM		0	0	0	0	4		4				0	1		0	1	5
3:10 PM		1	0	1	0	2		2				0	0		0	0	3
3:15 PM		1	0	1	1	2		3				0	0		0	0	4
3:20 PM		1	0	1	0	1		1				0	0		0	0	2
3:25 PM		0	0	0	0	0		0				0	0		0	0	0
3:30 PM		1	0	1	0	3		3				0	0		0	0	4
3:35 PM		1	0	1	0	4		4				0	0		0	0	5
3:40 PM		0	0	0	0	1		1				0	0		0	0	1
3:45 PM		1	0	1	0	2		2				0	0		0	0	3
3:50 PM		0	0	0	0	0		0				0	0		0	0	0
3:55 PM		1	1	2	0	4		4				0	0		0	0	6
Total Survey		20	2	22	2	45		47				0	3		1	4	73

Heavy Vehicle 15-Minute Interval Summary
2:00 PM to 4:00 PM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
2:00 PM		4	1	5	0	3		3				0	0		0	0	8
2:15 PM		4	0	4	0	2		2				0	1		1	2	8
2:30 PM		1	0	1	1	3		4				0	0		0	0	5
2:45 PM		2	0	2	0	12		12				0	1		0	1	15
3:00 PM		3	0	3	0	8		8				0	1		0	1	12
3:15 PM		2	0	2	1	3		4				0	0		0	0	6
3:30 PM		2	0	2	0	8		8				0	0		0	0	10
3:45 PM		2	1	3	0	6		6				0	0		0	0	9
Total Survey		20	2	22	2	45		47				0	3		1	4	73

Heavy Vehicle Peak Hour Summary
3:00 PM to 4:00 PM

By Approach	Northbound Hwy 43			Southbound Hwy 43			Eastbound Cedar Oak Dr			Westbound Cedar Oak Dr			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	10	26	36	26	9	35	0	0	0	1	2	3	37
PHF	0.83			0.72			0.00			0.25			0.77

By Movement	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
		T	R	Total	L	T		Total				Total	L		R	Total	
Volume		9	1	10	1	25		26				0	1		0	1	37
PHF		0.75	0.25	0.83	0.25	0.78		0.72				0.00	0.25		0.00	0.25	0.77

Heavy Vehicle Rolling Hour Summary
2:00 PM to 4:00 PM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
2:00 PM		11	1	12	1	20		21				0	2		1	3	36
2:15 PM		10	0	10	1	25		26				0	3		1	4	40
2:30 PM		8	0	8	2	26		28				0	2		0	2	38
2:45 PM		9	0	9	1	31		32				0	2		0	2	43
3:00 PM		9	1	10	1	25		26				0	1		0	1	37

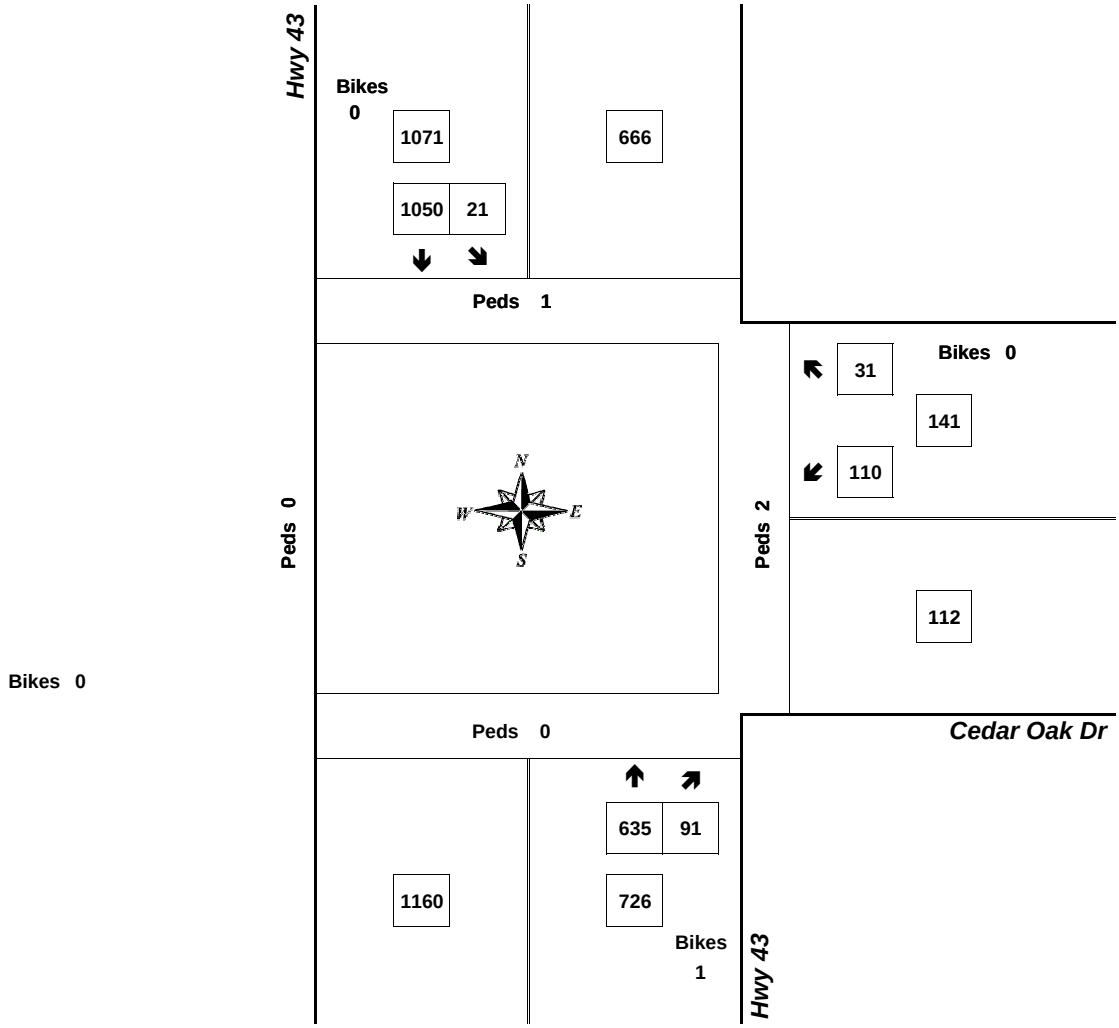
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Hwy 43 & Cedar Oak Dr

3:00 PM to 4:00 PM
Tuesday, July 31, 2018

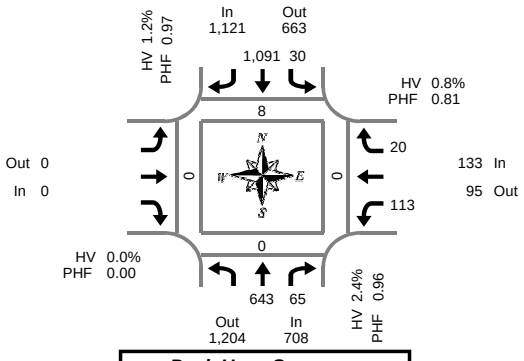


Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.82	0.7%	141
NB	0.89	1.4%	726
SB	0.94	2.4%	1,071
Intersection	0.94	1.9%	1,938

Count Period: 2:00 PM to 4:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:15 PM to 5:15 PM

Hwy 43 & Cedar Oak Dr

Tuesday, July 31, 2018
4:00 PM to 6:00 PM

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

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
4:00 PM	54	15	0		2	77		1				0	12		0	0	160	2	0	0	0
4:05 PM	42	1	0		2	83		0				0	14		4	0	146	1	0	0	0
4:10 PM	49	6	0		3	88		0				0	5		3	0	154	0	0	0	0
4:15 PM	60	2	0		4	78		1				0	17		3	0	164	2	0	0	0
4:20 PM	60	6	0		3	92		1				0	5		2	0	168	1	0	0	0
4:25 PM	36	5	0		3	97		0				0	8		0	0	149	0	0	0	0
4:30 PM	64	9	0		1	91		0				0	4		2	0	171	0	0	0	0
4:35 PM	52	5	0		3	94		0				0	13		2	0	169	0	0	0	0
4:40 PM	48	7	0		2	89		0				0	11		2	0	159	0	0	0	0
4:45 PM	43	6	0		2	89		0				0	11		2	0	153	0	0	0	0
4:50 PM	60	6	0		2	96		0				0	9		1	0	174	5	0	0	0
4:55 PM	62	7	0		1	90		0				0	9		1	0	170	0	0	0	0
5:00 PM	43	3	0		0	93		0				0	13		3	0	155	0	0	0	0
5:05 PM	61	3	0		5	85		0				0	6		0	0	160	0	0	0	0
5:10 PM	54	6	0		4	97		0				0	7		2	0	170	0	0	0	0
5:15 PM	48	2	0		2	89		0				0	16		0	0	157	1	0	0	0
5:20 PM	42	4	0		3	100		0				0	11		1	0	161	0	0	0	0
5:25 PM	52	7	0		4	77		0				0	8		4	0	152	0	0	0	0
5:30 PM	51	3	0		2	78		0				0	11		2	0	147	0	0	0	0
5:35 PM	55	7	0		2	93		0				0	14		4	0	175	1	0	0	0
5:40 PM	46	9	0		6	83		0				0	11		2	0	157	0	0	1	0
5:45 PM	47	6	0		3	88		0				0	5		2	0	151	0	0	0	0
5:50 PM	43	5	0		2	69		0				0	10		1	0	130	0	0	0	0
5:55 PM	34	6	0		1	70		0				0	12		2	0	125	0	1	0	0
Total Survey	1,206	136	0		62	2,086		3				0	242		45	0	3,777	13	1	1	0

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

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
4:00 PM	145	22	0		7	248		1				0	31		7	0	460	3	0	0	0
4:15 PM	156	13	0		10	267		2				0	30		5	0	481	3	0	0	0
4:30 PM	164	21	0		6	274		0				0	28		6	0	499	0	0	0	0
4:45 PM	165	19	0		5	275		0				0	29		4	0	497	5	0	0	0
5:00 PM	158	12	0		9	275		0				0	26		5	0	485	0	0	0	0
5:15 PM	142	13	0		9	266		0				0	35		5	0	470	1	0	0	0
5:30 PM	152	19	0		10	254		0				0	36		8	0	479	1	0	1	0
5:45 PM	124	17	0		6	227		0				0	27		5	0	406	0	1	0	0
Total Survey	1,206	136	0		62	2,086		3				0	242		45	0	3,777	13	1	1	0

Peak Hour Summary
4:15 PM to 5:15 PM

By Approach	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	708	1,204	1,912	0	1,121	663	1,784	2	0	0	0	0	133	95	228	0	1,962	8	0	0	0
%HV		2.4%				1.2%				0.0%				0.8%			1.6%				
PHF		0.96				0.97				0.00				0.81			0.98				

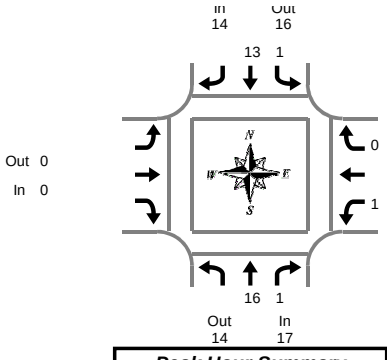
By Movement	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
	T	R	Total		L	T		Total				Total	L		R	Total	
Volume	643	65	708		30	1,091		1,121				0	113		20	133	1,962
%HV	2.5%	1.5%	2.4%		3.3%	1.2%	NA	1.2%	NA	NA	NA	0.0%	0.9%	NA	0.0%	0.8%	1.6%
PHF	0.97	0.77	0.96		0.75	0.97		0.97				0.00	0.81		0.83	0.81	0.98

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

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	T	R	Bikes		L	T		Bikes				Bikes	L		R	Bikes		North	South	East	West
4:00 PM	630	75	0		28	1,064		3				0	118		22	0	1,937	11	0	0	0
4:15 PM	643	65	0		30	1,091		2				0	113		20	0	1,962	8	0	0	0
4:30 PM	629	65	0		29	1,090		0				0	118		20	0	1,951	6	0	0	0
4:45 PM	617	63	0		33	1,070		0				0	126		22	0	1,931	7	0	1	0
5:00 PM	576	61	0		34	1,022		0				0	124		23	0	1,840	2	1	1	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Peak Hour Summary
4:15 PM to 5:15 PM

Hwy 43 & Cedar Oak Dr

Tuesday, July 31, 2018
4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
4:00 PM		0	0	0	0	2		2				0	0		0	0	2
4:05 PM		0	0	0	0	3		3				0	0		0	0	3
4:10 PM		0	0	0	0	2		2				0	0		0	0	2
4:15 PM		2	0	2	0	3		3				0	0		0	0	5
4:20 PM		0	1	1	0	0		0				0	0		0	0	1
4:25 PM		1	0	1	0	0		0				0	1		0	1	2
4:30 PM		0	0	0	0	2		2				0	0		0	0	2
4:35 PM		3	0	3	0	1		1				0	0		0	0	4
4:40 PM		1	0	1	0	1		1				0	0		0	0	2
4:45 PM		1	0	1	0	2		2				0	0		0	0	3
4:50 PM		1	0	1	0	2		2				0	0		0	0	3
4:55 PM		3	0	3	0	0		0				0	0		0	0	3
5:00 PM		0	0	0	0	1		1				0	0		0	0	1
5:05 PM		3	0	3	1	0		1				0	0		0	0	4
5:10 PM		1	0	1	0	1		1				0	0		0	0	2
5:15 PM		1	0	1	0	1		1				0	0		0	0	2
5:20 PM		0	0	0	0	0		0				0	0		0	0	0
5:25 PM		1	0	1	0	0		0				0	0		0	0	1
5:30 PM		1	0	1	0	2		2				0	1		0	1	4
5:35 PM		0	0	0	0	3		3				0	0		1	1	4
5:40 PM		0	1	1	0	0		0				0	0		0	0	1
5:45 PM		1	0	1	0	0		0				0	0		0	0	1
5:50 PM		0	1	1	0	1		1				0	0		0	0	2
5:55 PM		2	0	2	0	2		2				0	0		0	0	4
Total Survey		22	3	25	1	29		30				0	2		1	3	58

