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Schultz Farm

Transportation Impact Study

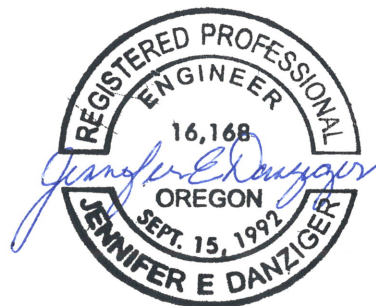
Woodburn, Oregon

Date: October 30, 2020

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Executive Summary

1. The annexation of tax lots 051W06C00400 (14 acres) and 051W06C00800 (17.13 acres) and subsequent 154-lot planned unit development is proposed in Woodburn, Oregon.
2. The calculations show that the proposed development is projected to generate 114 trips during the morning peak hour, 152 trips during the evening peak hour, and 1,454 daily trips.
3. The intersection of OR 214 at Evergreen Road is calculated to have a crash rate above 1.0. Specifically, a high number of eastbound and westbound collisions involving left-turning vehicles were reported. However, due to the small number of trips to be added and the movement to which the trips will contribute, no mitigation is recommended at the intersection in conjunction with the proposed development. Based on the review of crash history, no design flaws or deficiencies are evident at any other intersections.
4. Intersection sight distance at both the site accesses was measured to exceed 525 feet to north and south, which meets the intersection sight distance recommendation of 500 feet.
5. Preliminary traffic signal warrants are not met at any of the unsignalized study intersections upon full buildout of the proposed development.
6. All study intersections are projected to operate acceptably per each applicable performance standard under all analysis scenarios; therefore, no mitigation is recommended.



Project Description

The section below describes the proposed project and the surrounding transportation system.

Introduction

The annexation of tax lots 051W06C00400 (14 acres) and 051W06C00800 (17.13 acres) and subsequent 154-lot planned unit development is proposed in Woodburn, Oregon. This subject site is currently located outside city limits, but inside the Urban Growth Boundary.

Location Description

The planned residential development will be located north of Hazelnut Drive and west of Boones Ferry Road. The property is bordered by rural land to the north and residential uses to the south. A golf course is located east of the site and many Woodburn schools are within two miles of the subject site. Access to the site will be provided via two local streets which will be constructed in conjunction with the residential development.

Vicinity Streets

Nine roadways within the study area are anticipated to carry site trips to and from the proposed development. The characteristics of these roadways are summarized in Table 1.

Table 1: Vicinity Roadway Characteristics

Roadway	Jurisdiction	Classification	Travel Lanes	Speed (MPH)	Curbs/ Sidewalks	Bicycle Lanes	On-Street Parking
Boones Ferry Road	City/County	Minor Arterial	2-3	35-45	Partial	Partial	Not Permitted
Crosby Road NE	Marion County	Major/Minor Collector	2	55	None	None	Not Permitted
Hazelnut Drive	City of Woodburn	Access Street	2	25	Yes	Partial	Not Permitted
Country Club Road NE	City of Woodburn	Access Street/ Local Street	2	25	Yes	Partial	Not Permitted
OR 214	ODOT	District Highway	2-5	30-35	Yes	Yes	Not Permitted
Evergreen Road	City of Woodburn	Minor Arterial	3	25-30	Yes	Partial	Partially Permitted
N Settlemier Avenue	City of Woodburn	Minor Arterial	2	25	Yes	Partial	Not Permitted
Hayes Street	City of Woodburn	Service Collector	2	25	Partial	None	Partially Permitted
OR 99E	ODOT	Regional Highway	2-5	35	Yes	Yes	Not Permitted



Study Intersections










Based on correspondence with the City of Woodburn, seven intersections were selected for analysis. The characteristics of these intersections are summarized in Table 2.

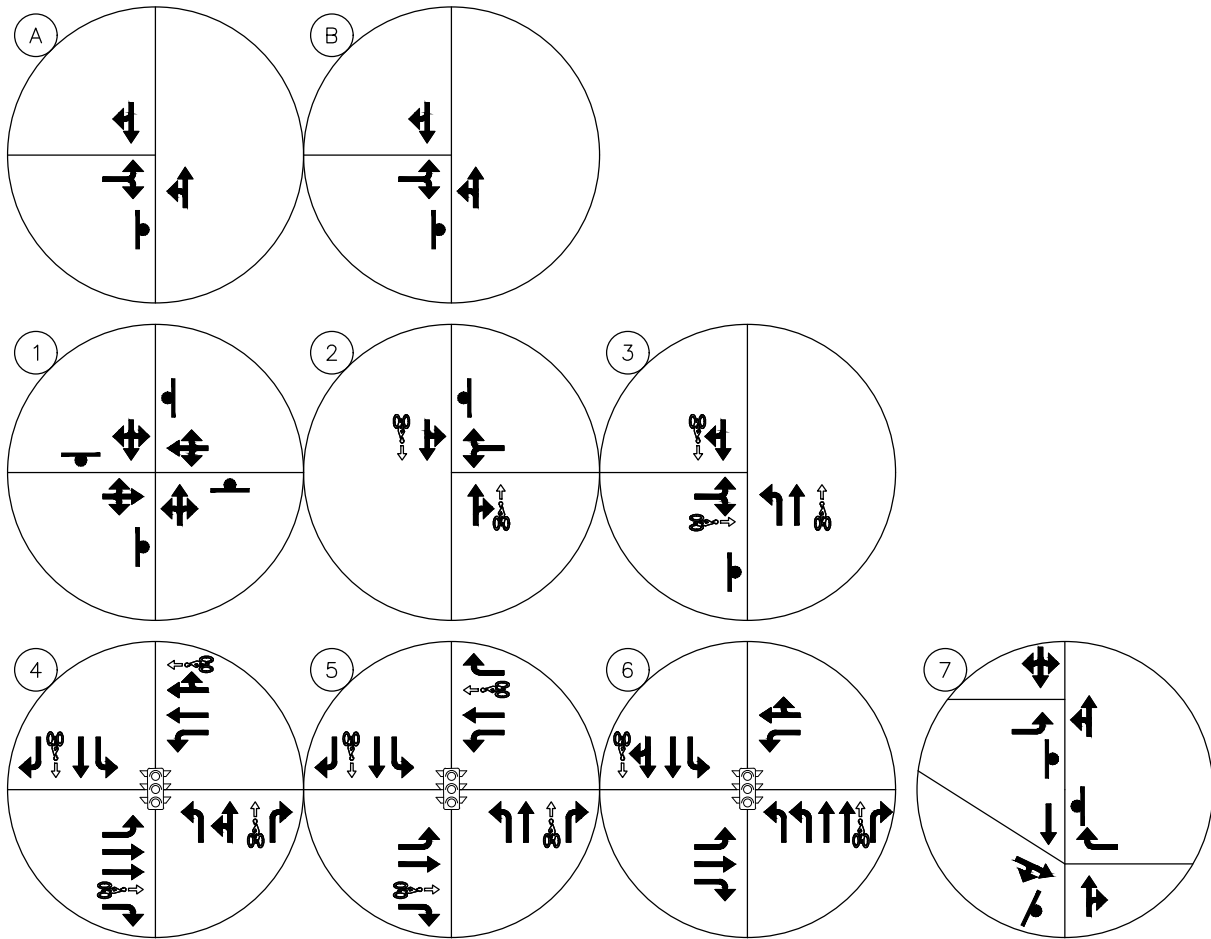
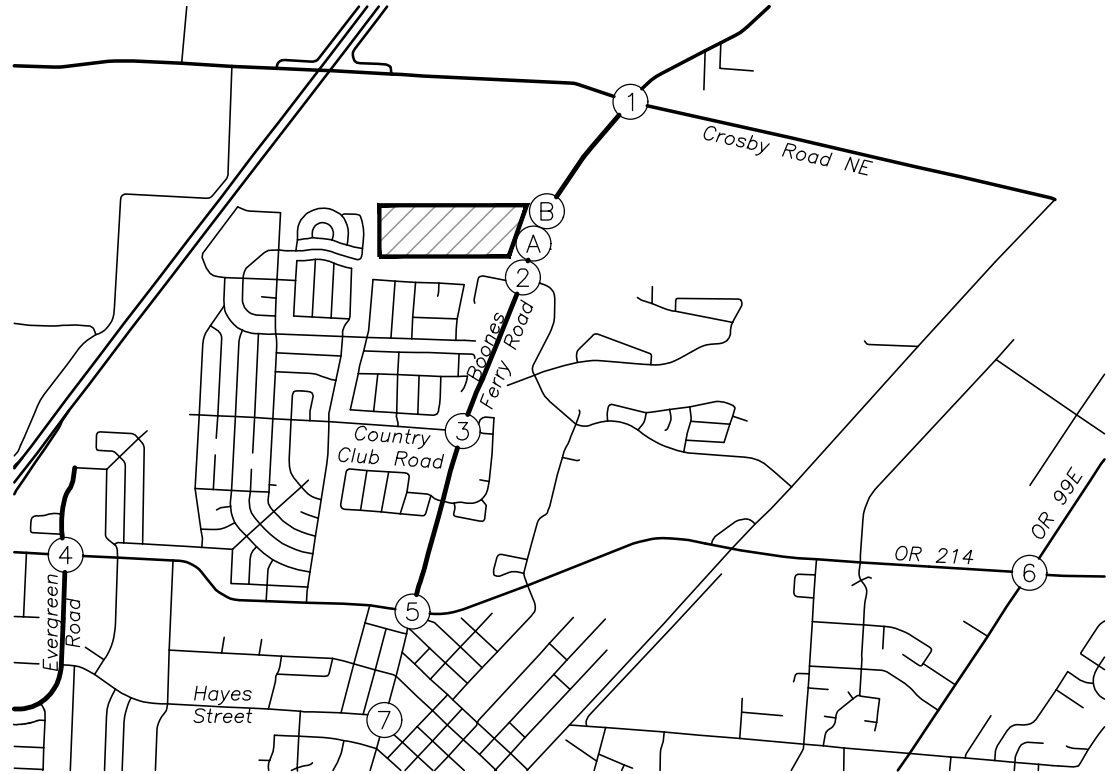
Table 2: Vicinity Intersection Descriptions

Number	Intersection	Geometry	Traffic Control	Phasing/Stopped Approaches
1	Boones Ferry Road at Crosby Road NE	Four-Legged	Stop Sign	All-Way Stop Controlled
2	Boones Ferry Road at Hazelnut Drive	Three-Legged	Stop Sign	Westbound Stop Controlled
3	Boones Ferry Road at Country Club Road NE	Three-Legged	Stop Sign	Eastbound Stop Controlled
4	OR 214 at Evergreen Road	Four-Legged	Traffic Signal	Protected North and Southbound Lefts, Protected/Permissive West and Eastbound Lefts
5	OR 214 at Boones Ferry Road/N Settlemier Avenue	Four-Legged	Traffic Signal	Protected Lefts
6	N Settlemier Avenue at Hayes Street	Three-Legged	Stop Sign	West and East-bound Stop-Controlled
7	OR 214 at OR 99E	Four-Legged	Traffic Signal	Protected Lefts

A vicinity map showing the study intersection configurations is shown in Figure 1 on page 7.

LEGEND

-  STUDY INTERSECTION
-  STOP SIGN
-  TRAFFIC SIGNAL
-  BIKE LANE
-  PROJECT SITE
-  INTERSTATE/HWY
-  ARTERIAL ROADWAY
-  COLLECTOR ROADWAY
-  LOCAL ROADWAY



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Site Trips

This section quantifies the trips from the proposed development and discusses how they will be distributed through the study-area intersections.

Trip Generation

To estimate the number of trips that will be generated by the site, trip rates from the *Trip Generation Manual*¹ were used. Trip rates for land-use code #210, Single Family Detached Housing, was used to estimate the trip generation for the proposed development.

The trip generation calculations show that the proposed use of the site will generate 108 trips during the morning peak hour, 145 trips during the evening peak hour, and 1,378 trips on a typical weekday. A summary of the trip generation is shown in Table 3.

Table 3: Trip Generation Summary

Land Use – ITE Code	Size	Morning Peak Hour			Evening Peak Hour			Weekday Total
		In	Out	Total	In	Out	Total	
Single Family Detached Housing - 210	154 lots	29	85	114	96	56	152	1,454

Trip Distribution

The directional distribution of site trips to and from the proposed development was estimated based on locations of likely trip destinations and locations of major transportation facilities in the site vicinity.

The following trip distribution was estimated and used for analysis:

- 5% of site trips will travel to/from the west along Crosby Road NE.
- 5% of site trips will travel to/from the north along NE Boones Ferry Road.
- 5% of site trips will travel to/from the east along Crosby Road NE.
- 25% of site trips will travel to/from the west along OR 214.
- 15% of site trips will travel to/from the north along OR 99E.
- 15% of site trips will travel to/from the south along OR 99E.
- 20% of site trips will travel to/from the south along N Settlemier Avenue.
- 10% of site trips will travel to/from the east along OR 214.

The site trip assignment and distribution for the morning and evening peak hours are shown in Figure 2 on page 10 and Figure 3 on page 11.

¹ Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition, 2017

Site Circulation

With most site trips traveling to and from the south of the subject site, many site trips are estimated to use the southern site access. In addition to the two site accesses which intersect Boones Ferry Road, future access points are provided internally to provide connections to the north and west.

Interstate Ramps

An accounting of the number of trips added to each Interstate 5 freeway ramp was requested during the pre-application meeting. The trip distribution shows 25% of the total site trips traveling to and from the west on OR 214. Based on the volumes for Interstate 5 exit 271 in ODOT's ramp interchange diagrams, an estimated 63% of these trips travel to/from north on Interstate 5 and 37% travel to/from the south on Interstate 5. The total number of trips on each ramp is summarized in the Table 4.

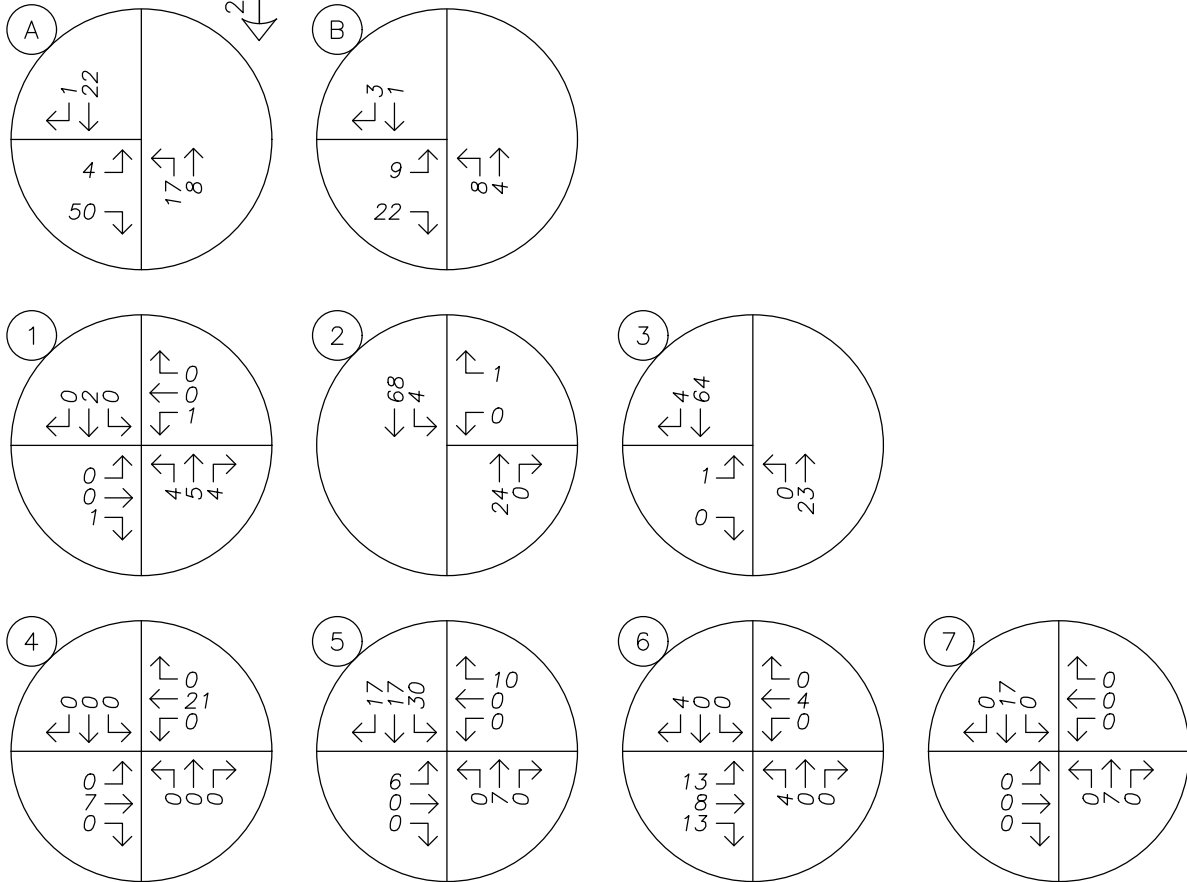
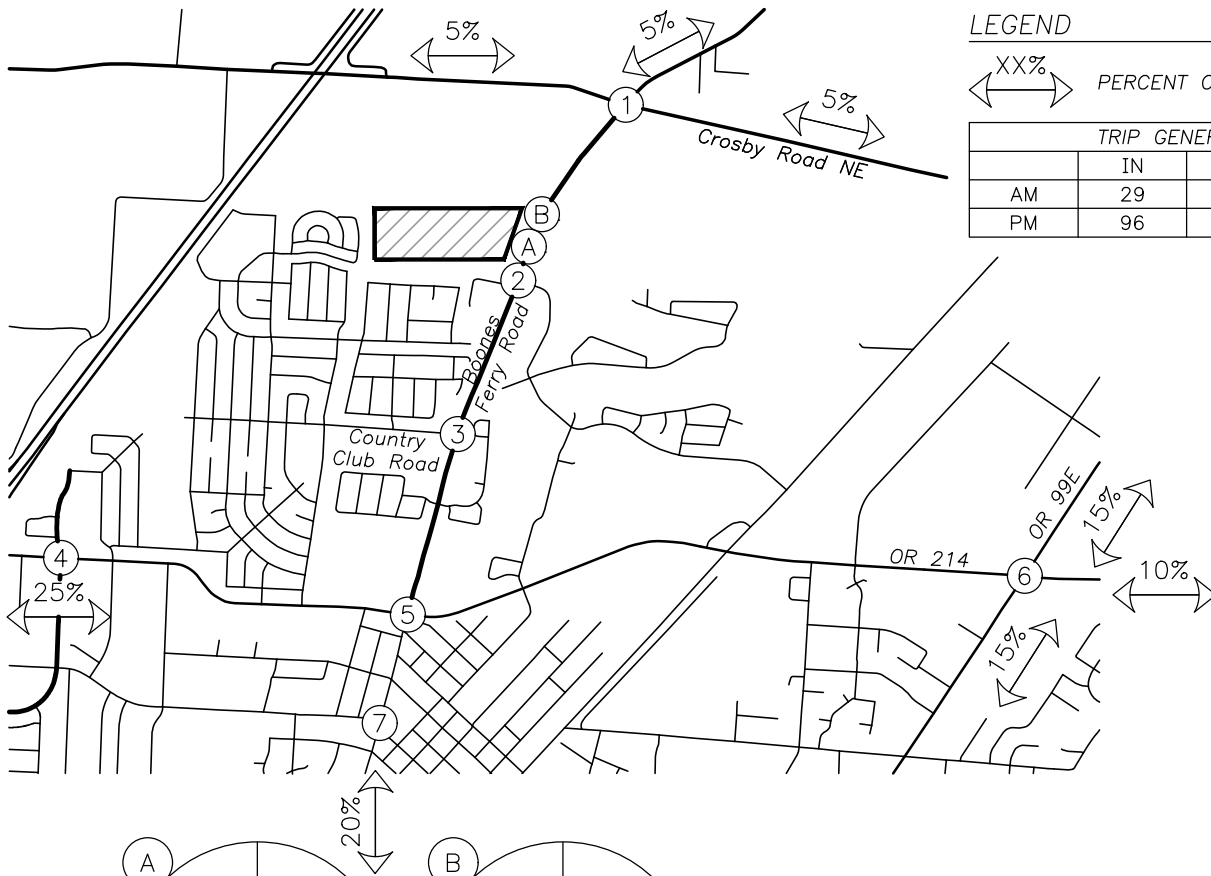
Table 4: I-5 Ramp Trip Accounting

Intersection	Morning Peak Hour	Evening Peak Hour
Highway 214 at I-5 Westbound to Northbound On-Ramp	13	9
Highway 214 at I-5 Northbound Off-Ramp	4	9
Highway 214 at I-5 Westbound to Southbound On-Ramp	8	5
Highway 214 at I-5 Southbound Off-Ramp	3	15

LEGEND

XX% PERCENT OF PROJECT TRIPS

TRIP GENERATION			
	IN	OUT	TOTAL
AM	29	85	114
PM	96	56	152

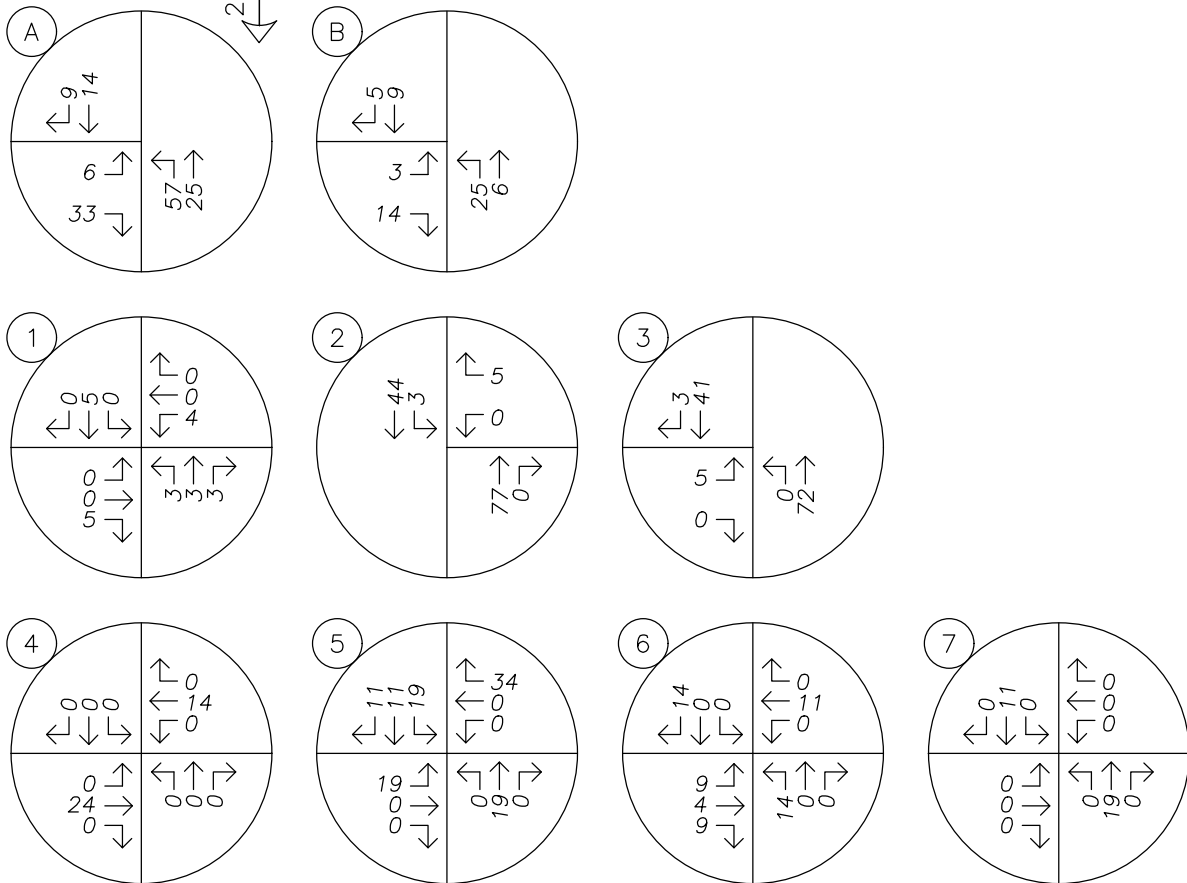
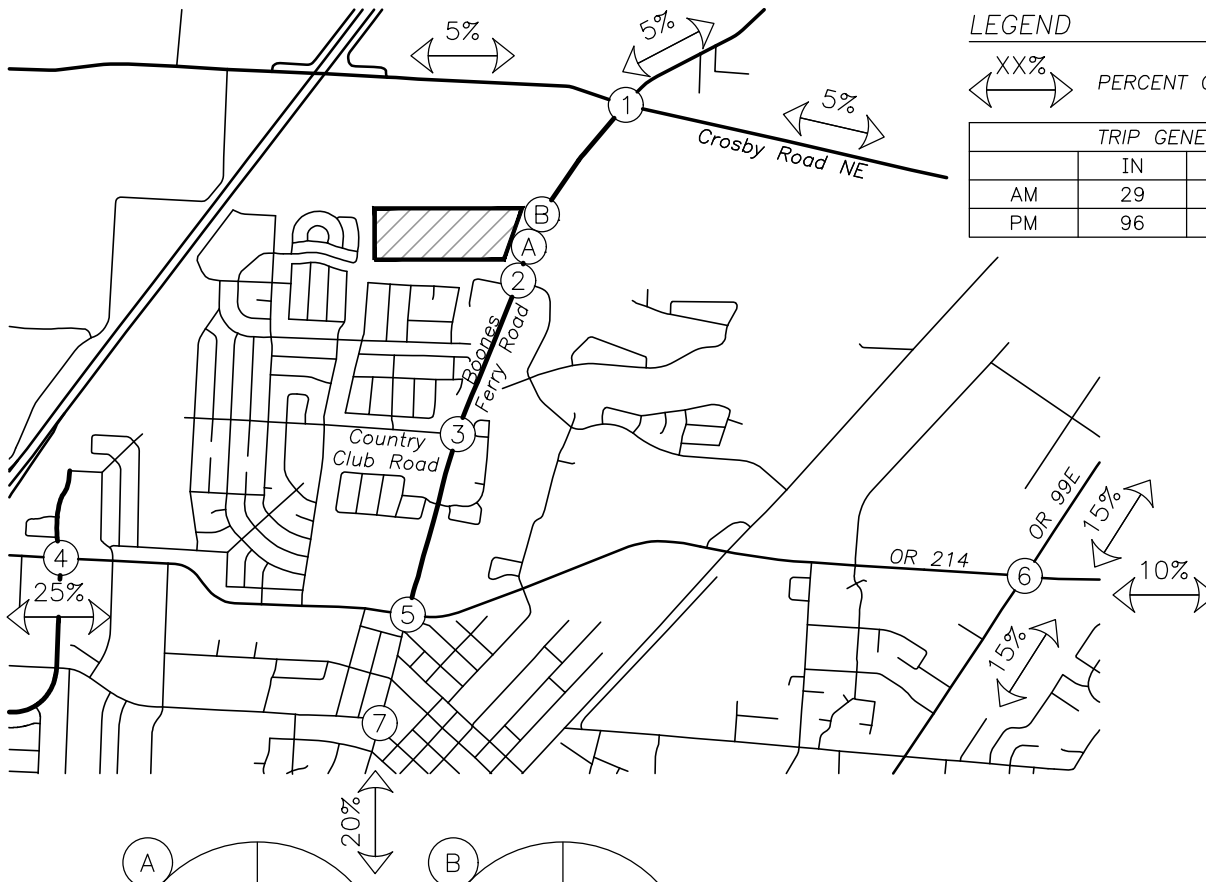


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LEGEND

XX% PERCENT OF PROJECT TRIPS

TRIP GENERATION			
	IN	OUT	TOTAL
AM	29	85	114
PM	96	56	152



Traffic Volumes

The section below discusses current and future-year traffic volumes and how they were developed.

Existing Conditions

Traffic counts were collected on Tuesday, October 6, 2020 between 7:00 AM and 9:00 AM and between 4:00 PM and 6:00 PM, corresponding to the morning and evening peak periods. Data for each intersection's peak hour were used for analysis. Per the requirements established in ODOT's Analysis Procedures Manual (APM), a seasonal adjustment factor was calculated and applied to the through movement traffic on OR 214 and OR 99E to reflect the 30th highest hour volumes. Utilizing ODOT's seasonal trend table, an adjustment factor of 1.027, based on a commuter trend was calculated.

After adjusting the collected volumes to 30th highest hour, these volumes were then compared to historical 2020 volumes which were collected prior to the impact of COVID-19 pandemic beginning in March 2020. Counts for the intersections of Evergreen Road at OR 214, Boones Ferry Road at Hazelnut Drive, and Boones Ferry Road at Crosby Road NE were used as a basis for the adjustments. Since the historical counts include school trips, these factors include adjustments for typical Woodburn School District traffic. The historical highway traffic volumes were also seasonally adjusted, thereby making the 30th highest hour the basis for comparison. The calculated adjustment factors which were applied to the October 2020 traffic counts to account for the decrease in volumes due to the COVID pandemic are shown in Table 5. The year 2020 existing traffic volumes for the morning and evening peak hours are shown in Figure 4 on page 14 and Figure 5 on page 15, respectively.

Table 5: COVID Adjustment Factors

Facility	AM Peak Hour	PM Peak Hour
City of Woodburn intersections	1.485	1.16
ODOT intersections	1.01	1.04

Background Conditions

Future traffic volumes for ODOT highways were projected in conformance with the requirements established in ODOT's APM. Growth rates along ODOT facilities were calculated based on data from ODOT's future volume table. Table 6 summarizes the growth rates used for analysis.

Table 6: Growth Rate Assumptions

Facility	Growth Rate
OR 214	0.3% per year (linear)
OR 99E	1.35% per year (linear)
City of Woodburn roadways	2% per year (compounded)



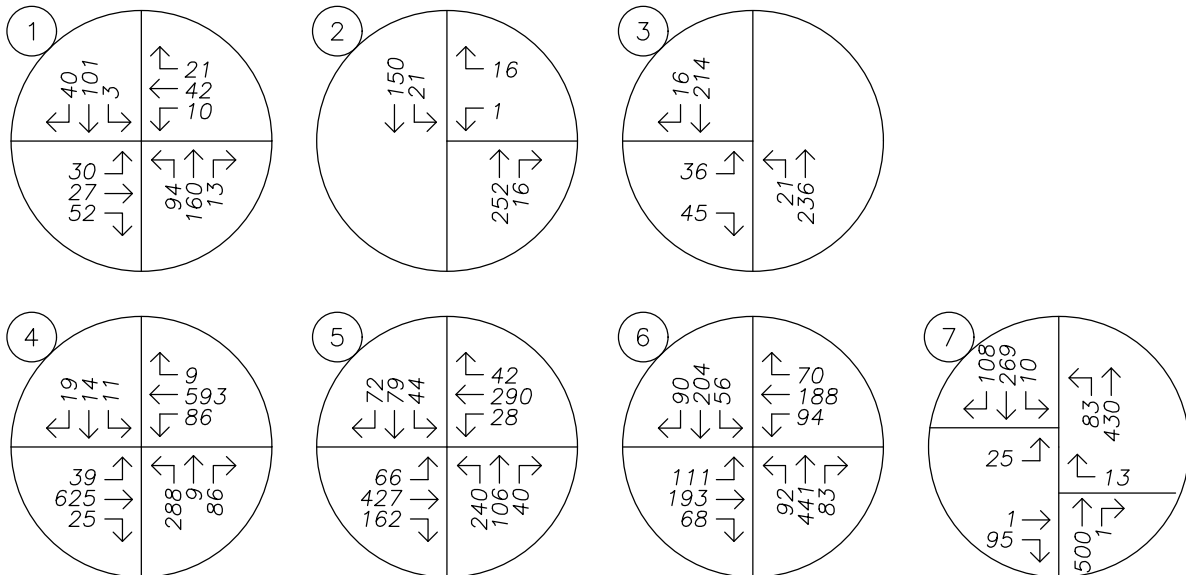
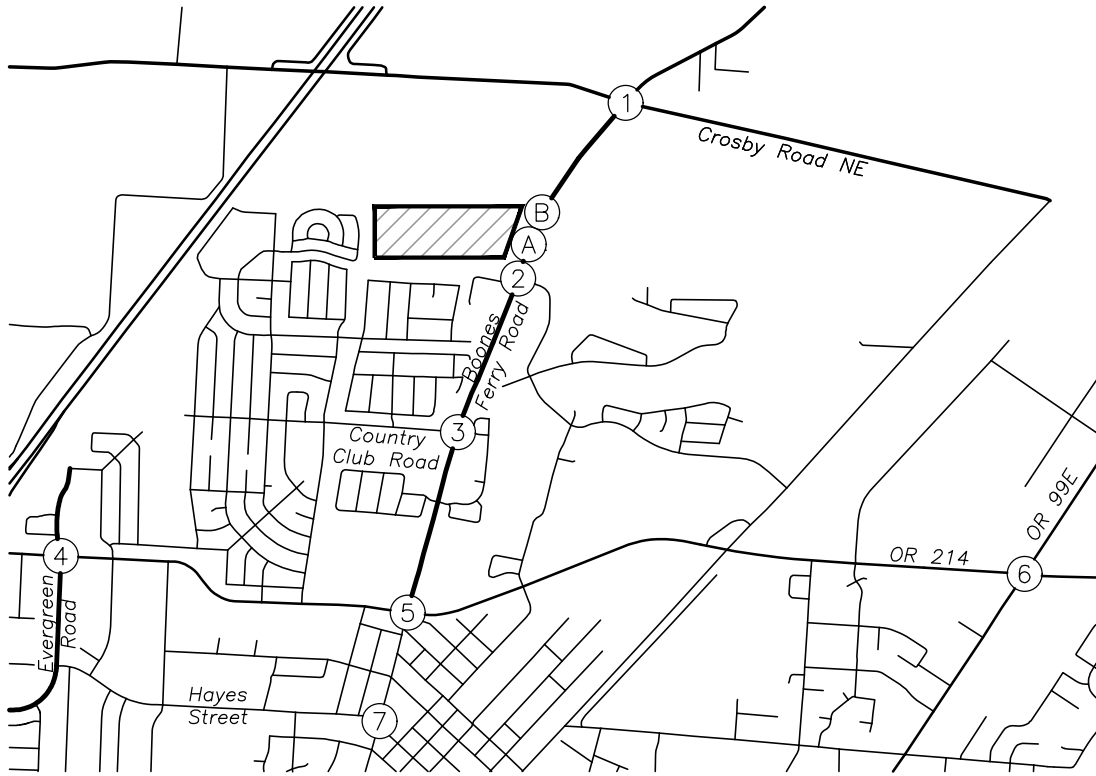
In-Process Development

In process trips associated with the previously approved Smith Creek Development and Allison Way Apartments were added to the background volumes to represent future traffic volumes at the study intersections prior to approval of the proposed development.