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

Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
4:00 PM		0	0	0	0	7		7				0	0		0	0	7
4:15 PM		3	1	4	0	3		3				0	1		0	1	8
4:30 PM		4	0	4	0	4		4				0	0		0	0	8
4:45 PM		5	0	5	0	4		4				0	0		0	0	9
5:00 PM		4	0	4	1	2		3				0	0		0	0	7
5:15 PM		2	0	2	0	1		1				0	0		0	0	3
5:30 PM		1	1	2	0	5		5				0	1		1	2	9
5:45 PM		3	1	4	0	3		3				0	0		0	0	7
Total Survey		22	3	25	1	29		30				0	2		1	3	58

Heavy Vehicle Peak Hour Summary
4:15 PM to 5:15 PM

By Approach	Northbound Hwy 43			Southbound Hwy 43			Eastbound Cedar Oak Dr			Westbound Cedar Oak Dr			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	17	14	31	14	16	30	0	0	0	1	2	3	32
PHF	0.71			0.70			0.00			0.25			0.89

By Movement	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
		T	R	Total	L	T		Total				Total	L		R	Total	
Volume		16	1	17	1	13		14				0	1		0	1	32
PHF		0.67	0.25	0.71	0.25	0.65		0.70				0.00	0.25		0.00	0.25	0.89

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

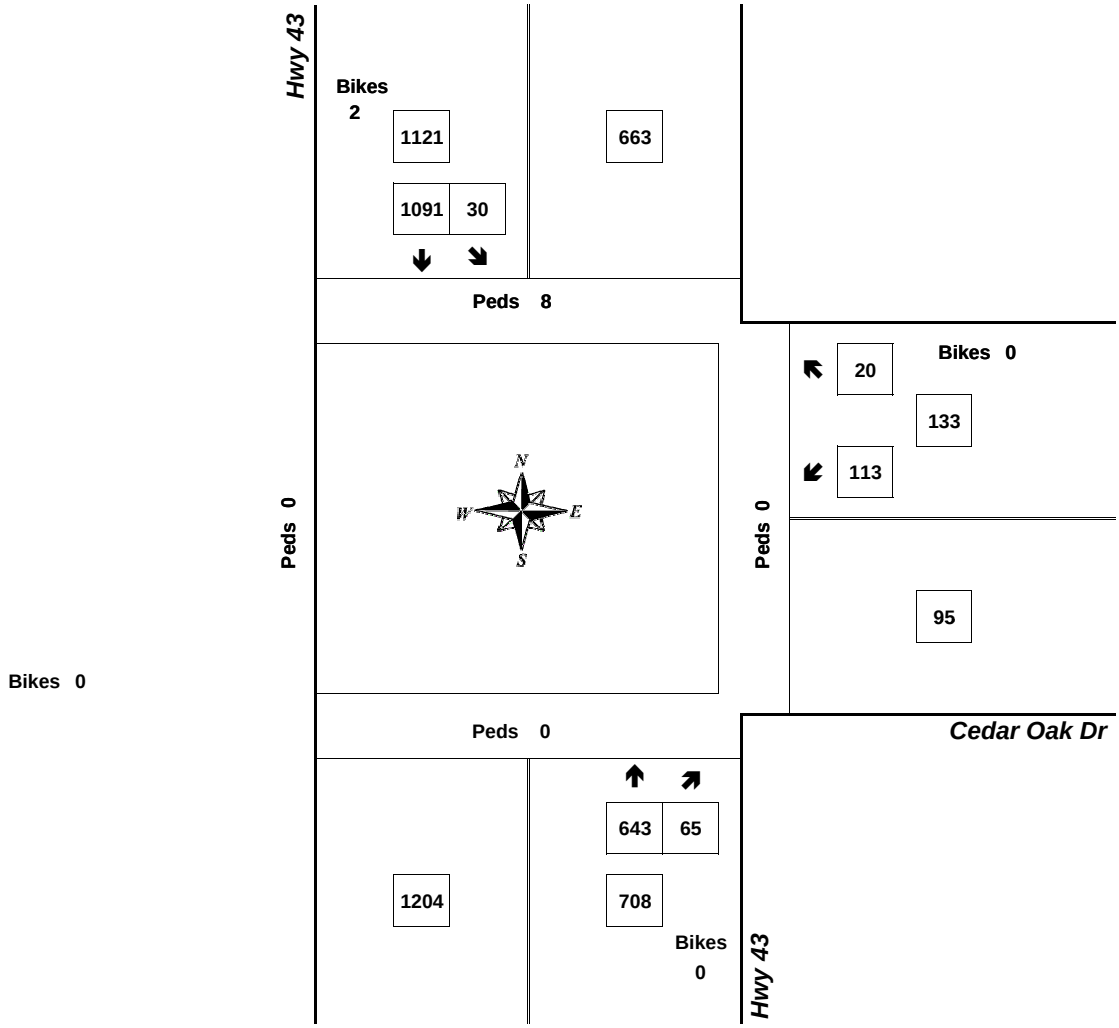
Interval Start Time	Northbound Hwy 43				Southbound Hwy 43				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
		T	R	Total	L	T		Total				Total	L		R	Total	
4:00 PM		12	1	13	0	18		18				0	1		0	1	32
4:15 PM		16	1	17	1	13		14				0	1		0	1	32
4:30 PM		15	0	15	1	11		12				0	0		0	0	27
4:45 PM		12	1	13	1	12		13				0	1		1	2	28
5:00 PM		10	2	12	1	11		12				0	1		1	2	26

Peak Hour Summary

Clay Carney
(503) 833-2740

Hwy 43 & Cedar Oak Dr

4:15 PM to 5:15 PM
Tuesday, July 31, 2018

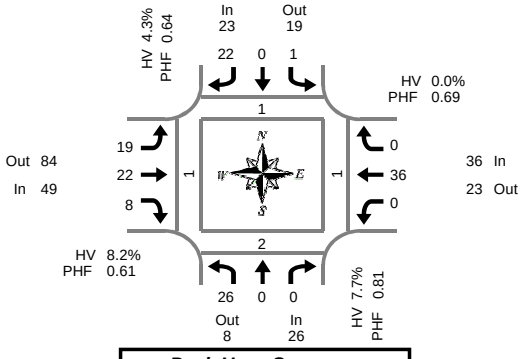


Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.81	0.8%	133
NB	0.96	2.4%	708
SB	0.97	1.2%	1,121
Intersection	0.98	1.6%	1,962

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

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:10 AM to 8:10 AM

Old River Rd & Cedar Oak Dr

Wednesday, August 01, 2018
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	2	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	6	0	0	0	0
7:05 AM	2	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	5	0	0	0	0
7:10 AM	4	0	0	0	0	0	1	0	3	0	1	0	0	2	0	0	11	1	0	0	0
7:15 AM	1	0	0	0	0	0	3	0	0	1	0	0	0	5	0	0	10	0	1	1	0
7:20 AM	3	0	0	0	0	0	1	0	3	2	1	0	0	2	0	0	12	0	0	0	0
7:25 AM	2	0	0	0	0	0	0	1	2	0	1	0	0	0	0	0	5	0	1	0	0
7:30 AM	1	0	0	0	0	0	3	0	2	0	3	0	0	3	0	0	12	0	0	0	0
7:35 AM	4	0	0	1	0	0	5	0	1	0	0	0	0	2	0	0	12	0	0	0	1
7:40 AM	2	0	0	0	0	0	1	0	1	1	0	0	0	3	0	0	8	0	0	0	0
7:45 AM	0	0	0	0	0	0	2	0	1	2	0	0	0	5	0	0	10	0	0	0	0
7:50 AM	3	0	0	0	1	0	2	0	3	1	0	0	0	5	0	0	15	0	0	0	0
7:55 AM	2	0	0	0	0	0	1	0	0	3	0	0	0	3	0	0	9	0	0	0	0
8:00 AM	3	0	0	0	0	0	1	0	3	5	0	0	0	2	0	0	14	0	0	0	0
8:05 AM	1	0	0	0	0	0	2	0	0	7	2	0	0	4	0	0	16	0	0	0	0
8:10 AM	1	0	0	0	0	0	1	0	2	3	0	0	0	2	0	0	9	0	3	0	0
8:15 AM	2	0	0	0	0	0	0	0	3	1	0	0	0	2	0	0	8	0	2	0	0
8:20 AM	0	0	0	1	0	0	2	1	0	2	0	0	0	2	0	0	6	0	2	1	2
8:25 AM	4	0	0	0	0	0	1	0	0	1	0	0	0	2	0	0	8	0	0	0	0
8:30 AM	3	1	0	1	0	0	5	0	0	0	1	0	0	3	0	0	13	0	0	1	0
8:35 AM	1	0	0	0	0	0	2	0	1	1	0	0	0	1	0	0	6	0	0	2	0
8:40 AM	0	0	0	0	0	0	4	0	3	0	2	0	0	6	0	0	15	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	0	0	3	3	0	0	3	0	0	10	0	0	0	0
8:50 AM	3	0	0	0	0	0	1	0	1	0	0	0	0	4	0	0	9	0	1	0	0
8:55 AM	2	0	0	0	0	0	0	0	1	1	0	0	0	4	0	0	8	0	0	0	0
Total Survey	46	1	0	3	2	0	41	2	33	34	15	0	0	65	0	0	237	1	10	5	3

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	8	0	0	0	1	0	3	0	6	0	2	0	0	2	0	0	22	1	0	0	0
7:15 AM	6	0	0	0	0	0	4	1	5	3	2	0	0	7	0	0	27	0	2	1	0
7:30 AM	7	0	0	1	0	0	9	0	4	1	3	0	0	8	0	0	32	0	0	0	1
7:45 AM	5	0	0	0	1	0	5	0	4	6	0	0	0	13	0	0	34	0	0	0	0
8:00 AM	5	0	0	0	0	0	4	0	5	15	2	0	0	8	0	0	39	0	3	0	0
8:15 AM	6	0	0	1	0	0	3	1	3	4	0	0	0	6	0	0	22	0	4	1	2
8:30 AM	4	1	0	1	0	0	11	0	4	1	3	0	0	10	0	0	34	0	0	3	0
8:45 AM	5	0	0	0	0	0	2	0	2	4	3	0	0	11	0	0	27	0	1	0	0
Total Survey	46	1	0	3	2	0	41	2	33	34	15	0	0	65	0	0	237	1	10	5	3

Peak Hour Summary
7:10 AM to 8:10 AM

By Approach	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	26	8	34	1	23	19	42	1	49	84	133	0	36	23	59	0	134	1	2	1	1
%HV	7.7%				4.3%				8.2%				0.0%				5.2%				
PHF	0.81				0.64				0.61				0.69				0.86				

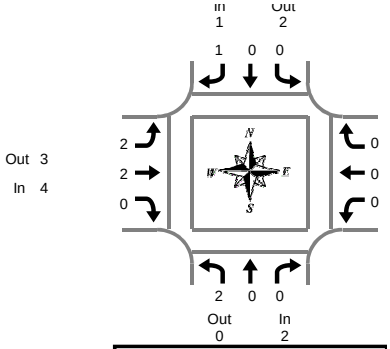
By Movement	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	26	0	0	26	1	0	22	23	19	22	8	49	0	36	0	36	134
%HV	7.7%	0.0%	0.0%	7.7%	0.0%	0.0%	4.5%	4.3%	10.5%	9.1%	0.0%	8.2%	0.0%	0.0%	0.0%	0.0%	5.2%
PHF	0.81	0.00	0.00	0.81	0.25	0.00	0.61	0.64	0.68	0.37	0.40	0.61	0.00	0.69	0.00	0.69	0.86

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	26	0	0	1	2	0	21	1	19	10	7	0	0	30	0	0	115	1	2	1	1
7:15 AM	23	0	0	1	1	0	22	1	18	25	7	0	0	36	0	0	132	0	5	1	1
7:30 AM	23	0	0	2	1	0	21	1	16	26	5	0	0	35	0	0	127	0	7	1	3
7:45 AM	20	1	0	2	1	0	23	1	16	26	5	0	0	37	0	0	129	0	7	4	2
8:00 AM	20	1	0	2	0	0	20	1	14	24	8	0	0	35	0	0	122	0	8	4	2

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Old River Rd & Cedar Oak Dr

Wednesday, August 01, 2018
7:00 AM to 9:00 AM

Peak Hour Summary
7:10 AM to 8:10 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
7:10 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	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	1	0	0	1	0	0	0	0	1
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
7:55 AM	0	0	0	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	1	0	1	0	0	0	0	1
8:05 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
8:10 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:25 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:40 AM	0	0	0	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	0	0	0
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	3	0	0	3	0	0	2	2	3	3	0	6	0	1	0	1	12

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
7:30 AM	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
8:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	1	1	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	0	0	0
Total Survey	3	0	0	3	0	0	2	2	3	3	0	6	0	1	0	1	12

Heavy Vehicle Peak Hour Summary
7:10 AM to 8:10 AM

By Approach	Northbound Old River Rd			Southbound Old River Rd			Eastbound Cedar Oak Dr			Westbound Cedar Oak Dr			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	2	0	2	1	2	3	4	3	7	0	2	2	7
PHF	0.50			0.25			0.50			0.00			0.88

By Movement	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	2	0	0	2	0	0	1	1	2	2	0	4	0	0	0	0	7
PHF	0.50	0.00	0.00	0.50	0.00	0.00	0.25	0.25	0.50	0.25	0.00	0.50	0.00	0.00	0.00	0.00	0.88

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	2	0	0	2	0	0	1	1	3	0	0	3	0	0	0	0	6
7:15 AM	1	0	0	1	0	0	1	1	2	3	0	5	0	1	0	1	8
7:30 AM	2	0	0	2	0	0	0	0	2	3	0	5	0	1	0	1	8
7:45 AM	1	0	0	1	0	0	1	1	1	3	0	4	0	1	0	1	7
8:00 AM	1	0	0	1	0	0	1	1	0	3	0	3	0	1	0	1	6