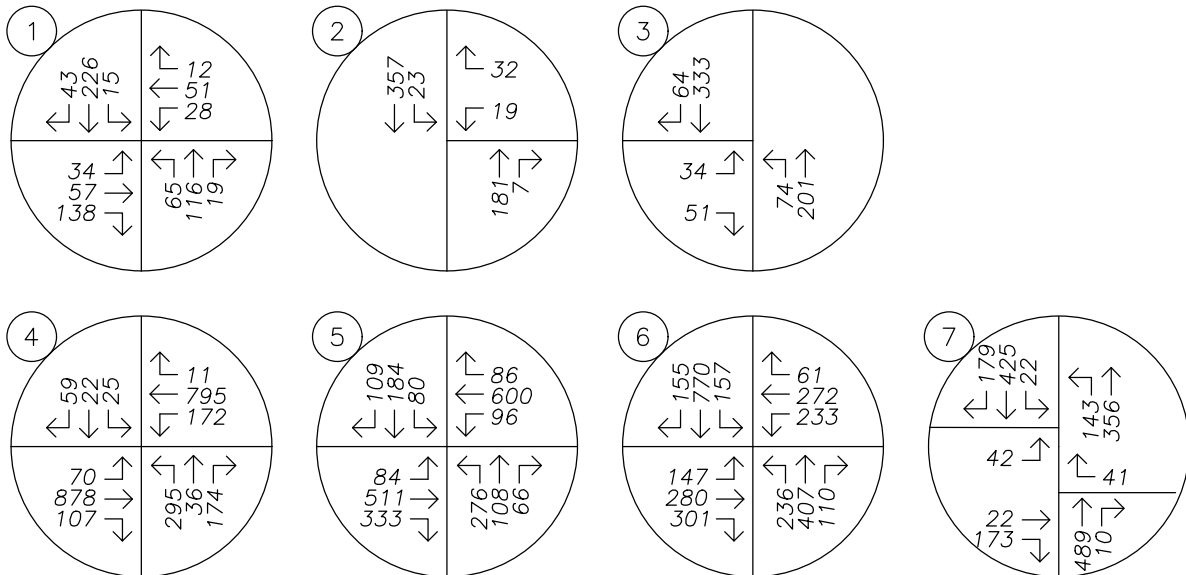
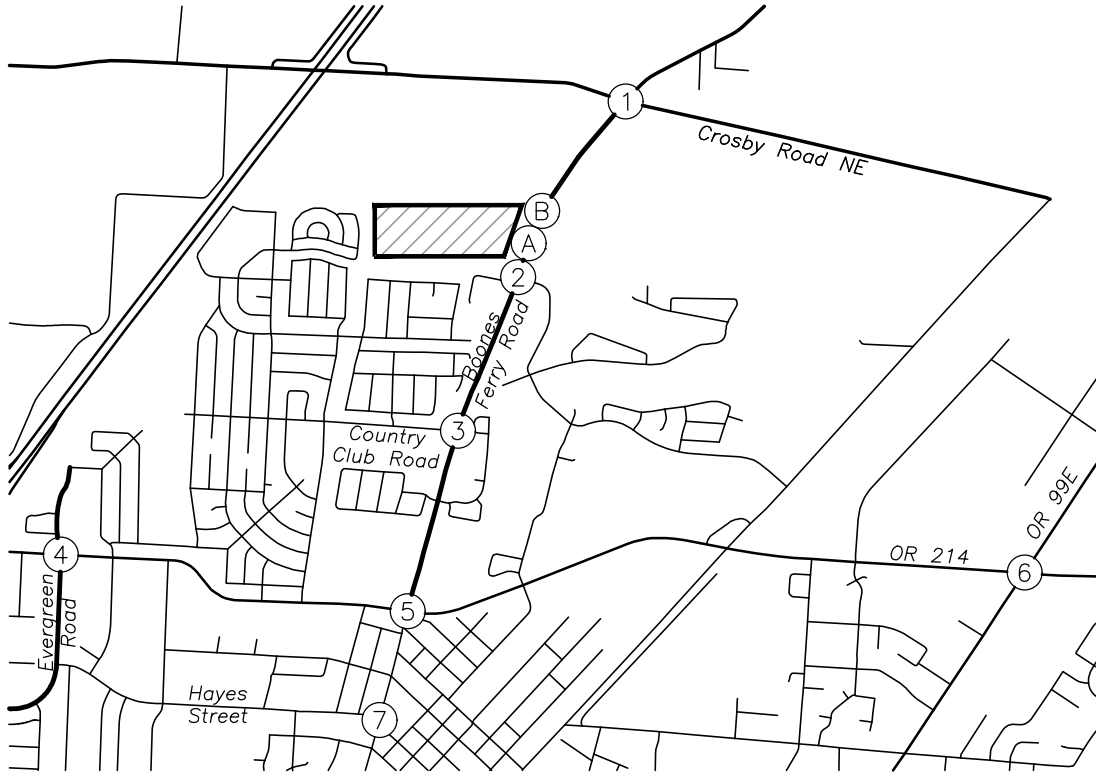
The year 2022 background traffic volumes for the morning and evening peak hours are shown in Figure 6 on page 16 and Figure 7 on page 17, respectively.

Build-Out Conditions

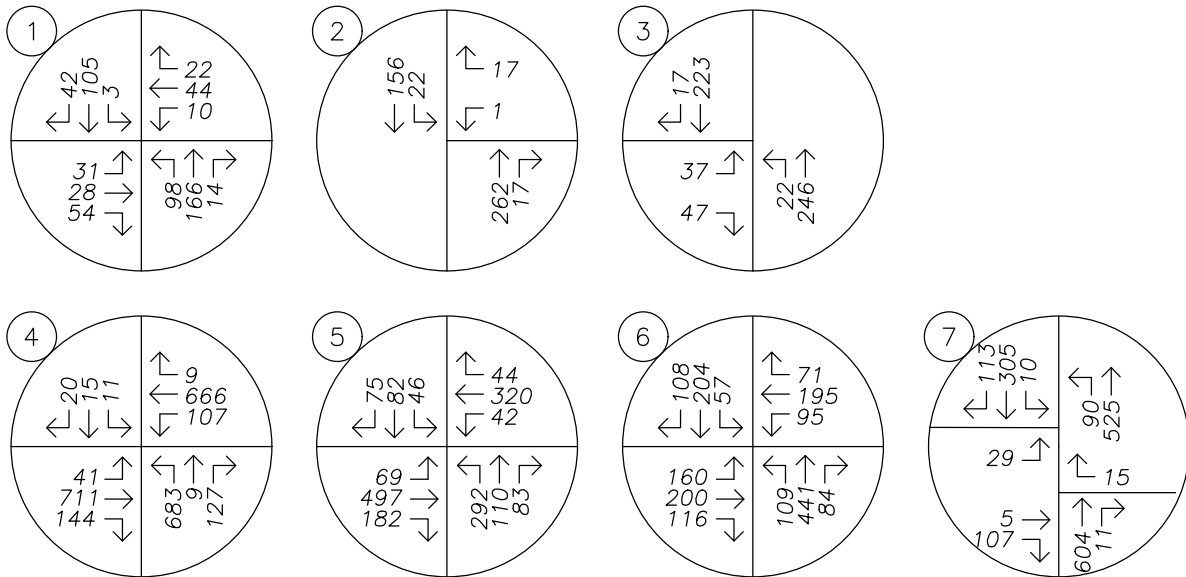
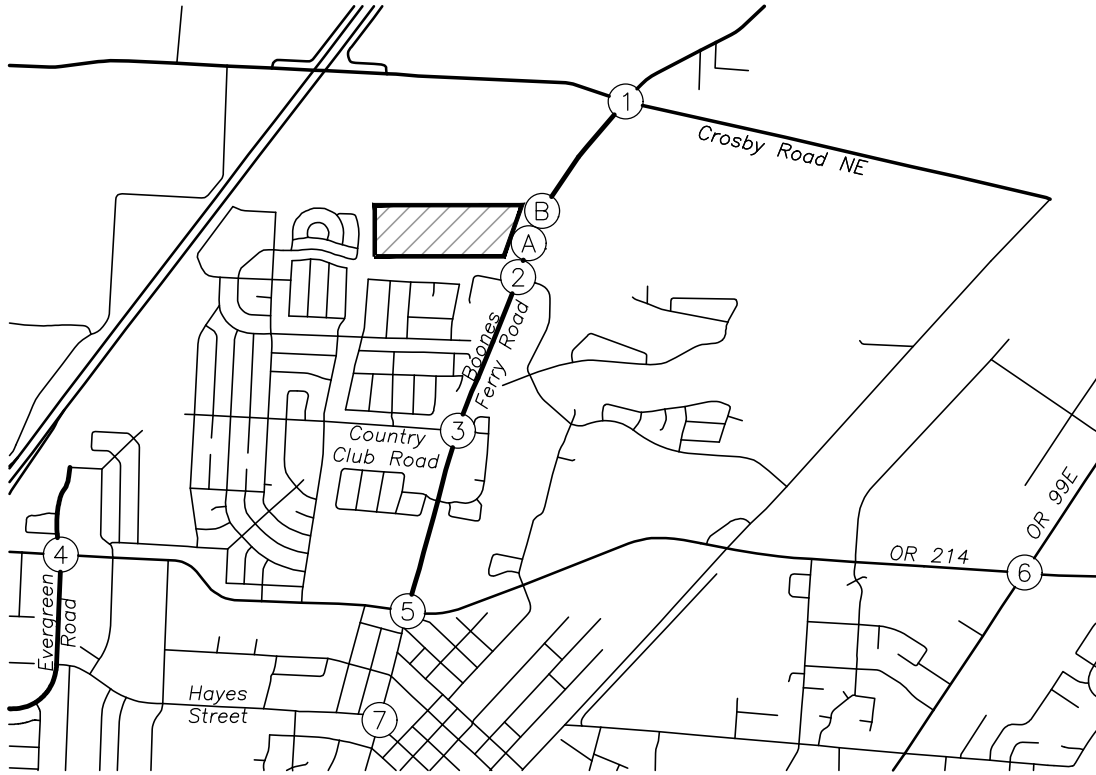
The trips estimated to be generated by the proposed development, as described earlier within the *Site Trips* section, were added to the year 2022 background traffic volumes to estimate traffic volumes under the year 2022 build-out conditions. The year 2022 build-out traffic volumes for the morning and evening peak hours are shown in Figure 8 on page 18 and Figure 9 on page 19, respectively.



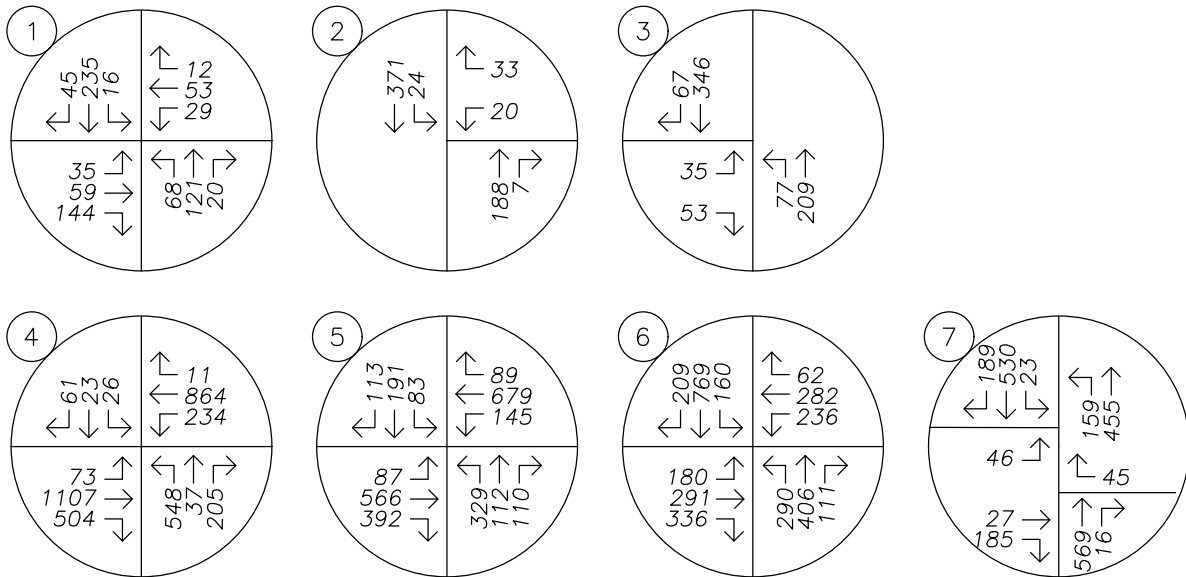
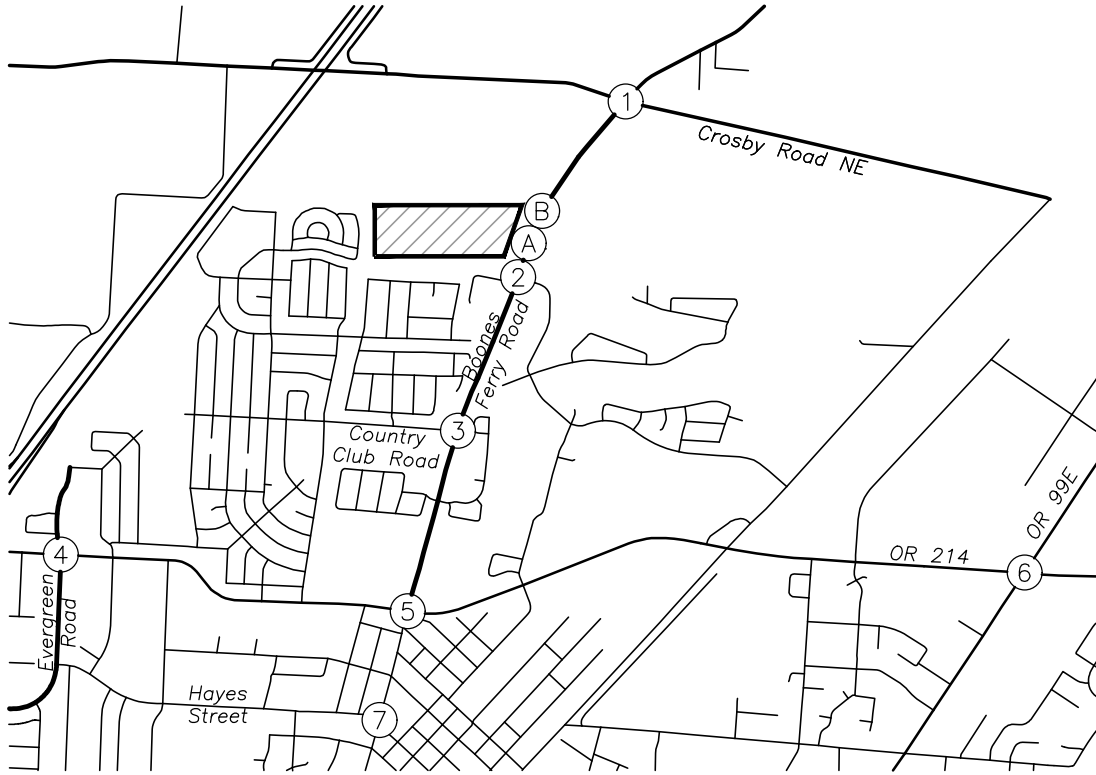
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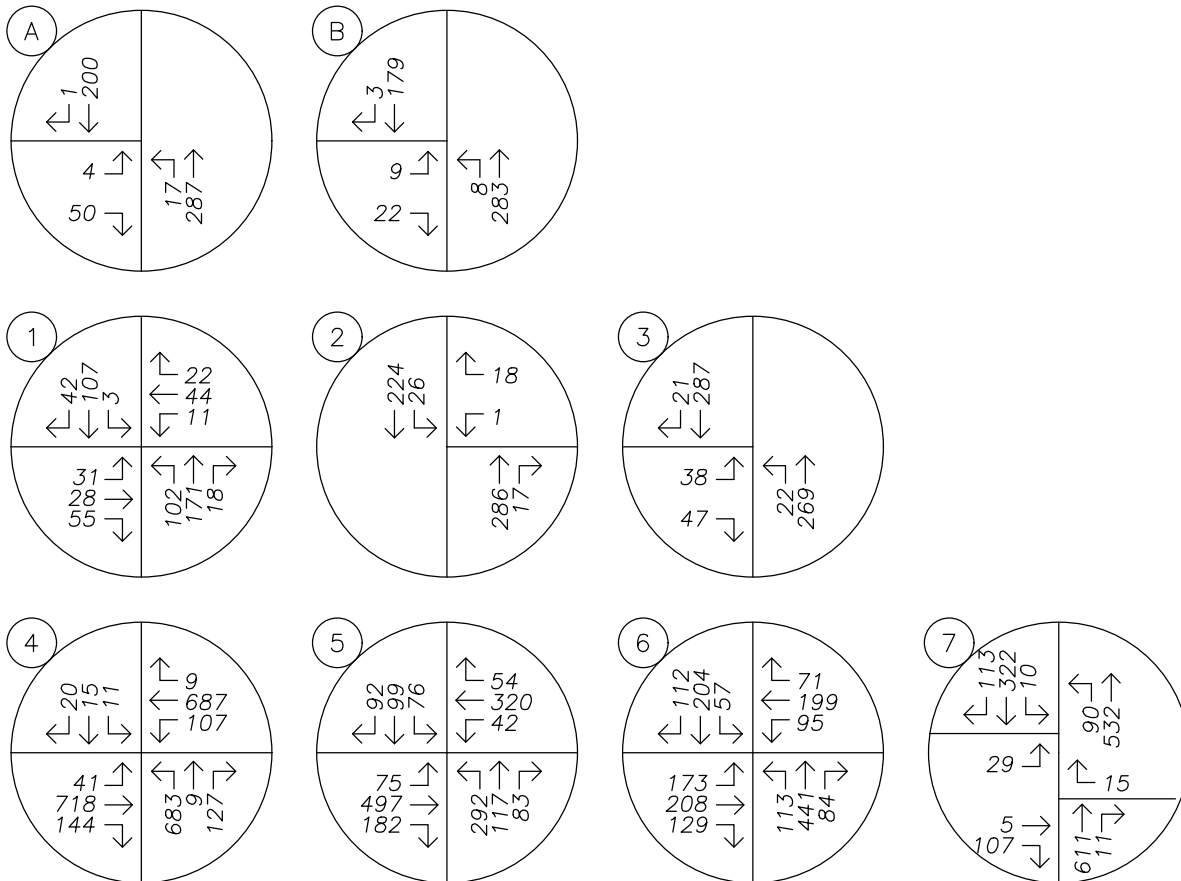
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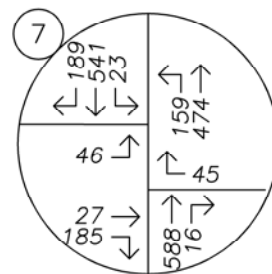
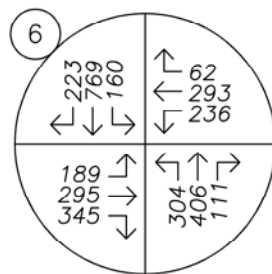
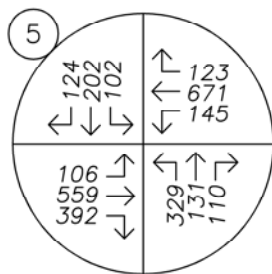
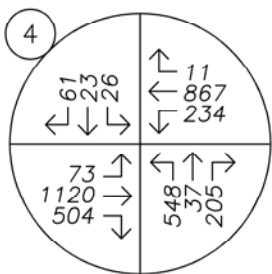
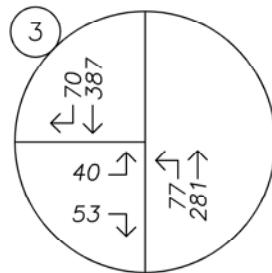
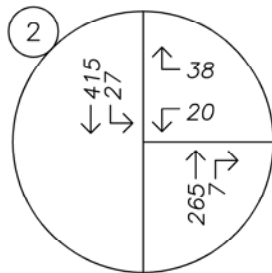
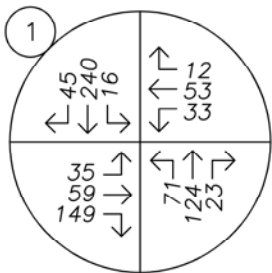
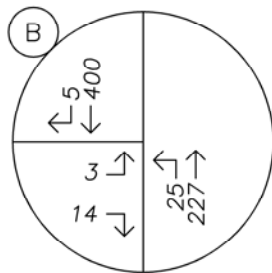
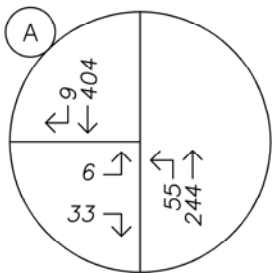
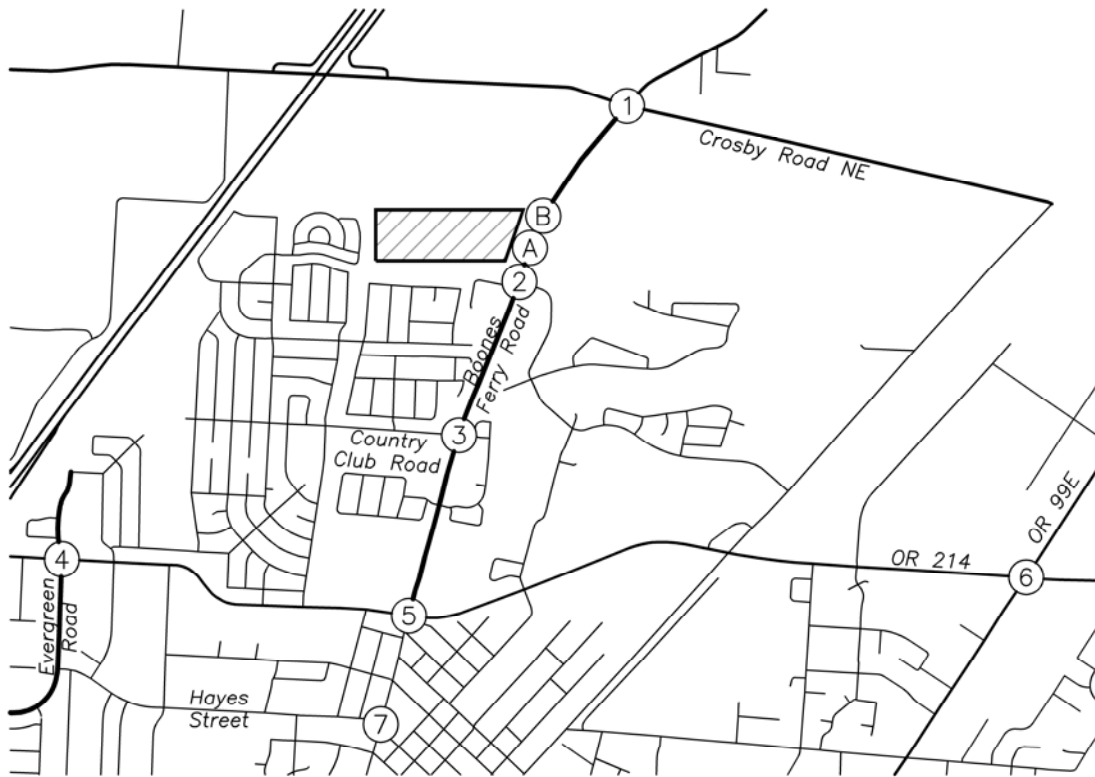
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Safety Analysis

The section below includes safety-related analyses for the project study area.

Crash History Review

Using data obtained from the ODOT's Crash Analysis and Reporting Unit, a review of the most recent available five years of crash history (January 2014 to December 2018) at the study intersections was performed. The crash data was evaluated based on the number of crashes, the type of collisions, the severity of the collisions, and the resulting crash rate for the intersection.

Crash rates provide the ability to compare safety risks at different intersections by accounting for both the number of crashes that have occurred during the study period and the number of vehicles that typically travel through the intersection. Crash rates were calculated using the common assumption that traffic counted during the evening peak period represents approximately 10 percent of the annual average daily traffic (ADT) at the intersection. Crash rates exceeding 1.0 crashes per million entering vehicles (CMEV) may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation. Crash rates for the intersections under ODOT's jurisdiction were also compared to the 90th percentile crash rates for urban, signalized, four-legged intersections, which is 0.86.

ODOT classifies crash severity into the following categories:

- Property Damage Only (PDO);
- Possible Injury (Injury C);
- Non-Incapacitating Injury (Injury B);
- Incapacitating Injury (Injury A); and
- Fatality or Fatal Injury.

Table 7 provides a summary of crash types while Table 8 on page 21 summarizes crash severities and rates for each of the study intersections. Detailed ODOT crash reports are included in the technical appendix to this report.

Table 7: Crash Type Summary

Intersection	Crash Type								Total Crashes
	Rear End	Side Swipe	Fixed Object	Ped	Turn	Angle	Head	Back	
Boones Ferry Road at Crosby Road NE	1	0	0	0	0	0	0	0	1
Boones Ferry Road at Hazelnut Drive	0	0	0	0	0	0	0	0	0
Boones Ferry Road at Country Club Drive	0	0	0	0	0	0	0	0	0
OR 214 at Evergreen Road	12	1	1	0	38	5	0	0	57
OR 214 at Boones Ferry Rd/ N Settlemier Ave	6	0	0	1	1	0	0	0	8
OR 214 at OR 99E	16	0	0	2	3	0	1	1	23
N Settlemier Ave at Hayes Street	2	0	0	0	3	0	0	0	5

Table 8: Crash Severity and Rate Summary

Intersection	Crash Severity					Total Crashes	AADT	Crash Rate
	PDO	C	B	A	Fatal			
Boones Ferry Road at Crosby Road NE	1	0	0	0	0	1	8,040	0.07
Boones Ferry Road at Hazelnut Drive	0	0	0	0	0	0	6,190	0
Boones Ferry Road at Country Club Drive	0	0	0	0	0	0	7,570	0
OR 214 at Evergreen Road	27	22	6	2	0	57	26,440	1.18
OR 214 at Boones Ferry Rd/ N Settlemier Ave	1	5	2	0	0	8	25,330	0.17
OR 214 at OR 99E	7	12	3	1	0	23	31,290	0.40
N Settlemier Ave at Hayes Street	5	0	0	0	0	5	14,040	0.20

Three intersections had reported collisions involving vulnerable users, crashes with high severities (Injury A or Fatality), or high crash rates. These locations are discussed further below. Based on a review of the crash data, all other study intersections do not show any signs of design flaws or a need for mitigation.



OR 214 at Boones Ferry Road/Settlemier Avenue

One collision involving a pedestrian was reported at the intersection. The crash was caused by a right-turning vehicle which did not yield to the right-of-way of the pedestrian. The pedestrian suffered a non-incapacitating injury.

OR 214 at OR 99E

This intersection had two collisions involving pedestrians and one collision resulting in a Type A injury:

- A collision involving a pedestrian was caused by an eastbound vehicle which did not yield to the right-of-way of the pedestrian. The pedestrian suffered a possible injury.
- A collision involving a pedestrian was caused by a driver's inattention while making a right-turn. The pedestrian suffered a non-incapacitating injury.
- A turning movement collision caused by a reckless driver under the influence of alcohol resulted in both drivers sustaining incapacitating injuries. The driver under the influence of alcohol disregarded the traffic signal.

These collisions were all caused by driver error and cannot be attributed to intersection configuration or characteristics.

OR 214 at Evergreen Road

The intersection has a calculated crash rate above 1.0 and above ODOT's 90th percentile crash rate of 0.86. It is also identified in the worst 5 percent of ODOT's Safety Priority Index System (SPIS) list.

Review of the historical crash data shows 38 turning movement collisions were reported, with 30 of those representing eastbound and westbound left-turning and through vehicles on the highway. This pattern likely occurs due to the flashing yellow arrow which allows for permissive turning movements. Vehicles may not be adequately estimating the time gap needed to cross the intersection safely. Based on the Protected Only Left-Turn Mode requirements found in ODOT's Traffic Signal Policy and Guidelines, "protected only left-turn mode should be provided when crash history indicates five or more crashes involving left-turn movements per approach in a consecutive 12-month period within the last three years." Protected left-turns should also be provided when U-turns are permitted, which is also the case. Altering the eastbound and westbound left-turn phases to protected only mode could reduce the intersection crash rate; however, it will affect the capacity of the intersection. The subject development adds a nominal amount of site trips to the total intersection volume. Additionally, the development's site trips contribute to the through movements along OR 214 and therefore are not anticipated to add impact turning movement collisions. Therefore, no mitigation is recommended at the intersection in conjunction with the proposed development.

Sight Distance

Intersection sight distance was measured and evaluated in accordance with the standards established in *A Policy on Geometric Design of Highways and Streets*². Intersection sight distance is an operational measure, intended to provide sufficient line of sight along the major street so that a driver can turn from the minor street without

² American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 7th Edition, 2018

impeding traffic flow. To measure intersection sight distance, the driver’s eye is assumed to be 15 feet from the near edge of the nearest travel lane of the intersecting street and at a height of 3.5 feet above the approach street pavement. The oncoming vehicle driver’s eye height along the major-street approach is assumed to be 3.5 feet above the cross-street pavement.

The southern site access is located 250 feet north of Hazelnut Drive. The northern site access is located 526 feet north of Hazelnut Drive. Based on the posted 45 mph speed limit north of Hazelnut Street, the recommended intersection sight distance is 500 feet.

Sight distance at the both the northern and southern site accesses was measured to exceed 525 feet to the north and south.

Active Transportation

Sidewalks are provided along Boones Ferry Road south of Vanderbeck Lane NE. Bicycle lanes are provided on Boones Ferry Road south of Hazelnut Drive. There are several planned pedestrian and bicycle projects listed in the City of Woodburn Transportation System Plan which will provide connections between the proposed development and existing infrastructure and enhance safety for vulnerable roadway users. These projects are listed in the following table.

Table 9: Active Transportation Projects in TSP

Project Number	Location	Description
P7	Boones Ferry Road from northern UGB to Hazelnut Drive	Install new sidewalks on one side
P13	Hayes Street from Harvard Drive to Settlemier Avenue	Fill in sidewalk gaps and improve safe routes to school
B9	Boones Ferry Road from northern UGB to Hazelnut Drive	Widen road and install bike lanes
B20	Hayes Street from Cascade Drive to Settlemier Avenue	Widen roadway and install bike lanes

Operational Analysis

To determine the level of service at the study intersections, a capacity analysis was conducted. The analysis was conducted using the signalized and unsignalized intersection analysis methodologies in the Highway Capacity Manual (HCM). Level of service (LOS) can range from LOS A, which indicates little or no delay, to LOS F, which indicates a significant amount of congestion and delay. The volume to capacity (v/c) ratio is a measure that compares the traffic volume (demand) against the available capacity of an intersection, with v/c ratios above 1.0 indicating that an intersection is operating above capacity.



Performance Standards

Intersections along OR 214 and OR 99E operate under the state's jurisdiction and therefore abide by the performance standards in the Oregon Highway Plan (OHP). For OR 214, a district highway located within the Urban Growth Boundary (non MPO), and a posted speed limit of 35 mph or less, the maximum volume-to-capacity ratio of 0.95 applies. For OR 99E, a regional highway located within the Urban Growth Boundary (non MPO), with a posted speed limit of 35 mph or less, the maximum volume-to-capacity ratio of 0.90 applies. For the intersection of two highways, the more restrictive standard applies.

For intersections under the City of Woodburn jurisdiction, intersections must operate at LOS E or better and a v/c ratio less than 1.0 regardless of LOS.

All-way stop-controlled intersections under Marion County jurisdiction must operate at LOS D or better, with individual movements at LOS E or better, with a volume to capacity ratio of 0.85 or less.

Delay & Capacity Analysis

The results of the capacity and delay analysis are shown in Table 10 on page 25. Values shown in bold exceed the performance standard.

Table 10: Capacity Analysis Summary

Condition	Morning Peak Hour			Evening Peak Hour		
	LOS	Delay (s)	V/C Ratio	LOS	Delay (s)	V/C Ratio
Boones Ferry Road at Crosby Road NE						
2020 Existing	A	10	0.42	B	11	0.43
2022 Background	B	10	0.44	B	12	0.46
2022 Buildout	B	10	0.46	B	13	0.47
Boones Ferry Road at Hazelnut Drive						
2020 Existing	A	10	0.03	B	10	0.08
2022 Background	B	10	0.03	B	11	0.08
2022 Buildout	B	10	0.03	B	11	0.10
Boones Ferry Road at Northern Site Access						
2022 Buildout	B	10	0.05	B	12	0.03
Boone Ferry Road at Southern Site Access						
2022 Buildout	B	10	0.08	B	12	0.08
Boones Ferry Road at Country Club Drive						
2020 Existing	B	12	0.15	B	15	0.20
2022 Background	B	12	0.16	C	15	0.22
2022 Buildout	B	13	0.18	C	18	0.27
OR 214 at Evergreen Road						
2020 Existing	B	13	0.43	B	14	0.59
2022 Background	C	27	0.63	C	24	0.81
2022 Buildout	C	27	0.63	C	24	0.82
OR 214 at N Settlemier Avenue/Boones Ferry Road						
2020 Existing	C	29	0.56	C	37	0.80
2022 Background	C	31	0.66	D	46	0.89
2022 Buildout	C	33	0.67	D	48	0.91
OR 214 at OR 99E						
2020 Existing	D	40	0.48	D	52	0.80
2022 Background	D	42	0.53	E	58	0.85
2022 Buildout	D	42	0.54	E	61	0.87
N Settlemier Avenue at Hayes Street (N)						
2020 Existing	C	22	0.11	D	34	0.26
2022 Background	D	28	0.17	F	68	0.47
2022 Buildout	D	30	0.18	F	74	0.49
N Settlemier Avenue at Hayes Street (S)						
2020 Existing	B	12	0.14	B	12	0.14
2022 Background	B	13	0.19	D	26	0.58
2022 Buildout	B	13	0.20	D	27	0.59



Planned Mitigation

Several roadway and intersection projects listed in the TSP apply to facilities studied in this report. A summary of the planned transportation projects within the study area are shown below.

Table 11: Planned Transportation Projects in the TSP

Project Number	Location	Description
R3	OR 214 from Cascadia Drive to OR 99E	Widen to include two lanes in each direction and a two-way left-turn lane and changes to signal timing
R10	OR 214 at Evergreen Road	Update signal timing
R14	OR 214 at OR 99E	Install second southbound left-turn lane, second receiving lane on east leg, and update signal timing
S10	Settlemer Avenue at Hayes Street	Enhance traffic control (signal, roundabout, other)

Preliminary Traffic Signal Warrants

Traffic signal warrants were examined for all unsignalized study intersections based on the methodologies in the Manual on Uniform Traffic Control Devices (MUTCD). This includes the intersections of Boones Ferry Road at Crosby Road NE, Boones Ferry Road at Hazelnut Drive, Boones Ferry Road at Country Club Drive, N Settlemer Avenue at Hayes Street, and both proposed site accesses along Boones Ferry Road. Volumes were used for the year 2022 buildout conditions.

Warrant 1, Eight Hour Vehicular Volumes, was used from the MUTCD published by the Federal Highway Administration in 2009. Warrants were evaluated based on the common assumption that traffic counted during the evening peak hour represents ten percent of the ADT.

Preliminary traffic signal warrants are not projected to be met at any of the unsignalized intersections in the study area upon full buildout of the proposed development. Detailed information on the traffic signal warrant analysis is included in the attached appendix.

Conclusions

The following are key findings related to transportation:

- The intersection of OR 214 at Evergreen Road is calculated to have a crash rate above 1.0. Specifically, a high number of eastbound and westbound collisions involving left-turning vehicles were reported. However, due to the small number of trips to be added and the movement to which the trips will contribute, no mitigation is recommended at the intersection in conjunction with the proposed development. Based on the review of crash history, no design flaws or deficiencies are evident at any other intersections.
- Intersection sight distance at both the site accesses was measured to exceed 525 feet to north and south, which meets the intersection sight distance recommendation of 500 feet.
- Preliminary traffic signal warrants are not met at any of the unsignalized study intersections upon full buildout of the proposed development.
- All study intersections are projected to operate acceptably per each applicable performance standard under all analysis scenarios; therefore, no mitigation is recommended.