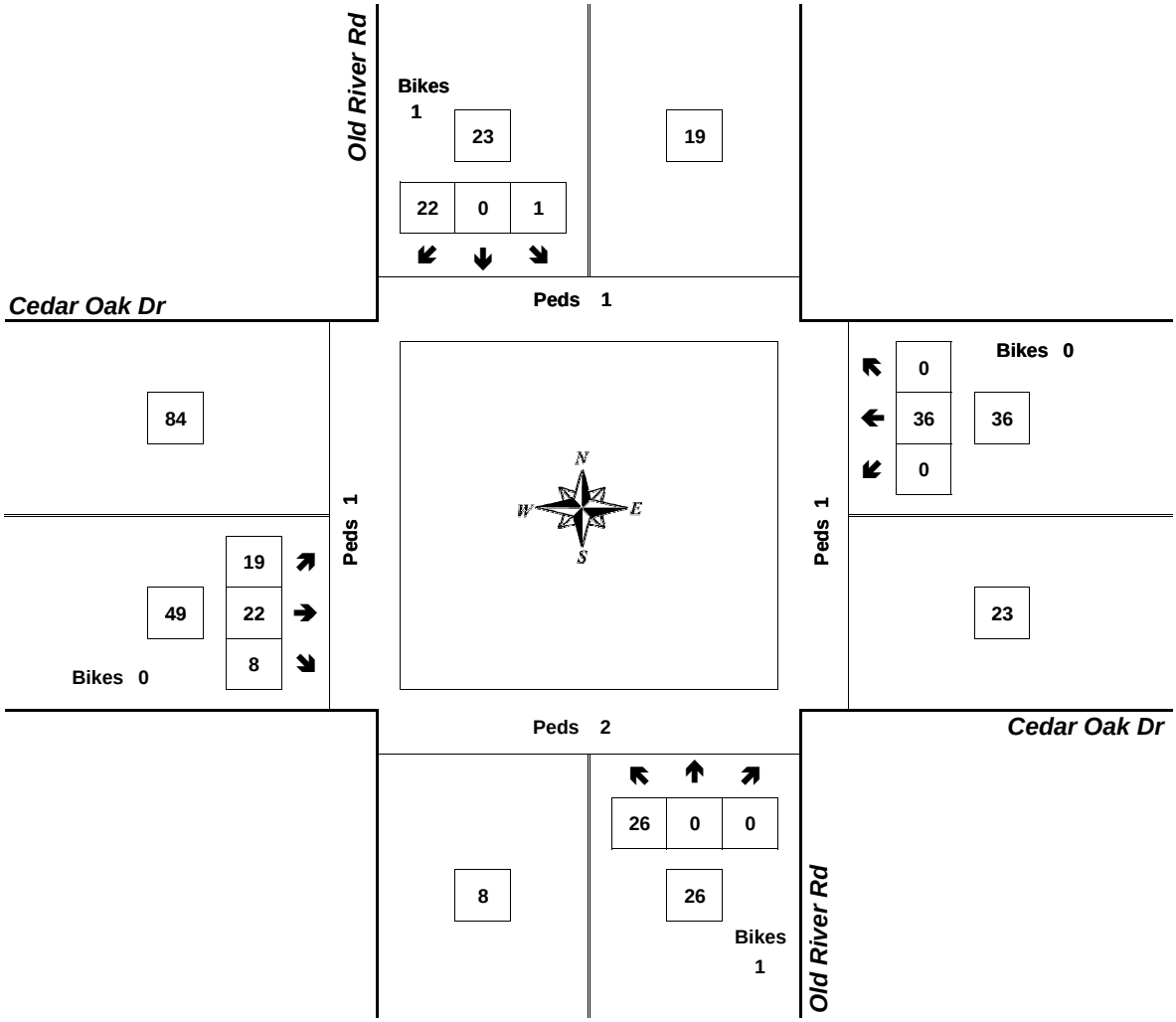
Peak Hour Summary

All Traffic Data Services Inc.

Clay Carney
(503) 833-2740

Old River Rd & Cedar Oak Dr

7:10 AM to 8:10 AM
Wednesday, August 01, 2018

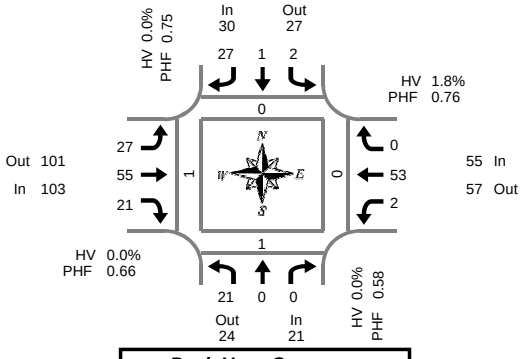


Approach	PHF	HV%	Volume
EB	0.61	8.2%	49
WB	0.69	0.0%	36
NB	0.81	7.7%	26
SB	0.64	4.3%	23
Intersection	0.86	5.2%	134

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
2:45 PM to 3:45 PM

Old River Rd & Cedar Oak Dr

Tuesday, July 31, 2018
2:00 PM to 4:00 PM

5-Minute Interval Summary
2:00 PM to 4:00 PM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
2:00 PM	1	0	0	0	0	0	1	0	1	4	0	0	0	4	0	0	11	0	2	0	0
2:05 PM	1	0	0	0	0	1	5	0	1	2	1	0	0	3	0	0	14	0	1	0	0
2:10 PM	0	0	0	0	0	0	2	0	1	2	2	0	0	3	0	0	10	0	0	0	0
2:15 PM	1	0	0	0	0	0	3	0	3	3	0	0	0	0	0	0	10	0	0	0	0
2:20 PM	1	0	0	0	0	0	2	1	1	5	2	0	0	6	1	0	18	0	0	0	0
2:25 PM	1	0	0	0	0	0	4	0	1	3	3	0	0	4	0	0	16	0	0	0	0
2:30 PM	1	0	1	0	0	0	1	0	4	3	4	0	0	5	0	0	19	0	0	0	0
2:35 PM	1	0	0	0	0	0	4	0	1	0	1	0	0	3	0	0	10	0	0	0	0
2:40 PM	4	0	0	0	1	0	4	0	1	3	2	0	0	3	0	0	18	0	0	0	0
2:45 PM	1	0	0	0	0	0	1	0	1	5	1	0	0	5	0	0	14	0	0	0	0
2:50 PM	1	0	0	0	0	0	2	0	0	3	0	0	1	4	0	0	11	0	0	0	0
2:55 PM	1	0	0	0	0	0	4	0	3	6	3	0	1	7	0	0	25	0	1	0	0
3:00 PM	3	0	0	0	0	0	0	0	1	5	0	0	0	4	0	0	13	0	0	0	0
3:05 PM	2	0	0	0	0	1	2	0	5	5	3	0	0	5	0	0	23	0	0	0	1
3:10 PM	1	0	0	0	0	0	3	0	0	1	3	0	0	6	0	0	14	0	0	0	0
3:15 PM	3	0	0	0	0	0	3	0	1	5	1	0	0	4	0	0	17	0	0	0	0
3:20 PM	2	0	0	0	0	0	3	0	2	4	0	0	0	4	0	0	15	0	0	0	0
3:25 PM	4	0	0	0	0	0	4	0	2	3	1	0	0	4	0	0	18	0	0	0	0
3:30 PM	0	0	0	0	1	0	1	0	5	7	5	0	0	0	0	0	19	0	0	0	0
3:35 PM	1	0	0	0	0	0	2	1	4	8	1	0	0	4	0	0	20	0	0	0	0
3:40 PM	2	0	0	0	1	0	2	0	3	3	3	0	0	6	0	0	20	0	0	0	0
3:45 PM	2	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	5	0	0	0	0
3:50 PM	2	0	0	0	0	1	2	0	1	4	0	0	0	2	0	0	12	0	0	2	0
3:55 PM	2	0	0	0	0	0	1	0	1	6	6	1	0	3	0	0	19	0	0	0	0
Total Survey	38	0	1	0	3	3	57	2	44	90	43	1	2	89	1	0	371	0	4	2	1

15-Minute Interval Summary
2:00 PM to 4:00 PM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
2:00 PM	2	0	0	0	0	1	8	0	3	8	3	0	0	10	0	0	35	0	3	0	0
2:15 PM	3	0	0	0	0	0	9	1	5	11	5	0	0	10	1	0	44	0	0	0	0
2:30 PM	6	0	1	0	1	0	9	0	6	6	7	0	0	11	0	0	47	0	0	0	0
2:45 PM	3	0	0	0	0	0	7	0	4	14	4	0	2	16	0	0	50	0	1	0	0
3:00 PM	6	0	0	0	0	1	5	0	6	11	6	0	0	15	0	0	50	0	0	0	1
3:15 PM	9	0	0	0	0	0	10	0	5	12	2	0	0	12	0	0	50	0	0	0	0
3:30 PM	3	0	0	0	2	0	5	1	12	18	9	0	0	10	0	0	59	0	0	0	0
3:45 PM	6	0	0	0	0	1	4	0	3	10	7	1	0	5	0	0	36	0	0	2	0
Total Survey	38	0	1	0	3	3	57	2	44	90	43	1	2	89	1	0	371	0	4	2	1

Peak Hour Summary
2:45 PM to 3:45 PM

By Approach	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	
Volume	21	24	45	0	30	27	57	1	103	101	204	0	55	57	112	0	209
%HV	0.0%				0.0%				0.0%				1.8%				0.5%
PHF	0.58				0.75				0.66				0.76				0.86

Pedestrians Crosswalk			
North	South	East	West
0	1	0	1

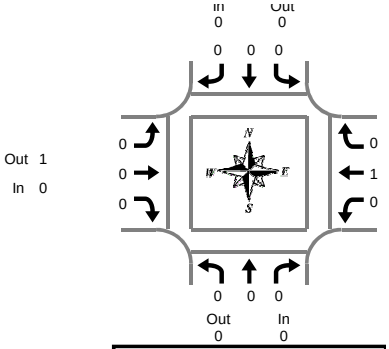
By Movement	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	21	0	0	21	2	1	27	30	27	55	21	103	2	53	0	55	209
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	1.8%	0.5%
PHF	0.58	0.00	0.00	0.58	0.25	0.25	0.68	0.75	0.56	0.76	0.58	0.66	0.25	0.83	0.00	0.76	0.86

Rolling Hour Summary
2:00 PM to 4:00 PM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
2:00 PM	14	0	1	0	1	1	33	1	18	39	19	0	2	47	1	0	176	0	4	0	0
2:15 PM	18	0	1	0	1	1	30	1	21	42	22	0	2	52	1	0	191	0	1	0	1
2:30 PM	24	0	1	0	1	1	31	0	21	43	19	0	2	54	0	0	197	0	1	0	1
2:45 PM	21	0	0	0	2	1	27	1	27	55	21	0	2	53	0	0	209	0	1	0	1
3:00 PM	24	0	0	0	2	2	24	1	26	51	24	1	0	42	0	0	195	0	0	2	1

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Old River Rd & Cedar Oak Dr

Tuesday, July 31, 2018
2:00 PM to 4:00 PM

Peak Hour Summary
2:45 PM to 3:45 PM

Heavy Vehicle 5-Minute Interval Summary
2:00 PM to 4:00 PM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
2:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
2:05 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
2:10 PM	0	0	0	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	0	0	0
2:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
2:25 PM	0	0	0	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	0	0	0
2:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:40 PM	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	0	0	0	0	1	0	1	1
2:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:55 PM	0	0	0	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	0	0	0
3:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:10 PM	0	0	0	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	0	0	0
3:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:25 PM	0	0	0	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	0	0	0
3:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:40 PM	0	0	0	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	0	0	0
3:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:55 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total Survey	0	0	0	0	0	1	0	1	0	1	1	2	0	2	0	2	5

Heavy Vehicle 15-Minute Interval Summary
2:00 PM to 4:00 PM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
2:00 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
2:30 PM	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	0	0	0	0	1	0	1	1
3:00 PM	0	0	0	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	0	0	0
3:30 PM	0	0	0	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	1	1	0	0	0	0	1
Total Survey	0	0	0	0	0	1	0	1	0	1	1	2	0	2	0	2	5

Heavy Vehicle Peak Hour Summary
2:45 PM to 3:45 PM

By Approach	Northbound Old River Rd			Southbound Old River Rd			Eastbound Cedar Oak Dr			Westbound Cedar Oak Dr			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	0	0	0	0	1	1	1	0	1	1
PHF	0.00			0.00			0.00			0.25			0.25