Appendix





TRIP GENERATION CALCULATIONS

Land Use: Single-Family Detached Housing
Land Use Code: 210
Setting/Location: General Urban/Suburban
Variable: Dwelling Units
Variable Value: 154

AM PEAK HOUR

Trip Rate: 0.74

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	29	85	114

PM PEAK HOUR

Trip Rate: 0.99

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	96	56	152

WEEKDAY

Trip Rate: 9.44

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	727	727	1,454

SATURDAY

Trip Rate: 9.54

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	735	735	1,470



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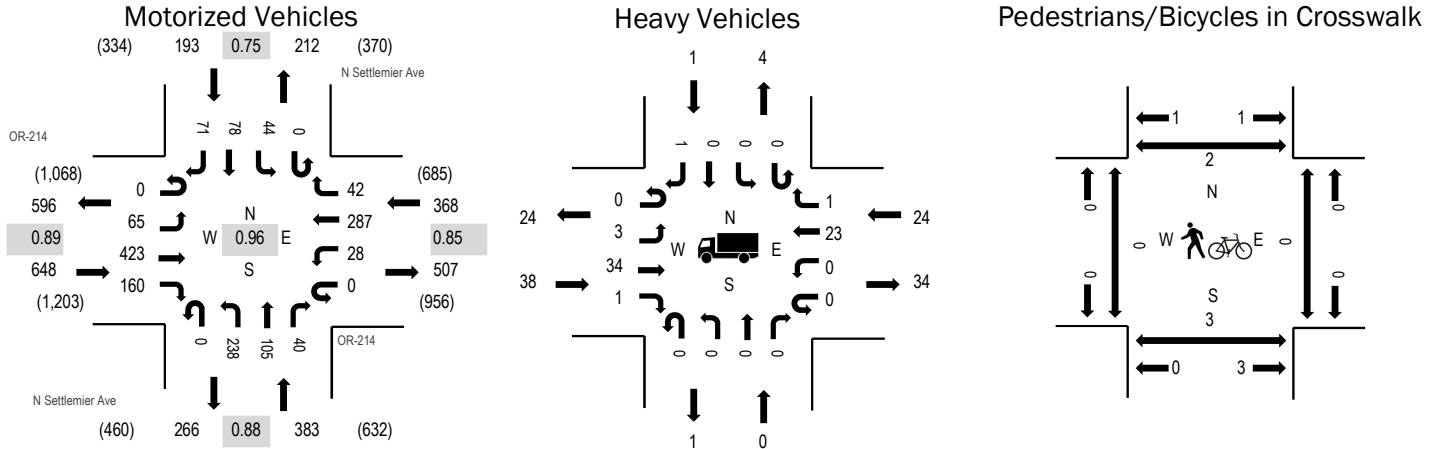
Location: 1 N Settlemier Ave & OR-214 AM

Date: Tuesday, October 6, 2020

Study Peak Hour: 07:05 AM - 08:05 AM

Peak 15-Minutes in Study Peak Hour: 07:40 AM - 07:55 AM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	9.0%	0.89
WB	11.5%	0.85
NB	1.3%	0.88
SB	2.6%	0.75
All	6.9%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	OR-214 Eastbound				OR-214 Westbound				N Settlemier Ave Northbound				N Settlemier Ave Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	6	32	9	0	2	18	3	0	13	8	3	0	0	3	8	105	1,569
7:05 AM	0	4	47	11	0	1	23	3	0	23	9	1	0	4	2	6	134	1,581
7:10 AM	0	5	34	14	0	0	34	3	0	19	10	1	0	2	5	5	132	1,557
7:15 AM	0	6	31	16	0	0	26	1	0	19	11	6	0	3	5	8	132	1,518
7:20 AM	0	8	32	12	0	3	22	1	0	21	7	0	0	3	7	9	125	1,491
7:25 AM	0	6	31	20	0	4	15	5	0	19	8	3	0	2	7	6	126	1,477
7:30 AM	0	7	31	15	0	2	30	3	0	22	8	4	0	5	5	8	140	1,469
7:35 AM	0	4	34	15	0	0	18	4	0	24	10	3	0	6	14	11	143	1,434
7:40 AM	0	7	24	11	0	2	23	2	0	22	10	6	0	4	7	2	120	1,400
7:45 AM	0	5	53	12	0	1	22	4	0	21	9	3	0	3	5	5	143	1,389
7:50 AM	0	6	35	11	0	5	26	3	0	17	9	4	0	4	7	5	132	1,351
7:55 AM	0	6	40	14	0	5	20	4	0	12	6	9	0	4	12	5	137	1,322
8:00 AM	0	1	31	9	0	5	28	9	0	19	8	0	0	4	2	1	117	1,285
8:05 AM	0	5	31	10	0	1	21	3	0	14	7	2	0	4	6	6	110	
8:10 AM	0	1	21	9	0	5	19	0	0	13	4	3	0	7	5	6	93	
8:15 AM	0	7	34	12	0	0	17	4	0	15	4	5	0	1	2	4	105	
8:20 AM	0	3	32	12	0	2	28	1	0	10	6	6	0	3	4	4	111	
8:25 AM	0	6	32	12	0	2	31	2	0	12	7	0	0	1	4	9	118	
8:30 AM	0	4	34	8	0	1	21	5	0	9	8	6	0	3	1	5	105	
8:35 AM	0	6	26	14	0	3	20	2	0	15	8	1	0	4	5	5	109	
8:40 AM	0	4	38	12	0	1	23	6	0	13	4	1	0	4	3	0	109	
8:45 AM	0	3	36	8	0	1	22	3	0	9	7	7	0	1	4	4	105	
8:50 AM	0	5	35	6	0	4	23	2	0	13	3	2	0	2	3	5	103	
8:55 AM	0	5	27	10	0	3	26	3	0	7	3	1	0	4	7	4	100	
Count Total	0	120	801	282	0	53	556	76	0	381	174	77	0	78	125	131	2,854	
Peak Hour	0	65	423	160	0	28	287	42	0	238	105	40	0	44	78	71	1,581	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	2	0	3	0	5	7:00 AM						7:00 AM	1	0	0	0	1
7:05 AM	5	0	1	0	6	7:05 AM						7:05 AM	0	0	0	0	0
7:10 AM	5	0	4	0	9	7:10 AM						7:10 AM	0	0	0	0	0
7:15 AM	2	0	1	0	3	7:15 AM						7:15 AM	0	0	0	0	0
7:20 AM	4	0	1	0	5	7:20 AM						7:20 AM	0	1	0	0	1
7:25 AM	4	0	1	0	5	7:25 AM						7:25 AM	0	0	0	0	0
7:30 AM	3	0	1	0	4	7:30 AM						7:30 AM	0	0	0	0	0
7:35 AM	0	0	2	0	2	7:35 AM						7:35 AM	0	0	0	0	0
7:40 AM	4	0	1	0	5	7:40 AM						7:40 AM	0	0	0	0	0
7:45 AM	4	0	3	0	7	7:45 AM						7:45 AM	0	0	0	0	0
7:50 AM	3	0	3	1	7	7:50 AM						7:50 AM	0	0	0	0	0
7:55 AM	3	0	1	0	4	7:55 AM						7:55 AM	0	2	0	1	3
8:00 AM	1	0	5	0	6	8:00 AM						8:00 AM	0	0	0	1	1
8:05 AM	2	0	1	0	3	8:05 AM						8:05 AM	0	0	0	0	0
8:10 AM	3	0	2	0	5	8:10 AM						8:10 AM	0	0	0	0	0
8:15 AM	4	0	1	0	5	8:15 AM						8:15 AM	0	0	0	0	0
8:20 AM	2	0	6	1	9	8:20 AM						8:20 AM	0	0	0	0	0
8:25 AM	3	0	2	0	5	8:25 AM						8:25 AM	0	0	0	0	0
8:30 AM	3	0	1	0	4	8:30 AM						8:30 AM	0	0	0	0	0
8:35 AM	4	0	5	1	10	8:35 AM						8:35 AM	0	0	0	0	0
8:40 AM	3	0	4	0	7	8:40 AM						8:40 AM	0	0	0	0	0
8:45 AM	5	0	3	0	8	8:45 AM						8:45 AM	0	0	0	0	0
8:50 AM	3	0	3	0	6	8:50 AM						8:50 AM	0	0	0	0	0
8:55 AM	2	0	5	1	8	8:55 AM						8:55 AM	0	0	0	0	0
Count Total	74	0	60	4	138	Count Total						Count Total	1	3	0	2	6
Peak Hour	38	0	24	1	63	Peak Hour						Peak Hour	0	3	0	2	5



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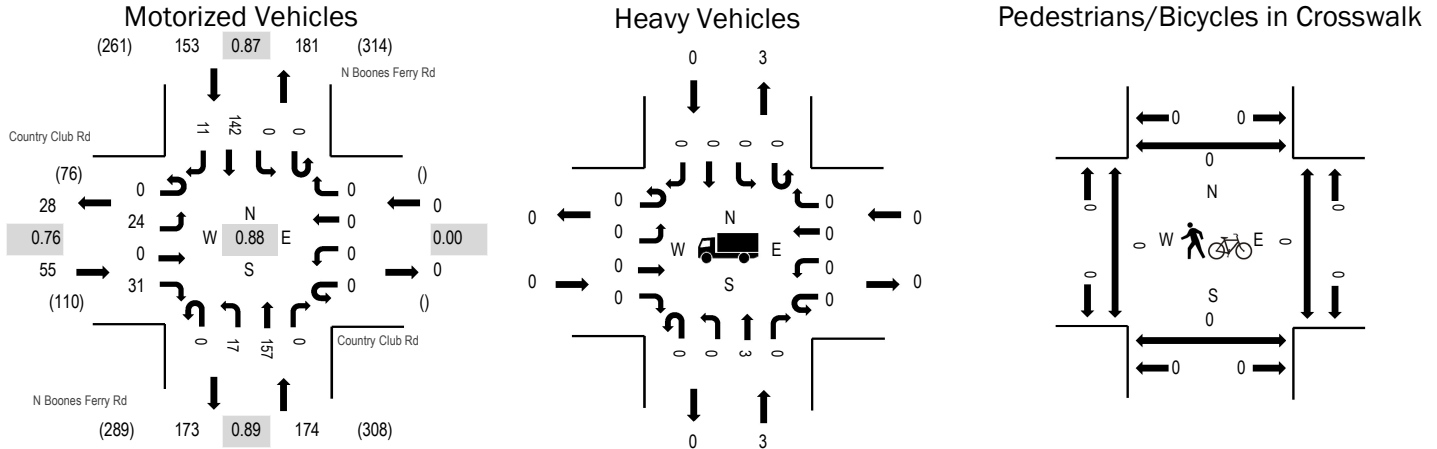
Location: 2 N Boones Ferry Rd & Country Club Rd AM

Date: Tuesday, October 6, 2020

Study Peak Hour: 07:05 AM - 08:05 AM

Peak 15-Minutes in Study Peak Hour: 07:40 AM - 07:55 AM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.76
WB	0.0%	0.00
NB	4.6%	0.89
SB	2.6%	0.87
All	3.1%	0.88

Traffic Counts - Motorized Vehicles

Interval Start Time	Country Club Rd Eastbound				Country Club Rd Westbound				N Boones Ferry Rd Northbound				N Boones Ferry Rd Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	2	0	1	0	0	0	0	0	1	11	0	0	0	9	0	24	382
7:05 AM	0	4	0	2	0	0	0	0	0	1	14	0	0	0	13	1	35	382
7:10 AM	0	2	0	2	0	0	0	0	0	1	17	0	0	0	6	0	28	379
7:15 AM	0	0	0	2	0	0	0	0	0	0	16	0	0	0	14	1	33	370
7:20 AM	0	2	0	1	0	0	0	0	0	0	13	0	0	0	16	0	32	357
7:25 AM	0	4	0	2	0	0	0	0	0	0	13	0	0	0	9	0	28	349
7:30 AM	0	2	0	3	0	0	0	0	0	4	11	0	0	0	15	1	36	348
7:35 AM	0	1	0	6	0	0	0	0	0	0	14	0	0	0	17	0	38	340
7:40 AM	0	3	0	3	0	0	0	0	0	2	16	0	0	0	7	4	35	324
7:45 AM	0	1	0	1	0	0	0	0	0	0	16	0	0	0	13	2	33	308
7:50 AM	0	1	0	3	0	0	0	0	0	2	12	0	0	0	14	0	32	304
7:55 AM	0	2	0	4	0	0	0	0	0	3	6	0	0	0	11	2	28	299
8:00 AM	0	2	0	2	0	0	0	0	0	4	9	0	0	0	7	0	24	297
8:05 AM	0	2	0	5	0	0	0	0	0	5	8	0	0	0	12	0	32	
8:10 AM	0	2	0	4	0	0	0	0	0	0	7	0	0	0	5	1	19	
8:15 AM	0	0	0	1	0	0	0	0	0	1	8	0	0	0	7	3	20	
8:20 AM	0	3	0	2	0	0	0	0	0	3	6	0	0	0	8	2	24	
8:25 AM	0	3	0	1	0	0	0	0	0	3	9	0	0	0	7	4	27	
8:30 AM	0	2	0	3	0	0	0	0	0	4	11	0	0	0	8	0	28	
8:35 AM	0	1	0	2	0	0	0	0	0	3	8	0	0	0	7	1	22	
8:40 AM	0	1	0	1	0	0	0	0	0	3	8	0	0	0	4	2	19	
8:45 AM	0	5	0	2	0	0	0	0	0	2	11	0	0	0	7	2	29	
8:50 AM	0	5	0	3	0	0	0	0	0	2	10	0	0	0	6	1	27	
8:55 AM	0	1	0	3	0	0	0	0	0	1	9	0	0	0	8	4	26	
Count Total	0	51	0	59	0	0	0	0	0	45	263	0	0	0	230	31	679	
Peak Hour	0	24	0	31	0	0	0	0	0	17	157	0	0	0	142	11	382	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	0	0	7:00 AM						7:00 AM	0	0	0	0	0
7:05 AM	0	0	0	0	0	7:05 AM						7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM						7:10 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0	7:15 AM						7:15 AM	0	0	0	0	0
7:20 AM	0	1	0	0	1	7:20 AM						7:20 AM	0	0	0	0	0
7:25 AM	0	0	0	0	0	7:25 AM						7:25 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0	7:30 AM						7:30 AM	0	0	0	0	0
7:35 AM	0	1	0	0	1	7:35 AM						7:35 AM	0	0	0	0	0
7:40 AM	0	0	0	0	0	7:40 AM						7:40 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0	7:45 AM						7:45 AM	0	0	0	0	0
7:50 AM	0	0	0	0	0	7:50 AM						7:50 AM	0	0	0	0	0
7:55 AM	0	1	0	0	1	7:55 AM						7:55 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0	8:00 AM						8:00 AM	0	0	0	0	0
8:05 AM	0	0	0	0	0	8:05 AM						8:05 AM	0	0	0	0	0
8:10 AM	0	0	0	0	0	8:10 AM						8:10 AM	0	0	0	0	0
8:15 AM	0	0	0	1	1	8:15 AM						8:15 AM	0	0	0	0	0
8:20 AM	0	0	0	0	0	8:20 AM						8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	0	0	8:25 AM						8:25 AM	0	0	0	0	0
8:30 AM	0	1	0	0	1	8:30 AM						8:30 AM	0	0	1	0	1
8:35 AM	1	0	0	0	1	8:35 AM						8:35 AM	0	0	1	0	1
8:40 AM	0	0	0	0	0	8:40 AM						8:40 AM	1	0	0	0	1
8:45 AM	0	0	0	0	0	8:45 AM						8:45 AM	0	0	0	0	0
8:50 AM	0	0	0	0	0	8:50 AM						8:50 AM	0	0	0	0	0
8:55 AM	0	0	0	1	1	8:55 AM						8:55 AM	0	0	0	0	0
Count Total	1	4	0	2	7	Count Total						Count Total	1	0	2	0	3
Peak Hour	0	3	0	0	3	Peak Hour						Peak Hour	0	0	0	0	0



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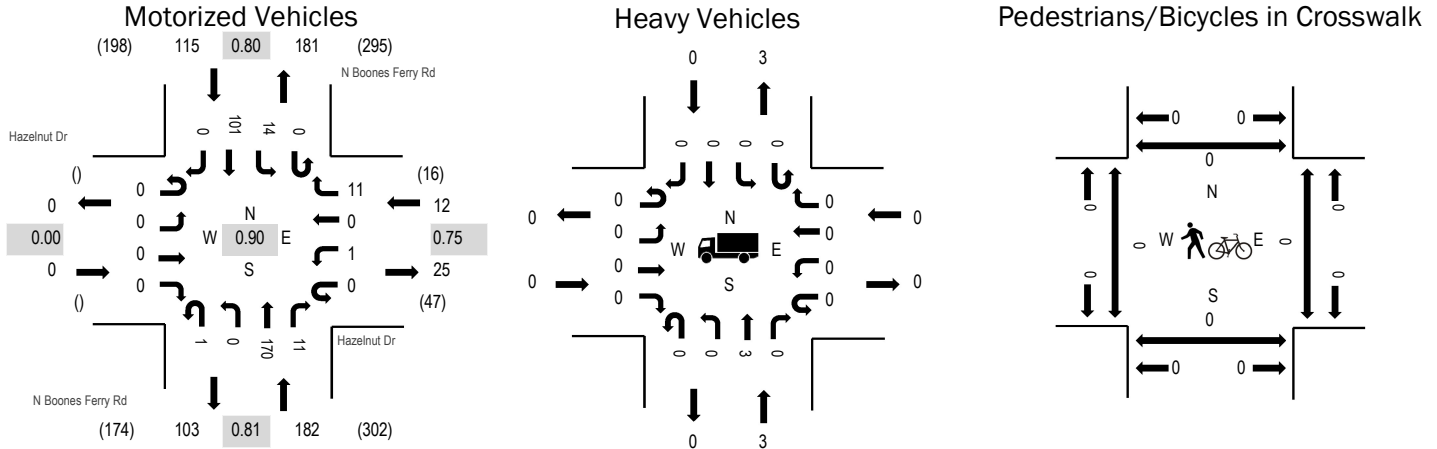
Location: 3 N Boones Ferry Rd & Hazelnut Dr AM

Date: Tuesday, October 6, 2020

Study Peak Hour: 07:05 AM - 08:05 AM

Peak 15-Minutes in Study Peak Hour: 07:40 AM - 07:55 AM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	0.0%	0.75
NB	3.3%	0.81
SB	3.5%	0.80
All	3.2%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	Hazelnut Dr Eastbound				Hazelnut Dr Westbound				N Boones Ferry Rd Northbound				N Boones Ferry Rd Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	0	0	0	0	0	0	0	0	16	1	0	0	6	0	23	305
7:05 AM	0	0	0	0	0	0	0	2	0	0	17	0	0	0	5	0	24	309
7:10 AM	0	0	0	0	0	0	0	1	0	0	18	0	3	10	0	32	300	
7:15 AM	0	0	0	0	0	0	0	1	0	0	20	1	0	1	7	0	30	277
7:20 AM	0	0	0	0	0	0	0	0	0	0	13	2	0	0	8	0	23	264
7:25 AM	0	0	0	0	0	1	0	1	1	0	14	2	0	2	7	0	28	259
7:30 AM	0	0	0	0	0	0	0	0	0	0	12	0	0	0	14	0	26	252
7:35 AM	0	0	0	0	0	0	0	2	0	0	12	0	0	0	13	0	27	245
7:40 AM	0	0	0	0	0	0	0	1	0	0	17	2	0	1	5	0	26	237
7:45 AM	0	0	0	0	0	0	0	1	0	0	14	2	0	1	5	0	23	225
7:50 AM	0	0	0	0	0	0	0	0	0	0	12	1	0	1	13	0	27	217
7:55 AM	0	0	0	0	0	0	0	0	0	0	8	0	0	1	7	0	16	210
8:00 AM	0	0	0	0	0	0	0	2	0	0	13	1	0	4	7	0	27	211
8:05 AM	0	0	0	0	0	0	0	0	0	0	7	2	0	2	4	0	15	
8:10 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	4	0	9	
8:15 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	1	7	0	17	
8:20 AM	0	0	0	0	0	0	0	2	0	0	9	1	0	1	5	0	18	
8:25 AM	0	0	0	0	0	0	0	0	0	0	8	1	0	1	11	0	21	
8:30 AM	0	0	0	0	0	0	0	0	0	0	13	0	0	0	6	0	19	
8:35 AM	0	0	0	0	0	0	0	1	0	0	8	2	0	1	7	0	19	
8:40 AM	0	0	0	0	0	0	0	1	0	0	6	1	0	2	4	0	14	
8:45 AM	0	0	0	0	0	0	0	0	0	0	9	0	0	2	4	0	15	
8:50 AM	0	0	0	0	0	0	0	0	0	0	12	0	0	1	7	0	20	
8:55 AM	0	0	0	0	0	0	0	0	0	0	8	2	0	1	6	0	17	
Count Total	0	0	0	0	0	1	0	15	1	0	280	21	0	26	172	0	516	
Peak Hour	0	0	0	0	0	1	0	11	1	0	170	11	0	14	101	0	309	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	0	0	7:00 AM						7:00 AM	0	0	0	0	0
7:05 AM	0	0	0	0	0	7:05 AM						7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM						7:10 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0	7:15 AM						7:15 AM	0	0	0	0	0
7:20 AM	0	1	0	0	1	7:20 AM						7:20 AM	0	0	0	0	0
7:25 AM	0	0	0	0	0	7:25 AM						7:25 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0	7:30 AM						7:30 AM	0	0	0	0	0
7:35 AM	0	1	0	0	1	7:35 AM						7:35 AM	0	0	0	0	0
7:40 AM	0	0	0	0	0	7:40 AM						7:40 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0	7:45 AM						7:45 AM	0	0	0	0	0
7:50 AM	0	0	0	0	0	7:50 AM						7:50 AM	0	0	0	0	0
7:55 AM	0	1	0	0	1	7:55 AM						7:55 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0	8:00 AM						8:00 AM	0	0	0	0	0
8:05 AM	0	0	0	0	0	8:05 AM						8:05 AM	0	0	0	0	0
8:10 AM	0	0	0	0	0	8:10 AM						8:10 AM	0	0	0	0	0
8:15 AM	0	0	0	1	1	8:15 AM						8:15 AM	0	0	0	0	0
8:20 AM	0	0	0	0	0	8:20 AM						8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	0	0	8:25 AM						8:25 AM	0	0	0	0	0
8:30 AM	0	1	0	0	1	8:30 AM						8:30 AM	0	0	0	0	0
8:35 AM	0	0	0	0	0	8:35 AM						8:35 AM	0	0	0	0	0
8:40 AM	0	0	0	0	0	8:40 AM						8:40 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0	8:45 AM						8:45 AM	0	0	0	0	0
8:50 AM	0	0	0	0	0	8:50 AM						8:50 AM	0	0	0	0	0
8:55 AM	0	0	0	1	1	8:55 AM						8:55 AM	0	0	0	0	0
Count Total	0	4	0	2	6	Count Total						Count Total	0	0	0	0	0
Peak Hour	0	3	0	0	3	Peak Hour						Peak Hour	0	0	0	0	0



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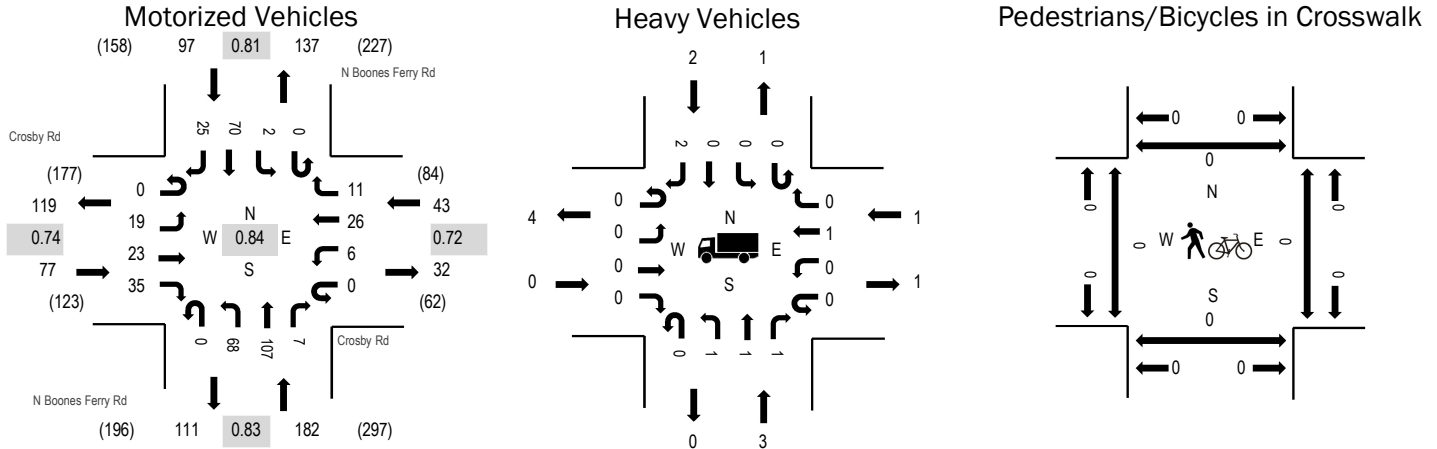
Location: 4 N Boones Ferry Rd & Crosby Rd AM

Date: Tuesday, October 6, 2020

Study Peak Hour: 07:05 AM - 08:05 AM

Peak 15-Minutes in Study Peak Hour: 07:40 AM - 07:55 AM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.3%	0.74
WB	4.7%	0.72
NB	3.3%	0.83
SB	6.2%	0.81
All	3.8%	0.84

Traffic Counts - Motorized Vehicles

Interval Start Time	Crosby Rd Eastbound				Crosby Rd Westbound				N Boones Ferry Rd Northbound				N Boones Ferry Rd Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	1	1	0	0	1	2	3	0	2	9	2	0	0	5	4	30	399
7:05 AM	0	1	0	2	0	0	1	3	0	6	10	0	0	0	3	2	28	399
7:10 AM	0	1	3	1	0	0	1	3	0	3	14	0	0	2	7	3	38	394
7:15 AM	0	2	0	3	0	0	5	1	0	11	10	0	0	0	9	1	42	369
7:20 AM	0	5	1	3	0	0	3	2	0	5	11	1	0	0	6	2	39	338
7:25 AM	0	2	0	1	0	1	0	0	0	5	9	0	0	0	4	1	23	324
7:30 AM	0	0	3	10	0	0	0	0	0	4	8	3	0	0	6	1	35	327
7:35 AM	0	1	0	5	0	1	5	1	0	4	8	0	0	0	8	5	38	316
7:40 AM	0	2	3	2	0	0	3	0	0	5	10	0	0	0	4	3	32	297
7:45 AM	0	4	1	3	0	0	1	0	0	8	5	3	0	0	5	0	30	286
7:50 AM	0	1	3	3	0	2	5	0	0	9	9	0	0	0	6	4	42	279
7:55 AM	0	0	3	2	0	2	2	1	0	1	5	0	0	0	5	1	22	260
8:00 AM	0	0	6	0	0	0	0	0	0	7	8	0	0	0	7	2	30	263
8:05 AM	0	1	1	1	0	1	1	2	0	1	7	2	0	0	4	2	23	
8:10 AM	0	0	1	2	0	2	1	0	0	2	4	0	0	0	1	0	13	
8:15 AM	0	0	1	2	0	2	1	0	0	0	3	0	0	0	1	1	11	
8:20 AM	0	0	1	3	0	2	1	0	0	5	6	1	0	0	4	2	25	
8:25 AM	0	0	1	2	0	2	3	0	0	0	8	1	0	0	7	2	26	
8:30 AM	0	0	4	1	0	0	1	0	0	3	9	0	0	0	6	0	24	
8:35 AM	0	0	2	2	0	2	0	0	0	1	8	2	0	0	2	0	19	
8:40 AM	0	0	3	2	0	0	0	3	0	1	5	1	0	0	6	0	21	
8:45 AM	0	0	2	1	0	1	3	1	0	5	6	1	0	0	1	2	23	
8:50 AM	0	1	0	4	0	1	4	0	0	3	4	1	0	0	5	0	23	
8:55 AM	0	2	0	4	0	0	0	1	0	5	6	1	0	1	5	0	25	
Count Total	0	24	40	59	0	20	43	21	0	96	182	19	0	3	117	38	662	
Peak Hour	0	19	23	35	0	6	26	11	0	68	107	7	0	2	70	25	399	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	0	0	7:00 AM						7:00 AM	0	0	0	0	0
7:05 AM	0	0	0	0	0	7:05 AM						7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM						7:10 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0	7:15 AM						7:15 AM	0	0	0	0	0
7:20 AM	0	1	0	1	2	7:20 AM						7:20 AM	0	0	0	0	0
7:25 AM	0	0	0	0	0	7:25 AM						7:25 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0	7:30 AM						7:30 AM	0	0	0	0	0
7:35 AM	0	0	0	0	0	7:35 AM						7:35 AM	0	0	0	0	0
7:40 AM	0	1	0	0	1	7:40 AM						7:40 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0	7:45 AM						7:45 AM	0	0	0	0	0
7:50 AM	0	0	1	1	2	7:50 AM						7:50 AM	0	0	0	0	0
7:55 AM	0	0	0	0	0	7:55 AM						7:55 AM	0	0	0	0	0
8:00 AM	0	1	0	0	1	8:00 AM						8:00 AM	0	0	0	0	0
8:05 AM	0	0	0	0	0	8:05 AM						8:05 AM	0	0	0	0	0
8:10 AM	0	0	0	0	0	8:10 AM						8:10 AM	0	0	0	0	0
8:15 AM	0	0	1	0	1	8:15 AM						8:15 AM	0	0	0	0	0
8:20 AM	0	0	0	0	0	8:20 AM						8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	0	0	8:25 AM						8:25 AM	0	0	0	0	0
8:30 AM	0	1	0	0	1	8:30 AM						8:30 AM	0	0	0	0	0
8:35 AM	0	0	0	0	0	8:35 AM						8:35 AM	0	0	0	0	0
8:40 AM	0	0	0	0	0	8:40 AM						8:40 AM	0	0	0	0	0
8:45 AM	0	0	0	1	1	8:45 AM						8:45 AM	0	0	0	0	0
8:50 AM	0	0	0	0	0	8:50 AM						8:50 AM	0	0	0	0	0
8:55 AM	1	0	0	0	1	8:55 AM						8:55 AM	0	0	0	0	0
Count Total	1	4	2	3	10	Count Total						Count Total	0	0	0	0	0
Peak Hour	0	3	1	2	6	Peak Hour						Peak Hour	0	0	0	0	0



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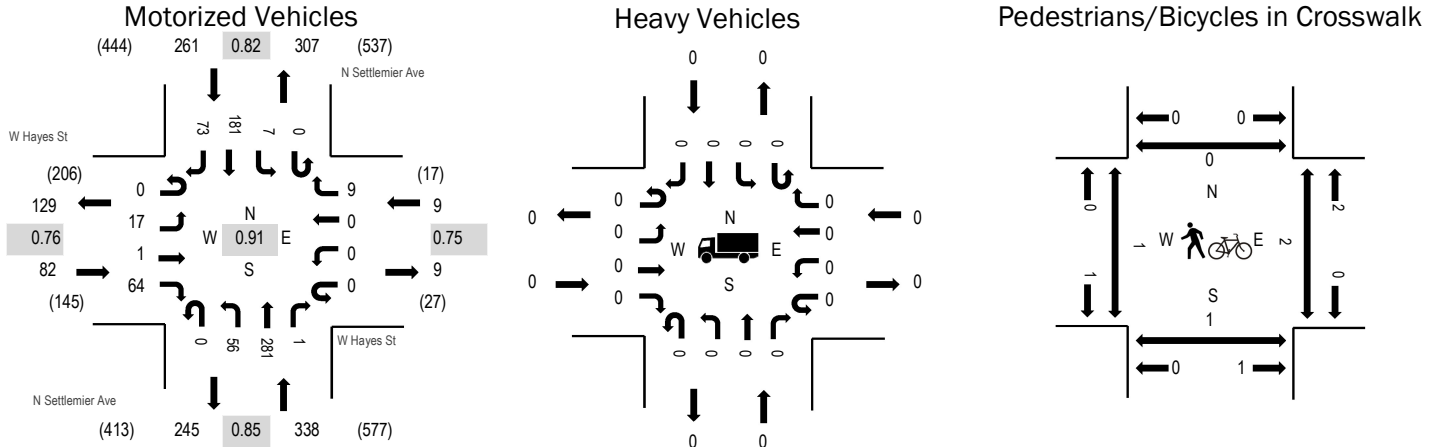
Location: 5 N Settlemier Ave & W Hayes St AM

Date: Tuesday, October 6, 2020

Study Peak Hour: 07:05 AM - 08:05 AM

Peak 15-Minutes in Study Peak Hour: 07:40 AM - 07:55 AM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.76
WB	11.1%	0.75
NB	1.8%	0.85
SB	3.4%	0.82
All	2.3%	0.91

Traffic Counts - Motorized Vehicles

Interval Start Time	W Hayes St Eastbound				W Hayes St Westbound				N Settlemier Ave Northbound				N Settlemier Ave Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	3	0	3	0	0	0	2	0	4	21	0	0	1	11	4	49	689
7:05 AM	0	2	1	5	0	0	0	1	0	3	19	0	0	0	11	4	46	690
7:10 AM	0	2	0	8	0	0	0	2	0	6	25	0	0	1	13	6	63	683
7:15 AM	0	2	0	7	0	0	0	0	0	5	21	0	0	0	17	5	57	655
7:20 AM	0	2	0	4	0	0	0	0	0	6	16	0	0	0	14	2	44	634
7:25 AM	0	1	0	5	0	0	0	0	0	5	27	0	0	1	20	6	65	629
7:30 AM	0	0	0	8	0	0	0	0	0	4	26	0	0	0	11	5	54	605
7:35 AM	0	1	0	5	0	0	0	2	0	5	28	0	0	0	21	3	65	602
7:40 AM	0	0	0	5	0	0	0	1	0	5	31	0	0	0	13	7	62	586
7:45 AM	0	3	0	3	0	0	0	0	0	4	27	0	0	0	17	9	63	568
7:50 AM	0	1	0	4	0	0	0	1	0	4	23	0	0	2	16	8	59	539
7:55 AM	0	2	0	5	0	0	0	1	0	6	20	0	0	2	16	10	62	522
8:00 AM	0	1	0	5	0	0	0	1	0	3	18	1	0	1	12	8	50	494
8:05 AM	0	0	0	3	0	0	0	2	0	2	15	0	0	1	12	4	39	
8:10 AM	0	0	0	3	0	0	0	1	0	2	11	0	0	1	15	2	35	
8:15 AM	0	3	1	2	0	0	0	0	0	4	13	0	0	1	10	2	36	
8:20 AM	0	0	0	4	0	1	0	0	0	3	19	0	0	1	8	3	39	
8:25 AM	0	0	0	1	0	0	0	1	0	3	20	0	0	2	10	4	41	
8:30 AM	0	4	1	6	0	0	0	0	0	2	17	0	0	1	12	8	51	
8:35 AM	0	4	0	6	0	0	0	0	0	4	17	0	0	0	15	3	49	
8:40 AM	0	2	2	2	0	0	0	1	0	1	20	0	0	0	11	5	44	
8:45 AM	0	3	2	0	0	0	0	0	0	1	16	0	0	1	8	3	34	
8:50 AM	0	0	0	3	0	0	0	0	0	5	22	1	0	0	8	3	42	
8:55 AM	0	1	0	4	0	0	0	0	0	3	12	1	0	1	10	2	34	
Count Total	0	37	7	101	0	1	0	16	0	90	484	3	0	17	311	116	1,183	
Peak Hour	0	17	1	64	0	0	0	9	0	56	281	1	0	7	181	73	690	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	0	0	7:00 AM						7:00 AM	0	0	0	0	0
7:05 AM	0	0	0	0	0	7:05 AM						7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM						7:10 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0	7:15 AM						7:15 AM	0	0	0	0	0
7:20 AM	0	0	0	0	0	7:20 AM						7:20 AM	0	0	0	0	0
7:25 AM	0	0	0	0	0	7:25 AM						7:25 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0	7:30 AM						7:30 AM	0	1	0	0	1
7:35 AM	0	0	0	0	0	7:35 AM						7:35 AM	0	0	0	0	0
7:40 AM	0	0	0	0	0	7:40 AM						7:40 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0	7:45 AM						7:45 AM	1	0	0	0	1
7:50 AM	0	0	0	0	0	7:50 AM						7:50 AM	0	0	0	0	0
7:55 AM	0	0	0	0	0	7:55 AM						7:55 AM	0	0	2	0	2
8:00 AM	0	0	0	0	0	8:00 AM						8:00 AM	0	0	0	0	0
8:05 AM	0	0	0	0	0	8:05 AM						8:05 AM	0	0	1	0	1
8:10 AM	0	0	0	0	0	8:10 AM						8:10 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0	8:15 AM						8:15 AM	0	0	0	0	0
8:20 AM	0	0	0	0	0	8:20 AM						8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	0	0	8:25 AM						8:25 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0	8:30 AM						8:30 AM	1	0	0	0	1
8:35 AM	0	0	0	0	0	8:35 AM						8:35 AM	0	2	0	0	2
8:40 AM	0	0	0	1	1	8:40 AM						8:40 AM	0	2	0	0	2
8:45 AM	0	0	0	0	0	8:45 AM						8:45 AM	0	0	1	0	1
8:50 AM	0	0	0	0	0	8:50 AM						8:50 AM	0	0	0	0	0
8:55 AM	0	0	0	0	0	8:55 AM						8:55 AM	0	0	0	0	0
Count Total	0	0	0	1	1	Count Total						Count Total	2	5	4	0	11
Peak Hour	0	0	0	0	0	Peak Hour						Peak Hour	1	1	2	0	4



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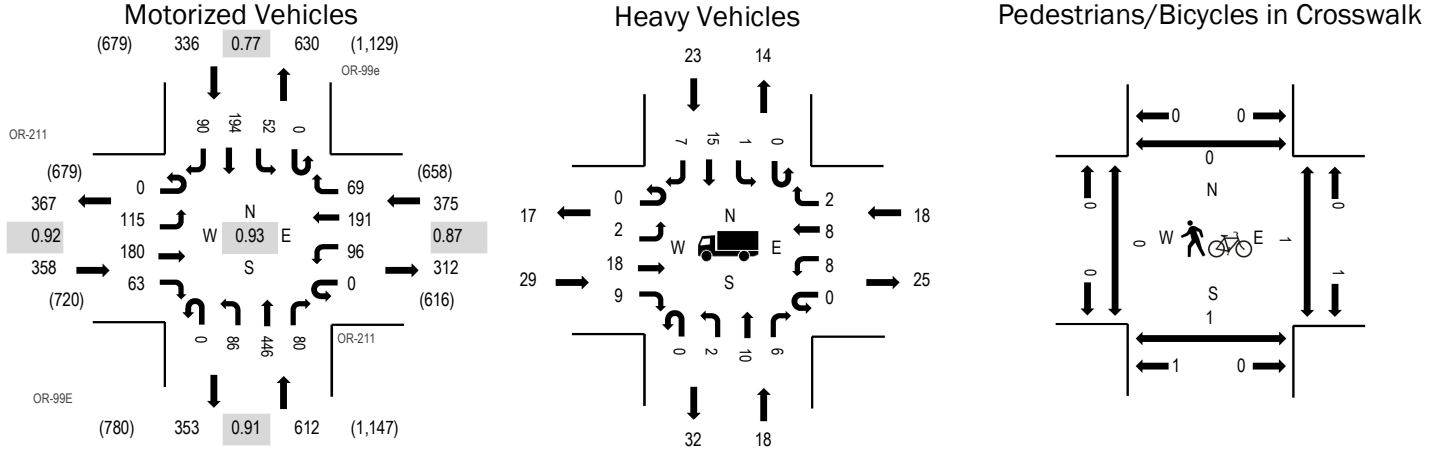
Location: 6 OR-99E & OR-211 AM

Date: Tuesday, October 6, 2020

Study Peak Hour: 07:05 AM - 08:05 AM

Peak 15-Minutes in Study Peak Hour: 07:40 AM - 07:55 AM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	12.0%	0.92
WB	9.8%	0.87
NB	6.4%	0.91
SB	14.6%	0.77
All	10.0%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	OR-211 Eastbound				OR-211 Westbound				OR-99E Northbound				OR-99e Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	8	16	5	0	5	11	3	0	6	48	5	1	4	16	4	132	1,665
7:05 AM	0	12	12	2	0	12	11	7	0	1	46	7	0	2	14	10	136	1,662
7:10 AM	0	8	20	9	0	7	18	4	0	3	41	10	0	9	17	8	154	1,672
7:15 AM	0	13	15	2	0	6	16	3	0	7	27	5	0	4	11	7	116	1,638
7:20 AM	0	7	17	4	0	6	15	7	0	10	41	9	0	3	10	9	138	1,639
7:25 AM	0	9	17	4	0	8	17	5	0	3	33	8	0	4	10	8	126	1,632
7:30 AM	0	16	13	6	0	12	15	9	0	7	25	6	0	4	10	6	129	1,656
7:35 AM	0	8	13	5	0	9	18	9	0	8	41	9	0	2	18	4	144	1,647
7:40 AM	0	8	11	5	0	4	10	3	0	8	47	6	0	7	25	10	144	1,615
7:45 AM	0	9	12	4	0	7	15	7	0	5	39	5	0	5	13	7	128	1,615
7:50 AM	0	12	16	9	0	10	21	4	0	16	35	4	0	6	28	8	169	1,609
7:55 AM	0	6	15	5	0	10	15	8	0	8	47	5	0	2	17	11	149	1,549
8:00 AM	0	7	19	8	0	5	20	3	0	10	24	6	0	4	21	2	129	1,539
8:05 AM	0	7	23	6	0	9	6	7	0	6	37	9	0	5	22	9	146	
8:10 AM	0	8	15	6	0	8	9	7	0	7	31	6	0	3	16	4	120	
8:15 AM	0	6	11	9	0	10	3	2	0	9	29	7	0	3	20	8	117	
8:20 AM	0	13	17	7	0	6	18	3	0	13	27	5	0	3	18	1	131	
8:25 AM	0	11	12	10	0	10	27	8	0	13	24	8	0	7	14	6	150	
8:30 AM	0	4	11	8	0	12	9	5	0	9	25	6	0	6	21	4	120	
8:35 AM	0	8	9	6	0	9	11	7	0	13	17	2	0	4	22	4	112	
8:40 AM	0	5	21	14	0	10	20	3	0	5	24	9	0	6	24	3	144	
8:45 AM	0	7	14	9	0	8	4	5	0	9	31	4	0	3	21	7	122	
8:50 AM	0	5	9	9	0	6	12	3	0	8	31	5	0	3	13	5	109	
8:55 AM	0	2	19	12	0	6	13	7	0	12	30	5	0	9	20	4	139	
Count Total	0	199	357	164	0	195	334	129	0	196	800	151	1	108	421	149	3,204	
Peak Hour	0	115	180	63	0	96	191	69	0	86	446	80	0	52	194	90	1,662	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	4	1	1	1	7	7:00 AM						7:00 AM	0	0	0	0	0
7:05 AM	1	1	2	1	5	7:05 AM						7:05 AM	0	0	0	0	0
7:10 AM	3	0	2	4	9	7:10 AM						7:10 AM	0	0	0	0	0
7:15 AM	3	3	0	0	6	7:15 AM						7:15 AM	0	0	0	0	0
7:20 AM	2	2	0	3	7	7:20 AM						7:20 AM	0	0	0	0	0
7:25 AM	4	0	1	1	6	7:25 AM						7:25 AM	0	0	0	0	0
7:30 AM	3	1	2	1	7	7:30 AM						7:30 AM	0	1	1	0	2
7:35 AM	1	1	2	2	6	7:35 AM						7:35 AM	0	0	0	0	0
7:40 AM	0	2	1	4	7	7:40 AM						7:40 AM	0	0	0	0	0
7:45 AM	4	5	3	1	13	7:45 AM						7:45 AM	0	0	0	0	0
7:50 AM	2	0	2	2	6	7:50 AM						7:50 AM	0	0	0	0	0
7:55 AM	2	2	1	2	7	7:55 AM						7:55 AM	0	0	0	0	0
8:00 AM	4	1	2	2	9	8:00 AM						8:00 AM	0	0	0	0	0
8:05 AM	1	3	0	3	7	8:05 AM						8:05 AM	0	0	0	0	0
8:10 AM	2	3	2	2	9	8:10 AM						8:10 AM	0	0	0	0	0
8:15 AM	2	3	3	2	10	8:15 AM						8:15 AM	0	0	0	0	0
8:20 AM	2	3	5	1	11	8:20 AM						8:20 AM	0	0	0	0	0
8:25 AM	2	4	1	2	9	8:25 AM						8:25 AM	0	0	1	0	1
8:30 AM	2	1	2	2	7	8:30 AM						8:30 AM	0	0	0	0	0
8:35 AM	1	1	2	5	9	8:35 AM						8:35 AM	1	1	0	0	2
8:40 AM	4	1	3	2	10	8:40 AM						8:40 AM	0	0	1	0	1
8:45 AM	2	1	0	1	4	8:45 AM						8:45 AM	0	0	0	0	0
8:50 AM	2	1	1	4	8	8:50 AM						8:50 AM	0	0	0	0	0
8:55 AM	2	3	3	4	12	8:55 AM						8:55 AM	0	0	0	0	0
Count Total	55	43	41	52	191	Count Total						Count Total	1	2	3	0	6
Peak Hour	29	18	18	23	88	Peak Hour						Peak Hour	0	1	1	0	2



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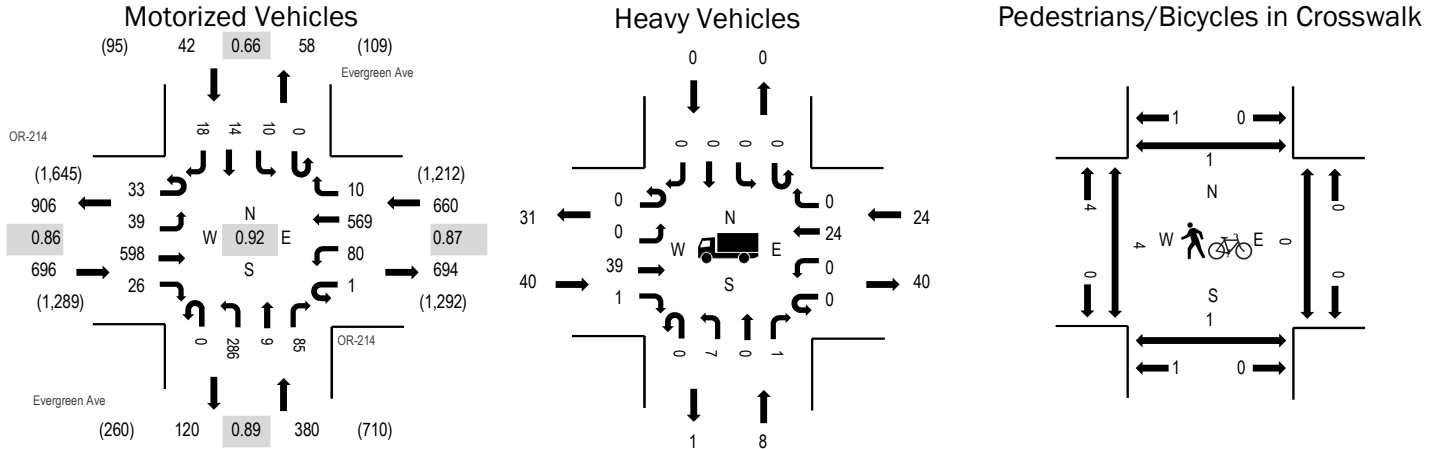
Location: 7 Evergreen Ave & OR-214 AM

Date: Tuesday, October 6, 2020

Study Peak Hour: 07:05 AM - 08:05 AM

Peak 15-Minutes in Study Peak Hour: 07:40 AM - 07:55 AM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	8.3%	0.86
WB	5.9%	0.87
NB	2.9%	0.89
SB	0.0%	0.66
All	6.1%	0.92

Traffic Counts - Motorized Vehicles

Interval Start Time	OR-214 Eastbound				OR-214 Westbound				Evergreen Ave Northbound				Evergreen Ave Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	1	6	62	3	0	11	54	0	0	13	0	5	0	1	0	2	158	1,790
7:05 AM	2	0	32	0	1	10	40	0	0	24	1	8	0	2	2	2	124	1,778
7:10 AM	2	2	57	2	0	6	42	2	0	24	1	7	0	0	1	2	148	1,777
7:15 AM	4	1	47	2	0	4	49	0	0	25	0	10	0	1	2	1	146	1,768
7:20 AM	1	2	41	1	0	5	50	2	0	23	0	7	0	1	2	0	135	1,740
7:25 AM	4	5	43	4	0	9	58	2	0	24	0	7	0	1	1	4	162	1,743
7:30 AM	3	4	50	0	0	7	57	0	0	26	0	6	0	1	1	4	159	1,706
7:35 AM	3	1	57	1	0	3	35	1	0	30	2	9	0	2	1	1	146	1,691
7:40 AM	4	2	55	2	0	10	64	0	0	14	3	6	0	0	1	1	162	1,648
7:45 AM	5	5	48	2	0	7	42	2	0	39	0	4	0	0	1	0	155	1,608
7:50 AM	4	6	59	2	0	12	49	0	0	20	2	8	0	0	0	2	164	1,561
7:55 AM	1	5	51	6	0	1	32	0	0	23	0	8	0	2	2	0	131	1,517
8:00 AM	0	6	58	4	0	6	51	1	0	14	0	5	0	0	0	1	146	1,516
8:05 AM	1	6	35	4	0	9	36	0	0	20	0	7	0	2	1	2	123	
8:10 AM	3	3	49	1	0	4	48	0	0	17	0	1	0	1	2	10	139	
8:15 AM	4	2	29	5	0	10	37	0	0	21	1	4	0	2	0	3	118	
8:20 AM	2	1	58	5	0	6	30	0	0	18	1	12	0	2	1	2	138	
8:25 AM	3	2	38	5	0	8	34	0	0	23	1	9	0	0	1	1	125	
8:30 AM	2	2	44	4	0	12	43	0	0	24	1	10	0	0	0	2	144	
8:35 AM	1	0	33	4	0	6	29	2	0	20	0	7	0	0	0	1	103	
8:40 AM	0	2	49	1	0	8	30	1	0	19	1	10	0	0	0	1	122	
8:45 AM	0	4	28	1	0	6	35	1	0	23	1	8	0	0	1	0	108	
8:50 AM	2	5	43	0	0	10	32	1	0	12	0	6	0	0	4	5	120	
8:55 AM	2	4	33	1	0	4	45	0	0	22	3	10	0	0	2	4	130	
Count Total	54	76	1,099	60	1	174	1,022	15	0	518	18	174	0	18	26	51	3,306	
Peak Hour	33	39	598	26	1	80	569	10	0	286	9	85	0	10	14	18	1,778	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	4	0	2	0	6	7:00 AM						7:00 AM	0	0	0	0	0
7:05 AM	3	1	3	0	7	7:05 AM						7:05 AM	0	0	0	0	0
7:10 AM	5	0	1	0	6	7:10 AM						7:10 AM	0	0	0	0	0
7:15 AM	4	0	1	0	5	7:15 AM						7:15 AM	0	0	0	0	0
7:20 AM	3	1	4	0	8	7:20 AM						7:20 AM	3	0	0	0	3
7:25 AM	3	1	2	0	6	7:25 AM						7:25 AM	0	0	0	0	0
7:30 AM	3	1	1	0	5	7:30 AM						7:30 AM	0	0	0	0	0
7:35 AM	3	1	1	0	5	7:35 AM						7:35 AM	0	1	0	0	1
7:40 AM	1	0	1	0	2	7:40 AM						7:40 AM	0	0	0	0	0
7:45 AM	4	1	3	0	8	7:45 AM						7:45 AM	0	0	0	1	1
7:50 AM	4	1	0	0	5	7:50 AM						7:50 AM	0	0	0	0	0
7:55 AM	3	0	3	0	6	7:55 AM						7:55 AM	0	0	0	0	0
8:00 AM	4	1	4	0	9	8:00 AM						8:00 AM	1	0	0	0	1
8:05 AM	1	2	2	0	5	8:05 AM						8:05 AM	3	0	0	0	3
8:10 AM	3	2	4	0	9	8:10 AM						8:10 AM	0	0	0	0	0
8:15 AM	2	0	2	0	4	8:15 AM						8:15 AM	0	0	0	0	0
8:20 AM	6	0	1	0	7	8:20 AM						8:20 AM	1	0	0	0	1
8:25 AM	1	0	3	0	4	8:25 AM						8:25 AM	1	1	0	0	2
8:30 AM	3	0	6	0	9	8:30 AM						8:30 AM	0	0	0	0	0
8:35 AM	3	0	2	0	5	8:35 AM						8:35 AM	1	2	0	0	3
8:40 AM	3	1	1	0	5	8:40 AM						8:40 AM	0	0	0	1	1
8:45 AM	3	1	5	0	9	8:45 AM						8:45 AM	1	0	0	0	1
8:50 AM	5	0	3	0	8	8:50 AM						8:50 AM	0	0	0	0	0
8:55 AM	1	0	5	0	6	8:55 AM						8:55 AM	0	0	0	0	0
Count Total	75	14	60	0	149	Count Total						Count Total	11	4	0	2	17
Peak Hour	40	8	24	0	72	Peak Hour						Peak Hour	4	1	0	1	6



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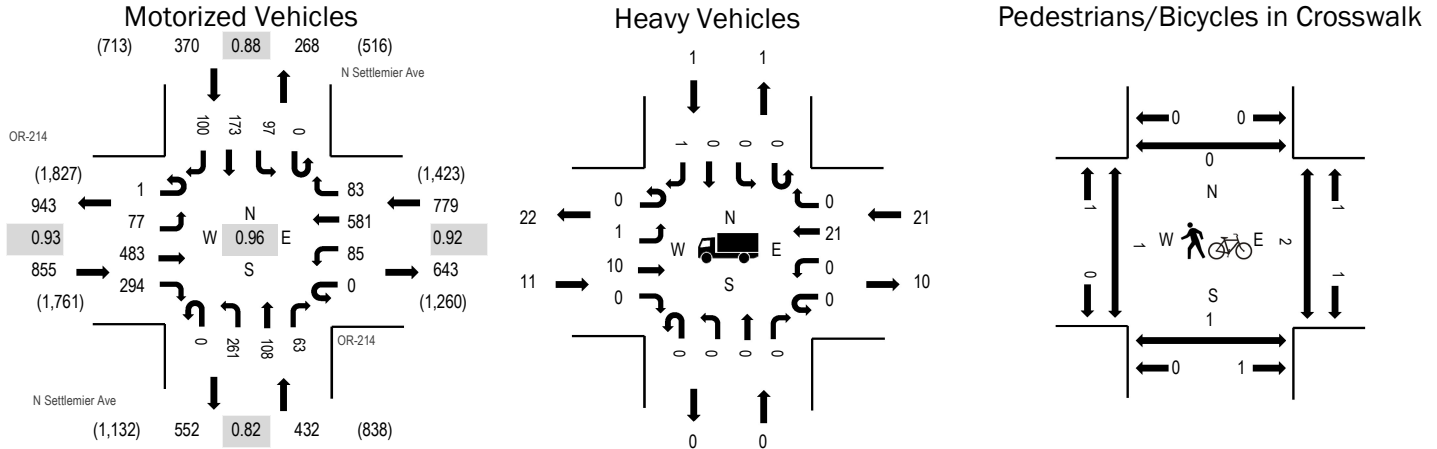
Location: 1 N Settlemier Ave & OR-214 PM

Date: Tuesday, October 6, 2020

Study Peak Hour: 04:25 PM - 05:25 PM

Peak 15-Minutes in Study Peak Hour: 05:10 PM - 05:25 PM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	2.3%	0.93
WB	3.3%	0.92
NB	0.5%	0.82
SB	0.8%	0.88
All	2.1%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	OR-214 Eastbound				OR-214 Westbound				N Settlemier Ave Northbound				N Settlemier Ave Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	5	42	32	0	6	46	9	0	27	5	10	0	10	12	14	218	2,418
4:05 PM	0	6	42	29	0	8	47	6	0	16	10	6	0	5	19	8	202	2,398
4:10 PM	0	5	56	34	0	6	51	3	0	20	6	6	0	11	8	11	217	2,393
4:15 PM	0	3	36	26	0	3	52	4	0	25	11	8	0	6	12	13	199	2,390
4:20 PM	0	5	38	23	0	6	45	9	0	18	9	7	0	7	18	9	194	2,405
4:25 PM	0	8	44	26	0	1	57	8	0	13	13	4	0	7	14	4	199	2,406
4:30 PM	0	10	37	19	0	4	38	5	0	17	9	4	0	17	14	9	183	2,411
4:35 PM	0	9	45	21	0	10	60	5	0	21	8	6	0	6	10	9	210	2,436
4:40 PM	0	5	47	24	0	2	53	6	0	25	7	5	0	10	9	13	206	2,426
4:45 PM	0	3	32	17	0	10	39	5	0	34	16	6	0	2	16	9	189	2,383
4:50 PM	0	5	34	25	0	7	50	2	0	17	15	6	0	5	16	6	188	2,360
4:55 PM	0	5	41	26	0	13	58	11	0	18	4	7	0	9	11	10	213	2,351
5:00 PM	1	6	54	20	0	5	45	13	0	18	6	6	0	4	12	8	198	2,317
5:05 PM	0	7	30	28	0	8	41	10	0	20	11	2	0	7	23	10	197	
5:10 PM	0	5	46	34	0	5	52	6	0	27	5	6	0	10	12	6	214	
5:15 PM	0	6	36	28	0	10	44	7	0	31	10	5	0	11	18	8	214	
5:20 PM	0	8	37	26	0	10	44	5	0	20	4	6	0	9	18	8	195	
5:25 PM	0	8	41	25	0	8	54	5	0	13	9	4	0	4	23	10	204	
5:30 PM	0	14	48	46	0	4	37	8	0	21	9	4	0	0	9	8	208	
5:35 PM	0	7	39	35	0	5	47	7	0	24	8	4	0	6	11	7	200	
5:40 PM	0	8	24	21	0	5	43	4	0	23	7	2	0	7	14	5	163	
5:45 PM	0	7	40	22	0	3	32	4	0	22	7	4	0	6	15	4	166	
5:50 PM	0	3	43	23	0	11	46	7	0	14	5	5	0	5	7	10	179	
5:55 PM	0	7	30	33	0	4	34	5	0	20	13	4	0	7	14	8	179	
Count Total	1	155	962	643	0	154	1,115	154	0	504	207	127	0	171	335	207	4,735	
Peak Hour	1	77	483	294	0	85	581	83	0	261	108	63	0	97	173	100	2,406	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	0	3	0	4	4:00 PM						4:00 PM	0	0	0	0	0
4:05 PM	1	0	1	0	2	4:05 PM						4:05 PM	0	0	0	0	0
4:10 PM	0	0	1	0	1	4:10 PM						4:10 PM	0	0	0	0	0
4:15 PM	1	0	1	0	2	4:15 PM						4:15 PM	0	1	0	0	1
4:20 PM	3	0	0	0	3	4:20 PM						4:20 PM	0	0	0	0	0
4:25 PM	1	0	2	0	3	4:25 PM						4:25 PM	0	0	0	0	0
4:30 PM	2	0	1	1	4	4:30 PM						4:30 PM	0	0	0	0	0
4:35 PM	1	0	1	0	2	4:35 PM						4:35 PM	0	0	0	0	0
4:40 PM	0	0	1	0	1	4:40 PM						4:40 PM	0	0	0	0	0
4:45 PM	0	0	4	0	4	4:45 PM						4:45 PM	0	1	0	0	1
4:50 PM	2	0	2	0	4	4:50 PM						4:50 PM	0	0	0	0	0
4:55 PM	0	0	1	0	1	4:55 PM						4:55 PM	0	0	2	0	2
5:00 PM	2	0	2	0	4	5:00 PM						5:00 PM	1	0	0	0	1
5:05 PM	1	0	1	0	2	5:05 PM						5:05 PM	0	0	0	0	0
5:10 PM	1	0	4	0	5	5:10 PM						5:10 PM	0	0	0	0	0
5:15 PM	0	0	1	0	1	5:15 PM						5:15 PM	0	0	0	0	0
5:20 PM	1	0	1	0	2	5:20 PM						5:20 PM	0	0	0	0	0
5:25 PM	2	0	0	0	2	5:25 PM						5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM						5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM						5:35 PM	0	0	0	1	1
5:40 PM	0	0	1	0	1	5:40 PM						5:40 PM	0	0	2	0	2
5:45 PM	0	0	0	0	0	5:45 PM						5:45 PM	0	0	0	0	0
5:50 PM	1	0	0	0	1	5:50 PM						5:50 PM	0	0	0	0	0
5:55 PM	2	0	0	0	2	5:55 PM						5:55 PM	0	0	0	0	0
Count Total	22	0	28	1	51	Count Total						Count Total	1	2	4	1	8
Peak Hour	11	0	21	1	33	Peak Hour						Peak Hour	1	1	2	0	4



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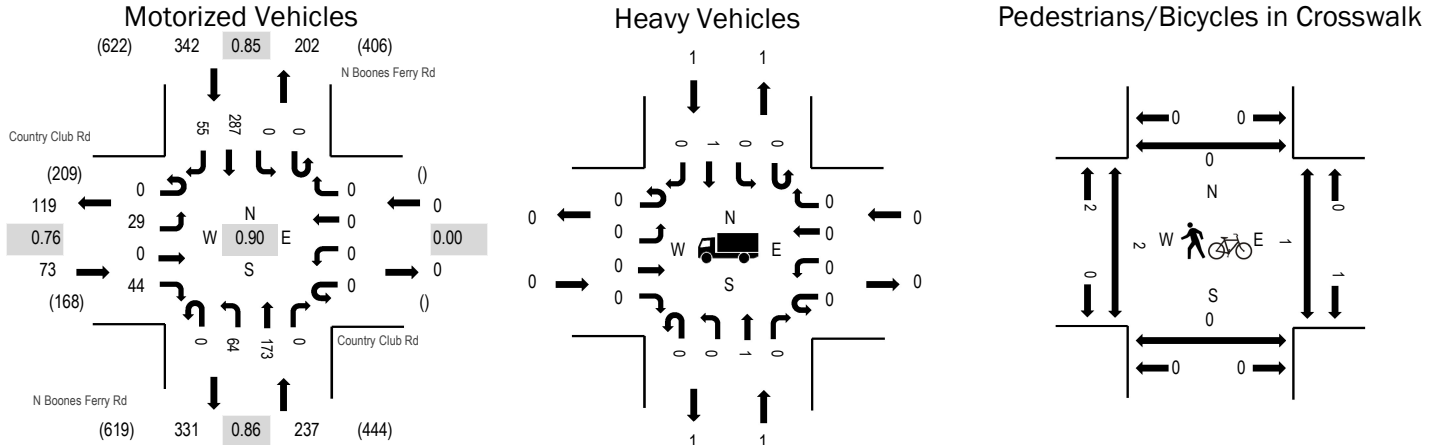
Location: 2 N Boones Ferry Rd & Country Club Rd PM

Date: Tuesday, October 6, 2020

Study Peak Hour: 04:25 PM - 05:25 PM

Peak 15-Minutes in Study Peak Hour: 05:10 PM - 05:25 PM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	1.4%	0.76
WB	0.0%	0.00
NB	1.7%	0.86
SB	0.9%	0.85
All	1.2%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	Country Club Rd Eastbound				Country Club Rd Westbound				N Boones Ferry Rd Northbound				N Boones Ferry Rd Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	4	0	6	0	0	0	0	0	8	18	0	0	0	19	4	59	616
4:05 PM	0	6	0	7	0	0	0	0	0	3	12	0	0	0	20	3	51	614
4:10 PM	0	5	0	8	0	0	0	0	0	3	12	0	0	0	17	1	46	628
4:15 PM	0	4	0	3	0	0	0	0	0	3	10	0	0	0	30	3	53	638
4:20 PM	0	4	0	4	0	0	0	0	0	7	10	0	0	0	18	5	48	643
4:25 PM	0	3	0	4	0	0	0	0	0	6	20	0	0	0	24	2	59	652
4:30 PM	0	3	0	4	0	0	0	0	0	4	16	0	0	0	20	5	52	644
4:35 PM	0	2	0	4	0	0	0	0	0	10	13	0	0	0	23	3	55	642
4:40 PM	0	3	0	2	0	0	0	0	0	4	11	0	0	0	25	5	50	632
4:45 PM	0	2	0	3	0	0	0	0	0	3	14	0	0	0	20	1	43	632
4:50 PM	0	2	0	3	0	0	0	0	0	6	8	0	0	0	13	8	40	621
4:55 PM	0	0	0	2	0	0	0	0	0	9	17	0	0	0	28	4	60	617
5:00 PM	0	4	0	4	0	0	0	0	0	9	12	0	0	0	25	3	57	618
5:05 PM	0	1	0	3	0	0	0	0	0	6	16	0	0	0	32	7	65	
5:10 PM	0	1	0	6	0	0	0	0	0	3	15	0	0	0	22	9	56	
5:15 PM	0	5	0	4	0	0	0	0	0	2	16	0	0	0	26	5	58	
5:20 PM	0	3	0	5	0	0	0	0	0	2	15	0	0	0	29	3	57	
5:25 PM	0	2	0	3	0	0	0	0	0	3	12	0	0	0	27	4	51	
5:30 PM	0	6	0	2	0	0	0	0	0	6	19	0	0	0	13	4	50	
5:35 PM	0	3	0	4	0	0	0	0	0	4	16	0	0	0	16	2	45	
5:40 PM	0	4	0	5	0	0	0	0	0	3	13	0	0	0	21	4	50	
5:45 PM	0	1	0	2	0	0	0	0	0	2	11	0	0	0	13	3	32	
5:50 PM	0	1	0	4	0	0	0	0	0	3	11	0	0	0	14	3	36	
5:55 PM	0	4	0	3	0	0	0	0	0	2	16	0	0	0	29	7	61	
Count Total	0	73	0	95	0	0	0	0	0	111	333	0	0	0	524	98	1,234	
Peak Hour	0	29	0	44	0	0	0	0	0	64	173	0	0	0	287	55	652	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM						4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM						4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	0	0	4:10 PM						4:10 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0	4:15 PM						4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	0	0	4:20 PM						4:20 PM	0	0	0	0	0
4:25 PM	0	1	0	0	1	4:25 PM						4:25 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1	4:30 PM						4:30 PM	1	0	0	0	1
4:35 PM	0	0	0	0	0	4:35 PM						4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM						4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM						4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM						4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM						4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM						5:00 PM	1	0	1	0	2
5:05 PM	0	0	0	0	0	5:05 PM						5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	0	0	5:10 PM						5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM						5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM						5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM						5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM						5:30 PM	1	0	0	0	1
5:35 PM	0	0	0	0	0	5:35 PM						5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM						5:40 PM	3	0	0	0	3
5:45 PM	0	0	0	0	0	5:45 PM						5:45 PM	1	0	0	0	1
5:50 PM	0	0	0	0	0	5:50 PM						5:50 PM	0	0	3	0	3
5:55 PM	0	0	0	0	0	5:55 PM						5:55 PM	0	0	0	0	0
Count Total	0	1	0	1	2	Count Total						Count Total	7	0	4	0	11
Peak Hour	0	1	0	1	2	Peak Hour						Peak Hour	2	0	1	0	3



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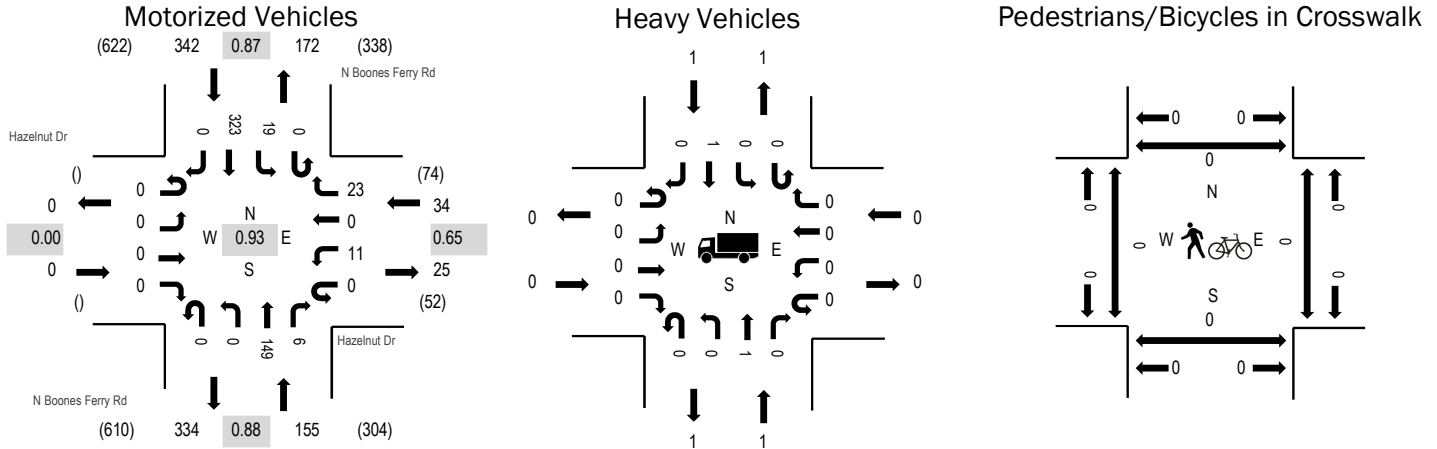
Location: 3 N Boones Ferry Rd & Hazelnut Dr PM

Date: Tuesday, October 6, 2020

Study Peak Hour: 04:25 PM - 05:25 PM

Peak 15-Minutes in Study Peak Hour: 05:10 PM - 05:25 PM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	0.0%	0.65
NB	4.5%	0.88
SB	0.9%	0.87
All	1.9%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	Hazelnut Dr Eastbound				Hazelnut Dr Westbound				N Boones Ferry Rd Northbound				N Boones Ferry Rd Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	0	0	0	0	0	0	0	0	14	0	0	2	26	0	42	498
4:05 PM	0	0	0	0	0	2	0	2	0	0	13	1	0	4	17	0	39	503
4:10 PM	0	0	0	0	0	3	0	4	0	0	8	0	0	2	25	0	42	512
4:15 PM	0	0	0	0	0	1	0	1	0	0	16	0	0	3	22	0	43	513
4:20 PM	0	0	0	0	0	0	0	1	0	0	7	1	0	2	27	0	38	522
4:25 PM	0	0	0	0	0	0	0	0	0	0	16	0	0	2	28	0	46	531
4:30 PM	0	0	0	0	0	1	0	2	0	0	10	0	0	1	24	0	38	523
4:35 PM	0	0	0	0	0	2	0	5	0	0	11	1	0	0	18	0	37	534
4:40 PM	0	0	0	0	0	0	0	3	0	0	11	2	0	1	30	0	47	528
4:45 PM	0	0	0	0	0	0	0	1	0	0	15	0	0	1	25	0	42	517
4:50 PM	0	0	0	0	0	1	0	2	0	0	16	0	0	1	22	0	42	500
4:55 PM	0	0	0	0	0	2	0	1	0	0	11	1	0	1	26	0	42	495
5:00 PM	0	0	0	0	0	1	0	1	0	0	11	0	0	4	30	0	47	502
5:05 PM	0	0	0	0	0	1	0	3	0	0	12	0	0	1	31	0	48	
5:10 PM	0	0	0	0	0	0	0	0	0	0	9	2	0	4	28	0	43	
5:15 PM	0	0	0	0	0	1	0	2	0	0	17	0	0	1	31	0	52	
5:20 PM	0	0	0	0	0	2	0	3	0	0	10	0	0	2	30	0	47	
5:25 PM	0	0	0	0	0	1	0	4	0	0	11	0	0	1	21	0	38	
5:30 PM	0	0	0	0	0	5	0	3	0	0	22	0	0	3	16	0	49	
5:35 PM	0	0	0	0	0	1	0	1	0	0	10	0	0	0	19	0	31	
5:40 PM	0	0	0	0	0	1	0	2	0	0	14	0	0	1	18	0	36	
5:45 PM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	15	0	25	
5:50 PM	0	0	0	0	0	1	0	2	0	0	8	0	0	2	24	0	37	
5:55 PM	0	0	0	0	0	3	0	2	0	0	11	3	0	2	28	0	49	
Count Total	0	0	0	0	0	29	0	45	0	0	293	11	0	41	581	0	1,000	
Peak Hour	0	0	0	0	0	11	0	23	0	0	149	6	0	19	323	0	531	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM						4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM						4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	0	0	4:10 PM						4:10 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0	4:15 PM						4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	0	0	4:20 PM						4:20 PM	0	0	0	0	0
4:25 PM	0	1	0	1	2	4:25 PM						4:25 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0	4:30 PM						4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM						4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM						4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM						4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM						4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM						4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM						5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM						5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	0	0	5:10 PM						5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM						5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM						5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM						5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM						5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM						5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM						5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM						5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM						5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM						5:55 PM	0	0	0	0	0
Count Total	0	1	0	1	2	Count Total						Count Total	0	0	0	0	0
Peak Hour	0	1	0	1	2	Peak Hour						Peak Hour	0	0	0	0	0



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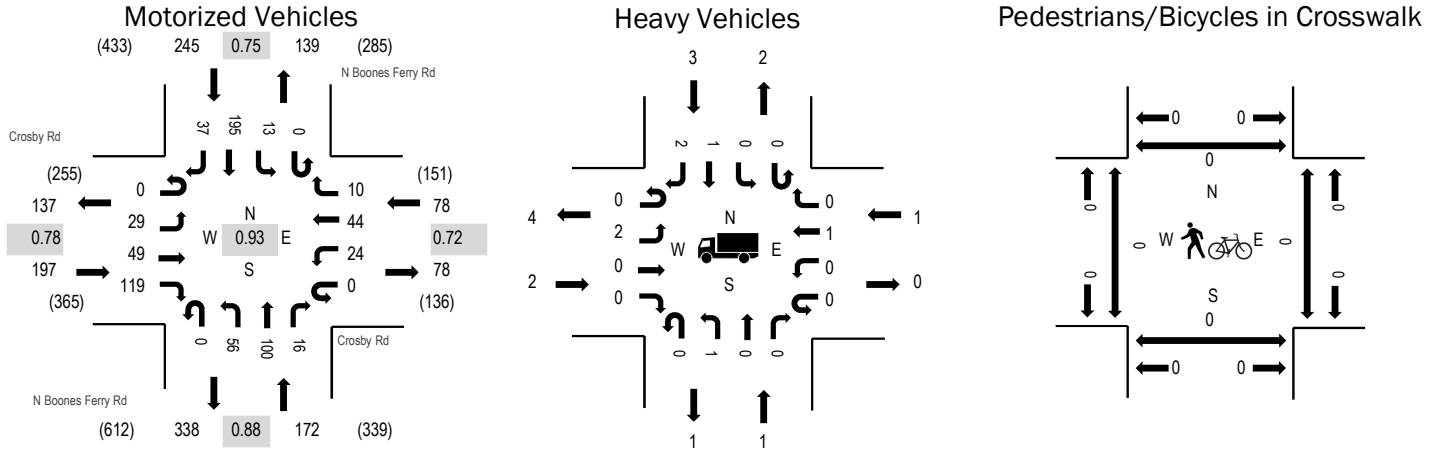
Location: 4 N Boones Ferry Rd & Crosby Rd PM