By Movement	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.25

Heavy Vehicle Rolling Hour Summary
2:00 PM to 4:00 PM

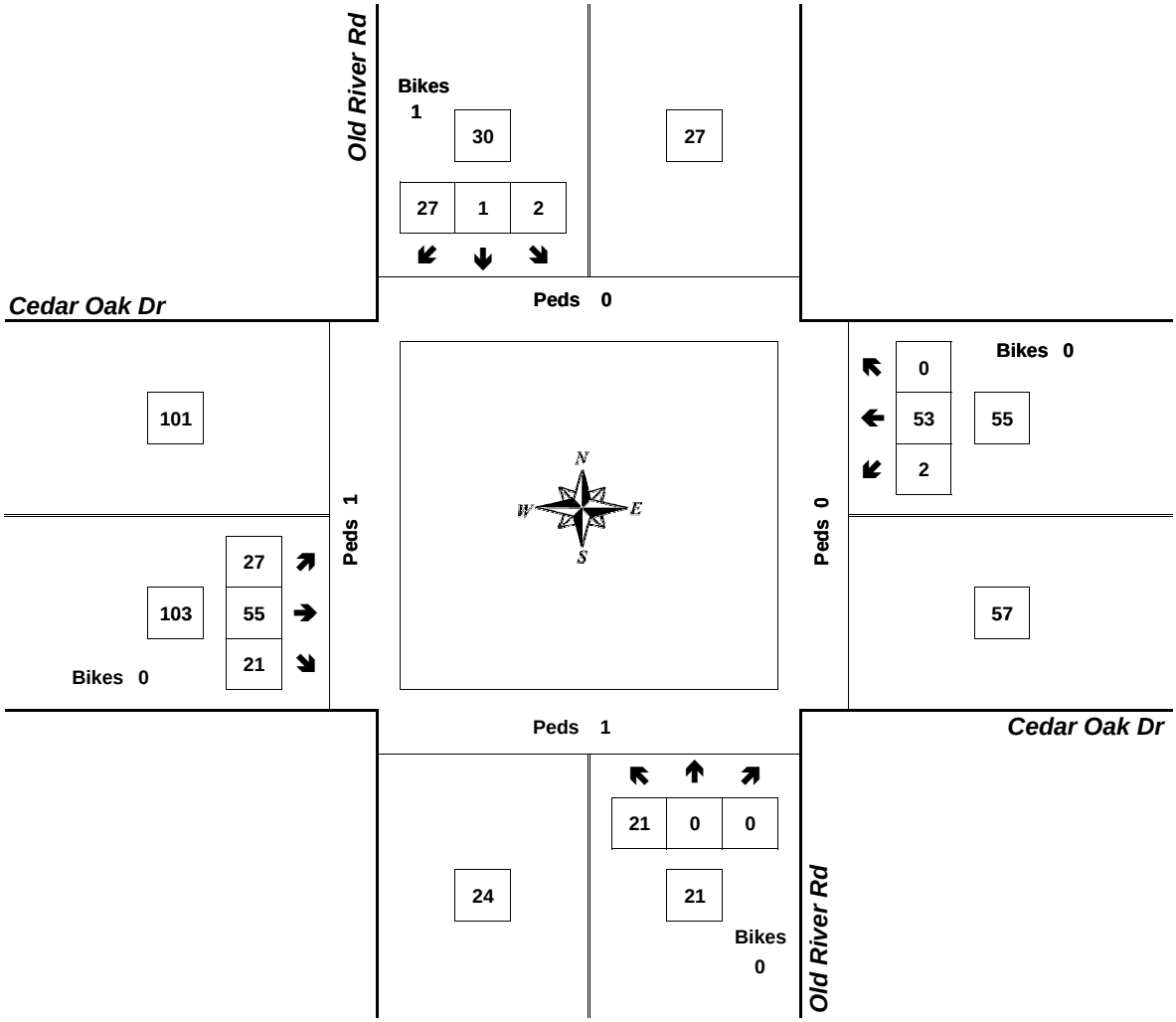
Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
2:00 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	2	0	2	4
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Old River Rd & Cedar Oak Dr

2:45 PM to 3:45 PM
Tuesday, July 31, 2018

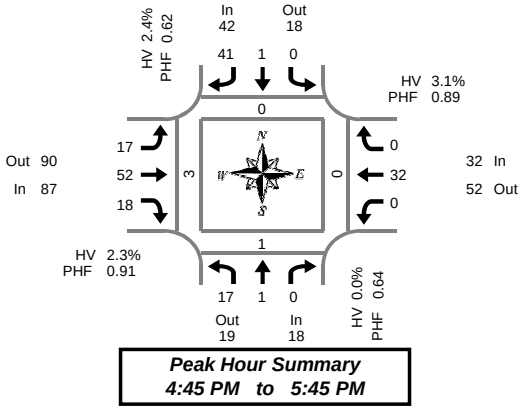


Approach	PHF	HV%	Volume
EB	0.66	0.0%	103
WB	0.76	1.8%	55
NB	0.58	0.0%	21
SB	0.75	0.0%	30
Intersection	0.86	0.5%	209

Count Period: 2:00 PM to 4:00 PM

Total Vehicle Summary

Clay Carney
(503) 833-2740



Peak Hour Summary
4:45 PM to 5:45 PM

Old River Rd & Cedar Oak Dr

Tuesday, July 31, 2018
4:00 PM to 6:00 PM

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

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	0	1	5	0	2	12	5	0	0	3	0	0	28	0	0	0	0
4:05 PM	2	0	0	0	0	1	1	0	1	2	0	0	0	2	0	0	9	0	0	0	0
4:10 PM	0	0	1	0	0	0	1	0	2	3	4	0	0	4	0	0	15	0	0	0	0
4:15 PM	2	1	0	0	1	0	4	0	1	1	1	0	0	3	0	0	14	0	0	0	0
4:20 PM	0	0	0	0	0	0	2	0	1	3	3	0	0	3	0	0	12	0	0	0	0
4:25 PM	0	0	0	0	0	1	0	0	0	5	2	0	0	2	0	0	10	0	0	0	0
4:30 PM	1	0	0	0	0	0	5	0	1	3	3	0	0	3	0	0	16	0	0	0	1
4:35 PM	0	1	0	0	1	0	6	0	3	1	1	0	0	2	0	0	15	0	0	0	0
4:40 PM	1	0	0	0	0	0	1	0	0	7	0	0	0	5	0	0	14	0	0	0	0
4:45 PM	2	0	0	0	0	0	4	0	3	3	2	0	0	3	0	0	17	0	0	0	0
4:50 PM	0	0	0	0	0	0	2	0	1	4	3	0	0	3	0	0	13	0	0	0	0
4:55 PM	2	1	0	0	0	0	2	0	0	6	2	0	0	1	0	0	14	0	0	0	0
5:00 PM	0	0	0	0	0	0	4	0	3	1	0	0	0	2	0	0	10	0	0	0	1
5:05 PM	3	0	0	2	0	0	1	0	0	4	1	0	0	4	0	0	13	0	0	0	0
5:10 PM	1	0	0	0	0	0	5	0	0	4	5	0	0	3	0	0	18	0	0	0	0
5:15 PM	1	0	0	0	0	0	4	0	1	4	0	0	0	1	0	0	11	0	0	0	0
5:20 PM	1	0	0	0	0	0	1	0	1	3	3	0	0	4	0	0	13	0	0	0	0
5:25 PM	5	0	0	0	0	0	4	0	3	6	1	0	0	2	0	0	21	0	0	0	1
5:30 PM	0	0	0	0	0	0	8	0	2	2	0	0	0	3	0	0	15	0	0	0	1
5:35 PM	2	0	0	0	0	1	4	0	2	6	1	0	0	3	0	0	19	0	0	0	0
5:40 PM	0	0	0	0	0	0	2	0	1	9	0	0	0	3	0	0	15	0	1	0	0
5:45 PM	1	0	0	0	0	0	3	0	2	2	1	0	0	2	0	0	11	0	0	0	0
5:50 PM	1	0	0	0	0	0	2	0	1	4	1	0	0	3	0	0	12	1	0	1	0
5:55 PM	1	0	0	0	0	0	2	1	0	6	1	0	0	7	0	0	17	0	0	0	0
Total Survey	26	3	1	2	2	4	73	1	31	101	40	0	0	71	0	0	352	1	1	1	4

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

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	2	0	1	0	0	2	7	0	5	17	9	0	0	9	0	0	52	0	0	0	0
4:15 PM	2	1	0	0	1	1	6	0	2	9	6	0	0	8	0	0	36	0	0	0	0
4:30 PM	2	1	0	0	1	0	12	0	4	11	4	0	0	10	0	0	45	0	0	0	1
4:45 PM	4	1	0	0	0	0	8	0	4	13	7	0	0	7	0	0	44	0	0	0	0
5:00 PM	4	0	0	2	0	0	10	0	3	9	6	0	0	9	0	0	41	0	0	0	1
5:15 PM	7	0	0	0	0	0	9	0	5	13	4	0	0	7	0	0	45	0	0	0	1
5:30 PM	2	0	0	0	0	1	14	0	5	17	1	0	0	9	0	0	49	0	1	0	1
5:45 PM	3	0	0	0	0	0	7	1	3	12	3	0	0	12	0	0	40	1	0	1	0
Total Survey	26	3	1	2	2	4	73	1	31	101	40	0	0	71	0	0	352	1	1	1	4

Peak Hour Summary
4:45 PM to 5:45 PM

By Approach	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	18	19	37	2	42	18	60	0	87	90	177	0	32	52	84	0	179	0	1	0	3
%HV	0.0%				2.4%				2.3%				3.1%				2.2%				
PHF	0.64				0.62				0.91				0.89				0.81				

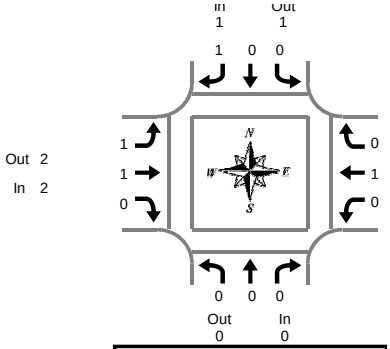
By Movement	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	17	1	0	18	0	1	41	42	17	52	18	87	0	32	0	32	179
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	2.4%	5.9%	1.9%	0.0%	2.3%	0.0%	3.1%	0.0%	3.1%	2.2%
PHF	0.61	0.25	0.00	0.64	0.00	0.25	0.64	0.62	0.61	0.76	0.56	0.91	0.00	0.89	0.00	0.89	0.81

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

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	10	3	1	0	2	3	33	0	15	50	26	0	0	34	0	0	177	0	0	0	1
4:15 PM	12	3	0	2	2	1	36	0	13	42	23	0	0	34	0	0	166	0	0	0	2
4:30 PM	17	2	0	2	1	0	39	0	16	46	21	0	0	33	0	0	175	0	0	0	3
4:45 PM	17	1	0	2	0	1	41	0	17	52	18	0	0	32	0	0	179	0	1	0	3
5:00 PM	16	0	0	2	0	1	40	1	16	51	14	0	0	37	0	0	175	1	1	1	3

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Old River Rd & Cedar Oak Dr

Tuesday, July 31, 2018
4:00 PM to 6:00 PM

Peak Hour Summary
4:45 PM to 5:45 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:20 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
4:25 PM	0	0	0	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	0	0	0
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:40 PM	0	0	0	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	0	0	0
4:50 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
4:55 PM	0	0	0	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	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:10 PM	0	0	0	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	0	0	0
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:25 PM	0	0	0	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	1	0	1	1
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	1	0	1	0	0	1	1	1	2	1	4	0	1	0	1	7

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

Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:15 PM	0	0	0	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	1	0	0	1	0	1	0	1	2
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Survey	0	1	0	1	0	0	1	1	1	2	1	4	0	1	0	1	7

Heavy Vehicle Peak Hour Summary
4:45 PM to 5:45 PM

By Approach	Northbound Old River Rd			Southbound Old River Rd			Eastbound Cedar Oak Dr			Westbound Cedar Oak Dr			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	1	1	2	2	2	4	1	1	2	4
PHF	0.00			0.25			0.50			0.25			0.50

By Movement	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	0	1	1	1	1	0	2	0	1	0	1	4
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.25	0.00	0.50	0.00	0.25	0.00	0.25	0.50

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

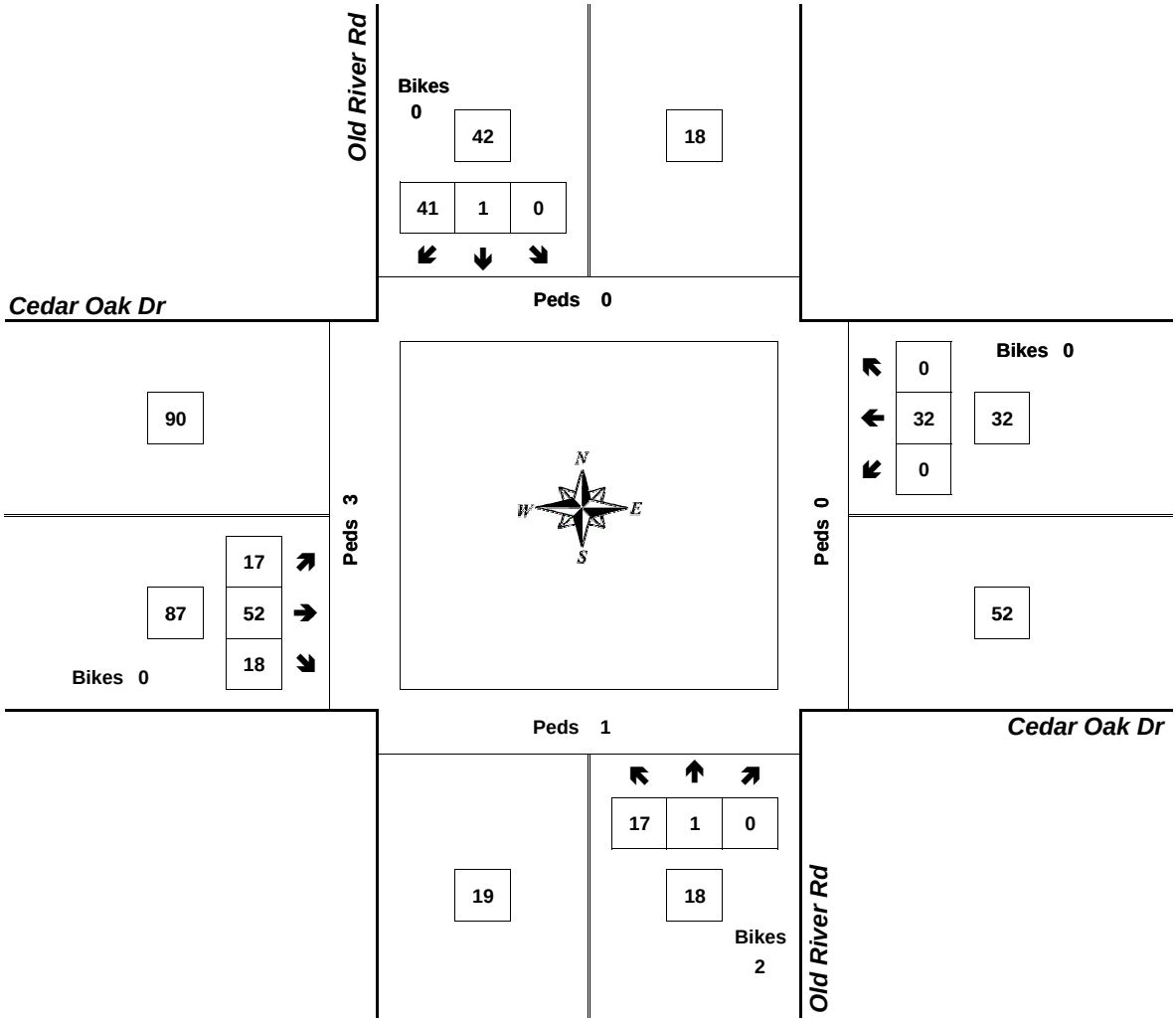
Interval Start Time	Northbound Old River Rd				Southbound Old River Rd				Eastbound Cedar Oak Dr				Westbound Cedar Oak Dr				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	1	0	1	0	0	1	1	0	0	1	1	0	0	0	0	3
4:15 PM	0	1	0	1	0	0	1	1	0	1	1	2	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	1	1	1	1	0	2	0	1	0	1	4
5:00 PM	0	0	0	0	0	0	0	0	1	2	0	3	0	1	0	1	4

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Old River Rd & Cedar Oak Dr

4:45 PM to 5:45 PM
Tuesday, July 31, 2018



Approach	PHF	HV%	Volume
EB	0.91	2.3%	87
WB	0.89	3.1%	32
NB	0.64	0.0%	18
SB	0.62	2.4%	42
Intersection	0.81	2.2%	179

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

SEASONAL TREND TABLE (Updated: 8/1/2018)																										
TREND	1-Jan	15-Jan	1-Feb	15-Feb	1-Mar	15-Mar	1-Apr	15-Apr	1-May	15-May	1-Jun	15-Jun	1-Jul	15-Jul	1-Aug	15-Aug	1-Sep	15-Sep	1-Oct	15-Oct	1-Nov	15-Nov	1-Dec	15-Dec	Seasonal Trend Peak Period Factor	Seasonal Trend K30 Value
INTERSTATE URBANIZED	1.1818	1.1788	1.0976	1.0164	0.9998	0.9832	0.9657	0.9482	0.9460	0.9439	0.9240	0.9042	0.9115	0.9189	0.9374	0.9558	0.9558	0.9557	0.9535	0.9512	0.9625	0.9738	0.9924	1.0109	0.9042	0.0817
INTERSTATE NONURBANIZED	1.4606	1.6394	1.4676	1.2958	1.1933	1.0909	1.0645	1.0382	1.0025	0.9667	0.9201	0.8735	0.8557	0.8379	0.8295	0.8211	0.9545	1.0880	1.0500	1.0120	1.0458	1.0796	1.1313	1.1830	0.8211	0.1213
COMMUTER	1.1573	1.1317	1.0654	0.9990	0.9841	0.9691	0.9491	0.9292	0.9207	0.9123	0.9016	0.8910	0.9014	0.9119	0.9020	0.8921	0.9074	0.9228	0.9193	0.9158	0.9372	0.9586	0.9845	1.0104	0.8910	0.0974
COASTAL DESTINATION	1.2740	1.3193	1.2641	1.2090	1.1609	1.1128	1.1031	1.0934	1.0569	1.0205	0.9791	0.9377	0.8842	0.8306	0.8299	0.8293	0.8775	0.9257	0.9810	1.0363	1.1041	1.1718	1.1809	1.1900	0.8293	0.1192
COASTAL DESTINATION ROUTE	1.5060	1.6791	1.5657	1.4522	1.3599	1.2675	1.2537	1.2400	1.1531	1.0662	1.0030	0.9399	0.8492	0.7584	0.7570	0.7556	0.8301	0.9045	1.0155	1.1265	1.2128	1.2992	1.3215	1.3438	0.7556	0.1609
AGRICULTURE	1.7076	1.8032	1.6535	1.5038	1.3802	1.2567	1.1986	1.1404	1.1072	1.0740	0.9827	0.8915	0.8529	0.8142	0.7179	0.6215	0.7163	0.8110	0.8614	0.9116	1.0105	1.1093	1.2415	1.3737	0.6215	0.2229
RECREATIONAL SUMMER	1.7585	2.2489	2.0847	1.9205	1.7358	1.5512	1.4576	1.3641	1.1766	0.9892	0.9061	0.8230	0.7650	0.7071	0.7124	0.7177	0.9130	1.1082	1.4413	1.7744	1.6928	1.6112	1.6401	1.6690	0.7071	0.2037
RECREATIONAL SUMMER WINTER	1.2477	1.5073	1.5669	1.6264	1.6218	1.6172	1.7108	1.8044	1.5925	1.3807	1.2325	1.0844	0.9631	0.8419	0.8674	0.8929	0.9274	0.9619	1.3267	1.6914	1.9522	2.2130	1.6835	1.1541	0.8419	0.2052
RECREATIONAL WINTER	0.8268	1.0474	1.1721	1.2968	1.3685	1.4402	1.8693	2.2984	2.2161	2.1339	1.7818	1.4298	1.2481	1.0665	1.0903	1.1142	0.8813	0.6484	1.2488	1.8493	2.5945	3.3398	2.1613	0.9828	0.6484	0.3092
SUMMER	1.3421	1.4546	1.3422	1.2298	1.1680	1.1061	1.0661	1.0261	0.9838	0.9415	0.9095	0.8774	0.8570	0.8366	0.8182	0.7997	0.8529	0.9060	0.9353	0.9645	1.0144	1.0643	1.1024	1.1406	0.7997	0.1216
SUMMER < 2500	1.3861	1.5332	1.4106	1.2881	1.1953	1.1025	1.0553	1.0080	0.9476	0.8871	0.8570	0.8268	0.8134	0.7999	0.7782	0.7565	0.8144	0.8723	0.8868	0.9013	0.9618	1.0223	1.0984	1.1745	0.7565	0.1485

***Seasonal Trend Table factors are based on previous year ATR data. The table is updated yearly.**

***Grey shading indicates months were seasonal factor is greater than 30%**

HWY	MP	DIR	HS	Location	2014	2015	2016	2036	RSQ
003	0.02	1		0.02 mile south of US26		3000		4100	MODEL
003	0.22	1		0.02 mile west of S.W. Hood Avenue		4100		4800	MODEL
003	0.41	1		0.18 mile south of connection to Pacific Highway (I-5)		12000		15700	MODEL
003	0.43	2	N	0.06 mile south of S.W. Curry Street		27200		33100	MODEL
003	0.63	2	N	0.01 mile south of S.W. Thomas Street		14500		18600	MODEL
003	1.00	1		0.02 mile north of S.W. Julia Street		22300		27300	MODEL
003	2.15	1		0.05 mile north of S.W. Taylors Ferry Road		22400		25600	MODEL
003	2.54	1		0.05 mile north of Sellwood Ferry Road		30000		32300	MODEL
003	3.64	1		South city limits of Portland		17300		21400	MODEL
003	4.02	1		0.02 mile north of S.W. Riverwood Road		17000		21000	MODEL
003	5.69	1		0.02 mile north of Terwilliger Boulevard		16500		20000	MODEL
003	5.80	1		0.06 mile south of Terwilliger Boulevard		21400		26000	MODEL
003	6.11	1		0.02 mile north of S. "A" Avenue		20200		24800	MODEL
003	6.17	1		0.04 mile south of S. "A" Avenue		34100		41500	MODEL
003	6.40	1		0.02 mile south of North Shore Road		28500		34700	MODEL
003	6.65	1		0.05 mile north of S. McVey Avenue		27600		33800	MODEL
003	6.77	1		On Oswego Creek Bridge		17900		20500	MODEL
003	7.54	1		0.04 mile south of S. Glenmorrie Road		16800		19800	MODEL
003	8.04	1		South city limits of Lake Oswego, north city limits of West Linn, 0.03 mile north of S. Arbor Drive		15900		18800	MODEL
003	9.52	1		0.02 mile north of Jolie Pointe Road		17800		21500	MODEL
003	10.27	1		0.02 mile south of W. "A" Street		18500		22300	MODEL
003	11.07	1		0.10 mile north of East Portland Freeway (I-205)		20900		25600	MODEL
003	11.34	1		0.01 mile north of S. Willamette Falls Drive		13600		15600	MODEL
003	11.43	1		On Willamette River Bridge, south city limits of West Linn and north city limits of Oregon City		13100		16600	MODEL

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	76	37	17	339	971	48
Future Volume (vph)	76	37	17	339	971	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1505	1736	1827	1830	
Flt Permitted	0.75	1.00	0.12	1.00	1.00	
Satd. Flow (perm)	1376	1505	218	1827	1830	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	83	40	18	368	1055	52
RTOR Reduction (vph)	0	36	0	0	1	0
Lane Group Flow (vph)	83	4	18	368	1106	0
Confl. Peds. (#/hr)		8	4			4
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	3%	3%	4%	4%	3%	3%
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			1	6	2	
Permitted Phases	8	8	6			
Actuated Green, G (s)	9.3	9.3	72.9	72.9	66.3	
Effective Green, g (s)	9.3	9.3	72.9	72.9	66.3	
Actuated g/C Ratio	0.10	0.10	0.80	0.80	0.73	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	140	153	209	1460	1330	
v/s Ratio Prot			0.00	c0.20	c0.60	
v/s Ratio Perm	c0.06	0.00	0.07			
v/c Ratio	0.59	0.03	0.09	0.25	0.83	
Uniform Delay, d1	39.1	36.9	10.9	2.3	8.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.6	0.1	0.2	0.4	6.2	
Delay (s)	45.7	36.9	11.0	2.7	14.8	
Level of Service	D	D	B	A	B	
Approach Delay (s)	42.9			3.1	14.8	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	22	8	0	36	0	26	0	0	1	0	22
Future Vol, veh/h	19	22	8	0	36	0	26	0	0	1	0	22
Conflicting Peds, #/hr	1	0	2	2	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	8	8	8	0	0	0	8	8	8	4	4	4
Mvmt Flow	22	26	9	0	42	0	30	0	0	1	0	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	43	0	0	37	0	0	132	119	33	118	124	44
Stage 1	-	-	-	-	-	-	76	76	-	43	43	-
Stage 2	-	-	-	-	-	-	56	43	-	75	81	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.18	6.58	6.28	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.14	5.54	-
Follow-up Hdwy	2.272	-	-	2.2	-	-	3.572	4.072	3.372	3.536	4.036	3.336
Pot Cap-1 Maneuver	1528	-	-	1587	-	-	826	760	1024	853	763	1020
Stage 1	-	-	-	-	-	-	918	820	-	966	855	-
Stage 2	-	-	-	-	-	-	941	847	-	929	824	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1527	-	-	1585	-	-	794	746	1021	842	749	1018
Mov Cap-2 Maneuver	-	-	-	-	-	-	794	746	-	842	749	-
Stage 1	-	-	-	-	-	-	903	806	-	951	854	-
Stage 2	-	-	-	-	-	-	916	846	-	914	810	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.9	0	9.7	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	794	1527	-	-	1585	-	-	1009
HCM Lane V/C Ratio	0.038	0.014	-	-	-	-	-	0.027
HCM Control Delay (s)	9.7	7.4	0	-	0	-	-	8.7
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	110	31	21	1050	635	91
Future Volume (vph)	110	31	21	1050	635	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1533	1736	1827	1808	
Flt Permitted	0.74	1.00	0.27	1.00	1.00	
Satd. Flow (perm)	1371	1533	486	1827	1808	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	117	33	22	1117	676	97
RTOR Reduction (vph)	0	29	0	0	4	0
Lane Group Flow (vph)	117	4	22	1117	769	0
Confl. Peds. (#/hr)		1	2			2
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	3%	3%	4%	4%	3%	3%
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			1	6	2	
Permitted Phases	8	8	6			
Actuated Green, G (s)	11.1	11.1	72.0	72.0	65.5	
Effective Green, g (s)	11.1	11.1	72.0	72.0	65.5	
Actuated g/C Ratio	0.12	0.12	0.78	0.78	0.71	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	165	184	407	1428	1285	
v/s Ratio Prot			0.00	c0.61	0.43	
v/s Ratio Perm	c0.09	0.00	0.04			
v/c Ratio	0.71	0.02	0.05	0.78	0.60	
Uniform Delay, d1	38.9	35.7	4.5	5.6	6.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.1	0.0	0.1	4.3	2.1	
Delay (s)	52.0	35.8	4.5	10.0	8.8	
Level of Service	D	D	A	A	A	
Approach Delay (s)	48.4			9.9	8.8	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	92.1	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	55	21	2	53	0	21	0	0	2	1	27
Future Vol, veh/h	27	55	21	2	53	0	21	0	0	2	1	27
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	2	2	2	0	0	0	0	0	0
Mvmt Flow	31	64	24	2	62	0	24	0	0	2	1	31

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	62	0	0	89	0	0	224	206	77	205	218	63
Stage 1	-	-	-	-	-	-	140	140	-	66	66	-
Stage 2	-	-	-	-	-	-	84	66	-	139	152	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1554	-	-	1506	-	-	736	694	990	757	684	1007
Stage 1	-	-	-	-	-	-	868	785	-	950	844	-
Stage 2	-	-	-	-	-	-	929	844	-	869	775	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1553	-	-	1506	-	-	699	678	989	744	668	1006
Mov Cap-2 Maneuver	-	-	-	-	-	-	699	678	-	744	668	-
Stage 1	-	-	-	-	-	-	849	768	-	930	843	-
Stage 2	-	-	-	-	-	-	897	843	-	851	758	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0.3	10.3	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	699	1553	-	-	1506	-	-	967
HCM Lane V/C Ratio	0.035	0.02	-	-	0.002	-	-	0.036
HCM Control Delay (s)	10.3	7.4	0	-	7.4	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.1