Date: Tuesday, October 6, 2020

Study Peak Hour: 04:25 PM - 05:25 PM

Peak 15-Minutes in Study Peak Hour: 05:10 PM - 05:25 PM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.1%	0.78
WB	1.3%	0.72
NB	4.1%	0.88
SB	1.2%	0.75
All	2.7%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	Crosby Rd Eastbound				Crosby Rd Westbound				N Boones Ferry Rd Northbound				N Boones Ferry Rd Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	2	7	6	0	2	4	0	0	5	12	1	0	1	12	3	55	653
4:05 PM	0	4	2	9	0	3	2	0	0	5	9	0	0	0	13	3	50	651
4:10 PM	0	3	6	9	0	1	6	1	0	3	8	2	0	1	9	2	51	677
4:15 PM	0	2	4	13	0	2	3	2	0	5	9	2	0	1	21	4	68	683
4:20 PM	0	1	3	10	0	4	4	0	0	2	6	2	0	0	10	2	44	667
4:25 PM	0	1	4	11	0	0	2	0	0	4	7	0	0	1	21	4	55	692
4:30 PM	0	4	3	7	0	0	4	0	0	6	10	2	0	0	15	2	53	685
4:35 PM	0	3	3	6	0	2	8	1	0	3	10	1	0	0	9	4	50	677
4:40 PM	0	1	5	13	0	5	1	1	0	4	10	3	0	2	15	2	62	677
4:45 PM	0	3	2	10	0	2	5	0	0	3	4	1	0	0	11	5	46	660
4:50 PM	0	5	3	7	0	1	4	3	0	6	12	2	0	1	17	2	63	652
4:55 PM	0	5	0	9	0	3	1	0	0	6	11	0	0	0	17	4	56	630
5:00 PM	0	1	2	9	0	3	4	2	0	3	4	3	0	1	16	5	53	635
5:05 PM	0	3	5	9	0	2	4	2	0	6	9	2	0	5	25	4	76	
5:10 PM	0	0	8	6	0	4	5	1	0	2	5	0	0	2	23	1	57	
5:15 PM	0	1	5	18	0	1	4	0	0	3	7	0	0	0	12	1	52	
5:20 PM	0	2	9	14	0	1	2	0	0	10	11	2	0	1	14	3	69	
5:25 PM	0	2	4	13	0	0	3	1	0	2	7	0	0	0	15	1	48	
5:30 PM	0	1	4	5	0	2	2	0	0	8	13	0	0	0	6	4	45	
5:35 PM	0	4	1	3	0	2	6	0	0	4	13	2	0	0	12	3	50	
5:40 PM	0	4	3	5	0	4	2	1	0	4	7	0	0	0	12	3	45	
5:45 PM	0	2	0	7	0	0	4	1	0	2	13	1	0	0	7	1	38	
5:50 PM	0	5	1	7	0	3	2	0	0	2	4	1	0	0	14	2	41	
5:55 PM	0	2	6	8	0	1	5	0	0	4	7	2	0	1	24	1	61	
Count Total	0	61	90	214	0	48	87	16	0	102	208	29	0	17	350	66	1,288	
Peak Hour	0	29	49	119	0	24	44	10	0	56	100	16	0	13	195	37	692	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM						4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM						4:05 PM	0	0	0	0	0
4:10 PM	1	0	0	0	1	4:10 PM						4:10 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0	4:15 PM						4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	0	0	4:20 PM						4:20 PM	0	0	0	0	0
4:25 PM	0	0	1	0	1	4:25 PM						4:25 PM	0	0	0	0	0
4:30 PM	0	1	0	2	3	4:30 PM						4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM						4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM						4:40 PM	0	0	0	0	0
4:45 PM	2	0	0	0	2	4:45 PM						4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM						4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM						4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM						5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM						5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	1	1	5:10 PM						5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM						5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM						5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM						5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM						5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM						5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM						5:40 PM	0	0	0	0	0
5:45 PM	1	0	0	0	1	5:45 PM						5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM						5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM						5:55 PM	0	0	0	0	0
Count Total	4	1	1	3	9	Count Total						Count Total	0	0	0	0	0
Peak Hour	2	1	1	3	7	Peak Hour						Peak Hour	0	0	0	0	0



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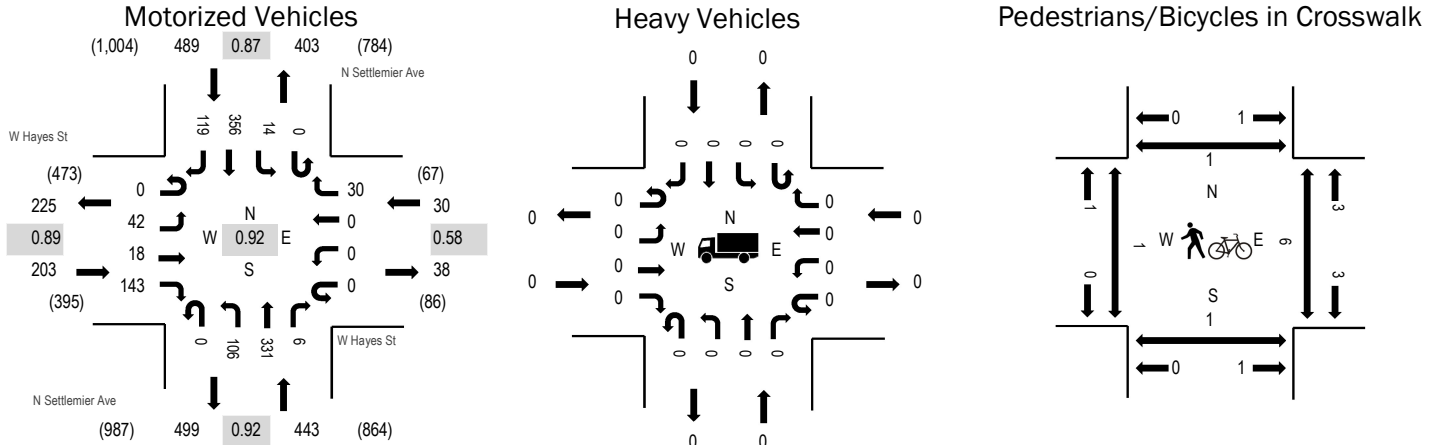
Location: 5 N Settlemier Ave & W Hayes St PM

Date: Tuesday, October 6, 2020

Study Peak Hour: 04:25 PM - 05:25 PM

Peak 15-Minutes in Study Peak Hour: 05:10 PM - 05:25 PM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.5%	0.89
WB	0.0%	0.58
NB	0.7%	0.92
SB	0.2%	0.87
All	0.4%	0.92

Traffic Counts - Motorized Vehicles

Interval Start Time	W Hayes St Eastbound				W Hayes St Westbound				N Settlemier Ave Northbound				N Settlemier Ave Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	3	0	10	0	0	0	6	0	15	25	0	0	0	34	12	105	1,126
4:05 PM	0	6	2	9	0	0	0	2	0	5	24	0	0	2	37	6	93	1,123
4:10 PM	0	1	3	16	0	0	0	2	0	10	25	3	0	1	28	8	97	1,129
4:15 PM	0	2	1	6	0	0	0	5	0	10	38	0	0	2	24	12	100	1,139
4:20 PM	0	3	2	10	0	0	0	3	0	6	19	2	0	4	29	5	83	1,137
4:25 PM	0	3	1	13	0	0	0	1	0	7	30	1	0	1	27	6	90	1,165
4:30 PM	0	4	1	12	0	0	0	0	0	4	29	0	0	1	28	7	86	1,155
4:35 PM	0	8	2	8	0	0	0	2	0	7	29	0	0	0	28	10	94	1,170
4:40 PM	0	5	1	7	0	0	0	4	0	7	35	0	0	1	24	10	94	1,180
4:45 PM	0	4	2	15	0	0	0	2	0	9	31	0	0	0	28	11	102	1,181
4:50 PM	0	1	2	9	0	0	0	1	0	6	27	1	0	0	32	8	87	1,177
4:55 PM	0	1	2	15	0	0	0	6	0	9	22	0	0	3	27	10	95	1,209
5:00 PM	0	2	0	9	0	0	0	5	0	10	32	1	0	0	26	17	102	1,204
5:05 PM	0	3	2	14	0	0	0	2	0	10	23	1	0	3	35	6	99	
5:10 PM	0	4	1	12	0	0	0	1	0	11	31	1	0	1	37	8	107	
5:15 PM	0	1	3	14	0	0	0	2	0	12	22	1	0	3	31	9	98	
5:20 PM	0	6	1	15	0	0	0	4	0	14	20	0	0	1	33	17	111	
5:25 PM	0	1	1	12	0	0	0	2	0	6	26	0	0	0	27	5	80	
5:30 PM	0	5	2	9	0	0	0	5	0	9	14	0	0	3	40	14	101	
5:35 PM	0	3	2	15	0	0	0	1	0	12	28	1	0	1	34	7	104	
5:40 PM	0	3	2	17	0	1	0	3	0	7	20	1	0	2	29	10	95	
5:45 PM	0	3	3	9	0	0	0	3	0	8	32	0	0	0	21	19	98	
5:50 PM	0	4	0	8	0	0	0	1	0	15	28	3	0	2	26	32	119	
5:55 PM	0	7	2	10	0	0	0	3	0	4	25	0	0	1	27	11	90	
Count Total	0	83	38	274	0	1	0	66	0	213	635	16	0	32	712	260	2,330	
Peak Hour	0	42	18	143	0	0	0	30	0	106	331	6	0	14	356	119	1,165	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM						4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM						4:05 PM	0	1	0	0	1
4:10 PM	0	0	0	0	0	4:10 PM						4:10 PM	0	0	0	0	0
4:15 PM	0	0	0	1	1	4:15 PM						4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	1	1	4:20 PM						4:20 PM	0	1	0	0	1
4:25 PM	0	0	0	0	0	4:25 PM						4:25 PM	0	1	1	0	2
4:30 PM	0	0	0	0	0	4:30 PM						4:30 PM	1	0	1	1	3
4:35 PM	0	0	0	0	0	4:35 PM						4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM						4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM						4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM						4:50 PM	0	0	1	0	1
4:55 PM	0	0	0	0	0	4:55 PM						4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM						5:00 PM	0	0	1	0	1
5:05 PM	0	0	0	0	0	5:05 PM						5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	0	0	5:10 PM						5:10 PM	0	0	1	0	1
5:15 PM	0	0	0	0	0	5:15 PM						5:15 PM	0	0	1	0	1
5:20 PM	0	0	0	0	0	5:20 PM						5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM						5:25 PM	1	0	1	0	2
5:30 PM	0	0	0	0	0	5:30 PM						5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM						5:35 PM	0	1	0	0	1
5:40 PM	0	0	0	0	0	5:40 PM						5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM						5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM						5:50 PM	1	1	0	0	2
5:55 PM	0	0	0	0	0	5:55 PM						5:55 PM	0	0	0	0	0
Count Total	0	0	0	2	2	Count Total						Count Total	3	5	7	1	16
Peak Hour	0	0	0	0	0	Peak Hour						Peak Hour	1	1	6	1	9



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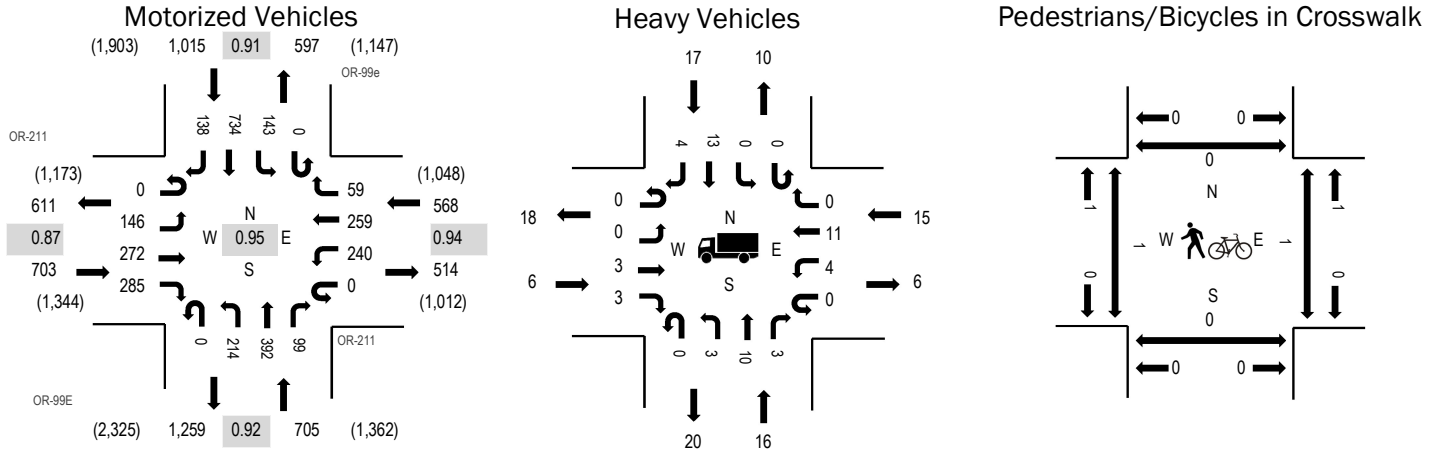
Location: 6 OR-99E & OR-211 PM

Date: Tuesday, October 6, 2020

Study Peak Hour: 04:25 PM - 05:25 PM

Peak 15-Minutes in Study Peak Hour: 05:10 PM - 05:25 PM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	2.8%	0.87
WB	4.3%	0.94
NB	4.1%	0.92
SB	2.7%	0.91
All	3.4%	0.95

Traffic Counts - Motorized Vehicles

Interval Start Time	OR-211 Eastbound				OR-211 Westbound				OR-99E Northbound				OR-99e Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	6	32	31	0	19	34	9	0	12	32	10	0	12	46	12	255	2,993
4:05 PM	0	12	21	22	0	15	11	3	0	25	30	10	0	17	47	13	226	2,984
4:10 PM	0	14	26	19	0	17	24	3	0	12	46	4	0	9	64	13	251	2,994
4:15 PM	0	9	33	23	0	25	25	4	0	22	24	11	1	8	61	5	251	3,006
4:20 PM	0	10	19	19	0	15	18	7	0	32	31	12	0	19	64	17	263	3,008
4:25 PM	0	8	21	23	0	24	29	2	0	15	21	1	0	15	46	12	217	2,981
4:30 PM	0	11	21	29	0	24	17	7	0	20	34	15	0	12	61	14	265	2,990
4:35 PM	0	14	24	27	0	16	22	8	0	17	27	8	0	12	82	12	269	2,932
4:40 PM	0	17	27	31	0	23	20	4	0	20	31	8	0	11	45	12	249	2,912
4:45 PM	0	8	20	25	0	16	19	6	0	22	37	11	0	16	79	11	270	2,845
4:50 PM	0	12	18	18	0	21	30	4	0	13	33	11	0	9	49	14	232	2,765
4:55 PM	0	16	20	25	0	22	20	4	0	16	39	10	0	14	48	11	245	2,722
5:00 PM	0	9	24	20	0	12	20	4	0	16	32	7	0	6	85	11	246	2,664
5:05 PM	0	16	31	20	0	26	26	2	0	13	29	7	0	9	48	9	236	
5:10 PM	0	8	21	24	0	14	10	6	0	24	47	10	0	14	72	13	263	
5:15 PM	0	12	23	28	0	11	31	5	0	19	30	6	0	14	61	13	253	
5:20 PM	0	15	22	15	0	31	15	7	0	19	32	5	0	11	58	6	236	
5:25 PM	0	10	27	21	0	18	23	2	0	8	35	5	0	2	64	11	226	
5:30 PM	0	15	26	21	0	18	19	3	0	17	22	9	0	9	45	3	207	
5:35 PM	0	12	19	21	0	10	17	3	0	20	42	13	0	11	66	15	249	
5:40 PM	0	6	17	15	0	12	20	3	0	11	26	5	0	7	49	11	182	
5:45 PM	0	21	11	8	0	20	12	4	0	19	27	9	1	14	35	9	190	
5:50 PM	0	7	21	16	0	11	22	4	0	7	28	6	0	6	49	12	189	
5:55 PM	0	15	22	14	0	21	14	5	0	12	18	5	0	11	45	5	187	
Count Total	0	283	546	515	0	441	498	109	0	411	753	198	2	268	1,369	264	5,657	
Peak Hour	0	146	272	285	0	240	259	59	0	214	392	99	0	143	734	138	2,981	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	5	2	1	8	4:00 PM						4:00 PM	4	1	0	2	7
4:05 PM	0	0	0	3	3	4:05 PM						4:05 PM	0	0	0	0	0
4:10 PM	0	2	1	0	3	4:10 PM						4:10 PM	0	0	0	0	0
4:15 PM	0	0	3	0	3	4:15 PM						4:15 PM	0	0	0	0	0
4:20 PM	1	1	2	0	4	4:20 PM						4:20 PM	0	0	0	0	0
4:25 PM	1	1	2	2	6	4:25 PM						4:25 PM	0	0	0	0	0
4:30 PM	0	1	1	1	3	4:30 PM						4:30 PM	0	0	0	0	0
4:35 PM	0	1	1	1	3	4:35 PM						4:35 PM	0	0	0	0	0
4:40 PM	0	3	3	4	10	4:40 PM						4:40 PM	0	0	0	0	0
4:45 PM	0	1	1	3	5	4:45 PM						4:45 PM	0	0	0	0	0
4:50 PM	0	1	1	0	2	4:50 PM						4:50 PM	0	0	0	0	0
4:55 PM	2	3	1	0	6	4:55 PM						4:55 PM	0	0	0	0	0
5:00 PM	0	0	1	1	2	5:00 PM						5:00 PM	0	0	0	0	0
5:05 PM	1	1	2	1	5	5:05 PM						5:05 PM	0	0	1	0	1
5:10 PM	1	1	0	0	2	5:10 PM						5:10 PM	1	0	0	0	1
5:15 PM	1	2	2	3	8	5:15 PM						5:15 PM	0	0	0	0	0
5:20 PM	0	1	0	1	2	5:20 PM						5:20 PM	0	0	0	0	0
5:25 PM	0	1	1	1	3	5:25 PM						5:25 PM	1	1	0	0	2
5:30 PM	2	3	0	2	7	5:30 PM						5:30 PM	0	0	1	0	1
5:35 PM	0	2	0	2	4	5:35 PM						5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	2	2	5:40 PM						5:40 PM	0	1	0	2	3
5:45 PM	0	0	0	0	0	5:45 PM						5:45 PM	0	0	2	0	2
5:50 PM	0	0	0	2	2	5:50 PM						5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM						5:55 PM	0	0	0	0	0
Count Total	9	30	24	30	93	Count Total						Count Total	6	3	4	4	17
Peak Hour	6	16	15	17	54	Peak Hour						Peak Hour	1	0	1	0	2



ALL TRAFFIC DATA SERVICES

(303) 216-2439

www.alltrafficdata.net

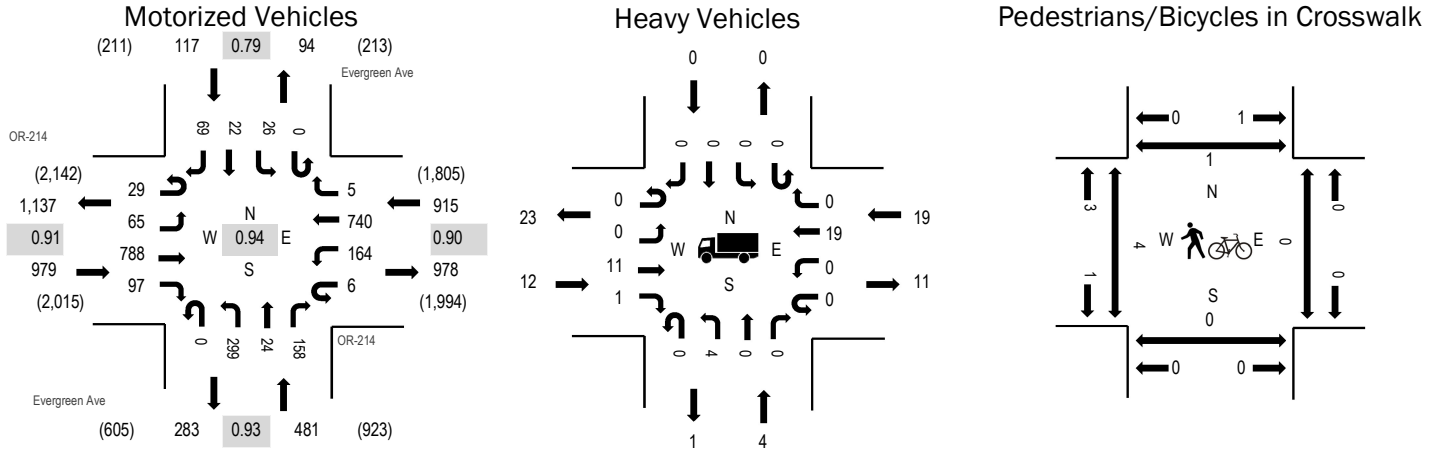
Location: 7 Evergreen Ave & OR-214 PM

Date: Tuesday, October 6, 2020

Study Peak Hour: 04:25 PM - 05:25 PM

Peak 15-Minutes in Study Peak Hour: 05:10 PM - 05:25 PM

Study Peak Hour (for all study intersections)



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	2.3%	0.91
WB	3.1%	0.90
NB	2.1%	0.93
SB	2.6%	0.79
All	2.6%	0.94

Traffic Counts - Motorized Vehicles

Interval Start Time	OR-214 Eastbound				OR-214 Westbound				Evergreen Ave Northbound				Evergreen Ave Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	1	4	76	11	1	15	66	3	0	20	3	17	0	2	0	8	227	2,492
4:05 PM	3	6	74	14	1	15	57	3	0	11	3	15	0	3	2	5	212	2,493
4:10 PM	4	4	54	8	0	17	50	2	0	20	4	15	0	5	4	9	196	2,474
4:15 PM	1	6	84	14	0	21	70	2	0	20	0	13	0	2	2	4	239	2,491
4:20 PM	2	10	58	9	0	22	60	3	0	25	3	13	0	0	3	5	213	2,487
4:25 PM	3	7	61	5	0	14	53	0	0	35	0	10	0	2	0	6	196	2,492
4:30 PM	4	2	72	12	0	11	50	0	0	24	2	13	0	3	1	5	199	2,482
4:35 PM	4	7	50	10	0	21	60	0	0	25	1	7	0	3	3	10	201	2,519
4:40 PM	4	3	77	10	0	9	57	0	0	23	2	16	0	4	3	5	213	2,534
4:45 PM	2	5	56	6	0	13	58	0	0	24	1	7	0	2	2	4	180	2,521
4:50 PM	1	9	55	4	0	16	70	0	0	24	5	15	0	1	1	3	204	2,510
4:55 PM	1	4	65	13	1	13	66	1	0	23	0	13	0	0	3	9	212	2,506
5:00 PM	4	7	69	5	1	25	58	2	0	25	5	20	0	0	2	5	228	2,462
5:05 PM	2	1	67	2	1	6	69	0	0	21	2	15	0	1	0	6	193	
5:10 PM	1	9	66	8	2	14	56	0	0	26	3	13	0	3	3	9	213	
5:15 PM	1	7	82	11	0	16	70	2	0	23	1	15	0	4	0	3	235	
5:20 PM	2	4	68	11	1	6	73	0	0	26	2	14	0	3	4	4	218	
5:25 PM	4	6	60	12	0	18	41	4	0	15	7	16	0	2	0	1	186	
5:30 PM	4	2	83	12	1	16	67	0	0	30	5	9	0	2	0	5	236	
5:35 PM	1	10	74	9	0	13	59	2	0	24	2	14	0	2	3	3	216	
5:40 PM	2	7	77	10	0	13	59	2	0	19	1	8	0	1	0	1	200	
5:45 PM	1	3	57	6	1	14	36	0	0	25	0	16	0	2	4	4	169	
5:50 PM	1	5	66	7	0	10	71	1	0	18	1	16	0	1	1	2	200	
5:55 PM	1	3	65	5	0	11	42	1	0	23	1	10	0	0	1	5	168	
Count Total	54	131	1,616	214	10	349	1,418	28	0	549	54	320	0	48	42	121	4,954	
Peak Hour	29	65	788	97	6	164	740	5	0	299	24	158	0	26	22	69	2,492	

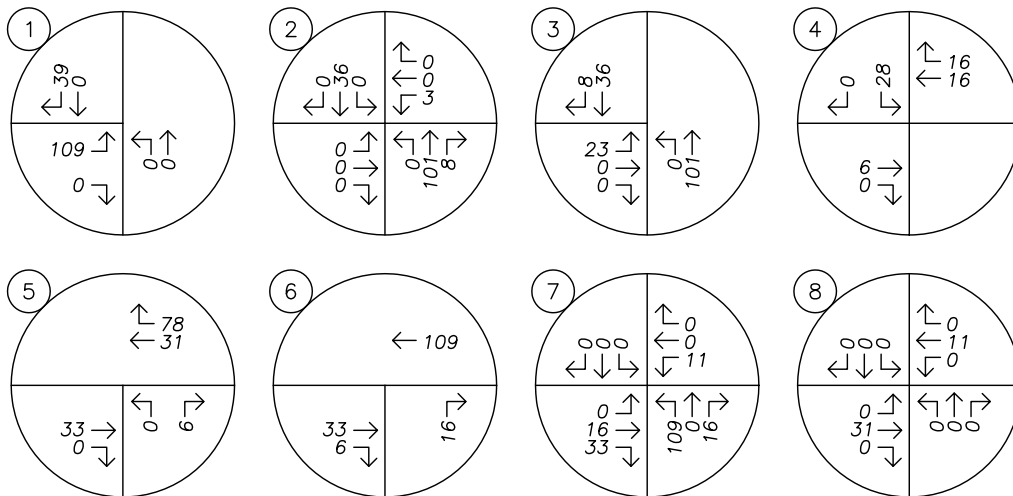
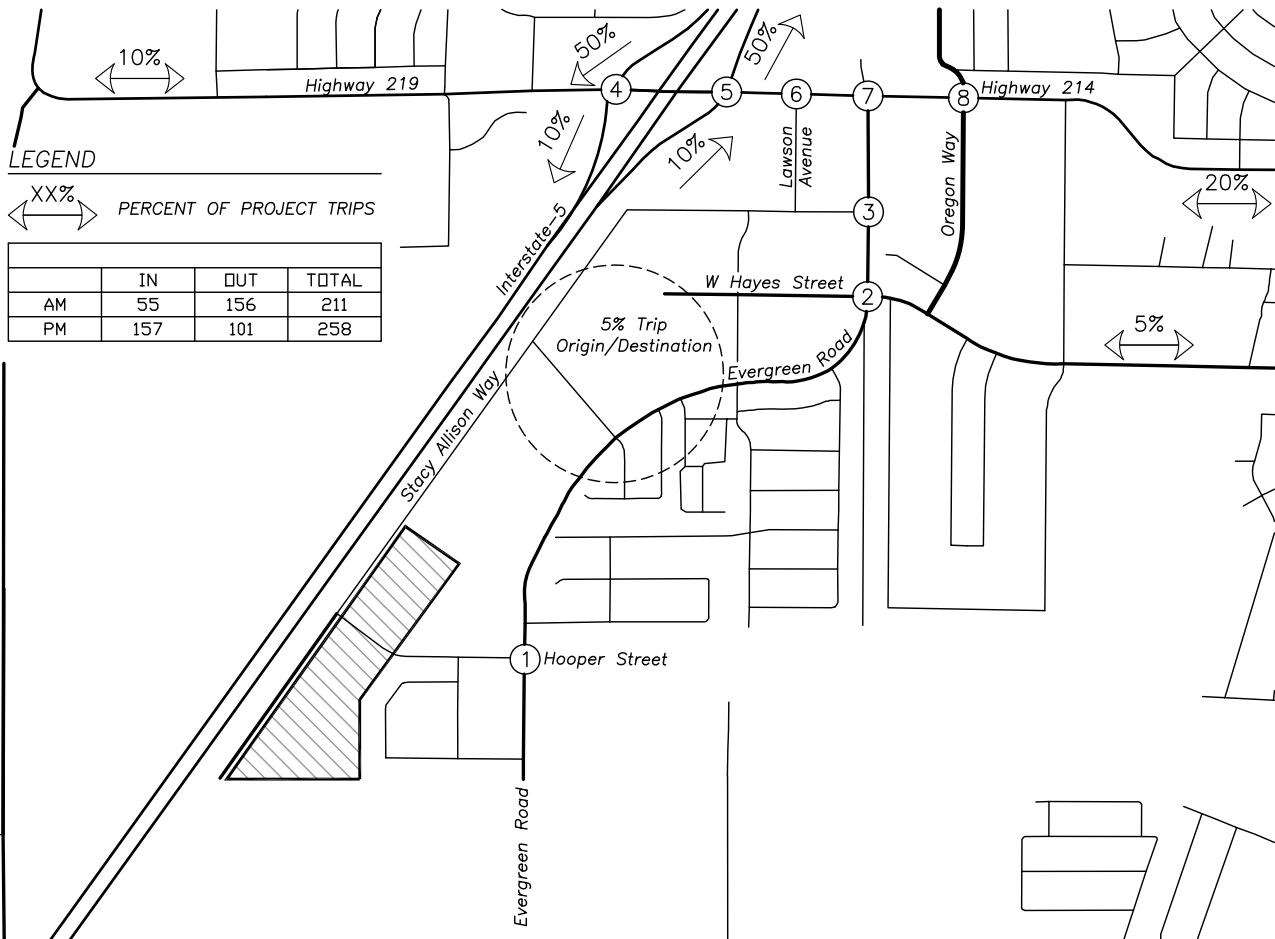
Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	3	0	3	4:00 PM						4:00 PM	0	0	0	2	2
4:05 PM	1	0	1	0	2	4:05 PM						4:05 PM	0	0	0	0	0
4:10 PM	1	0	2	0	3	4:10 PM						4:10 PM	0	0	0	0	0
4:15 PM	1	0	1	0	2	4:15 PM						4:15 PM	0	2	0	0	2
4:20 PM	1	0	1	0	2	4:20 PM						4:20 PM	0	0	0	0	0
4:25 PM	2	0	1	0	3	4:25 PM						4:25 PM	1	0	0	0	1
4:30 PM	1	0	1	0	2	4:30 PM						4:30 PM	0	0	0	0	0
4:35 PM	0	0	1	0	1	4:35 PM						4:35 PM	0	0	0	0	0
4:40 PM	1	0	2	0	3	4:40 PM						4:40 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1	4:45 PM						4:45 PM	1	0	0	0	1
4:50 PM	0	0	0	0	0	4:50 PM						4:50 PM	1	0	0	1	2
4:55 PM	2	0	5	0	7	4:55 PM						4:55 PM	0	0	0	0	0
5:00 PM	0	0	1	0	1	5:00 PM						5:00 PM	0	0	0	0	0
5:05 PM	3	0	1	0	4	5:05 PM						5:05 PM	0	0	0	0	0
5:10 PM	1	1	2	0	4	5:10 PM						5:10 PM	1	0	0	0	1
5:15 PM	1	1	3	0	5	5:15 PM						5:15 PM	0	0	0	0	0
5:20 PM	1	2	1	0	4	5:20 PM						5:20 PM	0	0	0	0	0
5:25 PM	1	0	1	0	2	5:25 PM						5:25 PM	0	0	1	0	1
5:30 PM	2	0	1	0	3	5:30 PM						5:30 PM	0	1	0	0	1
5:35 PM	0	0	0	0	0	5:35 PM						5:35 PM	0	0	0	0	0
5:40 PM	1	0	0	0	1	5:40 PM						5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM						5:45 PM	0	0	0	0	0
5:50 PM	0	0	1	0	1	5:50 PM						5:50 PM	0	0	0	0	0
5:55 PM	2	0	0	0	2	5:55 PM						5:55 PM	0	1	0	0	1
Count Total	22	4	30	0	56	Count Total						Count Total	4	4	1	3	12
Peak Hour	12	4	19	0	35	Peak Hour						Peak Hour	4	0	0	1	5

LEGEND

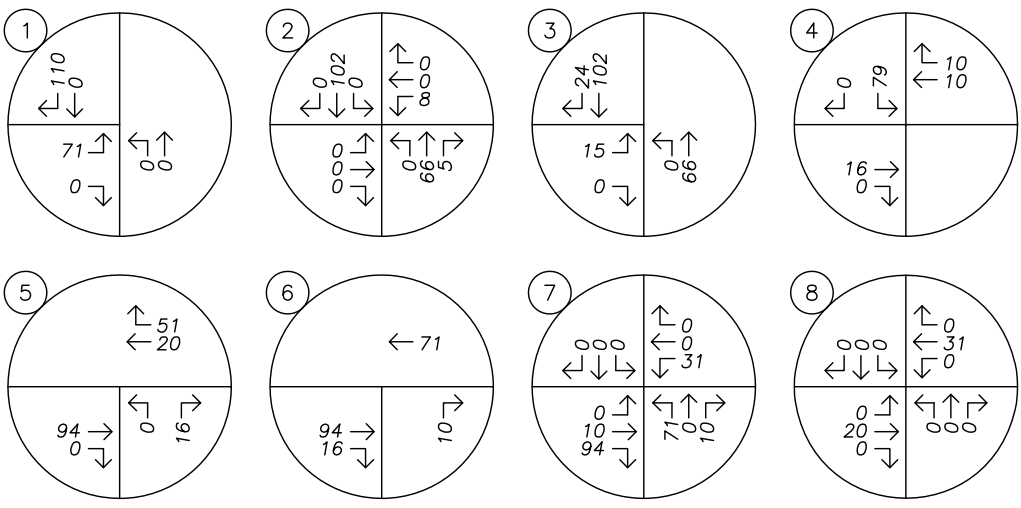
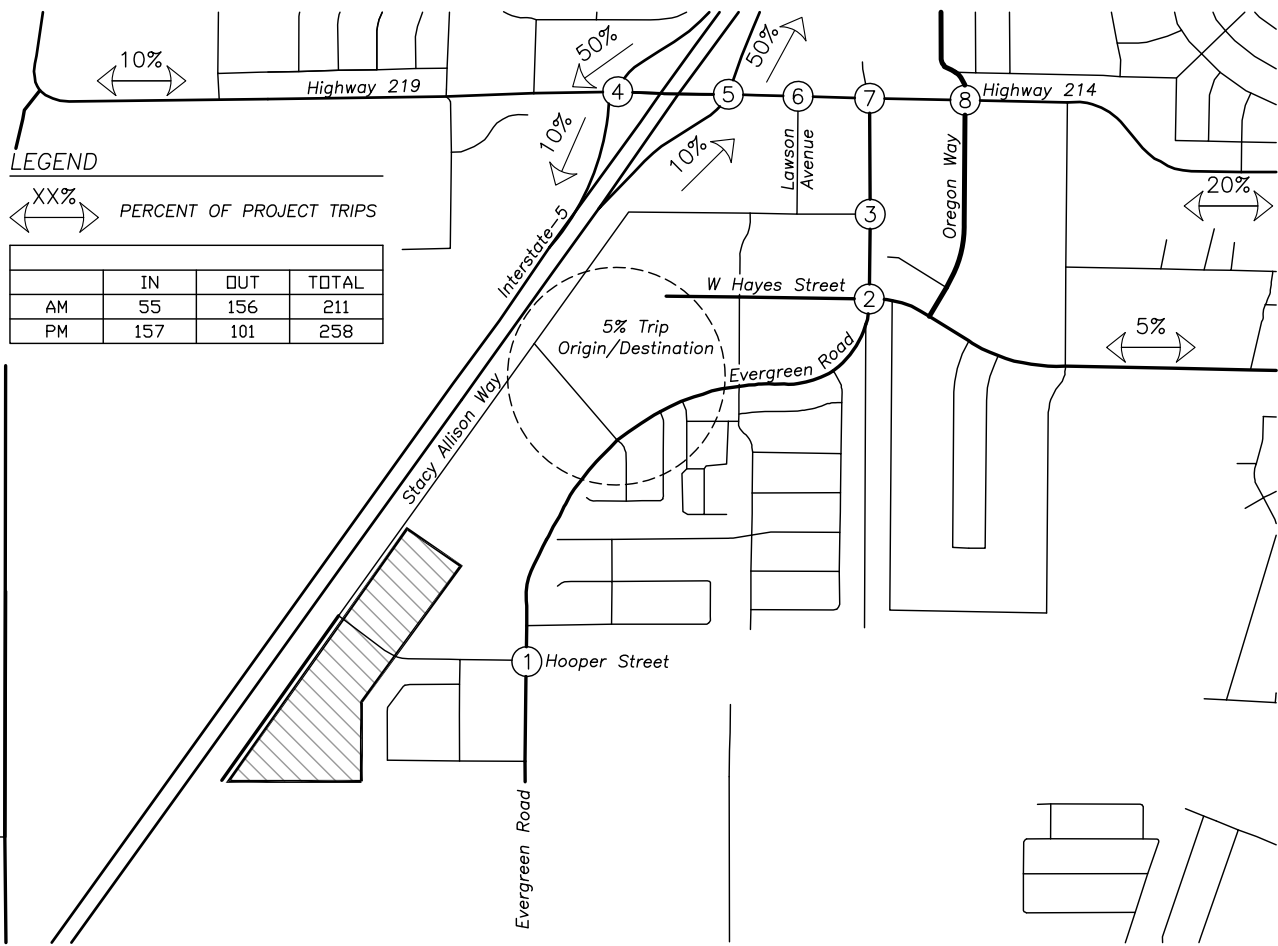
XX% PERCENT OF PROJECT TRIPS