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	113	20	30	1091	643	65
Future Volume (vph)	113	20	30	1091	643	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1535	1787	1881	1836	
Flt Permitted	0.74	1.00	0.29	1.00	1.00	
Satd. Flow (perm)	1386	1535	550	1881	1836	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	115	20	31	1113	656	66
RTOR Reduction (vph)	0	18	0	0	3	0
Lane Group Flow (vph)	115	2	31	1113	719	0
Confl. Peds. (#/hr)		8				
Confl. Bikes (#/hr)						2
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			1	6	2	
Permitted Phases	8	3	6			
Actuated Green, G (s)	11.0	11.0	72.5	72.5	66.0	
Effective Green, g (s)	11.0	11.0	72.5	72.5	66.0	
Actuated g/C Ratio	0.12	0.12	0.78	0.78	0.71	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	164	182	457	1474	1310	
v/s Ratio Prot			0.00	c0.59	0.39	
v/s Ratio Perm	c0.08	0.00	0.05			
v/c Ratio	0.70	0.01	0.07	0.76	0.55	
Uniform Delay, d1	39.2	36.0	4.0	5.3	6.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	12.7	0.0	0.1	3.6	1.7	
Delay (s)	51.9	36.0	4.0	8.9	7.9	
Level of Service	D	D	A	A	A	
Approach Delay (s)	49.5			8.8	7.9	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	92.5	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	17	52	18	0	32	0	17	1	0	0	1	41
Future Vol, veh/h	17	52	18	0	32	0	17	1	0	0	1	41
Conflicting Peds, #/hr	0	0	1	1	0	0	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	3	3	3	0	0	0	2	2	2
Mvmt Flow	21	64	22	0	40	0	21	1	0	0	1	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	40	0	0	87	0	0	186	158	76	158	169	43
Stage 1	-	-	-	-	-	-	118	118	-	40	40	-
Stage 2	-	-	-	-	-	-	68	40	-	118	129	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.1	6.5	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.5	4	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1570	-	-	1503	-	-	779	738	991	808	724	1027
Stage 1	-	-	-	-	-	-	891	802	-	975	862	-
Stage 2	-	-	-	-	-	-	947	866	-	887	789	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1566	-	-	1503	-	-	729	727	990	798	713	1024
Mov Cap-2 Maneuver	-	-	-	-	-	-	729	727	-	798	713	-
Stage 1	-	-	-	-	-	-	878	790	-	961	862	-
Stage 2	-	-	-	-	-	-	896	866	-	873	777	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0	10.1	8.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	729	1566	-	-	1503	-	-	1013
HCM Lane V/C Ratio	0.03	0.013	-	-	-	-	-	0.051
HCM Control Delay (s)	10.1	7.3	0	-	0	-	-	8.7
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	111	50	31	346	992	90
Future Volume (vph)	111	50	31	346	992	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1506	1736	1827	1819	
Flt Permitted	0.73	1.00	0.06	1.00	1.00	
Satd. Flow (perm)	1356	1506	110	1827	1819	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	54	34	376	1078	98
RTOR Reduction (vph)	0	47	0	0	3	0
Lane Group Flow (vph)	121	7	34	376	1173	0
Confl. Peds. (#/hr)		8	4			4
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	3%	3%	4%	4%	3%	3%
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			1	6	2	
Permitted Phases	8	8	6			
Actuated Green, G (s)	11.3	11.3	69.5	69.5	61.9	
Effective Green, g (s)	11.3	11.3	69.5	69.5	61.9	
Actuated g/C Ratio	0.13	0.13	0.77	0.77	0.69	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	170	189	141	1413	1253	
v/s Ratio Prot			0.01	c0.21	c0.64	
v/s Ratio Perm	c0.09	0.00	0.18			
v/c Ratio	0.71	0.04	0.24	0.27	0.94	
Uniform Delay, d1	37.7	34.5	18.8	2.9	12.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.2	0.1	0.9	0.5	14.1	
Delay (s)	50.8	34.5	19.7	3.4	26.4	
Level of Service	D	C	B	A	C	
Approach Delay (s)	45.8			4.7	26.4	
Approach LOS	D			A	C	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	74	22	8	0	37	0	27	0	0	1	0	67
Future Vol, veh/h	74	22	8	0	37	0	27	0	0	1	0	67
Conflicting Peds, #/hr	1	0	2	2	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	8	8	8	0	0	0	8	8	8	4	4	4
Mvmt Flow	86	26	9	0	43	0	31	0	0	1	0	78

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	44	0	0	37	0	0	287	248	33	247	253	45
Stage 1	-	-	-	-	-	-	204	204	-	44	44	-
Stage 2	-	-	-	-	-	-	83	44	-	203	209	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.18	6.58	6.28	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.14	5.54	-
Follow-up Hdwy	2.272	-	-	2.2	-	-	3.572	4.072	3.372	3.536	4.036	3.336
Pot Cap-1 Maneuver	1527	-	-	1587	-	-	653	644	1024	703	647	1019
Stage 1	-	-	-	-	-	-	784	722	-	965	854	-
Stage 2	-	-	-	-	-	-	910	847	-	794	725	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1526	-	-	1585	-	-	575	605	1021	671	608	1017
Mov Cap-2 Maneuver	-	-	-	-	-	-	575	605	-	671	608	-
Stage 1	-	-	-	-	-	-	737	679	-	908	853	-
Stage 2	-	-	-	-	-	-	839	846	-	747	682	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.3	0	11.6	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	575	1526	-	-	1585	-	-	1009
HCM Lane V/C Ratio	0.055	0.056	-	-	-	-	-	0.078
HCM Control Delay (s)	11.6	7.5	0	-	0	-	-	8.9
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	45	55	19	23	3
Future Vol, veh/h	2	45	55	19	23	3
Conflicting Peds, #/hr	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	49	60	21	25	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	167	27	28	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	140	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	823	1048	1585	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	887	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	792	1048	1585	-	-	-
Mov Cap-2 Maneuver	792	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	853	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	5.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1585	-	1034	-	-
HCM Lane V/C Ratio	0.038	-	0.049	-	-
HCM Control Delay (s)	7.4	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	138	42	29	1073	649	116
Future Volume (vph)	138	42	29	1073	649	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1736	1827	1800	
Flt Permitted	0.74	1.00	0.21	1.00	1.00	
Satd. Flow (perm)	1359	1568	383	1827	1800	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	147	45	31	1141	690	123
RTOR Reduction (vph)	0	43	0	0	6	0
Lane Group Flow (vph)	147	2	31	1141	807	0
Confl. Peds. (#/hr)		1	2			2
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	3%	3%	4%	4%	3%	3%
Turn Type	Perm	Over	pm+pt	NA	NA	
Protected Phases		1	1	6	2	
Permitted Phases	8		6			
Actuated Green, G (s)	14.1	4.1	66.8	66.8	58.2	
Effective Green, g (s)	14.1	4.1	66.8	66.8	58.2	
Actuated g/C Ratio	0.16	0.05	0.74	0.74	0.65	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	213	71	346	1357	1165	
v/s Ratio Prot		0.00	0.00	c0.62	0.45	
v/s Ratio Perm	c0.11		0.06			
v/c Ratio	0.69	0.03	0.09	0.84	0.69	
Uniform Delay, d1	35.8	41.0	7.0	7.9	10.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.2	0.2	0.1	6.4	3.4	
Delay (s)	45.1	41.2	7.1	14.3	13.5	
Level of Service	D	D	A	B	B	
Approach Delay (s)	44.2			14.1	13.5	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	13.5
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	59	56	21	2	54	0	21	0	0	2	1	64
Future Vol, veh/h	59	56	21	2	54	0	21	0	0	2	1	64
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	2	2	2	0	0	0	0	0	0
Mvmt Flow	69	65	24	2	63	0	24	0	0	2	1	74

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	63	0	0	91	0	0	322	283	78	282	295	64
Stage 1	-	-	-	-	-	-	216	216	-	67	67	-
Stage 2	-	-	-	-	-	-	106	67	-	215	228	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1553	-	-	1504	-	-	635	629	988	674	620	1006
Stage 1	-	-	-	-	-	-	791	728	-	948	843	-
Stage 2	-	-	-	-	-	-	905	843	-	792	719	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1552	-	-	1504	-	-	565	598	987	649	590	1005
Mov Cap-2 Maneuver	-	-	-	-	-	-	565	598	-	649	590	-
Stage 1	-	-	-	-	-	-	753	693	-	903	842	-
Stage 2	-	-	-	-	-	-	835	842	-	755	685	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.2	0.3	11.7	9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	565	1552	-	-	1504	-	-	979
HCM Lane V/C Ratio	0.043	0.044	-	-	0.002	-	-	0.08
HCM Control Delay (s)	11.7	7.4	0	-	7.4	0	-	9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	36	31	28	31	2
Future Vol, veh/h	2	36	31	28	31	2
Conflicting Peds, #/hr	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	39	34	30	34	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	133	35	36	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	98	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	861	1038	1575	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	842	1038	1575	-	-	-
Mov Cap-2 Maneuver	842	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	906	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	3.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1575	-	1025	-	-
HCM Lane V/C Ratio	0.021	-	0.04	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	126	24	34	1114	657	76
Future Volume (vph)	126	24	34	1114	657	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1535	1787	1881	1832	
Flt Permitted	0.73	1.00	0.26	1.00	1.00	
Satd. Flow (perm)	1381	1535	489	1881	1832	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	129	24	35	1137	670	78
RTOR Reduction (vph)	0	21	0	0	4	0
Lane Group Flow (vph)	129	3	35	1137	744	0
Confl. Peds. (#/hr)		8				
Confl. Bikes (#/hr)						2
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			1	6	2	
Permitted Phases	8	3	6			
Actuated Green, G (s)	13.3	13.3	69.7	69.7	62.1	
Effective Green, g (s)	13.3	13.3	69.7	69.7	62.1	
Actuated g/C Ratio	0.14	0.14	0.76	0.76	0.68	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	199	221	414	1425	1236	
v/s Ratio Prot			0.00	c0.60	0.41	
v/s Ratio Perm	c0.09	0.00	0.06			
v/c Ratio	0.65	0.02	0.08	0.80	0.60	
Uniform Delay, d1	37.1	33.7	5.3	6.8	8.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.1	0.0	0.1	4.7	2.2	
Delay (s)	44.2	33.8	5.4	11.6	10.4	
Level of Service	D	C	A	B	B	
Approach Delay (s)	42.6			11.4	10.4	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	53	18	0	33	0	17	1	0	0	1	57
Future Vol, veh/h	30	53	18	0	33	0	17	1	0	0	1	57
Conflicting Peds, #/hr	0	0	1	1	0	0	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	3	3	3	0	0	0	2	2	2
Mvmt Flow	37	65	22	0	41	0	21	1	0	0	1	70

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	41	0	0	89	0	0	232	193	78	192	204	44
Stage 1	-	-	-	-	-	-	152	152	-	41	41	-
Stage 2	-	-	-	-	-	-	80	41	-	151	163	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.1	6.5	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.5	4	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1568	-	-	1500	-	-	727	706	988	768	692	1026
Stage 1	-	-	-	-	-	-	855	775	-	974	861	-
Stage 2	-	-	-	-	-	-	934	865	-	851	763	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1564	-	-	1500	-	-	661	688	987	752	674	1023
Mov Cap-2 Maneuver	-	-	-	-	-	-	661	688	-	752	674	-
Stage 1	-	-	-	-	-	-	833	755	-	950	861	-
Stage 2	-	-	-	-	-	-	866	865	-	828	743	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	0	10.6	8.8
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	662	1564	-	-	1500	-	-	1014
HCM Lane V/C Ratio	0.034	0.024	-	-	-	-	-	0.071
HCM Control Delay (s)	10.6	7.4	0	-	0	-	-	8.8
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	15	13	18	43	1
Future Vol, veh/h	1	15	13	18	43	1
Conflicting Peds, #/hr	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	16	14	20	47	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	95	47	48	0	-	0
Stage 1	47	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	905	1022	1559	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	897	1022	1559	-	-	-
Mov Cap-2 Maneuver	897	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	965	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	3.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	1013	-	-
HCM Lane V/C Ratio	0.009	-	0.017	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	81	39	18	353	1010	51
Future Volume (vph)	81	39	18	353	1010	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1505	1736	1827	1830	
Flt Permitted	0.74	1.00	0.09	1.00	1.00	
Satd. Flow (perm)	1373	1505	173	1827	1830	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	88	42	20	384	1098	55
RTOR Reduction (vph)	0	38	0	0	1	0
Lane Group Flow (vph)	88	4	20	384	1152	0
Confl. Peds. (#/hr)		8	4			4
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	3%	3%	4%	4%	3%	3%
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			1	6	2	
Permitted Phases	8	8	6			
Actuated Green, G (s)	9.6	9.6	72.7	72.7	66.1	
Effective Green, g (s)	9.6	9.6	72.7	72.7	66.1	
Actuated g/C Ratio	0.11	0.11	0.80	0.80	0.72	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	144	158	173	1454	1324	
v/s Ratio Prot			0.00	c0.21	c0.63	
v/s Ratio Perm	c0.06	0.00	0.09			
v/c Ratio	0.61	0.03	0.12	0.26	0.87	
Uniform Delay, d1	39.1	36.7	13.4	2.4	9.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.5	0.1	0.3	0.4	8.0	
Delay (s)	46.5	36.7	13.7	2.8	17.4	
Level of Service	D	D	B	A	B	
Approach Delay (s)	43.4			3.4	17.4	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	91.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	23	8	0	38	0	28	0	0	1	0	23
Future Vol, veh/h	20	23	8	0	38	0	28	0	0	1	0	23
Conflicting Peds, #/hr	1	0	2	2	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	8	8	8	0	0	0	8	8	8	4	4	4
Mvmt Flow	23	27	9	0	44	0	33	0	0	1	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	45	0	0	38	0	0	139	125	34	124	130	46
Stage 1	-	-	-	-	-	-	80	80	-	45	45	-
Stage 2	-	-	-	-	-	-	59	45	-	79	85	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.18	6.58	6.28	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.14	5.54	-
Follow-up Hdwy	2.272	-	-	2.2	-	-	3.572	4.072	3.372	3.536	4.036	3.336
Pot Cap-1 Maneuver	1525	-	-	1585	-	-	818	754	1022	846	757	1018
Stage 1	-	-	-	-	-	-	914	817	-	964	853	-
Stage 2	-	-	-	-	-	-	938	846	-	925	820	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1524	-	-	1583	-	-	785	741	1019	835	744	1016
Mov Cap-2 Maneuver	-	-	-	-	-	-	785	741	-	835	744	-
Stage 1	-	-	-	-	-	-	899	803	-	949	852	-
Stage 2	-	-	-	-	-	-	912	845	-	910	806	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.9	0	9.8	8.7
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	785	1524	-	-	1583	-	-	1007
HCM Lane V/C Ratio	0.041	0.015	-	-	-	-	-	0.028
HCM Control Delay (s)	9.8	7.4	0	-	0	-	-	8.7
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	117	33	22	1093	661	97
Future Volume (vph)	117	33	22	1093	661	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1533	1736	1827	1807	
Flt Permitted	0.74	1.00	0.24	1.00	1.00	
Satd. Flow (perm)	1369	1533	439	1827	1807	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	124	35	23	1163	703	103
RTOR Reduction (vph)	0	30	0	0	4	0
Lane Group Flow (vph)	124	5	23	1163	802	0
Confl. Peds. (#/hr)		1	2			2
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	3%	3%	4%	4%	3%	3%
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			1	6	2	
Permitted Phases	8	8	6			
Actuated Green, G (s)	13.1	13.1	71.1	71.1	64.6	
Effective Green, g (s)	13.1	13.1	71.1	71.1	64.6	
Actuated g/C Ratio	0.14	0.14	0.76	0.76	0.69	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	192	215	362	1393	1252	
v/s Ratio Prot			0.00	c0.64	0.44	
v/s Ratio Perm	c0.09	0.00	0.05			
v/c Ratio	0.65	0.02	0.06	0.83	0.64	
Uniform Delay, d1	37.9	34.5	5.6	7.2	7.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.3	0.0	0.1	6.0	2.5	
Delay (s)	45.1	34.6	5.7	13.3	10.4	
Level of Service	D	C	A	B	B	
Approach Delay (s)	42.8			13.1	10.4	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	93.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	29	58	22	2	56	0	22	0	0	2	1	29
Future Vol, veh/h	29	58	22	2	56	0	22	0	0	2	1	29
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	2	2	2	0	0	0	0	0	0
Mvmt Flow	34	67	26	2	65	0	26	0	0	2	1	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	65	0	0	94	0	0	237	219	81	218	231	66
Stage 1	-	-	-	-	-	-	149	149	-	70	70	-
Stage 2	-	-	-	-	-	-	88	70	-	148	161	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1550	-	-	1500	-	-	722	683	985	743	672	1003
Stage 1	-	-	-	-	-	-	858	778	-	945	841	-
Stage 2	-	-	-	-	-	-	925	841	-	859	769	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1549	-	-	1500	-	-	683	666	984	729	655	1002
Mov Cap-2 Maneuver	-	-	-	-	-	-	683	666	-	729	655	-
Stage 1	-	-	-	-	-	-	837	759	-	923	840	-
Stage 2	-	-	-	-	-	-	891	840	-	839	751	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	0.3	10.5	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	683	1549	-	-	1500	-	-	963
HCM Lane V/C Ratio	0.037	0.022	-	-	0.002	-	-	0.039
HCM Control Delay (s)	10.5	7.4	0	-	7.4	0	-	8.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.1

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	120	21	32	1135	669	69
Future Volume (vph)	120	21	32	1135	669	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1535	1787	1881	1836	
Flt Permitted	0.74	1.00	0.27	1.00	1.00	
Satd. Flow (perm)	1384	1535	503	1881	1836	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	122	21	33	1158	683	70
RTOR Reduction (vph)	0	18	0	0	3	0
Lane Group Flow (vph)	122	3	33	1158	750	0
Confl. Peds. (#/hr)		8				
Confl. Bikes (#/hr)						2
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			1	6	2	
Permitted Phases	8	3	6			
Actuated Green, G (s)	11.2	11.2	70.4	70.4	62.9	
Effective Green, g (s)	11.2	11.2	70.4	70.4	62.9	
Actuated g/C Ratio	0.12	0.12	0.78	0.78	0.69	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	171	189	433	1461	1274	
v/s Ratio Prot			0.00	c0.62	0.41	
v/s Ratio Perm	c0.09	0.00	0.06			
v/c Ratio	0.71	0.01	0.08	0.79	0.59	
Uniform Delay, d1	38.2	34.9	4.6	5.9	7.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.2	0.0	0.1	4.5	2.0	
Delay (s)	51.3	34.9	4.7	10.4	9.2	
Level of Service	D	C	A	B	A	
Approach Delay (s)	48.9			10.2	9.2	
Approach LOS	D			B	A	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.6	Sum of lost time (s)	13.5
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	17	53	18	0	33	0	17	1	0	0	1	42
Future Vol, veh/h	17	53	18	0	33	0	17	1	0	0	1	42
Conflicting Peds, #/hr	0	0	1	1	0	0	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	3	3	3	0	0	0	2	2	2
Mvmt Flow	21	65	22	0	41	0	21	1	0	0	1	52

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	41	0	0	89	0	0	190	161	78	160	172	44
Stage 1	-	-	-	-	-	-	120	120	-	41	41	-
Stage 2	-	-	-	-	-	-	70	41	-	119	131	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.1	6.5	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.5	4	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1568	-	-	1500	-	-	774	735	988	806	721	1026
Stage 1	-	-	-	-	-	-	889	800	-	974	861	-
Stage 2	-	-	-	-	-	-	945	865	-	885	788	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1564	-	-	1500	-	-	723	724	987	796	710	1023
Mov Cap-2 Maneuver	-	-	-	-	-	-	723	724	-	796	710	-
Stage 1	-	-	-	-	-	-	876	788	-	960	861	-
Stage 2	-	-	-	-	-	-	893	865	-	871	776	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0	10.1	8.8
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	723	1564	-	-	1500	-	-	1013
HCM Lane V/C Ratio	0.031	0.013	-	-	-	-	-	0.052
HCM Control Delay (s)	10.1	7.3	0	-	0	-	-	8.8
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.2

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	137	59	42	353	1010	119
Future Volume (vph)	137	59	42	353	1010	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1505	1736	1827	1813	
Flt Permitted	0.73	1.00	0.06	1.00	1.00	
Satd. Flow (perm)	1341	1505	112	1827	1813	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	149	64	46	384	1098	129
RTOR Reduction (vph)	0	54	0	0	4	0
Lane Group Flow (vph)	149	10	46	384	1223	0
Confl. Peds. (#/hr)		8	4			4
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	3%	3%	4%	4%	3%	3%
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			1	6	2	
Permitted Phases	8	8	6			
Actuated Green, G (s)	14.4	14.4	68.3	68.3	60.7	
Effective Green, g (s)	14.4	14.4	68.3	68.3	60.7	
Actuated g/C Ratio	0.16	0.16	0.74	0.74	0.66	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	210	236	138	1360	1200	
v/s Ratio Prot			0.01	c0.21	c0.67	
v/s Ratio Perm	c0.11	0.01	0.24			
v/c Ratio	0.71	0.04	0.33	0.28	1.02	
Uniform Delay, d1	36.7	32.8	24.0	3.8	15.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.5	0.1	1.4	0.5	30.9	
Delay (s)	47.1	32.9	25.4	4.3	46.4	
Level of Service	D	C	C	A	D	
Approach Delay (s)	42.8			6.6	46.4	
Approach LOS	D			A	D	

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	91.7	Sum of lost time (s)	13.5
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	112	23	8	0	38	0	28	0	0	1	0	99
Future Vol, veh/h	112	23	8	0	38	0	28	0	0	1	0	99
Conflicting Peds, #/hr	1	0	2	2	0	1	1	0	1	1	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	8	8	8	0	0	0	8	8	8	4	4	4
Mvmt Flow	130	27	9	0	44	0	33	0	0	1	0	115

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	45	0	0	38	0	0	397	339	34	338	344	46
Stage 1	-	-	-	-	-	-	294	294	-	45	45	-
Stage 2	-	-	-	-	-	-	103	45	-	293	299	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.18	6.58	6.28	7.14	6.54	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.14	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.14	5.54	-
Follow-up Hdwy	2.272	-	-	2.2	-	-	3.572	4.072	3.372	3.536	4.036	3.336
Pot Cap-1 Maneuver	1525	-	-	1585	-	-	552	573	1022	612	575	1018
Stage 1	-	-	-	-	-	-	701	659	-	964	853	-
Stage 2	-	-	-	-	-	-	888	846	-	711	663	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1524	-	-	1583	-	-	456	522	1019	570	523	1016
Mov Cap-2 Maneuver	-	-	-	-	-	-	456	522	-	570	523	-
Stage 1	-	-	-	-	-	-	639	601	-	879	852	-
Stage 2	-	-	-	-	-	-	787	845	-	649	604	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5.9	0	13.5	9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	456	1524	-	-	1583	-	-	1008
HCM Lane V/C Ratio	0.071	0.085	-	-	-	-	-	0.115
HCM Control Delay (s)	13.5	7.6	0	-	0	-	-	9
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0.3	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	76	5	107	24	0
Future Vol, veh/h	4	76	5	107	24	0
Conflicting Peds, #/hr	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	83	5	116	26	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	153	26	26	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	127	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	839	1050	1588	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	836	1050	1588	-	-	-
Mov Cap-2 Maneuver	836	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	896	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1588	-	1037	-	-
HCM Lane V/C Ratio	0.003	-	0.084	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	77	24	24	5
Future Vol, veh/h	0	0	77	24	24	5
Conflicting Peds, #/hr	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	84	26	26	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	222	29	32	0	-	0
Stage 1	29	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	766	1046	1580	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	725	1046	1580	-	-	-
Mov Cap-2 Maneuver	725	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	795	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	5.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1580	-	-	-	-
HCM Lane V/C Ratio	0.053	-	-	-	-
HCM Control Delay (s)	7.4	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-	-

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	162	49	36	1093	661	136
Future Volume (vph)	162	49	36	1093	661	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1752	1568	1736	1827	1794	
Flt Permitted	0.73	1.00	0.18	1.00	1.00	
Satd. Flow (perm)	1351	1568	338	1827	1794	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	172	52	38	1163	703	145
RTOR Reduction (vph)	0	50	0	0	7	0
Lane Group Flow (vph)	172	2	38	1163	841	0
Confl. Peds. (#/hr)		1	2			2
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	3%	3%	4%	4%	3%	3%
Turn Type	Perm	Over	pm+pt	NA	NA	
Protected Phases		1	1	6	2	
Permitted Phases	8		6			
Actuated Green, G (s)	15.3	4.1	66.7	66.7	58.1	
Effective Green, g (s)	15.3	4.1	66.7	66.7	58.1	
Actuated g/C Ratio	0.17	0.05	0.73	0.73	0.64	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	227	70	310	1339	1145	
v/s Ratio Prot		0.00	0.01	c0.64	0.47	
v/s Ratio Perm	c0.13		0.08			
v/c Ratio	0.76	0.03	0.12	0.87	0.73	
Uniform Delay, d1	36.1	41.6	8.3	8.9	11.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.5	0.2	0.2	7.8	4.2	
Delay (s)	49.5	41.8	8.5	16.8	15.4	
Level of Service	D	D	A	B	B	
Approach Delay (s)	47.7			16.5	15.4	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	91.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	82	58	22	2	56	0	22	0	0	2	1	90
Future Vol, veh/h	82	58	22	2	56	0	22	0	0	2	1	90
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	2	2	2	0	0	0	0	0	0
Mvmt Flow	95	67	26	2	65	0	26	0	0	2	1	105

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	65	0	0	94	0	0	396	342	81	341	355	66
Stage 1	-	-	-	-	-	-	272	272	-	70	70	-
Stage 2	-	-	-	-	-	-	124	70	-	271	285	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1550	-	-	1500	-	-	568	583	985	617	574	1003
Stage 1	-	-	-	-	-	-	738	688	-	945	841	-
Stage 2	-	-	-	-	-	-	885	841	-	739	679	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1549	-	-	1500	-	-	481	544	984	586	536	1002
Mov Cap-2 Maneuver	-	-	-	-	-	-	481	544	-	586	536	-
Stage 1	-	-	-	-	-	-	689	643	-	884	840	-
Stage 2	-	-	-	-	-	-	790	840	-	691	634	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.8	0.3	12.9	9.1
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	481	1549	-	-	1500	-	-	978
HCM Lane V/C Ratio	0.053	0.062	-	-	0.002	-	-	0.111
HCM Control Delay (s)	12.9	7.5	0	-	7.4	0	-	9.1
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	61	3	79	32	0
Future Vol, veh/h	3	61	3	79	32	0
Conflicting Peds, #/hr	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	66	3	86	35	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	127	35	35	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	92	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	868	1038	1576	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	932	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	866	1038	1576	-	-	-
Mov Cap-2 Maneuver	866	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	930	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1576	-	1028	-	-
HCM Lane V/C Ratio	0.002	-	0.068	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	50	32	32	3
Future Vol, veh/h	0	0	50	32	32	3
Conflicting Peds, #/hr	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	54	35	35	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	179	36	38	0	-	0
Stage 1	36	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	811	1037	1572	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	783	1037	1572	-	-	-
Mov Cap-2 Maneuver	783	-	-	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	853	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	4.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1572	-	-	-	-
HCM Lane V/C Ratio	0.035	-	-	-	-
HCM Control Delay (s)	7.4	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (vph)	139	28	38	1135	669	85
Future Volume (vph)	139	28	38	1135	669	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1787	1535	1787	1881	1830	
Flt Permitted	0.73	1.00	0.24	1.00	1.00	
Satd. Flow (perm)	1376	1535	460	1881	1830	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	142	29	39	1158	683	87
RTOR Reduction (vph)	0	25	0	0	4	0
Lane Group Flow (vph)	142	4	39	1158	766	0
Confl. Peds. (#/hr)		8				
Confl. Bikes (#/hr)						2
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type	Perm	Perm	pm+pt	NA	NA	
Protected Phases			1	6	2	
Permitted Phases	8	3	6			
Actuated Green, G (s)	14.0	14.0	69.2	69.2	61.6	
Effective Green, g (s)	14.0	14.0	69.2	69.2	61.6	
Actuated g/C Ratio	0.15	0.15	0.75	0.75	0.67	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	208	233	389	1411	1222	
v/s Ratio Prot			0.00	c0.62	0.42	
v/s Ratio Perm	c0.10	0.00	0.07			
v/c Ratio	0.68	0.02	0.10	0.82	0.63	
Uniform Delay, d1	37.0	33.3	5.9	7.5	8.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.9	0.0	0.1	5.5	2.4	
Delay (s)	45.9	33.3	6.1	12.9	11.2	
Level of Service	D	C	A	B	B	
Approach Delay (s)	43.8			12.7	11.2	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	92.2	Sum of lost time (s)	13.5
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	55	19	0	34	0	18	1	0	0	1	70
Future Vol, veh/h	40	55	19	0	34	0	18	1	0	0	1	70
Conflicting Peds, #/hr	0	0	1	1	0	0	3	0	0	0	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	3	3	3	0	0	0	2	2	2
Mvmt Flow	49	68	23	0	42	0	22	1	0	0	1	86