	IN	OUT	TOTAL
AM	55	156	211
PM	157	101	258



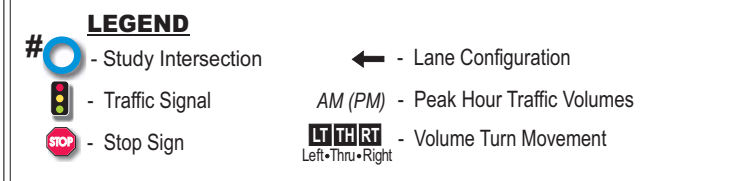
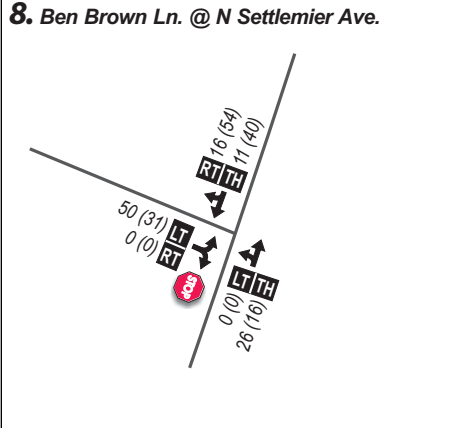
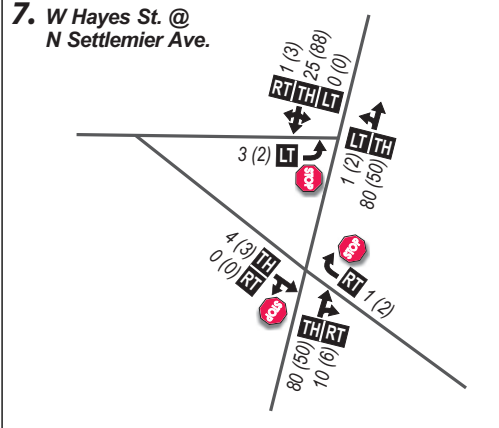
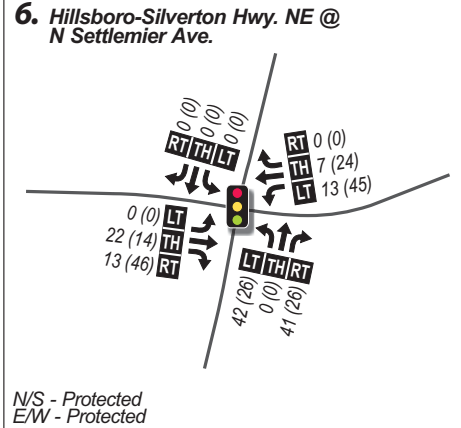
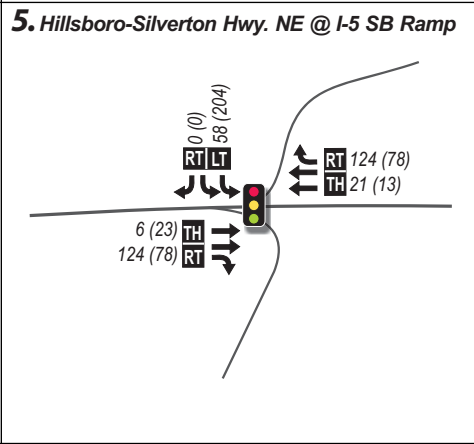
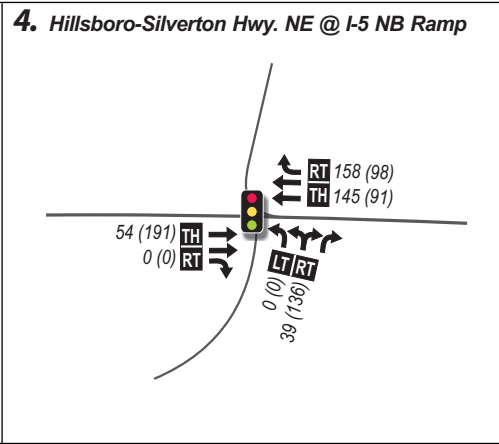
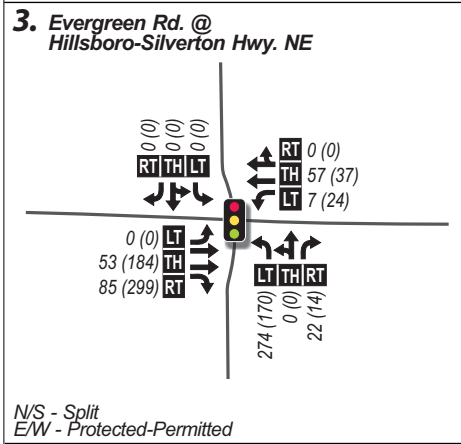
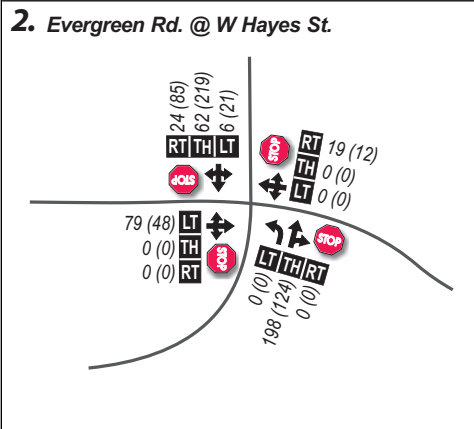
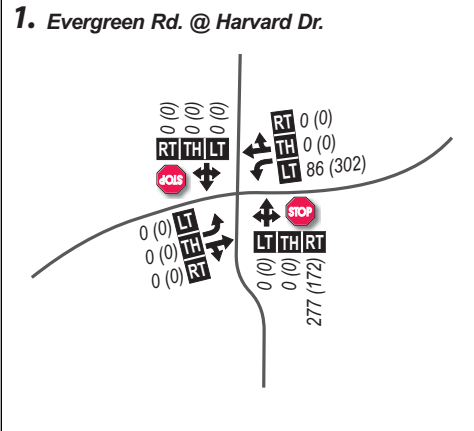
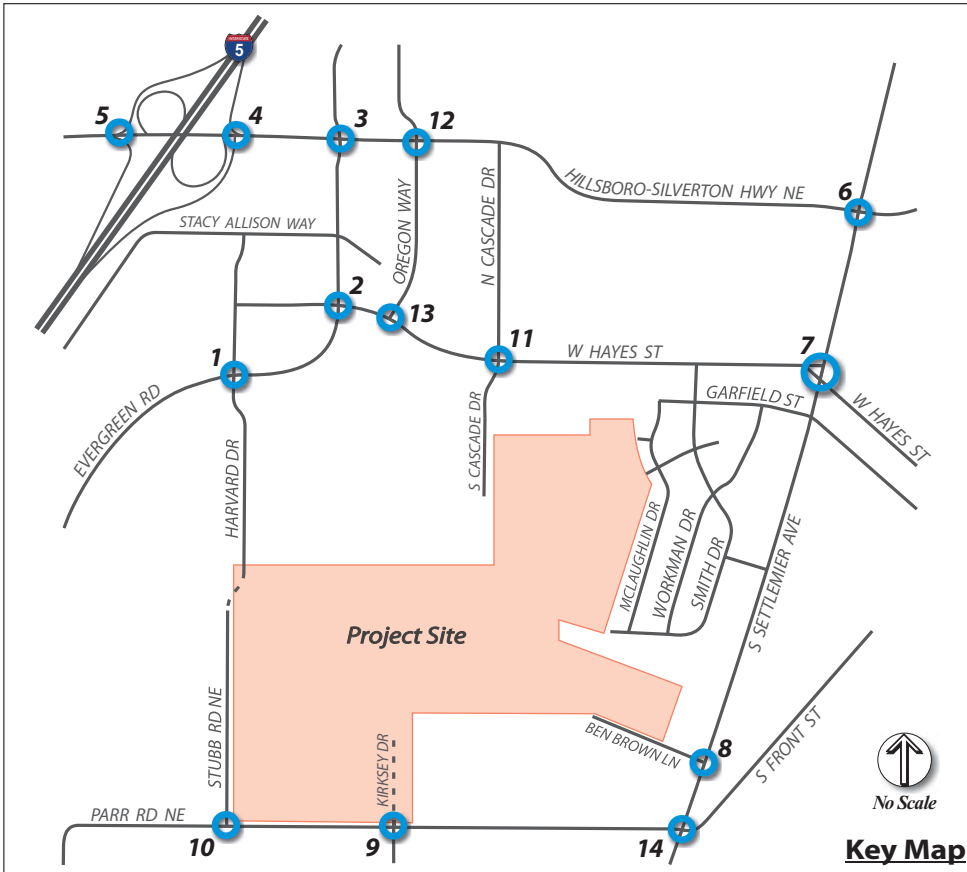
SITE TRIP DISTRIBUTION & ASSIGNMENT
 Proposed Development Plan – Phase 1 & 2
 AM Peak Hour





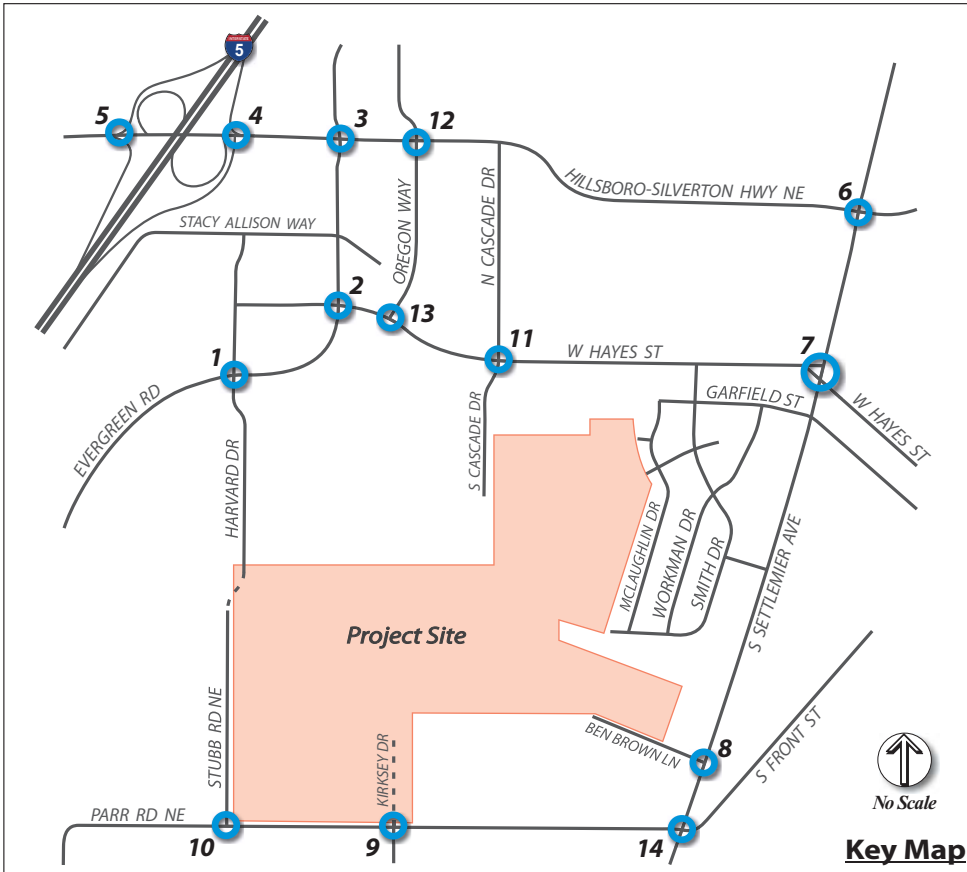
SITE TRIP DISTRIBUTION & ASSIGNMENT
 Proposed Development Plan – Phase 1 & 2
 PM Peak Hour



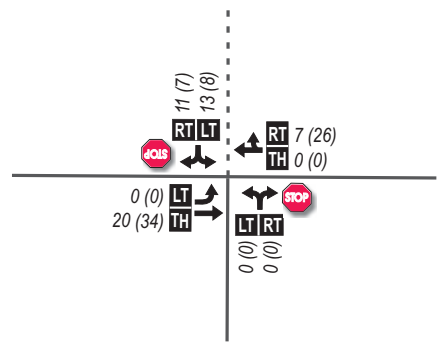


DKS **Figure 5a**

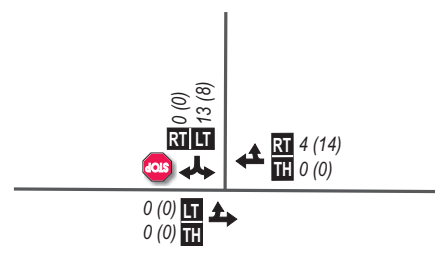
Project Trip Assignment at Full Buildout



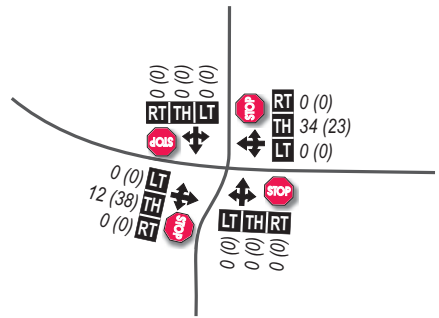
9. Parr Rd. NE @ Kirksey Dr.



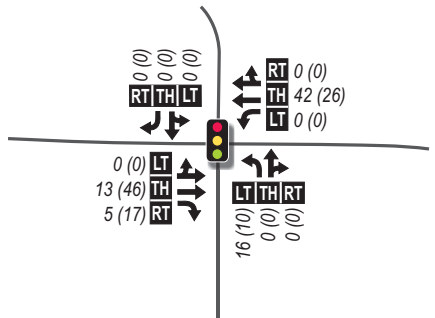
10. Parr Rd. NE @ Stubb Rd. NE



11. W Hayes St. @ S Cascade Dr.

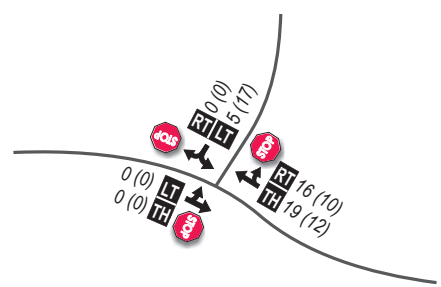


12. Hillsboro-Silverton Hwy. NE @ Oregon Way

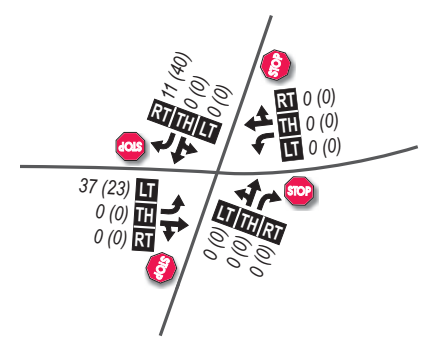


N/S - Protected
E/W - Protected

13. W Hayes St. @ Oregon Way



14. Parr Rd. NE @ S Settlemier Ave.



LEGEND

- # - Study Intersection
- 🚦 - Traffic Signal
- 🛑 - Stop Sign
- ← - Lane Configuration
- AM (PM) - Peak Hour Traffic Volumes
- LT TH RT - Volume Turn Movement (Left-Thru-Right)

DKS

Figure 5b

Project Trip Assignment at Full Buildout

CITY OF WOODBURN, MARION COUNTY

HILLSBORO-SILV HY at PACIFIC HY 99E, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

HILLSBORO-SILV HY at PACIFIC HY 99E, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

HILLSBORO-SILV HY at PACIFIC HY 99E, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

HILLSBORO-SILV HY at PACIFIC HY 99E, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

HILLSBORO-SILV HY at PACIFIC HY 99E, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

HILLSBORO-SILV HY at PACIFIC HY 99E, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

HILLSBORO-SILV HY at PACIFIC HY 99E, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

BOONES FERRY RD at COUNTRY CLUB RD, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

SER#	P	R	J	S	W	DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	SPCL USE	MOVE	A	S	RD DPT	E	L	G	N	H	R	TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED	UNLOC?	D	C	S	V	L	K	LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE
------	---	---	---	---	---	------	-------	-------------	---------	----------	----------	------	---	---	--------	---	---	---	---	---	---	------	------	---------------	--------	------	-------	-------	------	------	-------	------	------	-----	---	---	-------	-----	--------	---	---	---	---	---	---	-----	------	-----	-------	----------	-------	-------	-------	-------	----	------	----	----	------	-------	---	---	-----	-----	-------	-----	-------	-------

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

CITY OF WOODBURN, MARION COUNTY

BOONES FERRY RD at COUNTRY CLUB RD, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

BOONES FERRY RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

MARION COUNTY

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

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CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

40 - 41 of 58 Crash records shown.

SER#	P	R	J	S	W	DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	SPCL USE	TRLR QTY	MOVE	A	S	INJ	G	E	LICNS	PED	ERROR	ACT	EVENT	CAUSE													
INVEST	E	A	U	I	C	O	DIST	FIRST STREET		(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH																							
RD DPT	E	L	G	N	H	R	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM																					
UNLOC?	D	C	S	V	L	K	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC													
															01	NONE	0	STRGHT																			
																PRVTE	W -E								000	000	00										
																PSNGR	CAR		02	PSNG	NO<5	02	F			000	000	00									
															01	NONE	0	STRGHT																			
																PRVTE	W -E									000	000	00									
																PSNGR	CAR		03	PSNG	NO<5	01	F			000	000	00									
															02	NONE	0	STRGHT																			
																PRVTE	N -S									000	013	00									
																PSNGR	CAR		01	DRVR	NONE	39	M	OR-Y		000	022	00									
															02	NONE	0	STRGHT																			
																PRVTE	N -S										000	013	00								
																PSNGR	CAR		02	PSNG	INJC	20	M			000	000	00									
															02	NONE	0	STRGHT																			
																PRVTE	N -S										000	013	00								
																PSNGR	CAR		03	PSNG	INJC	39	F			000	000	00									
															03	NONE	0	STOP																			
																PRVTE	S -N										012	013	00								
																PSNGR	CAR		01	DRVR	NONE	60	F	OR-Y		000	022	00									
															04	NONE	0	STOP										012	00								
																PRVTE	S -N										000	000	00								
																PSNGR	CAR		01	DRVR	INJC	36	F	OR-Y		000	000	00									
															04	NONE	0	STOP										012	00								
																PRVTE	S -N										000	000	00								
																PSNGR	CAR		02	PSNG	INJC	15	M			000	000	00									
02923	N	N	N	N	N	07/20/2017	14	EVERGREEN RD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE	0	STRGHT										04									
CITY						TH		HILLSBORO-SILV HY	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	W -E										000	00									
N						2P			03	3		N	DAY	INJ		PSNGR	CAR									01	DRVR	INJC	25	F	OTH-Y		020	000	04		
N						45 9 3.52	-122 52	014000100S00																													
							32.54																														
																01	NONE	0	STRGHT																		
																PRVTE	W -E												000	000	00						
																PSNGR	CAR			02	PSNG	INJC	22	F			000	000	00								
																02	NONE	0	TURN-L																		
																PRVTE	E -S												000	000	00						
																PSNGR	CAR			01	DRVR	NONE	73	M	OTH-Y		000	000	00								
03299	N	N	N	N	N	08/15/2017	14	EVERGREEN RD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE	0	TURN-L																			
CITY						TU		HILLSBORO-SILV HY	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	E -S												000	000	00						
N						3P			03	3		N	DAY	INJ		PSNGR	CAR											01	DRVR	NONE	17	M	OR-Y		097	000	00
N						45 9 3.52	-122 52	014000100S00																													
							32.54																														

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CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

51 - 52 of 58 Crash records shown.

SER#	INVEST	RD DPT	UNLOC?	S	D	M	P	R	J	S	W	DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	INT-REL	OFFRD	WTHR	CRASH	SPCL USE	MOVE	A	S	ACT	EVENT	CAUSE											
	E	A	U	I	C	O	DAY	DIST	FIRST STREET				DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY																	
	E	L	G	N	H	R	TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM																
	D	C	S	V	L	K	LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO		PRTC	INJ	G	E	LICNS	PED	ERROR												
00422	N	N	N	N	N	N	02/05/2018	14	EVERGREEN RD	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE	0	STRGHT								013	04										
	CITY						MO		HILLSBORO-SILV HY	CN							TRF SIGNAL	N	DRY	ANGL	PRVTE	W -E				000	00											
	N						8A			03	3			DAY						INJ	PSNGR CAR		01	DRVR	INJA	76	F	OR-Y	020	000	04							
	N						45 9 3.52	-122 52 32.54	014000100S00																													
00833	N	N	N	N	N	N	03/11/2018	14	EVERGREEN RD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE	0	U-TURN									02										
	CITY						SU		HILLSBORO-SILV HY	CN							FLASHBCN-A	N	DRY	TURN	PRVTE	W -W				000	00											
	N						1P			02	3			DAY						INJ	PSNGR CAR		01	DRVR	NONE	69	M	OTH-Y	028	000	02							
	N						45 9 3.52	-122 52 32.54	014000100S00																													
04885	N	N	N	N	N	N	12/19/2018	14	EVERGREEN RD	INTER	CROSS	N	N	CLD	O-1 L-TURN	01	NONE	0	STRGHT									02										
	CITY						WE		HILLSBORO-SILV HY	CN							FLASHBCN-A	N	DRY	TURN	PRVTE	W -E				000	00											
	N						12P			03	3			DAY						INJ	PSNGR CAR		01	DRVR	NONE	55	F	OTH-Y	000	000	00							
	N						45 9 3.52	-122 52 32.54	014000100S00																													

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CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

EVERGREEN RD at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

SETTLEMIER AVE at HILLSBORO-SILV HY, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

CITY OF WOODBURN, MARION COUNTY

HAYES ST at SETTLEMIER AVE, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF WOODBURN, MARION COUNTY

HAYES ST at SETTLEMIER AVE, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

5 - 5 of 5 Crash records shown.

SER#	S	D	M	P	R	J	S	W	DATE	CLASS	CITY STREET	INT-TYPE	SPCL USE																									
INVEST	E	A	U	I	C	O	DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE	A S																				
RD DPT	E	L	G	N	H	R	TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED															
UNLOC?	D	C	S	V	L	K	LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE									
															02	NONE	0	TURN-L																				
																	PRVTE	SE-SW																		018	00	
																	PSNGR	CAR		01	DRVR	NONE	25	F	OR-Y		028								000	02		
																02	NONE	0	TURN-L																			
																	PRVTE	SE-SW																			018	00
																	PSNGR	CAR		02	PSNG	NO<5	01	M			000									000	00	

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CITY OF WOODBURN, MARION COUNTY

HAYES ST at SETTLEMIER AVE, City of Woodburn, Marion County, 01/01/2014 to 12/31/2018

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	27	52	10	42	21	94	160	13	3	101	40
Future Vol, veh/h	30	27	52	10	42	21	94	160	13	3	101	40
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	2	2	2	1	1	1	2	2	2
Mvmt Flow	36	32	62	12	50	25	112	190	15	4	120	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	8.9	11.1	9.1
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	35%	28%	14%	2%
Vol Thru, %	60%	25%	58%	70%
Vol Right, %	5%	48%	29%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	267	109	73	144
LT Vol	94	30	10	3
Through Vol	160	27	42	101
RT Vol	13	52	21	40
Lane Flow Rate	318	130	87	171
Geometry Grp	1	1	1	1
Degree of Util (X)	0.415	0.178	0.123	0.223
Departure Headway (Hd)	4.697	4.929	5.11	4.688
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	763	721	695	759
Service Time	2.753	3	3.188	2.754
HCM Lane V/C Ratio	0.417	0.18	0.125	0.225
HCM Control Delay	11.1	9.1	8.9	9.1
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2.1	0.6	0.4	0.9

HCM 6th TWSC
2: Boones Ferry Road & Hazelnut Drive

10/23/2020

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	1	16	252	16	21	150
Future Vol, veh/h	1	16	252	16	21	150
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, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	1	18	280	18	23	167

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	502	289	0	0	298	0
Stage 1	289	-	-	-	-	-
Stage 2	213	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	533	755	-	-	1275	-
Stage 1	765	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	522	755	-	-	1275	-
Mov Cap-2 Maneuver	654	-	-	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	827	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	748	1275
HCM Lane V/C Ratio	-	-	0.025	0.018
HCM Control Delay (s)	-	-	9.9	7.9
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

HCM 6th TWSC
 3: Boones Ferry Road & Country Club Road

10/23/2020

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑	↑	
Traffic Vol, veh/h	36	45	21	236	214	16
Future Vol, veh/h	36	45	21	236	214	16
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	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	41	51	24	268	243	18

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	568	252	261	0	-	0
Stage 1	252	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	488	792	1303	-	-	-
Stage 1	795	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	479	792	1303	-	-	-
Mov Cap-2 Maneuver	479	-	-	-	-	-
Stage 1	781	-	-	-	-	-
Stage 2	744	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1303	-	614	-	-
HCM Lane V/C Ratio	0.018	-	0.15	-	-
HCM Control Delay (s)	7.8	-	11.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

HCM 6th Signalized Intersection Summary

4: Evergreen Road & Hwy 214

10/23/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	625	25	86	593	9	288	9	86	11	14	19
Future Volume (veh/h)	39	625	25	86	593	9	288	9	86	11	14	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1668	1668	1668	1709	1709	1709	1723	1723	1723	1750	1750	1750
Adj Flow Rate, veh/h	42	672	0	92	638	10	317	0	0	12	15	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	3	3	3	2	2	2	0	0	0
Cap, veh/h	543	2030		549	2123	33	444	0		78	82	
Arrive On Green	0.04	0.85	0.00	0.04	0.86	0.64	0.14	0.00	0.00	0.05	0.05	0.00
Sat Flow, veh/h	1589	3169	1414	1628	3272	51	3281	0	1460	1667	1750	1483
Grp Volume(v), veh/h	42	672	0	92	316	332	317	0	0	12	15	0
Grp Sat Flow(s),veh/h/ln	1589	1585	1414	1628	1624	1700	1641	0	1460	1667	1750	1483
Q Serve(g_s), s	1.1	5.2	0.0	2.3	4.3	4.5	11.1	0.0	0.0	0.8	1.0	0.0
Cycle Q Clear(g_c), s	1.1	5.2	0.0	2.3	4.3	4.5	11.1	0.0	0.0	0.8	1.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	543	2030		549	1054	1103	444	0		78	82	
V/C Ratio(X)	0.08	0.33		0.17	0.30	0.30	0.71	0.00		0.15	0.18	
Avail Cap(c_a), veh/h	593	2030		627	1054	1103	820	0		153	160	
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.5	3.6	0.0	6.5	3.2	3.3	49.7	0.0	0.0	54.9	55.0	0.0
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.1	0.7	0.7	2.2	0.0	0.0	0.9	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	1.5	0.0	0.8	1.4	1.5	4.7	0.0	0.0	0.4	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.6	4.0	0.0	6.6	3.9	4.0	51.8	0.0	0.0	55.8	56.0	0.0
LnGrp LOS	A	A		A	A	A	D	A		E	E	
Approach Vol, veh/h		714	A		740			317	A		27	A
Approach Delay, s/veh		4.2			4.3			51.8			55.9	
Approach LOS		A			A			D			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	80.9		20.2	8.3	81.9		9.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	51.5		29.5	7.5	54.5		10.5				
Max Q Clear Time (g_c+I1), s	4.3	7.2		13.1	3.1	6.5		3.0				
Green Ext Time (p_c), s	0.1	10.1		1.7	0.0	8.9		0.0				

Intersection Summary

HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 5: Settlemier Avenue /Boones Ferry Road & Hwy 214

10/23/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	427	162	28	290	42	240	106	40	44	79	72
Future Volume (veh/h)	66	427	162	28	290	42	240	106	40	44	79	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1668	1668	1668	1654	1654	1654	1750	1750	1750	1736	1736	1736
Adj Flow Rate, veh/h	69	445	120	29	302	36	250	110	30	46	82	54
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	7	7	7	0	0	0	1	1	1
Cap, veh/h	92	987	1081	47	932	788	290	361	306	65	123	104
Arrive On Green	0.06	0.79	0.59	0.03	0.75	0.56	0.17	0.21	0.21	0.04	0.07	0.07
Sat Flow, veh/h	1589	1668	1410	1576	1654	1398	1667	1750	1483	1654	1736	1471
Grp Volume(v), veh/h	69	445	120	29	302	36	250	110	30	46	82	54
Grp Sat Flow(s),veh/h/ln	1589	1668	1410	1576	1654	1398	1667	1750	1483	1654	1736	1471
Q Serve(g_s), s	5.1	10.6	2.6	2.2	7.3	1.4	17.5	6.4	2.0	3.3	5.5	4.2
Cycle Q Clear(g_c), s	5.1	10.6	2.6	2.2	7.3	1.4	17.5	6.4	2.0	3.3	5.5	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	987	1081	47	932	788	290	361	306	65	123	104
V/C Ratio(X)	0.75	0.45	0.11	0.61	0.32	0.05	0.86	0.31	0.10	0.71	0.67	0.52
Avail Cap(c_a), veh/h	159	987	1081	92	932	788	431	496	420	138	188	159
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	6.4	3.6	57.5	7.5	11.7	48.1	40.4	38.6	57.0	54.4	53.8
Incr Delay (d2), s/veh	11.3	1.5	0.2	12.2	0.9	0.1	11.1	0.5	0.1	13.5	6.1	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	3.3	0.7	1.0	2.5	0.5	8.2	2.8	0.7	1.6	2.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	7.8	3.8	69.7	8.4	11.8	59.3	40.8	38.7	70.5	60.4	57.7
LnGrp LOS	E	A	A	E	A	B	E	D	D	E	E	E
Approach Vol, veh/h	634			367			390			182		
Approach Delay, s/veh	13.5			13.6			52.5			62.2		
Approach LOS	B			B			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	75.0	24.9	12.5	11.0	71.6	8.7	28.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5	52.5	30.5	12.5	11.5	47.5	9.5	33.5				
Max Q Clear Time (g_c+1), s	11.2	12.6	19.5	7.5	7.1	9.3	5.3	8.4				
Green Ext Time (p_c), s	0.0	7.4	0.9	0.2	0.1	4.1	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	28.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary

6: OR 99E & Hwy 214

10/23/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	193	68	94	188	70	92	441	83	56	204	90
Future Volume (veh/h)	111	193	68	94	188	70	92	441	83	56	204	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1641	1641	1641	1682	1682	1682	1709	1709	1709	1654	1654	1654
Adj Flow Rate, veh/h	118	205	0	100	200	57	98	469	73	60	217	83
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	5	5	5	3	3	3	7	7	7
Cap, veh/h	149	887		130	662	189	159	629	280	81	437	162
Arrive On Green	0.10	0.72	0.00	0.08	0.70	0.52	0.05	0.19	0.19	0.05	0.19	0.19
Sat Flow, veh/h	1563	1641	1391	1602	1258	359	3158	3247	1445	1576	2243	832
Grp Volume(v), veh/h	118	205	0	100	0	257	98	469	73	60	150	150
Grp Sat Flow(s),veh/h/ln	1563	1641	1391	1602	0	1617	1579	1624	1445	1576	1572	1503
Q Serve(g_s), s	8.9	5.1	0.0	7.3	0.0	8.1	3.6	16.3	5.2	4.5	10.2	10.7
Cycle Q Clear(g_c), s	8.9	5.1	0.0	7.3	0.0	8.1	3.6	16.3	5.2	4.5	10.2	10.7
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.55
Lane Grp Cap(c), veh/h	149	887		130	0	851	159	629	280	81	306	293
V/C Ratio(X)	0.79	0.23		0.77	0.00	0.30	0.62	0.75	0.26	0.74	0.49	0.51
Avail Cap(c_a), veh/h	273	887		240	0	851	263	812	361	171	432	413
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.1	8.5	0.0	54.1	0.0	11.0	55.8	45.6	41.1	56.1	43.0	43.3
Incr Delay (d2), s/veh	9.1	0.6	0.0	9.3	0.0	0.9	3.8	2.8	0.5	12.3	1.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	1.8	0.0	3.3	0.0	2.9	1.5	6.8	1.9	2.1	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.2	9.1	0.0	63.4	0.0	11.9	59.7	48.4	41.6	68.4	44.2	44.7
LnGrp LOS	E	A		E	A	B	E	D	D	E	D	D
Approach Vol, veh/h	323		A	357			640		360			
Approach Delay, s/veh	28.5			26.4			49.3		48.5			
Approach LOS	C			C			D		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.7	68.9	10.0	27.4	15.4	67.1	10.2	27.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	47.5	42.5	9.5	32.5	20.5	39.5	12.5	29.5				
Max Q Clear Time (g_c+19), s	19.3	7.1	5.6	12.7	10.9	10.1	6.5	18.3				
Green Ext Time (p_c), s	0.2	1.0	0.1	3.1	0.3	1.3	0.1	4.3				

Intersection Summary

HCM 6th Ctrl Delay	40.3
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
7: Settlemier Avenue & Hayes Street

10/23/2020

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↵			↵	↵	
Traffic Vol, veh/h	25	0	83	417	279	108
Future Vol, veh/h	25	0	83	417	279	108
Conflicting Peds, #/hr	0	1	1	0	0	1
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	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	27	0	91	458	307	119

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1008	-	427	0	-	0
Stage 1	368	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	269	0	1143	-	-	-
Stage 1	704	0	-	-	-	-
Stage 2	529	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	240	-	1142	-	-	-
Mov Cap-2 Maneuver	240	-	-	-	-	-
Stage 1	628	-	-	-	-	-
Stage 2	528	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.9	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1142	-	240	-	-
HCM Lane V/C Ratio	0.08	-	0.114	-	-
HCM Control Delay (s)	8.4	0	21.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	-	-

HCM 6th TWSC
8: Settlemier Avenue & Hayes Street

10/23/2020

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻				↻		↻			↻	
Traffic Vol, veh/h	0	1	95	0	0	13	0	500	1	10	269	0
Future Vol, veh/h	0	1	95	0	0	13	0	500	1	10	269	0
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	3	3	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1	104	0	0	14	0	549	1	11	296	0

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	-	871	297	-
Stage 1	-	318	-	-
Stage 2	-	553	-	-
Critical Hdwy	-	6.5	6.2	-
Critical Hdwy Stg 1	-	5.5	-	-
Critical Hdwy Stg 2	-	5.5	-	-
Follow-up Hdwy	-	4	3.3	-
Pot Cap-1 Maneuver	0	291	747	0
Stage 1	0	657	-	0
Stage 2	0	518	-	0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	286	746	-
Mov Cap-2 Maneuver	-	286	-	-
Stage 1	-	648	-	-
Stage 2	-	516	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	11.9	0	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBL	SBT
Capacity (veh/h)	-	-	734	535	1024
HCM Lane V/C Ratio	-	-	0.144	0.027	0.011
HCM Control Delay (s)	-	-	10.7	11.9	8.6
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	0

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	34	57	138	28	51	12	65	116	19	15	226	43
Future Vol, veh/h	34	57	138	28	51	12	65	116	19	15	226	43
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	37	61	148	30	55	13	70	125	20	16	243	46
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	9.8	10.8	12
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	15%	31%	5%
Vol Thru, %	58%	25%	56%	80%
Vol Right, %	10%	60%	13%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	229	91	284
LT Vol	65	34	28	15
Through Vol	116	57	51	226
RT Vol	19	138	12	43
Lane Flow Rate	215	246	98	305
Geometry Grp	1	1	1	1
Degree of Util (X)	0.318	0.35	0.154	0.433
Departure Headway (Hd)	5.318	5.119	5.683	5.105
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	675	702	630	705
Service Time	3.354	3.156	3.729	3.138
HCM Lane V/C Ratio	0.319	0.35	0.156	0.433
HCM Control Delay	10.8	10.9	9.8	12
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	1.4	1.6	0.5	2.2

HCM 6th TWSC
2: Boones Ferry Road & Hazelnut Drive

10/23/2020

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	R	T	R	L	T
Traffic Vol, veh/h	19	32	181	7	23	357
Future Vol, veh/h	19	32	181	7	23	357
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, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	20	34	195	8	25	384

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	633	199	0	0	203
Stage 1	199	-	-	-	-
Stage 2	434	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	447	847	-	-	1381
Stage 1	839	-	-	-	-
Stage 2	658	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	437	847	-	-	1381
Mov Cap-2 Maneuver	573	-	-	-	-
Stage 1	820	-	-	-	-
Stage 2	658	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	719	1381
HCM Lane V/C Ratio	-	-	0.076	0.018
HCM Control Delay (s)	-	-	10.4	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1

HCM 6th TWSC
 3: Boones Ferry Road & Country Club Road

10/23/2020

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	51	74	201	333	64
Future Vol, veh/h	34	51	74	201	333	64
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	38	57	82	223	370	71

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	796	409	444	0	-	0
Stage 1	409	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	359	647	1127	-	-	-
Stage 1	675	-	-	-	-	-
Stage 2	691	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	331	645	1124	-	-	-
Mov Cap-2 Maneuver	331	-	-	-	-	-
Stage 1	624	-	-	-	-	-
Stage 2	689	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	2.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1124	-	468	-	-
HCM Lane V/C Ratio	0.073	-	0.202	-	-
HCM Control Delay (s)	8.5	-	14.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-

HCM 6th Signalized Intersection Summary
 4: Evergreen Road & Hwy 214

10/23/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	878	107	172	795	11	295	36	174	25	22	59
Future Volume (veh/h)	70	878	107	172	795	11	295	36	174	25	22	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1736	1736	1736	1723	1723	1723	1736	1736	1736	1750	1750	1750
Adj Flow Rate, veh/h	74	924	0	181	837	12	338	0	0	26	23	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	0	0	0
Cap, veh/h	473	2013		459	2090	30	442	0		97	102	
Arrive On Green	0.04	0.81	0.00	0.06	0.84	0.63	0.13	0.00	0.00	0.06	0.06	0.00
Sat Flow, veh/h	1654	3299	1471	1641	3303	47	3307	0	1471	1667	1750	1483
Grp Volume(v), veh/h	74	924	0	181	415	434	338	0	0	26	23	0
Grp Sat Flow(s),veh/h/ln	1654	1650	1471	1641	1637	1714	1654	0	1471	1667	1750	1483
Q Serve(g_s), s	2.0	10.1	0.0	4.7	7.3	7.5	11.8	0.0	0.0	1.8	1.5	0.0
Cycle Q Clear(g_c), s	2.0	10.1	0.0	4.7	7.3	7.5	11.8	0.0	0.0	1.8	1.5	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	473	2013		459	1035	1085	442	0		97	102	
V/C Ratio(X)	0.16	0.46		0.39	0.40	0.40	0.77	0.00		0.27	0.23	
Avail Cap(c_a), veh/h	500	2013		586	1035	1085	717	0		125	131	
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.7	5.4	0.0	7.6	4.1	4.2	50.2	0.0	0.0	54.1	53.9	0.0
Incr Delay (d2), s/veh	0.2	0.8	0.0	0.5	1.2	1.1	2.8	0.0	0.0	1.5	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.8	0.0	1.6	2.2	2.4	5.1	0.0	0.0	0.8	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	6.1	0.0	8.1	5.2	5.3	53.0	0.0	0.0	55.5	55.1	0.0
LnGrp LOS	A	A		A	A	A	D	A		E	E	
Approach Vol, veh/h		998	A		1030			338	A		49	A
Approach Delay, s/veh		6.2			5.8			53.0			55.3	
Approach LOS		A			A			D			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.8	77.2		20.0	9.1	79.9		11.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	16.5	51.5		25.5	6.5	61.5		8.5				
Max Q Clear Time (g_c+I1), s	6.7	12.1		13.8	4.0	9.5		3.8				
Green Ext Time (p_c), s	0.5	14.7		1.5	0.0	13.1		0.0				