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	42	0	0	92	0	0	268	221	81	221	233	45
Stage 1	-	-	-	-	-	-	179	179	-	42	42	-
Stage 2	-	-	-	-	-	-	89	42	-	179	191	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.1	6.5	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.5	4	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1567	-	-	1496	-	-	689	681	985	735	667	1025
Stage 1	-	-	-	-	-	-	827	755	-	972	860	-
Stage 2	-	-	-	-	-	-	923	864	-	823	742	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1563	-	-	1496	-	-	612	658	984	715	644	1022
Mov Cap-2 Maneuver	-	-	-	-	-	-	612	658	-	715	644	-
Stage 1	-	-	-	-	-	-	799	729	-	940	860	-
Stage 2	-	-	-	-	-	-	841	864	-	794	717	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.6	0	11.1	8.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	614	1563	-	-	1496	-	-	1014
HCM Lane V/C Ratio	0.038	0.032	-	-	-	-	-	0.086
HCM Control Delay (s)	11.1	7.4	0	-	0	-	-	8.9
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	26	1	40	44	0
Future Vol, veh/h	1	26	1	40	44	0
Conflicting Peds, #/hr	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	28	1	43	48	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	94	48	48	0	-	0
Stage 1	48	-	-	-	-	-
Stage 2	46	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	906	1021	1559	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	976	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	905	1021	1559	-	-	-
Mov Cap-2 Maneuver	905	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	975	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1559	-	1016	-	-
HCM Lane V/C Ratio	0.001	-	0.029	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	21	20	44	1
Future Vol, veh/h	0	0	21	20	44	1
Conflicting Peds, #/hr	0	0	0	0	0	0
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	23	22	48	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	115	48	49	0	-	0
Stage 1	48	-	-	-	-	-
Stage 2	67	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	881	1021	1558	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	956	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	868	1021	1558	-	-	-
Mov Cap-2 Maneuver	868	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	942	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	3.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1558	-	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Control Delay (s)	7.3	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection: 1: Willamette Drive & Cedar Oak Drive

Movement	WB	WB	SE	SE	NW
Directions Served	L	R	L	T	TR
Maximum Queue (ft)	153	74	92	118	720
Average Queue (ft)	70	17	32	44	612
95th Queue (ft)	131	50	73	95	870
Link Distance (ft)		390		541	666
Upstream Blk Time (%)					32
Queuing Penalty (veh)					0
Storage Bay Dist (ft)	170		110		
Storage Blk Time (%)	0		0	0	
Queuing Penalty (veh)	0		1	0	

Intersection: 2: Old River Road & Cedar Oak Drive

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	37	4	60	70
Average Queue (ft)	3	0	21	34
95th Queue (ft)	19	3	50	55
Link Distance (ft)	390	573	293	213
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: Old River Road & Southern Site Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	61	5
Average Queue (ft)	33	0
95th Queue (ft)	53	4
Link Distance (ft)	161	213
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Old River Road & Northern Site Access

Movement	NB
Directions Served	LT
Maximum Queue (ft)	24
Average Queue (ft)	2
95th Queue (ft)	15
Link Distance (ft)	185
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1

CITY OF WEST LINN, CLACKAMAS COUNTY

CEDAROAK DR at OLD RIVER RD, City of West Linn, Clackamas County, 01/01/2012 to 12/31/2016

SER# / INVEST / RD DPT / UNLOC?	S P E E D	D R A U L G C S	S U H L	W C O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	SPCL USE / TRLR QTY / OWNER / V# TYPE	MOVE / FROM / TO	PRTC / P# TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED / LOC	ERROR	ACT EVENT	CAUSE

CITY OF WEST LINN, CLACKAMAS COUNTY

CEDAROAK DR at WILLAMETTE DR, City of West Linn, Clackamas County, 01/01/2012 to 12/31/2016

1 - 3 of 9 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	R U G S	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02508	N	N	N	N	N	06/30/2014	14	CEDAROAK DR	INTER	3-LEG	N	N	CLR	ANGL-STP	01	NONE 0	TURN-R											08
CITY						MO		WILLAMETTE DR	E		TRF SIGNAL	N	DRY	TURN		PRVTE	SE-E									000		00
N						12P			06	0		N	DAY	INJ		MOTRHOME		01	DRVR	NONE	84	M	OR-Y		001	000		08
N						45 23 13.73	-122 38 28.91	000300100S00															OR<25					
															02	NONE 0	STOP											
																PRVTE	E -W									011		00
																PSNGR CAR		01	DRVR	INJC	52	F	OR-Y		000	000		00
																							OR<25					
00264	Y	N	N	N	Y	01/22/2015	14	CEDAROAK DR	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013,116,002	27,07,01
CITY						TH		WILLAMETTE DR	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000		00
N						7P			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	26	M	OR-Y		016,026,047	038	116,002	27,07,01
N						45 23 13.73	-122 38 28.91	000300100S00															OR>25					
															02	NONE 0	STRGHT											
																PRVTE	SE-NW									006	013	00
																PSNGR CAR		01	DRVR	NONE	22	M	OR-Y		000	000		00
																							OR<25					
															03	NONE 0	STOP											
																PRVTE	SE-NW									011	013	00
																PSNGR CAR		01	DRVR	NONE	66	F	OR-Y		000	000		00
																							OR<25					
															04	NONE 0	STOP											
																PRVTE	SE-NW									022	013	00
																PSNGR CAR		01	DRVR	NONE	29	F	OR-Y		000	000		00
																							OR<25					
															05	NONE 0	STOP											
																PRVTE	SE-NW									022		00
																PSNGR CAR		01	DRVR	INJC	56	F	OTH-Y		000	000		00
																							N-RES					
04287	N	N	N			10/18/2015	14	CEDAROAK DR	INTER	3-LEG	N	N	UNK	S-1STOP	01	NONE 0	STRGHT											29
NONE						SU		WILLAMETTE DR	SE		TRF SIGNAL	N	WET	REAR		PRVTE	SE-NW									000		00
N						2A			06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	29	M	OR-Y		026	000		29
N						45 23 13.73	-122 38 28.91	000300100S00															OR<25					
															02	NONE 0	STOP											
																PRVTE	SE-NW									011		00
																PSNGR CAR		01	DRVR	INJB	38	M	OTH-Y		000	000		00
																							N-RES					
															02	NONE 0	STOP											
																PRVTE	SE-NW									011		00
																PSNGR CAR		02	PSNG	INJB	34	F			000	000		00

CITY OF WEST LINN, CLACKAMAS COUNTY

CEDAROAK DR at WILLAMETTE DR, City of West Linn, Clackamas County, 01/01/2012 to 12/31/2016

4 - 6 of 9 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A	L	C	S	L	R S W O H K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00558	N	N	N					02/12/2015	14	CEDAROAK DR	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE								TH		WILLAMETTE DR	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE-NW									000		00
N								4P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	65	M	OR-Y		026	000		29
N								45 23 13.73	-122 38 28.91	000300100S00															OR<25					
																	02	NONE 0	STOP											
																		PRVTE	SE-NW									011		00
																		PSNGR CAR		01	DRVR	NONE	63	M	OR-Y		000	000		00
																									OR<25					
03610	N	N	N	N	N			08/08/2016	14	CEDAROAK DR	INTER	3-LEG	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										013	29
CITY								MO		WILLAMETTE DR	SE		TRF SIGNAL	N	DRY	REAR		UNKN	SE-NW									000		00
N								6P			06	0		N	DAY	INJ		UNKNOWN		01	DRVR	NONE	00	Unk	UNK		042	000		29
N								45 23 13.73	-122 38 28.91	000300100S00															UNK					
																	02	NONE 0	STRGHT											
																		PRVTE	SE-NW									006	013	00
																		PSNGR CAR		01	DRVR	NONE	65	F	OR-Y		000	000		00
																									OR<25					
																	03	NONE 0	STRGHT											
																		PRVTE	SE-NW									022	013	00
																		PSNGR CAR		01	DRVR	INJC	33	M	OR-Y		000	000		00
																									OR<25					
																	04	NONE 0	STRGHT											
																		PRVTE	SE-NW									022		00
																		PSNGR CAR		01	DRVR	NONE	50	F	OR-Y		000	000		00
																									OR<25					
02068	N	N	N					06/11/2013	14	CEDAROAK DR	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE								TU		WILLAMETTE DR	NW		TRF SIGNAL	N	DRY	REAR		PRVTE	NW-SE									000		00
N								4P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	32	F	OR-Y		026	000		07
N								45 23 13.732404	-122 38 28.9122719	000300100S00															OR<25					
																	02	NONE 0	STOP											
																		PRVTE	NW-SE									011		00
																		PSNGR CAR		01	DRVR	NONE	35	F	OR-Y		000	000		00
																									OR<25					
02665	N	N	N					07/02/2015	14	CEDAROAK DR	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	29
NONE								TH		WILLAMETTE DR	NW		TRF SIGNAL	N	DRY	REAR		PRVTE	NW-SE									000		00
N								11A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	36	M	OTH-Y		026	000		29
N								45 23 13.73	-122 38 28.91	000300100S00															N-RES					
																	02	NONE 0	STOP											
																		PRVTE	NW-SE									011	013	00
																		PSNGR CAR		01	DRVR	INJC	44	F	OR-Y		000	000		00
																									OR<25					

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION

TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF WEST LINN, CLACKAMAS COUNTY

CEDAROAK DR at WILLAMETTE DR, City of West Linn, Clackamas County, 01/01/2012 to 12/31/2016

7 - 9 of 9 Crash records shown.

SER# INVEST RD DPT UNLOC?	S P E E D	A L C	D R U G S	S C H L	W O R K	DATE DAY TIME LAT	CLASS DIST FROM LONG	CITY STREET FIRST STREET SECOND STREET LRS	RD CHAR DIRECT LOCTN	INT-TYPE (MEDIAN) LEGS (#LANES)	INT-REL TRAF- CONTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH COLL SVRTY	SPCL USE TRLR QTY OWNER V# TYPE	MOVE FROM TO	PRTC P# TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
															03 NONE 0	STOP									
															PRVTE	NW-SE								022	00
															PSNGR CAR		01 DRVR	NONE	34	M	OR-Y		000	000	00
																					OR>25				
01488	N	N	N	N	N	04/21/2015	14	CEDAROAK DR	INTER	3-LEG	N	N	CLD	S-1STOP	01 NONE 0	STRGHT									29
CITY						TU		WILLAMETTE DR	NW		TRF SIGNAL	N	DRY	REAR	PRVTE	NW-SE								000	00
N						1P			06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	63	M	OR-Y		026	000	29
N						45 23 13.73	-122 38 28.91	000300100S00													OR<25				
															02 NONE 0	STOP									
															PRVTE	NW-SE								011	00
															PSNGR CAR		01 DRVR	NONE	52	F	OR-Y		000	000	00
																					OR<25				
02883	N	N	N	N	N	07/17/2015	14	CEDAROAK DR	INTER	3-LEG	N	N	CLD	S-1STOP	01 NONE 0	STRGHT									29
CITY						FR		WILLAMETTE DR	NW		TRF SIGNAL	N	DRY	REAR	PRVTE	NW-SE								000	00
N						4P			06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	20	M	OR-Y		026	000	29
N						45 23 13.73	-122 38 28.91	000300100S00													OR<25				
															02 NONE 0	STOP									
															PRVTE	NW-SE								011	00
															PSNGR CAR		01 DRVR	NONE	22	M	OR-Y		000	000	00
																					OR<25				

The Marylhurst School

			Monday		Tuesday		Wednesday		Thursday		Friday	
# of Students	Grades		Drop Off	Pickup	Drop Off	Pickup	Drop Off	Pickup	Drop Off	Pickup	Drop Off	Pickup
15	Middle School	Drive Through	8:30	3:15	8:30	3:15	8:30	3:15	8:30	3:15	8:30	3:15
72	Primary	Drive Through	8:30	2:30	8:30	2:30	8:30	2:30	8:30	2:30	8:30	2:30
18	Threes/Fours	Park & Drop	9:00	1:00	9:00	1:00	9:00	1:00	9:00	1:00	No Class	
Full-Time	Faculty	10										

*Incentives for teachers who take public transportation
**Some families carpool
***On average 20 Extended care children stay later; get picked up between 2:30 - 5:00
***On average 10 Extended care children arrive early; get dropped off between 7:30 - 8:00

Variables:

- Our teachers currently park in a park and ride across the street from our current location. There is a park and ride on Cedar Oak where teachers could potentially park.
- 36 of our families have multiple children that go to this school so they would arrive in the same car.
- There are 11 students who have parents who teach at our school. They would be included in the faculty parking rather than parent drop off.

	Morning:	8:00-8:30	8:30-9:00	9:00-9:30	9:30-10:00	10:00-10:30	10:30-11:00	11:00-11:30	11:30-12:00
Staff: 14	Monday								
Staff: 14	Tuesday								
Staff: 14	Wednesday								
Staff: 14	Thursday								
Staff: 14	Friday								

	Afternoon:	12:00-12:30	12:30-1:00	1:00-1:30	1:30-2:00	2:00-2:30	2:30-3:00	3:00-3:30	3:30-4:00
Staff: 14	Monday								
Staff: 14	Tuesday								
Staff: 14	Wednesday								
Staff: 14	Thursday								
Staff: 14	Friday								

Staff Only
10 - 15 cars parked
15 - 20 Cars parked

Special School Events:

- Parent Association meetings; once a month alternating am meeting and pm meeting
- Back to School Night; one for Primary & one for Preschool both in September
- Work Party; twice a year on a Saturday one October & one April
- Info night; once a year November
- Winter Performance; once a year December
- Preschool Celebration; once a year December
- Open House; once a year January
- Preschool Picnic; once a year June
- Parent Education Night; possibly twice a year month varies