Intersection Summary

HCM 6th Ctrl Delay	13.6
HCM 6th LOS	B

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

5: Settlemier Avenue /Boones Ferry Road & Hwy 214

10/23/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	511	333	96	600	86	276	108	66	80	184	109
Future Volume (veh/h)	84	511	333	96	600	86	276	108	66	80	184	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1736	1736	1736	1723	1723	1723	1750	1750	1750	1750	1750	1750
Adj Flow Rate, veh/h	87	527	236	99	619	46	285	111	60	82	190	78
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	115	812	969	128	820	695	319	447	377	109	227	191
Arrive On Green	0.07	0.62	0.47	0.08	0.63	0.48	0.19	0.26	0.26	0.07	0.13	0.13
Sat Flow, veh/h	1654	1736	1470	1641	1723	1458	1667	1750	1477	1667	1750	1472
Grp Volume(v), veh/h	87	527	236	99	619	46	285	111	60	82	190	78
Grp Sat Flow(s),veh/h/ln	1654	1736	1470	1641	1723	1458	1667	1750	1477	1667	1750	1472
Q Serve(g_s), s	6.2	23.1	7.8	7.1	30.3	2.0	20.0	6.1	3.8	5.8	12.7	5.8
Cycle Q Clear(g_c), s	6.2	23.1	7.8	7.1	30.3	2.0	20.0	6.1	3.8	5.8	12.7	5.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	812	969	128	820	695	319	447	377	109	227	191
V/C Ratio(X)	0.76	0.65	0.24	0.78	0.75	0.07	0.89	0.25	0.16	0.75	0.84	0.41
Avail Cap(c_a), veh/h	165	812	969	164	820	695	361	447	377	181	248	208
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	16.4	8.3	54.3	17.1	17.0	47.3	35.5	34.7	55.1	51.0	48.0
Incr Delay (d2), s/veh	11.5	4.0	0.6	15.9	6.4	0.2	21.7	0.3	0.2	9.8	20.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	8.6	2.6	3.5	11.4	0.7	10.3	2.7	1.4	2.7	6.8	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.3	20.4	8.9	70.2	23.4	17.2	69.0	35.8	34.9	64.9	71.4	49.4
LnGrp LOS	E	C	A	E	C	B	E	D	C	E	E	D
Approach Vol, veh/h		850			764			456			350	
Approach Delay, s/veh		21.9			29.1			56.4			64.9	
Approach LOS		C			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.3	60.1	27.0	19.5	12.3	61.1	11.9	34.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5	48.5	25.5	16.5	11.5	48.5	12.5	29.5				
Max Q Clear Time (g_c+1/3), s	19.5	25.1	22.0	14.7	8.2	32.3	7.8	8.1				
Green Ext Time (p_c), s	0.1	8.6	0.5	0.2	0.1	6.6	0.1	0.8				

Intersection Summary

HCM 6th Ctrl Delay	36.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary

6: OR 99E & Hwy 214

10/23/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑	↗	↙	↑		↙↗	↑↑	↗	↙	↑↗	
Traffic Volume (veh/h)	147	280	301	233	272	61	236	407	110	157	770	155
Future Volume (veh/h)	147	280	301	233	272	61	236	407	110	157	770	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1736	1736	1736	1709	1709	1709	1723	1723	1723	1723	1723	1723
Adj Flow Rate, veh/h	155	295	0	245	286	53	248	428	90	165	811	154
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	186	472		277	462	86	313	990	440	200	894	170
Arrive On Green	0.11	0.36	0.00	0.17	0.44	0.33	0.10	0.30	0.30	0.12	0.33	0.32
Sat Flow, veh/h	1654	1736	1471	1628	1402	260	3183	3273	1455	1641	2743	521
Grp Volume(v), veh/h	155	295	0	245	0	339	248	428	90	165	484	481
Grp Sat Flow(s),veh/h/ln	1654	1736	1471	1628	0	1662	1591	1637	1455	1641	1637	1628
Q Serve(g_s), s	11.0	16.8	0.0	17.6	0.0	19.2	9.1	12.6	5.5	11.8	33.9	34.0
Cycle Q Clear(g_c), s	11.0	16.8	0.0	17.6	0.0	19.2	9.1	12.6	5.5	11.8	33.9	34.0
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	186	472		277	0	548	313	990	440	200	533	531
V/C Ratio(X)	0.83	0.62		0.88	0.00	0.62	0.79	0.43	0.20	0.83	0.91	0.91
Avail Cap(c_a), veh/h	207	472		312	0	548	345	990	440	301	546	543
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	33.2	0.0	48.6	0.0	28.8	52.9	33.6	31.1	51.4	38.7	38.8
Incr Delay (d2), s/veh	22.4	6.1	0.0	22.8	0.0	5.2	10.9	0.3	0.2	10.9	18.7	18.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	7.3	0.0	8.8	0.0	7.8	4.1	5.0	2.0	5.4	16.1	16.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	39.4	0.0	71.4	0.0	34.0	63.8	33.9	31.3	62.4	57.4	57.6
LnGrp LOS	E	D		E	A	C	E	C	C	E	E	E
Approach Vol, veh/h		450	A		584			766			1130	
Approach Delay, s/veh		51.5			49.7			43.3			58.2	
Approach LOS		D			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.4	36.6	15.8	43.1	17.5	43.6	18.6	40.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	22.5	27.5	12.5	39.5	14.5	35.5	21.5	30.5				
Max Q Clear Time (g_c+19.6), s	19.6	18.8	11.1	36.0	13.0	21.2	13.8	14.6				
Green Ext Time (p_c), s	0.3	0.9	0.2	2.7	0.1	1.4	0.4	5.0				

Intersection Summary

HCM 6th Ctrl Delay	51.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
7: Settlemier Avenue & Hayes Street

10/23/2020

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↵			↵	↵	
Traffic Vol, veh/h	42	0	143	346	425	179
Future Vol, veh/h	42	0	143	346	425	179
Conflicting Peds, #/hr	0	1	1	0	0	1
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	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	44	0	149	360	443	186

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1195	-	630	0	-	0
Stage 1	537	-	-	-	-	-
Stage 2	658	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	208	0	962	-	-	-
Stage 1	590	0	-	-	-	-
Stage 2	519	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	167	-	961	-	-	-
Mov Cap-2 Maneuver	167	-	-	-	-	-
Stage 1	475	-	-	-	-	-
Stage 2	518	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	34	2.8	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	961	-	167	-	-
HCM Lane V/C Ratio	0.155	-	0.262	-	-
HCM Control Delay (s)	9.4	0	34	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.5	-	1	-	-

HCM 6th TWSC
8: Settlemier Avenue & Hayes Street

10/23/2020

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↶				↷		↶			↷	
Traffic Vol, veh/h	0	1	95	0	0	13	0	500	1	10	269	0
Future Vol, veh/h	0	1	95	0	0	13	0	500	1	10	269	0
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	3	3	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1	104	0	0	14	0	549	1	11	296	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	-	871	297	-	-	553	-	0	0	553	0	0
Stage 1	-	318	-	-	-	-	-	-	-	-	-	-
Stage 2	-	553	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	-	-	6.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	-	-	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	291	747	0	0	537	0	-	-	1027	-	0
Stage 1	0	657	-	0	0	-	0	-	-	-	-	0
Stage 2	0	518	-	0	0	-	0	-	-	-	-	0
Platoon blocked, %												
Mov Cap-1 Maneuver	-	286	746	-	-	535	-	-	-	1024	-	-
Mov Cap-2 Maneuver	-	286	-	-	-	-	-	-	-	-	-	-
Stage 1	-	648	-	-	-	-	-	-	-	-	-	-
Stage 2	-	516	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.7		11.9		0		0.3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBL	SBT
Capacity (veh/h)	-	-	734	535	1024
HCM Lane V/C Ratio	-	-	0.144	0.027	0.011
HCM Control Delay (s)	-	-	10.7	11.9	8.6
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	0

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	31	28	54	10	44	22	98	166	14	3	105	42
Future Vol, veh/h	31	28	54	10	44	22	98	166	14	3	105	42
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	2	2	2	1	1	1	2	2	2
Mvmt Flow	37	33	64	12	52	26	117	198	17	4	125	50
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.2	9	11.4	9.3
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	35%	27%	13%	2%
Vol Thru, %	60%	25%	58%	70%
Vol Right, %	5%	48%	29%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	278	113	76	150
LT Vol	98	31	10	3
Through Vol	166	28	44	105
RT Vol	14	54	22	42
Lane Flow Rate	331	135	90	179
Geometry Grp	1	1	1	1
Degree of Util (X)	0.435	0.186	0.13	0.235
Departure Headway (Hd)	4.731	4.987	5.169	4.732
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	755	713	687	752
Service Time	2.794	3.067	3.255	2.804
HCM Lane V/C Ratio	0.438	0.189	0.131	0.238
HCM Control Delay	11.4	9.2	9	9.3
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2.2	0.7	0.4	0.9

HCM 6th TWSC
 2: Boones Ferry Road & Hazelnut Drive

10/23/2020

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	1	17	262	17	22	156
Future Vol, veh/h	1	17	262	17	22	156
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, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	1	19	291	19	24	173

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	522	301	0	0	310	0
Stage 1	301	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	519	743	-	-	1262	-
Stage 1	755	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	508	743	-	-	1262	-
Mov Cap-2 Maneuver	644	-	-	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	821	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	737	1262
HCM Lane V/C Ratio	-	-	0.027	0.019
HCM Control Delay (s)	-	-	10	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

HCM 6th TWSC
 3: Boones Ferry Road & Country Club Road

10/23/2020

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	47	22	246	223	17
Future Vol, veh/h	37	47	22	246	223	17
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	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	42	53	25	280	253	19

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	593	263	272	0	0
Stage 1	263	-	-	-	-
Stage 2	330	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-
Pot Cap-1 Maneuver	472	781	1291	-	-
Stage 1	786	-	-	-	-
Stage 2	733	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	463	781	1291	-	-
Mov Cap-2 Maneuver	463	-	-	-	-
Stage 1	771	-	-	-	-
Stage 2	733	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1291	-	600	-	-
HCM Lane V/C Ratio	0.019	-	0.159	-	-
HCM Control Delay (s)	7.8	-	12.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-

HCM 6th Signalized Intersection Summary

4: Evergreen Road & Hwy 214

10/23/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	711	144	107	666	9	683	9	127	11	15	20
Future Volume (veh/h)	41	711	144	107	666	9	683	9	127	11	15	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1668	1668	1668	1709	1709	1709	1723	1723	1723	1750	1750	1750
Adj Flow Rate, veh/h	44	765	0	115	716	10	741	0	0	12	16	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	3	3	3	2	2	2	0	0	0
Cap, veh/h	408	1648		410	1761	25	806	0		80	83	
Arrive On Green	0.04	0.69	0.00	0.05	0.71	0.53	0.25	0.00	0.00	0.05	0.05	0.00
Sat Flow, veh/h	1589	3169	1414	1628	3279	46	3281	0	1460	1667	1750	1483
Grp Volume(v), veh/h	44	765	0	115	355	371	741	0	0	12	16	0
Grp Sat Flow(s),veh/h/ln	1589	1585	1414	1628	1624	1701	1641	0	1460	1667	1750	1483
Q Serve(g_s), s	1.5	13.2	0.0	3.9	10.5	10.7	26.4	0.0	0.0	0.8	1.1	0.0
Cycle Q Clear(g_c), s	1.5	13.2	0.0	3.9	10.5	10.7	26.4	0.0	0.0	0.8	1.1	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	408	1648		410	872	913	806	0		80	83	
V/C Ratio(X)	0.11	0.46		0.28	0.41	0.41	0.92	0.00		0.15	0.19	
Avail Cap(c_a), veh/h	457	1648		472	872	913	820	0		153	160	
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.5	10.9	0.0	12.6	9.4	9.6	44.1	0.0	0.0	54.8	54.9	0.0
Incr Delay (d2), s/veh	0.1	0.9	0.0	0.4	1.4	1.3	15.2	0.0	0.0	0.9	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.0	0.0	1.4	3.5	3.7	12.5	0.0	0.0	0.4	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	11.9	0.0	13.0	10.8	11.0	59.3	0.0	0.0	55.7	56.0	0.0
LnGrp LOS	B	B		B	B	B	E	A		E	E	
Approach Vol, veh/h		809	A		841			741	A		28	A
Approach Delay, s/veh		11.9			11.2			59.3			55.9	
Approach LOS		B			B			E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	66.4		33.5	8.3	68.4		9.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	51.5		29.5	7.5	54.5		10.5				
Max Q Clear Time (g_c+I1), s	5.9	15.2		28.4	3.5	12.7		3.1				
Green Ext Time (p_c), s	0.2	11.3		0.5	0.0	10.1		0.0				

Intersection Summary

HCM 6th Ctrl Delay	26.7
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 5: Settlemier Avenue /Boones Ferry Road & Hwy 214

10/23/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	497	182	42	320	44	292	110	83	46	82	75
Future Volume (veh/h)	69	497	182	42	320	44	292	110	83	46	82	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1668	1668	1668	1654	1654	1654	1750	1750	1750	1736	1736	1736
Adj Flow Rate, veh/h	72	518	141	44	333	38	304	115	74	48	85	57
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	7	7	7	0	0	0	1	1	1
Cap, veh/h	96	921	1069	60	876	741	343	413	350	67	123	104
Arrive On Green	0.06	0.73	0.55	0.04	0.70	0.53	0.21	0.24	0.24	0.04	0.07	0.07
Sat Flow, veh/h	1589	1668	1410	1576	1654	1398	1667	1750	1483	1654	1736	1471
Grp Volume(v), veh/h	72	518	141	44	333	38	304	115	74	48	85	57
Grp Sat Flow(s),veh/h/ln	1589	1668	1410	1576	1654	1398	1667	1750	1483	1654	1736	1471
Q Serve(g_s), s	5.4	16.9	3.2	3.3	9.7	1.6	21.3	6.4	4.8	3.4	5.7	4.5
Cycle Q Clear(g_c), s	5.4	16.9	3.2	3.3	9.7	1.6	21.3	6.4	4.8	3.4	5.7	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	921	1069	60	876	741	343	413	350	67	123	104
V/C Ratio(X)	0.75	0.56	0.13	0.73	0.38	0.05	0.89	0.28	0.21	0.72	0.69	0.55
Avail Cap(c_a), veh/h	159	921	1069	92	876	741	431	496	420	138	188	159
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	9.4	3.9	57.1	9.8	13.6	46.3	37.5	36.9	56.9	54.5	53.9
Incr Delay (d2), s/veh	11.1	2.5	0.3	15.4	1.3	0.1	16.7	0.4	0.3	13.2	6.7	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	5.2	0.9	1.6	3.4	0.5	10.4	2.8	1.8	1.7	2.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.6	11.9	4.2	72.5	11.0	13.8	63.0	37.9	37.2	70.1	61.2	58.3
LnGrp LOS	E	B	A	E	B	B	E	D	D	E	E	E
Approach Vol, veh/h	731			415			493			190		
Approach Delay, s/veh	15.8			17.8			53.3			62.6		
Approach LOS	B			B			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	70.2	28.7	12.5	11.3	67.6	8.9	32.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5	52.5	30.5	12.5	11.5	47.5	9.5	33.5				
Max Q Clear Time (g_c+1), s	15.3	18.9	23.3	7.7	7.4	11.7	5.4	8.4				
Green Ext Time (p_c), s	0.0	8.6	0.9	0.2	0.1	4.5	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary

6: OR 99E & Hwy 214

10/23/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↗		↖	↑	↗	↖	↗	
Traffic Volume (veh/h)	160	200	116	95	195	71	109	441	84	57	204	108
Future Volume (veh/h)	160	200	116	95	195	71	109	441	84	57	204	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1641	1641	1641	1682	1682	1682	1709	1709	1709	1654	1654	1654
Adj Flow Rate, veh/h	170	213	0	101	207	59	116	469	74	61	217	102
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	5	5	5	3	3	3	7	7	7
Cap, veh/h	202	885		131	618	176	179	629	280	82	398	180
Arrive On Green	0.13	0.72	0.00	0.08	0.65	0.49	0.06	0.19	0.19	0.05	0.19	0.19
Sat Flow, veh/h	1563	1641	1391	1602	1258	359	3158	3247	1445	1576	2101	952
Grp Volume(v), veh/h	170	213	0	101	0	266	116	469	74	61	160	159
Grp Sat Flow(s),veh/h/ln	1563	1641	1391	1602	0	1617	1579	1624	1445	1576	1572	1481
Q Serve(g_s), s	12.8	5.3	0.0	7.4	0.0	9.5	4.3	16.3	5.2	4.6	11.1	11.7
Cycle Q Clear(g_c), s	12.8	5.3	0.0	7.4	0.0	9.5	4.3	16.3	5.2	4.6	11.1	11.7
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	202	885		131	0	794	179	629	280	82	297	280
V/C Ratio(X)	0.84	0.24		0.77	0.00	0.33	0.65	0.75	0.26	0.74	0.54	0.57
Avail Cap(c_a), veh/h	273	885		240	0	794	263	812	361	171	432	407
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	8.6	0.0	54.0	0.0	13.5	55.4	45.6	41.1	56.1	43.9	44.3
Incr Delay (d2), s/veh	15.7	0.6	0.0	9.3	0.0	1.1	3.9	2.8	0.5	12.1	1.5	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	1.9	0.0	3.3	0.0	3.4	1.8	6.8	1.9	2.1	4.4	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.7	9.2	0.0	63.3	0.0	14.7	59.3	48.4	41.6	68.2	45.4	46.1
LnGrp LOS	E	A		E	A	B	E	D	D	E	D	D
Approach Vol, veh/h		383	A		367			659			380	
Approach Delay, s/veh		34.7			28.1			49.5			49.4	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.8	68.7	10.8	26.7	19.5	63.0	10.3	27.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5	42.5	9.5	32.5	20.5	39.5	12.5	29.5				
Max Q Clear Time (g_c+1), s	19.4	7.3	6.3	13.7	14.8	11.5	6.6	18.3				
Green Ext Time (p_c), s	0.2	1.0	0.1	3.3	0.3	1.3	0.1	4.3				

Intersection Summary

HCM 6th Ctrl Delay	41.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
7: Settlemier Avenue & Hayes Street

10/23/2020

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↵			↵	↵	
Traffic Vol, veh/h	29	0	90	525	305	113
Future Vol, veh/h	29	0	90	525	305	113
Conflicting Peds, #/hr	0	1	1	0	0	1
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	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	0	99	577	335	124

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1173	-	460	0	-	0
Stage 1	398	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	214	0	1112	-	-	-
Stage 1	683	0	-	-	-	-
Stage 2	458	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	186	-	1111	-	-	-
Mov Cap-2 Maneuver	186	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	458	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.3	1.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1111	-	186	-	-
HCM Lane V/C Ratio	0.089	-	0.171	-	-
HCM Control Delay (s)	8.6	0	28.3	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.3	-	0.6	-	-

HCM 6th TWSC
8: Settlemier Avenue & Hayes Street

10/23/2020

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻				↻		↻			↻	
Traffic Vol, veh/h	0	5	107	0	0	15	0	604	11	10	305	0
Future Vol, veh/h	0	5	107	0	0	15	0	604	11	10	305	0
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	3	3	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	5	118	0	0	16	0	664	12	11	335	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	-	1036	336	-	-	673	-	0	0	679	0	0
Stage 1	-	357	-	-	-	-	-	-	-	-	-	-
Stage 2	-	679	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	-	-	6.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	-	-	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	233	711	0	0	459	0	-	-	923	-	0
Stage 1	0	632	-	0	0	-	0	-	-	-	-	0
Stage 2	0	454	-	0	0	-	0	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	229	710	-	-	458	-	-	-	920	-	-
Mov Cap-2 Maneuver	-	229	-	-	-	-	-	-	-	-	-	-
Stage 1	-	623	-	-	-	-	-	-	-	-	-	-
Stage 2	-	453	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.8		13.2		0		0.3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	649	458	920	-
HCM Lane V/C Ratio	-	-	0.19	0.036	0.012	-
HCM Control Delay (s)	-	-	11.8	13.2	9	0
HCM Lane LOS	-	-	B	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1	0	-

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	35	59	144	29	53	12	68	121	20	16	235	45
Future Vol, veh/h	35	59	144	29	53	12	68	121	20	16	235	45
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	38	63	155	31	57	13	73	130	22	17	253	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.3	10	11.2	12.5
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	15%	31%	5%
Vol Thru, %	58%	25%	56%	79%
Vol Right, %	10%	61%	13%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	209	238	94	296
LT Vol	68	35	29	16
Through Vol	121	59	53	235
RT Vol	20	144	12	45
Lane Flow Rate	225	256	101	318
Geometry Grp	1	1	1	1
Degree of Util (X)	0.337	0.37	0.163	0.458
Departure Headway (Hd)	5.398	5.202	5.79	5.177
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	665	691	618	694
Service Time	3.442	3.247	3.845	3.217
HCM Lane V/C Ratio	0.338	0.37	0.163	0.458
HCM Control Delay	11.2	11.3	10	12.5
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	1.5	1.7	0.6	2.4

HCM 6th TWSC
2: Boones Ferry Road & Hazelnut Drive

10/23/2020

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	33	188	7	24	371
Future Vol, veh/h	20	33	188	7	24	371
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, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	35	202	8	26	399

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	657	206	0	0	210
Stage 1	206	-	-	-	-
Stage 2	451	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	433	840	-	-	1373
Stage 1	833	-	-	-	-
Stage 2	646	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	423	840	-	-	1373
Mov Cap-2 Maneuver	561	-	-	-	-
Stage 1	813	-	-	-	-
Stage 2	646	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	707	1373
HCM Lane V/C Ratio	-	-	0.081	0.019
HCM Control Delay (s)	-	-	10.5	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

HCM 6th TWSC
3: Boones Ferry Road & Country Club Road

10/23/2020

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	53	77	209	346	67
Future Vol, veh/h	35	53	77	209	346	67
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	39	59	86	232	384	74

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	828	424	461	0	-	0
Stage 1	424	-	-	-	-	-
Stage 2	404	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	344	634	1111	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	315	632	1108	-	-	-
Mov Cap-2 Maneuver	315	-	-	-	-	-
Stage 1	610	-	-	-	-	-
Stage 2	677	-	-	-	-	-

























Approach	EB	NB	SB
HCM Control Delay, s	15.2	2.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1108	-	451	-	-
HCM Lane V/C Ratio	0.077	-	0.217	-	-
HCM Control Delay (s)	8.5	-	15.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.8	-	-

HCM 6th Signalized Intersection Summary

4: Evergreen Road & Hwy 214

10/23/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1096	504	234	853	11	548	37	205	26	23	61
Future Volume (veh/h)	73	1096	504	234	853	11	548	37	205	26	23	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1736	1736	1736	1723	1723	1723	1736	1736	1736	1750	1750	1750
Adj Flow Rate, veh/h	77	1154	0	246	898	12	605	0	0	27	24	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	0	0	0
Cap, veh/h	386	1679		346	1850	25	680	0		98	103	
Arrive On Green	0.04	0.68	0.00	0.09	0.74	0.56	0.21	0.00	0.00	0.06	0.06	0.00
Sat Flow, veh/h	1654	3299	1471	1641	3307	44	3307	0	1471	1667	1750	1483
Grp Volume(v), veh/h	77	1154	0	246	444	466	605	0	0	27	24	0
Grp Sat Flow(s),veh/h/ln	1654	1650	1471	1641	1637	1715	1654	0	1471	1667	1750	1483
Q Serve(g_s), s	2.6	25.4	0.0	8.1	13.1	13.3	21.3	0.0	0.0	1.9	1.6	0.0
Cycle Q Clear(g_c), s	2.6	25.4	0.0	8.1	13.1	13.3	21.3	0.0	0.0	1.9	1.6	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	386	1679		346	915	959	680	0		98	103	
V/C Ratio(X)	0.20	0.69		0.71	0.49	0.49	0.89	0.00		0.27	0.23	
Avail Cap(c_a), veh/h	412	1679		426	915	959	717	0		125	131	
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.9	13.6	0.0	17.2	8.4	8.6	46.3	0.0	0.0	54.0	53.9	0.0
Incr Delay (d2), s/veh	0.3	2.3	0.0	4.2	1.8	1.8	12.8	0.0	0.0	1.5	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.0	0.0	3.2	4.1	4.3	10.0	0.0	0.0	0.8	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	15.9	0.0	21.3	10.3	10.4	59.1	0.0	0.0	55.5	55.0	0.0
LnGrp LOS	B	B		C	B	B	E	A		E	E	
Approach Vol, veh/h		1231	A		1156			605	A		51	A
Approach Delay, s/veh		15.8			12.7			59.1			55.3	
Approach LOS		B			B			E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.2	65.1		28.7	9.1	71.1		11.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	16.5	51.5		25.5	6.5	61.5		8.5				
Max Q Clear Time (g_c+I1), s	10.1	27.4		23.3	4.6	15.3		3.9				
Green Ext Time (p_c), s	0.6	14.6		0.8	0.0	14.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				23.9								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

5: Settlemier Avenue /Boones Ferry Road & Hwy 214

10/23/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	559	392	145	671	89	329	112	110	83	191	113
Future Volume (veh/h)	87	559	392	145	671	89	329	112	110	83	191	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1736	1736	1736	1723	1723	1723	1750	1750	1750	1750	1750	1750
Adj Flow Rate, veh/h	90	576	297	149	692	49	339	115	105	86	197	82
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	118	724	932	164	768	650	361	492	415	114	233	196
Arrive On Green	0.07	0.55	0.42	0.10	0.59	0.45	0.22	0.28	0.28	0.07	0.13	0.13
Sat Flow, veh/h	1654	1736	1470	1641	1723	1458	1667	1750	1478	1667	1750	1472
Grp Volume(v), veh/h	90	576	297	149	692	49	339	115	105	86	197	82
Grp Sat Flow(s),veh/h/ln	1654	1736	1470	1641	1723	1458	1667	1750	1478	1667	1750	1472
Q Serve(g_s), s	6.4	31.7	11.1	10.8	42.1	2.3	24.0	6.1	6.6	6.1	13.2	6.1
Cycle Q Clear(g_c), s	6.4	31.7	11.1	10.8	42.1	2.3	24.0	6.1	6.6	6.1	13.2	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	724	932	164	768	650	361	492	415	114	233	196
V/C Ratio(X)	0.76	0.80	0.32	0.91	0.90	0.08	0.94	0.23	0.25	0.75	0.85	0.42
Avail Cap(c_a), veh/h	165	724	932	164	768	650	361	492	415	181	248	209
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	22.6	10.1	53.5	22.1	19.1	46.2	33.2	33.4	54.9	50.8	47.8
Incr Delay (d2), s/veh	12.5	8.8	0.9	44.6	15.8	0.2	32.0	0.2	0.3	9.6	22.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	13.1	3.8	6.5	17.8	0.8	13.2	2.7	2.4	2.8	7.1	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.2	31.4	11.0	98.1	37.9	19.3	78.2	33.4	33.7	64.5	72.9	49.2
LnGrp LOS	E	C	B	F	D	B	E	C	C	E	E	D
Approach Vol, veh/h		963			890			559			365	
Approach Delay, s/veh		28.5			47.0			60.6			65.6	
Approach LOS		C			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	60.0	54.1	30.0	19.9	12.6	57.5	12.2	37.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	54.5	48.5	25.5	16.5	11.5	48.5	12.5	29.5				
Max Q Clear Time (g_c+M2), s	33.7	33.7	26.0	15.2	8.4	44.1	8.1	8.6				
Green Ext Time (p_c), s	0.0	7.6	0.0	0.2	0.1	2.7	0.1	1.1				

Intersection Summary

HCM 6th Ctrl Delay	45.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary

6: OR 99E & Hwy 214

10/23/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	291	336	236	282	62	290	406	111	160	769	209
Future Volume (veh/h)	180	291	336	236	282	62	290	406	111	160	769	209
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1736	1736	1736	1709	1709	1709	1723	1723	1723	1723	1723	1723
Adj Flow Rate, veh/h	189	306	0	248	297	54	305	427	91	168	809	211
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	207	441		280	424	77	345	1038	461	203	853	223
Arrive On Green	0.13	0.34	0.00	0.17	0.40	0.30	0.11	0.32	0.32	0.12	0.33	0.33
Sat Flow, veh/h	1654	1736	1471	1628	1407	256	3183	3273	1455	1641	2568	670
Grp Volume(v), veh/h	189	306	0	248	0	351	305	427	91	168	516	504
Grp Sat Flow(s),veh/h/ln	1654	1736	1471	1628	0	1663	1591	1637	1455	1641	1637	1601
Q Serve(g_s), s	13.5	18.3	0.0	17.9	0.0	21.3	11.3	12.3	5.5	12.0	36.9	36.9
Cycle Q Clear(g_c), s	13.5	18.3	0.0	17.9	0.0	21.3	11.3	12.3	5.5	12.0	36.9	36.9
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		0.42
Lane Grp Cap(c), veh/h	207	441		280	0	501	345	1038	461	203	544	532
V/C Ratio(X)	0.91	0.69		0.89	0.00	0.70	0.88	0.41	0.20	0.83	0.95	0.95
Avail Cap(c_a), veh/h	207	441		312	0	501	345	1038	461	301	546	534
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	35.7	0.0	48.5	0.0	32.4	52.8	32.2	29.9	51.3	39.0	39.2
Incr Delay (d2), s/veh	39.7	8.7	0.0	23.3	0.0	8.0	22.8	0.3	0.2	11.5	26.1	26.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	8.2	0.0	9.0	0.0	9.1	5.6	4.9	1.9	5.5	18.4	18.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.5	44.4	0.0	71.8	0.0	40.4	75.5	32.4	30.1	62.8	65.1	65.6
LnGrp LOS	F	D		E	A	D	E	C	C	E	E	E
Approach Vol, veh/h	495			599			823			1188		
Approach Delay, s/veh	62.4			53.4			48.1			65.0		
Approach LOS	E			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.6	34.5	17.0	43.9	19.0	40.1	18.8	42.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.5	27.5	12.5	39.5	14.5	35.5	21.5	30.5				
Max Q Clear Time (g_c+1/9), s	19.9	20.3	13.3	38.9	15.5	23.3	14.0	14.3				
Green Ext Time (p_c), s	0.3	0.8	0.0	0.5	0.0	1.4	0.4	5.1				

Intersection Summary

HCM 6th Ctrl Delay	57.9
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
7: Settlemier Avenue & Hayes Street

10/23/2020

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶			↷	↷	
Traffic Vol, veh/h	46	0	159	455	553	189
Future Vol, veh/h	46	0	159	455	553	189
Conflicting Peds, #/hr	0	1	1	0	0	1
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	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	48	0	166	474	576	197

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1482	-	774	0	-	0
Stage 1	676	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	139	0	851	-	-	-
Stage 1	509	0	-	-	-	-
Stage 2	443	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	102	-	850	-	-	-
Mov Cap-2 Maneuver	102	-	-	-	-	-
Stage 1	374	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	68.3	2.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	850	-	102	-	-
HCM Lane V/C Ratio	0.195	-	0.47	-	-
HCM Control Delay (s)	10.3	0	68.3	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.7	-	2	-	-

HCM 6th TWSC
8: Settlemier Avenue & Hayes Street

10/23/2020

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	0	27	185	0	0	45	0	569	16	23	530	0
Future Vol, veh/h	0	27	185	0	0	45	0	569	16	23	530	0
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	3	3	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	30	203	0	0	49	0	625	18	25	582	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	-	1278	583	-	-	637	-	0	0	646	0	0
Stage 1	-	632	-	-	-	-	-	-	-	-	-	-
Stage 2	-	646	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	-	-	6.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	-	-	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	168	516	0	0	481	0	-	-	949	-	0
Stage 1	0	477	-	0	0	-	0	-	-	-	-	0
Stage 2	0	470	-	0	0	-	0	-	-	-	-	0
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	161	516	-	-	480	-	-	-	946	-	-
Mov Cap-2 Maneuver	-	161	-	-	-	-	-	-	-	-	-	-
Stage 1	-	458	-	-	-	-	-	-	-	-	-	-
Stage 2	-	469	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	25.5		13.4		0		0.4	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBL	SBT
Capacity (veh/h)	-	-	403	480	946
HCM Lane V/C Ratio	-	-	0.578	0.103	0.027
HCM Control Delay (s)	-	-	25.5	13.4	8.9
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	3.5	0.3	0.1

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	31	28	55	11	44	22	102	171	18	3	107	42
Future Vol, veh/h	31	28	55	11	44	22	102	171	18	3	107	42
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	2	2	2	1	1	1	2	2	2
Mvmt Flow	37	33	65	13	52	26	121	204	21	4	127	50
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.3	9.1	11.8	9.4
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	35%	27%	14%	2%
Vol Thru, %	59%	25%	57%	70%
Vol Right, %	6%	48%	29%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	291	114	77	152
LT Vol	102	31	11	3
Through Vol	171	28	44	107
RT Vol	18	55	22	42
Lane Flow Rate	346	136	92	181
Geometry Grp	1	1	1	1
Degree of Util (X)	0.456	0.19	0.133	0.239
Departure Headway (Hd)	4.738	5.029	5.221	4.763
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	755	706	679	746
Service Time	2.804	3.114	3.312	2.841
HCM Lane V/C Ratio	0.458	0.193	0.135	0.243
HCM Control Delay	11.8	9.3	9.1	9.4
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2.4	0.7	0.5	0.9

HCM 6th TWSC
2: Boones Ferry Road & Hazelnut Drive

10/30/2020

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	18	286	17	26	224
Future Vol, veh/h	1	18	286	17	26	224
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, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	1	20	318	19	29	249

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	635	328	0	0	337	0
Stage 1	328	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	446	718	-	-	1234	-
Stage 1	734	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	434	718	-	-	1234	-
Mov Cap-2 Maneuver	591	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	751	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	710	1234
HCM Lane V/C Ratio	-	-	0.03	0.023
HCM Control Delay (s)	-	-	10.2	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1

HCM 6th TWSC
 3: Boones Ferry Road & Country Club Road

10/30/2020

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	38	47	22	269	287	21
Future Vol, veh/h	38	47	22	269	287	21
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	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	43	53	25	306	326	24

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	694	338	350	0	-	0
Stage 1	338	-	-	-	-	-
Stage 2	356	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	412	709	1209	-	-	-
Stage 1	727	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	403	709	1209	-	-	-
Mov Cap-2 Maneuver	403	-	-	-	-	-
Stage 1	712	-	-	-	-	-
Stage 2	713	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1209	-	529	-	-
HCM Lane V/C Ratio	0.021	-	0.183	-	-
HCM Control Delay (s)	8	-	13.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

HCM 6th Signalized Intersection Summary
 4: Evergreen Road & Hwy 214

10/30/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑		↘	↗	↗	↘	↑	↗
Traffic Volume (veh/h)	41	718	144	107	687	9	683	9	127	11	15	20
Future Volume (veh/h)	41	718	144	107	687	9	683	9	127	11	15	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1668	1668	1668	1709	1709	1709	1723	1723	1723	1750	1750	1750
Adj Flow Rate, veh/h	44	772	0	115	739	10	741	0	0	12	16	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	3	3	3	2	2	2	0	0	0
Cap, veh/h	400	1648		408	1762	24	806	0		80	83	
Arrive On Green	0.04	0.69	0.00	0.05	0.71	0.53	0.25	0.00	0.00	0.05	0.05	0.00
Sat Flow, veh/h	1589	3169	1414	1628	3280	44	3281	0	1460	1667	1750	1483
Grp Volume(v), veh/h	44	772	0	115	366	383	741	0	0	12	16	0
Grp Sat Flow(s),veh/h/ln	1589	1585	1414	1628	1624	1701	1641	0	1460	1667	1750	1483
Q Serve(g_s), s	1.5	13.3	0.0	3.9	11.0	11.2	26.4	0.0	0.0	0.8	1.1	0.0
Cycle Q Clear(g_c), s	1.5	13.3	0.0	3.9	11.0	11.2	26.4	0.0	0.0	0.8	1.1	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	400	1648		408	872	914	806	0		80	83	
V/C Ratio(X)	0.11	0.47		0.28	0.42	0.42	0.92	0.00		0.15	0.19	
Avail Cap(c_a), veh/h	448	1648		470	872	914	820	0		153	160	
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.5	11.0	0.0	12.6	9.5	9.7	44.1	0.0	0.0	54.8	54.9	0.0
Incr Delay (d2), s/veh	0.1	1.0	0.0	0.4	1.5	1.4	15.2	0.0	0.0	0.9	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.1	0.0	1.4	3.6	3.9	12.5	0.0	0.0	0.4	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	11.9	0.0	13.0	11.0	11.1	59.3	0.0	0.0	55.7	56.0	0.0
LnGrp LOS	B	B		B	B	B	E	A		E	E	
Approach Vol, veh/h		816	A		864			741	A		28	A
Approach Delay, s/veh		12.0			11.3			59.3			55.9	
Approach LOS		B			B			E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.4	66.4		33.5	8.3	68.4		9.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	10.5	51.5		29.5	7.5	54.5		10.5				
Max Q Clear Time (g_c+I1), s	5.9	15.3		28.4	3.5	13.2		3.1				
Green Ext Time (p_c), s	0.2	11.4		0.5	0.0	10.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay	26.6
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 5: Settlemier Avenue /Boones Ferry Road & Hwy 214

10/30/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	497	182	42	320	54	292	117	83	76	99	92
Future Volume (veh/h)	75	497	182	42	320	54	292	117	83	76	99	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1668	1668	1668	1654	1654	1654	1750	1750	1750	1736	1736	1736
Adj Flow Rate, veh/h	78	518	141	44	333	48	304	122	74	79	103	75
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	6	6	6	7	7	7	0	0	0	1	1	1
Cap, veh/h	103	904	1055	60	853	721	343	390	331	105	140	119
Arrive On Green	0.06	0.72	0.54	0.04	0.69	0.52	0.21	0.22	0.22	0.06	0.08	0.08
Sat Flow, veh/h	1589	1668	1410	1576	1654	1398	1667	1750	1483	1654	1736	1471
Grp Volume(v), veh/h	78	518	141	44	333	48	304	122	74	79	103	75
Grp Sat Flow(s),veh/h/ln	1589	1668	1410	1576	1654	1398	1667	1750	1483	1654	1736	1471
Q Serve(g_s), s	5.8	17.7	3.4	3.3	10.4	2.1	21.3	7.0	4.9	5.6	7.0	5.9
Cycle Q Clear(g_c), s	5.8	17.7	3.4	3.3	10.4	2.1	21.3	7.0	4.9	5.6	7.0	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	103	904	1055	60	853	721	343	390	331	105	140	119
V/C Ratio(X)	0.76	0.57	0.13	0.73	0.39	0.07	0.89	0.31	0.22	0.75	0.73	0.63
Avail Cap(c_a), veh/h	159	904	1055	92	853	721	431	496	420	138	188	159
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	10.1	4.2	57.1	10.8	14.6	46.3	39.0	38.1	55.3	53.9	53.4
Incr Delay (d2), s/veh	10.7	2.6	0.3	15.4	1.3	0.2	16.7	0.5	0.3	15.1	9.6	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.5	1.0	1.6	3.6	0.7	10.4	3.1	1.8	2.8	3.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.9	12.8	4.5	72.5	12.1	14.8	63.0	39.4	38.5	70.4	63.5	58.9
LnGrp LOS	E	B	A	E	B	B	E	D	D	E	E	E
Approach Vol, veh/h		737			425			500			257	
Approach Delay, s/veh		16.8			18.7			53.6			64.3	
Approach LOS		B			B			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	69.0	28.7	13.7	11.8	65.8	11.6	30.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5	52.5	30.5	12.5	11.5	47.5	9.5	33.5				
Max Q Clear Time (g_c+1), s	15.3	19.7	23.3	9.0	7.8	12.4	7.6	9.0				
Green Ext Time (p_c), s	0.0	8.6	0.9	0.2	0.1	4.6	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay											33.2	
HCM 6th LOS											C	
Notes												
User approved pedestrian interval to be less than phase max green.												

HCM 6th Signalized Intersection Summary

6: OR 99E & Hwy 214

10/30/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↗		↖	↑	↗	↖	↑	↗
Traffic Volume (veh/h)	172	208	129	95	199	71	113	441	84	57	204	112
Future Volume (veh/h)	172	208	129	95	199	71	113	441	84	57	204	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1641	1641	1641	1682	1682	1682	1709	1709	1709	1654	1654	1654
Adj Flow Rate, veh/h	183	221	0	101	212	59	120	469	74	61	217	106
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	8	8	8	5	5	5	3	3	3	7	7	7
Cap, veh/h	215	885		131	612	170	183	629	280	82	390	183
Arrive On Green	0.14	0.72	0.00	0.08	0.64	0.48	0.06	0.19	0.19	0.05	0.19	0.18
Sat Flow, veh/h	1563	1641	1391	1602	1266	352	3158	3247	1445	1576	2073	976
Grp Volume(v), veh/h	183	221	0	101	0	271	120	469	74	61	163	160
Grp Sat Flow(s),veh/h/ln	1563	1641	1391	1602	0	1618	1579	1624	1445	1576	1572	1477
Q Serve(g_s), s	13.7	5.6	0.0	7.4	0.0	10.0	4.5	16.3	5.2	4.6	11.2	11.9
Cycle Q Clear(g_c), s	13.7	5.6	0.0	7.4	0.0	10.0	4.5	16.3	5.2	4.6	11.2	11.9
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		0.66
Lane Grp Cap(c), veh/h	215	885		131	0	782	183	629	280	82	295	278
V/C Ratio(X)	0.85	0.25		0.77	0.00	0.35	0.65	0.75	0.26	0.74	0.55	0.58
Avail Cap(c_a), veh/h	273	885		240	0	782	263	812	361	171	432	406
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	8.6	0.0	54.0	0.0	14.2	55.3	45.6	41.1	56.1	44.1	44.5
Incr Delay (d2), s/veh	18.2	0.7	0.0	9.3	0.0	1.2	3.9	2.8	0.5	12.1	1.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	2.0	0.0	3.3	0.0	3.6	1.9	6.8	1.9	2.1	4.5	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	9.3	0.0	63.3	0.0	15.4	59.2	48.4	41.6	68.2	45.7	46.4
LnGrp LOS	E	A		E	A	B	E	D	D	E	D	D
Approach Vol, veh/h		404	A		372			663			384	
Approach Delay, s/veh		36.2			28.4			49.6			49.6	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	3.8	68.7	11.0	26.6	20.5	62.0	10.3	27.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5	42.5	9.5	32.5	20.5	39.5	12.5	29.5				
Max Q Clear Time (g_c+1), s	19.4	7.6	6.5	13.9	15.7	12.0	6.6	18.3				
Green Ext Time (p_c), s	0.2	1.1	0.1	3.3	0.3	1.4	0.1	4.3				

Intersection Summary

HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
7: Settlemier Avenue & Hayes Street

10/30/2020

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↵			↵	↵	
Traffic Vol, veh/h	29	0	90	532	322	113
Future Vol, veh/h	29	0	90	532	322	113
Conflicting Peds, #/hr	0	1	1	0	0	1
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	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	32	0	99	585	354	124

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1200	-	479	0	-	0
Stage 1	417	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	206	0	1094	-	-	-
Stage 1	669	0	-	-	-	-
Stage 2	454	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	178	-	1093	-	-	-
Mov Cap-2 Maneuver	178	-	-	-	-	-
Stage 1	579	-	-	-	-	-
Stage 2	454	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.6	1.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1093	-	178	-	-
HCM Lane V/C Ratio	0.09	-	0.179	-	-
HCM Control Delay (s)	8.6	0	29.6	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.3	-	0.6	-	-

HCM 6th TWSC
8: Settlemier Avenue & Hayes Street

10/30/2020

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻				↻		↻			↻	
Traffic Vol, veh/h	0	5	107	0	0	15	0	611	11	10	322	0
Future Vol, veh/h	0	5	107	0	0	15	0	611	11	10	322	0
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	3	3	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	5	118	0	0	16	0	671	12	11	354	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	-	1062	355	-	-	680	-	0	0	686	0	0
Stage 1	-	376	-	-	-	-	-	-	-	-	-	-
Stage 2	-	686	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	-	-	6.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	-	-	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	225	693	0	0	454	0	-	-	917	-	0
Stage 1	0	620	-	0	0	-	0	-	-	-	-	0
Stage 2	0	451	-	0	0	-	0	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	221	692	-	-	453	-	-	-	914	-	-
Mov Cap-2 Maneuver	-	221	-	-	-	-	-	-	-	-	-	-
Stage 1	-	611	-	-	-	-	-	-	-	-	-	-
Stage 2	-	450	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.1		13.2		0		0.3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBL	SBT
Capacity (veh/h)	-	-	632	453	914
HCM Lane V/C Ratio	-	-	0.195	0.036	0.012
HCM Control Delay (s)	-	-	12.1	13.2	9
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1	0

HCM 6th TWSC
 9: Boones Ferry Road & Site Access B

10/30/2020

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	9	22	8	283	179	3
Future Vol, veh/h	9	22	8	283	179	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	10	24	9	308	195	3

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	523	197	198	0	-	0
Stage 1	197	-	-	-	-	-
Stage 2	326	-	-	-	-	-
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	514	844	1375	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	731	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	510	844	1375	-	-	-
Mov Cap-2 Maneuver	510	-	-	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	731	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1375	-	709	-	-
HCM Lane V/C Ratio	0.006	-	0.048	-	-
HCM Control Delay (s)	7.6	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC
 10: Boones Ferry Road & Site Access A

10/30/2020

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	4	50	17	287	200	1
Future Vol, veh/h	4	50	17	287	200	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	4	54	18	312	217	1

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	566	218	218	0	-	0
Stage 1	218	-	-	-	-	-
Stage 2	348	-	-	-	-	-
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	486	822	1352	-	-	-
Stage 1	818	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	478	822	1352	-	-	-
Mov Cap-2 Maneuver	478	-	-	-	-	-
Stage 1	805	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1352	-	780	-	-
HCM Lane V/C Ratio	0.014	-	0.075	-	-
HCM Control Delay (s)	7.7	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	35	59	149	33	53	12	71	124	23	16	240	45
Future Vol, veh/h	35	59	149	33	53	12	71	124	23	16	240	45
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	38	63	160	35	57	13	76	133	25	17	258	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.6	10.2	11.5	12.9
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	14%	34%	5%
Vol Thru, %	57%	24%	54%	80%
Vol Right, %	11%	61%	12%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	218	243	98	301
LT Vol	71	35	33	16
Through Vol	124	59	53	240
RT Vol	23	149	12	45
Lane Flow Rate	234	261	105	324
Geometry Grp	1	1	1	1
Degree of Util (X)	0.355	0.382	0.172	0.471
Departure Headway (Hd)	5.445	5.259	5.871	5.236
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	659	682	608	686
Service Time	3.495	3.309	3.932	3.281
HCM Lane V/C Ratio	0.355	0.383	0.173	0.472
HCM Control Delay	11.5	11.6	10.2	12.9
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.6	1.8	0.6	2.5

HCM 6th TWSC
2: Boones Ferry Road & Hazelnut Drive

10/30/2020

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT			TT
Traffic Vol, veh/h	20	38	265	7	27	415
Future Vol, veh/h	20	38	265	7	27	415
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, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	22	41	285	8	29	446

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	793	289	0	0	293
Stage 1	289	-	-	-	-
Stage 2	504	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	360	755	-	-	1280
Stage 1	765	-	-	-	-
Stage 2	611	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	349	755	-	-	1280
Mov Cap-2 Maneuver	512	-	-	-	-
Stage 1	742	-	-	-	-
Stage 2	611	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	649	1280
HCM Lane V/C Ratio	-	-	0.096	0.023
HCM Control Delay (s)	-	-	11.1	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1

HCM 6th TWSC
 3: Boones Ferry Road & Country Club Road

10/30/2020

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	53	77	281	387	70
Future Vol, veh/h	40	53	77	281	387	70
Conflicting Peds, #/hr	0	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	205	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	44	59	86	312	430	78

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	956	472	511	0	-	0
Stage 1	472	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	289	596	1065	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	264	594	1062	-	-	-
Mov Cap-2 Maneuver	264	-	-	-	-	-
Stage 1	579	-	-	-	-	-
Stage 2	622	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	1.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1062	-	386	-	-
HCM Lane V/C Ratio	0.081	-	0.268	-	-
HCM Control Delay (s)	8.7	-	17.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	1.1	-	-

HCM 6th Signalized Intersection Summary

4: Evergreen Road & Hwy 214

10/30/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1120	504	234	867	11	548	37	205	26	23	61
Future Volume (veh/h)	73	1120	504	234	867	11	548	37	205	26	23	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1736	1736	1736	1723	1723	1723	1736	1736	1736	1750	1750	1750
Adj Flow Rate, veh/h	77	1179	0	246	913	12	605	0	0	27	24	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	0	0	0
Cap, veh/h	381	1679		339	1850	24	680	0		98	103	
Arrive On Green	0.04	0.68	0.00	0.09	0.74	0.56	0.21	0.00	0.00	0.06	0.06	0.00
Sat Flow, veh/h	1654	3299	1471	1641	3308	43	3307	0	1471	1667	1750	1483
Grp Volume(v), veh/h	77	1179	0	246	452	473	605	0	0	27	24	0
Grp Sat Flow(s),veh/h/ln	1654	1650	1471	1641	1637	1715	1654	0	1471	1667	1750	1483
Q Serve(g_s), s	2.6	26.4	0.0	8.1	13.4	13.6	21.3	0.0	0.0	1.9	1.6	0.0
Cycle Q Clear(g_c), s	2.6	26.4	0.0	8.1	13.4	13.6	21.3	0.0	0.0	1.9	1.6	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	1679		339	915	959	680	0		98	103	
V/C Ratio(X)	0.20	0.70		0.72	0.49	0.49	0.89	0.00		0.27	0.23	
Avail Cap(c_a), veh/h	407	1679		419	915	959	717	0		125	131	
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.9	13.8	0.0	17.9	8.5	8.7	46.3	0.0	0.0	54.0	53.9	0.0
Incr Delay (d2), s/veh	0.3	2.5	0.0	4.8	1.9	1.8	12.8	0.0	0.0	1.5	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.4	0.0	3.3	4.2	4.4	10.0	0.0	0.0	0.8	0.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	16.3	0.0	22.7	10.4	10.5	59.1	0.0	0.0	55.5	55.0	0.0
LnGrp LOS	B	B		C	B	B	E	A		E	E	
Approach Vol, veh/h		1256	A		1171			605	A		51	A
Approach Delay, s/veh		16.1			13.0			59.1			55.3	
Approach LOS		B			B			E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.2	65.1		28.7	9.1	71.1		11.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	16.5	51.5		25.5	6.5	61.5		8.5				
Max Q Clear Time (g_c+I1), s	10.1	28.4		23.3	4.6	15.6		3.9				
Green Ext Time (p_c), s	0.6	14.5		0.8	0.0	14.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay	24.0
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.
- Unsignalized Delay for [NBR, EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 5: Settlemier Avenue /Boones Ferry Road & Hwy 214

10/30/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	559	392	145	671	123	329	131	110	102	202	124
Future Volume (veh/h)	106	559	392	145	671	123	329	131	110	102	202	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1736	1736	1736	1723	1723	1723	1750	1750	1750	1750	1750	1750
Adj Flow Rate, veh/h	109	576	297	149	692	84	339	135	105	105	208	94
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	2	2	2	0	0	0	0	0	0
Cap, veh/h	139	715	924	164	738	624	361	479	404	135	242	203
Arrive On Green	0.08	0.55	0.41	0.10	0.57	0.43	0.22	0.27	0.27	0.08	0.14	0.14
Sat Flow, veh/h	1654	1736	1470	1641	1723	1458	1667	1750	1478	1667	1750	1472
Grp Volume(v), veh/h	109	576	297	149	692	84	339	135	105	105	208	94
Grp Sat Flow(s),veh/h/ln	1654	1736	1470	1641	1723	1458	1667	1750	1478	1667	1750	1472
Q Serve(g_s), s	7.8	32.2	11.3	10.8	44.6	4.2	24.0	7.3	6.7	7.4	14.0	7.1
Cycle Q Clear(g_c), s	7.8	32.2	11.3	10.8	44.6	4.2	24.0	7.3	6.7	7.4	14.0	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	715	924	164	738	624	361	479	404	135	242	203
V/C Ratio(X)	0.79	0.81	0.32	0.91	0.94	0.13	0.94	0.28	0.26	0.78	0.86	0.46
Avail Cap(c_a), veh/h	165	715	924	164	738	624	361	479	404	181	248	209
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	23.2	10.4	53.5	24.4	20.8	46.2	34.3	34.1	54.1	50.6	47.6
Incr Delay (d2), s/veh	18.6	9.4	0.9	44.6	21.1	0.4	32.0	0.3	0.3	14.1	24.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	13.4	3.8	6.5	19.9	1.5	13.2	3.2	2.5	3.6	7.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.6	32.6	11.3	98.1	45.5	21.3	78.2	34.6	34.4	68.1	75.3	49.3
LnGrp LOS	E	C	B	F	D	C	E	C	C	E	E	D
Approach Vol, veh/h	982			925			579			407		
Approach Delay, s/veh	30.6			51.7			60.1			67.4		
Approach LOS	C			D			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	60.0	53.4	30.0	20.6	14.1	55.4	13.7	36.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	54.5	48.5	25.5	16.5	11.5	48.5	12.5	29.5				
Max Q Clear Time (g_c+M2), s	34.2	34.2	26.0	16.0	9.8	46.6	9.4	9.3				
Green Ext Time (p_c), s	0.0	7.4	0.0	0.1	0.1	1.3	0.1	1.2				

Intersection Summary

HCM 6th Ctrl Delay	48.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

HCM 6th Signalized Intersection Summary

6: OR 99E & Hwy 214

10/30/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	295	345	238	293	62	304	406	111	160	769	223
Future Volume (veh/h)	189	295	345	238	293	62	304	406	111	160	769	223
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1736	1736	1736	1709	1709	1709	1723	1723	1723	1723	1723	1723
Adj Flow Rate, veh/h	199	311	0	251	308	54	320	427	91	168	809	226
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	207	436		283	425	74	345	1041	463	203	842	235
Arrive On Green	0.13	0.33	0.00	0.17	0.40	0.30	0.11	0.32	0.32	0.12	0.33	0.33
Sat Flow, veh/h	1654	1736	1471	1628	1416	248	3183	3273	1455	1641	2525	705
Grp Volume(v), veh/h	199	311	0	251	0	362	320	427	91	168	524	511
Grp Sat Flow(s),veh/h/ln	1654	1736	1471	1628	0	1664	1591	1637	1455	1641	1637	1594
Q Serve(g_s), s	14.4	18.8	0.0	18.1	0.0	22.3	12.0	12.3	5.5	12.0	37.7	37.7
Cycle Q Clear(g_c), s	14.4	18.8	0.0	18.1	0.0	22.3	12.0	12.3	5.5	12.0	37.7	37.7
Prop In Lane	1.00		1.00	1.00		0.15	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	207	436		283	0	499	345	1041	463	203	546	531
V/C Ratio(X)	0.96	0.71		0.89	0.00	0.73	0.93	0.41	0.20	0.83	0.96	0.96
Avail Cap(c_a), veh/h	207	436		312	0	499	345	1041	463	301	546	531
HCM Platoon Ratio	1.00	1.33	1.00	1.00	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	36.2	0.0	48.4	0.0	32.8	53.0	32.1	29.8	51.3	39.2	39.3
Incr Delay (d2), s/veh	51.8	9.5	0.0	23.7	0.0	8.9	30.7	0.3	0.2	11.5	28.8	29.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	8.5	0.0	9.1	0.0	9.5	6.2	4.9	1.9	5.5	19.1	18.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.0	45.7	0.0	72.2	0.0	41.6	83.7	32.4	30.0	62.8	68.1	68.7
LnGrp LOS	F	D		E	A	D	F	C	C	E	E	E
Approach Vol, veh/h	510			613			838			1203		
Approach Delay, s/veh	68.5			54.1			51.7			67.6		
Approach LOS	E			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.8	34.2	17.0	44.0	19.0	40.0	18.8	42.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.5	27.5	12.5	39.5	14.5	35.5	21.5	30.5				
Max Q Clear Time (g_c+20), s	20.8	20.8	14.0	39.7	16.4	24.3	14.0	14.3				
Green Ext Time (p_c), s	0.3	0.8	0.0	0.0	0.0	1.4	0.4	5.1				

Intersection Summary

HCM 6th Ctrl Delay	60.9
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC
7: Settlemier Avenue & Hayes Street

10/30/2020

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶			↷	↷	
Traffic Vol, veh/h	46	0	159	474	564	189
Future Vol, veh/h	46	0	159	474	564	189
Conflicting Peds, #/hr	0	1	1	0	0	1
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	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	48	0	166	494	588	197

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1514	-	786	0	-	0
Stage 1	688	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Critical Hdwy	6.4	-	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	-	2.2	-	-	-
Pot Cap-1 Maneuver	133	0	842	-	-	-
Stage 1	503	0	-	-	-	-
Stage 2	433	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	97	-	841	-	-	-
Mov Cap-2 Maneuver	97	-	-	-	-	-
Stage 1	366	-	-	-	-	-
Stage 2	433	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	73.9	2.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	841	-	97	-	-
HCM Lane V/C Ratio	0.197	-	0.494	-	-
HCM Control Delay (s)	10.3	0	73.9	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.7	-	2.2	-	-

HCM 6th TWSC
 8: Settlemier Avenue & Hayes Street

10/30/2020

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	0	27	185	0	0	45	0	588	16	23	541	0
Future Vol, veh/h	0	27	185	0	0	45	0	588	16	23	541	0
Conflicting Peds, #/hr	0	0	1	1	0	0	1	0	3	3	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	30	203	0	0	49	0	646	18	25	595	0

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	-	1312	596	-	-	658	-	0	0	667	0	0
Stage 1	-	645	-	-	-	-	-	-	-	-	-	-
Stage 2	-	667	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	6.5	6.2	-	-	6.2	-	-	-	4.1	-	-
Critical Hdwy Stg 1	-	5.5	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	5.5	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	4	3.3	-	-	3.3	-	-	-	2.2	-	-
Pot Cap-1 Maneuver	0	160	507	0	0	468	0	-	-	932	-	0
Stage 1	0	471	-	0	0	-	0	-	-	-	-	0
Stage 2	0	460	-	0	0	-	0	-	-	-	-	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	153	507	-	-	467	-	-	-	929	-	-
Mov Cap-2 Maneuver	-	153	-	-	-	-	-	-	-	-	-	-
Stage 1	-	452	-	-	-	-	-	-	-	-	-	-
Stage 2	-	459	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	26.8		13.6		0		0.4	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBT	NBR	EBLn1WBLn1	SBL	SBT
Capacity (veh/h)	-	-	392	467	929
HCM Lane V/C Ratio	-	-	0.594	0.106	0.027
HCM Control Delay (s)	-	-	26.8	13.6	9
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	3.7	0.4	0.1

HCM 6th TWSC
9: Boones Ferry Road & Site Access B

10/30/2020

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	3	14	25	227	400	5
Future Vol, veh/h	3	14	25	227	400	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	3	15	27	247	435	5

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	739	438	440	0	-	0
Stage 1	438	-	-	-	-	-
Stage 2	301	-	-	-	-	-
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	385	619	1120	-	-	-
Stage 1	651	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	374	619	1120	-	-	-
Mov Cap-2 Maneuver	374	-	-	-	-	-
Stage 1	633	-	-	-	-	-
Stage 2	751	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1120	-	555	-	-
HCM Lane V/C Ratio	0.024	-	0.033	-	-
HCM Control Delay (s)	8.3	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

HCM 6th TWSC
 10: Boones Ferry Road & Site Access A

10/30/2020

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	6	33	55	244	404	9
Future Vol, veh/h	6	33	55	244	404	9
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	7	36	60	265	439	10

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	829	444	449	0	0
Stage 1	444	-	-	-	-
Stage 2	385	-	-	-	-
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	340	614	1111	-	-
Stage 1	646	-	-	-	-
Stage 2	688	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	319	614	1111	-	-
Mov Cap-2 Maneuver	319	-	-	-	-
Stage 1	605	-	-	-	-
Stage 2	688	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	1.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1111	-	538	-	-
HCM Lane V/C Ratio	0.054	-	0.079	-	-
HCM Control Delay (s)	8.4	0	12.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Signalized Intersection V/C Calculation Summary

MORNING PEAK HOUR

Intersection 4: Evergreen Road at Hwy 214

Year 2020

	Protected/Permitted Left-Turn Phasing				Split Phasing		
Critical Movement:	EBL	EBT	WBL	WBT	NBLT	SBL	SBT
Adjusted Flow Rate:	42	672	92	638	317	12	15
Saturated Flow:	1589	3169	1628	3272	3281	1667	1750
Flow Ratio:	0.03	0.21	0.06	0.19	0.10	0.01	0.01
	0.27				0.11		

Sum of Critical Flow Ratios:	0.37	Critical Intersection V/C:	0.43
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Background

	Protected/Permitted Left-Turn Phasing				Split Phasing		
Critical Movement:	EBL	EBT	WBL	WBT	NBLT	SBL	SBT
Adjusted Flow Rate:	44	765	115	716	741	12	16
Saturated Flow:	1589	3169	1628	3279	3281	1667	1750
Flow Ratio:	0.03	0.24	0.07	0.22	0.23	0.01	0.01
	0.31				0.23		

Sum of Critical Flow Ratios:	0.55	Critical Intersection V/C:	0.63
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Buildout

	Protected/Permitted Left-Turn Phasing				Split Phasing		
Critical Movement:	EBL	EBT	WBL	WBT	NBLT	SBL	SBT
Adjusted Flow Rate:	44	772	115	739	741	12	16
Saturated Flow:	1589	3169	1628	3280	3281	1667	1750
Flow Ratio:	0.03	0.24	0.07	0.23	0.23	0.01	0.01
	0.31				0.23		

Sum of Critical Flow Ratios:	0.55	Critical Intersection V/C:	0.63
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

EVENING PEAK HOUR

Intersection 4: Evergreen Road at Hwy 214

Year 2020

	Protected/Permitted Left-Turn Phasing				Split Phasing		
Critical Movement:	EBL	EBT	WBL	WBT	NBLT	SBL	SBT
Adjusted Flow Rate:	74	924	181	837	338	26	23
Saturated Flow:	1654	3299	1641	3303	3307	1667	1750
Flow Ratio:	0.04	0.28	0.11	0.25	0.10	0.02	0.01
	0.39				0.12		

Sum of Critical Flow Ratios:	0.51	Critical Intersection V/C:	0.59
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Background

	Protected/Permitted Left-Turn Phasing				Split Phasing		
Critical Movement:	EBL	EBT	WBL	WBT	NBLT	SBL	SBT
Adjusted Flow Rate:	77	1154	246	898	605	27	24
Saturated Flow:	1654	3299	1641	3307	3307	1667	1750
Flow Ratio:	0.05	0.35	0.15	0.27	0.18	0.02	0.01
	0.50				0.20		

Sum of Critical Flow Ratios:	0.70	Critical Intersection V/C:	0.81
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Buildout

	Protected/Permitted Left-Turn Phasing				Split Phasing		
Critical Movement:	EBL	EBT	WBL	WBT	NBLT	SBL	SBT
Adjusted Flow Rate:	77	1179	246	913	605	27	24
Saturated Flow:	1654	3299	1641	3308	3307	1667	1750
Flow Ratio:	0.05	0.36	0.15	0.28	0.18	0.02	0.01
	0.51				0.20		

Sum of Critical Flow Ratios:	0.71	Critical Intersection V/C:	0.82
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Notes:

Since EB and WB left-turn phases are protected, critical ring is either EBL+WBT or WBL+EBT - HCM6 does not show reductions for permitted left turns

Since NB and SB left-turn phases are Split, critical ring is max of NB lane groups + max of SB lane groups

Signalized Intersection V/C Calculation Summary

MORNING PEAK HOUR

Intersection 5: Boones Ferry Road/N Settlemier Avenue at Hwy 214

Year 2020

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	69	445	29	302	250	110	46	82
Saturated Flow:	1589	1668	1576	1654	1667	1750	1654	1736
Flow Ratio:	0.04	0.27	0.02	0.18	0.15	0.06	0.03	0.05
	0.29				0.20			

Sum of Critical Flow Ratios:	0.48	Critical Intersection V/C:	0.56
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Background

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	72	518	44	333	304	115	48	85
Saturated Flow:	1589	1668	1576	1654	1667	1750	1654	1736
Flow Ratio:	0.05	0.31	0.03	0.20	0.18	0.01	0.03	0.05
	0.34				0.23			

Sum of Critical Flow Ratios:	0.57	Critical Intersection V/C:	0.66
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Buildout

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	78	518	44	333	304	122	79	103
Saturated Flow:	1589	1668	1576	1654	1667	1750	1654	1736
Flow Ratio:	0.05	0.31	0.03	0.20	0.18	0.07	0.05	0.06
	0.34				0.24			

Sum of Critical Flow Ratios:	0.58	Critical Intersection V/C:	0.67
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

EVENING PEAK HOUR

Intersection 5: Boones Ferry Road/N Settlemier Avenue at Hwy 214

Year 2020

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	87	527	99	619	285	111	82	190
Saturated Flow:	1654	1736	1641	1723	1667	1750	1667	1750
Flow Ratio:	0.05	0.30	0.06	0.36	0.17	0.06	0.05	0.11
	0.41				0.28			

Sum of Critical Flow Ratios:	0.69	Critical Intersection V/C:	0.80
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Background

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	90	576	149	692	339	115	86	197
Saturated Flow:	1654	1736	1641	1723	1667	1750	1667	1750
Flow Ratio:	0.05	0.33	0.09	0.40	0.20	0.07	0.05	0.11
	0.46				0.32			

Sum of Critical Flow Ratios:	0.77	Critical Intersection V/C:	0.89
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Buildout

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	109	576	149	692	339	135	105	208
Saturated Flow:	1654	1736	1641	1723	1667	1750	1667	1750
Flow Ratio:	0.07	0.33	0.09	0.40	0.20	0.08	0.06	0.12
	0.47				0.32			

Sum of Critical Flow Ratios:	0.79	Critical Intersection V/C:	0.91
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Notes:

Note: Since EB and WB left-turn phases are protected, critical ring is either EBL+WBT or WBL+EBT

Note: Since NB and SB left-turn phases are protected, critical ring is either NBL+SBT or SBL+NBT

Signalized Intersection V/C Calculation Summary

MORNING PEAK HOUR

Intersection 6: OR 99E at Hwy 214

Year 2020

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	118	205	100	200	98	469	60	217
Saturated Flow:	1563	1641	1602	1258	3158	3247	1576	2243
Flow Ratio:	0.08	0.12	0.06	0.16	0.03	0.14	0.04	0.10
	0.23				0.18			

Sum of Critical Flow Ratios:	0.42	Critical Intersection V/C:	0.48
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Background

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	170	213	101	207	116	469	61	217
Saturated Flow:	1563	1641	1602	1258	3158	3247	1576	2101
Flow Ratio:	0.11	0.13	0.06	0.16	0.04	0.14	0.04	0.10
	0.27				0.18			

Sum of Critical Flow Ratios:	0.46	Critical Intersection V/C:	0.53
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Buildout

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	183	221	101	212	120	469	61	217
Saturated Flow:	1563	1641	1602	1264	3158	3247	1576	2073
Flow Ratio:	0.12	0.13	0.06	0.17	0.04	0.14	0.04	0.10
	0.28				0.18			

Sum of Critical Flow Ratios:	0.47	Critical Intersection V/C:	0.54
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

EVENING PEAK HOUR

Intersection 6: OR 99E at Hwy 214

Year 2020

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	155	295	245	286	248	428	165	811
Saturated Flow:	1654	1736	1628	1402	3183	3273	1641	2743
Flow Ratio:	0.09	0.17	0.15	0.20	0.08	0.13	0.10	0.30
	0.32				0.37			

Sum of Critical Flow Ratios:	0.69	Critical Intersection V/C:	0.80
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Background

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	189	306	248	297	305	427	168	809
Saturated Flow:	1654	1736	1628	1407	3183	3273	1641	2568
Flow Ratio:	0.11	0.18	0.15	0.21	0.10	0.13	0.10	0.32
	0.33				0.41			

Sum of Critical Flow Ratios:	0.74	Critical Intersection V/C:	0.85
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Year 2022 Buildout

	Protected Left-Turn Phasing				Protected Left-Turn Phasing			
Critical Movement:	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Adjusted Flow Rate:	199	311	251	308	320	427	168	809
Saturated Flow:	1654	1736	1628	1415	3183	3273	1641	2525
Flow Ratio:	0.12	0.18	0.15	0.22	0.10	0.13	0.10	0.32
	0.34				0.42			

Sum of Critical Flow Ratios:	0.76	Critical Intersection V/C:	0.88
Cycle Length (seconds):	120		
Lost Time per phase (seconds):	4		

Notes:

Note: Since EB and WB left-turn phases are protected, critical ring is either EBL+WBT or WBL+EBT

Note: Since NB and SB left-turn phases are protected, critical ring is either NBL+SBT or SBL+NBT

Traffic Signal Warrant Analysis



Project: Schultz Farm
 Date: 10/26/2020
 Scenario: Year 2022 Buildout

Major Street: Boones Ferry Road Minor Street: Crosby Road
 Number of Lanes: 1 Number of Lanes: 1
 PM Peak Hour Volumes: 301 PM Peak Hour Volumes: 205

Warrant Used:

100 percent of standard warrants used
 X 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
<u>Major St.</u>	<u>Minor St.</u>	<u>100%</u>	<u>70%</u>	<u>100%</u>	<u>70%</u>
		<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

WARRANT 1, CONDITION B

1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	3,010	6,200	
Minor Street*	2,050	1,850	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	3,010	9,300	
Minor Street*	2,050	950	No
<i>Combination Warrant</i>			
Major Street	3,010	7,440	
Minor Street*	2,050	1,480	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis



Project: Schultz Farm
 Date: 10/26/2020
 Scenario: Year 2020 Buildout

Major Street:	Boones Ferry	Minor Street:	Country Club
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	811	PM Peak Hour Volumes:	79

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
<u>Major St.</u>	<u>Minor St.</u>	<u>100% Warrants</u>	<u>70% Warrants</u>	<u>100% Warrants</u>	<u>70% Warrants</u>
WARRANT 1, CONDITION A					
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	8,110	8,850	
Minor Street*	790	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	8,110	13,300	
Minor Street*	790	1,350	No
<i>Combination Warrant</i>			
Major Street	8,110	10,640	
Minor Street*	790	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis



Project: Schultz Farm
 Date: 10/26/2020
 Scenario: Year 2022 Buildout

Major Street:	Settlemier Avenue	Minor Street:	Hayes Street (N)
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	1385	PM Peak Hour Volumes:	46

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
<u>Major St.</u>	<u>Minor St.</u>	<u>100% Warrants</u>	<u>70% Warrants</u>	<u>100% Warrants</u>	<u>70% Warrants</u>
WARRANT 1, CONDITION A					
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	13,850	8,850	
Minor Street*	460	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	13,850	13,300	
Minor Street*	460	1,350	No
<i>Combination Warrant</i>			
Major Street	13,850	10,640	
Minor Street*	460	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis



Project: Schultz Farm
 Date: 10/26/2020
 Scenario: Year 2022 Buildout

Major Street:	Settlemier Avenue	Minor Street:	Hayes Street (S)
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	1144	PM Peak Hour Volumes:	166

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
<u>Major St.</u>	<u>Minor St.</u>	<u>100% Warrants</u>	<u>70% Warrants</u>	<u>100% Warrants</u>	<u>70% Warrants</u>
WARRANT 1, CONDITION A					
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	11,440	8,850	
Minor Street*	1,660	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	11,440	13,300	
Minor Street*	1,660	1,350	No
<i>Combination Warrant</i>			
Major Street	11,440	10,640	
Minor Street*	1,660	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis



Project: Schultz Farm
 Date: 10/26/2020
 Scenario: Year 2022 Buildout

Major Street:	Boones Ferry Road	Minor Street:	Site Access B
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	654	PM Peak Hour Volumes:	13

Warrant Used:

	100 percent of standard warrants used
X	70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
<u>Major St.</u>	<u>Minor St.</u>	<u>100%</u>	<u>70%</u>	<u>100%</u>	<u>70%</u>
		<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
WARRANT 1, CONDITION A					
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	6,540	6,200	
Minor Street*	130	1,850	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	6,540	9,300	
Minor Street*	130	950	No
<i>Combination Warrant</i>			
Major Street	6,540	7,440	
Minor Street*	130	1,480	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis



Project: Schultz Farm
 Date: 10/26/2020
 Scenario: Year 2022 Buildout

Major Street:	Boones Ferry Road	Minor Street:	Site Access A
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	711	PM Peak Hour Volumes:	30

Warrant Used:

	100 percent of standard warrants used
X	70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
<u>Major St.</u>	<u>Minor St.</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

WARRANT 1, CONDITION B

1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
<i>Warrant 1</i>			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	7,110	6,200	
Minor Street*	300	1,850	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	7,110	9,300	
Minor Street*	300	950	No
<i>Combination Warrant</i>			
Major Street	7,110	7,440	
Minor Street*	300	1,480	No

* Minor street right-turning traffic volumes reduced by 25%